

Health of Boston



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Introduction

Welcome to The Health of Boston 2011!

Since 1996, this report has been commissioned annually to provide information about the health of Boston residents. The purpose of this report is to provide descriptive information about the health status, and factors that influence the health status, of Boston residents.

The report provides a broad picture of the overall health experience of our city, describes many of the contextual factors that influence the health of Boston residents, and identifies groups of individuals and communities at greatest risk for poor health conditions. Health of Boston 2011 does not aim to demonstrate specific causal relationships or make policy recommendations. Rather, the report provides information to help build knowledge and stimulate discussion among individuals that live in our communities.

This year's report continues to focus attention on social determinants that influence the health of Boston residents and communities. Social determinants are the social factors, and the physical conditions in which people live, learn, play and work, that contribute to their health experience. These contextual factors include income, education, employment, housing, exposure to racism and discrimination, and they ultimately define opportunities for individuals to lead healthy lives. Social determinants impact, directly and indirectly, both an individual's health and the collective health experience of a population.

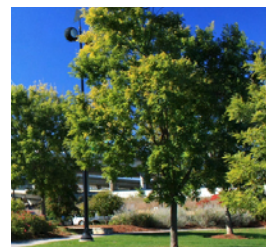
An awareness of the role of social determinants of health is critical to understanding the underlying forces influencing many of the differences in health experiences and outcomes described in this report. For example, presented data consistently demonstrate that Boston's Black and Latino residents collectively experience higher levels of chronic disease, higher mortality rates, and poorer health outcomes than Boston's White residents. Similar racial differences in income, education and employment status are presented here as well. In addition, lifelong exposure to subtle and not-so-subtle forms of racism and discrimination



causes prolonged stress and limit opportunities for healthy activity. These and other factors likely account for the racial differences in health experience observed among Boston’s residents over time.

In a similar manner, characteristics of the physical “built” environments in which people live are widely recognized social determinants influencing mental and physical health. Access to green spaces for exercise or relaxation, grocery stores and restaurants with affordable healthy foods, and of course safe housing, are all important for maintaining good health. Neighborhoods are the physical and social environments of our daily lives; thus, the second half of this report presents neighborhood-level data on community assets, determinants, and health outcomes. Our data show that health experiences vary dramatically among Boston neighborhoods, suggesting that when it comes to health, place matters.

The entire Health of Boston 2011 report and additional data tables can be found on the Boston Public Health Commission’s website at www.bphc.org.



Executive Summary

The Health of Boston 2011 report provides a broad picture of the health of Boston residents. The report reviews select health conditions, risk behaviors, and social determinants of health and identifies individuals and communities at greatest risk for specific health conditions. This report does not attempt to identify causality or make recommendations. Instead, it provides information needed to stimulate dialogue among individuals and within communities.

The first section of this report, an overview of social determinants of health, provides a foundation for understanding the health disparities revealed in this report. The three sections that follow provide data on the demographics and socioeconomic characteristics of Boston as well as a description of Boston neighborhoods. The balance of the report focuses on health issues and conditions. Each of these sections begins with an introduction describing the featured health indicators, followed by a short explanation of emerging trends and/or changes in the data elements. The sections conclude with a list of references, and notes that clarify the data analysis. This executive summary highlights significant findings from each of the sections, and discusses the persistence of disparities in health outcomes among Black and Latino Boston residents.

Health Equity

Boston's Black and Latino residents experience higher levels of chronic disease, mortality, and poorer health outcomes compared with White residents. These health inequities are driven by the interaction of several factors including racism, poverty, and residential segregation. For Boston's Black residents, these health inequities begin early in life and persist throughout an individual's lifespan. For example, the preliminary Black infant mortality rate was 40% higher than the White infant mortality rate in 2009. For the last 16 years, the percentage of low birth weight and preterm births has been higher among Black infants than other racial/ethnic group.

Data on health conditions for Boston residents demonstrate several alarming trends across numerous diseases. In 2009, the asthma hospitalization rate for Black and Latino children ages 3 to 5 years was more than two times the rate for Asian children and three to four times the rate for White children. Hospitalization rates for diabetes and heart disease were highest among Black residents when compared with other racial/ethnic groups in 2008 and 2009. Black residents have higher overall mortality rates as well as higher rates of diabetes, heart disease, and cancer mortality than Asian, Latino, or White residents. Black residents also suffer disproportionately from violence. From 1999 through 2008, the rate of homicide was highest among Black residents.



Understanding the city's diversity is essential to developing policies and strategies that address health inequity in Boston.



Latino residents also experience poorer health outcomes than White residents in Boston. In 2009, the diabetes hospitalization rate for Black and Latino residents was approximately four to five times the rate for Asians and the rate for Whites. In 2008 and 2009, Black and Latino residents had higher rates of hospitalization for heart disease compared with Asian and White residents. In 2006 and 2008, a higher percentage of Latino women reported having asthma than White and Asian women. Between 2007 and 2008, the age-adjusted all-cause mortality rate for Latinos increased 15%.

Efforts to eliminate these inequities must acknowledge and address the role of social determinants. Under Mayor Thomas M. Menino's leadership, individuals, community-based organizations, health care providers, policymakers, and city agencies came together to create an action plan for eliminating health inequities. The plan is being implemented by the Center for Health Equity and Social Justice at the Boston Public Health Commission.

Boston: Demographic Profile

The city has become more racially and ethnically diverse over the past several decades. In 2009, approximately 25% of Boston residents were foreign-born, originating from a wide array of countries such as the Dominican Republic, China, and Haiti. This diverse population has brought with it fluency in a variety of languages including Spanish, French, Chinese, and Vietnamese. The percentage of Latino residents in Boston has continued to increase from 6% in 1980 to 18% in 2010. Understanding the city's diversity is essential to developing policies and strategies that address health inequity in Boston.

Boston: Socioeconomic Profile

Socioeconomic status (SES) is a measure of an individual's or family's economic and social position relative to others based on income, education, and occupation. Low socioeconomic status is associated with limited access to regular health care, adequate housing, quality education, nutritious food, recreational opportunities, and other resources associated with a healthy lifestyle. The socioeconomic status

of Boston residents has varied dramatically by race/ethnicity, gender, and age. Key points from the socioeconomic status section in this report include the following in 2009:

- 17% of Boston residents had income below the poverty level.
- Over 20% of female-headed households with children under age 5 had income below the poverty level.
- 39% of Latino adults had less than a high school diploma.
- The unemployment rate for Black males was 29.3%, almost four times the rate for White males (6.6%).
- 31% of those who were homeless were children.

Health-Related Behaviors

Personal health behaviors have a significant influence on overall health outcomes. Dietary habits, physical activity, tobacco use, and alcohol consumption contribute to the development of chronic conditions, such as cardiovascular disease, cancer, diabetes, and premature death. The adoption of positive health behaviors can help individuals achieve and maintain good health.

In 2009, Boston public high school survey data revealed:

- The percentage of high school students who reported smoking cigarettes decreased significantly from 2001 to 2009. In 2009, one in ten Boston public high school students reported smoking cigarettes.
- Only 27% of the Boston public high school students reported engaging in regular physical activity. More than 50% of Boston public high school students reported receiving no physical education during the past week (data not shown in this report).

In 2010, Boston adult resident survey data revealed:

- 26% of Boston adults reported consuming the recommended number of fruit and vegetable servings and 57% reported engaging in regular physical activity. Differences in adult physical activity were noted by age, race/ethnicity, education, household income, and neighborhood of residence.
- A higher percentage of White female adults reported binge drinking within the past month in comparison with Black and Latino female adults.



The percentage of high school students who reported smoking cigarettes decreased significantly from 2001 to 2009. In 2009, one in ten Boston public high school students reported smoking cigarettes.

Health Indicators

This section provides data on a variety of important health outcomes including births, deaths, and disease status.

Maternal and Child Health

Birth and infant death data provide important measures of the well-being of infants and pregnant women and are often seen as a reflection of the health of a community. Several factors including maternal health, infant birthweight, socioeconomic conditions, racism, access to medical care, and neighborhood of residence affect infant health and infant survival.

Progress or sustained improvement is noted in this report in the areas of adolescent births, maternal smoking during pregnancy, access to adequate prenatal care, and blood lead levels among children:

- Boston's adolescent birth rate decreased 19% from 2008 to 2009.
- In 2009, 83% of Boston women who gave birth received adequate prenatal care.
- In 2009, among Boston children ages 6 and under, the percentage of those screened who were positive for an elevated blood lead level remained extremely low (1 %) compared with the levels experienced 10 to 15 years earlier (6% to 15%).

These data also suggest continued need for improvement in the prevention of low birthweight births, preterm births, and infant mortality:

- For each year from 1999 to 2009, Black women had the highest percentage of low birthweight (LBW) babies.
- Black women in Boston had the highest percentage of preterm births every year between 1999 and 2009.

Until 2009, Boston infant mortality (IMR) had been consistently highest for Black infants. However, in 2009, the preliminary IMR was highest for Latino infants (8.0 infant deaths per 1,000 live births) which was 60% higher than the rate for White infants (5.0 infant deaths per 1,000). The preliminary IMR for Black infants (7.7 infant deaths per 1,000) was second highest.



Birth and infant death data provide important measures of the well-being of infants and pregnant women and are often seen as a reflection of the health of a community.

Chronic Diseases

Asthma, high blood pressure, cardiovascular disease, and diabetes are common chronic diseases that affect the lives of many Boston residents. Chronic diseases can lead to significant disability, a reduction in the quality of life, and ultimately death.

Chronic disease data reveal the need for improvement in the prevention and control of several diseases including asthma, diabetes, and obesity:

- In 2008 and 2009, Black and Latino children ages 3 to 5 had the highest age-specific asthma hospital emergency department visit rates among racial/ethnic groups. In 2009, the rates for Black and Latino children were more than twice the rate for White children and three to four times the rate for Asian children.
- In 2008 and 2009, Latino residents had the highest heart disease hospitalization rate.
- In 2009, Latino and Black residents had diabetes hospitalization rates four to five times the rates for Asian and White residents.
- In 2007 and 2009 combined, a higher percentage of Black and Latino female students were overweight in comparison with White female students.

Sexual health is a critical component of physical and emotional well-being.



Sexual Health

Sexual health is a critical component of physical and emotional well-being. The most accessible data available to help understand and monitor the sexual health of a population are data on self-reported sexual activity and sexual behaviors and sexually transmitted infections (STIs) rates.

Sexual health data suggest additional need for improvement in the prevention and control of Chlamydia, gonorrhea, and HIV infection:

- In 2010, the rate of new chlamydia infections among females ages 15-19 (4,055.7 new cases per 100,000 population) was the highest age-specific rate and was three times the rate for males in the same age group (1,329.8 new cases per 100,000 population).
- The reported gonorrhea incidence rate in 2010 for young people ages 15-19 (260.9 new cases per 100,000 population) was the highest of all age groups and twice the rate for Boston.



In 2009, the Boston incidence rate of reported Salmonella infection decreased 11% from 26.3 new cases per 100,000 population in 2008 to 23.4 new cases per 100,000 population in 2009.

- HIV incidence rates for Boston's Black residents continue to be the highest among all Boston residents. In 2010, the HIV incidence rate for Boston's Black residents (48.5 new cases per 100,000 population) was 2.4 times the rate for White residents and 1.8 times the rate for Latino residents.

Infectious Diseases

Infectious diseases remain a significant threat to public health in the United States. Food-borne illnesses, including salmonella, the reemergence of vaccine-preventable diseases, such as pertussis, and the threat of newly emerging infectious diseases, such as severe acute respiratory syndrome (SARS) and the 2009 H1N1 virus, are among the many potential threats.

Infectious disease data suggest progress in the prevention of pertussis and salmonella infection:

- The Boston incidence rate of reported pertussis decreased 53% from 9.0 new cases per 100,000 population in 2008 to 4.2 new cases per 100,000 population in 2009. The pertussis rate decreased 80% from 2007 to 2009.
- In 2009, the Boston incidence rate of reported Salmonella infection decreased 11% from 26.3 new cases per 100,000 population in 2008 to 23.4 new cases per 100,000 population in 2009.

The data also suggest additional need for improvement in the prevention and control of tuberculosis:

- In 2009, the highest incidence rate of reported tuberculosis was among Asians, with a rate three times that of Boston overall. Black residents had a rate nearly twice that of the Boston rate.

Mental Health

Mental health embodies the psychological capacity to make healthy decisions that promote overall quality of life. People living with mental health illnesses and disorders can often experience disruptions in thinking, feeling, behavior, and emotions, which subsequently influence the ability to relate to others, impair functioning, and limit major activities.

Mental health data suggest additional need for improvement in the area of mental health:

- In 2009, nearly 30% of Boston public high school students reported feeling sad or hopeless for two weeks straight or more during the past year.



Misuse of alcohol or other drugs over time can lead to physical and/or psychological dependence on these substances and increased risk of mortality and morbidity.

- In 2009, 12% of Boston public high school students seriously considered attempting suicide during the past year. A higher percentage of females compared with males seriously considered attempting suicide. A higher percentage of lesbian, gay or bisexual (LGB) students (including “not sure”) compared with heterosexual students seriously considered suicide.

- In 2010, 9% of Boston adults reported persistent symptoms of depression (i.e., feeling sad, blue, or depressed for more than 14 days during the past month). Among Boston adults, a higher percentage of adults with annual household income less than \$25,000 reported persistent symptoms of depression compared with adults with annual household income of \$50,000 or more.

Substance Abuse

Substance abuse involves the excessive use of alcohol or the use of drugs in a non-prescribed manner to achieve an altered physiological state. Misuse of alcohol or other drugs over time can lead to physical and/or psychological dependence on these substances and increased risk of mortality and morbidity.

Substance abuse data suggest progress and sustained improvement in drug abuse mortality:

- The substance abuse mortality (drug and alcohol) age-adjusted rate decreased 19% from 2007 to 2008.
- The overall decline was attributed to a 30% decrease in drug abuse deaths (from 155 deaths in 2007 to 110 deaths in 2008).
- From 2007 to 2008, the Latino substance abuse mortality rate decreased 50%.
- From 2007 to 2008, the Black and White substance abuse mortality rates declined 5% and 21%, respectively.

Violence

Violence is widely recognized as a major public health issue. The fatal and non-fatal outcomes resulting from violent victimization and perpetration have a negative impact on individual and community health.

These data suggest additional need for improvement in the areas of teen risk behaviors, non-fatal assault-related gunshot and stabbing injuries, and homicides:

- In 2008, 18% of Boston public high school students reported being bullied in the past 30 days
- Data for 2007 and 2009 combined show that almost one in four male public high school students reported carrying a weapon during the past month.
- In 2008, 37% of Boston public high school students felt that police treated them with respect in the past 12 months when they came into contact with them.
- The homicide rate for Black residents exceeded that for other racial/ethnic groups for every year from 1999 to 2008. During this ten-year period, more than two-thirds of Boston resident homicide victims were Black residents.

Cancer

Cancer is the leading cause of death in Boston, claiming more lives than heart disease, stroke, or injuries.

Cancer data suggest sustained improvement in the areas of cancer screening:

- In 2010, 88% of Black women age 40 and over, and 79% of Latino women age 40 and over reported having a mammogram during the past year.

These data also suggest the need to address racial/ethnic inequities in cancer mortality:

- In 2008, the age-adjusted cancer mortality rate was highest for Black residents and White residents, 257.0 and 178.4 deaths per 100,000 population, respectively.
- Lung cancer was the leading cause of cancer mortality each year from 2006 to 2008. Latino residents consistently had the lowest age-adjusted lung cancer.

Mortality

Death, or mortality, is a part of the human condition. However, the timing of one's death is most often related to health factors such as disease and injury. Because death often results from disease and injury, mortality data help to describe the impact of disease on society.

Mortality data suggest progress or sustained improvement in the area of overall mortality, mortality from specific causes, and mortality among certain racial/ethnic groups:

Because death often results from disease and injury, mortality data help to describe the impact of disease on society.



- The mortality rate attributed to injuries decreased from 2007 to 2008.
- The age-adjusted cancer mortality rate decreased 7% for Blacks between 2007 and 2008.
- The age-adjusted mortality rates for cancer, heart disease, injuries, and stroke among Boston's White residents decreased from 2007 to 2008.

These data also suggest the need to address racial/ethnic inequities in mortality:

- Among Latino residents, the age-adjusted rates for cancer, heart disease, and stroke increased from 2007 to 2008.
- Among Black residents, the age-adjusted heart disease mortality rate increased 27% between 2006 and 2008.

Boston Neighborhoods: Socio-demographic Profiles and Health Indicators

In this year's Health of Boston, there is a focus on neighborhood-level data. Where one lives contributes to shaping health behaviors and influencing one's health. Because each Boston neighborhood has unique characteristics influencing health, it is imperative to consider the various neighborhoods when evaluating the health of the residents of the Boston.

The Neighborhood Demographic and Socioeconomic Profile section provides a more detailed look at demographic and socioeconomic indicators. This year the US Census Bureau has provided neighborhood-level estimates for a host of indicators including the racial/ethnic distribution, median annual income, languages spoken at home and others through the 2005-2009 American Community Survey.



Because each Boston neighborhood is unique in its characteristics, it is imperative to consider the various neighborhoods when evaluating the health of the residents of the Boston.

In addition to this profile, a community assets map is provided for each neighborhood. Although Boston possesses a considerable amount of green space and a system of bike paths dispersed throughout the city, community assets, such as farmer's markets, community gardens, and food pantries, are less evenly distributed. Additionally, some neighborhoods are disproportionately burdened by poorer health and perceptions of poorer neighborhood safety. The availability of resources and community assets plays an important role in promoting conditions that support good health. Several health indicators maps are presented to allow more comprehensive assessment of neighborhood-level data.

The entire Health of Boston 2011 report and additional data can be found on the Boston Public Health Commission's website at www.bphc.org.

Note to Readers

What's the difference between census type data and survey data?

The Health of Boston Report uses two types of data sources: census and survey.

Census type data sources include the U.S. Census, birth data, death data, hospitalization data, and emergency department data. These data sets are created by collecting information from the entire Boston population rather than sampling a subset of the Boston population. The information collected from these data sets reflects the true frequency of events rather than estimates of the true frequency, since information from every single person was accounted for in the data set.

Survey type data sources include the American Community Survey, the Boston Behavioral Risk Factor Surveillance System, the Youth Risk Behavioral Surveillance System, the Boston Youth Survey, and the Boston Neighborhood Survey. These data sets are created by collecting information from a randomly selected subset of the Boston population, or sample, which can then be adjusted statistically (or weighted) to make estimates about how the entire Boston population might have responded to the same survey questions if every single person had been interviewed. Projecting these statistical estimates onto the entire population introduces a degree of uncertainty about how well the sample data reflects the true frequency of events in the entire population. This degree of uncertainty is often referred to as "margin of error" or "confidence interval" in order to emphasize that the true frequency exists within a range of values with 95% certainty. For this report, the confidence intervals for the estimates presented are used to make determinations about whether estimates differ from one another significantly.

How do we determine if one point estimate (or percentage point) is higher or lower than another?

As introduced in the previous question, survey data drawn from a randomly selected subset, or sample, of the population generates point estimates, or percentages, of how likely the rate found in the sample population reflects the true rate of the entire population if every single person were accounted for. In order to determine whether two point estimates differ significantly from each other, the confidence intervals, or margin of error surrounding each estimate must be compared. If the confidence intervals have overlapping values, then we cannot say

with 95% certainty that the two estimates differ significantly. If the confidence intervals do not have overlapping values, then we can say with 95% certainty that one estimate is higher or lower than the other. This determination is often referred to as “statistical significance.” In this report, when the text refers to estimates as “higher” or “lower” than each other, we have made the determination that these estimates are statistically significantly different from each other with 95% certainty.

For example, in the Neighborhood Selected Health Indicators Map section of this report, there is a measure of self-reported asthma by Boston neighborhood from the Boston Behavioral Risk Factor Surveillance System (Figure 30.13). The percentage of overall adult Boston residents reporting asthma was 11%, while in Roxbury the percentage was 15%. The confidence interval for Boston was 9.6%-11.7%; for Roxbury, the confidence interval was 9.5%-19.8%. Although the point estimates (11% vs. 15%) are different from each other numerically, the overlapping values in the confidence intervals (9.6%-11.7% vs. 9.5%-19.8%) indicate that the difference between them is not statistically significant. As a result, we would report these two point estimates as being “statistically similar”.

There are other statistical tests not used for this report that could reveal statistically significant differences in some cases where confidence intervals overlap slightly.

Rates drawn from census type data sources do not routinely undergo statistical testing, since the rates themselves are considered true values for the entire population rather than estimates of the true values based on a sample of the population. This means that the difference in values is interpreted as the true change from year to year or between different groups.

Making a determination about whether these differences are important, or meaningful, includes interpreting the social context in which these data were collected in any given year: changes in how data were categorized or reported, city-wide programs that may have affected event occurrence, etc.

In some instances, a test of significance is used to determine if the difference between two rates drawn from census type data is unlikely due to random chance. This is likely to occur when the difference is considered important and the number of events or cases is extremely small relative to the size of the population.

What do the terms “insufficient sample size” and “n<5” mean?

In the section notes, the phrase insufficient sample size is used to describe data points that are not presented. This occurs when the stratification of survey data by population groups results in a sample that is too small to calculate reliable point estimates. In addition, to protect the confidentiality of respondents, data are not presented when the sample size is too small.

The notation, n<5, is used when there are fewer than five occurrences of an event (for example, births, deaths, new cases of a disease) and thus a rate could not be presented. In some instances, combining several years of data increases the sample size enough for data to be reported.

Why do we sometimes combine several years of data?

In certain instances, when there are fewer than five cases or an insufficient sample size in a given year, we combine data from two or more years in order to permit the calculation and presentation of a rate or point estimate. In this report, the title of a chart indicates whether two or more years of data have been combined.

How do we define neighborhood boundaries in this report?

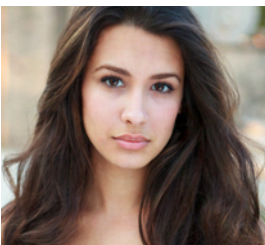
Neighborhoods can be defined in a number of ways. In this report, zip codes and census tracts are used to identify neighborhood boundaries since this information is often collected with Boston health data. Most graphs and maps presenting neighborhood data use neighborhood definitions based on zip codes, but graphs and maps presenting birth data, death data, American Community Survey data, and Census 2000 data rely on census tracts to define neighborhoods.

Why are some of the data older than other data?

The most recent data available are presented in this report: some are older than others, and the availability varies by source. Several factors determine when data are available including the frequency of data collection, the post-collection cleaning and verification process, and resources available to manage and analyze the data.

Health Equity

The Health of Boston 2011 report provides a comprehensive view of the health of Boston residents. As you review the sections that follow, you will notice significant differences between the health of Boston's residents of color and the health of White residents.



White residents, on average, enjoy better health than Black and Latino residents.

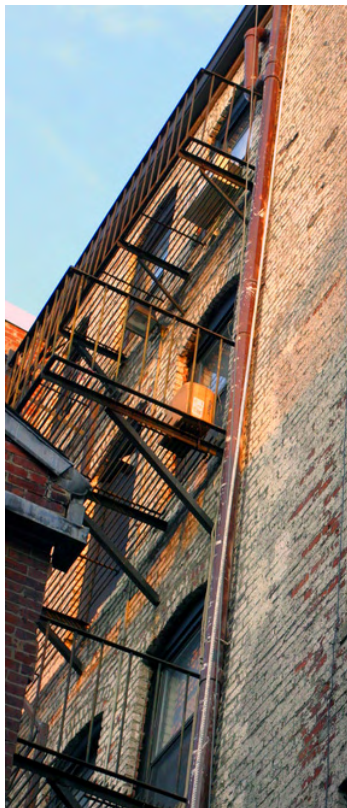
Biology, personal behaviors, and access to health care do not adequately account for these racial and ethnic health inequities. Instead, we need to look at how social, economic, and environmental resources that influence health are distributed across communities. Resources that impact health include income and wealth, education and employment opportunities, food access, opportunities for physical activity, health and social services, and political power.

The nation's history of racism has led to an unequal distribution of these resources resulting in people of color bearing an inequitable burden of disease. Infant mortality is accepted internationally as a reliable indicator of the health status of a population [1]. Groups in which the infant mortality rate (IMR) is high invariably face high levels of other health problems. In Boston, in 2009, the preliminary IMR per thousand live births was 8.0 for Latino infants and 7.7 for Black infants. The rate for Latino infants was 60% higher than the rate of 5.0 for White infants. Similarly, the IMR for Black infants was 40% higher than the rate for White infants.

Health inequities are found across multiple health conditions. For example, in 2008, the diabetes mortality rates for Black and Latino residents were about three times the rate for White residents. The diabetes mortality rate per 100,000 residents was 38.4 for Black residents and 34.8 for Latino residents compared with 11.9 for White residents. In the same year, the mortality rates for stroke for Black and Latino residents were almost twice the rate for White residents. The mortality rate for stroke per 100,000 residents was 54.8 for Black residents and 50.1 for Latino residents compared with 28.2 for White residents.

Social Determinants of Health

The social determinants of health describe conditions in which people are born, grow, live, work, play, and age [2]. Resource-rich neighborhoods provide ample opportunities for healthy choices and conditions that positively impact health. Resource-poor neighborhoods, on the other hand, often lack the opportunities and conditions needed



Social determinants of health can be divided into three core areas: economic conditions, environmental and neighborhood conditions, and social conditions.

for good health. This inequitable distribution of resources results in people of color often living in neighborhoods where there is less access to healthy conditions and opportunities, such as fresh fruits and vegetables, open green space, quality housing, and employment. Social determinants of health can be divided into three core areas: economic conditions, environmental and neighborhood conditions, and social conditions.

Economic conditions include employment, income, education, and wealth. Socioeconomic status has long been recognized as a key predictor of health [3]. When considering its relationship to health, socioeconomic position creates a social gradient in which health improves as socioeconomic status rises [4].

Physical environment and neighborhood conditions include food access, parks and open space, housing, air quality, liquor and tobacco advertisements, and transportation. These conditions work alone and in concert with each other to affect health. Individuals who live in areas with poor air quality experience higher rates of asthma. Lack of grocery stores that sell fresh produce and the lack of safe and affordable places to engage in physical activity contribute to poor diets, obesity, and diabetes [5].

Social conditions include neighborhood safety, social networks, social capital, and civic engagement. Negative social conditions like exposure to racism and lack of neighborhood safety lead to chronic stress. Stress is directly linked to chronic disease, particularly hypertension and heart disease [6]. Research has shown that supportive social networks can serve as a buffer to stress and depression, which in turn, protect against physical and mental illness [7].

The social determinants of health affect individuals at each stage of life. Understanding the pathways and mechanisms through which social conditions affect health is fundamental to understanding the health of populations.

The Role of Racism

In the United States, racism and the legacy of racism have played a significant role in creating and perpetuating health inequities. Social inequities, such as poverty, segregation, and lack of educational and employment opportunities, have origins in racist laws, policies, and practices that have historically denied people of color the right to earn

income, own property, and accumulate wealth. All forms of racism – structural, institutional, interpersonal, and internalized – contribute to poor health outcomes that are experienced disproportionately by people of color [8]. Understanding the multiple pathways through which racism shapes socioeconomic status, health behaviors, neighborhood environment, and stress is essential in addressing inequities in health.

At the structural level, racial inequality is perpetuated through a system of allocating social privilege using public policies and institutional practices. At the institutional level, unfair organizational policies and practices affect access to goods, services, and opportunities, including healthcare. At the interpersonal level, prejudice and discrimination affect the way people of color are treated by others, intentionally and unintentionally. Internalized racism is manifested as internalized oppression and can cause stress, depression, and feelings of inadequacy.

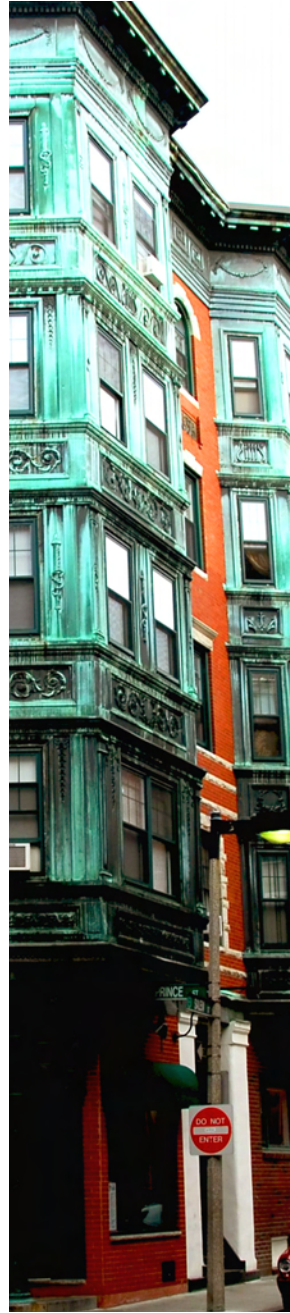
Approaches to Achieving Health Equity

Health inequities will persist as long as social, economic, and environment resources are distributed unequally. Approaches to reducing health inequity may only be effective if they are built on the understanding that social, economic, and environmental inequity are root causes of health inequity, and that improving social, economic, and environmental conditions is essential to improving health outcomes. Strategies must address inequities in education, employment, income, housing, neighborhood safety, recreational opportunities, environmental hazards, and healthy food access, through policy, systems, and environmental change efforts [9].

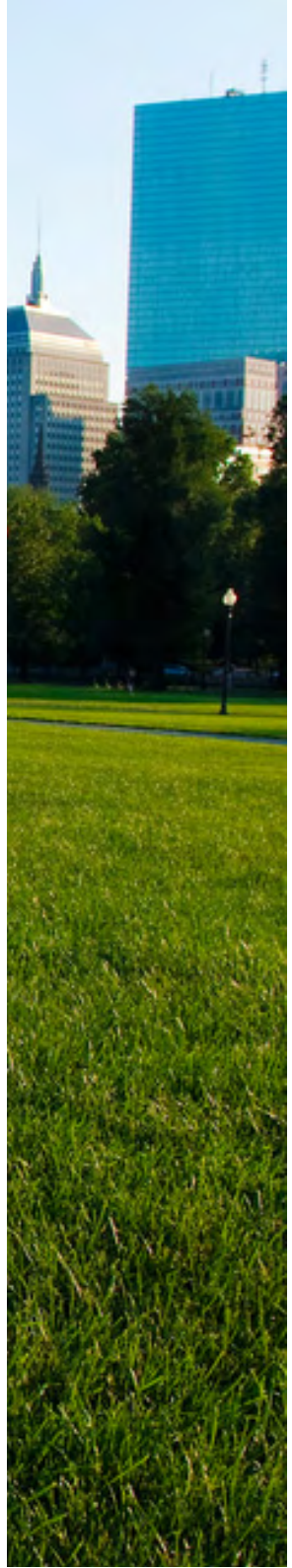
Addressing root causes of health inequities requires a long-term commitment to comprehensive multi-level and multisectoral strategies to change the social determinants of health. Broad coalitions of public, private, nonprofit, and community stakeholders are required to change community structures. In order to do this work effectively, resident voices are essential; residents should define the assets and challenges of their communities, identify the possible solutions, and participate in the implementation of those solutions [10]. It is this model of building partnerships with community residents, community-based organizations, and large institutions that is essential to promoting system and policy level change to promote health in all Boston communities.

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Boston



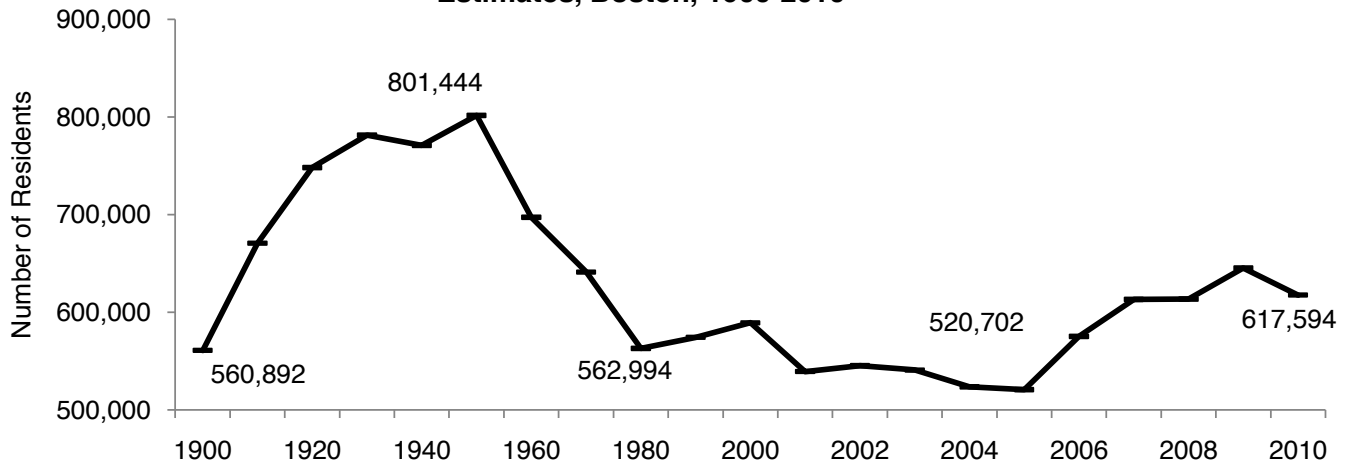
Demographic Profile

In order to understand the health experience of Boston residents, it is important to first gain knowledge of certain characteristics that describe the city's population.

Demographic characteristics, such as gender, age, race/ethnicity, are often associated with risk factors for a disease or with poorer health outcomes. For instance, there is an increased risk for coronary artery disease as an individual gets older. Also, mortality rates for breast cancer are higher among Black women, although incidence rates are higher among White women. This report begins with a description of the population including age, gender and racial/ethnic distributions as well as several other common demographic characteristics. The foundation for understanding the context of health in Boston is built on this description of its residents.



Figure 1.1 Population and Population Estimates, Boston, 1900-2010



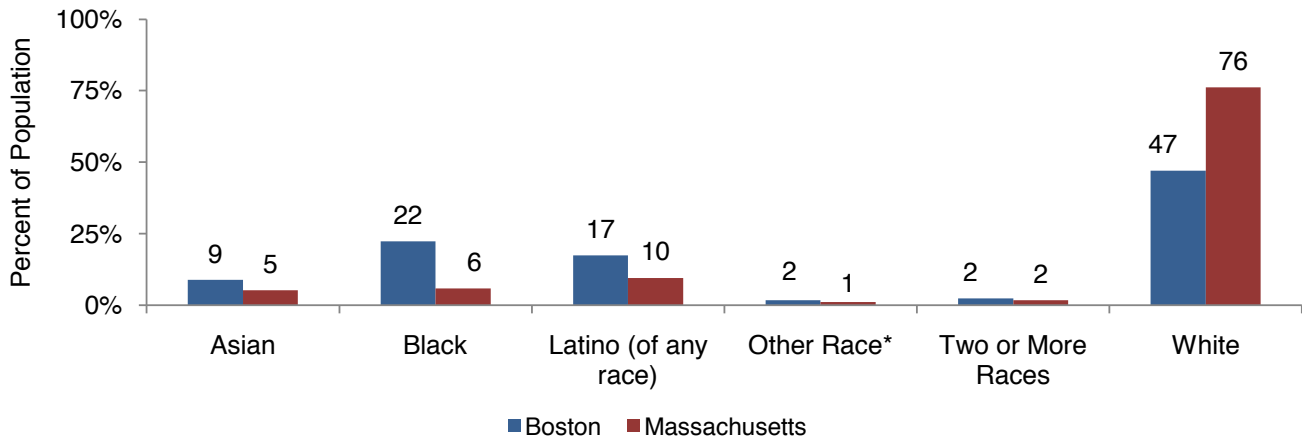
DATA SOURCES: Decennial Censuses, U.S. Department of Commerce, Bureau of the Census, 1900-2000; U.S. Census Bureau, 2009 American Community Survey; U.S. Census Bureau, 2010 American FactFinder, 2010 Demographic Profile Data

■ **Figure 1.1 Population and Population Estimates, Boston, 1900-2010**

Boston is the largest city in Massachusetts and the 22nd largest in the US. According to the 2010 US Census, the Boston population in 2010 was 617,594. Fifty-two percent of the population was female (data not shown). The population decreased 4% from 2009.

The city's population has fluctuated over time. The city experienced a 43% increase in the first half of the last century, reaching the city's highpoint of 801,444 residents in 1950. During the first half of the past decade, the population decreased from 589,141 in 2000 to 520,702 in 2005 but has increased 19% since then.

Figure 1.2 Population by Race/Ethnicity, Boston and Massachusetts, 2010



*Includes American Indians/Alaskan Natives, Native Hawaiian/Other Pacific Islanders, and Some Other Races

DATA SOURCE: U.S. Census Bureau, 2010 American FactFinder, 2010 Demographic Profile Data

■ **Figure 1.2 Population by Race/Ethnicity, Boston and Massachusetts 2010**

The Boston population is more racially diverse compared to Massachusetts overall. In 2010, 53% of Boston residents were non-White compared with 24% of Massachusetts residents. Boston has higher percentages of Black residents (22% vs. 6%) and Latino residents (17% vs. 10%) compared to Massachusetts.

Figure 1.3 Population by Race/Ethnicity and Year, Boston, 1980-2010

Year	Not Latino					Latino (of any Race)
	Asian	Black	Other race†	Two or more races	White	
	%	%	%	%	%	%
1980	*	21.7%	1.1%	*	67.9%	6.4%
1990	*	24.0%	1.0%	*	59.1%	10.4%
2000	*	23.8%	1.4%	*	49.5%	14.4%
2001	7.2%	25.7%	1.7%	0.5%	52.3%	11.9%
2002	7.6%	26.8%	1.6%	0.9%	48.3%	14.8%
2003	8.3%	26.7%	0.5%	1.4%	48.5%	14.5%
2004	8.9%	26.4%	1.9%	0.3%	47.3%	14.3%
2005	8.7%	23.5%	3.3%	0.8%	48.6%	14.7%
2006	7.9%	23.4%	2.2%	1.3%	50.2%	14.9%
2007	8.5%	21.2%	2.1%	1.5%	49.8%	16.9%
2008	8.2%	21.6%	1.7%	1.5%	50.8%	16.2%
2009	7.5%	21.7%	1.6%	1.7%	51.2%	16.3%
2010	8.9%	22.3%	1.9%	2.4%	47.0%	17.5%

*Data unavailable

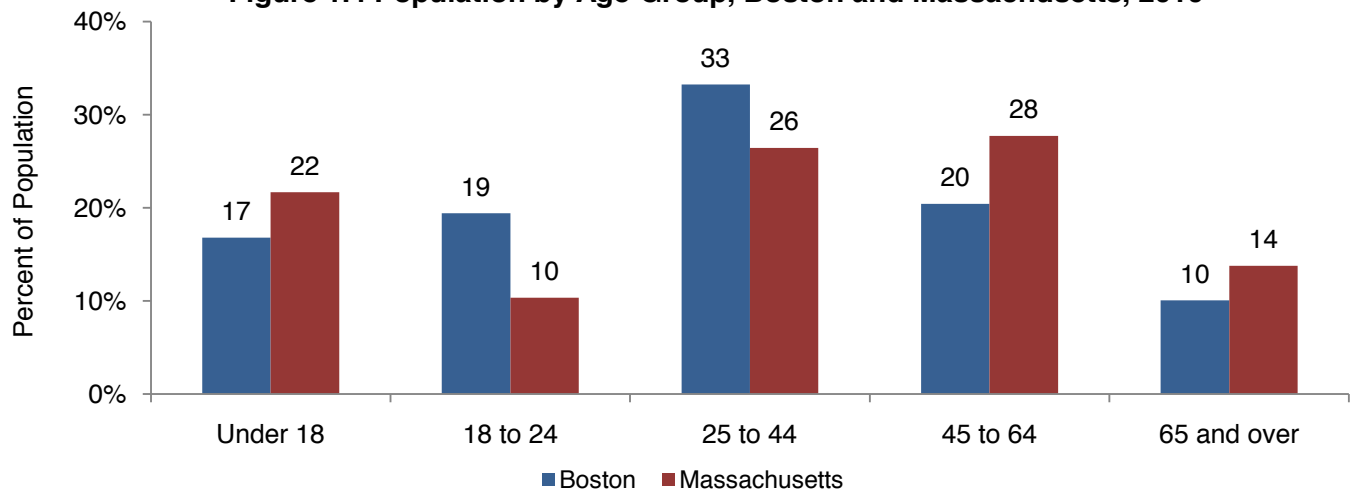
†Includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races

DATA SOURCES: Decennial Censuses, US Department of Commerce, Bureau of the Census, 1900-2000; U.S. Department of Commerce, Bureau of the Census, American FactFinder, 2001-2009; U.S. Department of Commerce, Bureau of the Census, American FactFinder, 2010, 2010 Demographic Profile Data

■ **Figure 1.3 Population by Race/Ethnicity and Year: Percentage Distributions, 1980-2010**

The population of Boston has become increasingly diverse over time. In 1980, 67.9% of Boston residents were White and only 6.4% were Latino. By 2010, 47.0% of residents were White and 17.5% were Latino.

Note: Like the 2000 Census, the 2010 Census offered the option of reporting more than one race; therefore, comparisons pre-2000 Census data are not strictly comparable with data collected before this time. Nonetheless, these data provide good estimates of the changes in the racial and ethnic composition of Boston.

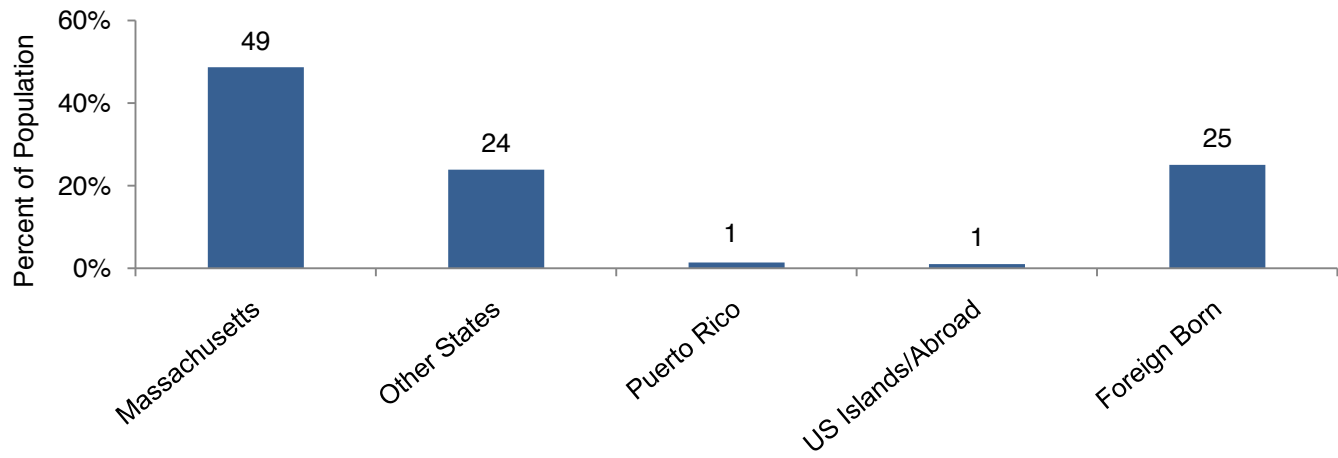
Figure 1.4 Population by Age Group, Boston and Massachusetts, 2010

DATA SOURCE: U.S. Census Bureau, 2010 American FactFinder, Summary File 1

■ **Figure 1.4 Population by Age Group, Boston and Massachusetts, 2010**

Compared with Massachusetts, Boston has higher percentages of younger adults (ages 18 to 44) and lower percentages of children (under age 18) and older adults (ages 45 and over). In 2010, 52% of the Boston population were female and 48% were male (data not shown).

Figure 1.5 Population by Place of Birth, Boston, 2009

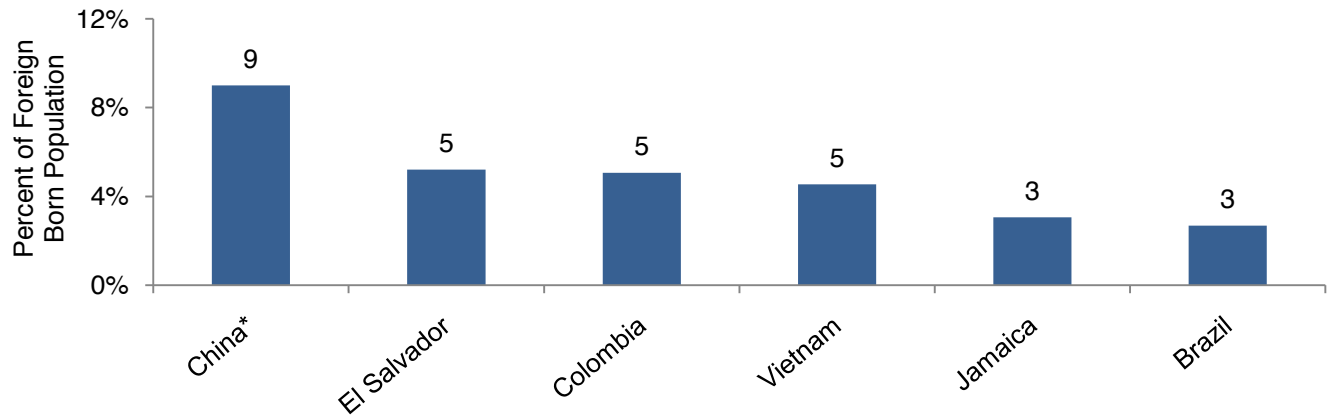


DATA SOURCE: US Census Bureau, 2009 American Community Survey

■ **Figure 1.5 Population by Place of Birth, Boston, 2009**

Roughly half of the Boston population was born in Massachusetts. Foreign born residents made up a quarter of the total Boston population.

Figure 1.6 Most Frequently Reported Countries of Birth Among Foreign Born, Boston, 2009



*China includes Hong Kong

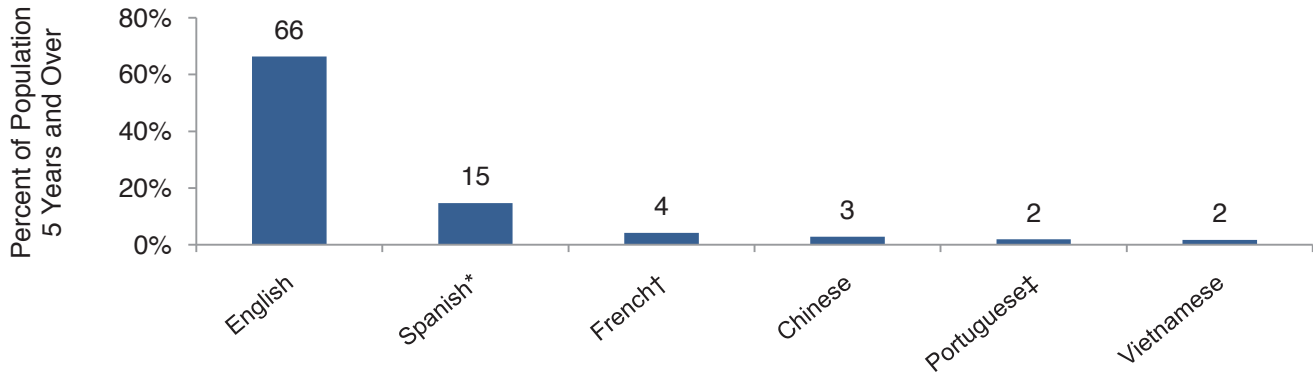
DATA SOURCE: US Census Bureau, 2009 American Community Survey

■ **Figure 1.6 Most Frequently Reported Countries of Birth Among Foreign Born, Boston, 2009**

Of the residents who reported being born outside the United States, 27% originated from countries in the Caribbean region (data not shown). Among countries, the highest percentage of the foreign-born residents were born in China (9%)



Figure 1.7 Most Frequently Reported Languages Spoken at Home, Boston, 2009



*Spanish Includes Spanish Creole

†French includes Patois, Cajun, and French Creole

‡Portuguese Includes Portuguese Creole

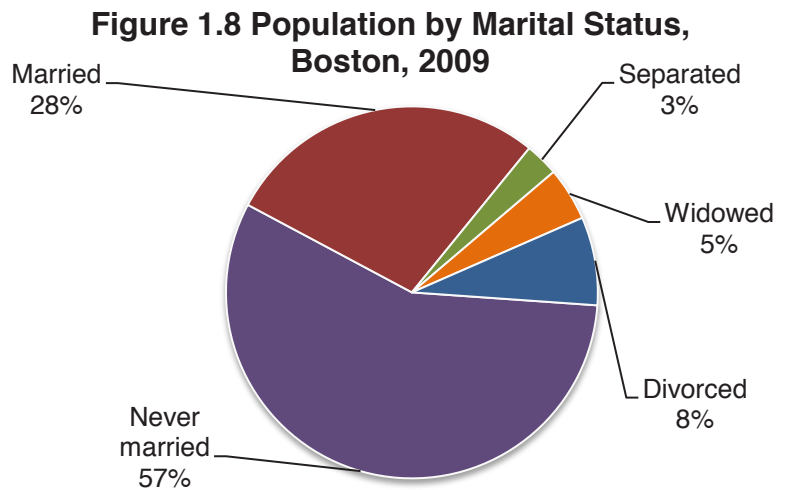
DATA SOURCE: US Census Bureau, 2009 American Community Survey

■ **Figure 1.7 Most Frequently Reported Languages Spoken at Home, Boston, 2009**

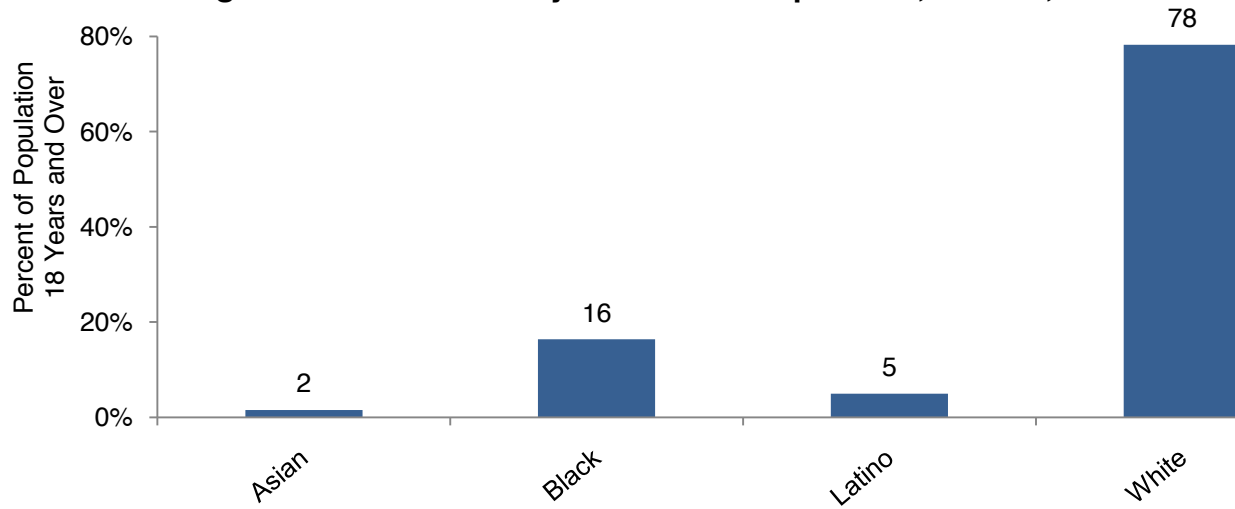
Thirty-four percent of Boston residents reported speaking a language other than English at home. Spanish was spoken at home by 15% of Boston residents, 4% spoke French (including 3% French Creole), and 3% spoke Chinese.

■ **Figure 1.8 Population by Marital Status, Boston, 2009**

Among Boston residents 15 years and older, 57% reported never being married; 28% were currently married; 3% were separated; 5% were widowed, and 8% were divorced.



DATA SOURCE: US Census Bureau, 2009 American Community Survey

Figure 1.9 Race/Ethnicity for Veteran Population, Boston, 2009

DATA SOURCE: US Census Bureau, 2009 American Community Survey

■ **Figure 1.9 Race/Ethnicity for Veteran Population, Boston, 2009**

Veterans comprise 5% of the Boston population of 18 years and over (data not shown). More than three-fourths of the veteran population were White residents.

Notes and Data Analysis for Demographic Section

Figure 1.1 Population and Population Estimates, Boston, 1900-2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 1.2 Population by Race/Ethnicity, Boston and Massachusetts, 2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 1.3 Population by Race/Ethnicity and Year: Percentage Distributions, 1980-2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 1.4 Population by Age Group, Boston and Massachusetts, 2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 1.5 Population by Place of Birth, Boston, 2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 1.6 Most Frequently Reported Countries of Birth Among Foreign Born, Boston, 2009

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Figure 1.7 Most Frequently Reported Languages Spoken at Home, Boston, 2009

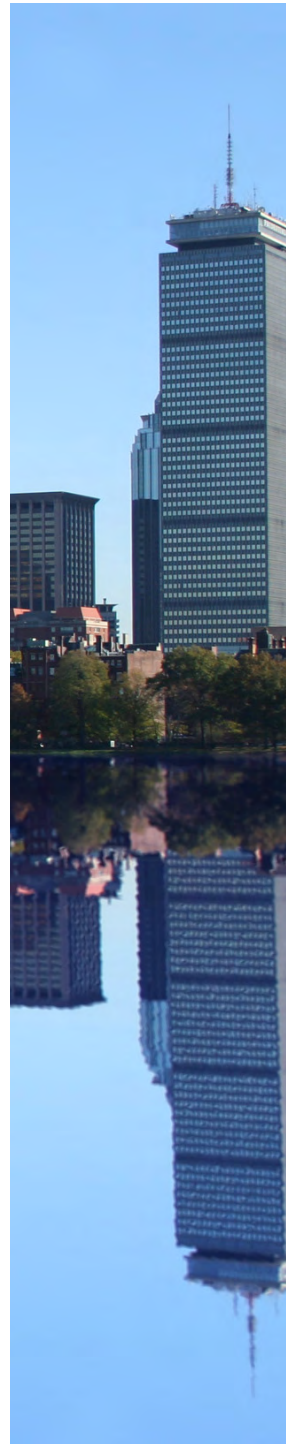
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 1.8 Population by Marital Status, Boston, 2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 1.9 Race/Ethnicity for Veteran Population, Boston, 2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office



Socioeconomic Profile

Socioeconomic status (SES) is a measure of an individual's or family's economic and social position relative to others and is based on several factors including income, education, and occupation.

Socioeconomic status (SES) is a measure of an individual's or family's economic and social position relative to others and is based on several factors including income, education, and occupation. Measures of socioeconomic status can be strong predictors of health. Factors that contribute to low socioeconomic status impact health, often acting as de facto barriers to accessing regular health care, adequate housing, quality education, nutritious food, recreational opportunities, and other resources associated with good health. As a result, an individual's place on the socioeconomic ladder can play a defining role in a person's health experience and even help predict how long that person may live (1).

Racism has a significant influence on the socioeconomic status of individuals, families, and communities. Racism limits economic and social opportunities and adversely affects the living and working conditions of people of color (2). The impact of racism on health results, in part, as a consequence of the influence of racism on socioeconomic status. The daily stressors associated with lower socioeconomic status and racism can trigger physiological changes that over time can damage immune defenses and vital organs resulting in more rapid onset and progression of chronic illnesses (3).

An assessment of the health of Boston residents would be incomplete without consideration of the socioeconomic status of its residents. This section will present data on measures related to socioeconomic status. These include measures of income (median family and median household income, poverty levels,), measures of the impact of low-income levels (foreclosures, homelessness, and food stamp caseloads), and measures associated with income status (educational level, employment levels, and housing tenure).

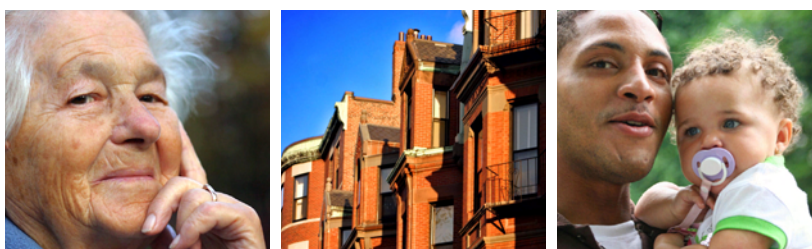
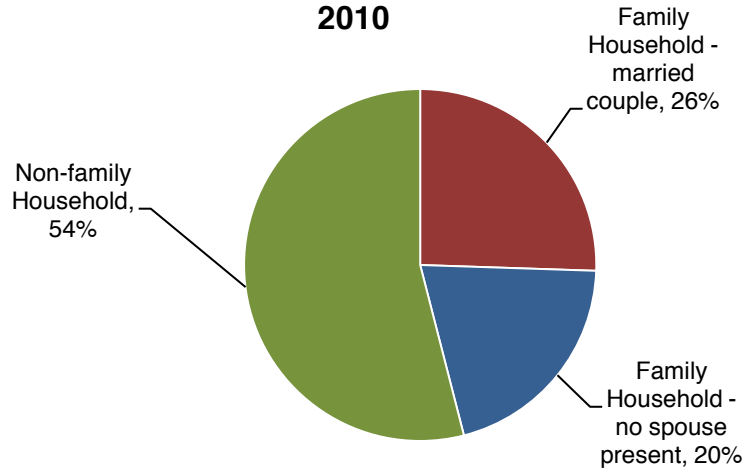


Figure 2.1 Type of Household, Boston, 2010

In 2010, 46% of all households in Boston consisted of families (data not shown). The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household). Of all households, 26% were married couple families and 20% were families in which the householder did not have a spouse present. Over half of the households in Boston were non-family households.

Figure 2.1 Type of Household, Boston, 2010

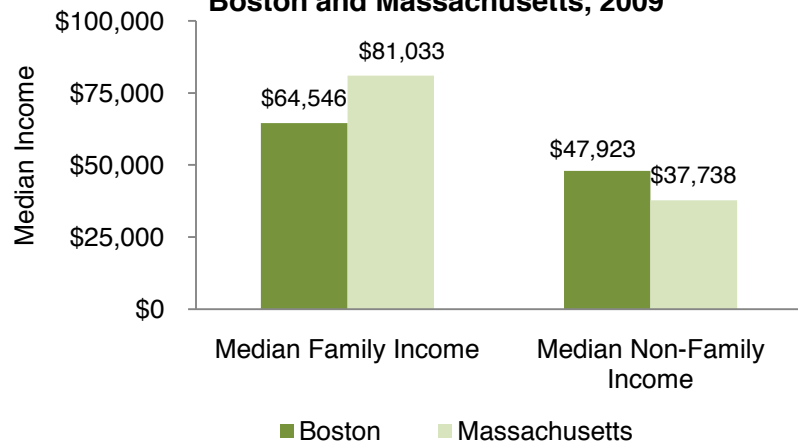


DATA SOURCE: U.S. Census Bureau, 2010 American FactFinder, 2010 Demographic Profile Data

Figure 2.2 Median Household Income by Family and Non-Family Household Types, Boston and Massachusetts, 2009

In 2009, the estimated median family household income in Boston was 20% lower than in Massachusetts overall. The estimated median income of non-family households (households in which the householder lived alone or with non-related individuals) was 27% higher in Boston than in the state.

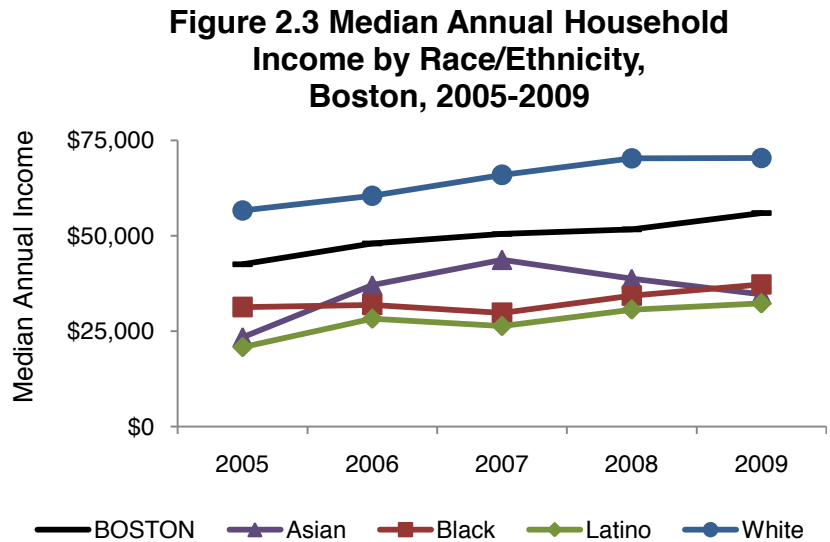
Figure 2.2 Median Household Income by Family and Non-Family Household Types, Boston and Massachusetts, 2009



DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ **Figure 2.3 Median Annual Household Income by Race/Ethnicity, Boston, 2005-2009**

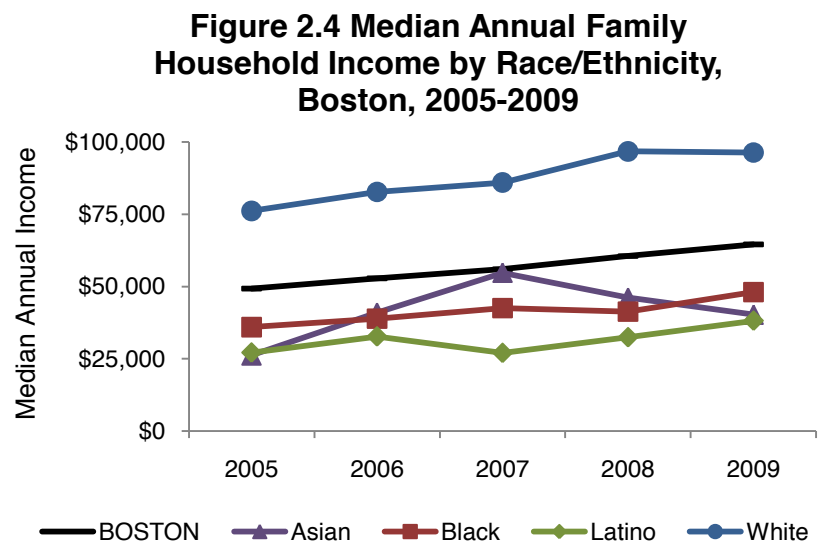
Between 2005 and 2009, the estimated median annual household income of Boston residents increased by 32% to \$55,979. Racial/ethnic group differences were observed. For all years, White resident households had a substantially higher estimated median annual household income in comparison to Asian, Black, and Latino resident households.



DATA SOURCE: U.S. Census Bureau, 2005-2009 American Community Survey

■ **Figure 2.4 Median Annual Family Household Income by Race/Ethnicity, Boston, 2005-2009**

A family household is defined as a household in which at least one other member of the household is related to the head of the house. The estimated median annual family household income among Boston residents was \$64,546 in 2009, a 31% increase from 2005.



DATA SOURCE: U.S. Census Bureau, 2005-2009 American Community Survey

Substantial differences in median family household income were observed by racial/ethnic group. In 2009, the estimated median annual family household income for White resident families was \$96,412, compared with \$40,264 for Asian, \$48,043 for Black, and \$38,128 for Latino resident families.

■ **Figure 2.5 Population Living Below Poverty Level by Selected Indicators, Boston, 2009**

In 2009, an estimated 17% of Boston residents lived below the poverty level. The U.S. Census Bureau uses a set of money income thresholds that vary by family size and composition to detect who is poor. If the total income for a family household or for an unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as living “below the poverty level.” This level is adjusted yearly as changes occur in the national economy’s Consumer Price Index and costs of living.

An educational gradient was observed among Boston residents living below the poverty level. A higher percentage of residents over the age of 25 with less than a HS school diploma lived below the poverty level compared to residents of the same age at higher education levels according to American Community Survey estimates. A lower percentage of residents with a bachelor degree or higher lived below the poverty level compared with residents at lower education levels.

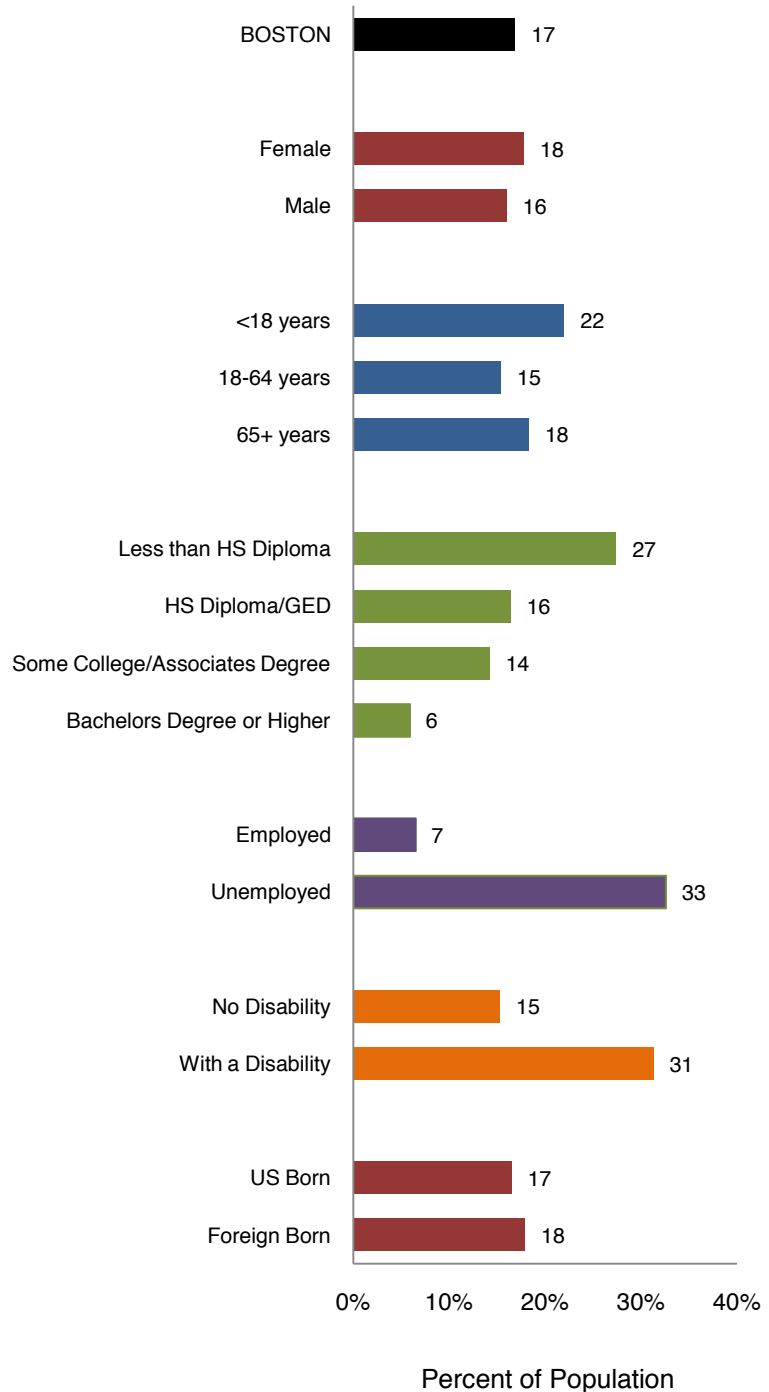
A higher percentage of unemployed residents lived below the poverty level in comparison to employed residents.

A higher percentage of disabled Boston residents reported living below the poverty level in comparison to non-disabled residents.

A higher percentage of residents under age 18 were living in poverty compared with residents ages 18 to 64.

The percentages of residents living in poverty were similar with respect to place of birth and gender.

Figure 2.5 Population Living Below Poverty Level by Selected Indicators, Boston, 2009

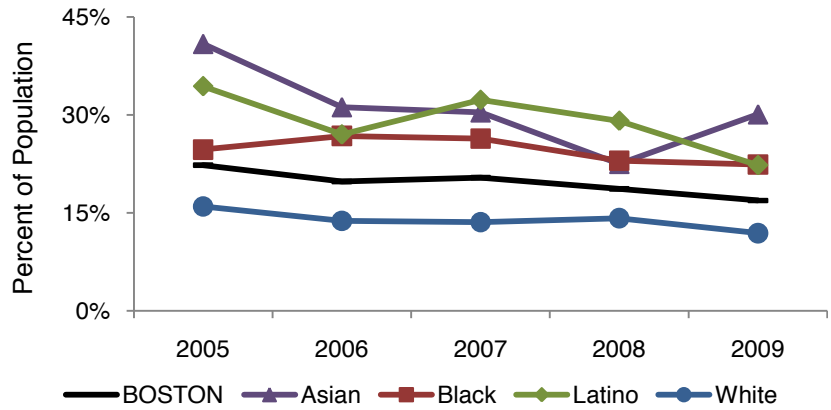


DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ Figure 2.6 Population Living Below Poverty Level by Race/Ethnicity, Boston, 2005-2009

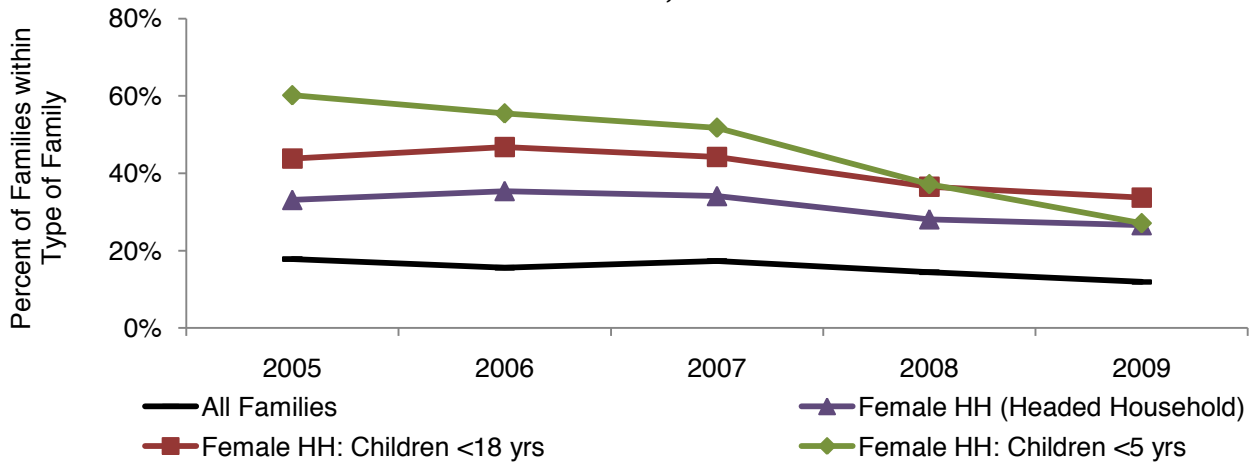
In 2009, an estimated 17% of Boston residents had an income that fell below the poverty line. The percentage of individuals living below the poverty line has remained fairly constant for Boston overall. However, there have been fluctuations in the percentage of the population living in poverty for Asian and Latino residents. In 2009, a lower percentage of White Boston residents were living below the poverty level compared to other racial/ethnic groups.

Figure 2.6 Population Living Below Poverty Level by Race/Ethnicity, Boston, 2005-2009



DATA SOURCE: U.S. Census Bureau, 2005-2009 American Community Survey

Figure 2.7 Families with Income Below Poverty Level by Family Type, Boston, 2005-2009

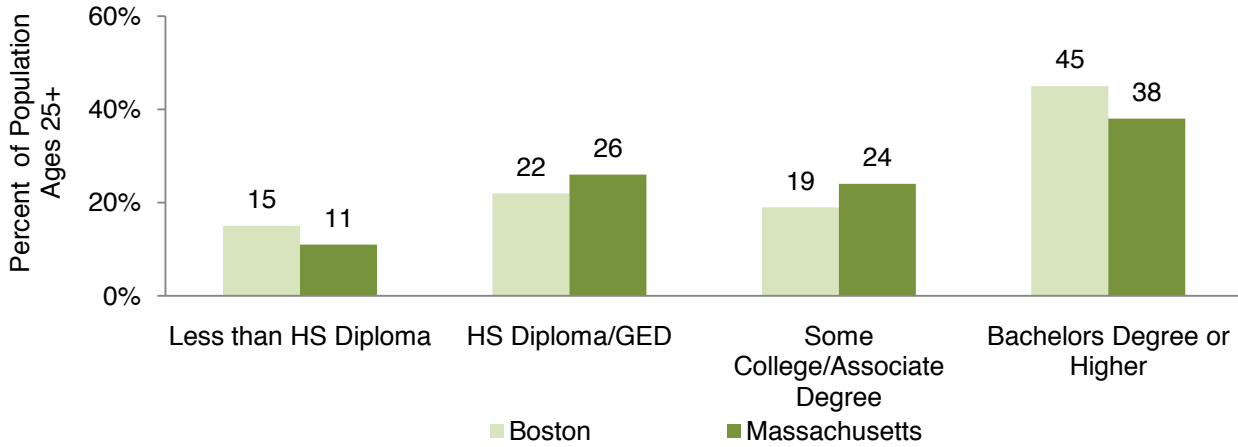


DATA SOURCE: U.S. Census Bureau, 2005-2009 American Community Survey

■ Figure 2.7 Families with Income Below Poverty Level by Family Type, Boston, 2005-2009

From 2005 to 2009, the estimated percentage of all families with income below the poverty level has consistently remained below 20%. The estimated percentages of female-headed households, female-headed households with children under age 18, and female-headed households with children under age five with income below poverty level were consistently above 20%.

Figure 2.8 Educational Attainment, Boston and Massachusetts, 2009

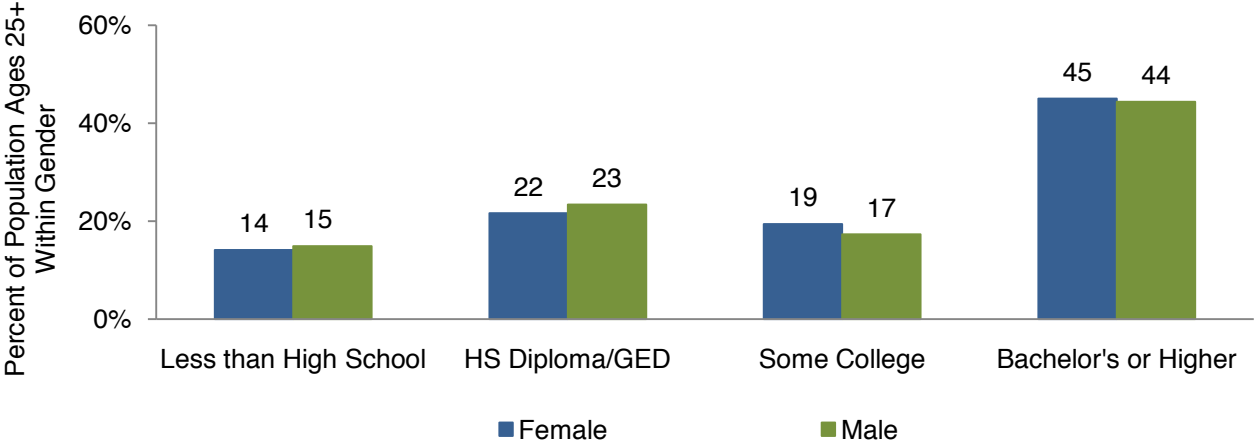


DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ **Figure 2.8 Educational Attainment, Boston and Massachusetts, 2009**

Comparing Boston estimates to Massachusetts of residents ages 25 and older by education level in 2009, higher percentages of Massachusetts residents had obtained a high school diploma/GED and completed some college or an associate degree compared to Boston residents. However, higher percentages of Boston residents had a Bachelors degree or higher and less than a high school diploma when compared to the state residents.

Figure 2.9 Educational Attainment by Gender, Boston, 2009



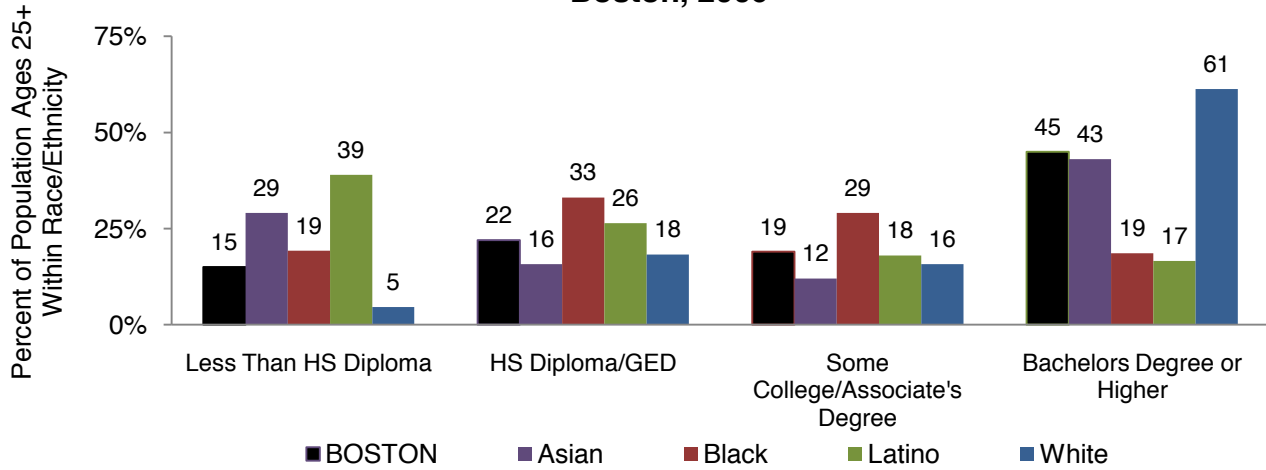
DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ **Figure 2.9 Educational Attainment by Gender, Boston, 2009**

In 2009, at each education level, females and males had approximately the same estimated level of achievement.



Figure 2.10 Educational Attainment by Race/Ethnicity, Boston, 2009

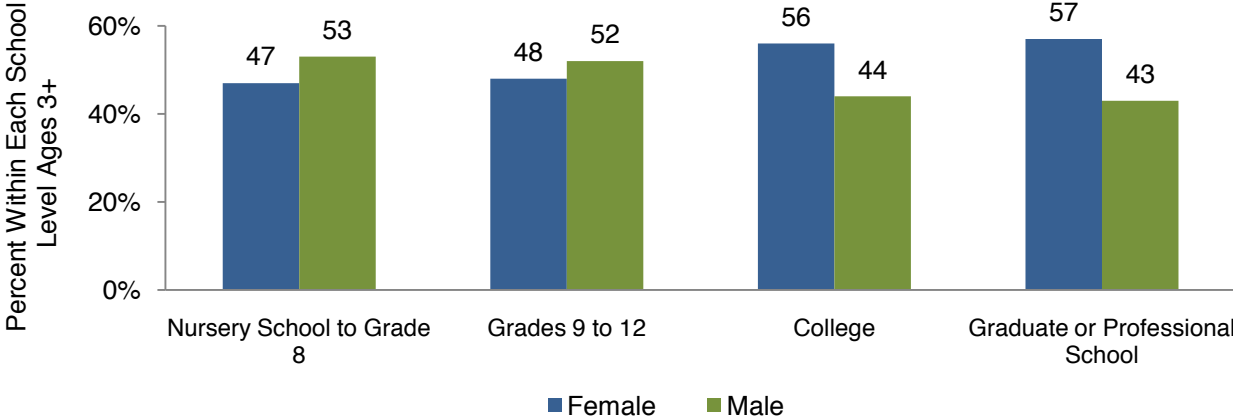


DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ **Figure 2.10 Educational Attainment by Race/Ethnicity, Boston, 2009**

In 2009, there were racial/ethnic differences in the estimates of educational attainment of Boston residents. Fifteen percent of Boston residents ages 25 and over had less than a high school diploma or GED. The percentage of Boston residents with less than a high school diploma or GED was highest among Latino adults (39%) and lowest among White adults (5%). By contrast, the percentage of adults who had attained a bachelor's degree or higher was highest among White adults and lowest among Black and Latino adults.

Figure 2.11 School Enrollment by Gender Distribution at Various Education Levels, Boston, 2009

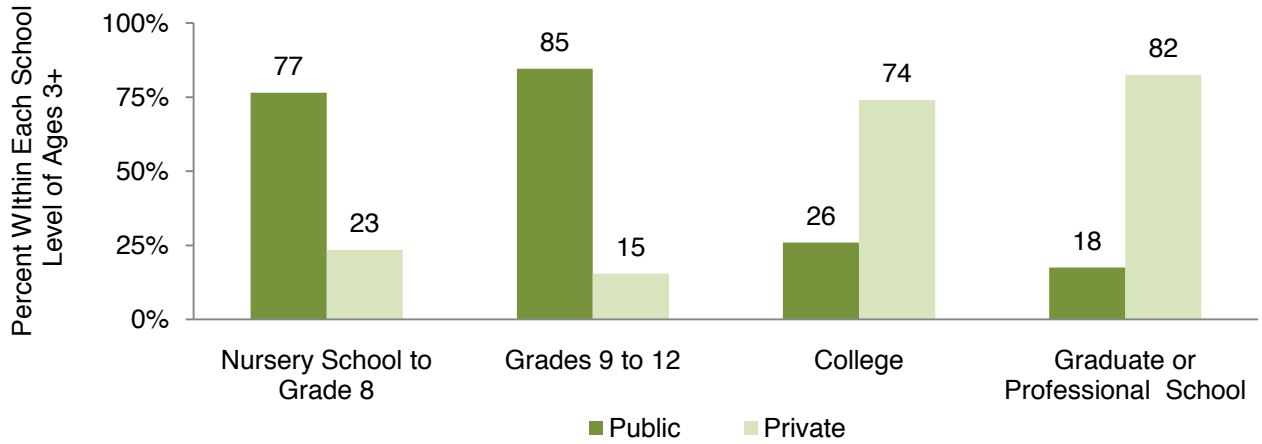


DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ **Figure 2.11 School Enrollment by Gender Distribution at Various Education Levels, Boston, 2009**

According to 2009 American Community Survey estimates, a higher percentage of Boston resident graduate/professional school enrollees were female than male. Conversely, a higher percentage of resident enrollees in nursery school to grade 8 and in grades 9 to 12 were male.

Figure 2.12 School Enrollment Type Distribution (Public vs. Private) at Various Education Levels, Boston, 2009

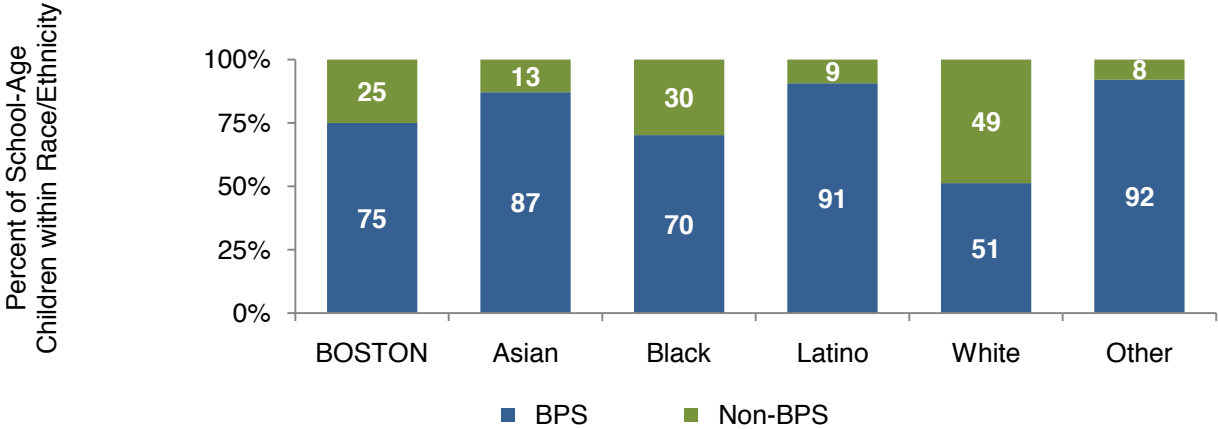


DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ **Figure 2.12 School Enrollment Type Distribution (Public vs. Private) at Various Education Levels, Boston, 2009**

An estimated majority of Boston residents in nursery school to grade 8 and in grades 9 to 12 attended Boston public schools. However, most Boston residents attending college or graduate/professional school attended private institutions.

Figure 2.13 Boston School-Age Children Attending School by Type of School and Race/Ethnicity, 2009



DATA SOURCE: Boston School Department, 2009

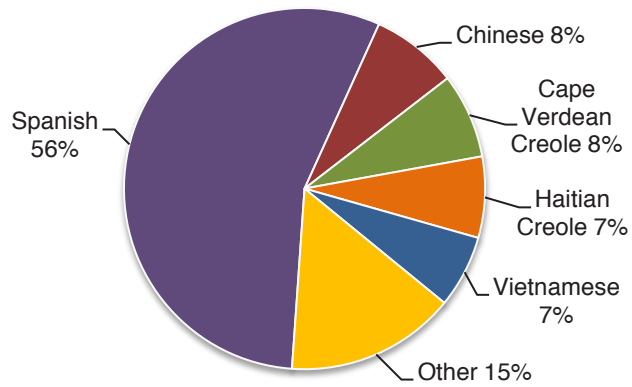
■ Figure 2.13 Boston School-Age Children Attending School by Type of School and Race/Ethnicity, 2009

Most Latino and Asian youth attended schools within the Boston public school system, 91% and 87%, respectively. By comparison, only half (52%) of White youth in Boston attended public schools.

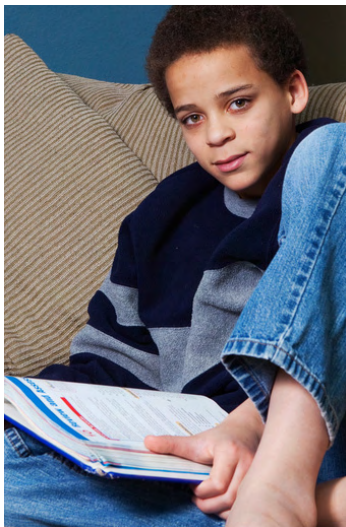
■ **Figure 2.14 Primary Language of Boston Public Schools English Language Learner (ELL) Students, 2009**

In 2009, 19% of Boston public school students, representing 40 countries, attended English Language Learner (ELL) programs (data not shown). Spanish was the primary language spoken by more than half (56%) of those students. Other common languages included Chinese, Cape Verdean Creole, Haitian Creole, and Vietnamese.

Figure 2.14 Primary Language of Boston Public Schools English Language Learners (ELL), 2009



DATA SOURCE: Boston School Department, 2009



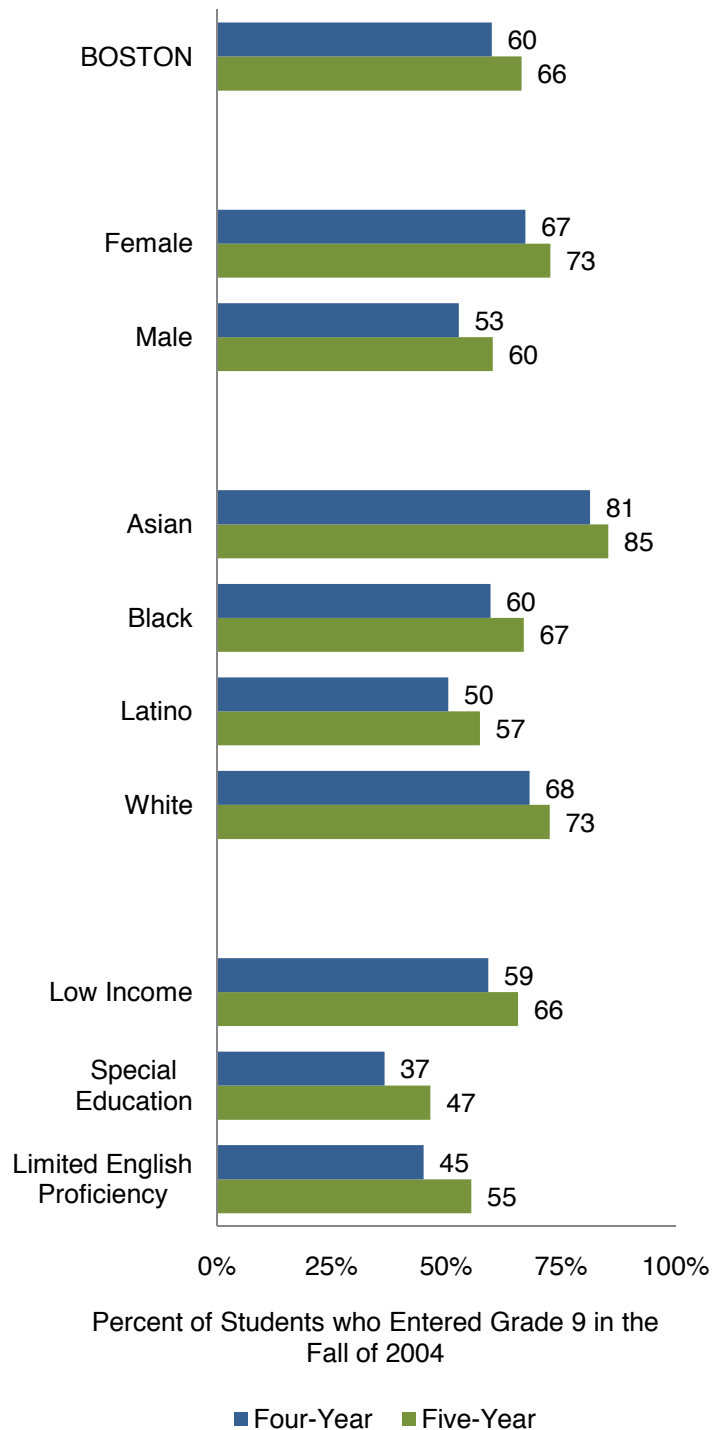
■ Figure 2.15 Boston Public Schools Four-Year and Five-Year High School Graduation Rates, Class of 2008

Figure 2.15 shows the four-year and five-year graduation rates for class of 2008 (defined as students who began high school in the fall of 2004 plus transfers into BPS minus transfers out of BPS and deaths.). After four years, 60% of the class had graduated. With an additional year, the graduation rate increased to 66%.

Females had higher four-year and five-year graduation rates compared to males. As a result of an extra year of schooling, the graduation rate for males increased by 14% compared to an 8% increase for females.

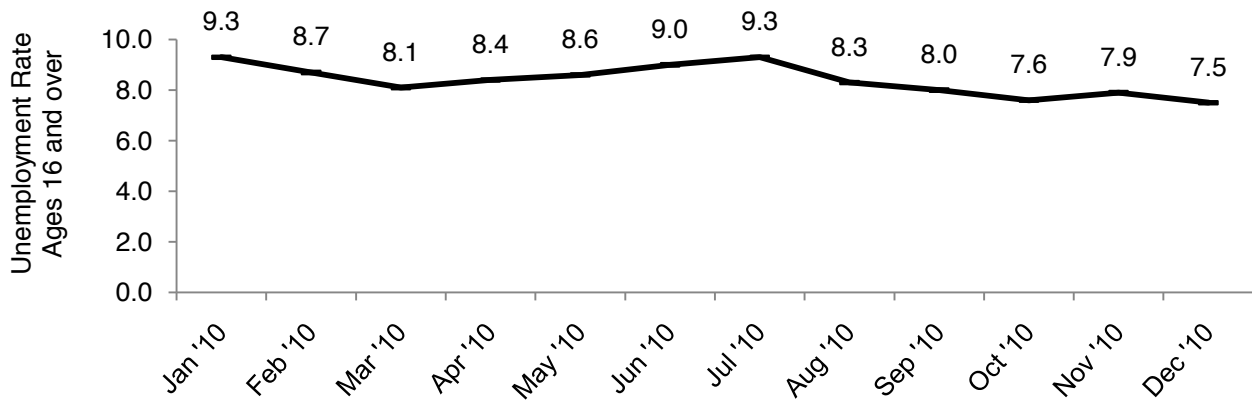
Asian students had the highest graduation rates at both four and five years. Latino and Black students showed the highest increases from four year to five years of schooling – the graduation rate increased 14% and 12% respectively. Special education students and limited English proficiency students benefitted most from an additional year of high school. The graduation rate for special education students and limited English proficiency students increased by 27% and 23%, respectively.

Figure 2.15 Boston Public Schools Four-Year and Five-Year High School Graduation Rates Class of 2008



DATA SOURCE: Boston School Department, 2009

Figure 2.16 Boston Unemployment Rate, January 2010 - December 2010

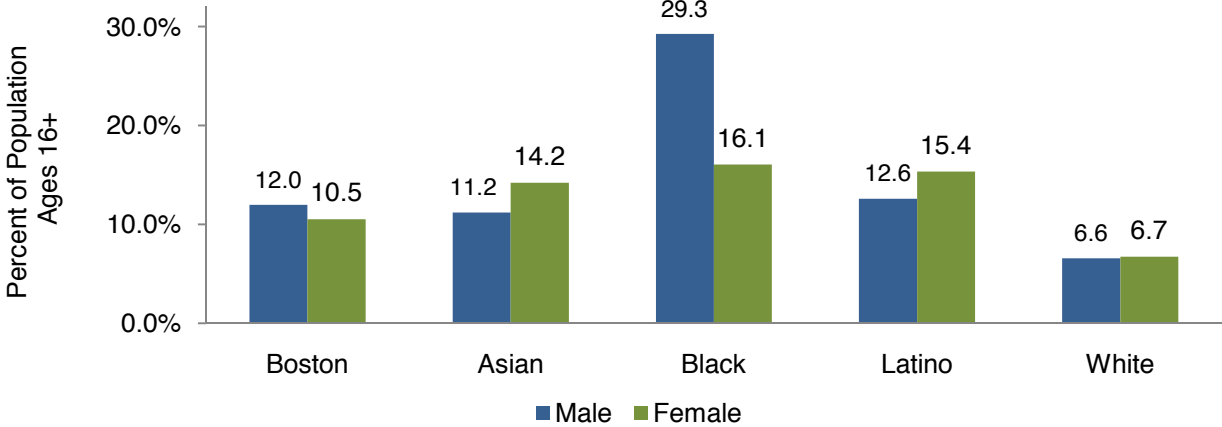


Source: U.S. Department of Labor, Bureau of Labor Statistics, 2008 and 2009 Local Area Unemployment Statistics
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation

■ **Figure 2.16 Boston Unemployment Rate, January 2010 to December 2010**

The monthly unemployment rate in Boston in January and July of 2010 was 9.3, the highest level in almost 20 years. In December 2010, the unemployment rate was 7.5, which was 19% lower than the peaks in January and July rate and the lowest level since April 2009.

Figure 2.17 Unemployment Rate by Race/Ethnicity and Gender, Boston, 2009

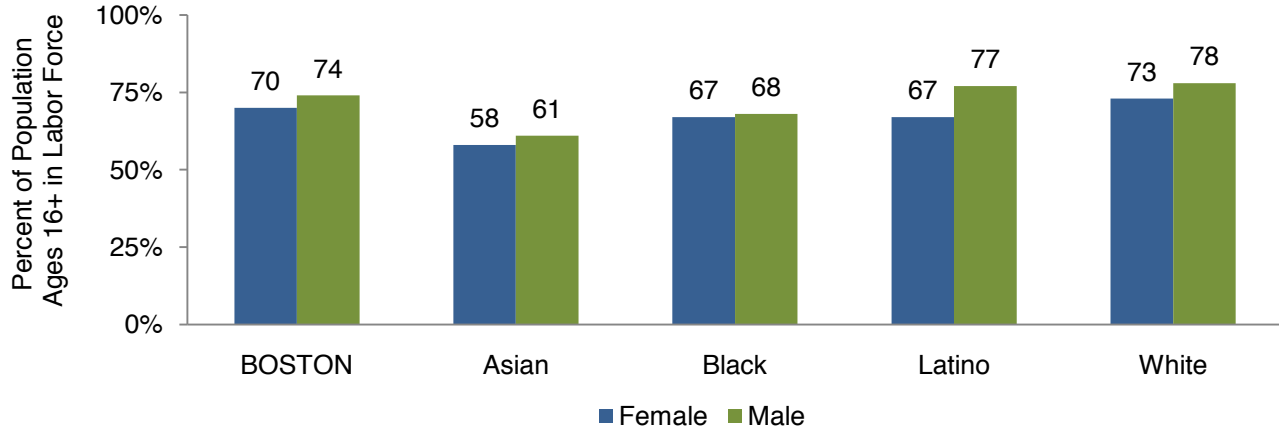


DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ **Figure 2.17 Employment Rate by Race/Ethnicity and Gender, Boston, 2009**

The unemployment rate was highest among Black males and lowest among White females and males.

Figure 2.18 Labor Force Participation Rate by Race/Ethnicity and Gender, Boston, 2009



DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

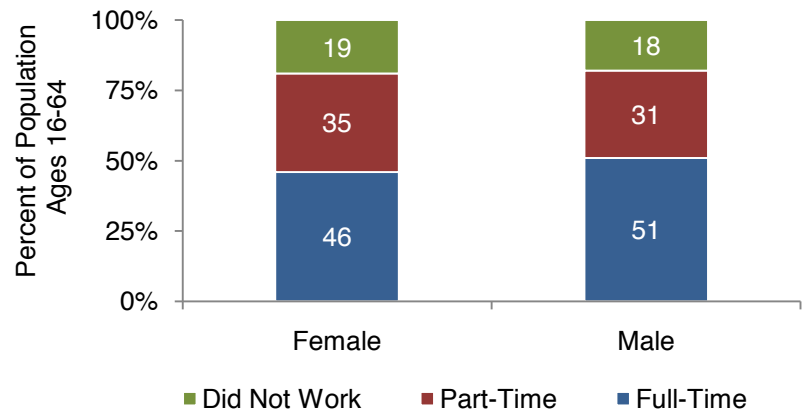
■ **Figure 2.18 Labor Force Participation Rate by Race/Ethnicity and Gender, Boston, 2009**

The estimated Labor Force Participation Rate (LFPR) was highest among White and Latino males. The LFPR was lowest among Asian females and males.

■ **Figure 2.19 Employment Status by Gender, Boston, 2009**

In 2009, an estimated 46% of females ages 16 to 64 were employed full-time, while 51% of males were employed full-time.

Figure 2.19 Employment Status by Gender, Boston, 2009

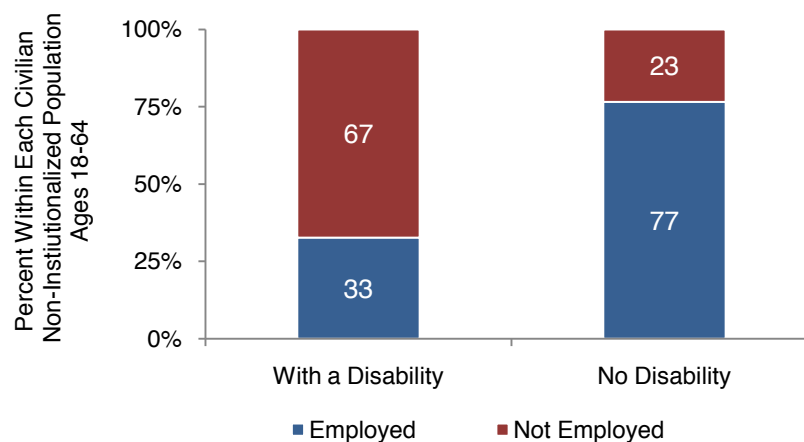


DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ **Figure 2.20 Employment Status by Disability Status, Boston, 2009**

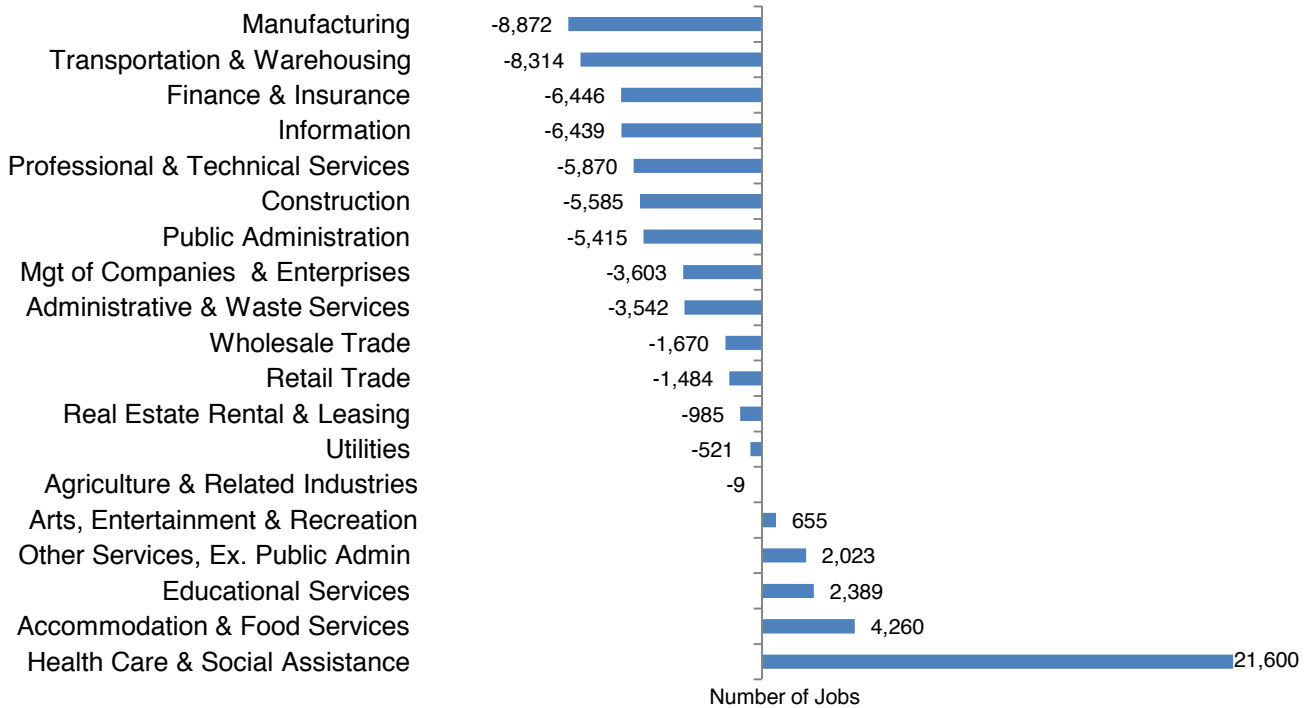
In 2009, only an estimated 33% of the civilian non-institutionalized population ages 18 to 64 with a disability were employed, while 77% of the same population but without a disability were employed.

Figure 2.20 Employment Status by Disability Status, Boston, 2009



DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

Figure 2.21 Jobs Gained or Lost in Boston Industries Between 2001 and 2009



DATA SOURCE: Massachusetts Executive Office of Labor and Workforce Development’s Employment and Wage (ES-202) data

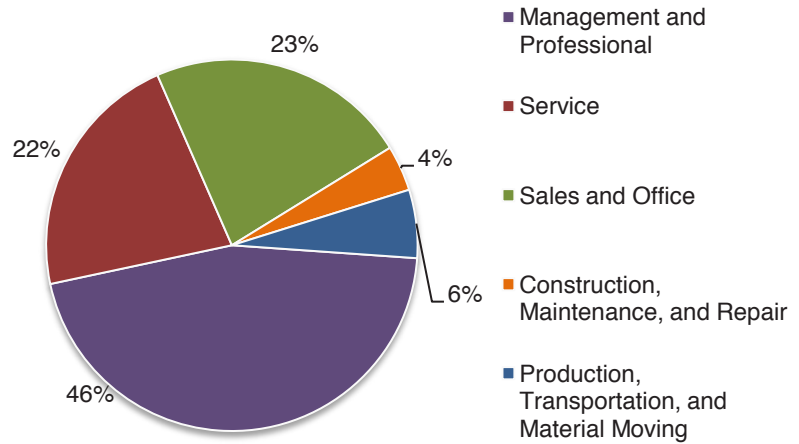
■ **Figure 2.21 Jobs Gained or Lost in Boston Industries between 2001 and 2009**

Between 2001 and 2009, Boston lost 27,807 jobs. During this time, five industrial sectors added jobs while 14 sectors lost jobs. The largest job gains occurred within the “Health Care and Social Assistance” sector, which gained 21,600 jobs – a 23% increase. The largest losses occurred in the “Manufacturing” and the “Transportation and Warehousing” sectors. Manufacturing lost 8,872 jobs, a decrease of 51%, while “Transportation and Warehousing” lost 8,314 jobs, a decrease of 25%.

■ **Figure 2.22 Work Type Distribution Among Employed Residents, Boston, 2009**

In 2009, an estimated 46% of the civilian employed population ages 16 and over were employed in management and professional occupations, 23% were employed in sales and office occupations and 22% were employed in the service industry.

Figure 2.22 Work Type Distribution Among Employed Residents, Boston, 2009

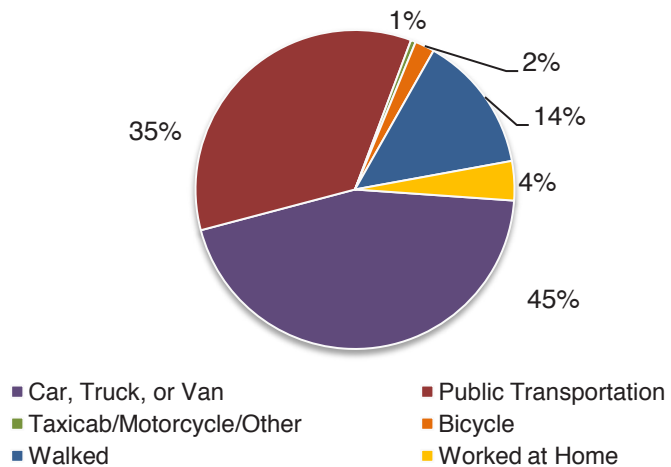


DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

■ **Figure 2.23 Workers' Means of Transportation to Workplace, Boston, 2009**

In 2009, an estimated 45% of Boston's employed residents drove to work in a car, truck, or van. Thirty-five percent of working residents relied on public transportation and 14% walked to work.

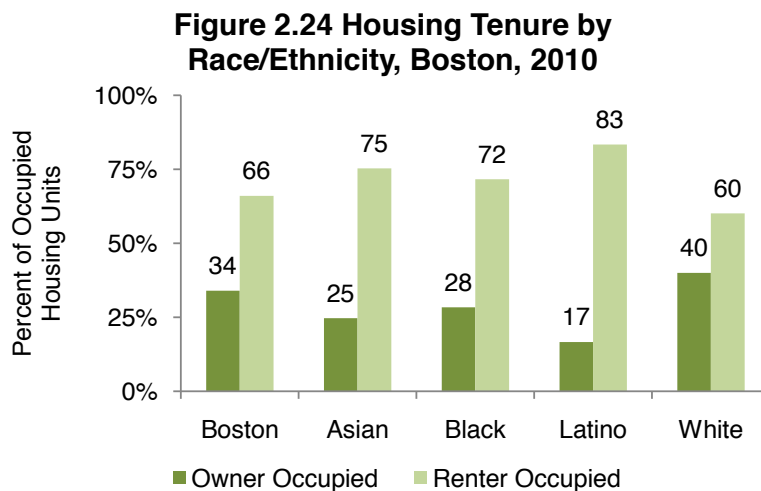
Figure 2.23 Workers' Means of Transportation to Workplace, Boston, 2009



DATA SOURCE: U.S. Census Bureau, 2009 American Community Survey

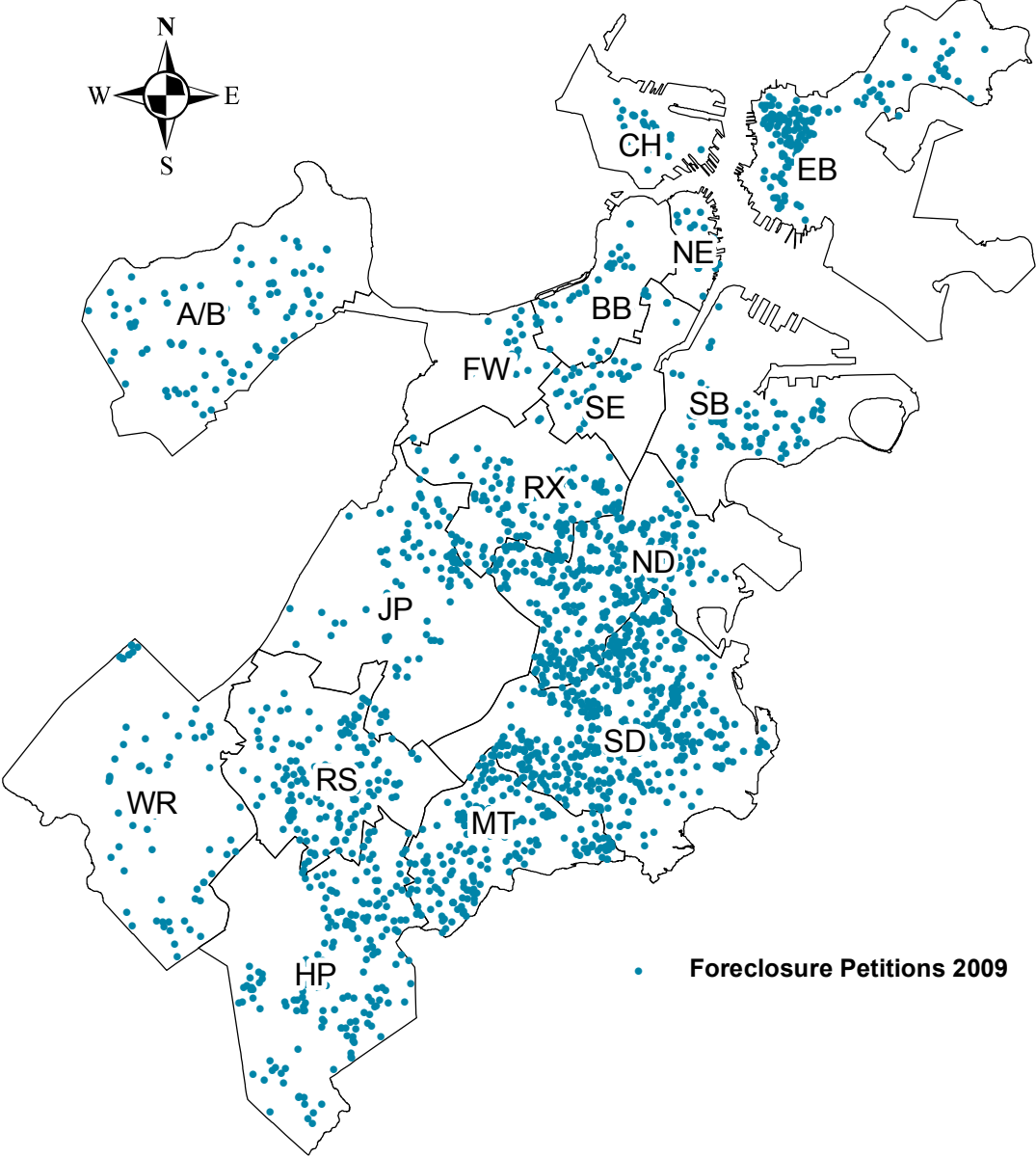
■ Figure 2.24 Housing Tenure by Race/Ethnicity, Boston, 2010

Housing tenure refers to the rental or ownership status of a housing unit. In 2010, 34% of Boston housing units were owner occupied. Housing tenure varied by race/ethnicity. Owner occupancy was highest among White residents (40%) and lowest among Latino residents (17%). Conversely, renter occupancy was highest among Latino residents (83%) and lowest among White residents (60%).



DATA SOURCE: U.S. Census Bureau, 2010 American FactFinder, Summary File 1

Figure 2.25 Foreclosure Petitions by Neighborhood, 2009



■ Figure 2.25 Foreclosure Petitions by Neighborhood, 2009

A foreclosure petition is the first step in the foreclosure process of a home. According to the City of Boston Department of Neighborhood Development’s published data in “Foreclosure Trends 2009”, the number of foreclosure petitions in Boston was 2,200 in 2009. The highest numbers of foreclosure petitions were in the neighborhoods of South Dorchester, Roxbury, and Mattapan.

Figure 2.26 Foreclosure Petitions in Boston Neighborhoods, 2007, 2008, and 2009

	2007	2008	2009	% Change from 2007-2009
BOSTON	2,430	1,897	2,200	-9%
Allston/Brighton	67	60	93	39%
Back Bay†	34	32	57	68%
Charlestown	32	26	23	-28%
East Boston	169	185	166	-2%
Fenway	11	9	14	27%
Hyde Park	182	156	237	30%
Jamaica Plain	95	70	63	-34%
Mattapan	241	183	251	4%
North Dorchester	410	276	168	-59%
North End/Downtown	2	2	5	150%
Roslindale	132	109	149	13%
Roxbury	192	155	339	77%
South Boston	94	97	94	0%
South Dorchester	664	462	430	-35%
South End†	32	22	41	28%
West Roxbury	75	53	70	-7%

*Includes Beacon Hill and West End

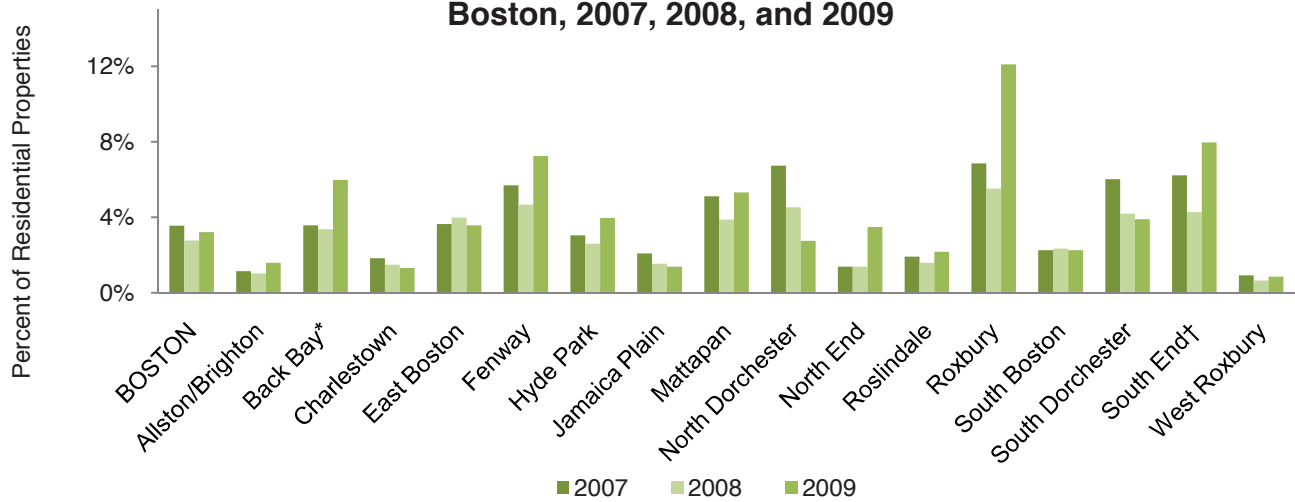
†Includes Chinatown

DATA SOURCE: City of Boston, Department of Neighborhood Development

■ Figure 2.26 Foreclosure Petitions in Boston Neighborhoods, 2007, 2008, and 2009

The total numbers of foreclosure petitions in Boston decreased from 2007 to 2008 from 2,430 to 1,897 respectively. However, the number increased again in 2009 to 2,200. The increase in numbers is attributed to multiple foreclosure deeds recorded for the same property following a Massachusetts Land Court case ruling in March of 2009. The case involved foreclosing lenders which failed to show proof that they held ownership of the mortgages. The court ruling ultimately effected thousands of foreclosures. Lenders then “re-foreclosed” properties, causing the total numbers of foreclosures to include multiple foreclosures on the same properties (City of Boston Department of Neighborhood Development, “Foreclosure Trends 2009”).

Figure 2.27 Foreclosure Petitions as Percentage of all Residential Properties, Boston, 2007, 2008, and 2009



*Includes Beacon Hill and West End

†Includes Chinatown

DATA SOURCE: City of Boston, Department of Neighborhood Development

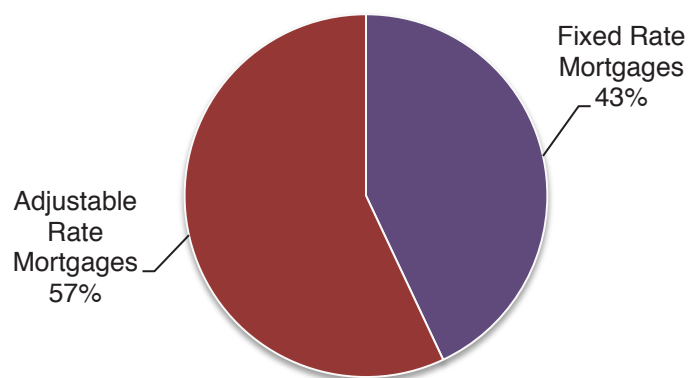
Figure 2.27 Foreclosure Petitions as Percentages of all Residential Properties, Boston, 2007, 2008, and 2009

In 2009, 3.2% of residential properties resulted in a foreclosure petition, an increase from 2.8% in 2008, and a decrease from 3.5% in 2007. Through all three years, the highest percentages were in the neighborhood of Roxbury and the lowest percentages were in West Roxbury.

Figure 2.28 Residential Foreclosures by Type of Loan, Boston, 2009

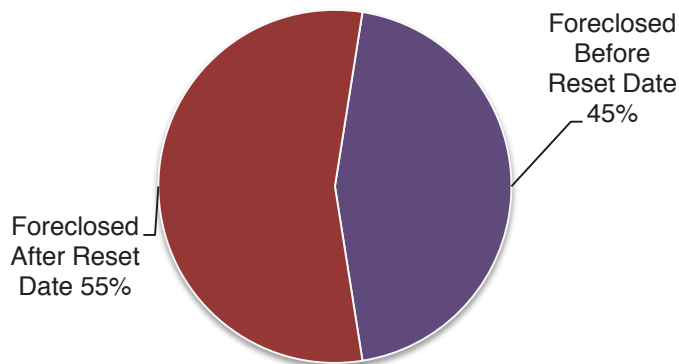
Foreclosure deeds represent the last step in the foreclosure process. In 2009, 57% of foreclosure deeds in Boston were adjustable rate mortgages, while 43% were fixed rate mortgages (City of Boston Department of Neighborhood Development, "Foreclosure Trends 2009").

Figure 2.28 Residential Foreclosures by Type of Loan, Boston, 2009



DATA SOURCE: City of Boston, Department of Neighborhood Development

Figure 2.29 Residential Foreclosures for Adjustable Rate Mortgages, Boston, 2009

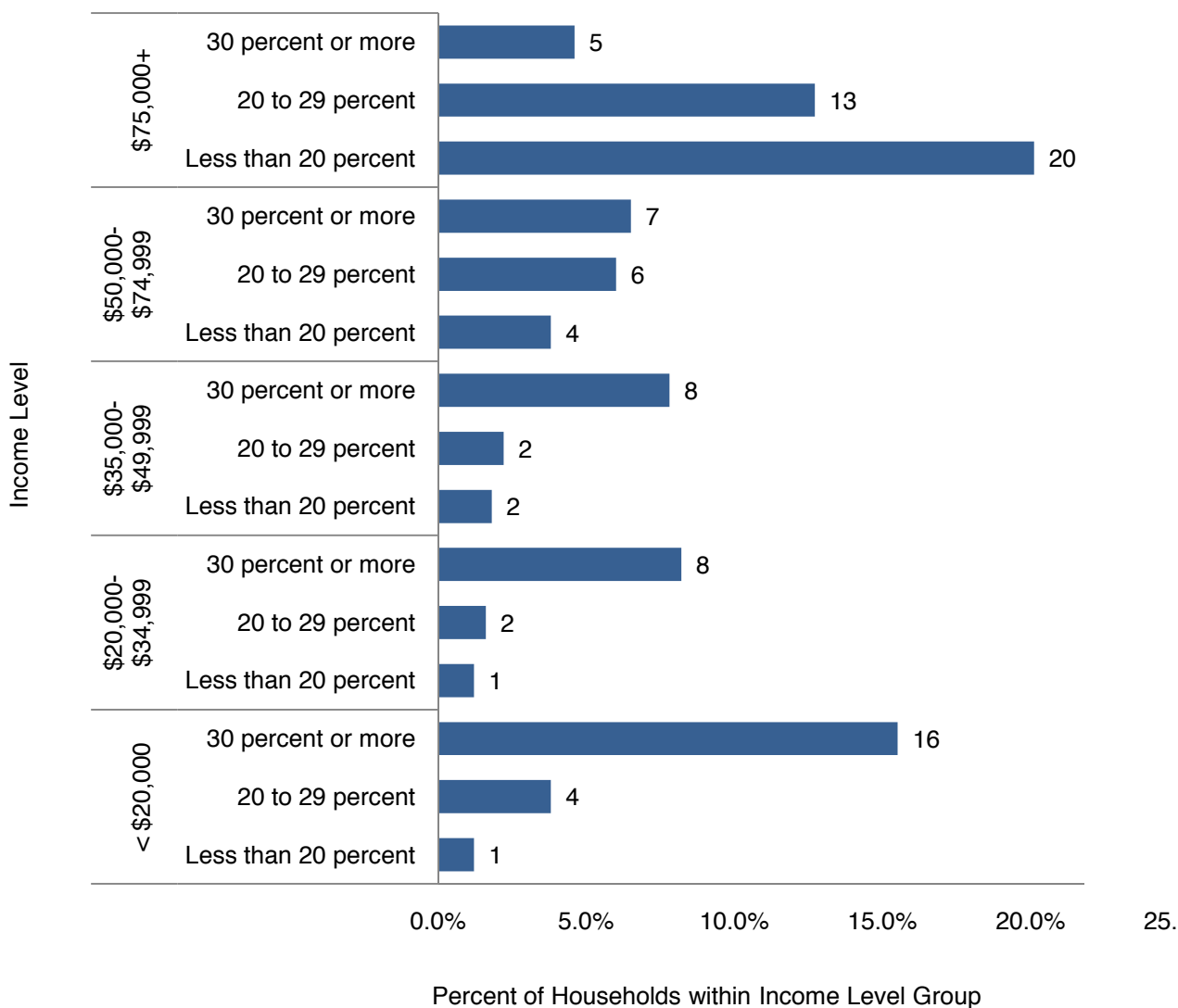


DATA SOURCE: City of Boston, Department of Neighborhood Development

■ **Figure 2.29 Residential Foreclosures for Adjustable Rate Mortgages, Boston, 2009**

In 2009, 45% of homes in Boston with an adjustable rate mortgage foreclosed before the reset date of the adjustable rate mortgage compared to 55% which foreclosed after the reset date. This is the first year since 2007 that the majority of ARMs foreclosed after their reset date (data not show) (City of Boston Department of Neighborhood Development, “Foreclosure Trends 2009”).

Figure 2.30 Monthly Housing Cost as a Percentage of Household Income by Income Level, 2009



DATA SOURCE: US Census Bureau, 2005-2009, American Community Survey

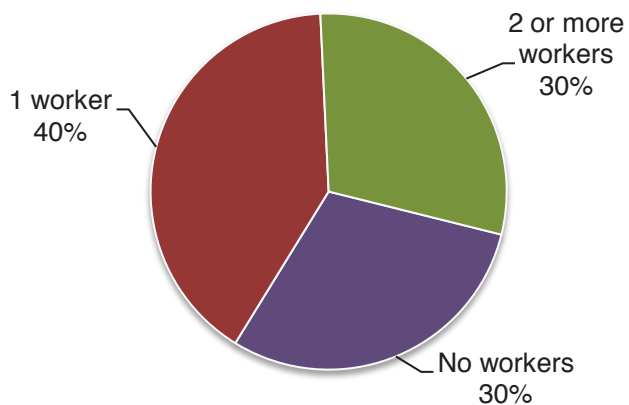
■ **Figure 2.30 Monthly Housing Cost as a Percentage of Household Income by Income Level, 2009**

In 2009, 16% of Boston households at an income level of lower than \$20,000 spent 30% or more of their income on housing costs. In comparison, 8% of households in each of the income level groups of \$20,000-\$34,999 and \$35,000-\$49,999 spent 30% or more on housing costs. Five percent of households in the highest income group (\$75,000 or more) spent 30% or more on housing costs.

■ **Figure 2.31 Households Receiving Food Stamps in the Past Year by Employment Status, 2009**

In 2009, 70% of all households receiving food stamps in the past year had at least one employed worker.

Figure 2.31 Households Receiving Food Stamps in the Past Year by Employment Status, 2009



DATA SOURCE: U.S. Census, 2009 Community Survey

**Figure 2.32 Food Stamp Cases in Boston Neighborhoods,
January 2008 and January 2010**

	January 2008	January 2010	Change from 2008 - 2010	% Change from 2008 - 2010
Boston	71,308	65,793	-5,515	-8%
Allston/Brighton	3,563	3,585	22	1%
Back Bay*	1,695	2,213	518	31%
Charlestown	1,782	1,290	-492	-28%
East Boston	4,240	4,298	58	1%
Fenway	2,446	2,415	-31	-1%
Hyde Park	2,847	2,719	-128	-4%
Jamaica Plain	3,365	2,915	-450	-13%
Mattapan	4,014	3,733	-281	-7%
North Dorchester	13,652	10,755	-2,897	-21%
Roslindale	2,942	2,511	-431	-15%
Roxbury	9,246	7,841	-1,405	-15%
South Boston	3,465	2,993	-472	-14%
South Dorchester	12,668	10,771	-1,897	-15%
South End†	4,764	6,930	2,166	45%
West Roxbury	619	824	205	33%

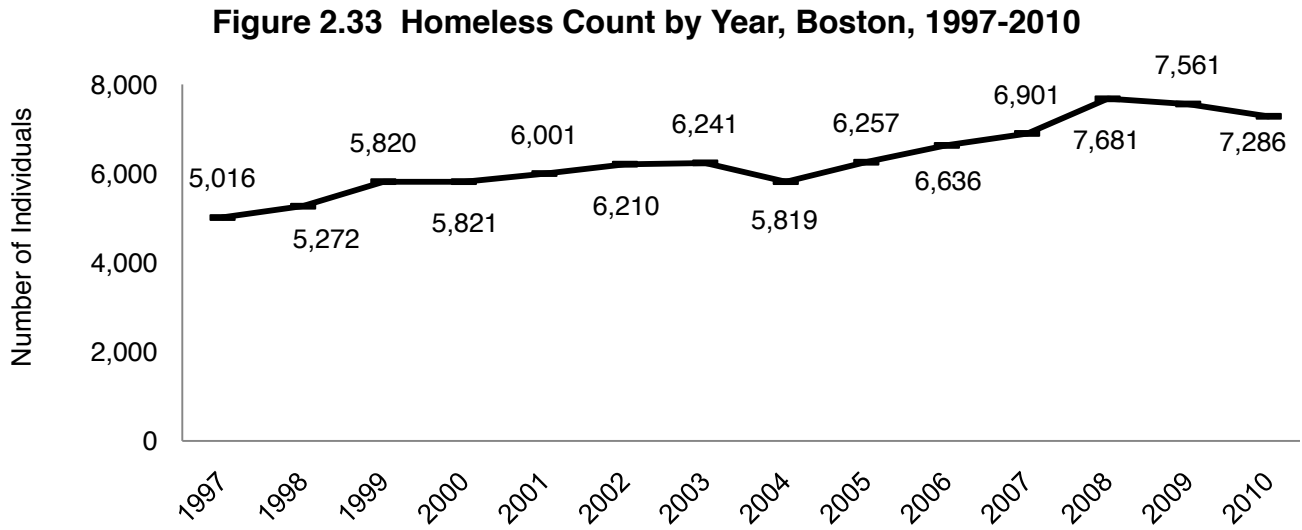
*Includes Beacon Hill, West End, and North End

†Includes Chinatown

DATA SOURCE: Commonwealth of Massachusetts, Department of Transitional Assistance

■ **Figure 2.32 Food Stamp cases in Boston Neighborhoods, January 2008 and January 2010**

Between January 2008 and January 2010, the number of food stamp cases in Boston decreased by 8%. The neighborhoods with the largest percentage increase in food stamp cases were the South End, West Roxbury, and the Back Bay. The neighborhoods with the largest percentage decrease in food stamp cases were Charlestown and North Dorchester.

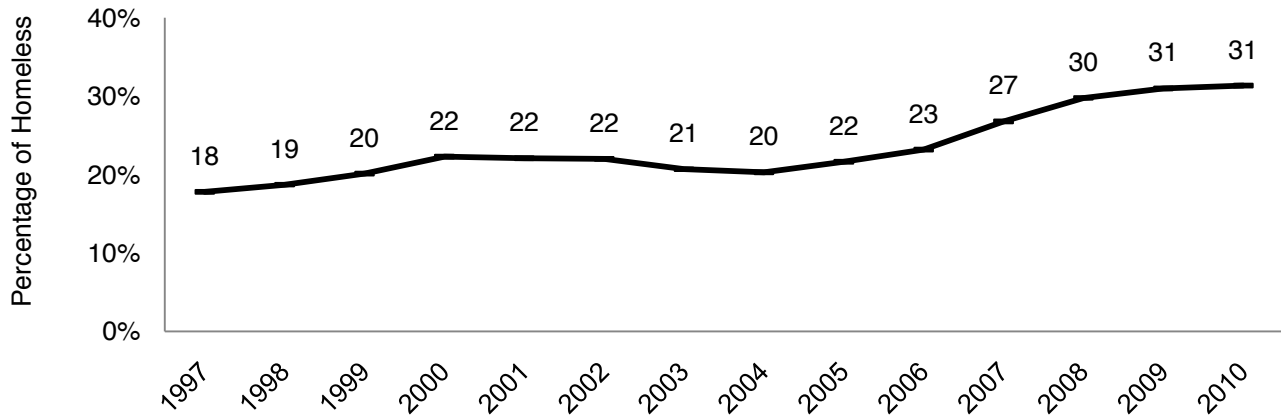


DATA SOURCE: Homeless Counts, City of Boston Emergency Shelter

■ Figure 2.33 Homeless Count by Year, 1997-2010

There were more than 7,000 homeless individuals counted in Boston in 2010. Between 2004 and 2008, the number of homeless individuals increased by 32%. The number decreased by 5% between 2008 and 2010.

Figure 2.34 Percentage of Homeless who are Children, Boston, 1997-2009



DATA SOURCE: Homeless Counts, City of Boston Emergency Shelter

■ **Figure 2.34 Percentage of Homeless who are Children, 1997-2009**

In 2009, 31% of Boston’s homeless were children. There has been a steady increase in the percentage of homeless individuals who were children since 2004 when 20% of all homeless individuals were children.



Figure 2.35 Residents with Health Insurance Coverage by Selected Indicators, 2010

In 2010, 96% of Boston residents had health insurance coverage.

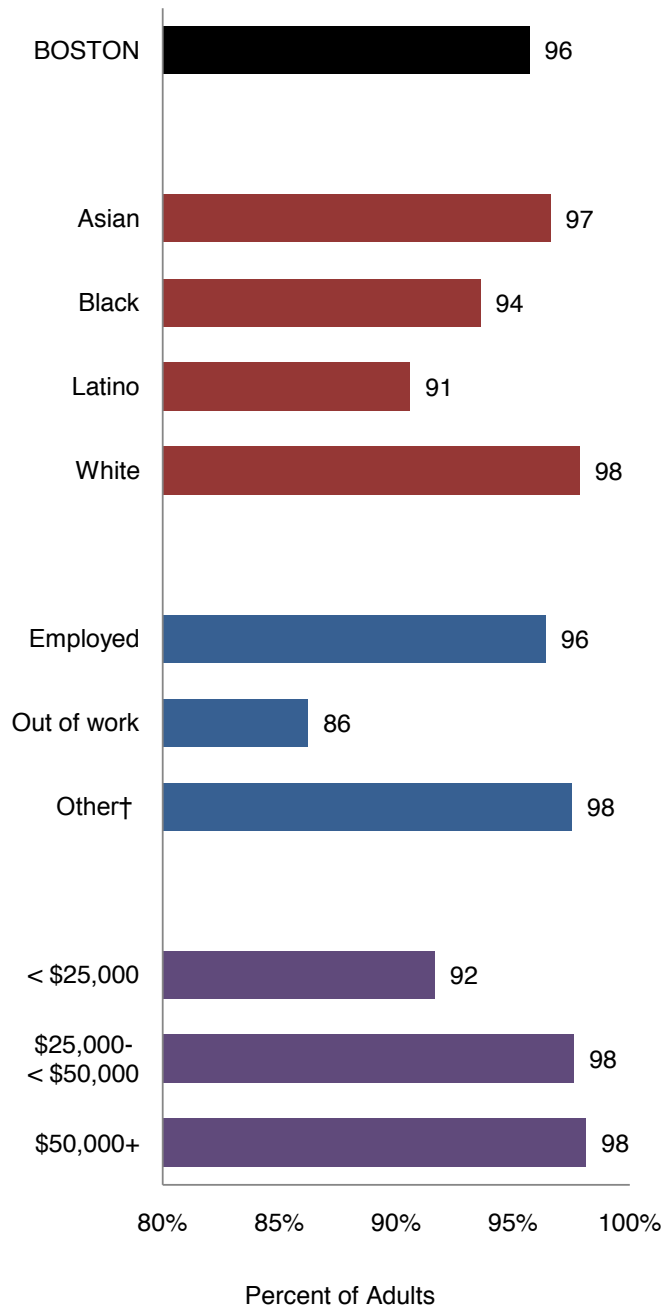
A lower percentage of Latino adults reported having health insurance compared to White adults.

A higher percentage of employed and other (includes students, homemakers, retirees, and individuals who are unable to work) adults reported having health insurance compared to adults who were out of work.

Adults with a household income less than \$25,000 reported a lower percentage of health insurance coverage compared to adults with a household income equal to or greater than \$25,000.

The quality (or extent) of coverage varies. Other factors including physician visit co-pays, insurance deductibles, and prescription medication costs, can pose as additional barriers to accessing health care.

Figure 2.35 Residents with Health Insurance Coverage by Selected Indicators, 2010



† Includes students, homemakers, retirees, and individuals who are unable to work.

DATA SOURCE: Boston Behavioral Risk Factor Survey 2008, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ **Figure 2.36 Residents with Dental Insurance Coverage by Selected Indicators, 2008**

Dental insurance coverage is not universal in Massachusetts. Of the residents who had general health insurance, 27% did not have dental insurance (data not shown).

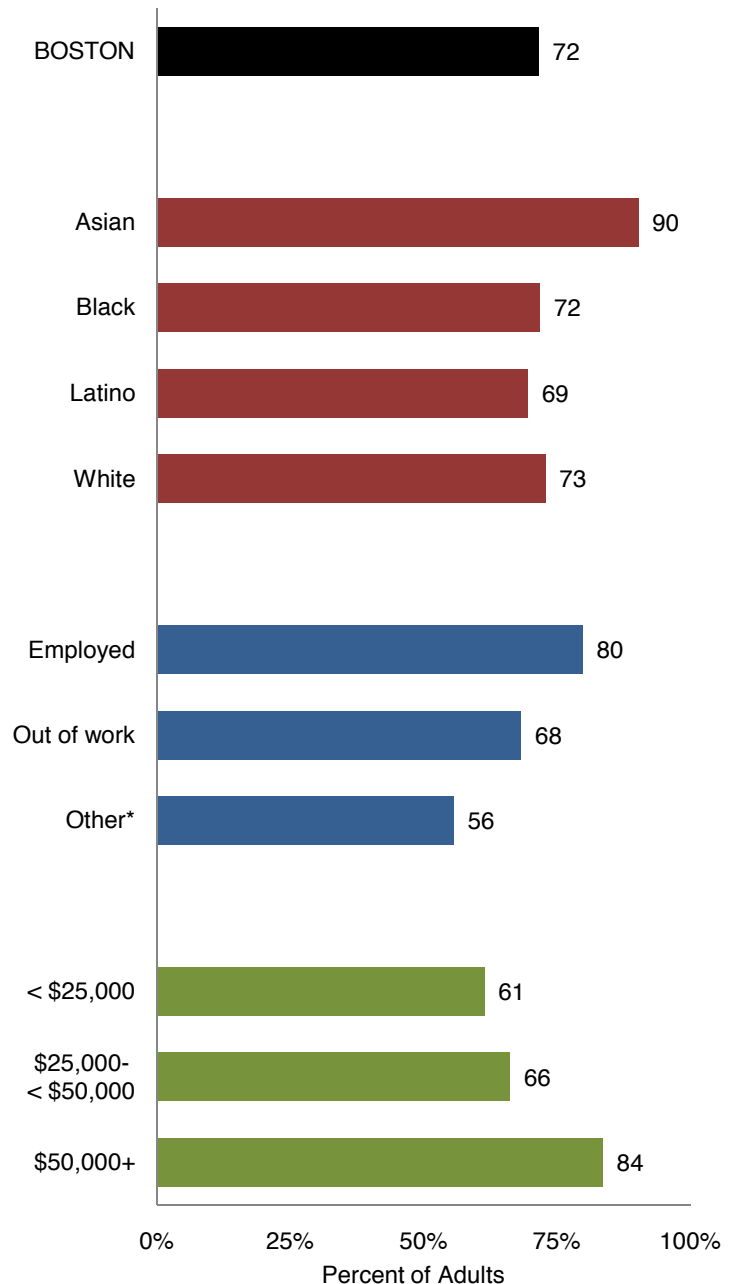
In 2008, 72% of Boston adult residents reported having dental insurance to cover routine dental visits.

A higher percentage of Asian adult Boston residents reported having dental insurance compared to Black, Latino, and White residents.

A higher percentage of residents who were employed reported having dental insurance compared to residents characterized as other (i.e. students, homemakers, retirees, and individuals who were unable to work). The percentage of adult residents who reported having dental insurance was statistically similar for employed and out of work residents.

A higher percentage of residents with reported household income earnings of \$50,000 or more had dental insurance coverage in comparison to those with less income.

Figure 2.36 Residents with Insurance to Cover Routine Dental Care by Selected Indicators, 2008



*Includes students, homemakers, retirees, and individuals who are unable to work.

DATA SOURCE: Boston Behavioral Risk Factor Survey 2008, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Figure 2.37 Dental Cleaning within the Past Year by Selected Indicators, 2010

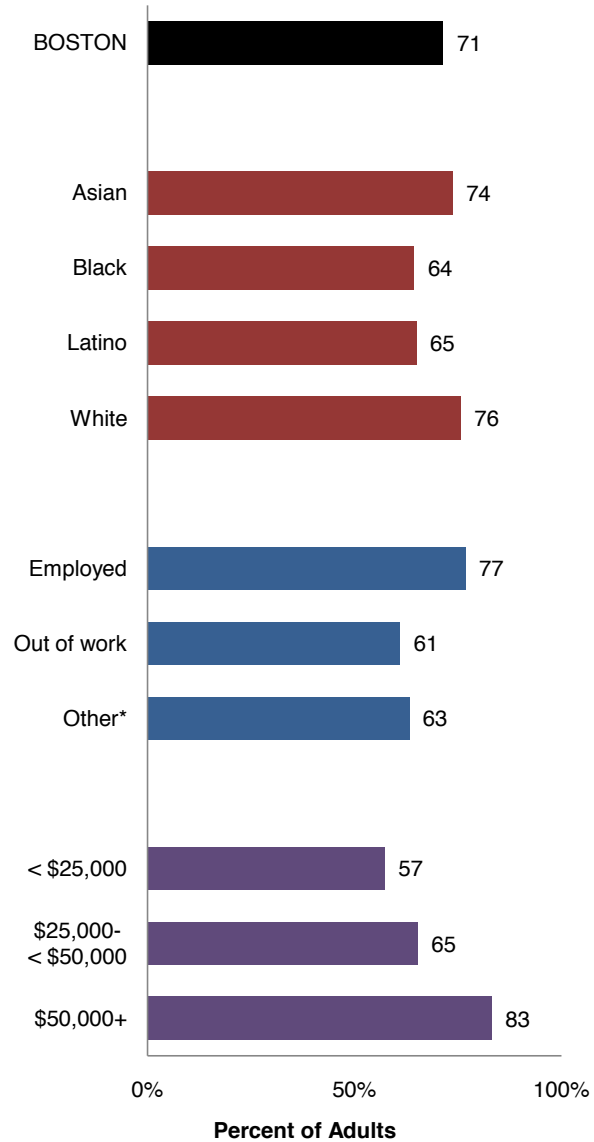
In 2010, nearly three-fourths of Boston residents had their teeth cleaned by a dentist or dental hygienist within the past year.

The percentage of Black and Latino residents who had their teeth professionally cleaned was smaller than the percentage of White residents.

A higher percentage of employed residents had their teeth cleaned within the past year compared to adults who were out of work and other Boston adults (includes students, homemakers, retirees, and individuals who are unable to work).

A smaller percentage of residents with a household income of less than \$50,000 a year had their teeth professionally cleaned within the past year compared to residents with an income of \$50,000 or more. Furthermore, a significantly lower percentage of residents with an income of less \$25,000 a year had their teeth professionally cleaned compared to Boston overall.

Figure 2.37 Dental Cleaning within the Past Year by Selected Indicators, 2010



*Includes students, homemakers, retirees, and individuals who are unable to work.

DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Notes and Data Analysis for Boston Socioeconomic Profile

Figure 2.1 Type of Household, Boston, 2010

NOTE: Data are estimates based on the American Community Survey

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.2 Median Household Income by Family and Non-Family Household Types, Boston, 2009

NOTE: Data are estimates based on the American Community Survey

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.3 Median Annual Household Income by Race/Ethnicity, Boston, 2005-2009

NOTE: Data are estimates based on the American Community Survey. A family household (usually referred to as a “family”) consists of a householder (formerly referred to as head of house) and individuals living in the household who are related to the householder by birth, marriage, or adoption. People in a household who are related to the householder are regarded as members the family. Non-related individuals who live in the household are not considered as part of the family. In comparison, a household includes all related and unrelated individuals who occupy a housing unit. Individuals who live alone are considered a household of one. Annual family income is the total annual pre-tax money income from all family members over the age 15. It includes wages and salary, as well as income received from sources such as unemployment insurance, child support, and dividends from investments. Annual household income is defined the same as annual family income, except that it includes the annual income of all individuals over 15 residing in the housing unit. Median annual family income and median annual household income refers to the amount which divides the group in half; that is, half of the households will fall above the median and half will fall below the median.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.4 Median Annual Family Household Income by Race/Ethnicity, Boston, 2005-2009

NOTE: Data are estimates based on the American Community Survey. A family household (usually referred to as a “family”) consists of a householder (formerly referred to as head of house) and individuals living in the household who are related to the householder by birth, marriage, or adoption. People in a household who are related to the householder are regarded as members the family. Non-related individuals who live in the household are not considered as part of the family. In comparison, a household includes all related and unrelated individuals who occupy a housing unit. Individuals who live alone are considered a household of one. Annual family income is the total annual pre-tax money income from all family members over the age 15. It includes wages and salary, as well as income received from sources such as unemployment insurance, child support, and dividends from investments. Annual household income is defined the same as annual family income, except that it includes the annual income of all individuals over 15 residing in the housing unit. Median annual family income and median annual household income refers to the amount which divides the group in half; that is, half of the households will fall above the median and half will fall below the median.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.5 Population Living Below Poverty Level by Selected Indicators, Boston, 2009

NOTE: Data are estimates based on the American Community Survey. Poverty statistics in ACS products adhere to the standards specified by the Office of Management and Budget in Statistical Policy Directive 14. The Census Bureau uses a set of dollar value thresholds that vary by family size and composition to determine who is in poverty. Further, poverty thresholds for people living alone or with nonrelatives (unrelated individuals) vary by age (under 65 years or 65 years and older). The poverty thresholds for two-person families also vary by the age of the householder. If a family's total income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty. Similarly, if an unrelated individual's total income is less than the appropriate threshold, then that individual is considered to be in poverty.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.6 Population Living Below Poverty Level by Race/Ethnicity, Boston, 2005-2009

NOTE: Data are estimates based on the American Community Survey. People who identify their origin as Latino may be of any race. Poverty statistics in ACS products adhere to the standards specified by the Office of Management and Budget in Statistical Policy Directive 14. The Census Bureau uses a set of dollar value thresholds that vary by family size and composition to determine who is in poverty. Further, poverty thresholds for people living alone or with nonrelatives (unrelated individuals) vary by age (under 65 years or 65 years and older). The poverty thresholds for two-person families also vary by the age of the householder. If a family's total income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty. Similarly, if an unrelated individual's total income is less than the appropriate threshold, then that individual is considered to be in poverty.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.7 Families with Income Below Poverty Level by Family Type, Boston, 2005-2009

NOTE: Data are estimates based on the American Community Survey. Poverty statistics in ACS products adhere to the standards specified by the Office of Management and Budget in Statistical Policy Directive 14. The Census Bureau uses a set of dollar value thresholds that vary by family size and composition to determine who is in poverty. Further, poverty thresholds for people living alone or with nonrelatives (unrelated individuals) vary by age (under 65 years or 65 years and older). The poverty thresholds for two-person families also vary by the age of the householder. If a family's total income is less than the dollar value of the appropriate threshold, then that family and every individual in it are considered to be in poverty. Similarly, if an unrelated individual's total income is less than the appropriate threshold, then that individual is considered to be in poverty. Female head of household: In 1980, the U.S. Census replaced the term "head of household" with "householder." The census uses the term "householder" to refer to the individual in whose name the housing unit is owned or rented (if a unit is co-owned or rented, either individual may be called the "householder." If no such person resides in the unit, any adult may be considered the "householder." Families in which a female is responsible for the care of children census is inferred through the census category, "female householder, no husband present, with children."

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.8 Educational Attainment, Boston, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.9 Educational Attainment by Gender, Boston, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.10 Educational Attainment by Race/Ethnicity, Boston, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.11 School Enrollment by Gender Distribution at Various Education Levels, Boston, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.12 School Enrollment Type Distribution (Public vs. Private) at Various Education Levels, Boston, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.13 Boston School-Age Children Attending School by Type of School and Race/Ethnicity, 2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.14 Primary Language of Boston Public Schools English Language Learners (ELL), 2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.15 Boston Public Schools Four-Year and Five-Year High School Graduation Rates, Class of 2008

NOTE: A student is considered low-income if they meet any one of the following criteria: (1) The student is eligible for free or reduced price lunch, (2) The student receives Transitional Aid to Families benefits, or (3) The student is eligible for food stamps.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.16 Boston Unemployment Rate, January 2010 - December 2010

NOTE: The labor force and unemployment data are based on the same concepts and definitions as those used for the official national estimates obtained from the Current Population Survey (CPS), a sample survey of households that is conducted for the Bureau of Labor Statistics (BLS) by the U.S. Census Bureau. The LAUS program measures employment and unemployment on a place-of-residence basis. The universe for each consists of individuals who are not in the military and are not in an institution. Employed persons are those who did any work at all for pay or profit in the reference week (the week including the 12th of the month) or worked 15 hours or more without pay in a family business or farm, plus those not working who had a job from which they were temporarily absent, whether or not paid, for such reasons as labor-management dispute, illness, or vacation. Unemployed persons are those who were not employed during the reference week (based on the definition above), had actively looked for a job sometime in the 4-week period ending with the reference week, and were currently available for work; persons on layoff expecting recall need not be looking for work to be counted as unemployed. The civilian labor force is the sum of employed and unemployed persons. The unemployment rate is calculated as the number of unemployed/civilian labor force multiplied by 100.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.17 Unemployment Rate by Race/Ethnicity and Gender, Boston, 2009

Note: Data are estimates based on the American Community Survey. The federal Bureau of Labor Statistics conducts monthly household surveys to gather national, state and local employment data. The survey uses the following definitions in calculating employment-related rates. Individuals who are not in the military and not in an institution are part of this survey. Individuals with jobs are considered employed. Jobs can be part-time and temporary and includes unpaid work done on behalf of a family enterprise. Individuals are considered unemployed if they did not have a job, but are available for work and are looking for a job. The civilian labor force consists of individuals who are either employed or unemployed. Individuals who are not employed and not looking for work are not in the civilian labor force.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.18 Labor Force Participation Rate by Race/Ethnicity and Gender, Boston, 2009

NOTE: Data are estimates based on the American Community Survey. The federal Bureau of Labor Statistics conducts monthly household surveys to gather national, state and local employment data. The survey uses the following definitions in calculating employment-related rates. Individuals who are not in the military and not in an institution are part of this survey. Individuals with jobs are considered employed. Jobs can be part-time and temporary and includes unpaid work done on behalf of a family enterprise. Individuals are considered unemployed if they did not have a job, but are available for work and are looking for a job. The civilian labor force consists of individuals who are either employed or unemployed. Individuals who are not employed and not looking for work are not in the civilian labor force. The survey defines labor force participation rate (LFPR) as a proportion of the civilian population who are either employed or unemployed. The LFPR is calculated as the number of employed and unemployed/civilian population multiplied by 100.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.19 Employment Status by Gender, Boston, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.20 Employment Status by Disability Status, Boston, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.21 Jobs Gained or Lost in Boston Industries Between 2001 and 2009

NOTE:

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.22 Work Type Distribution Among Employed Residents, Boston, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.23 Workers' Means of Transportation to Workplace, Boston, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.24 Housing Tenure by Race/Ethnicity, Boston, 2010

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.25 Foreclosure Petitions by Neighborhood, 2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury NOTE: Neighborhoods were defined using zip codes. Residential properties include single family dwellings, residential condominium units, two family dwellings, and three family dwellings. Professionally managed properties, such as rental buildings, are not considered residential properties.

NOTE: Neighborhoods were defined by zip code.

DATA ANALYSIS: Department of Neighborhood Development and the Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 2.26 Foreclosure Petitions in Boston Neighborhoods, 2007, 2008, and 2009

NOTE: Residential properties include single family dwellings, residential condominium units, two family dwellings, and three family dwellings. Professionally managed properties, such as rental buildings, are not considered residential properties. A foreclosure petition is the first step in the foreclosure process.

DATA ANALYSIS: Department of Neighborhood Development and the Boston Public Health Commission Research and Evaluation Office

Figure 2.27 Foreclosure Petitions as Percentage of all Residential Properties, Boston, 2007, 2008, and 2009

NOTE: Residential properties include single family dwellings, residential condominium units, two family dwellings, and three family dwellings. Professionally managed properties, such as rental buildings, are not considered residential properties. A foreclosure petition is the first step in the foreclosure process.

DATA ANALYSIS: Department of Neighborhood Development and the Boston Public Health Commission Research and Evaluation Office

Figure 2.28 Residential Foreclosures by Type of Loan, Boston, 2009

NOTE: Residential properties include single family dwellings, residential condominium units, two family dwellings, and three family dwellings. Professionally managed properties, such as rental buildings, are not considered residential properties. A foreclosure deed is the final step in the foreclosure process.

DATA ANALYSIS: Department of Neighborhood Development and the Boston Public Health Commission Research and Evaluation Office

Figure 2.29 Residential Foreclosures for Adjustable Rate Mortgages, Boston, 2009

NOTE: Residential properties include single family dwellings, residential condominium units, two family dwellings, and three family dwellings. Professionally managed properties, such as rental buildings, are not considered residential properties. A foreclosure deed is the final step in the foreclosure process.

DATA ANALYSIS: Department of Neighborhood Development and the Boston Public Health Commission Research and Evaluation Office

Figure 2.30 Monthly Housing Cost as a Percentage of Household Income by Income Level, 2009

NOTE: Data are estimates based on the American Community Survey. For occupied housing units and renter-occupied housing units, the median monthly housing costs excludes renter-occupied housing units for which no cash rent is paid.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.31 Households Receiving Food Stamps in the Past Year by Employment Status, 2009

NOTE: Data are estimates based on the American Community Survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.32 Food Stamp Cases in Boston Neighborhoods, January 2008 and January 2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.33 Homeless Count by Year, 1997-2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.34 Percentage of Homeless who are Children, 1997-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 2.35 Residents with Health Insurance Coverage by Selected Indicators, 2008

NOTE: Survey question reads, “Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMO’s, or government plans such as Medicare?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation

Figure 2.36 Residents with Insurance to Cover Routine Dental Care by Selected Indicators, 2008

NOTE: Survey question reads, “Do you have any kind of insurance coverage that pays for some or all of your routine dental care, including dental insurance, prepaid plans such as HMO’s, or government plans such as Medicaid?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation

Figure 2.37 Dental Cleaning within the Past Year by Selected Indicators, 2010

NOTE: Survey question reads, “How long has it been since you had your teeth cleaned by a dentist or dental hygienist?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation

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Health-Related Behaviors

- Smoking
- Excessive alcohol consumption
- Sugar sweetened beverage consumption
- Physical activity
- Fruit and vegetable consumption

Personal health behaviors have a substantial influence on overall health outcomes. Poor dietary habits, lack of physical activity, tobacco use, and excessive alcohol consumption are known major contributors to the development of chronic conditions, such as cardiovascular disease, cancer, diabetes, and premature death (1).

To address high rates of chronic disease and other poor health outcomes, public health interventions have often focused primarily on associated personal health behaviors. However, an individual's health-related behaviors exist in the context of social and physical environments that often strongly influence these behaviors and choices (2). For example, lack of local access to affordable healthy foods may negatively influence dietary patterns. Access to safe parks and exercise facilities in residential neighborhoods can increase levels of physical exercise (3). Social determinants of health such as education, income, and food security can significantly impact an individual's ability to engage in positive personal health behaviors. Living in resource-deficient social and physical environments can negatively impact health behaviors. So while health-related behaviors play a substantial role in determining health status and disease outcomes, factors influencing healthy behaviors need to be better understood and addressed.

This section provides a description of the health behaviors of public high school students and adult residents of Boston. Self-reported data on youth and adult smoking, alcohol consumption, physical activity, and dietary habits are provided.



■ **Figure 3.1 Good or Excellent Self-Rated Health by Selected Indicators, 2010**

In Boston, 86% of adults reported having good or excellent health.

A higher percentage of males than females reported having good or excellent health.

A lower percentage of Boston residents ages 65 and over reported good or excellent health in comparison with residents in all other age groups.

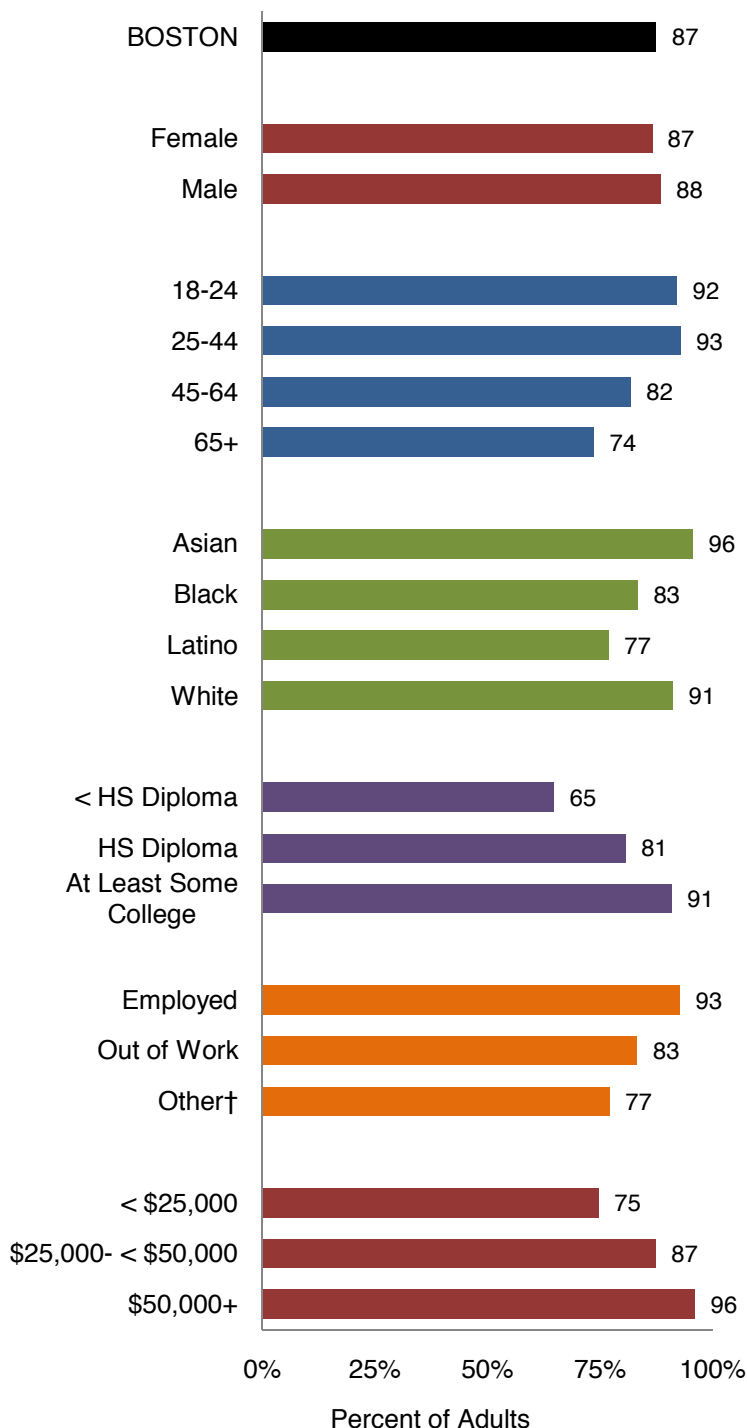
A higher percentage of White adults reported good or excellent health compared with Black and Latino adults.

A higher percentage of adults with any college education reported good or excellent health in comparison with adults with less education.

On a similar note, a higher percentage of employed adults reported good or excellent health compared to non-employed adults (i.e., individuals who indicated being ‘out of work’ and individuals with ‘other’ employment status).

Adult residents with a household income of \$50,000 or more reported good or excellent health compared to adults from lower income households (\$25,000- <\$50,000 and < \$25,000).

Figure 3.1 Good or Excellent Self-Rated Health by Selected Indicators, 2010



†Includes homemakers, students, retirees, or people who are unable to work

DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Smoking



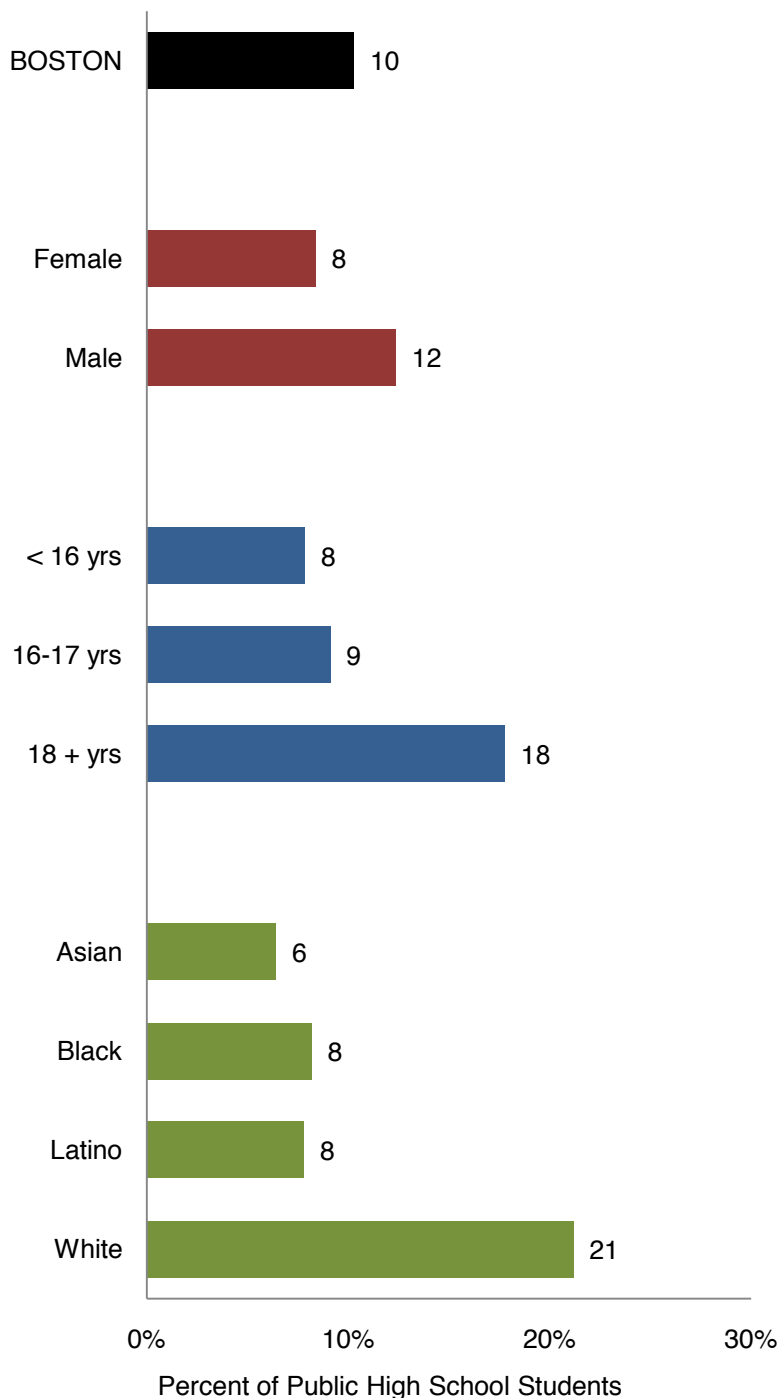
■ **Figure 3.2 Public High School Students Who Smoke by Selected Indicators, 2009**

In 2009, one in ten Boston public high school students reported smoking cigarettes.

The percentage of public high school students who reported smoking was statistically similar across gender and age groups.

A higher percentage of White public high school students reported smoking compared with Asian, Black, and Latino students.

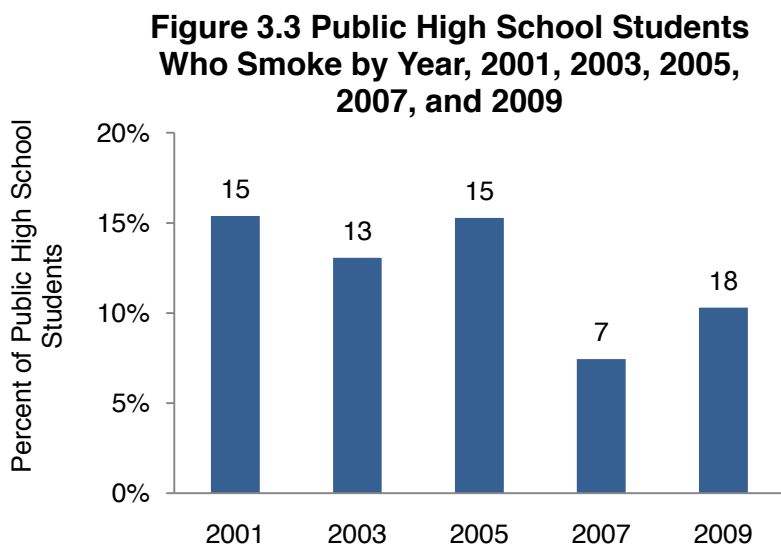
Figure 3.2 Public High School Students Who Smoke by Selected Indicators, 2009



DATA SOURCE: Youth Risk Behavior Survey 2009, Youth Risk Behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention (CDC)

■ **Figure 3.3 Public High School Students Who Smoke by Year, 2001, 2003, 2005, 2007, and 2009**

The percentage of high school students who reported smoking cigarettes decreased significantly from 2001 to 2009.



DATA SOURCE: Youth Risk Behavior Survey 2001, 2003, 2005, 2007, and 2009, Youth Risk Behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention (CDC)



■ **Figure 3.4 Adult Current Smoking by Selected Indicators, 2010**

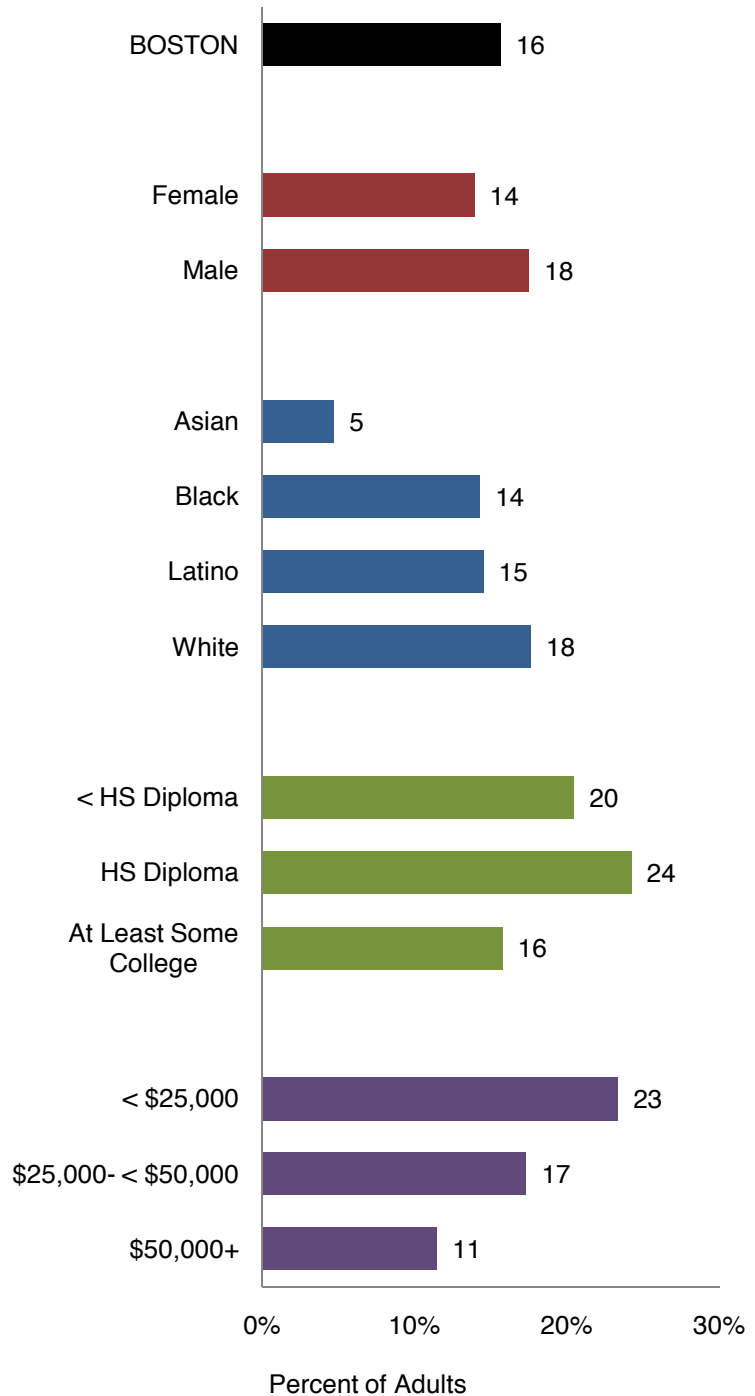
In 2010, 16% of Boston adults reported that they currently smoke.

The percentage of adults who reported that they currently smoke was statistically similar for males and females. A higher percentage of White residents reported current smoking compared with Asian and Black residents.

A higher percentage of adults who have a high school diploma reported that they currently smoke compared with adults with at least some college education.

A higher percentage of adults with household income of less than \$25,000 reported that they currently smoke compared with adults with household income of \$50,000 or more.

Figure 3.4 Adult Current Smoking by Selected Indicators, 2010

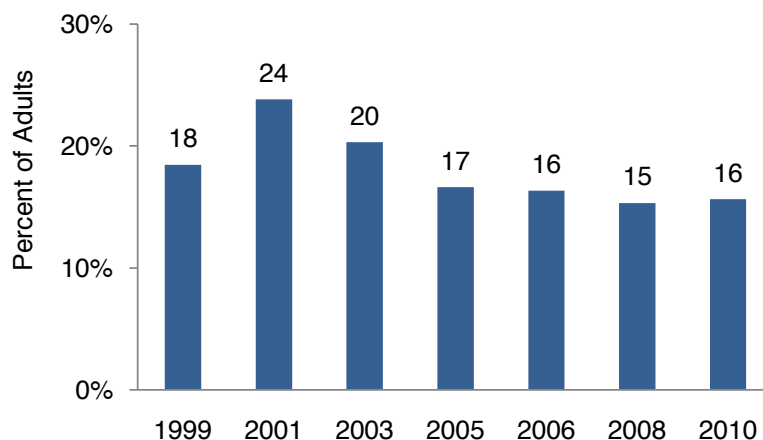


DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ Figure 3.5 Adult Current Smoking by Year, 1999, 2001, 2003, 2005, 2006, 2008, and 2010

A higher percentage of adults reported that they smoke in 2001 compared with 2005 and subsequent years.

Figure 3.5 Adult Current Smoking by Year, 1999, 2001, 2003, 2005, 2006, 2008, and 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 1999, 2001, 2003, 2005, 2006, 2008, and 2010 Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission



Excessive Alcohol Consumption



Figure 3.6 Excessive Alcohol Consumption among Public High School Students by Selected Indicators, 2007 and 2009 Combined

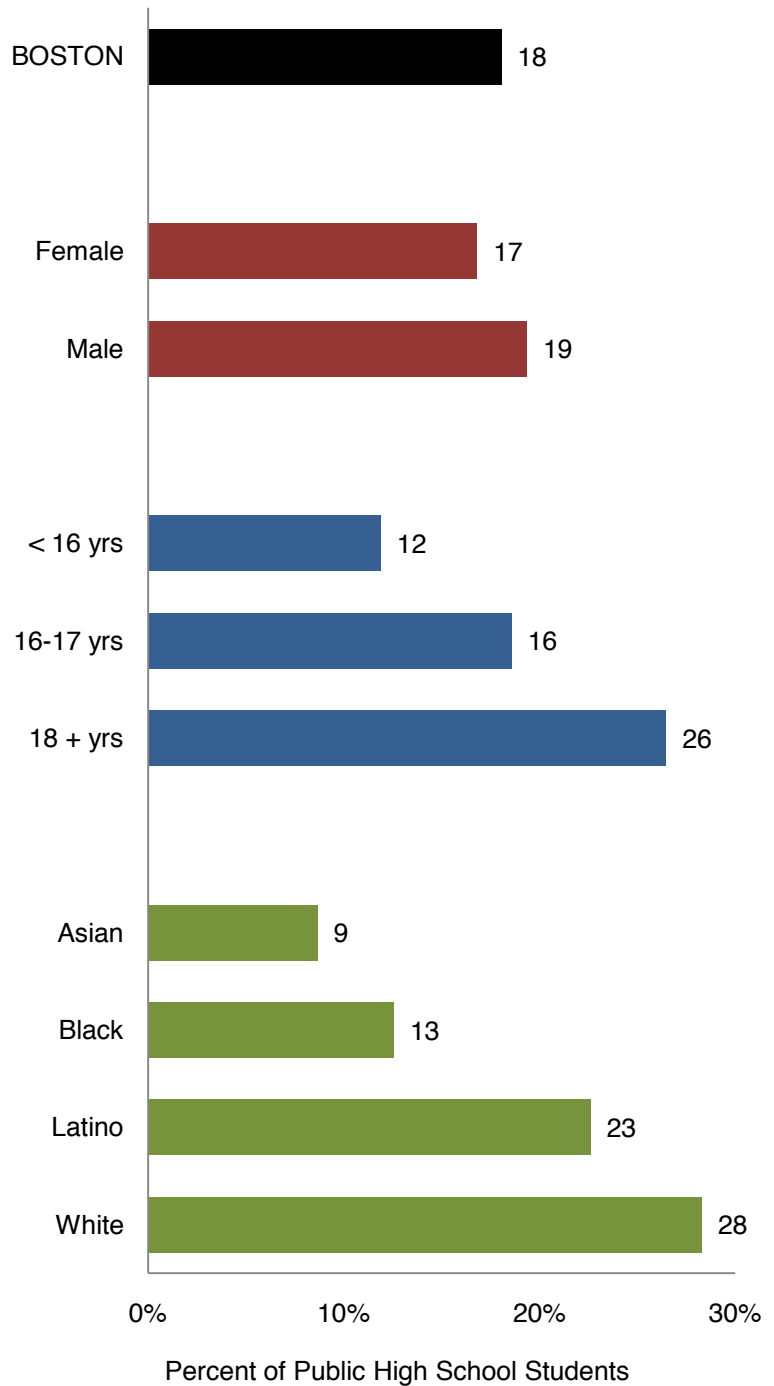
Excessive alcohol consumption is defined as having five or more alcoholic drinks on one occasion in the past month. For the years 2007 and 2009 combined, about one in five (18%) public high school students reported consuming excessive alcohol in the past 30 days.

The percentage of public high school students who reported excessive alcohol consumption was statistically similar between female and male students.

A higher percentage of students who were 18 years or older and students in the 16-17 year age group reported excessive alcohol consumption compared with students who were less than 16 years old.

A higher percentage of Latino and White students reported excessive alcohol consumption compared with Asian and Black students.

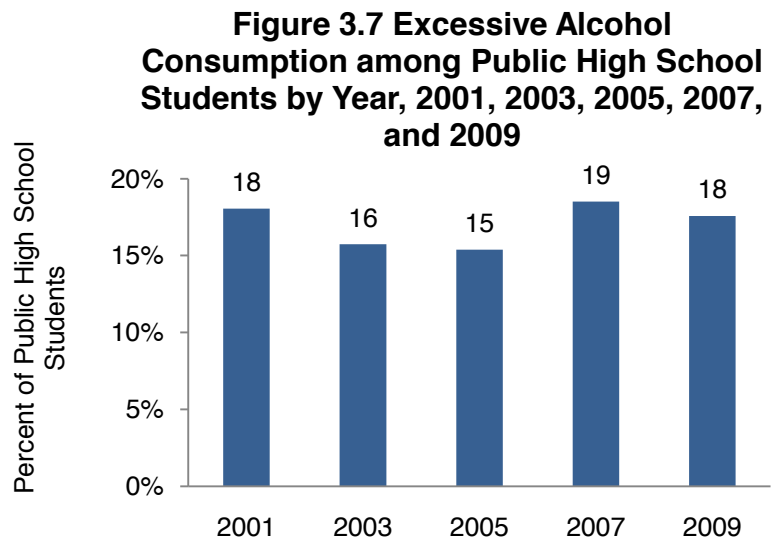
Figure 3.6 Excessive Alcohol Consumption among Public High School Students by Selected Indicators, 2007 and 2009 Combined



DATA SOURCE: Youth Risk Behavior Survey 2007 and 2009, Youth Risk Behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention (CDC)

■ **Figure 3.7 Excessive Alcohol Consumption among Public High School Students by Year, 2001, 2003, 2005, 2007, and 2009**

The percentage of public high school students who reported excessive alcohol consumption was statistically similar from 2001 to 2009.



DATA SOURCE: Youth Risk Behavior Survey 2001, 2003, 2005, 2007, and 2009, Youth Risk Behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention (CDC)



Figure 3.8 Excessive Alcohol Consumption among Adults in Past Month by Selected Indicators, 2010

In 2010, 23% of Boston adults reported excessive alcohol consumption in past month.

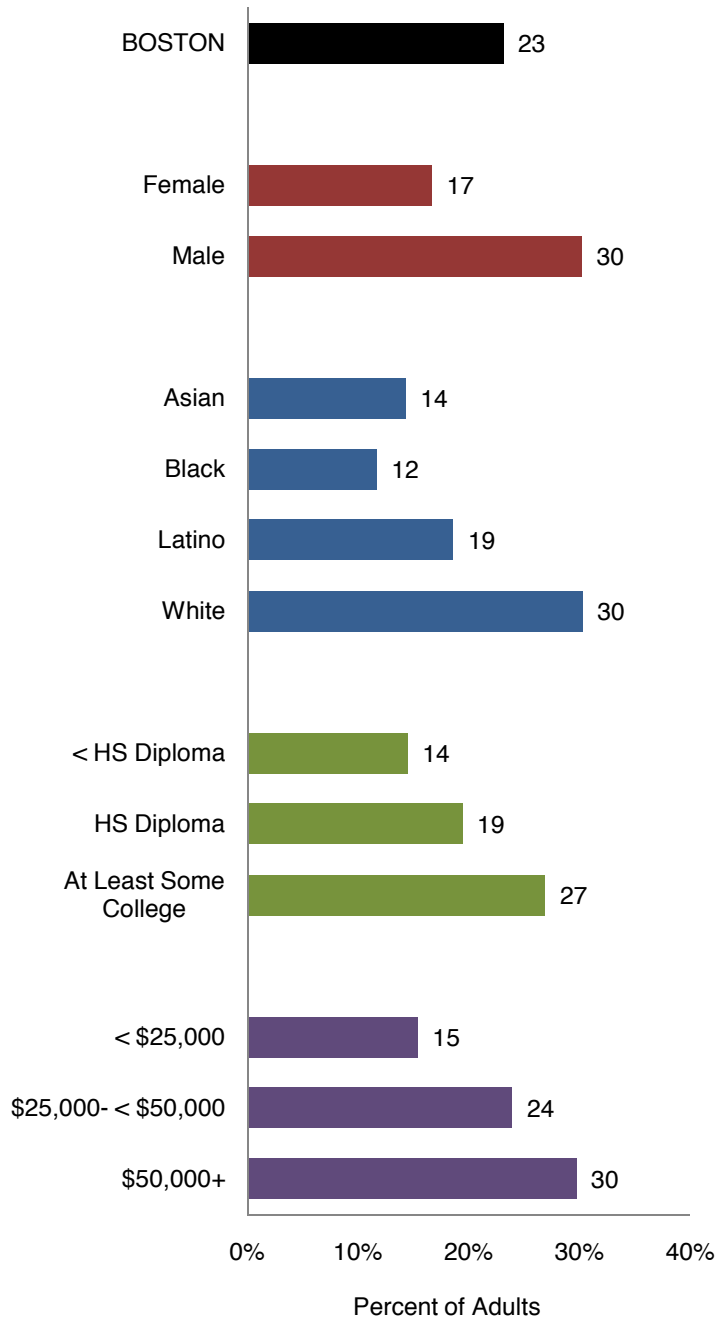
A higher percentage of adult male residents reported excessive alcohol consumption in the past month compared with female adults.

A higher percentage of White adults reported excessive alcohol consumption compared with Asian, Black, and Latino adults.

A higher percentage of adults with at least some college education reported excessive alcohol consumption compared with adults with less than high school diploma.

Adults with a household income less than \$25,000 were less likely to report excessive alcohol consumption compared with adults who earn higher incomes.

Figure 3.8 Excessive Alcohol Consumption Among Adults in Past Month by Selected Indicators, 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Sugar Sweetened Beverage Consumption



Figure 3.9 Average Daily Soda Consumption among Public High School Students by Selected Indicators, 2007 and 2009 Combined

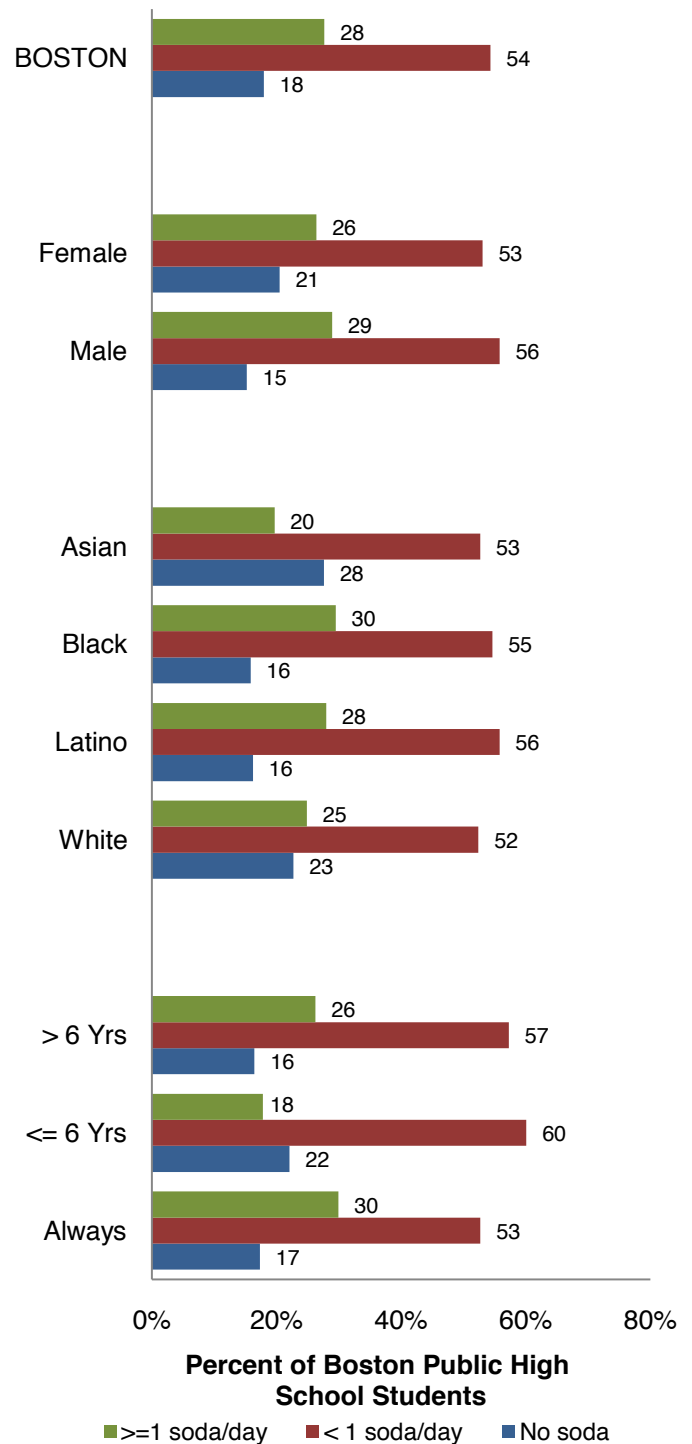
For 2007 and 2009 combined, over one-fourth of Boston public high school students consumed one or more sodas per day. A higher percentage of Boston public high school students drank one or more sodas a day compared with students who never drank soda.

Compared with males, a higher percentage of females never drank soda.

Among Black and Latino students, a higher percent drank one or more sodas a day compared with Black and Latino students who never drank soda.

As number of years living in the US increased, the percent of students who drank one or more sodas per day also increased. A lower percentage of students living in the US for six years or fewer drank one or more sodas per day compared with students who have always lived in the US.

Figure 3.9 Average Daily Soda Consumption among Public High School Students by Selected Indicators, 2007 and 2009 Combined



DATA SOURCE: Youth Risk Behavior Survey 2007 and 2009, Youth Risk Behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention (CDC)

Figure 3.10 Average Daily Soda Consumption among Adults by Selected Indicators, 2010

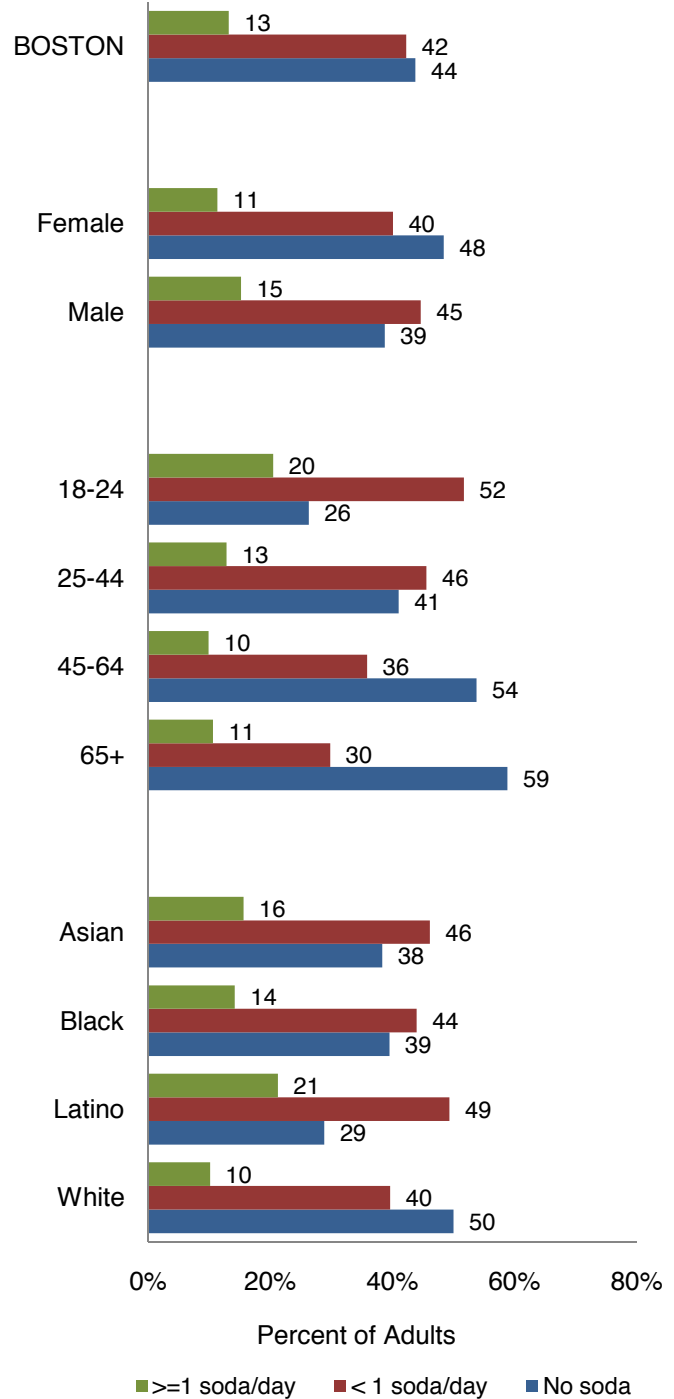
In 2010, 13% of adults consumed one or more sodas per day. This was significantly lower than adults who drank less than one soda per day and adults who never drank soda.

Almost half of female adults never drank soda. This percentage of females was higher in comparison with males who never drank soda.

As age increases the percentage of adults who consume one or more sodas per day and less than one soda per day decrease, while the percent of adults who never consume soda increases.

A lower percentage of Latino adults never consumed soda compared with White and Black adults. A higher percentage of Latino adults consumed one or more sodas per day compared White adults.

Figure 3.10 Average Daily Soda Consumption among Adults by Selected Indicators, 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Physical Activity



■ Figure 3.11 Public High School Students who Engage in Regular Physical Activity by Selected Indicators, 2009

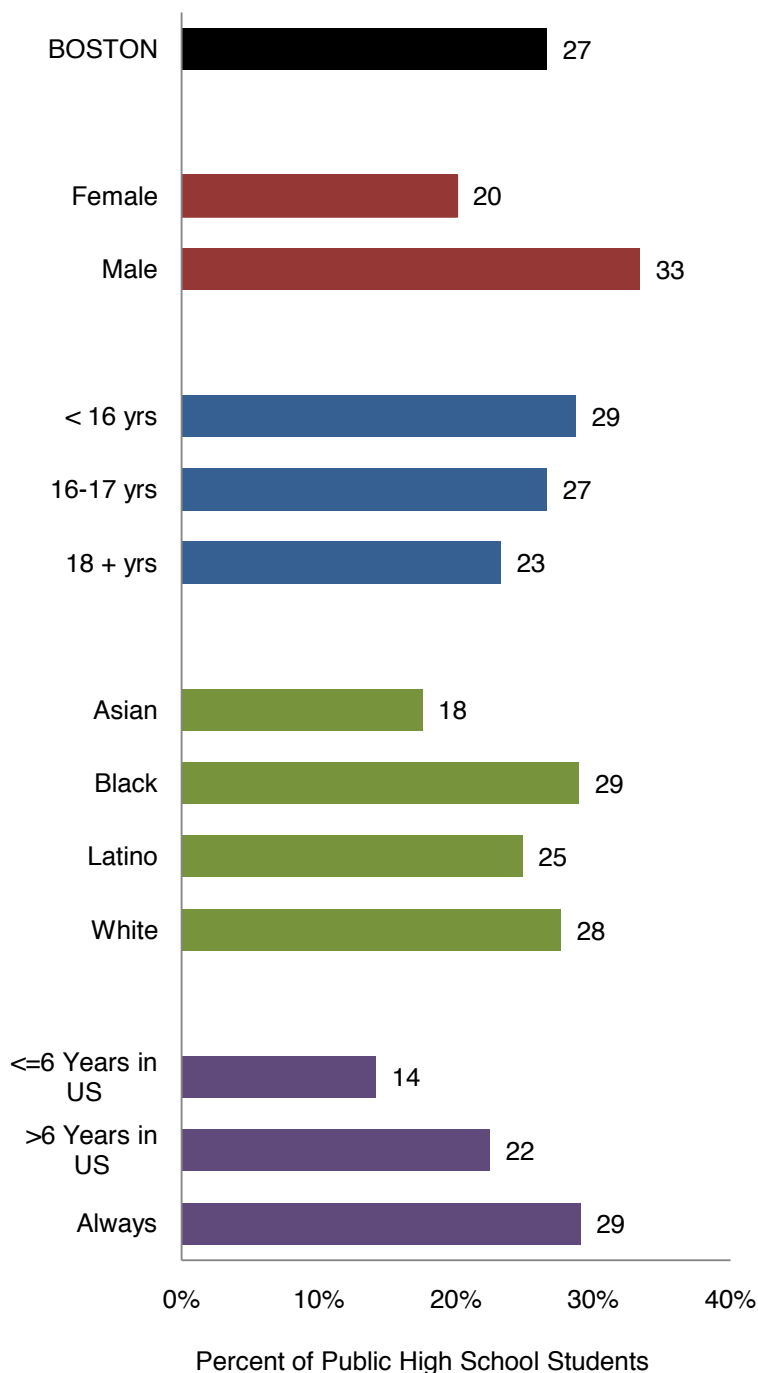
Regular physical activity is defined for adolescents as engaging in physical activity for at least one hour per day on five or more days per week. In 2009, 27% of Boston public high school students reported engaging in regular physical activity. The percentage of students who reported engaging in regular physical activity in 2007 was statistically similar to 2009 (data not shown).

In 2009, a lower percentage of female students engaged in regular physical activity compared with male students.

The percentage of students who reported engaging in regular physical activity was statistically similar by age and racial/ethnic groups.

A lower percentage of public high school students who lived in the US for six or fewer years reported engaging in regular physical activity compared with students who always lived in the US.

Figure 3.11 Public High School Students Who Engage in Regular Physical Activity by Selected Indicators, 2009



DATA SOURCE: Youth Risk Behavior Survey 2009, Youth Risk Behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention (CDC)

■ **Figure 3.12 Adults who Engage in Regular Physical Activity by Selected Indicators, 2010**

For adults, regular physical activity is defined as vigorous activity for 20 minutes per day on 3 or more days a week or moderate activity for 30 minutes per day on 5 or more days a week.

In 2010, 57% of Boston adult residents reported engaging in regular physical activity.

Compared with males, a lower percentage of females engaged in regular physical activity.

A higher percentage of adults ages 25-44 engaged in regular physical activity compared with adults 45 years and over. A lower percentage of adults 65 years and over engaged in regular physical activity compared with adults less than 65 years of age.

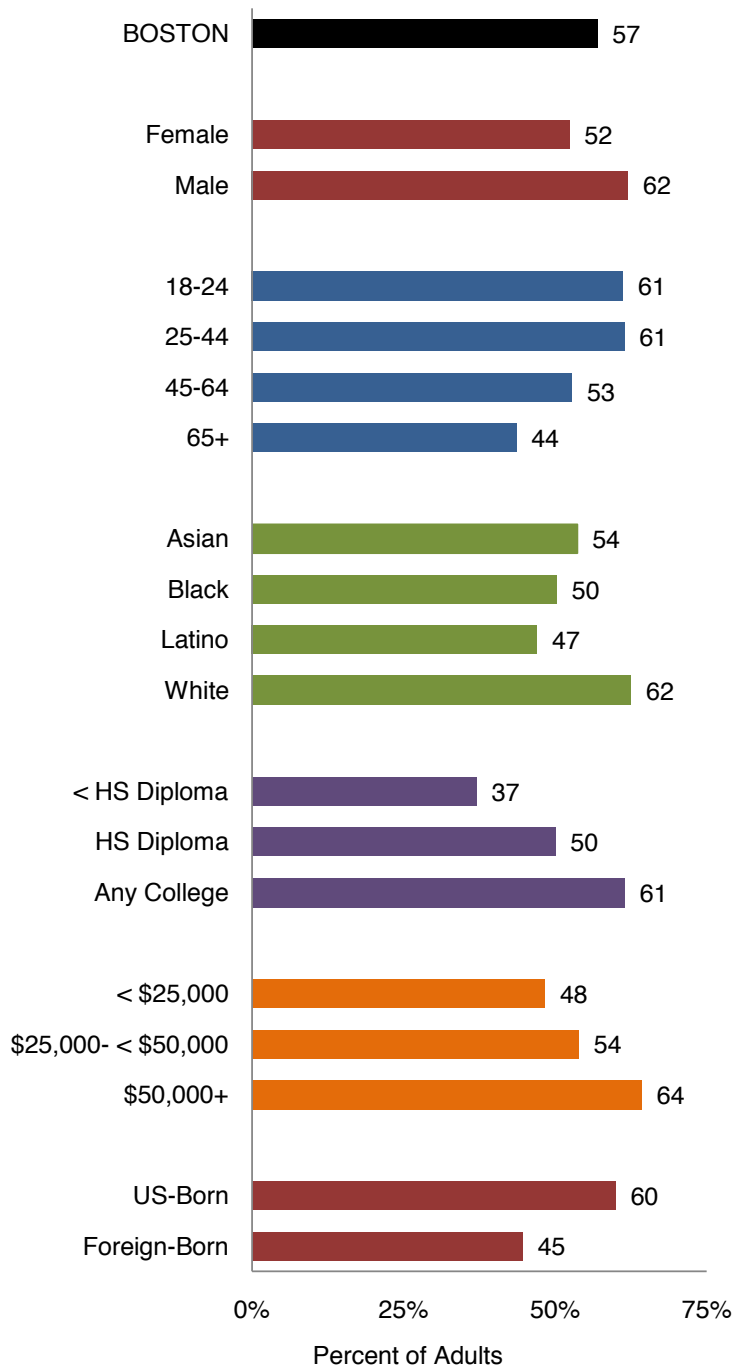
A lower percentage of Black and Latino adults engaged in regular physical activity compared with White adult residents in Boston.

A higher percentage of residents who had at least some college education engaged in regular physical activity compared with adults with less education.

A higher percentage of residents with a household income of \$50,000 or more reported engaging in regular physical activity compared with residents with lower household income.

A higher percentage of US-born adult residents engaged in regular physical activity compared with foreign-born adult residents.

Figure 3.12 Adults Who Engage in Regular Physical Activity by Selected Indicators, 2010

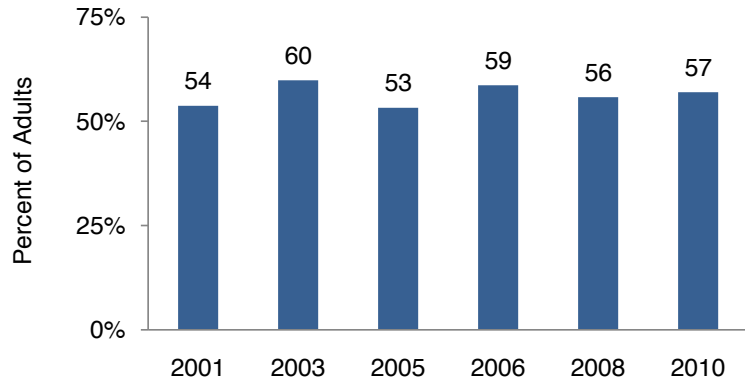


DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ **Figure 3.13 Adults Who Engage in Regular Physical Activity by Year, 2001, 2003, 2005, 2006, 2008 and 2010**

From 2001 to 2010, the percentage of adults who engaged in regular physical activity was similar statistically.

Figure 3.13 Adults Who Engage in Regular Physical Activity by Year, 2001, 2003, 2005, 2006, 2008, and 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 2001, 2003, 2005, 2006, 2008, and 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission



Fruit and Vegetable Consumption

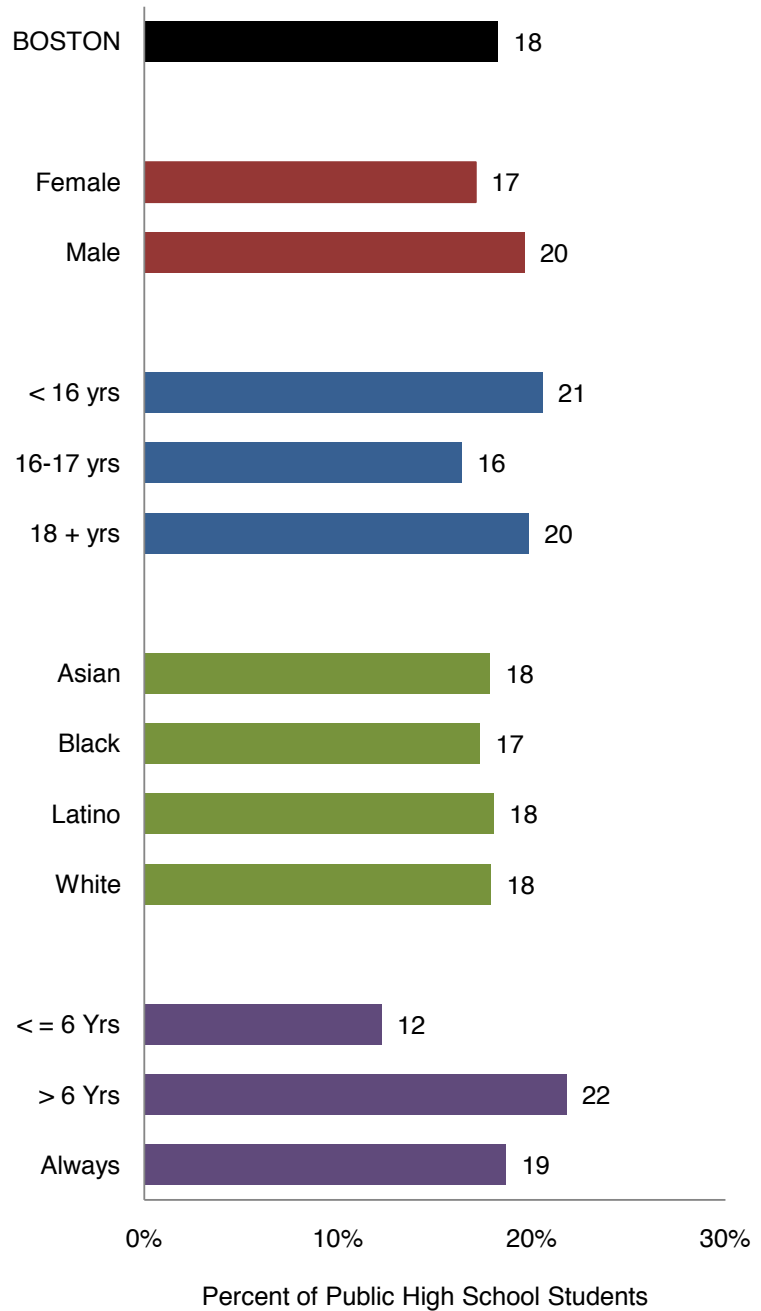


■ **Figure 3.14 Public High School Students Who Consume Recommended Daily Fruits and Vegetables by Selected Indicators, 2009**

In 2009, 18% of Boston public high school students reported consuming five or more daily servings of fruits and vegetables, the CDC recommended daily amount of fruits and vegetables.

No significant differences were observed by gender, age groups, racial/ethnic groups and years of residence in the US.

Figure 3.14 Public High School Students Who Consume Recommended Daily Fruits and Vegetables by Selected Indicators, 2009



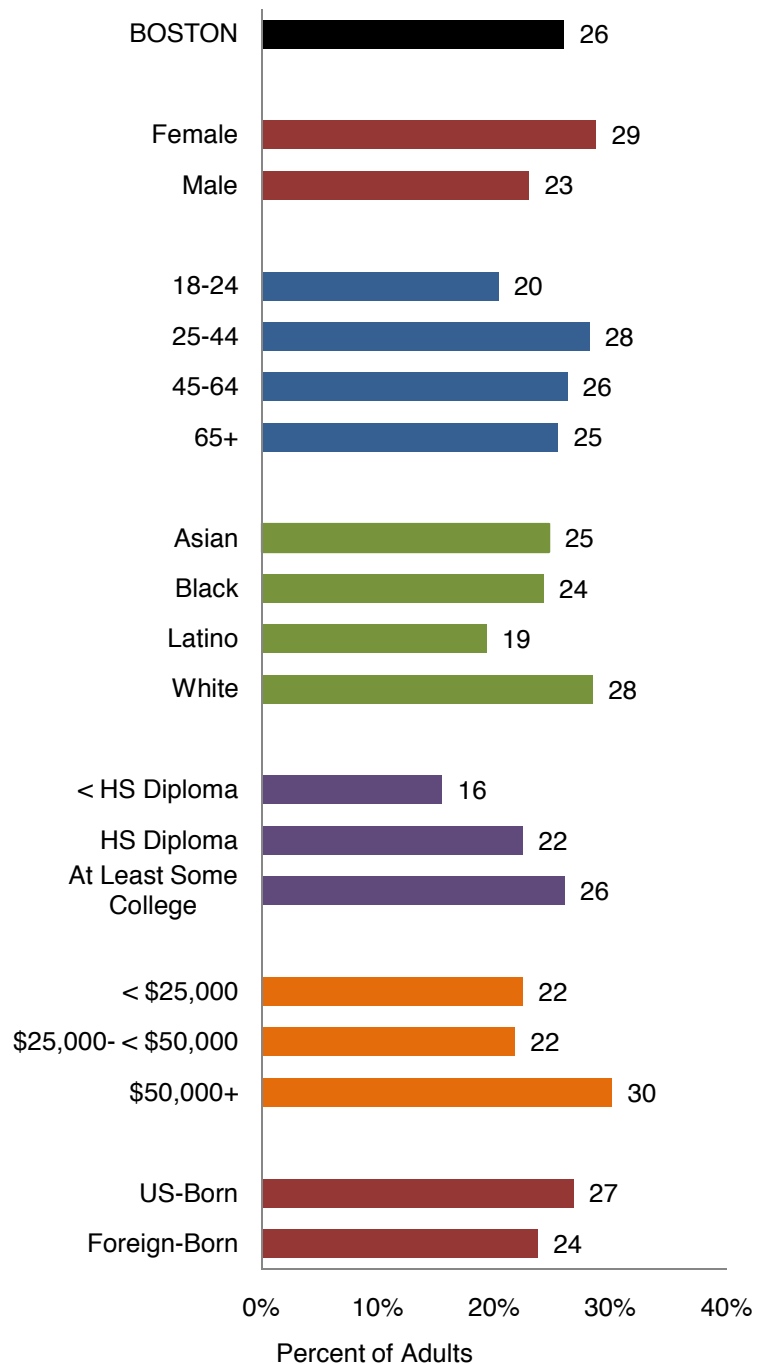
DATA SOURCE: Youth Risk Behavior Survey 2009, Youth Risk Behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention (CDC)

■ **Figure 3.15 Adults Who Consume Recommended Daily Fruits and Vegetables by Selected Indicators, 2010**

In 2010, 26% of adult Boston residents reported consuming the recommended five servings of fruits and vegetables per day.

A higher percent of female residents reported eating the recommended daily servings of fruits and vegetables compared with male residents. Compared with White residents, a lower percentage of Latino residents reported eating the recommended daily servings of fruits and vegetables. A lower percent of residents with a high school diploma and who had a household income less than \$25,000 reported eating recommended fruits and vegetables daily compared with residents who had at least some college education and those who had a household income of \$50,000 or more, respectively. There were no significant differences seen across age group and place of birth.

Figure 3.15 Adults Who Consume Recommended Daily Fruits and Vegetables by Selected Indicators, 2010

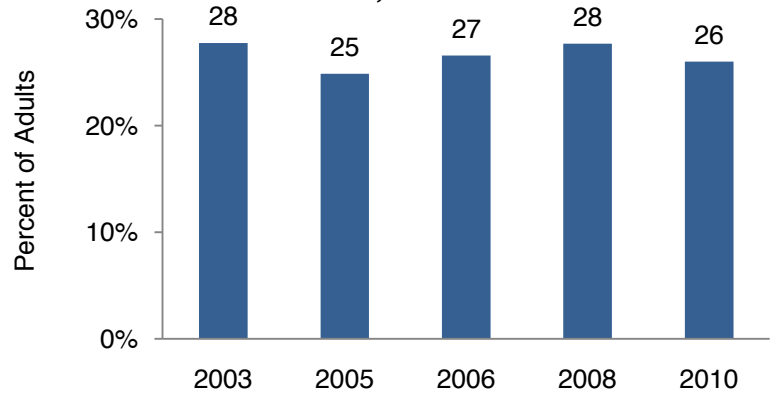


DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ **Figure 3.16 Adults Who Consume Recommended Daily Fruits and Vegetables by Year, 2003, 2005, 2006, 2008, and 2010**

There are no significant differences in the percentage of adults who consume recommended daily fruits and vegetables across years.

Figure 3.16 Adults Who Consume Recommended Daily Fruits and Vegetables by Year, 2003, 2005, 2006, 2008, and 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 2003, 2005, 2006, 2008, and 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission



Notes and Data Analysis for Health-Related Behaviors

Figure 3.1 Good or Excellent Self-Rated Health by Selected Indicators, 2008

NOTE: Survey question reads, “Would you say that in general your health is Excellent, very good, good, fair or poor?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.2 Public High School Students who Smoke by Selected Indicators, 2009

NOTE: Survey question reads, “During the past 30 days, on how many days did you smoke cigarettes?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.3 Public School Students who Smoke by Year, 2001, 2003, 2005, 2007, and 2009

NOTE: Survey question reads, “During the past 30 days, on how many days did you smoke cigarettes?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.4 Adult Current Smoking by Selected Indicators, 2008

NOTE: Calculated as adults who have smoked at least 100 cigarettes in their life and report smoking every day or some days.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.5 Adult Current Smoking by Year, 1999, 2001, 2003, 2005, 2006, and 2008

NOTE: Calculated as adults who have smoked at least 100 cigarettes in their life and report smoking every day or some days.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.6 Excessive Alcohol Consumption among Public High School Students by Selected Indicators, 2007 and 2009 combined

NOTE: Data reflects survey question, “During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.7 Excessive Alcohol Consumption among Public High School Students by Year, 2001, 2003, 2005, 2007, and 2009

NOTE: Data reflects survey question, “During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.8 Excessive Alcohol Consumption among Adults in Past Month by Selected Indicators, 2008

NOTE: Survey question reads, “Considering all types of alcoholic beverages, how many times during the past 30 days did you have X [X=5 for men, X=4 for women] or more drinks on an occasion?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.9 Average Daily Soda Consumption among Public High School Students by Race/Ethnicity, 2007 and 2009 Combined

NOTE: Survey question reads, “During the past 7 days, how many times did you drink a can, bottle, or glass of soda or pop, such as Coke, Pepsi, or Sprite? (Do not include diet soda or diet pop.)?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.10 Average Daily Soda Consumption among Public High School Students by Years of residence in US, 2007 and 2009 Combined

NOTE: Survey question reads, “During the past 7 days, how many times did you drink a can, bottle, or glass of soda or pop, such as Coke, Pepsi, or Sprite? (Do not include diet soda or diet pop.)?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.11 Public High School Students who Engage in Regular Physical Activity by Selected Indicators, 2009

NOTE: Survey question reads, “During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.12 Adults who Engage in Regular Physical Activity by Selected Indicators, 2008

NOTE: Calculated as adults who have done moderate activities for at least 30 minutes per day on five days of a usual week or vigorous activities for at least 20 minutes per day on three days of a usual week.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.13 Adults who Engage in Regular Physical Activity by Year, 2001, 2003, 2005, 2006, and 2008

NOTE: Calculated as adults who have done moderate activities for at least 30 minutes per day on five days of a usual week or vigorous activities for at least 20 minutes per day on three days of a usual week.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.14 Public High School Students who Consume Recommended Daily Fruits and Vegetables by Selected Indicators, 2009

NOTE: Percentage calculated based on responses to multiple questions. Calculated variable description: ate five or more servings of fruits and vegetables (100% fruit juices, fruit, green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables) per day on five or more days during the 7 days prior to the survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.15 Adults who Consume Recommended Daily Fruits and Vegetables by Selected Indicators, 2008

NOTE: Calculated as adults who reported eating five or more servings of fruits and vegetables per day for at least five days during the week prior to the survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 3.16 Adults who Consume Recommended Daily Fruits and Vegetables by Year, 2003, 2005, 2006, and 2008

NOTE: Calculated as adults who reported eating five or more servings of fruits and vegetables per day for at least five days during the week prior to the survey.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

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Selected Health Indicators

- Maternal and Child Health
- Chronic Diseases
- Sexual Health
- Infectious Diseases
- Mental Health
- Substance Abuse
- Violence
- Cancer
- Mortality

Measures of morbidity and mortality are indicators of health that provide knowledge of disease burden and overall health experience. These health indicators are used increasingly to identify public health priorities and to monitor the progress of public health responses over time. Specific measures of morbidity and mortality include prevalence rates for health conditions such as obesity and asthma, as well as birth rates and death rates. Together, these indicators play a significant role in determining the allocation of ever-shrinking resources, understanding health inequities, and raising community awareness.

The Boston Health Indicators section provides a broad picture of the overall health experience of Boston residents. This section begins with a description of the maternal and child health experiences, then follows with descriptive statistics about specific chronic diseases (i.e., asthma, diabetes, heart disease and obesity) and concludes with indicators specific to sexual health, infectious diseases, mental health, violence, substance abuse, cancer and mortality.



Maternal and Child Health



Birth rates, infant characteristics such as birth weight, maternal health status, and infant mortality are some of the most frequently collected and reliable data available to public health professionals. Together, they provide important measures of the well-being of infants and pregnant women, and are often seen as a reflection on the health of a community.

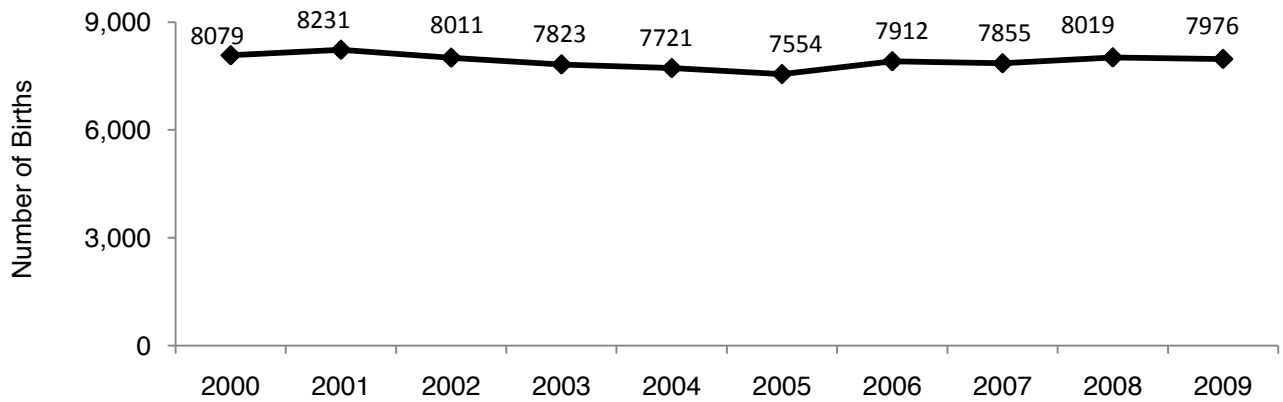
Low birth weight (birth weight less than 5 pounds, 8 ounces or 2,500 grams) and preterm birth (gestational age less than 37 weeks of completed pregnancy) are important predictors of infant survival.

Low birth weight (LBW), preterm births, and infant mortality are influenced by a variety of factors, including the health status of the mother (i.e. diabetes, high blood pressure or nutritional status) and maternal health behaviors, such as smoking during pregnancy. Furthermore, poorer infant outcomes are strongly associated with low socioeconomic status, poor access to medical care, exposure to racism, and residence in disadvantaged neighborhoods (1, 2).

Historically, across the United States and in Boston, Black infants are two to four times more likely than White infants to die in the first year of life. A number of studies indicate that the cumulative effect of chronic stressors endured by women over time may play a major role in adverse outcomes for mothers and their infants (3). These stressors include, but are not limited to, domestic violence, racism, living in neighborhoods with poor housing and inadequate access to health resources and services. For example, women who are exposed to the chronic stress of racism and suffer from the related economic inequities may experience physiological changes in their body that are detrimental to their health and the healthy development of their fetus (3).

This section presents data on births, maternal characteristics, prenatal care, infant characteristics, and infant mortality. In addition, data on childhood blood lead levels are presented.

Figure 4.1 Births, 2000-2009

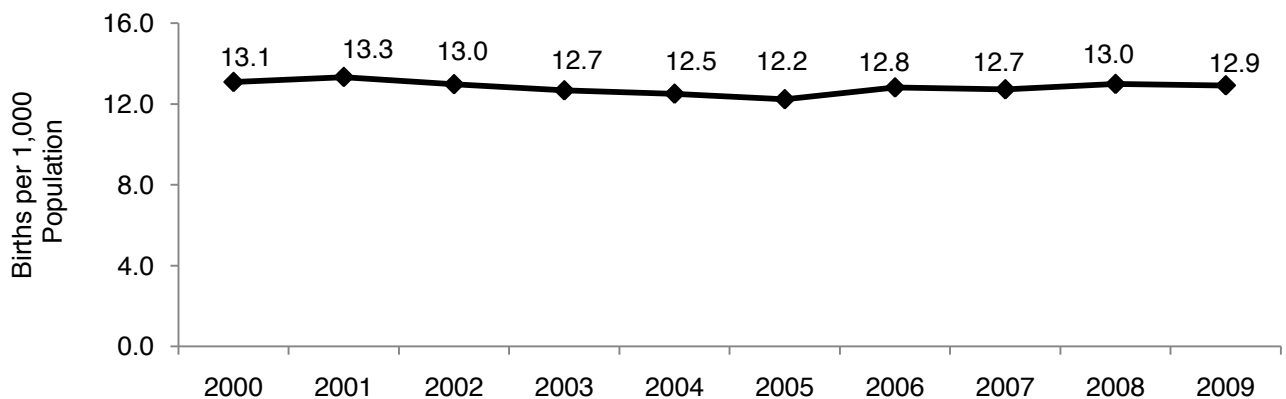


DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ **Figure 4.1 Births, 2000-2009**

The number of births to Boston residents has remained relatively stable from 2000 to 2009. There were 7,976 reported births in 2009.

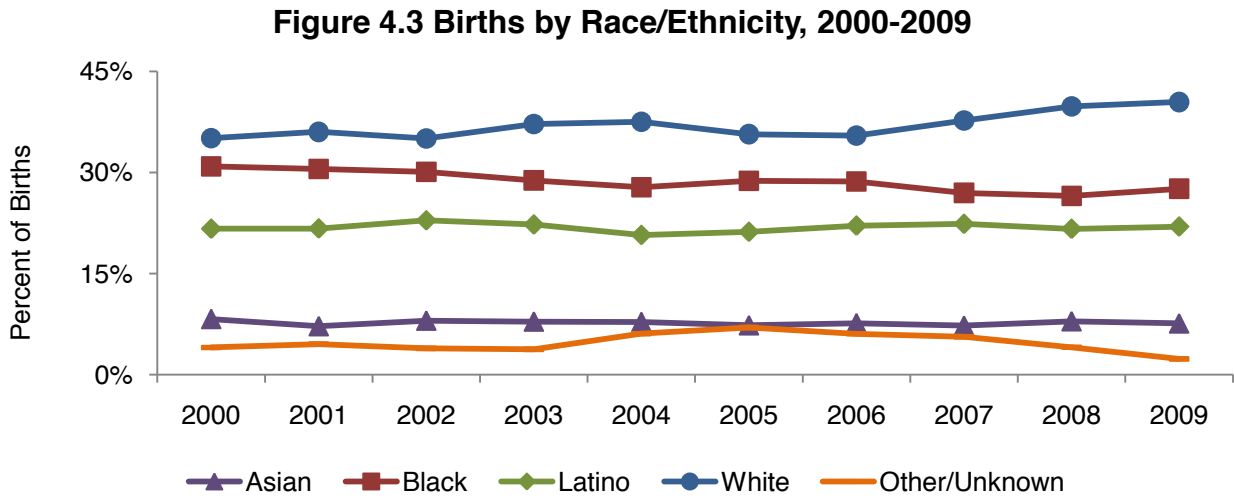
Figure 4.2 Birth Rate, 2000-2009



DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ **Figure 4.2 Birth Rate, 2000-2009**

In 2009, the birth rate in Boston was 12.9 births per 1,000 population.



DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ **Figure 4.3 Births by Race/Ethnicity, 2000-2009**

Births to White women comprised the highest percentage of Boston births from 2000 to 2009. Births to Black women were the second-highest percentage of Boston births during the same time period.

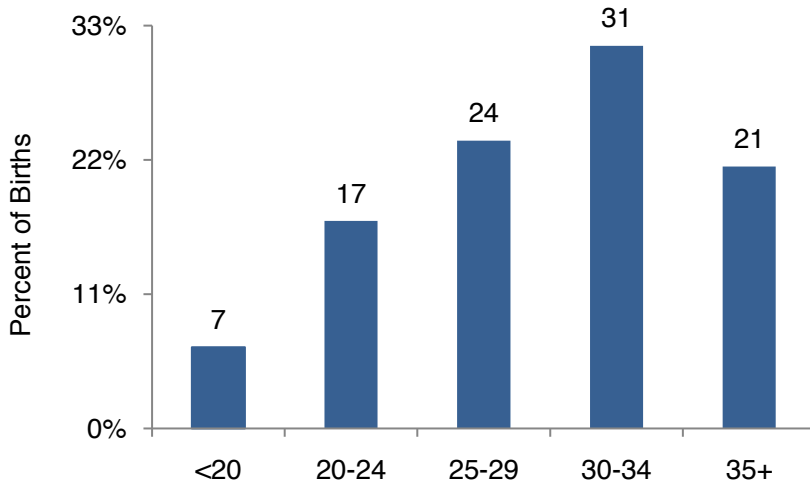
From 2000 to 2009, the percentage of births to Black women decreased while the percentage of births to White women increased. Overall, the percentage of Boston births to Asian and Latino women remained fairly consistent during the ten-year time period.

■ **Figure 4.4 Births by Maternal Age, 2009**

By maternal age group, the largest percentage of births in Boston in 2009 was to women between ages 30 and 34.

From 2008 to 2009, the percentage of births to Boston women ages 35 and over decreased 9% while the percentage of births to teen and adolescents, and to women ages 20-24 remained the same (data not shown).

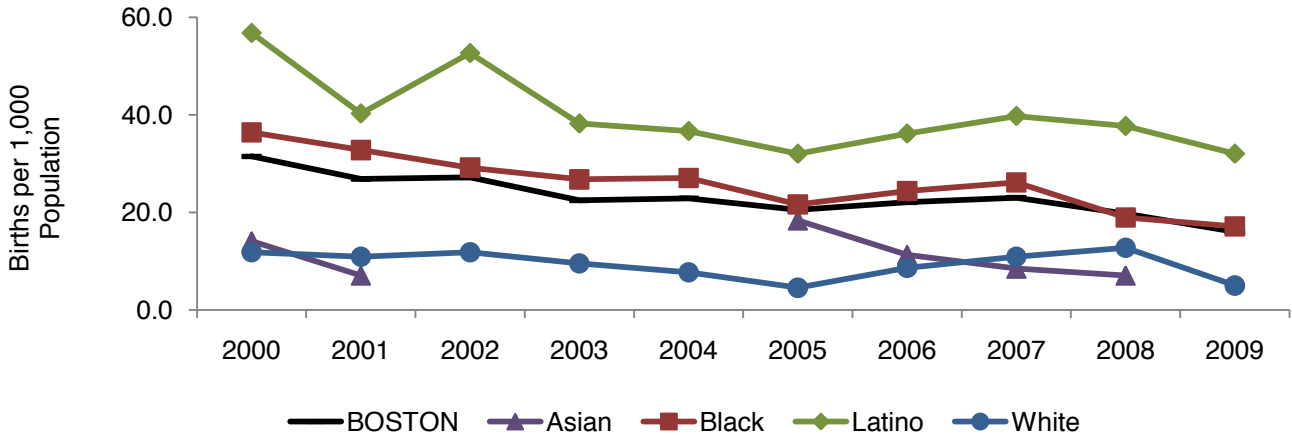
Figure 4.4 Births by Maternal Age, 2009



DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health



Figure 4.5 Births Among Adolescents Ages 15-17 by Race/Ethnicity, 2000-2009



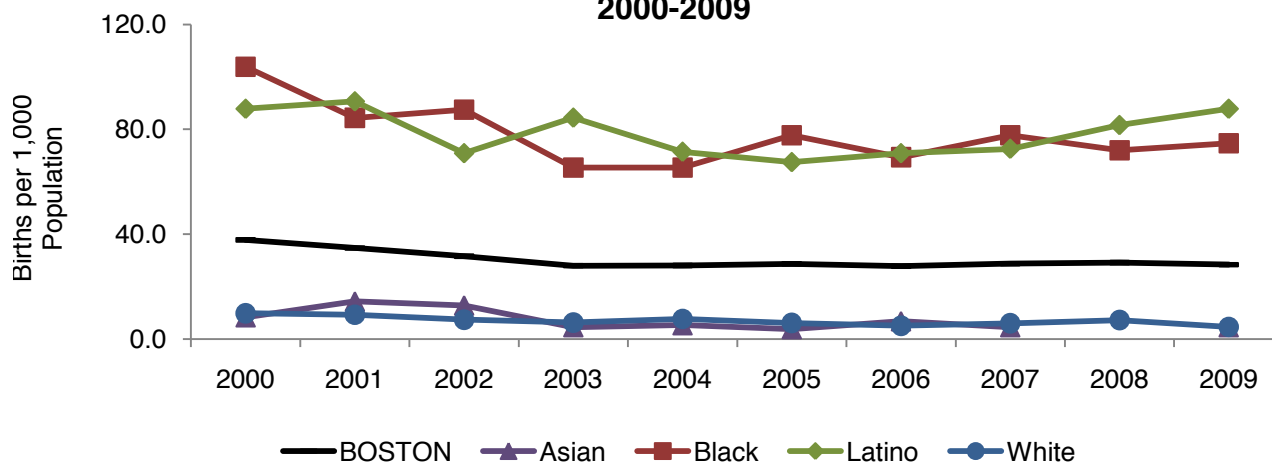
DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ **Figure 4.5 Births Among Adolescents Ages 15-17 by Race/Ethnicity, 2000-2009**

From 2008 to 2009, the adolescent birth rate decreased 19%.

From 2000 to 2009, the Latino and Black adolescent birth rates for females ages 15-17 were consistently higher than the White and Asian birth rates. From 2008 to 2009, adolescent birth rates declined for Black, Latino and White adolescents. The White adolescent birth rate declined the most, by 61%.

Figure 4.6 Births Among Adolescents Ages 18-19 by Race/Ethnicity, 2000-2009

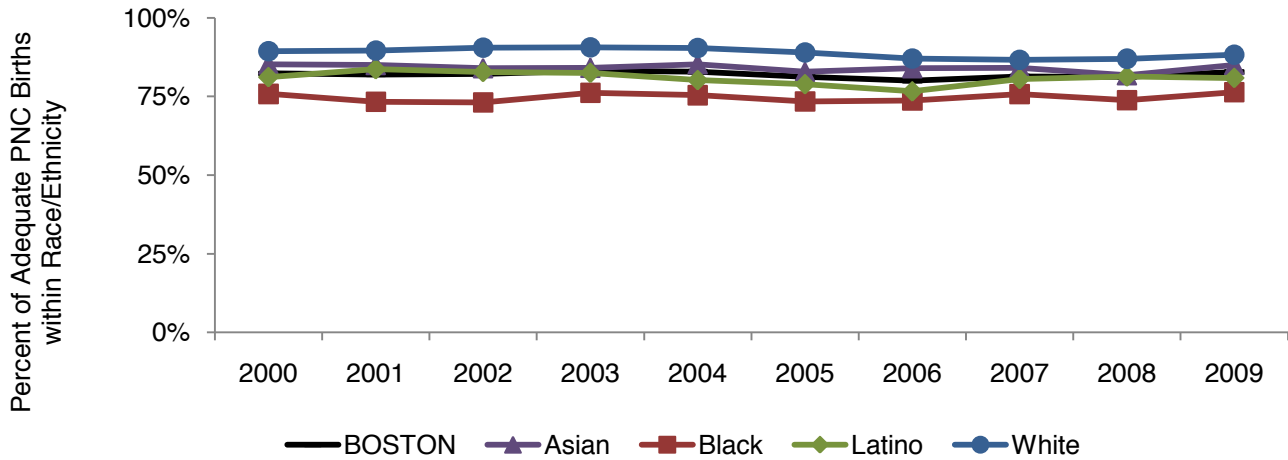


DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ **Figure 4.6 Births Among Adolescents Ages 18-19 by Race/Ethnicity, 2000-2009**

Between 2000 and 2009, the Boston birth rate for females ages 18-19 declined 25% overall. Although declines were observed for Black and White females, 28%, and 53% respectively, the birth rate for females ages 18-19 was consistently highest among Black and Latino females. The rate for Latino females remained the same between 2000 and 2009.

Figure 4.7 Adequate Prenatal Care by Race/Ethnicity, 2000-2009

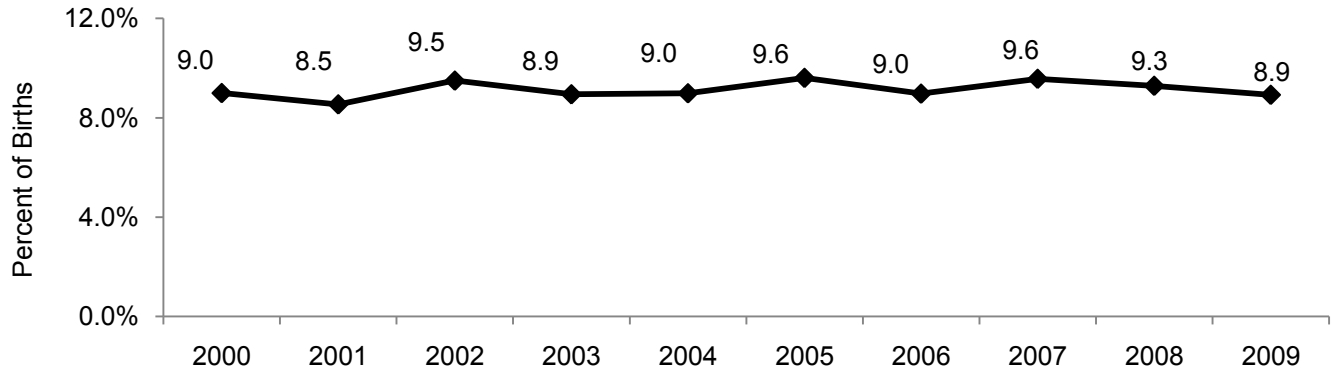


DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ **Figure 4.7 Adequate Prenatal Care by Race/Ethnicity, 2000-2009**

From 2000 to 2009, the majority of births to Boston women in all racial/ethnic groups had adequate prenatal care. Across all years, the highest percentage of adequate prenatal care was among births to White women; in comparison, Black women had the lowest percentage of adequate prenatal care.

Figure 4.8 Low Birth Weight Births, 2000-2009

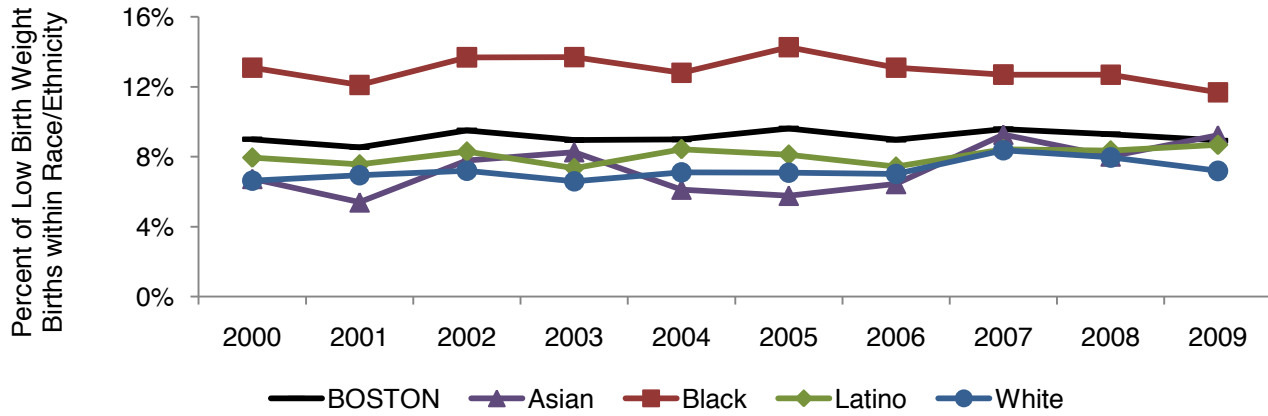


DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ **Figure 4.8 Low Birth Weight Births, 2000-2009**

Between 2000 and 2009, Boston's rate of low birth weight births was relatively stable, fluctuating between 8.5% and 9.6% of all births.

Figure 4.9 Low Birth Weight Births by Race/Ethnicity, 2000-2009

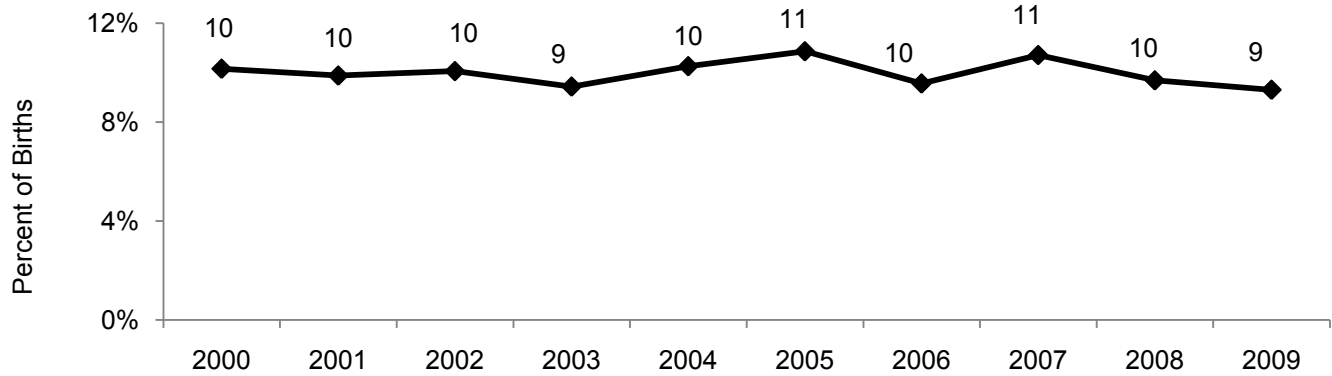


DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ **Figure 4.9 Low Birth Weight Births by Race/Ethnicity, 2000-2009**

For each year from 2000 to 2009, the percentage of Boston low birth weight (LBW) births was consistently highest for Black women.

Between 2005 and 2007, the LBW rate for Black women declined and remained the same in 2008. From 2008 to 2009, the percentage of LBW infants increased 15% for Asian women, decreased 8% for Black women, decreased 10% for White women and increased 4% for Latino women. In 2009, the LBW rate for Black women was 21%, 34%, and 38% higher than the rate for Asian, Latino, and White women, respectively.

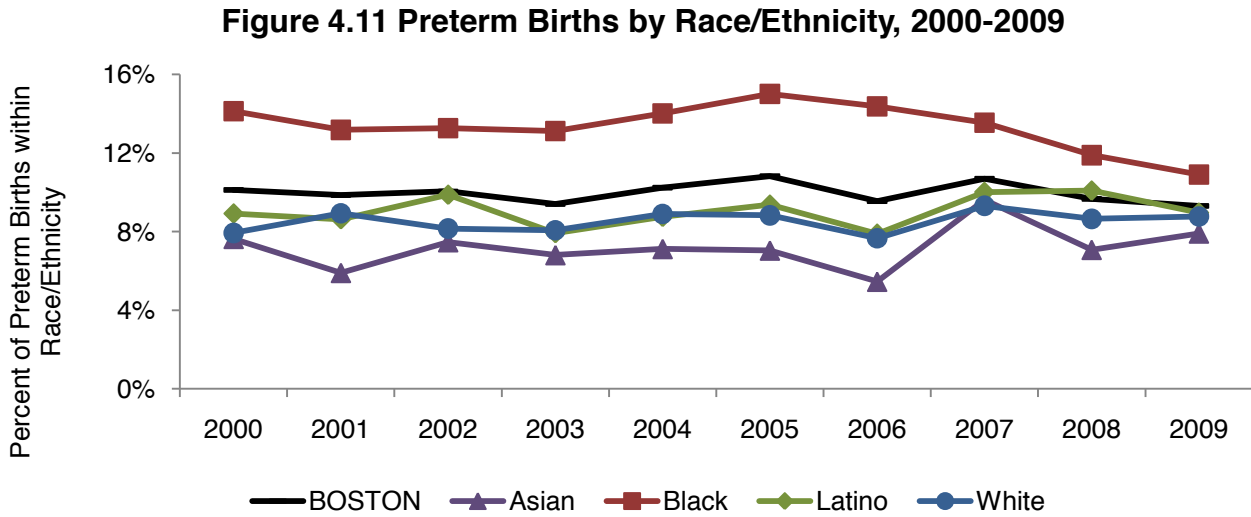
Figure 4.10 Preterm Births, 2000-2009

DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ Figure 4.10 Preterm Births, 2000-2009

Preterm births are births in which there are less than 37 completed weeks of pregnancy. Infants born preterm have a number of health problems including respiratory distress, mental retardation, and vision problems. Complications of preterm births can result in the death of the infant. In Boston, for every year from 2000 to 2009, approximately one in ten births was premature.

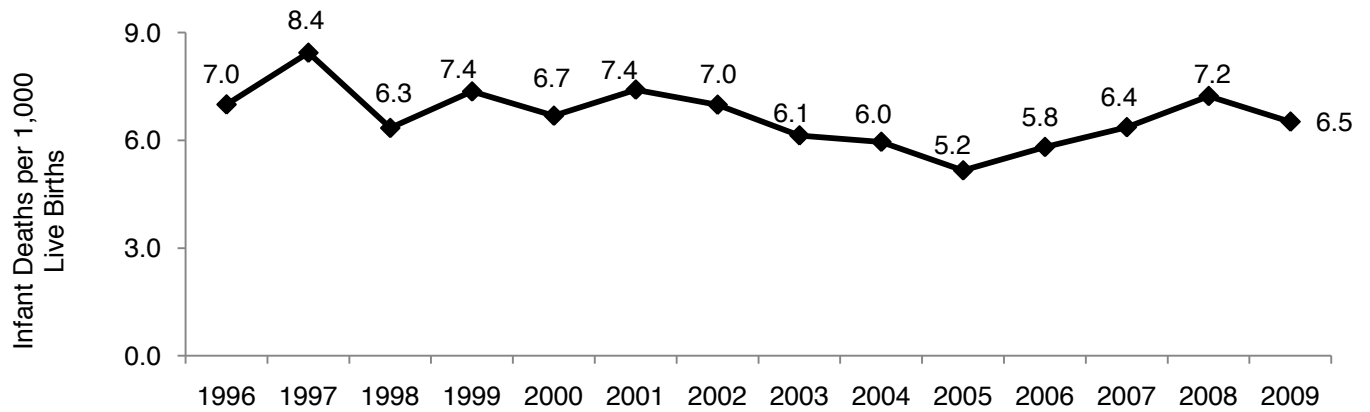




DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

■ **Figure 4.11 Preterm Births by Race/Ethnicity, 2000-2009**

Black women in Boston had the greatest percentage of preterm births each year between 2000 and 2009 compared to women of other racial/ethnic groups, despite a decrease in the percentage of preterm births for Black women for every year between 2005 and 2009. From 2008 to 2009, the percentage of preterm births decreased for Black and Latino women but increased slightly for White and Asian women. In 2009, the percentage of preterm births for Black women was 38%, 17% and 24% higher than Asian, Latino, and White women, respectively.

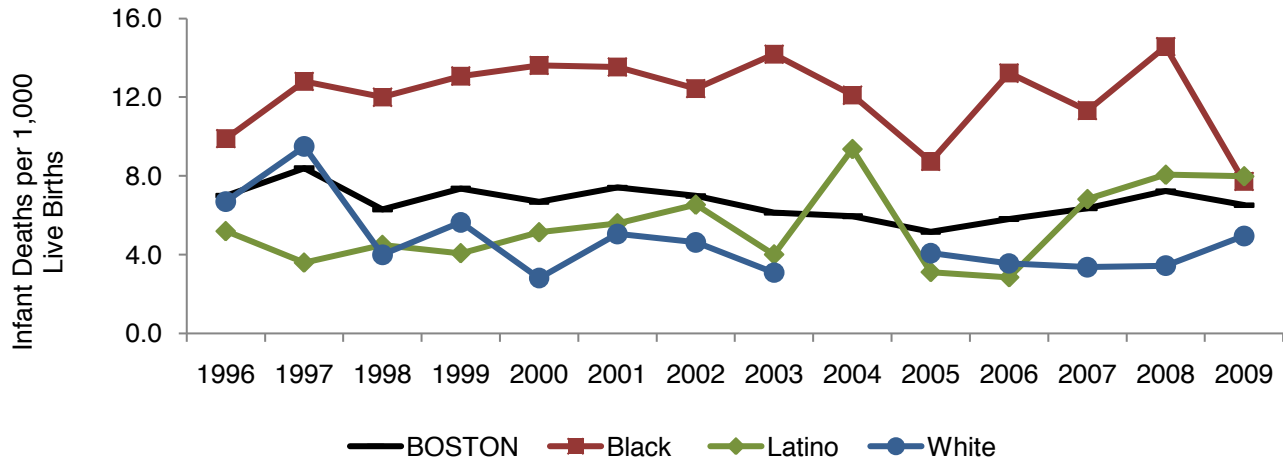
Figure 4.12 Infant Mortality, 1996-2009

DATA SOURCE: Boston resident live births and deaths, Massachusetts Department of Public Health

■ **Figure 4.12 Infant Mortality, 1996-2009**

There were 52 infant deaths in Boston in 2009, resulting in an infant mortality rate (IMR) of 6.5 deaths per 1,000 live births, based on the preliminary resident linked birth/death file (death cohort).

Figure 4.13 Infant Mortality by Race/Ethnicity, 1996-2009



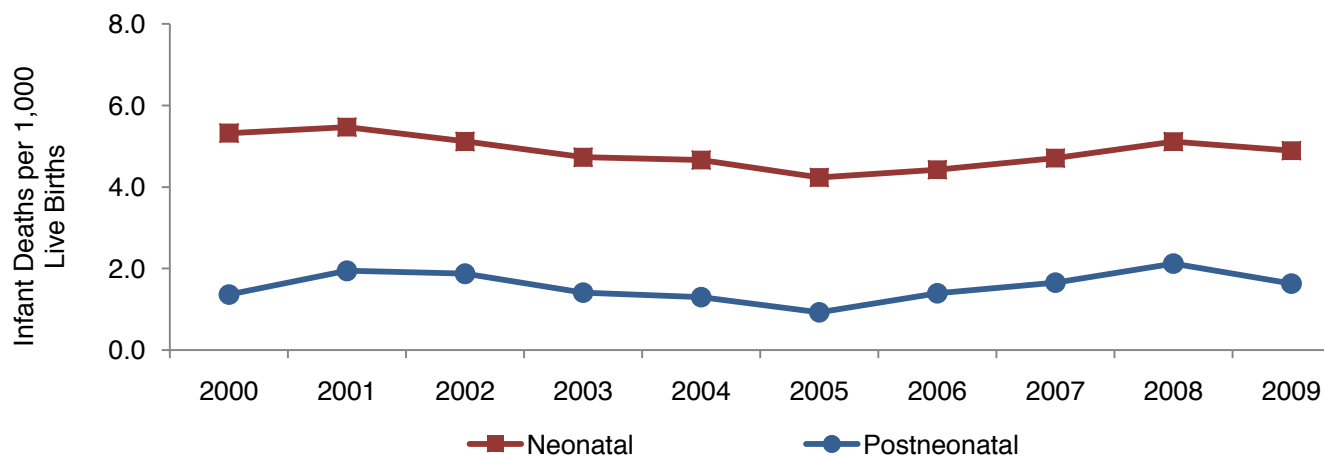
DATA SOURCE: Boston resident live births and deaths, Massachusetts Department of Public Health

■ **Figure 4.13 Infant Mortality by Race/Ethnicity, 1996-2009**

From 1996 to 2008, the infant mortality rate (IMRs) was consistently highest for Black infants. In 2009, the Latino IMR was the highest among racial/ethnic groups. Boston Latino women had the second highest IMR in 2007 and in 2008.

This was the first year in the past 20 years (data not shown) that the Black IMR was not the highest among racial/ethnic groups. In 2009, unlike in previous years, the IMRs were calculated based on the preliminary resident linked birth/death file (death cohort). The Black IMR (7.7 deaths per 1,000 live births) was 1.5 times the White IMR in 2009.



Figure 4.14 Neonatal and Postneonatal Infant Mortality, 2000-2009

DATA SOURCE: Boston resident live births and deaths, Massachusetts Department of Public Health

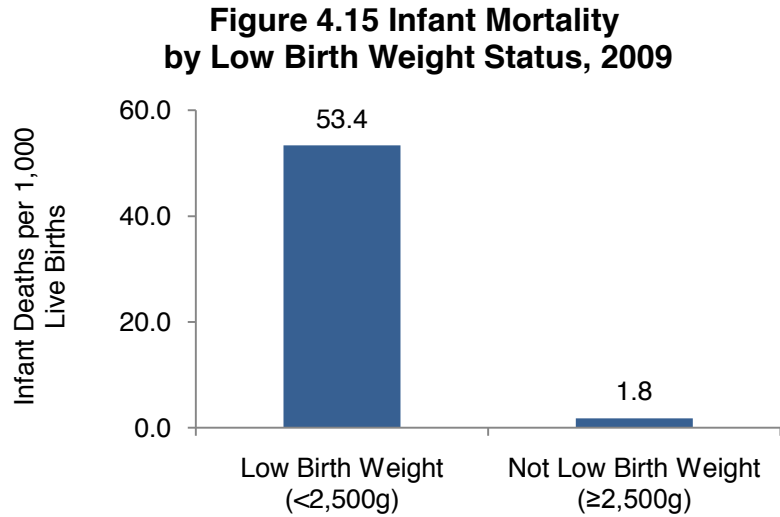
■ **Figure 4.14 Neonatal and Postneonatal Infant Mortality, 2000-2009**

Most infant deaths occur during the neonatal period (live birth through 27 days of age). Infant deaths during the neonatal period are associated with preterm birth and low birth weight, congenital conditions of the infant, and other conditions that might originate during the perinatal period such as cardiovascular and respiratory disorders.

The rate of Boston infants who died during the neonatal period decreased 21% from 2000 to 2005 and increased 21% from 2005 to 2008. The neonatal infant mortality rate in 2009 was 4.9 infant deaths per 1,000 live births based on using the preliminary resident linked birth/death file (death cohort). The postneonatal infant mortality rate, resulting from infant deaths from 28 days of age to less than one year was 1.6 infant deaths per 1,000 live births in 2009 using the same file.

■ **Figure 4.15 Infant Mortality by Low Birth Weight Status, 2009**

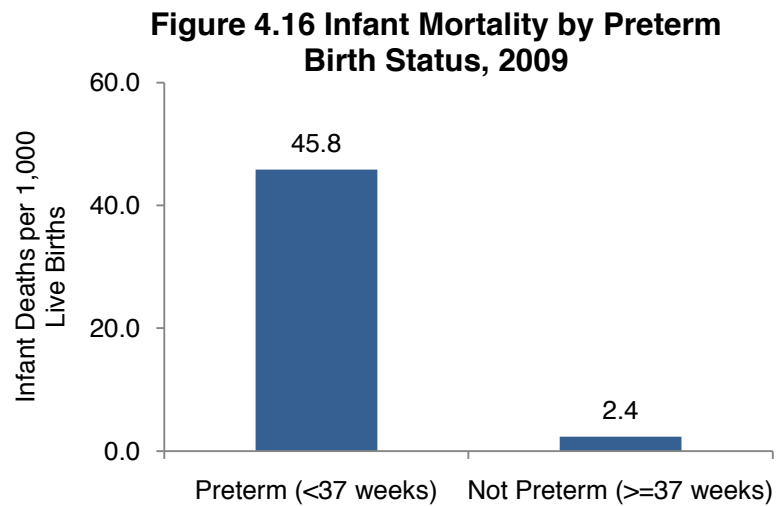
In 2009, the infant mortality rate for infants with low birth weight was 30 times the rate for non-low birth weight infants based on using the preliminary resident lined birth/death file (death cohort).



DATA SOURCE: Boston resident live births and deaths, Massachusetts Department of Public Health

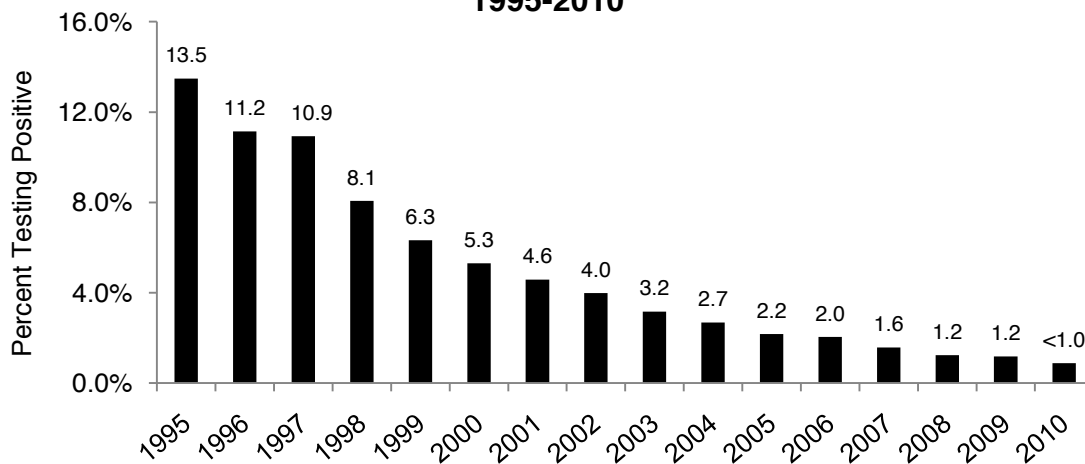
■ **4.16 Infant Mortality by Preterm Birth Status, 2009**

The infant mortality rate (IMR) for preterm births in 2009 was 19 times the IMR for infants that were not born preterm based on using the preliminary resident lined birth/death file (death cohort).



DATA SOURCE: Boston resident live births and deaths, Massachusetts Department of Public Health

Figure 5.1 Children with Elevated Blood Lead Levels, 1995-2010



DATA SOURCE: Boston Public Health Commission Office of Environmental Health

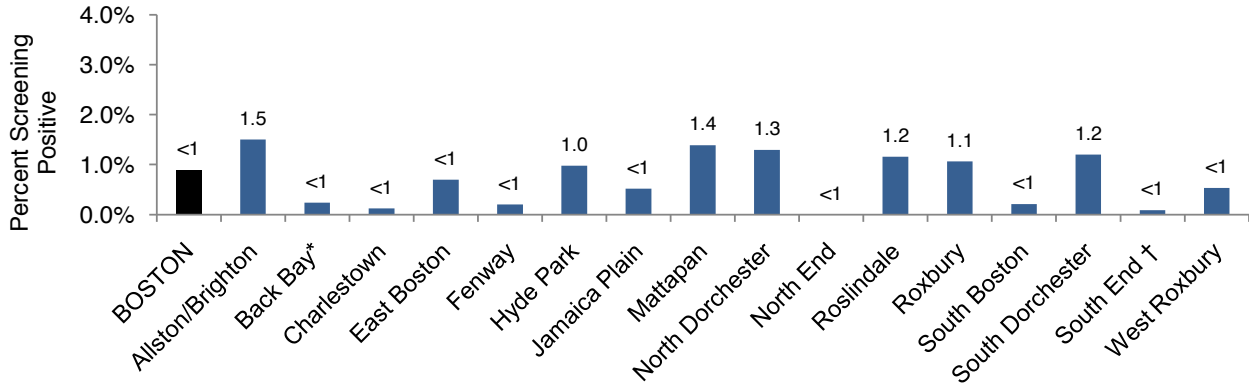
■ **Figure 5.1 Children with Elevated Blood Lead Levels, 1995-2010**

Elevated blood lead levels in children have been linked to nervous system damage, behavior and learning difficulties, stunted growth and hearing disorders.

In 2010, 22,230 children under age six were screened for elevated blood lead levels (defined as 10 micrograms per deciliter [$\mu\text{g}/\text{dl}$] or higher). Of the children screened, less than 1% had elevated blood lead levels. The percentage of elevated blood levels among tested children has decreased substantially from 13.5% in 1995.



Figure 5.2 Children with Elevated Blood Lead Levels by Neighborhood, 2010



*Includes Beacon Hill, Downtown, and the West End

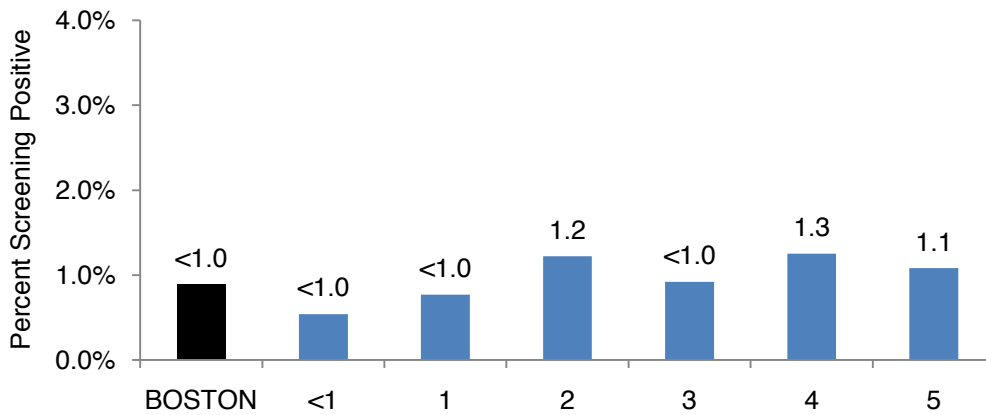
†Includes Chinatown

DATA SOURCE: Boston Public Health Commission Office of Environmental Health

■ Figure 5.2 Children with Elevated Blood Lead Levels by Neighborhood, 2010

Across all Boston neighborhoods in 2010, fewer than 2% of tested children had elevated blood lead levels.

Figure 5.3 Children with Elevated Blood Lead Levels by Age, 2010



DATA SOURCE: Boston Public Health Commission Office of Environmental Health

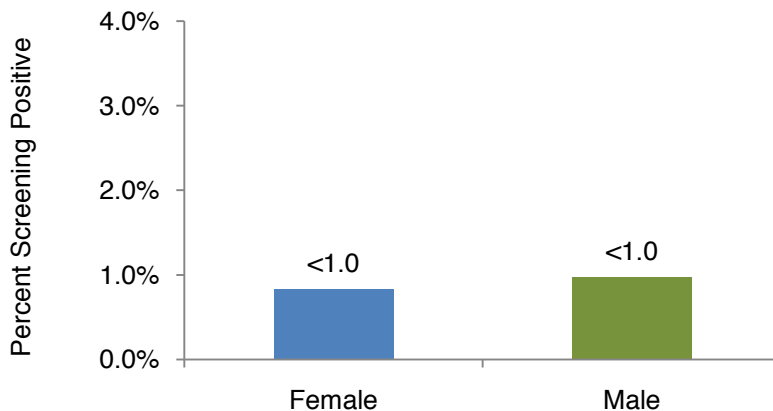
■ Figure 5.3 Children with Elevated Blood Levels by Age, 2010

Fewer than 2% of children screened by age had elevated blood levels.

■ **Figure 5.4 Children with Elevated Blood Levels by Gender, 2010**

In 2010, fewer than 1% of both male and female children had positive screenings for elevated blood levels.

Figure 5.4 Children with Elevated Blood Lead Levels by Gender, 2010



DATA SOURCE: Boston Public Health Commission Office of Environmental Health



Chronic Diseases

Chronic diseases are diseases or health conditions that are of long duration, slow progression, and may require ongoing medical care. In Boston, chronic diseases such as asthma, diabetes, heart disease, stroke, cancer, and arthritis are among the leading causes of illness, disability, and death.

Age, education, income, insurance status, heredity, air pollution, and stress are factors associated with risk of chronic disease (1). Low income and education is associated with obesity and the onset of heart disease and diabetes (2). Modifiable health behaviors including physical inactivity, unhealthy eating habits, excessive alcohol consumption, and tobacco use may promote the onset of certain chronic diseases. Additionally, social determinants of health such as socioeconomic status (e.g., low educational attainment or low income), neighborhood environment (e.g., neighborhood poverty and accessibility and availability of affordable and nutritious food options), and exposure to racism can also contribute to the increased risk of chronic disease.

Although many Boston residents are affected by chronic diseases, some subgroups of the population are disproportionately affected. For example, among adults under age 65, Black residents of all income levels are more likely than residents of other racial/ethnic groups to have a chronic disease or disability, especially asthma, heart failure, hypertension, and stroke (3).

Having access to quality health care, including routine screenings for early detection of disease, aids in the prevention of chronic diseases. Ensuring that Boston residents have healthy neighborhood environments that support healthy behaviors and facilitate positive choices is essential.

This section includes information on asthma, diabetes, heart disease and obesity.

Asthma



What is Asthma?

Asthma is a chronic respiratory disease characterized by episodes of coughing, wheezing, difficulty breathing, and chest tightness. The symptoms of asthma result from inflammation and the narrowing of small airways in response to environmental triggers (1). An asthma attack can be triggered by many factors including allergens (mold, pet dander, dust mites, and cockroaches), certain chemicals, exposure to tobacco smoke, and infections. Asthma can be well controlled by avoiding triggers, adhering to maintenance medication, identifying and treating attacks early, and developing an asthma action plan with a health care provider (1).

Population at greatest risk

Young children are at risk for developing asthma. Obesity, a family history of asthma, allergies, and exposure to allergens such as dust mites and second-hand smoke can increase an individual's risk of developing asthma (1). Among racial/ethnic groups in the United States, Puerto Ricans have the highest prevalence of lifetime asthma followed by Blacks and American Indians (2).

Prevention

Though asthma cannot be cured, it can be controlled by avoiding contact with the asthma “triggers” mentioned above and proper medical care. Continuous monitoring of the disease, patient education, and having a medical management plan is recommended (1).

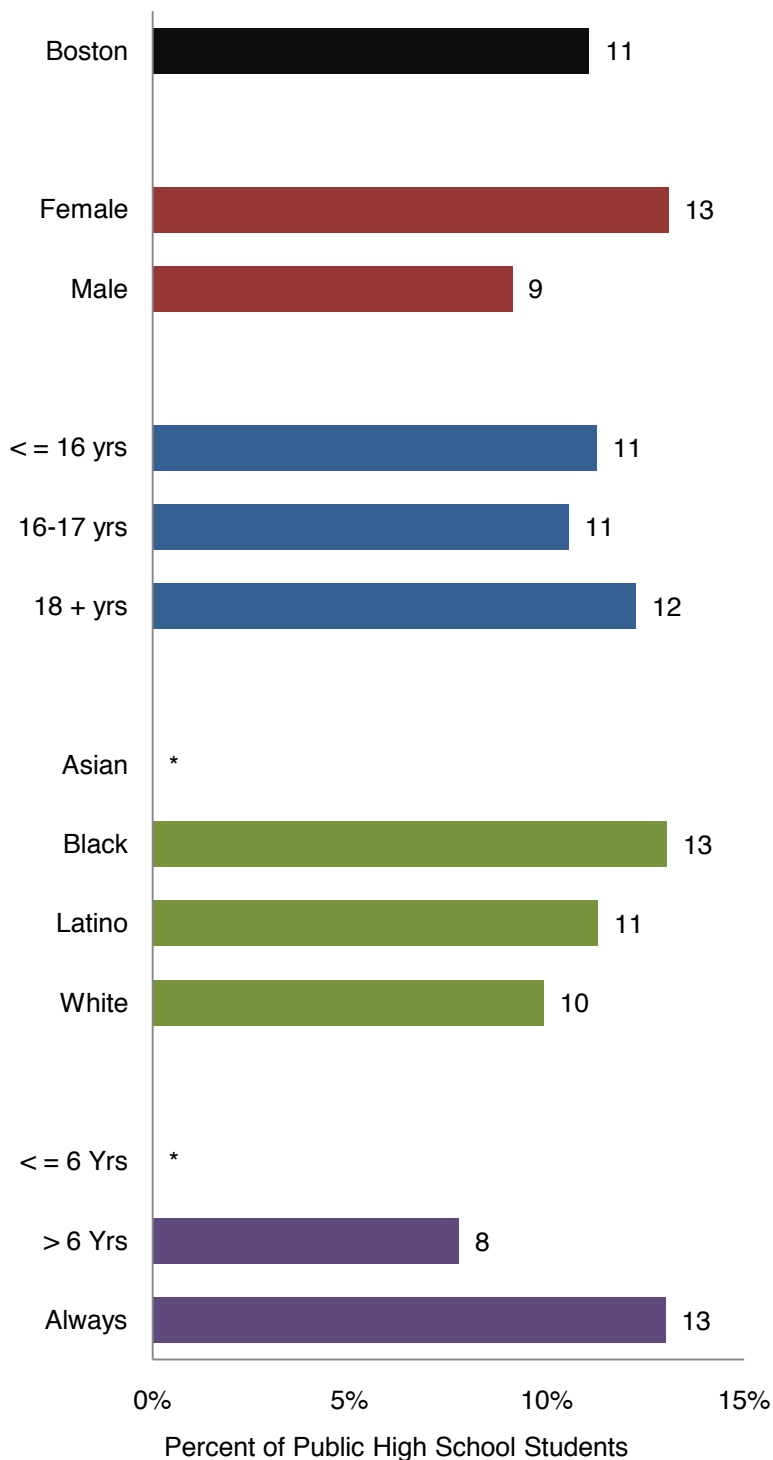
Creating healthy environments in homes and neighborhoods that reduce exposure to known triggers is an essential component of an effective asthma management plan and requires the full participation of city departments, community-based organizations, and families. Workplace tobacco control regulations that limit exposure to second hand smoke are effective in reducing exposure in work environments.

■ Figure 6.1 Asthma Among Public High School Students by Selected Indicators, 2009

In 2009, 11% of Boston public high school students reported that they currently have asthma.

There were no significant differences between female and male students, among age groups, racial/ethnic groups and years of residence in the US.

Figure 6.1 Asthma Among Public High School Students by Selected Indicators, 2009



*Insufficient sample size for Asian students and <=6 years of residence in the US

DATA SOURCE: Youth Risk Behavior Survey 2007, Youth Risk Behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention

■ Figure 6.2 Asthma Among Adults by Selected Indicators, 2010

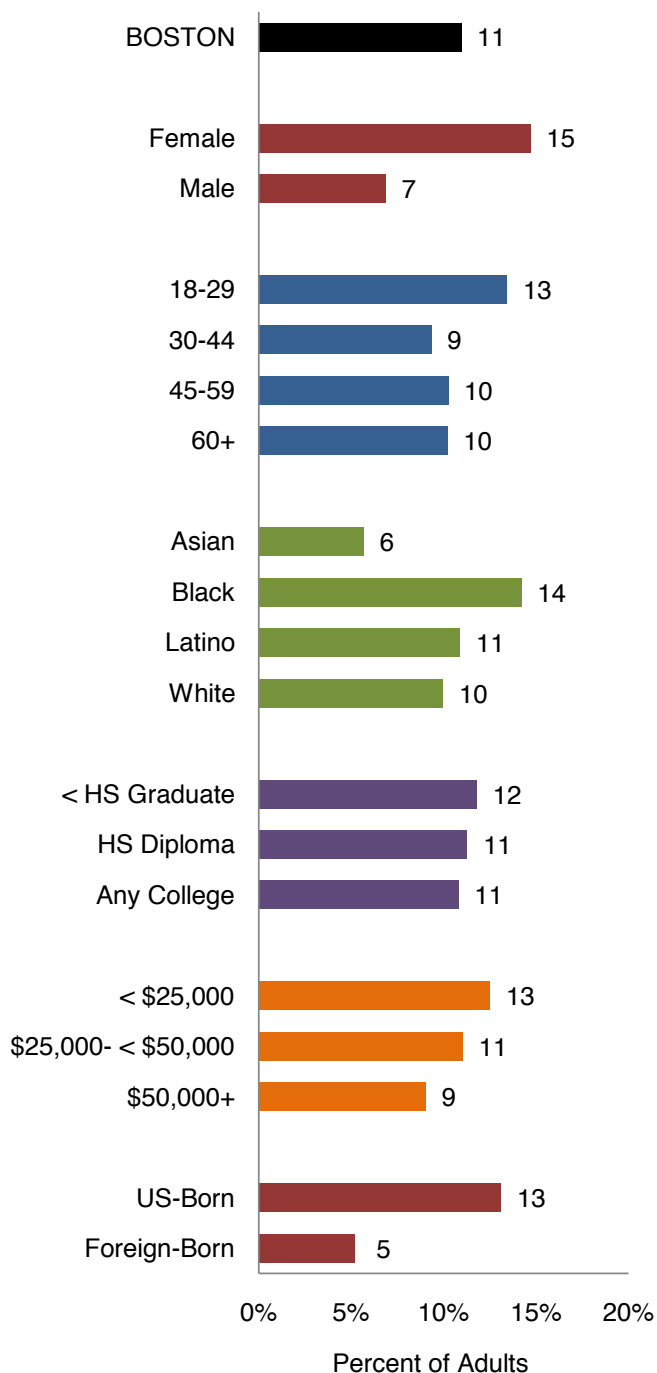
In 2010, 11% of the Boston adult residents reported that they currently have asthma.

A higher percentage of female residents reported having asthma compared to males.

There were no significant differences among age groups and education levels.

A higher percentage of residents with a household income of less than \$25,000 reported that they have asthma. A higher percentage of residents who were US-born reported that they have asthma compared to residents who were foreign-born.

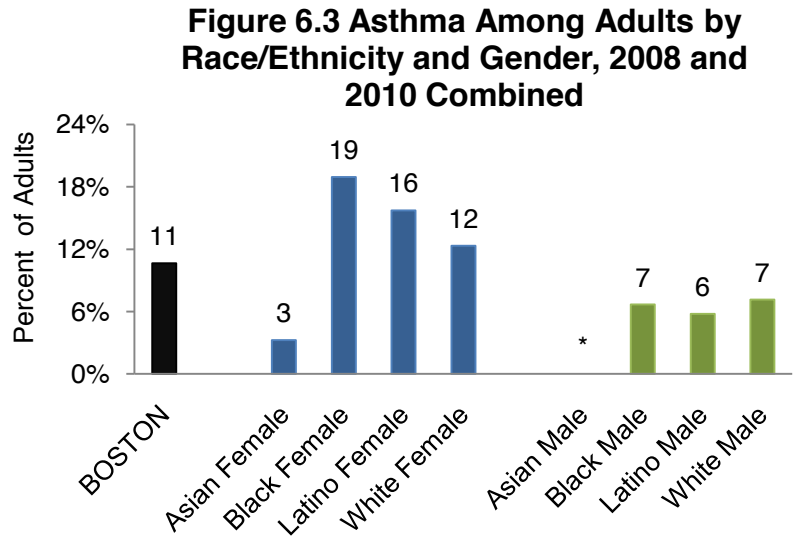
Figure 6.2 Asthma Among Adults by Selected Indicators, 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ Asthma in Adults by Race/Ethnicity and Gender, 2008 and 2010 Combined

A lower percentage of Asian and White females reported that they currently have asthma compared to Black females. No significant differences were seen across the racial/ethnic male groups.



*Insufficient sample size for Asian Males.

DATA SOURCE: Boston Behavioral Risk Factor Survey 2008 and 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

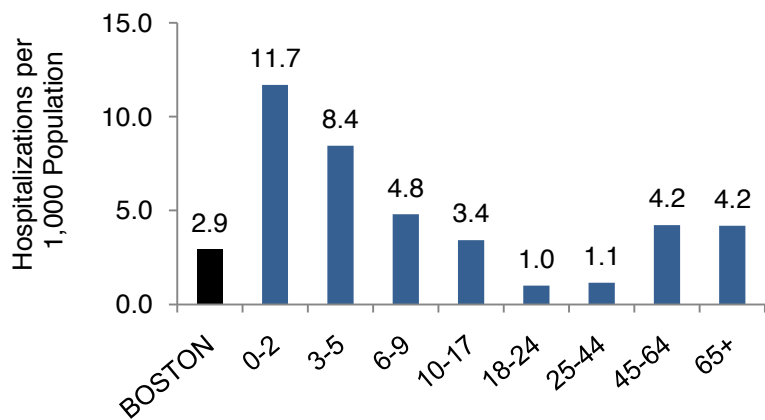
■ Figure 6.4 Asthma Hospitalizations by Age Group, 2009

In 2009, children ages 2 and under had the highest age-specific asthma hospitalization rate in Boston (12 out of 1,000 hospitalizations), four times the overall rate for the city (3 out of 1,000 hospitalizations).

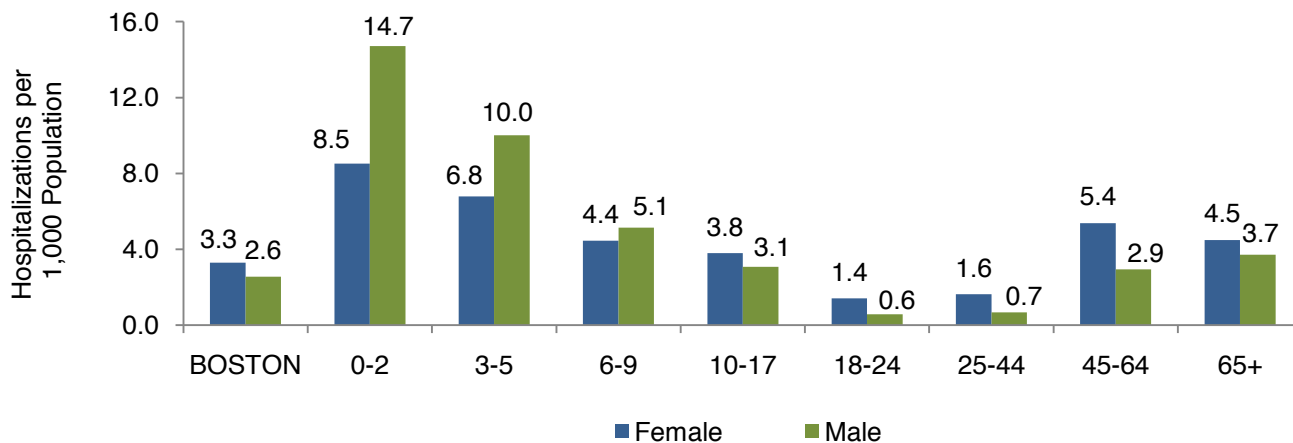
Children ages 3 to 5 years of age had the second highest rate (8 out of 1,000 hospitalization), followed by children ages 6 to 9 years (5 out of 1,000 hospitalizations).

Adult residents ages 18 to 24 and 25 to 44 had lower rates of asthma hospitalizations (1 out of 1,000 hospitalizations) compared to the other age groups.

Figure 6.4 Asthma Hospitalizations by Age Group, 2009



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy.

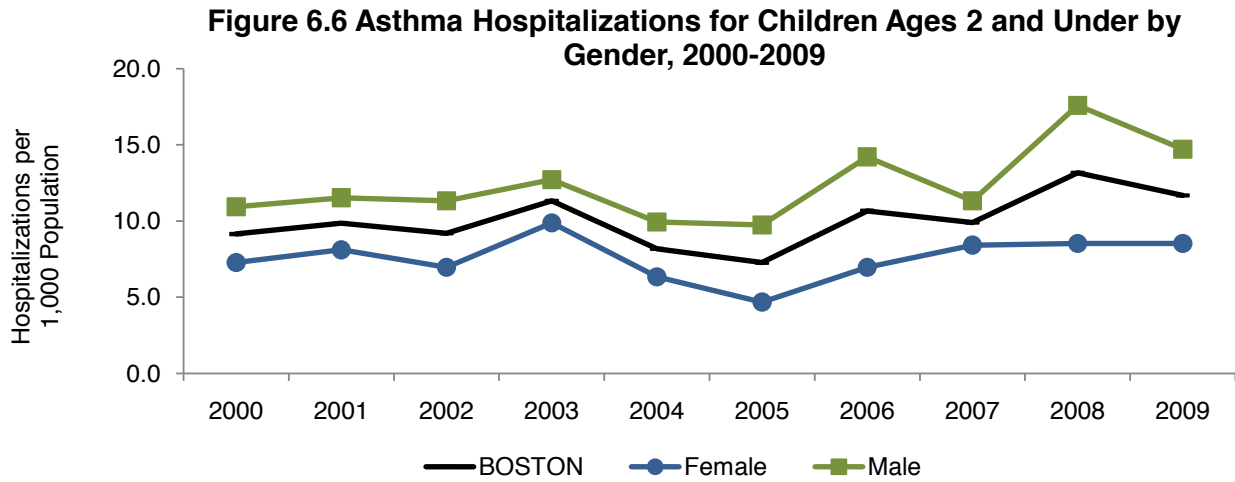
Figure 6.5 Asthma Hospitalizations by Age Group and Gender, 2009

DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

■ **Figure 6.5 Asthma Hospitalizations by Age Group and Gender, 2009**

In 2009, the asthma hospitalization rate varied by gender across age groups.

Male children under the age of ten had higher age-specific asthma hospitalization rates than females. Across all age groups above age nine, female residents had higher age-specific asthma hospitalization rates than males.



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

■ **Figure 6.6 Asthma Hospitalizations of Children Ages 2 and Under by Gender, 2000-2009**

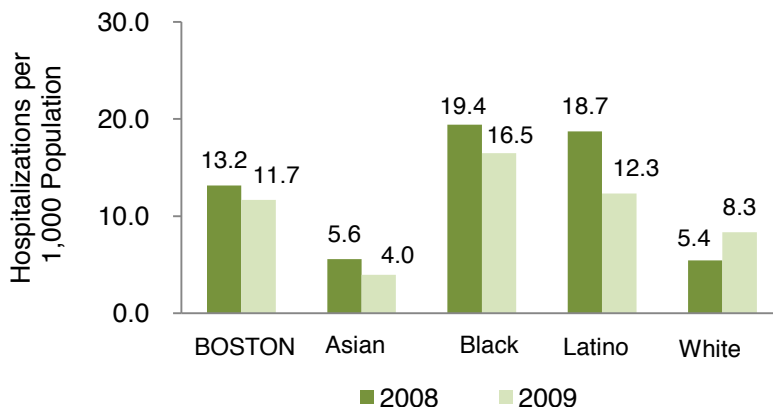
Every year from 2000 to 2009, male children ages 2 and under had a higher rate of asthma hospitalizations compared to female children in the same age group.

From 2008 to 2009, the asthma rate for male children ages 2 and under decreased 16% while the rate for female children did not change.

■ Figure 6.7 Asthma Hospitalizations of Children Ages 2 and Under by Race/Ethnicity, 2008 and 2009

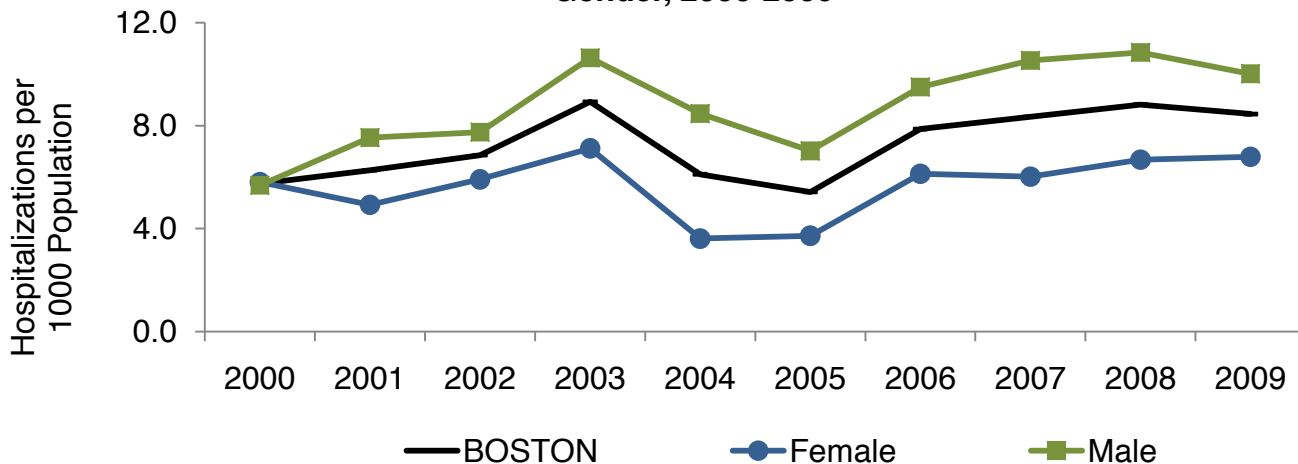
In 2008 and 2009, Black and Latino children ages 2 and under had the highest age-specific asthma hospitalization rates among racial/ethnic groups. In 2009, the rate for Black children was more than four times the rate for Asian children and approximately two times the rate for White children.

Figure 6.7 Asthma Hospitalizations for Children Ages 2 and Under by Race/Ethnicity, 2008 and 2009



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy.

Figure 6.8 Asthma Hospitalizations for Children Ages 3 to 5 and Gender, 2000-2009



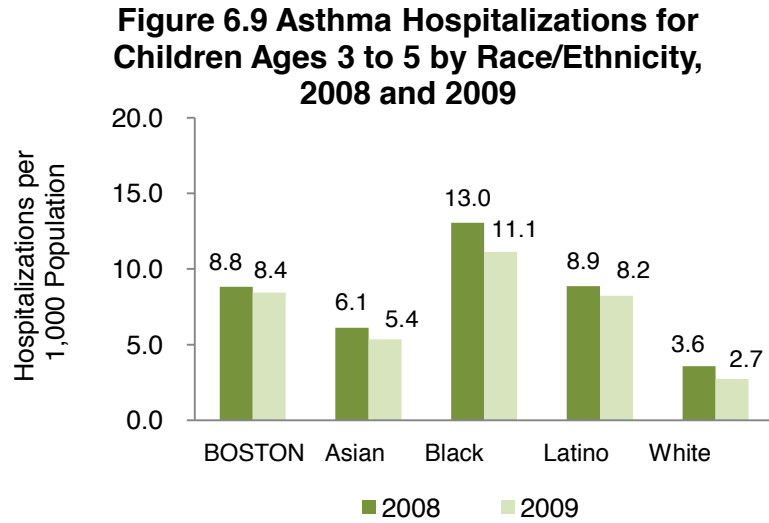
DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy.

■ Figure 6.8 Asthma Hospitalizations of Children Ages 3 to 5 by Gender, 2000-2009

Every year from 2001 to 2009, male children ages 3 to 5 had a higher rate of asthma hospitalizations compared to female children in the same age group. In 2009, the rate for male children was one and a half times the rate for female children.

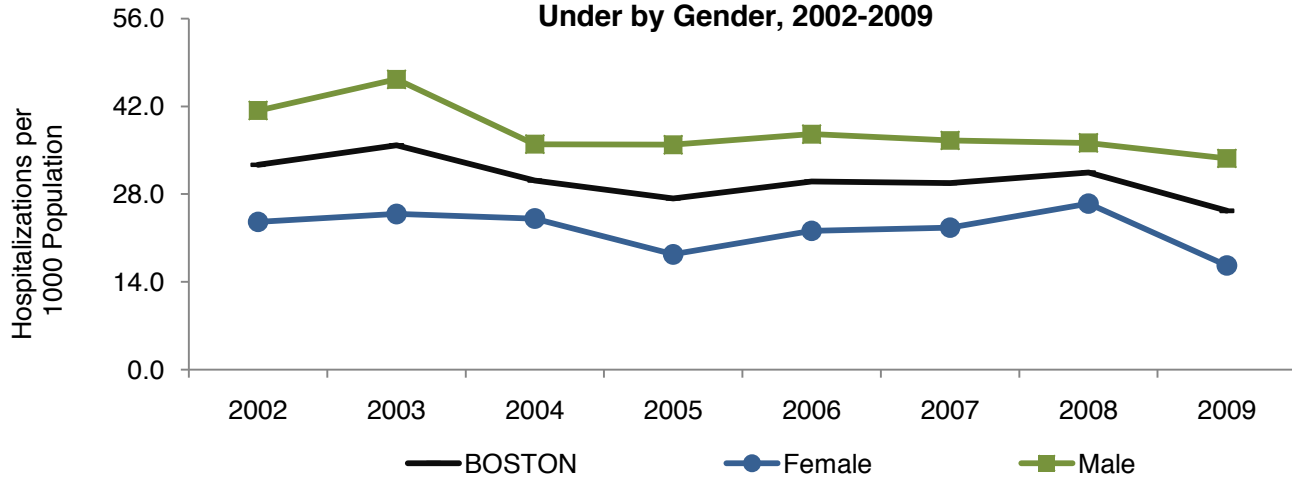
Figure 6.9 Asthma Hospitalizations of Children Ages 3 to 5 by Race/Ethnicity, 2008 and 2009

Across all racial/ethnic groups, the age-specific asthma hospitalization rate for children ages 3 to 5 decreased from 2008 to 2009. In both years, the rates for Black and Latino children were substantially higher than the rates for Asian and White children.



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

Figure 6.10 Asthma Emergency Department Visits for Children Ages 2 and Under by Gender, 2002-2009



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

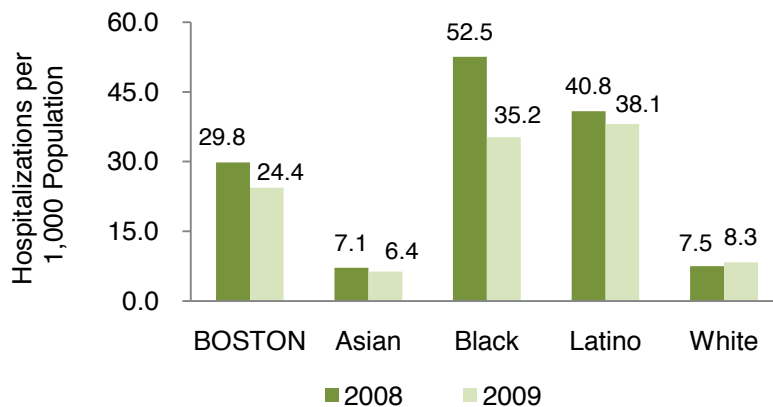
Figure 6.10 Asthma Emergency Department Visits of Children Ages 2 and Under by Gender, 2002-2009

Every year from 2002 to 2009, male children ages 2 and under had a higher rate of asthma-related hospital emergency department visits than female children. The rates for both genders were at their lowest levels in 2009.

■ **Figure 6.11 Asthma Emergency Department Visits of Children Ages 2 and Under by Race/Ethnicity, 2008 and 2009**

In 2008 and 2009, Black and Latino children ages 2 and under had the highest age-specific asthma hospital emergency department visit rates among racial/ethnic groups. In 2009, the rates for Black and Latino children were more than four times the rates for Asian and White children.

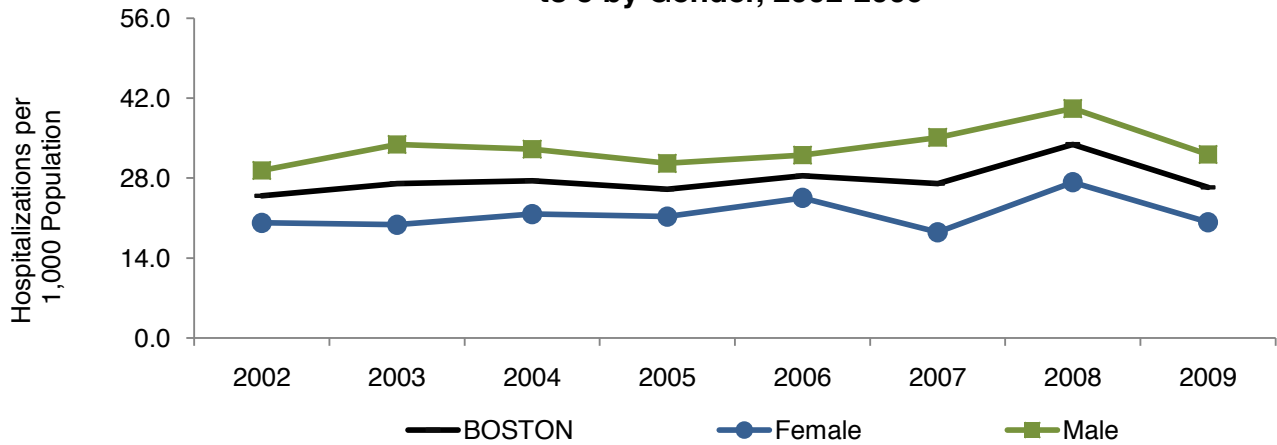
Figure 6.11 Asthma Emergency Department Visits for Children Under 2 by Race/Ethnicity, 2008 and 2009



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy



Figure 6.12 Asthma Emergency Department Visits for Children Ages 3 to 5 by Gender, 2002-2009



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy.

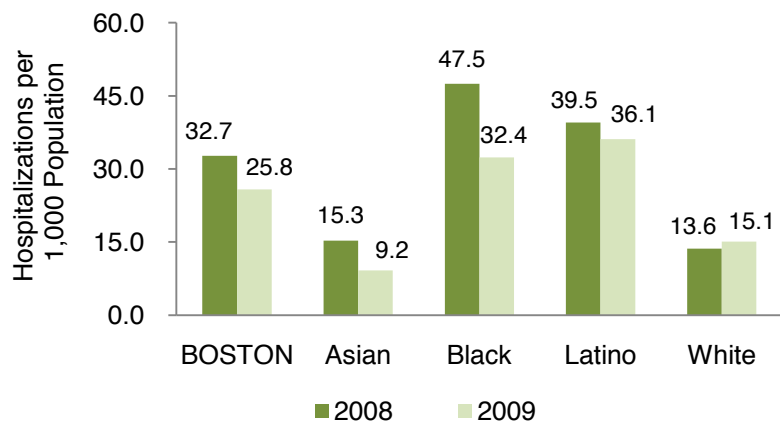
■ **Figure 6.12 Asthma Emergency Department Visits of Children Ages 3 to 5 by Gender, 2002-2009**

Every year from 2002 to 2009, male children ages 3 to 5 had a higher rate of asthma-related hospital emergency department visits than female children.

■ **Figure 6.13 Asthma Emergency Department (ED) Visits of Children Ages 3 to 5 by Race/Ethnicity, 2008 and 2009**

In 2008 and 2009, Black and Latino children ages 3 to 5 had the highest age-specific asthma hospital emergency department visit rates among racial/ethnic groups. In 2009, the rates for Black and Latino children were more than twice the rate for White children and three times the rate for Asian children.

Figure 6.13 Asthma Emergency Department Visits for Children Ages 3 to 5 by Race/Ethnicity, 2008 and 2009



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy.

Diabetes



What is Diabetes?

Diabetes Mellitus is a group of diseases in which the body cannot effectively regulate blood glucose (sugar) due to deficiencies in producing or utilizing a hormone called insulin. There are several types of diabetes including type 1 diabetes, type 2 diabetes, and gestational diabetes. Type 2 diabetes is the most common type of diabetes and will be the focus of this section. Type 2 diabetes occurs when the body loses the ability to use the insulin that it produces effectively, leading to higher levels of blood glucose (1). In a diabetic person, the body, which normally uses glucose as the source of energy for all of its functions, cannot use the available glucose. This leads to several initial symptoms such as frequent urination, excessive thirst, weight loss, fatigue and extreme hunger. Poorly controlled diabetes can lead to several debilitating complications including blindness, kidney damage, stroke, peripheral vascular disease, and heart disease including heart attack (1). The risk of complications can be lowered by controlling blood sugar, blood pressure, and blood lipid levels.

Population at greatest risk

Individuals at increased risk are those with a family history of diabetes (having a parent, brother or sister with diabetes), older aged individuals, racial and ethnic minorities (African-American, American Indian, Asian-American, Pacific Islander, or Hispanic-American/Latino heritage), those who are overweight or obese, and those with high blood pressure or high cholesterol (1).

Prevention

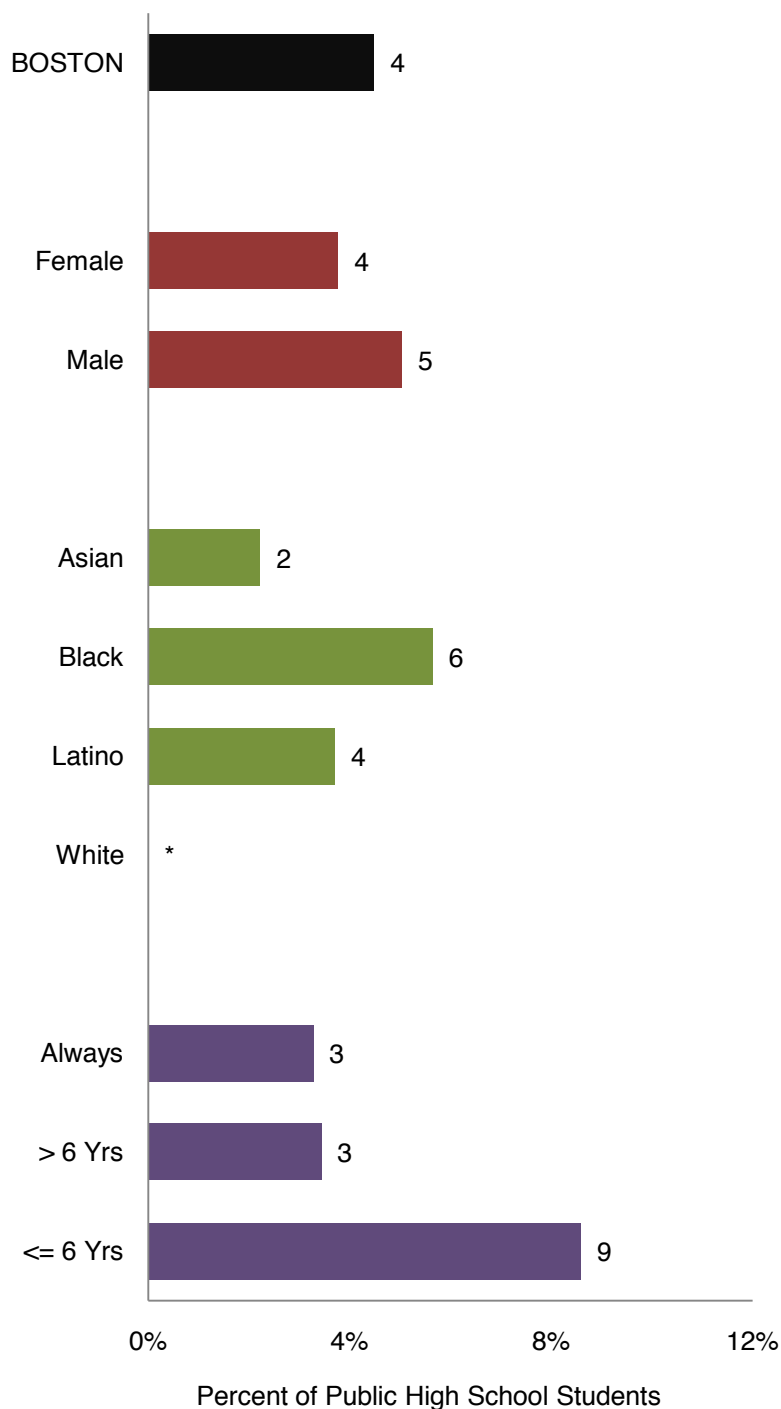
Lifestyle changes can delay or prevent the onset of diabetes, and help control diabetes once diagnosed. Eating a healthy diet, maintaining a healthy weight, and exercising regularly can help prevent diabetes. In addition, controlling blood sugar levels, reducing the consumption of alcohol, quitting cigarette smoking, and maintaining normal cholesterol and blood pressure may reduce the risk of complications from diabetes (2).

■ Figure 6.14 Public High School Students with Diabetes by Selected Indicators, 2007

In 2007, 4% of the public high school students reported that they have diabetes.

The percentage of high school students with diabetes was statistically similar across various groups, such as gender, race/ethnicity and years of residence in the US.

Figure 6.14 Public High School Students with Diabetes by Selected Indicators, 2007



*Insufficient sample size for White students

DATA SOURCE: Youth Risk Behavior Survey 2007, Youth Risk Behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention (CDC)

■ Figure 6.15a Adults with Diabetes by Selected Indicators, 2010

The percentage of adult males and females who reported having diabetes was statistically similar.

A higher percentage of adults ages 60 and over reported having diabetes compared to all adults ages 30-44 and 45-59. A higher percentage of adults ages 45-59 reported having diabetes compared to adults ages 30-44.

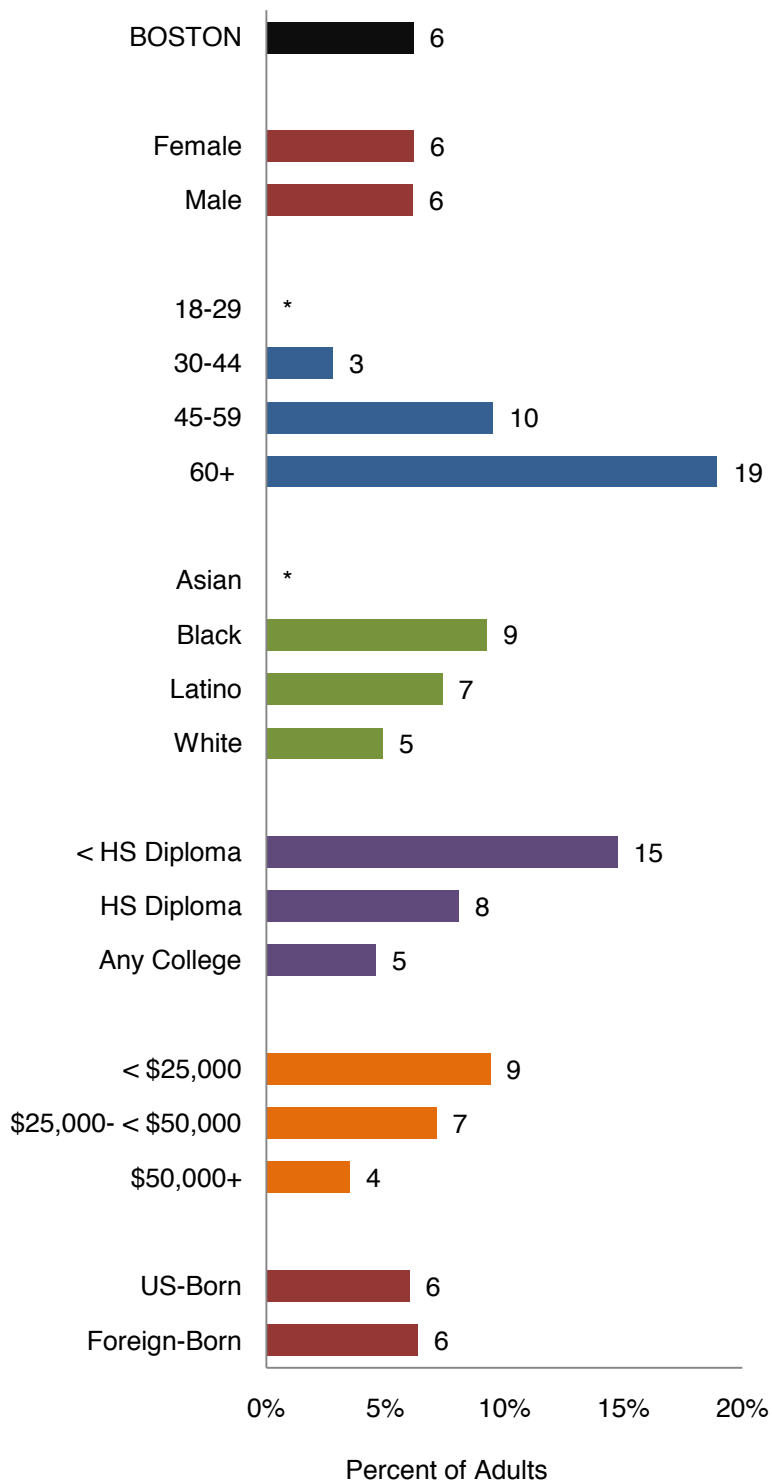
A higher percentage of Black adults reported having diabetes than White adults.

A higher percentage of adults with less than high school education reported having diabetes compared to adults at higher education levels.

A higher percentage of adults with a household income of less than \$25,000 reported having diabetes compared to adults with a household income of \$50,000 or more.

The percentage of adults who reported having diabetes was statistically similar by place of birth

Figure 6.15a Adults with Diabetes by Selected Indicators, 2010

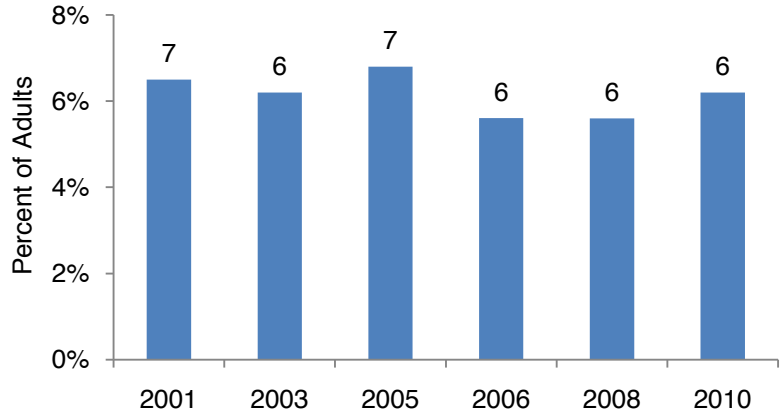


*Insufficient sample size for 18-29 age group and Asian residents
 DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ **Figure 6.15b Adults with Diabetes by Year, 2001, 2003, 2005, 2006, 2008, and 2010**

There were no significant differences across years in percentage of Boston adults who reported having diabetes.

Figure 6.15b Adults with Diabetes by Year, 2001, 2003, 2005, 2006, 2008, and 2010

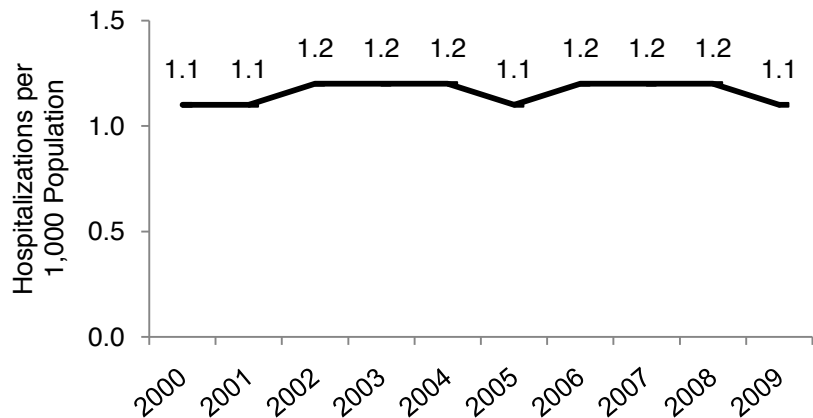


DATA SOURCE: Boston Behavioral Risk Factor Survey 2001, 2003, 2005, 2006, 2008, and 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ **Figure 6.16 Diabetes Hospitalizations by Year, 2000-2009**

The age-adjusted diabetes hospitalization rate for Boston residents, based on primary diagnosis, has remained stable since 2000.

Figure 6.16 Diabetes Hospitalizations by Year, 2000-2009



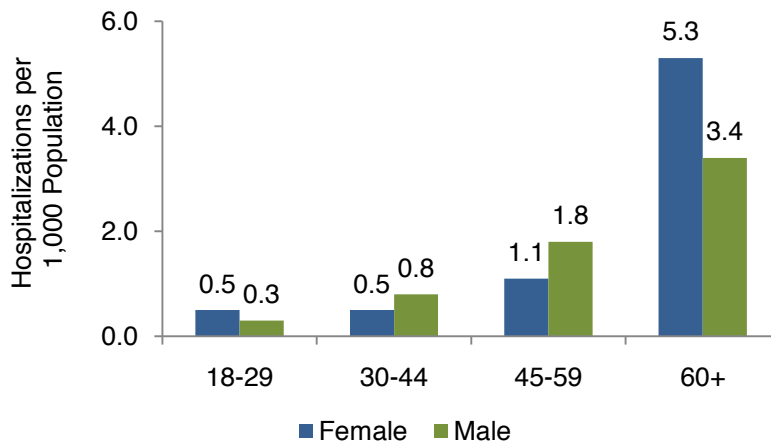
DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

■ **Figure 6.17 Diabetes Hospitalizations of Adults by Age and Gender, 2009**

In 2009, the age-specific diabetes hospitalization rates for Boston adult males ages 30-44 and 45-59 were higher than their female counterparts.

Adult females ages 60 and over had the highest diabetes hospitalization rate overall and was more than one and half times the rate for males ages 60 and over.

Figure 6.17 Diabetes Hospitalizations of Adults by Age and Gender, 2009



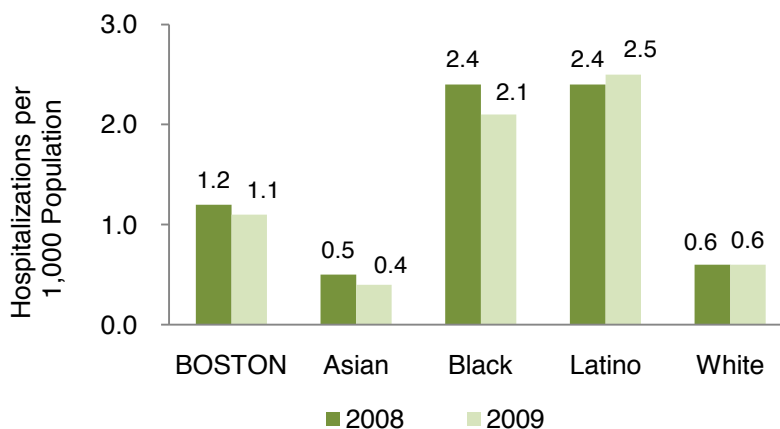
DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

■ **Figure 6.18 Diabetes Hospitalizations by Race/Ethnicity and Year, 2008 and 2009**

In 2008, the diabetes hospitalization rate for Black residents and Latino residents was similar, and more than four times the rate for Asian residents and four times the rate for White residents.

In 2009, Latino and Black residents, again, had much higher diabetes hospitalization rates than Asian and White residents.

Figure 6.18 Diabetes Hospitalizations by Race/Ethnicity and Year, 2008 and 2009

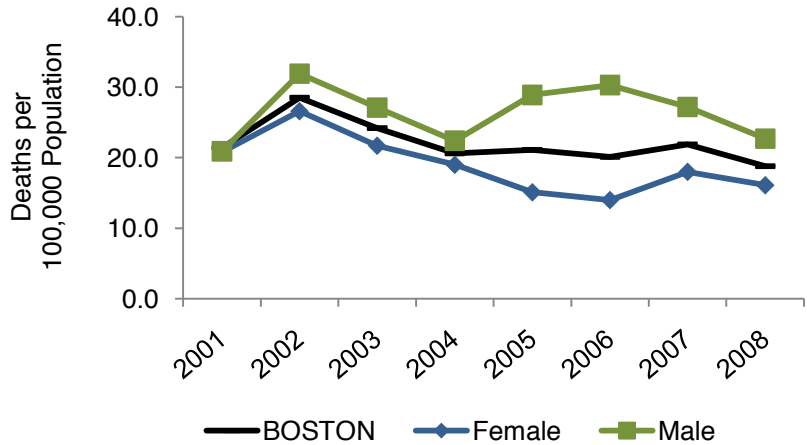


DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

Figure 6.19 Diabetes Mortality by Gender, 2001-2008*

The overall age-adjusted diabetes mortality rate for Boston residents in 2008 was 18.8 deaths per 100,000 population. From 2001 to 2008, the male diabetes mortality rate was generally higher than the female rate.

Figure 6.19 Diabetes Mortality by Gender, 2001-2008*



*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

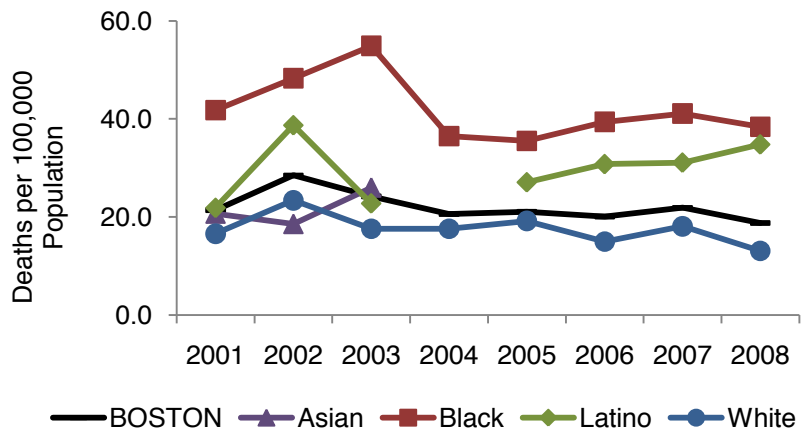
DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

Figure 6.20 Diabetes Mortality by Race/Ethnicity*, 2001-2008†

From 2001 through 2008, Boston's Black residents had the highest age-adjusted diabetes mortality rate among all racial/ethnic groups.

Between 2007 and 2008, the diabetes mortality rate decreased 7% for Black and 28% for White residents but increased 12% for Latino residents.

Figure 6.20 Diabetes Mortality by Race/Ethnicity*, 2001-2008†



*Rates are not presented for Asians for 2004-2008 and Latinos for 2004 due to the small number of cases in each of the years shown.

†Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

Heart Disease



What is Heart Disease?

Heart disease is one of the leading causes of death for Boston residents. The term heart disease includes several heart conditions, such as coronary artery disease, angina, heart failure, and arrhythmias. The most common type of heart disease in the United States is coronary artery disease (CAD) (1). CAD is a narrowing of the blood vessels, which supply the heart and can lead to heart attack. Each type of heart disease can have different symptoms, although some symptoms are common to multiple conditions. Heaviness or pressure in the chest, shortness of breath, dizziness, sweating, and nausea are common symptoms of coronary artery disease. High blood pressure, high blood cholesterol, cigarette smoking, diabetes, and obesity are the most important risk factors for coronary artery disease (1).

Population at greatest risk

Heart disease is the leading cause of death for both men and women in the US and accounts for about 30% of all deaths (2). It is also the leading cause of death for all racial and ethnic groups except for Asians and Pacific Islanders, for whom it is the second leading cause of death (2). In Boston, heart disease is the second leading cause of death for all residents overall.

Prevention

Preventing, treating or controlling high blood pressure, high blood cholesterol and diabetes, avoiding tobacco, reducing stress, exercising regularly, maintaining a healthy weight, and eating nutritious food can help prevent heart disease (3). Regulations that eliminate artificial trans-fats from prepared foods support heart-healthy choices.

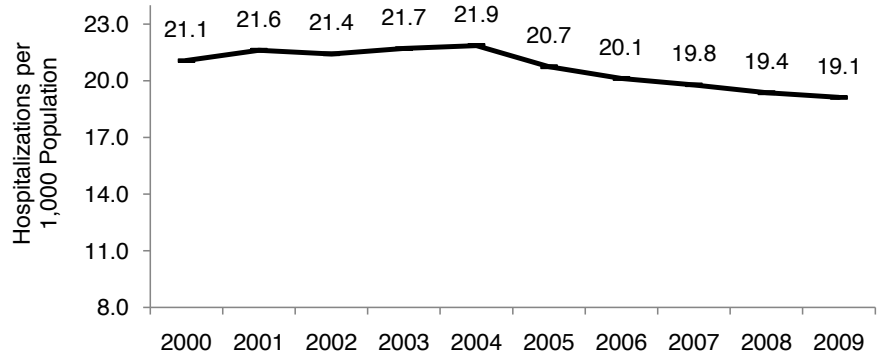
Figure 6.21 Heart Disease Hospitalizations, 2000-2009

Although largely preventable, heart disease is a leading cause of hospitalization and death for Boston residents.

Of the 58,772 hospitalizations experienced by Boston residents in 2009, (excluding pregnancy, childbirth and newborns), heart disease accounted for 16%.

Since 2004, age-adjusted heart disease hospitalization rates for Boston residents have been gradually declining. From 2004 to 2009, the rate decreased 13%.

Figure 6.21 Heart Disease Hospitalizations 2000-2009



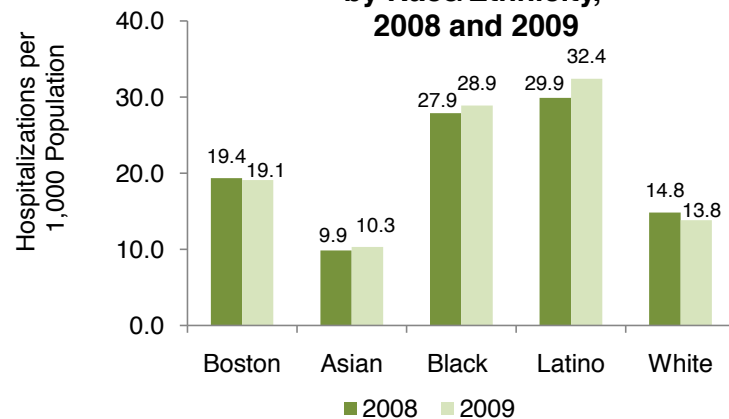
DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

Figure 6.22 Heart Disease Hospitalizations by Race/Ethnicity, 2008 and 2009

Black residents consistently had the highest age-adjusted heart disease hospitalization rate from 2000 through 2007 (data not shown). However in 2008 and 2009, Latino residents had the highest rate.

For both 2008 and 2009, Boston's Asian and White residents had lower age-adjusted heart disease hospitalization rates compared to Black and Latino residents. From 2008 to 2009, the rates for all non-White racial/ethnic groups increased slightly while the rate for White residents decreased slightly.

Figure 6.22 Heart Disease Hospitalizations by Race/Ethnicity, 2008 and 2009

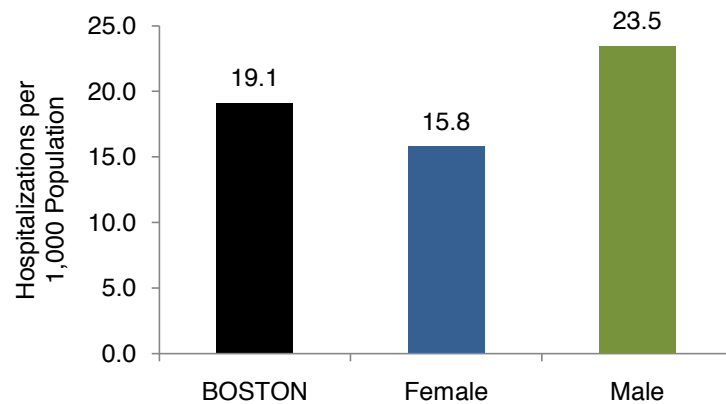


DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

■ **Figure 6.23 Heart Disease Hospitalizations by Gender, 2009**

In 2009, the age-adjusted heart disease hospitalization rate for Boston males was almost 50% higher than for Boston females.

Figure 6.23 Heart Disease Hospitalizations by Gender, 2009



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

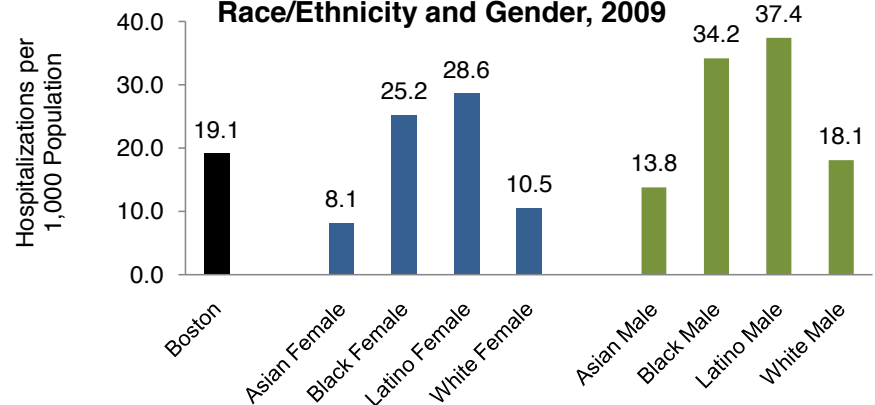
■ **Figure 6.24 Heart Disease Hospitalizations by Race/Ethnicity and Gender, 2009**

In 2009, within each racial/ethnic group, Boston males had a higher rate of heart disease hospitalization than females.

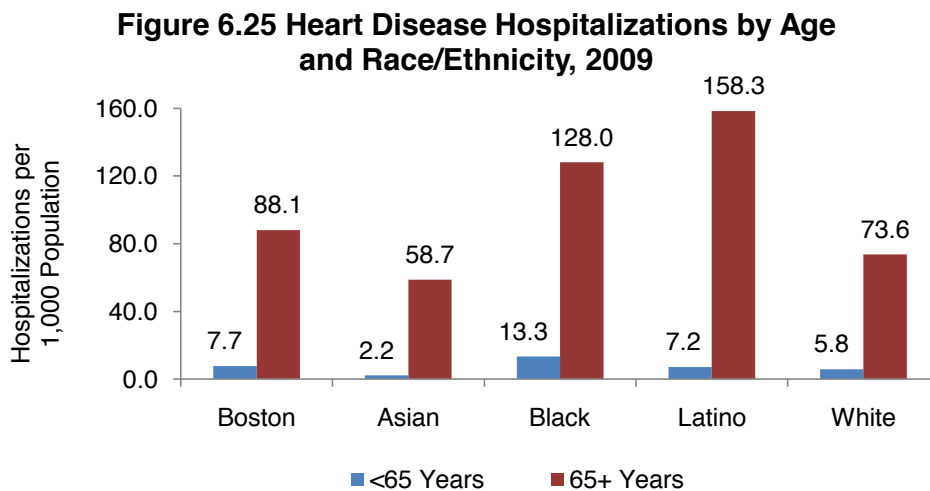
Among both males and females, the heart disease hospitalization rates were higher for Latino and Black residents than for Asian and White residents.

The rate for Latino females was 3.5 times the rate for Asian females and 2.7 times the rate for White females. The rate for Latino males was 2.7 times the rate for Asian males and 2.1 times the rate for White males.

Figure 6.24 Heart Disease Hospitalizations by Race/Ethnicity and Gender, 2009



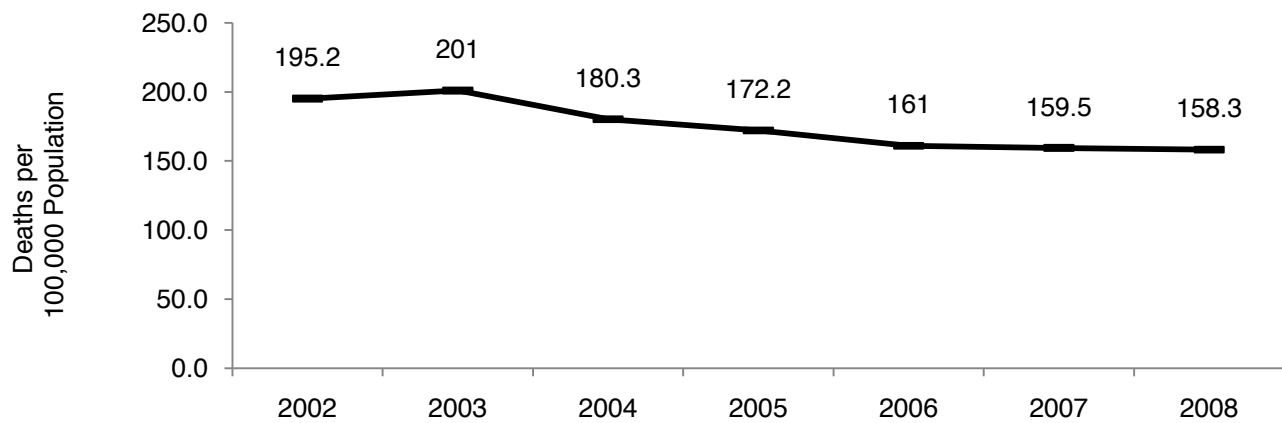
DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy



DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

■ **Figure 6.25 Heart Disease Hospitalizations by Age and Race/Ethnicity, 2009**

In 2009, Latino adults ages 65 and older had the highest age-specific rate for heart disease hospitalizations, 79% higher than the Boston overall rate for adults in the same age group. Among adults under age 65, Black residents had the highest rate of heart disease hospitalization.

Figure 6.26 Heart Disease Mortality, 2002-2008*

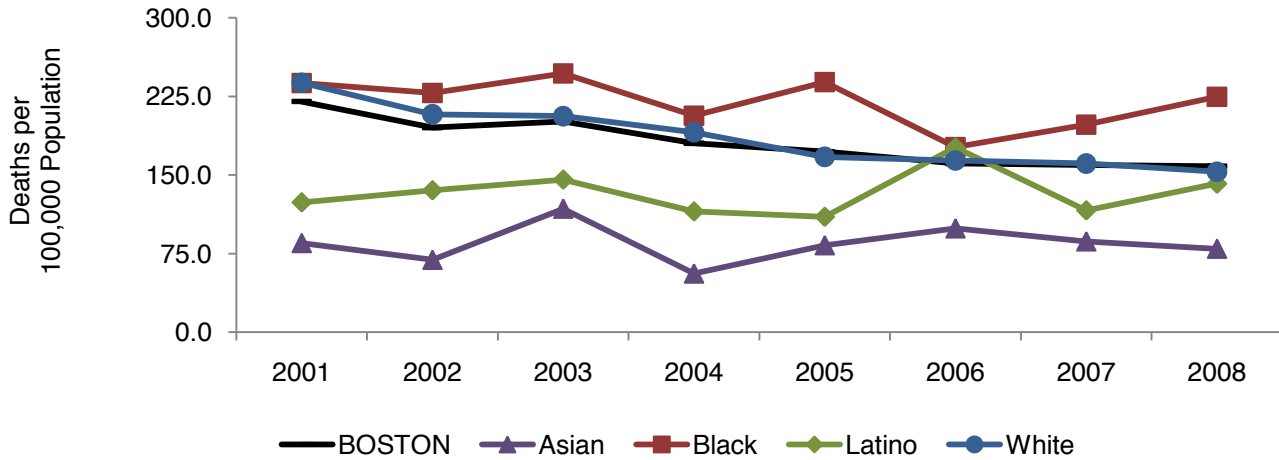
*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

■ **Figure 6.26 Heart Disease Mortality, 2002-2008***

Between 2002 and 2008, the age-adjusted heart disease mortality rate for Boston residents declined steadily. The rate decreased 19% from 2002 to 2008.

Figure 6.27 Heart Disease Mortality by Race/Ethnicity, 2001-2008*



*Death data for 2009 are not yet available from Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

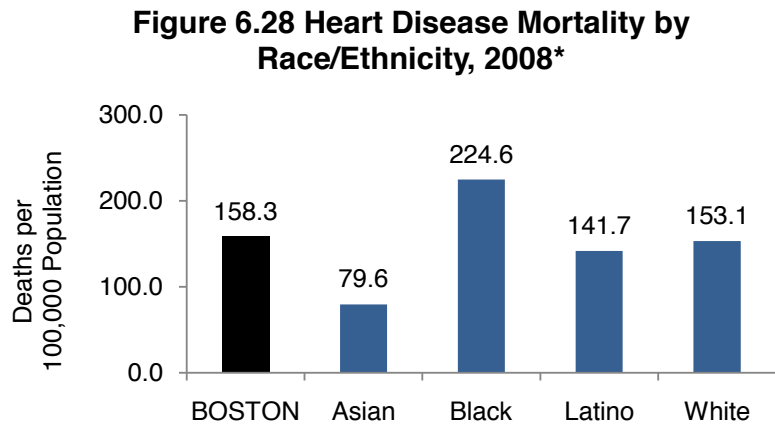
DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

Figure 6.27 Heart Disease Mortality by Race/Ethnicity, 2001-2008*

From 2002 to 2008, age-adjusted heart disease mortality rates were highest among Black residents, peaking in 2003 at 246.9 deaths per 100,000 population. From 2007 to 2008, rates declined for Asian residents and for White residents but increased 13% for Black residents and 22% for Latino residents. Asians consistently had the lowest age-adjusted heart disease mortality rate across all years.

Figure 6.28 Heart Disease Mortality by Race/Ethnicity, 2008*

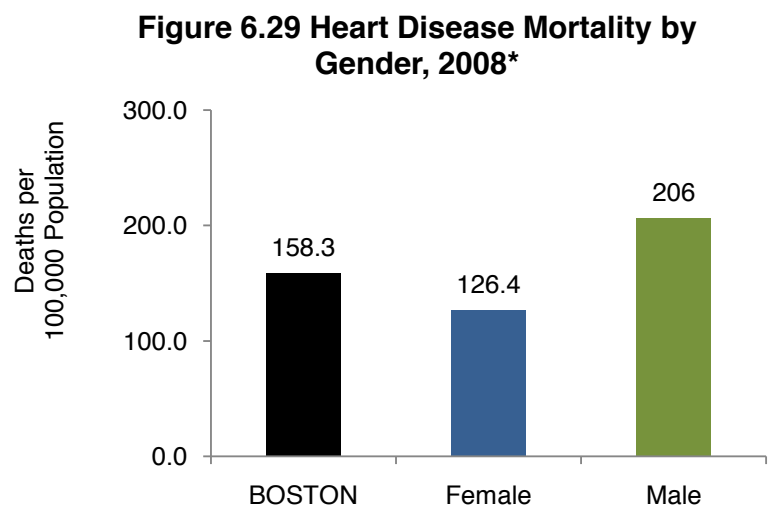
In 2008, Black residents had the highest age-adjusted heart disease mortality rate. That rate was almost three times the rate for Asian residents and nearly one and a half times the rate for White residents.



*Death data for 2009 are not yet available from the Massachusetts. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.
 DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

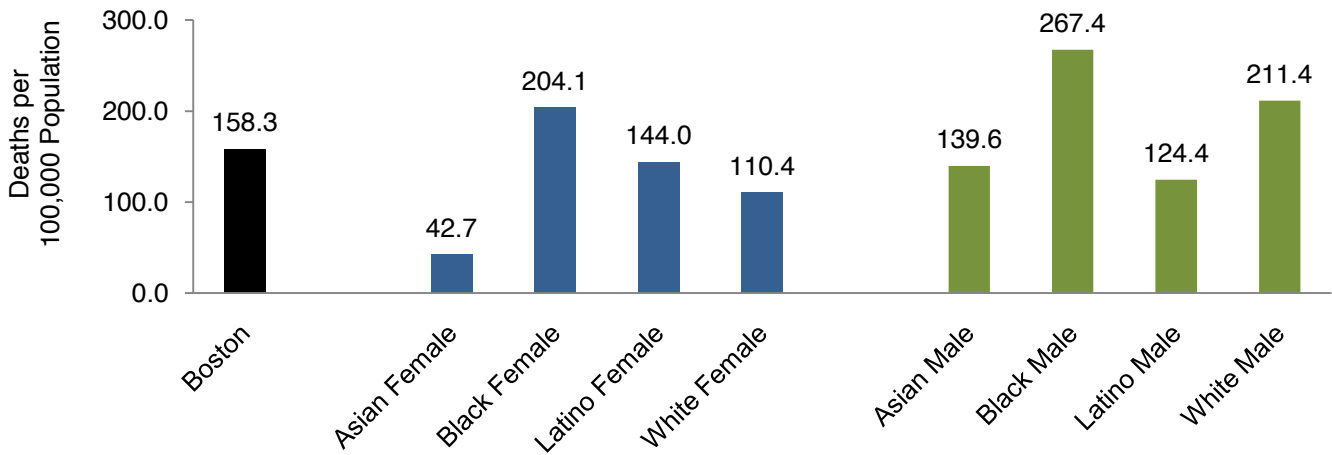
Figure 6.29 Heart Disease Mortality by Gender, 2008*

In 2008, the age-adjusted rate of heart disease mortality for Boston males was almost twice the rate for Boston females and almost a third higher than the rate for Boston overall.



*Death data for 2009 are not yet available from the Massachusetts. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.
 DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

Figure 6.30 Heart Disease Mortality by Race/Ethnicity and Gender, 2008*



*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

■ **Figure 6.30 Heart Disease Mortality by Race/Ethnicity and Gender, 2008***

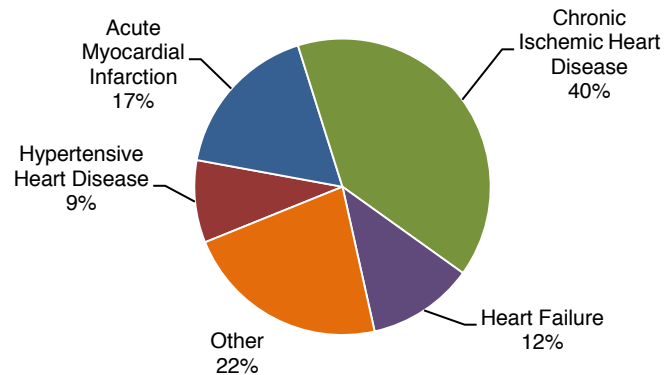
In 2008, about 80% of heart disease mortality was reported among Boston residents age 65 and older (data not shown). Except for Latinos, within each racial/ethnic group the age-adjusted heart disease mortality rate was higher for males than for females.

■ **Figure 6.31 Heart Disease Mortality by Type of Heart Disease, 2008***

In 2008, about 78% of heart disease mortality was attributed to four types of heart disease: chronic ischemic heart disease, acute myocardial infarction, heart failure, and hypertensive heart disease.

Chronic ischemic heart disease accounted for 40% of heart disease mortality in 2008.

Figure 6.31 Heart Disease Mortality by Type of Heart Disease, 2008*



*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health



Hypertension

What is Hypertension (high blood pressure)?

As blood is pumped through the arteries by the heart, it generates force against the walls of the arteries. This force creates pressure inside the arteries. This pressure is known as blood pressure (1). Blood pressure is recorded as two numbers: the higher number is called systolic pressure and the lower number is called diastolic pressure. Normal values are less than 120 mmHg of systolic blood pressure and less than 80 mmHg of diastolic blood pressure (1). The Centers for Disease Control and Prevention (CDC) defines high blood pressure or hypertension for adults “as a systolic blood pressure of 140 mmHg or higher or a diastolic blood pressure of 90 mmHg or higher.” A person with high blood pressure may not have any symptoms until they develop a serious, often life-threatening, complication. These complications, which include heart disease, heart attacks, stroke, heart failure, kidney disease and peripheral artery disease, can be prevented through early diagnosis and management (1,2). In Boston, heart disease and stroke are among the top five leading causes of death.

Population at greatest risk

African Americans have a higher prevalence of high blood pressure compared to other racial and ethnic populations (2). Obese individuals, heavy drinkers, and women taking birth control pills are also at increased risk (1).

Prevention

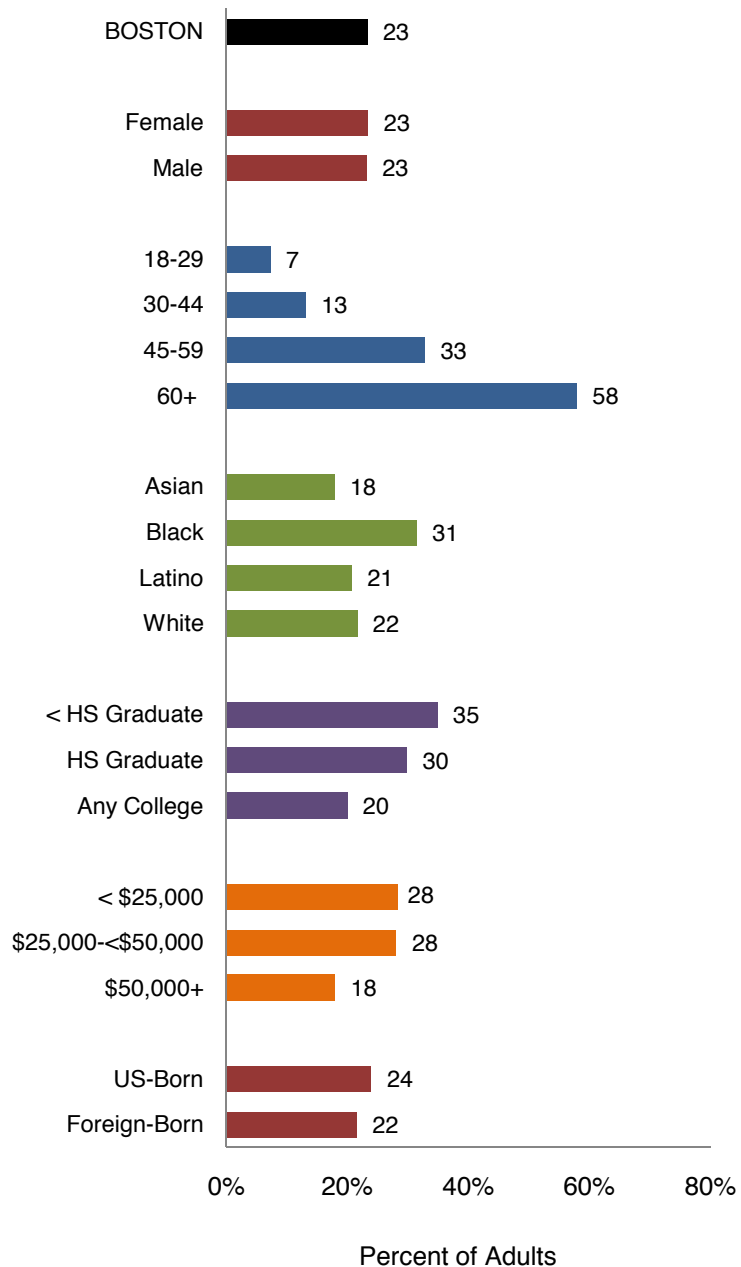
Maintaining a healthy lifestyle is the key to keeping blood pressure normal. Eating a healthy diet, doing regular physical activity, maintaining a healthy weight, avoiding tobacco and excess alcohol consumption, and controlling diabetes can help to maintain a healthy blood pressure (1). In addition, regular check-ups with a health care provider can result in the diagnosis and management of high blood pressure prior to the development of complications.

■ **Figure 6.32 Adults with High Blood Pressure by Selected Indicators, 2010**

In 2010, 23% of adult residents reported that they had high blood pressure. The percentage of male and female residents who reported having high blood pressure was similar. As the age groups increased, the percentage of adults reporting high blood pressure also increased.

Compared to White residents, a higher percent of Black adults reported having high blood pressure. A lower percentage of adults with any college education reported having high blood pressure compared to adults with less education. A lower percentage of adults who had a household income of \$50,000 or more reported having high blood pressure compared to adults who had a lower household income. No significant difference was seen by place of birth.

Figure 6.32 Adults with High Blood Pressure by Selected Indicators, 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Obesity



How are Overweight and Obesity defined?

The Centers for Disease Control and Prevention (CDC) define overweight and obesity “as ranges of weight that are greater than what is generally considered healthy for a given height” (1). A measure called the body mass index (BMI) is used to evaluate overweight and obesity. BMI is calculated using an individual’s weight and height, and is a more reliable measure of body fat than weight alone. For adults, overweight is defined as a BMI between 25 and 29.9 and obese is defined as a BMI of 30 or higher (1). For adolescents, a BMI-for-age percentile is determined. Overweight is defined as a BMI at or between the 85th and 95th percentile, and obese is defined as a BMI at or above the 95th percentile for children of the same age and sex (1).

Population at greatest risk

All people are at risk of becoming overweight or obese.

Prevention

Adopting health-promoting behaviors including regular physical activity and maintaining a healthy diet with appropriate caloric consumption may help maintain or reduce an individual’s weight (2). In addition to individual behaviors, communities and local agencies can facilitate maintaining a healthy weight by ensuring the availability of fresh fruits and vegetables in every community and regulating the food industry using tools such as food labeling regulations, and banning the use of artificial trans-fats.

■ Figure 6.33 High School Students Who are Overweight or Obese by Selected Indicators, 2009

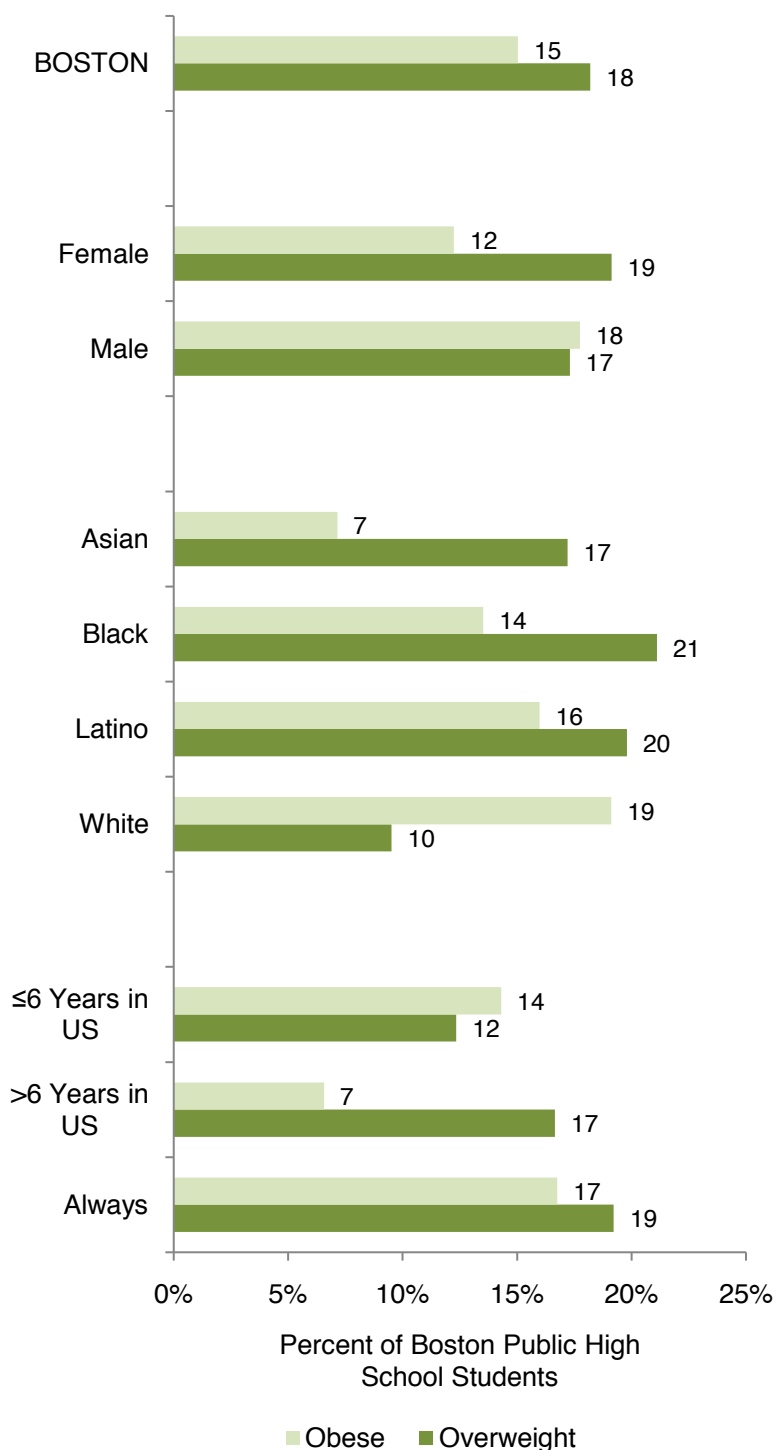
In 2009, 18% of Boston Public High School students were overweight while 15% were obese.

A higher percentage of Black and Latino high school students were overweight compared to White students. The percentage of obese students was statistically similar across all racial/ethnic groups.

A higher percentage of high school students who had always lived in the US were obese compared to those who had lived in the US for more than six years, but not always.

There were no significant differences in the percentages of overweight or obese students by gender.

Figure 6.33 Public High School Students Who are Overweight or Obese by Selected Indicators, 2009



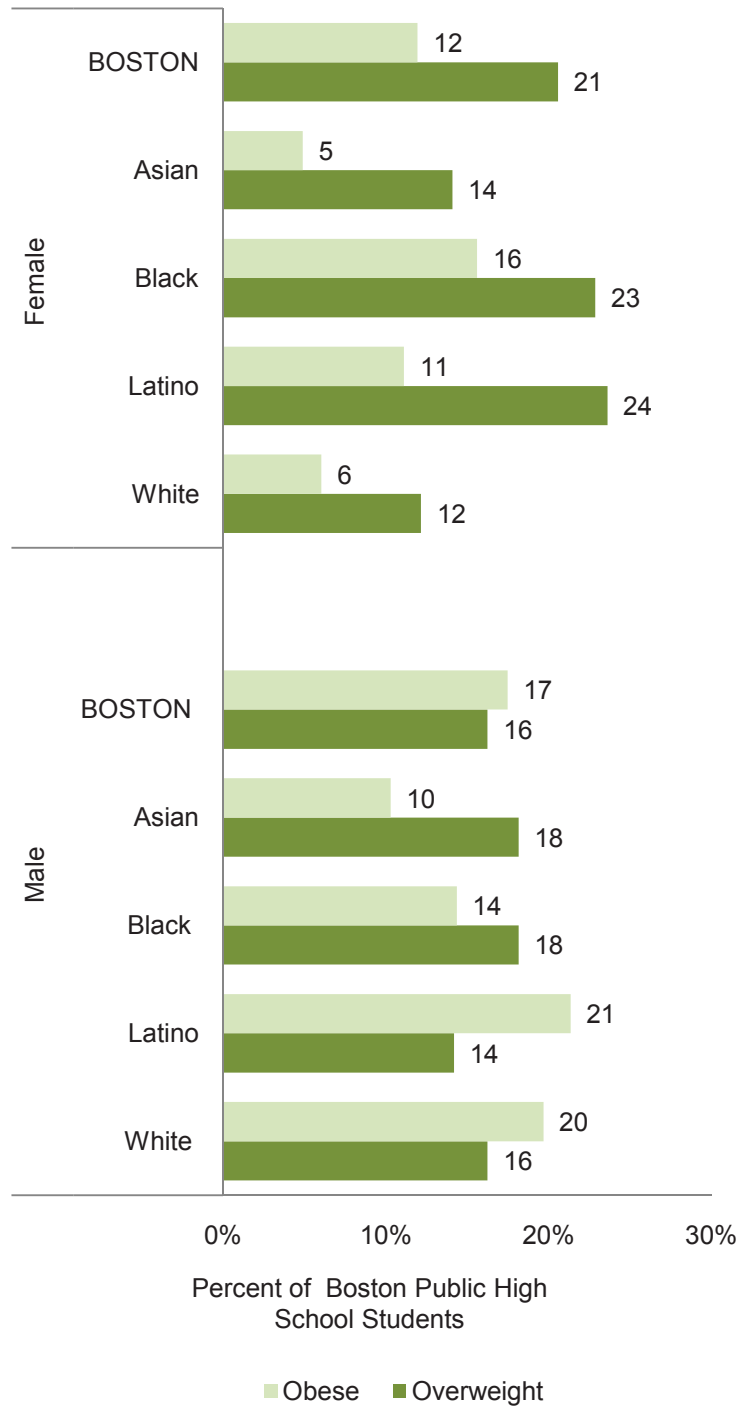
DATA SOURCE: Youth Risk Behavior Survey 2009, Youth Risk behavioral Surveillance System (YRBS), Centers for Disease Control and Prevention

■ Figure 6.34 High School Students Who are Overweight or Obese by Race and Gender, 2007 and 2009 Combined

A higher percentage of Latino and Black female students were overweight compared to White female students. A higher percentage of Black female students were obese compared to Asian and White female students.

A higher percentage of Latino male students were obese compared to Asian male students. The percentage of overweight among male students was statistically similar across racial/ethnic groups.

Figure 6.34 Public High School Students Who Are Overweight or Obese by Race and Gender, 2007 and 2009 Combined



DATA SOURCE: Youth Risk Behavior Survey 2009, Youth Risk Behavioral Surveillance System (YRBS), Center for Disease Control and Prevention

■ **Figure 6.35 Obesity in Adults by Selected Indicators, 2010**

In 2010, 21% of Boston adults were obese.

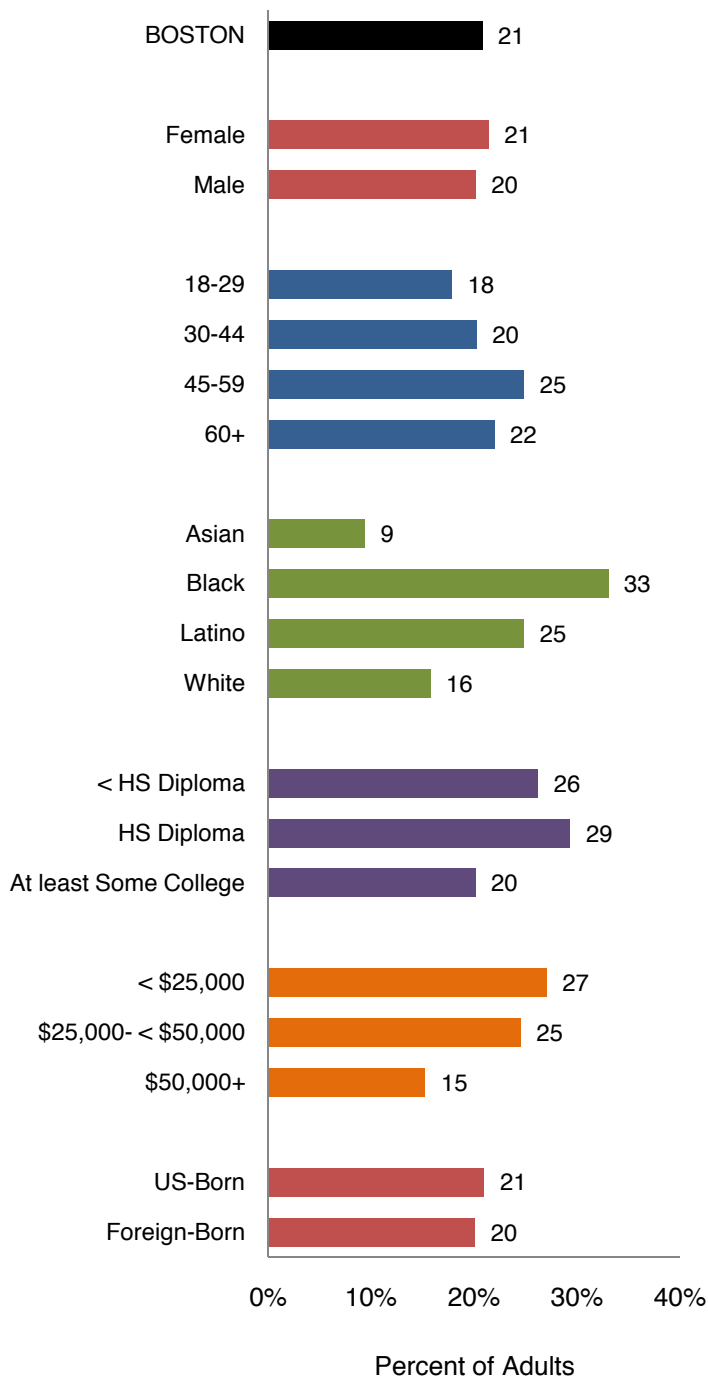
There were no significant differences in percentage of adults who were obese by gender, age group, and place of birth.

A higher percentage of Latino and Black adults were obese compared to White and Asian adults. A lower percentage of adults who had any college education were obese compared to those who only had a high school diploma.

A higher percentage of adults ages 45-59 were obese compared to the 30-44 age group. There was no statistical difference among the other age groups.

A higher percentage of Latino and Black adults were obese compared to White adults.

Figure 6.35 Obesity in Adults by Selected Indicators, 2010

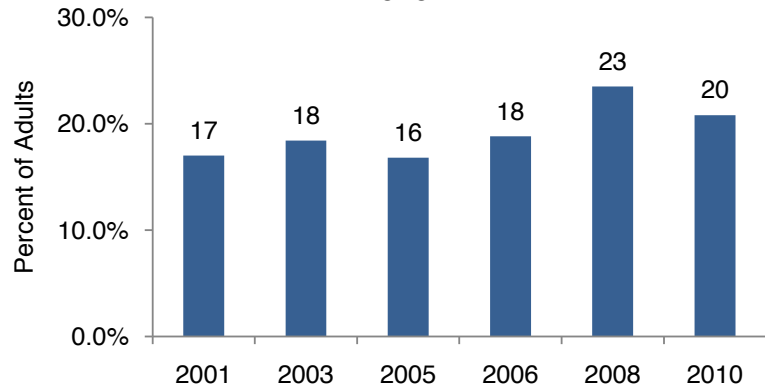


DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ **Figure 6.36 Adults who Are Obese by Year, 2001, 2003, 2005, 2006, 2008, and 2010**

A higher percentage of Boston adults were obese in 2010 and 2008 when compared with 2005.

Figure 6.36 Adults who Are Obese by Year, 2001, 2003, 2005, 2006, 2008, and 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 2001, 2003, 2005
2006, 2008, and 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS),
Boston Public Health Commission

Sexual Health



Sexual health relates to all aspects of human sexual interaction including healthy relationships and attitudes toward sexuality, safe sexual experiences, and the absence of disease. Estimates from the Centers for Disease Control and Prevention (CDC) suggest that there are approximately 19 million new cases of sexually transmitted infections (STIs) such as Chlamydia, gonorrhea, and syphilis each year in the United States. Approximately half of these cases occur among people 15 to 24 years of age (1). In addition, CDC estimates that about 50,000 new cases of HIV infection, another type of STI, also occur each year (2). Profound disparities in the incidence and prevalence of STIs including HIV have been documented by education, income, geographic location, sexual orientation, and race/ethnicity.

Prior studies have documented that individual risk behaviors do not fully account for the marked racial disparities that disproportionately affect Blacks (3,4). The social determinants of health, namely, poverty, poor physical conditions of neighborhoods, disproportionate incarceration, and patterns of residential segregation have been shown to be key factors in shaping the dynamics of STIs (4, 5,6). Increased attention must be given to the development of prevention and intervention strategies that take into account the social determinants of health.

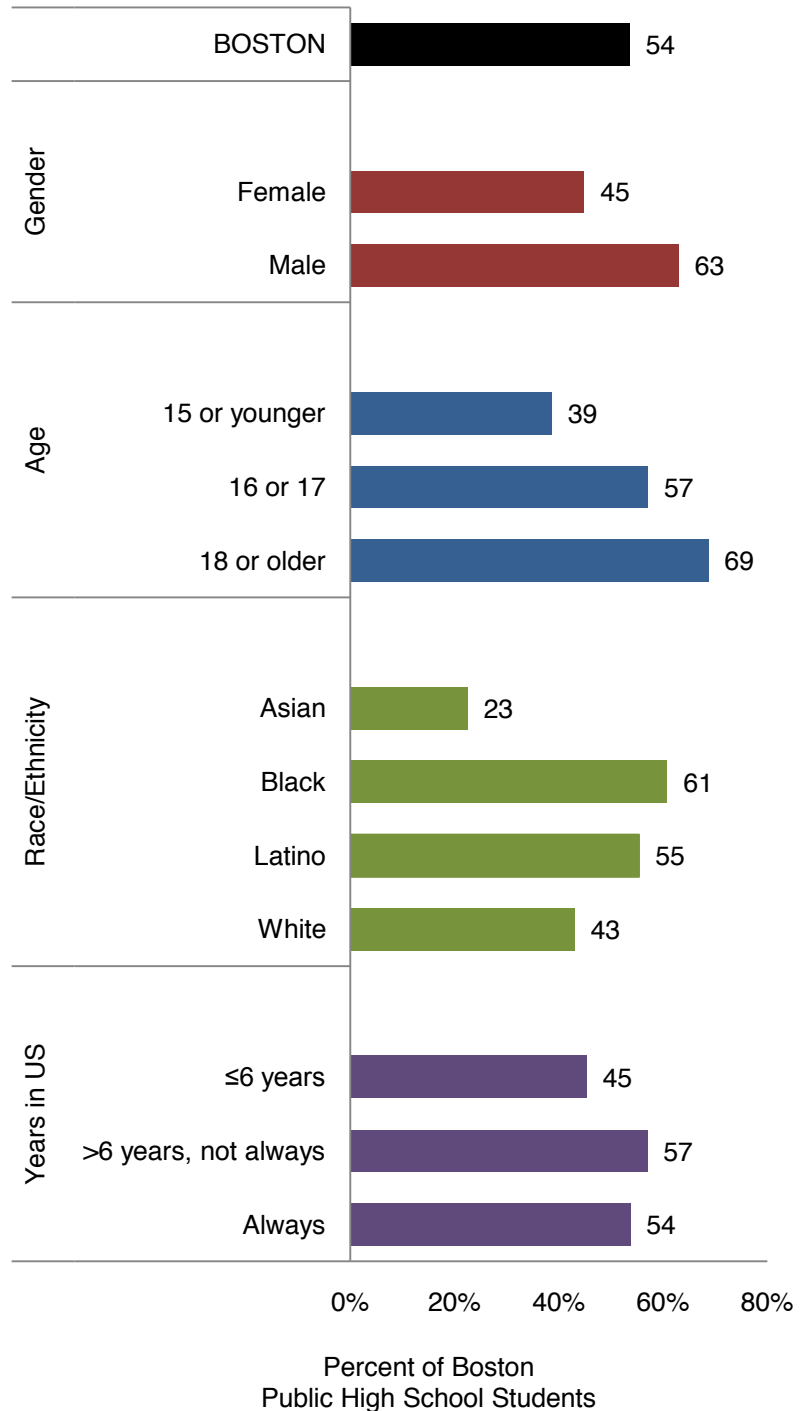
This section provides a more detailed understanding of the sexual health of Boston youth and adult residents by presenting data on self-reported sexual behaviors on four reportable STIs: Chlamydia, gonorrhea, syphilis, and HIV/AIDS.



■ **Figure 7.1 High School Students Who Ever Had Sex by Selected Indicators, 2009**

In 2009, 54% of Boston public high school students reported ever having sex. A higher percentage of male students compared to female students reported ever having sex. A higher percentage of older students, ages 16 or 17, 18 or older reported having sex when compared to students ages 15 or younger. A higher percentage of Black students reported ever having sex in comparison to White and Asian students. There was no statistical difference seen between students who have always lived in the US or those who had lived in other countries.

Figure 7.1 High School Students Who Ever Had Sex by Selected Indicators, 2009

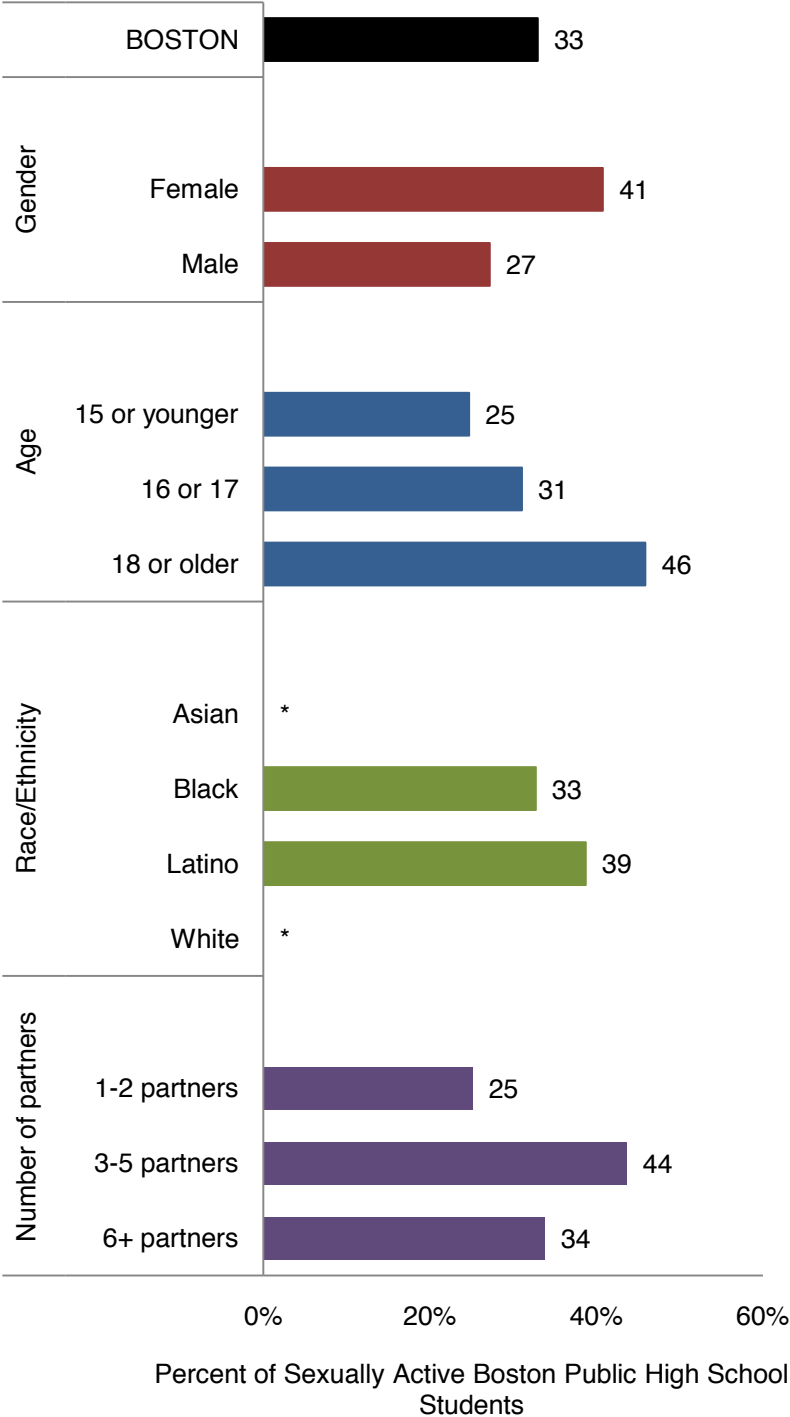


DATA SOURCE: Youth Risk Behavior Survey 2009, Youth Risk Behavioral Surveillance System, Centers for Disease Control and Prevention

■ Figure 7.2 Ever Tested for HIV Among High School Students by Selected Indicators, 2009

In Boston, 33% of sexually active public high school students reported being tested for HIV. A higher percentage of students who are 18 or older reported being tested in comparison to students who are 15 or younger. A higher percentage of students who reported three to five lifetime partners reported being tested compared to students who had one to two lifetime partners.

Figure 7.2 Ever Tested for HIV Among High School Students by Selected Indicators, 2009



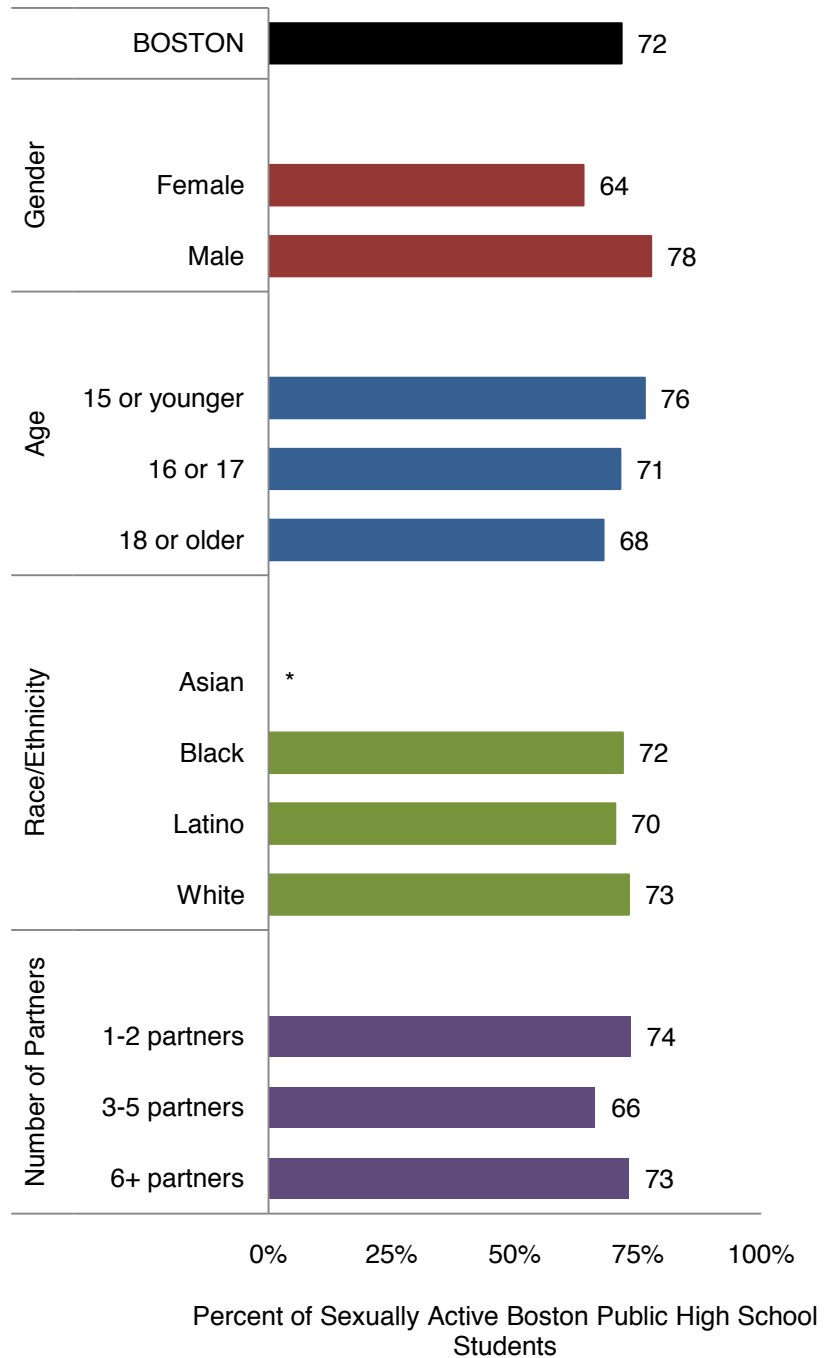
* Insufficient sample size for Asian students and White students

DATA SOURCE: Youth Risk Behavior Survey 2009, Youth Risk Behavioral Surveillance System, Centers for Disease Control and Prevention

Figure 7.3 Condom Use During Last Sex Among High School Students by Selected Indicators, 2007 and 2009 Combined

Among sexually active public high school students in Boston, 72% reported using a condom during last sex. A higher percentage of males reported using a condom during last sex when compared to females. There was no statistical difference seen by age, race/ethnicity, or number of lifetime partners.

Figure 7.3 Condom Use During Last Sex Among High School Students by Selected Indicators, 2007 and 2009 Combined



* Insufficient sample size for Asian students

DATA SOURCE: Youth Risk Behavior Survey 2007 and 2009, Youth Risk Behavioral Surveillance System, Centers for Disease Control and Prevention



Chlamydia

What is chlamydia?

Chlamydia is a sexually transmitted disease caused by the bacterium *Chlamydia trachomatis*. Chlamydial infection is the most commonly reported disease in the United States. About 50% of infected men and 75% of infected women have no symptoms, may not be aware of their status, and do not seek testing. Chlamydia can permanently damage a woman's reproductive organs if not treated promptly (6).

Population at greatest risk

Any person who is sexually active is at risk for chlamydia infection. However, young women ages 15-24 are at greatest risk for chlamydia infection, possibly due to the cervix not being fully matured. Since chlamydia can also be transmitted by oral or anal sex, men who have sex with men are also at risk (6).

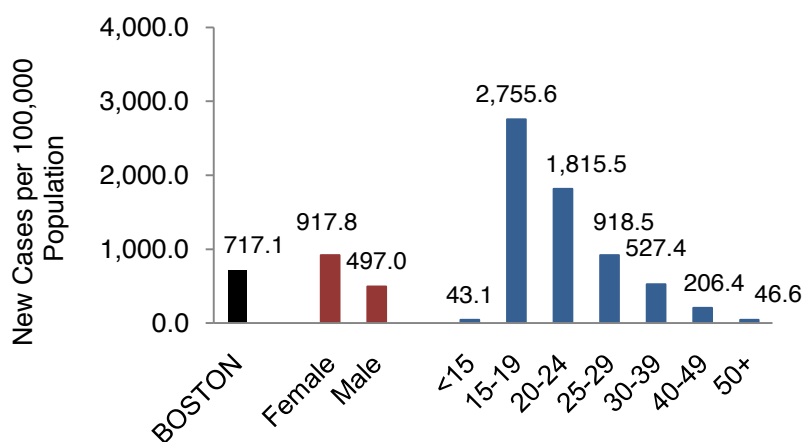
Prevention

Latex male condoms, when used consistently and correctly, can reduce the risk of transmission of chlamydia. Yearly chlamydia testing of all sexually active women ages 25 or younger, older women with risk factors for chlamydia infections (those who have a new sex partner or multiple sex partners), and all pregnant women is recommended.

■ Figure 7.4 Chlamydia Rates* by Gender and Age, 2010

In 2010, the chlamydia incidence rate for Boston females was almost twice the rate for males. The highest rate of reported chlamydia occurred among young people ages 15-19. The second highest rate occurred among young adults, ages 20-24.

Figure 7.4 Chlamydia Rates* by Gender and Age, 2010



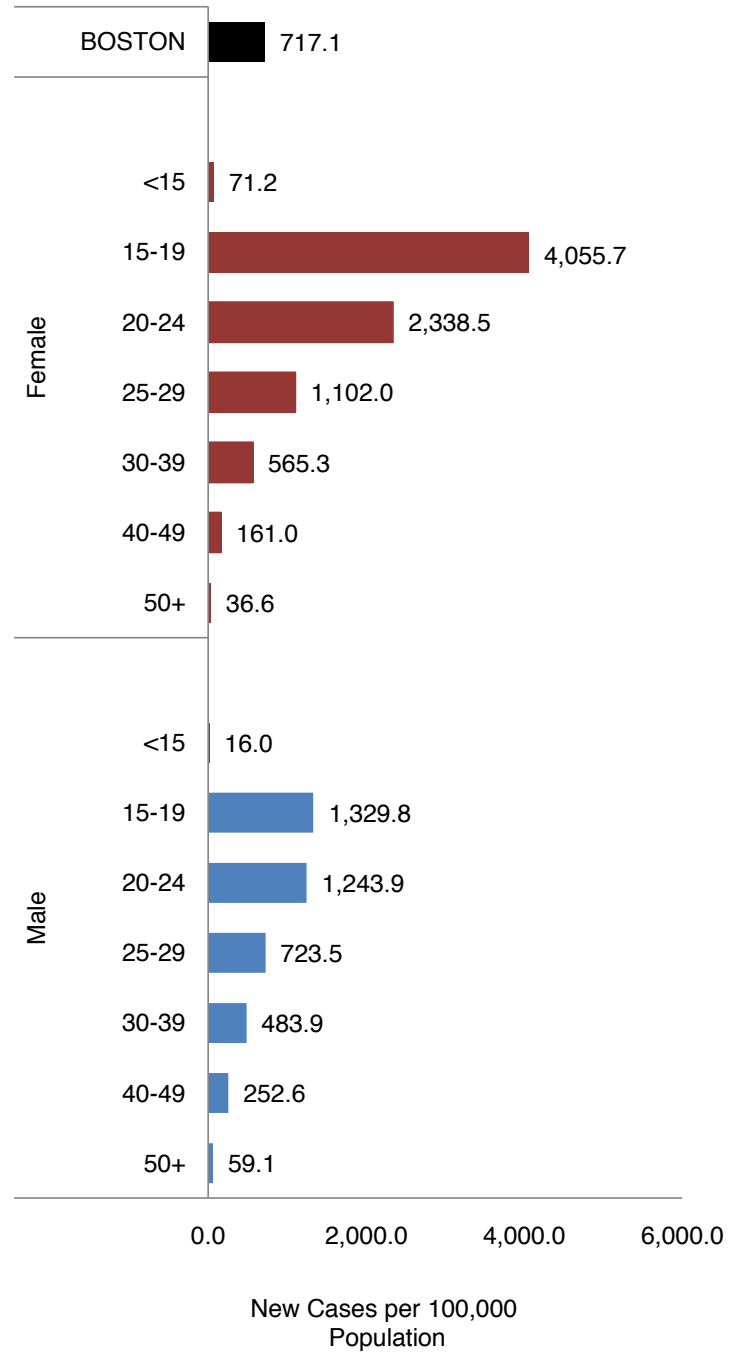
*Rates are calculated using the 2010 U.S. Census population.

DATA SOURCE: Massachusetts Department of Public Health, STD Division

■ Figure 7.5 Chlamydia Rates* by Age Within Gender, 2010

The rate of new chlamydia infections was highest among Boston females ages 15-19. This rate was three times the rate for males in the same age group. Females ages 20-24 had the second highest rate which was almost twice the rate of males of the same age group.

Figure 7.5 Chlamydia Rates* by Age Within Gender, 2010



*Rates are calculated using the 2010 U.S. Census population.
 DATA SOURCE: Massachusetts Department of Public Health, STD Division



Gonorrhea

What is gonorrhea?

Gonorrhea is a sexually transmitted disease caused by the bacterium *Neisseria gonorrhoea*. Gonorrhea is the second most commonly reported notifiable disease in the US. Signs and symptoms include a burning sensation when urinating, or a white, yellow, or green discharge from the penis or vagina. Infected individuals may have no symptoms at all. Gonorrhea is spread through contact with the penis, vagina, mouth, or anus of an infected individual. Gonorrhea can also be spread from mother to baby during delivery. People who have had gonorrhea and received treatment may get infected again if they have sexual contact with a person infected with gonorrhea (7).

Population at greatest risk

Any person who is sexually active is at risk for a gonorrheal infection. However, the highest rates of infection are seen among teenagers, young adults and African Americans (7).

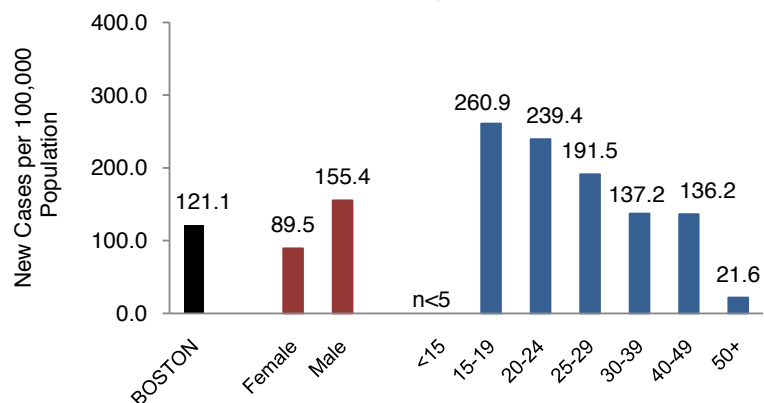
Prevention

Latex male condoms, when used consistently and correctly, can reduce the risk of transmission of gonorrhea. Any genital symptoms such as discharge or burning during urination or unusual sore or rash should be a signal to stop having sex and to see a doctor immediately (7).

■ Figure 7.6 Gonorrhea Rates** by Gender and Age, 2010

The gonorrhea incidence rate for Boston males in 2010 was almost double the rate for females. The gonorrhea incidence rate for young people ages 15-19 was the highest of all age groups and double the rate for Boston residents overall. Young adults ages 20-24 incurred the second highest gonorrhea incidence rate.

Figure 7.6 Gonorrhea Rates*† by Gender and Age, 2010



*Rates are calculated using the 2010 U.S. Census population.

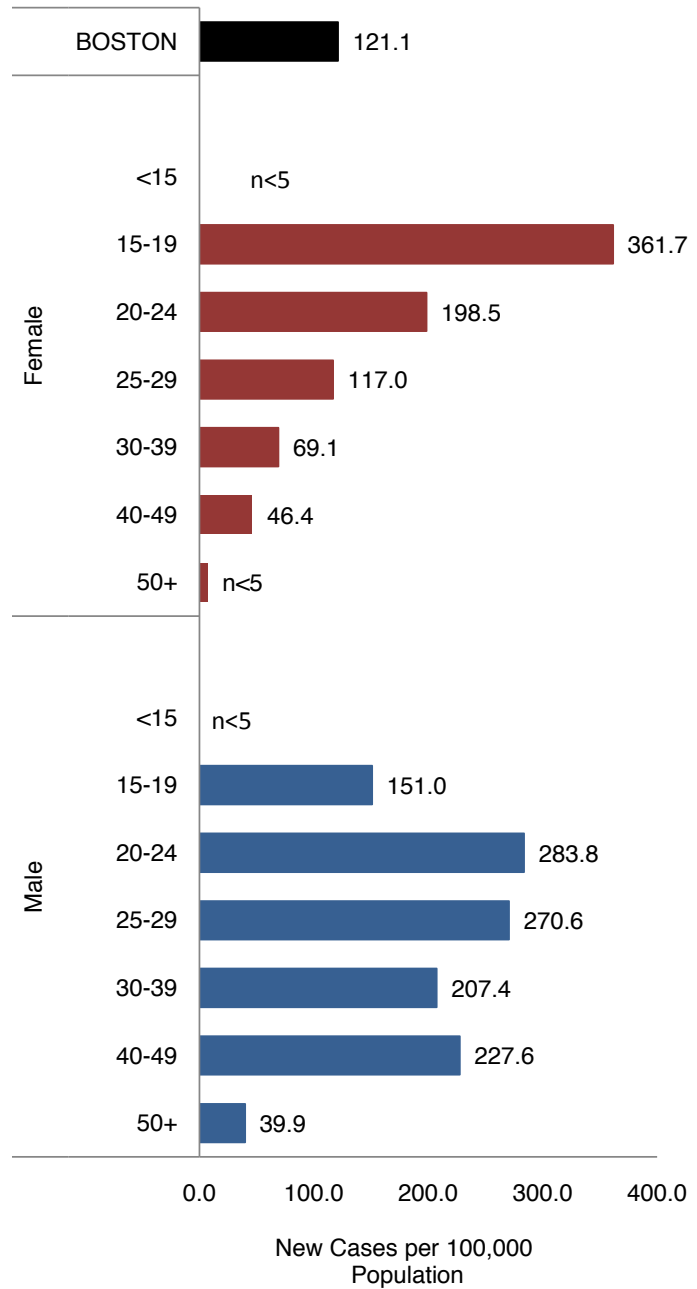
†Rates are not presented for ages <15 due to the small number of new cases in 2010.

DATA SOURCE: Massachusetts Department of Public Health, STD Division

■ **Figure 7.7 Gonorrhea Rates*† by Age Within Gender, 2010**

In 2010, the gonorrhea incidence rate among Boston females ages 15-19 was the highest rate among Boston residents and three times higher than the Boston overall rate. It was also more than double the rate for males within the same age group. The highest gonorrhea incidence rate for males occurred among males ages 20-24 and was 2.3 times higher than the Boston overall rate.

Figure 7.7 Gonorrhea Rates*† by Age Within Gender, 2010



*Rates are calculated based on the 2010 U.S. Census population.
 †Rates are not presented for females ages <15 and males ages <15 due to the small number of new cases in 2010.
 DATA SOURCE: Massachusetts Department of Public Health, STD Division



Syphilis

What is syphilis?

Syphilis is a sexually transmitted disease caused by the bacterium *Treponema pallidum*. Many people infected with syphilis do not have any symptoms for years, yet remain at risk for later complications if they are not treated. Initial symptoms include firm, round, small, and painless genital sores. In later stages, symptoms may include skin rashes and mucous membrane lesions. Sores occur mainly on the external genitals, vagina, anus, or in the rectum. Also, sores can occur on the lips and in the mouth. Syphilis is passed from person to person through direct contact with a syphilis sore. Transmission of the organism occurs during vaginal, anal, or oral sex. The syphilis bacterium can infect the baby of a woman during her pregnancy (8).

Population at greatest risk

Adults age 40 and older, and men are at greater risk for syphilis infection. In 2006, men who have sex with men accounted for 64% of the syphilis cases in the US (8).

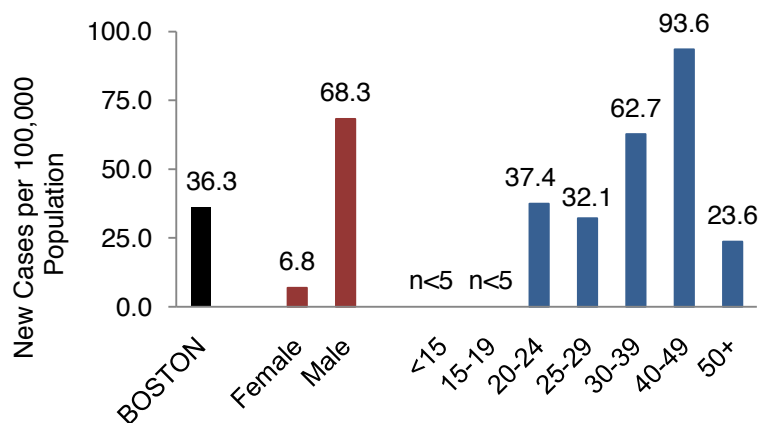
Prevention

Latex male condoms, when used consistently and correctly, can reduce the risk of transmission of syphilis. Any genital symptoms such as an unusual sore or rash should be a signal to stop having sex and to see a doctor immediately (8).

■ **Figure 7.8 Syphilis Rates** by Gender and Age, 2010**

The syphilis incidence rate for males (62.4 per 100,000 population) was nearly 10 times the rate for females (6.5 per 100,000 population). Syphilis was most common among adults ages 40-49.

■ **Figure 7.8 Syphilis Rates*† by Gender and Age, 2010**



*Rates are calculated using the 2010 U.S. Census population.

†Rates are not presented for residents ages <15 and residents ages 15-19 due to the small number of new cases in 2010.

DATA SOURCE: Massachusetts Department of Public Health, STD Division



HIV/AIDS

What is HIV/AIDS?

HIV is the virus referred to as the human immunodeficiency virus that can lead to AIDS or acquired immune deficiency. HIV comes in two types, HIV-1 and HIV-2. In the US, HIV usually refers to the HIV-1 type. HIV destroys specific blood cells, called CD4+ T cells, which are necessary for the body to fight disease (1).

HIV infection is a sexually transmitted disease. It can be spread a number of different ways but according to the CDC, there the three most common ways that HIV is transmitted in the US include the following (5):

- During vaginal, anal, or oral sex
- The sharing of needles and syringes that are contaminated with infected blood as in intravenous drug use
- From mother to child in which infected mothers transmit the virus to their infants during pregnancy, childbirth, or breastfeeding

Population at greatest risk

Anyone who is sexually active is at risk for HIV infection. However, individuals most at risk of HIV infection are those who have unprotected vaginal, anal or oral sex with multiple partners, men who have sex with men, or anonymous partners, exchange sex for money, have been given a diagnosis or treated for hepatitis, TB or a sexually transmitted disease such as syphilis, received a blood transfusion during 1978-1985 or had unprotected sex with someone who has any of the risk factors listed here (5).

In Massachusetts, Black individuals have the highest incidence of HIV infection, and Latino individuals the second highest. Furthermore, HIV infected males significantly outnumber HIV infected females (9).

Prevention

Consistently using latex condoms correctly can reduce the risk of HIV infection during sex. Individuals who inject drugs, should not share needles or syringes. Mothers who are HIV infected should not breastfeed. Avoiding multiple sexual partners and knowing the HIV status of sexual partners is also recommended.

Figure 7.9 HIV Incidence Rates, 1999-2009

From 1999 to 2009, the incidence rates for reported HIV infection among Boston residents decreased 57%. In 1999 there were 359 reported new cases of HIV infection among Boston residents; in 2009, that number had dropped to 155 new cases.

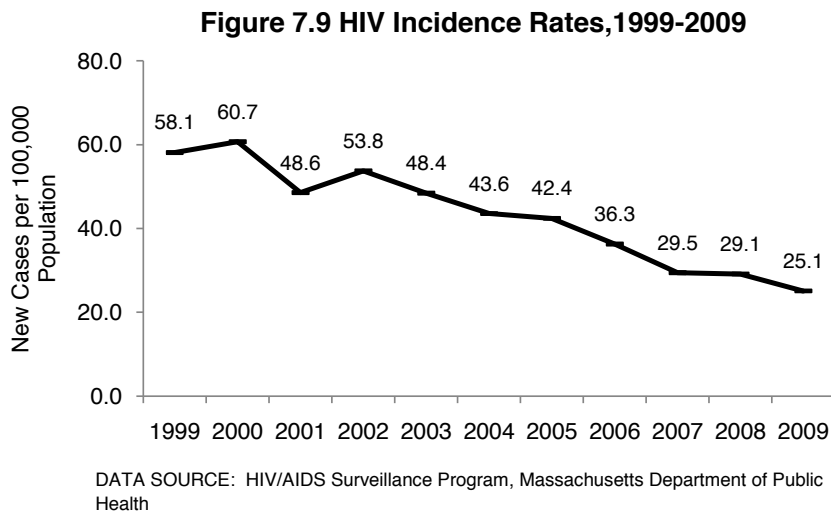


Figure 7.10 HIV Incidence Rates by Race/Ethnicity*, 1999-2009

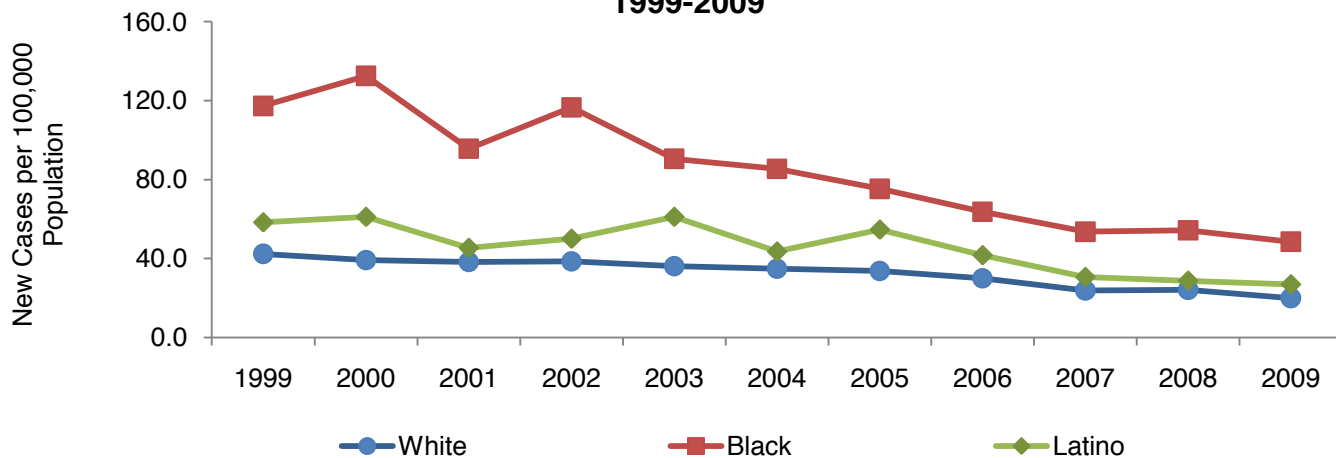
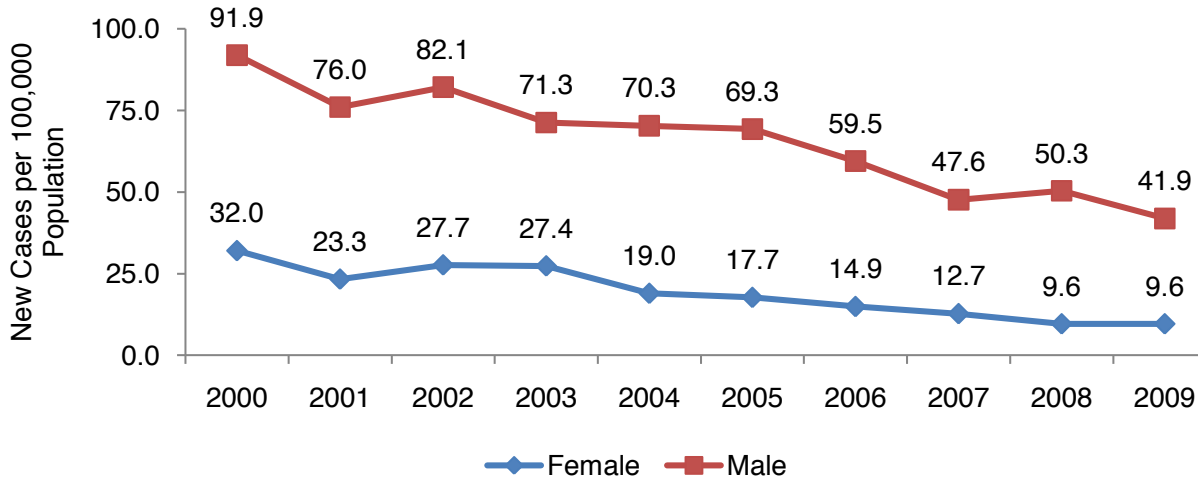


Figure 7.10 HIV Incidence Rates by Race/Ethnicity, 1999-2009

For each year of the period 1999-2009, Black Boston residents had higher HIV incidence rates than Boston's Latino and White residents. In most years, HIV incidence rates for Black Boston residents were twice the rates for Boston Latino residents and more than twice the rates for Boston White residents.

Despite some fluctuations, HIV incidence rates for Boston Black, Latino, and White residents declined between 1999 and 2009. The rates declined 59% for Black residents, 54% for Latino residents, and 53% for White residents.

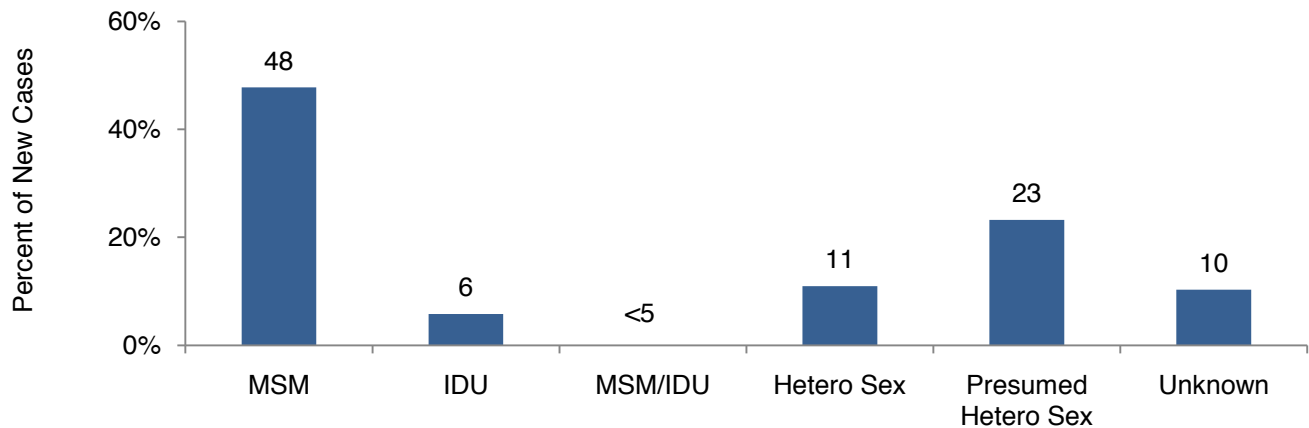
Figure 7.11 HIV Incidence Rates by Gender, 2000-2009



DATA SOURCE: HIV/AIDS Surveillance Program, Massachusetts Department of Public Health

■ **Figure 7.11 HIV Incidence Rates by Gender, 2000-2009**

Boston male residents continue to have higher HIV incidence rates than female residents, despite a downward trend. From 2000 through 2003, Boston male HIV incidence rates were about three times higher than those for females. However, beginning in 2004, male incidence rates were about four times higher than the rates for females and as much as five times higher in 2008.

Figure 7.12 HIV Incidence by Primary Reported Mode of Exposure, 2009

DATA SOURCE: HIV/AIDS Surveillance Program, Massachusetts Department of Public Health

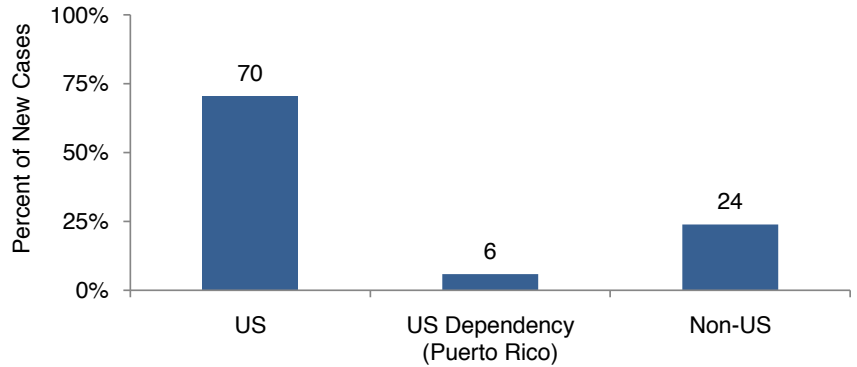
■ **Figure 7.12 HIV Incidence by Primary Reported Mode of Exposure, 2009**

Exposure to HIV infection continues to primarily be a result of males having sex with males. HIV incidence for Boston residents based on MSM being the primary reported mode of exposure ranged from 36% to 54% of HIV cases during the period 2000-2009 (data not shown).. Smaller percentages of cases were reported for heterosexual and intravenous drug use (IDU) modes of exposure.

Figure 7.13 HIV Incidence by U S-Born and Non US-Born, 2009

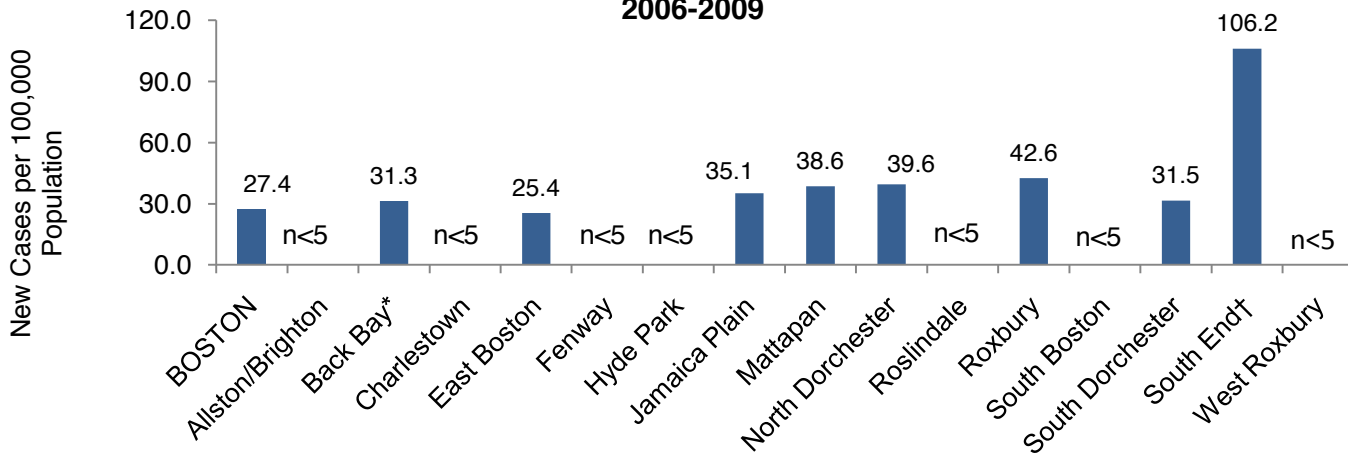
The highest percentage of reported HIV incidence in Boston is among residents born in the US. During each year of the period 2000 to 2009, US-born residents accounted for 65% to 70% of Boston HIV cases (data not shown)..

Figure 7.13 HIV Incidence by US-Born and Non US-Born, 2009



DATA SOURCE: HIV/AIDS Surveillance Program, Massachusetts Department of Public Health

Figure 7.14 HIV Incidence Rates by Neighborhood, 2006-2009



*Includes Beacon Hill, West End, and North End

†Includes Chinatown

DATA SOURCE: HIV/AIDS Surveillance Program, Massachusetts Department of Public Health

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

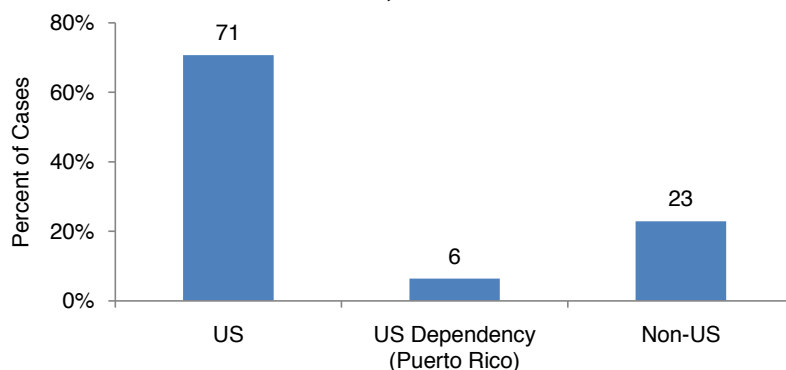
Figure 7.14 HIV Incidence by Neighborhood, 2006-2009

During 2006-2009, only eight Boston neighborhoods had a sufficient number of reported new HIV incidence cases to allow the presentation of HIV incidence rates. Most of those neighborhoods had incidence rates higher than overall Boston. The HIV incidence rate for the South End was almost four times the rate for overall Boston and almost three to four times the rate for the seven other neighborhoods.

Figure 7.15 Number of Individuals Living with HIV/AIDS, 1999-2009

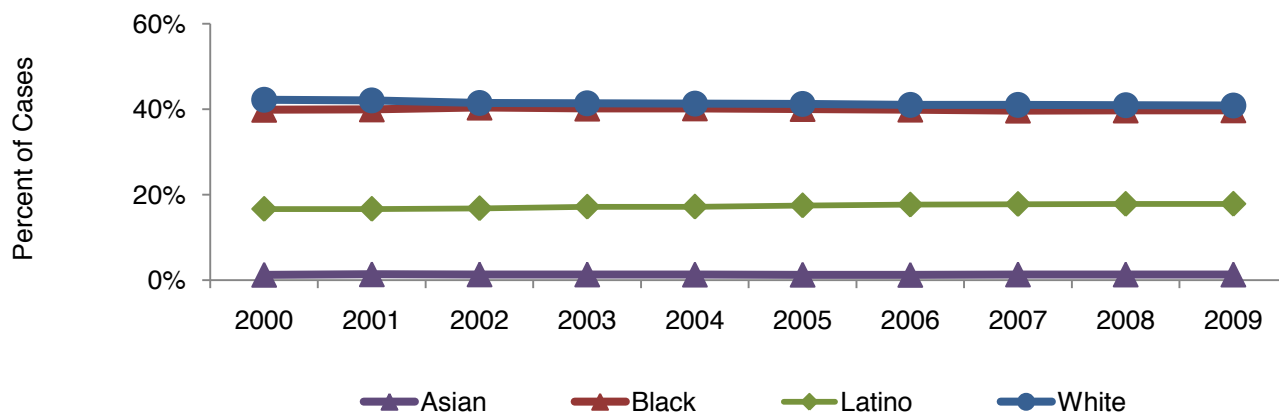
The number of Boston residents living with HIV/AIDS increased every year of the period 1999-2009. Those HIV/AIDS cases increased 47%, from 3,610 in 1999 to 5,321 in 2009.

Figure 7.15 Individuals Living with HIV/AIDS by Place of Birth, 2009



DATA SOURCE: HIV/AIDS Surveillance Program, Massachusetts Department of Public Health

Figure 7.16 Individuals Living with HIV/AIDS by Race/Ethnicity, 2000-2009

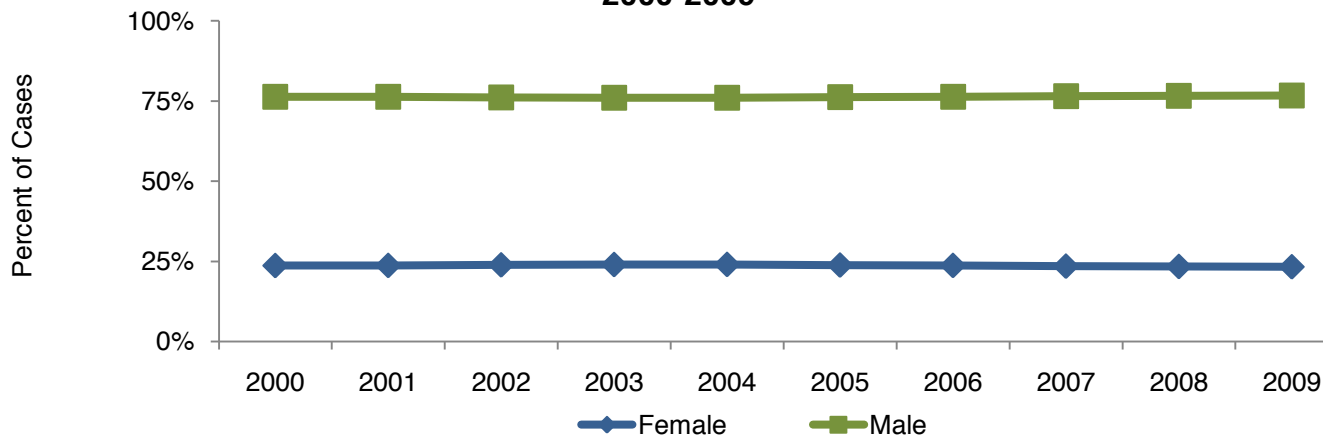


DATA SOURCE: HIV/AIDS Surveillance Program, Massachusetts Department of Public Health

Figure 7.16 Individuals Living with HIV/AIDS by Race/Ethnicity, 2000-2009

The percentage of individual living with HIV/AIDS cases among the Boston population was highest for Black and White residents each year during 2000-2009, averaging 40-41% of all cases. The percentage for Latinos ranged from 17% to 18%.

Figure 7.17 Individuals Living with HIV/AIDS by Gender, 2000-2009



DATA SOURCE: HIV/AIDS Surveillance Program, Massachusetts Department of Public Health

■ **Figure 7.17 Individuals Living with HIV/AIDS by Gender, 2000-2009**

Between 76% and 77% of Boston residents living with HIV/AIDS, are men. This pattern has persisted every year during 2000-2009.

Infectious Diseases



Infectious diseases are caused by bacteria, viruses, parasites or fungi and can be spread, directly or indirectly, from one person to another. In the United States, the disease and mortality burden from infectious diseases substantially declined during the 20th century (1). These declines are partly attributed to improvements in sanitation, living conditions, the development and widespread use of vaccines to prevent illnesses, and drugs to treat and cure disease. However, the re-emergence of infectious diseases that were thought to be controlled or on the verge of eradication pose a significant challenge to the public's health. Food-borne illnesses, including salmonella, the re-emergence of vaccine preventable diseases such as pertussis, multi-drug resistant strains of tuberculosis, chronic manifestations of diseases (i.e. HIV/AIDS and Hepatitis B and C), and the threat of newly emerging infectious diseases such as severe acute respiratory syndrome (SARS) and the 2009 H1N1 virus, are among the many threats.

Social, economic, behavioral, environmental, and political factors have been noted in the emergence and re-emergence of infectious disease patterns as well as in the transmission and risk of disease (2). Disadvantaged populations are often more susceptible and disproportionately affected by infectious diseases as a result of social inequalities. Additionally, issues related to globalization, migration, and urbanization have also contributed to the rapid and pandemic spread of infectious diseases such as SARS and influenza viruses (e.g., 2009 H1N1 virus).

Effective prevention measures, such as immunizations, and treatment exist for many of the most common and deadly infectious diseases. Schools, health care providers, public health agencies, and community organizations must continue to work with individuals and communities to raise awareness of proven prevention strategies and enhance access to preventive care and treatment.

This section provides information on three infectious diseases that affect Boston residents: pertussis, salmonella, and tuberculosis.



Pertussis Infection

Pertussis (also called “whooping cough”) is a respiratory illness caused by a bacterium. The bacteria that cause pertussis live in the nose, mouth and throat and are sprayed into the air when an infected person sneezes, cough or talks. People nearby can then breathe in the germs. Transmission of pertussis occurs by droplets or direct contact with mucus or saliva from an infected person. People with pertussis can spread the disease starting two weeks before until three weeks after their cough starts. However, treatment with appropriate antibiotics can make a person non-contagious after five days.

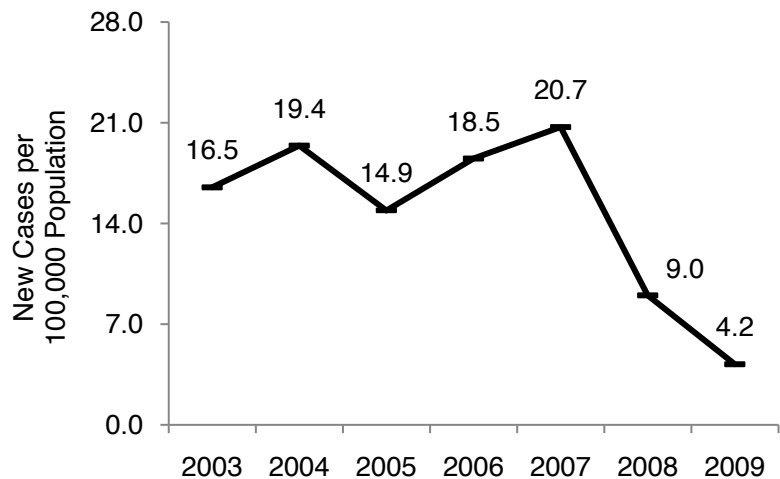
Vaccination is the best way to protect against pertussis. Pertussis vaccine is usually combined with tetanus and diphtheria vaccines (called DTaP or DTP) and given to children at 2 months, 4 months, 6 months, 15-18 months and at 4-6 years old. Adolescents and adults can get a vaccine called Tdap to protect against pertussis, tetanus, and diphtheria. At this time, only one dose of Tdap vaccine is recommended. The Tdap vaccine is usually given to adolescents at 11 to 12 years of age.

■ **Figure 8.1 Pertussis Cases, 2003-2009**

The Boston incidence rate of reported pertussis decreased 53% from 9.0 new cases per 100,000 population in 2008 to 4.2 new cases per 100,000 population in 2009. The pertussis rate has decreased 80% from 2007 to 2009. The decrease was likely due to the expanded use of a vaccine (Tdap) to prevent pertussis.

The highest age-specific incidence rate of reported pertussis was among children under the age of 10 (data not shown). The numbers of reported pertussis cases for other age groups were too small to calculate rates.

Figure 8.1 Pertussis Cases, 2003-2009

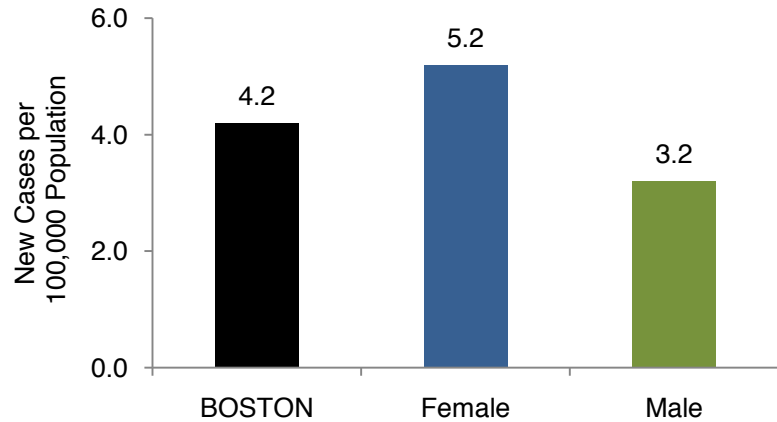


DATA SOURCE: Communicable Disease Database, Boston Public Health Commission,

■ **Figure 8.2 Pertussis Cases by Gender, 2009**

The incidence rate of reported pertussis cases for Boston females (5.2 new cases per 100,000 population) was 63% higher than for males (3.2 new cases per 100,000 population).

Figure 8.2 Pertussis Cases by Gender, 2009

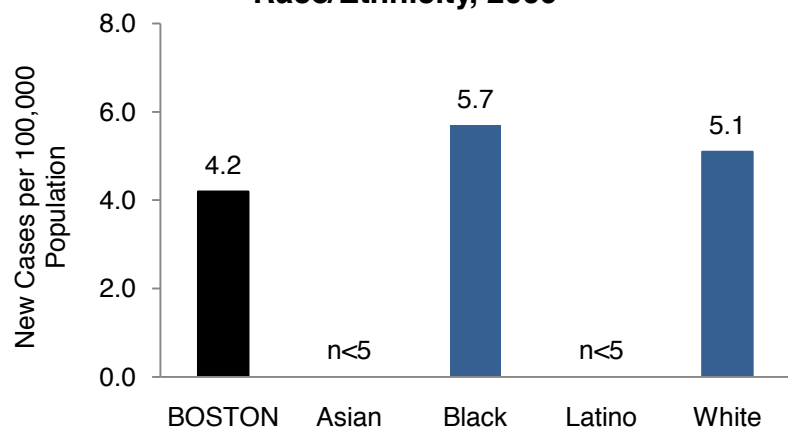


DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

■ **Figure 8.3 Pertussis Cases by Race/Ethnicity, 2009**

Black Boston residents had the highest incidence of reported pertussis cases with a rate 1.4 times that of Boston overall.

Figure 8.3 Pertussis Cases by Race/Ethnicity, 2009



Rates are not presented for Asians and Latinos due to the small number of cases.

DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division



Salmonella Infection

Salmonella is a germ that causes diarrhea, fever, and stomach cramps. The germ is found in the stool (feces) of infected people and animals. It must be swallowed to cause illness. Usually this happens when someone eats food that has not been properly prepared, handled, or cooked. Salmonella is common in undercooked food products from animals, such as eggs, egg products, meat, poultry, and unpasteurized dairy products; however, all foods can become contaminated.

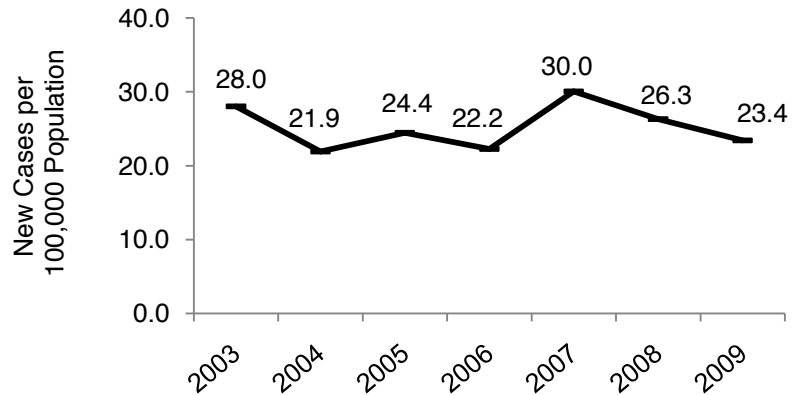
The best way to prevent Salmonella infection is to:

- Carefully wash hands with soap and warm water before and after preparing food, after using the toilet and after handling pets.
- Food surfaces and utensils including knives, cutting boards, counter tops and dishes should be washed with clean warm, soapy water before and after preparing food. Keep everything that touches food clean.
- Wash all fruits and vegetables with clean drinking water and use a brush if needed.
- Place appropriate food items in the refrigerator or freezer right away. Refrigerator temperatures should be at 40°F or below. Freezer temperatures should be below 0°F.
- Cook foods to proper temperatures to kill the germs.
- Freeze or refrigerate leftovers immediately. Keep leftover meat well wrapped in the refrigerator.

■ **Figure 8.4 Salmonella Cases, 2003-2009**

In 2009, the Boston incidence rate of reported Salmonella infection decreased 11% from 26.3 new cases per 100,000 population in 2008 to 23.4 new cases per 100,000 population in 2009.

Figure 8.4 Salmonella Cases, 2003-2009

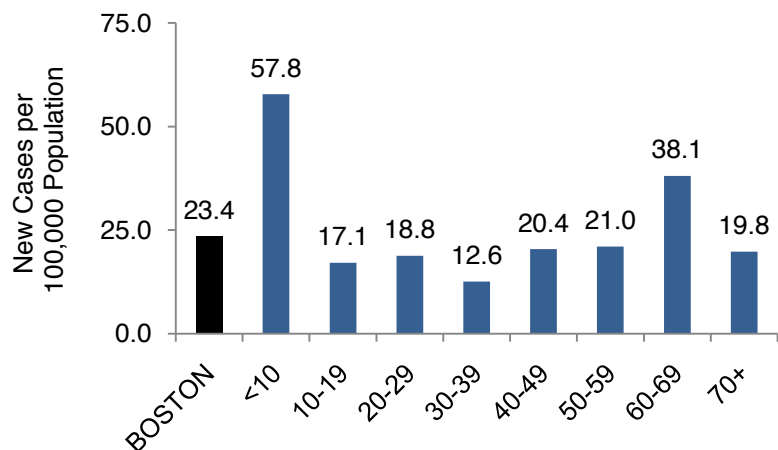


DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

■ **Figure 8.5 Salmonella Cases by Age, 2009**

Children younger than 10 years of age are most vulnerable to Salmonella. The highest incidence rate of reported Salmonella infection was among those less than 10 years of age with a rate 2.5 times that of Boston overall. Those 60-69 years of age had a rate 1.6 times that of the Boston rate.

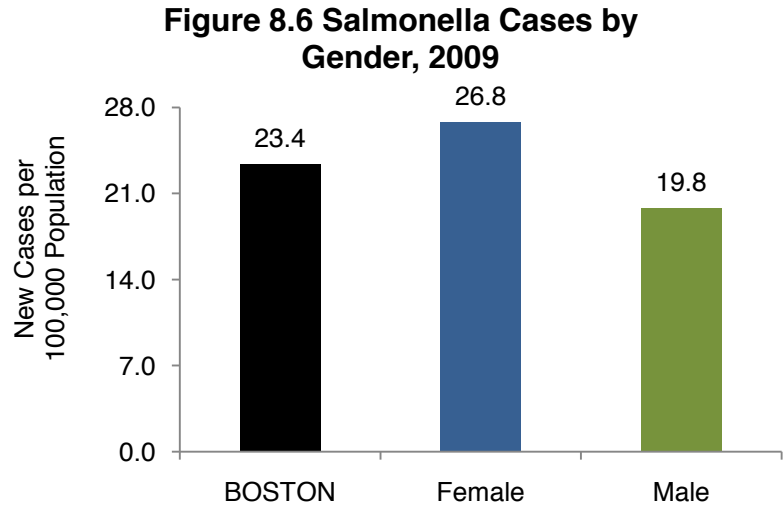
Figure 8.5 Salmonella Cases by Age, 2009



DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

Figure 8.6 Salmonella Cases by Gender, 2009

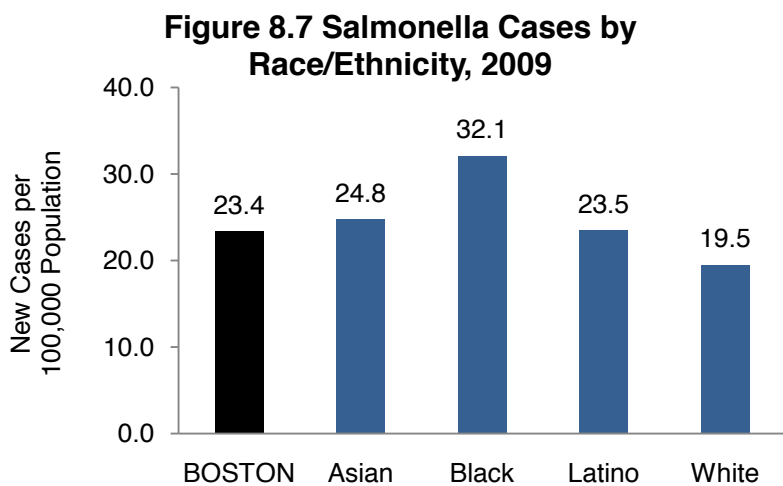
The incidence rate of reported Salmonella infection was 1.4 times as high in females as in males.



DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

Figure 8.7 Salmonella Cases by Race/Ethnicity, 2009

Black Boston residents had the highest incidence of reported Salmonella infection, 32.1 new cases per 100,000 population in 2009. The incidence rate of reported Salmonella, among Asian Boston residents decreased 62% from 65.5 new cases per 100,000 population in 2008 (data not shown) to 24.8 new cases per 100,000 population in 2009. This decrease is likely due to food safety initiatives in the Asian community.



DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

Tuberculosis Infection

Tuberculosis (TB) is a disease caused by a germ that usually affects the lungs. When a person with TB disease of the lungs coughs, sneezes, laughs, or sings, the germs get into the air. Anyone who is near the person can breathe in the TB germs which can live in the body without immediately causing sickness. This is called TB infection without disease or latent TB infection. The immune system contains the TB germs and keeps them from making the person sick. However, sometimes the TB germs escape immune system control and are able to spread and cause TB disease (“active disease”).

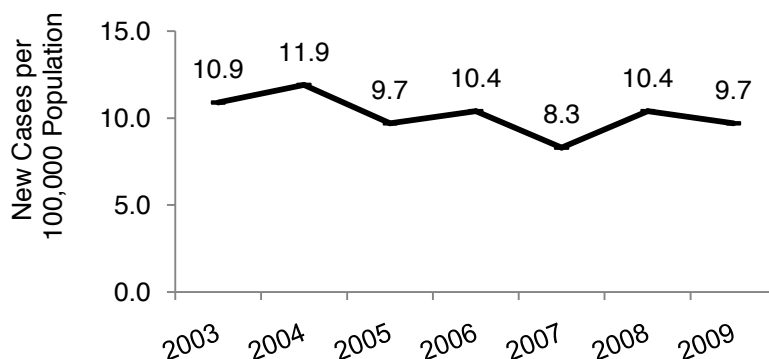
A TB skin test is the best way to tell if you have TB infection. A positive reaction usually means that the person has been infected with the TB germ. It does not necessarily mean that the person has TB disease. Other tests, such as a chest x-ray are needed to see if the person has TB disease. It is important for people who have a positive skin test to see a health care provider.

Special drugs that kill TB germs can cure TB disease. If someone has TB disease, he will need to take medicine for six months or longer to kill the germs. Medicine to prevent TB germs from ever becoming active in someone with latent TB infection is also available.

■ Figure 8.8 Tuberculosis Cases, 2003-2009

The reported TB incidence decreased to 9.7 cases per 100,000 population in 2009 from 10.4 cases per 100,000 population in 2008.

Figure 8.8 Tuberculosis Cases, 2003-2009

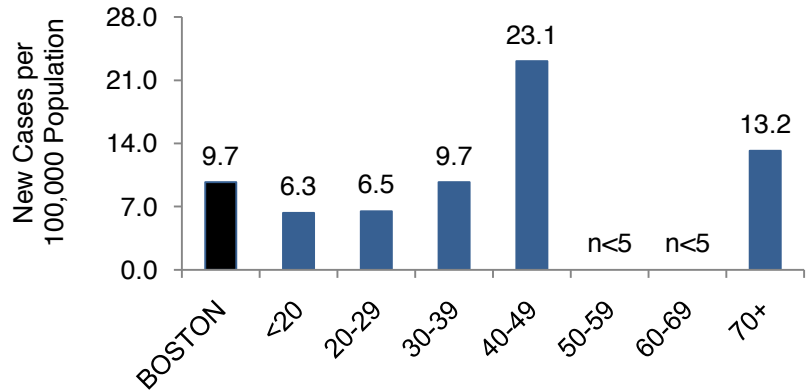


DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

Figure 8.9 Tuberculosis Cases by Age Groups, 2009

The highest incidence rate of reported tuberculosis was among those ages 40-49 years with a rate 2.4 times that of Boston overall. Residents, ages 69 years and older had a rate 1.4 times that of the Boston rate.

Figure 8.9 Tuberculosis Cases by Age Groups, 2009

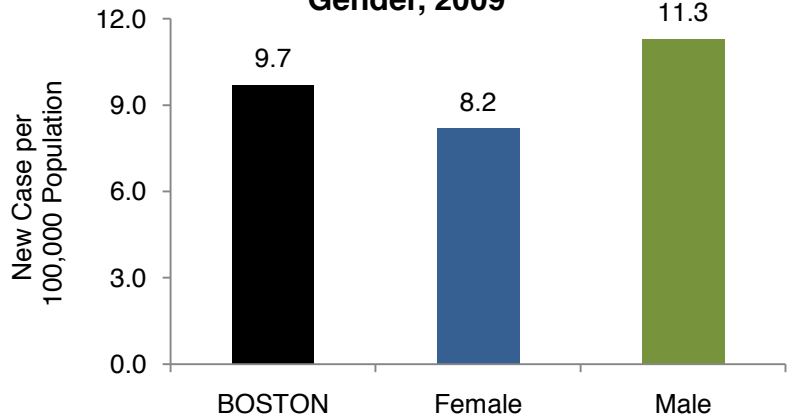


Rates are not presented for age groups 50-59 and 60-69 due to the small number of cases.
 DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

Figure 8.10 Tuberculosis Cases by Gender, Boston, 2009

In 2009, the Boston incidence rate of reported tuberculosis was 1.4 times as high in males as in females.

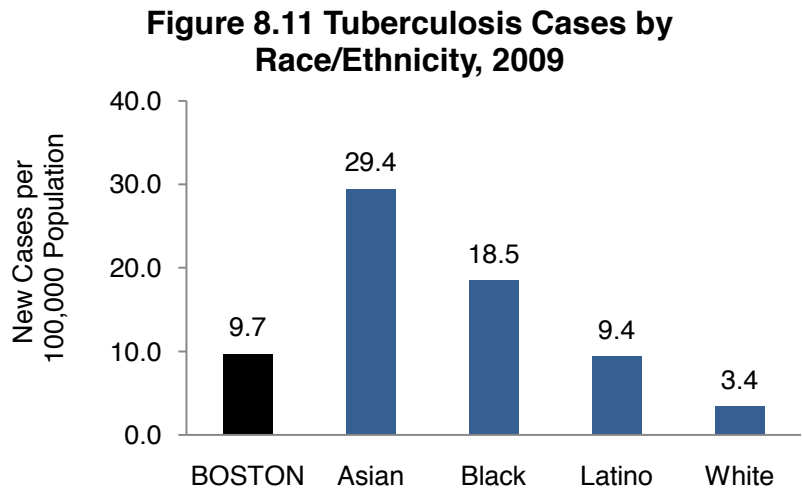
Figure 8.10 Tuberculosis Cases by Gender, 2009



DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

■ Figure 8.11 Tuberculosis Cases by Race/Ethnicity, Boston, 2009

The highest incidence rate for reported tuberculosis was among Asians, with a rate 3.0 times that of Boston overall. Black residents had a rate 1.9 times that of the Boston rate. Differences in rates across racial/ethnic groups may be related to immigration of individuals from countries with high rates of tuberculosis.



DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

Mental Health



The World Health Organization defines mental health as “a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (1). This definition encompasses more than the mere absence of a mental disorder (1), but connotes that mental health embodies the psychological capacity to make healthy decisions that promote overall quality of life.

Mental health illnesses and disorders can cause a disruption in a person’s thinking, behaviors, feelings, and emotions, which can subsequently influence their ability to relate to others, impairs functioning and limits major life activities.

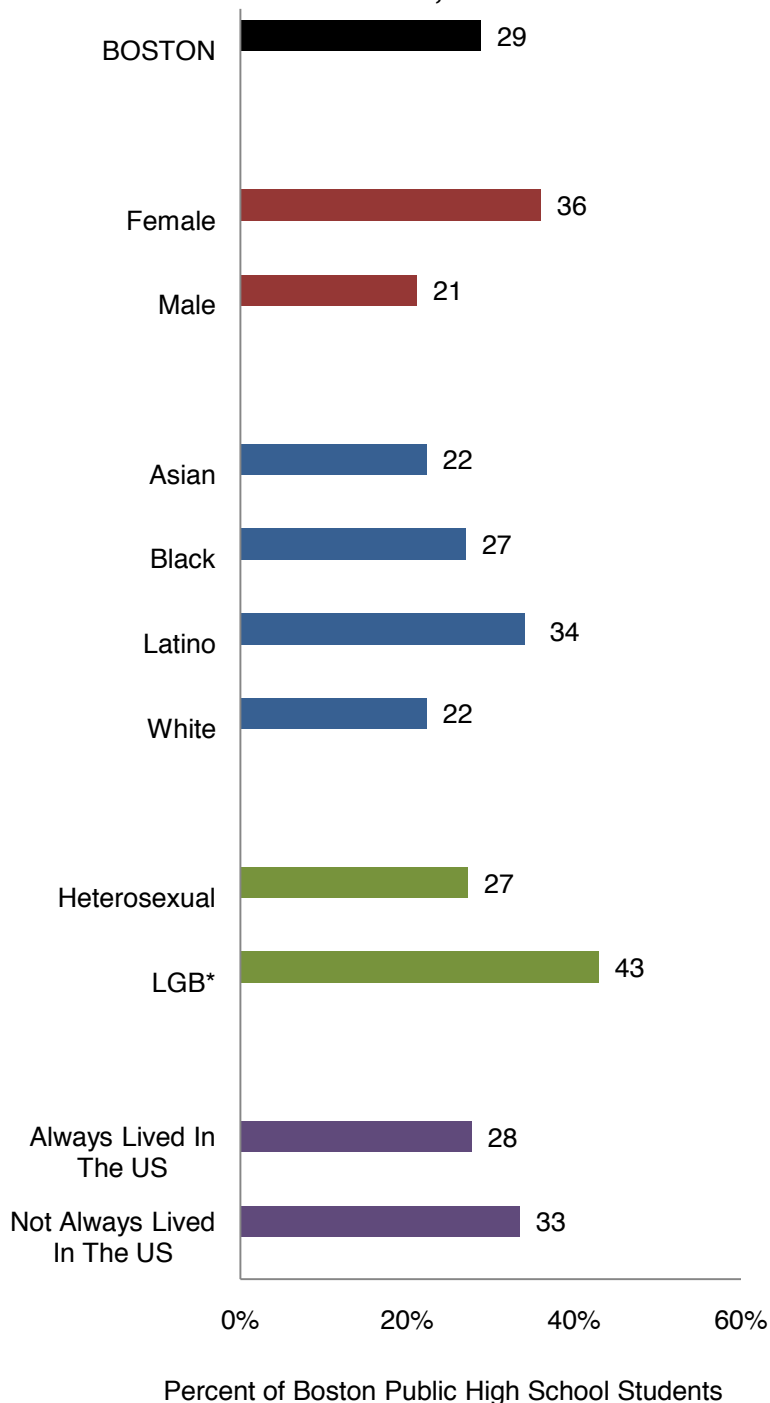
Mental health disorders occur in persons of all ages and social groups. Factors such as family history, stressful life events (e.g. death of a loved one, economic hardship), chronic medical conditions, early exposure to toxins, substance abuse, lack of social support, and discrimination have been associated with an increased risk of developing a mental disorder (2). There are marked differences in the distribution of mental disorders by gender, race/ethnicity, socioeconomic status, and neighborhood of residence (3-8). For example, females are more likely to suffer from depression (3). Blacks and Latinos are less likely to have a lifetime prevalence of mental disorders compared with Whites; however, they are more likely to have a longer course of persistent and disabling disorders (4).

This section provides a snapshot of several indicators of mental health including self-reported assessments of sadness, anxiety, and depression, and suicide among Boston youth and adults in the past year.

■ Figure 9.1 Sad or Hopeless for Two Weeks Straight During Past Year by Selected Indicators, 2009

Nearly 30% of Boston public high school students reported feeling sad or hopeless for two weeks straight during the past year. A higher percentage of female students compared to male students reported these feelings. A higher percentage of LGB (including “not sure”) students reported these symptoms compared to heterosexual high school students. There were no significant differences by race/ethnicity, or lifetime in the US.

Figure 9.1 Sad or Hopeless for Two Weeks Straight During Past Year by Selected Indicators, 2009



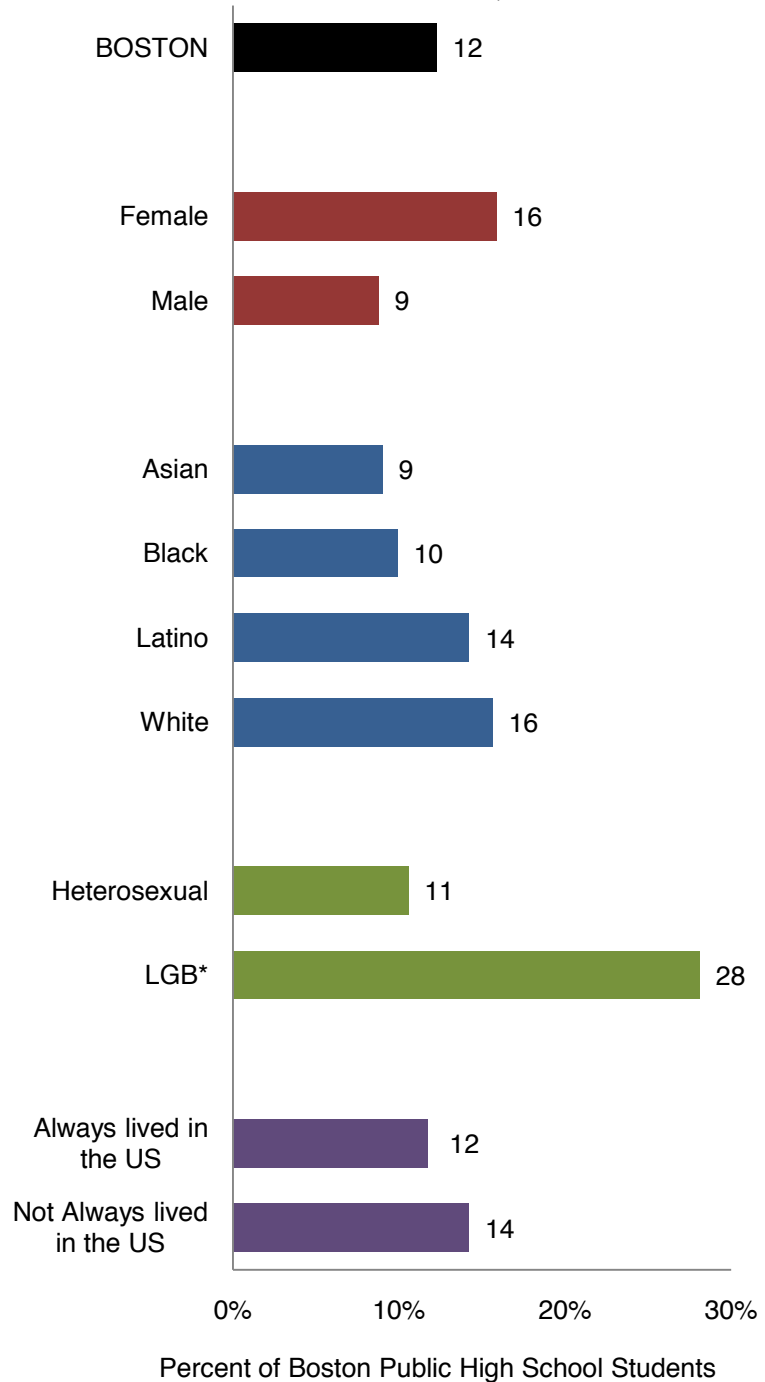
*Includes lesbian, gay, bisexual and 'Not sure'

DATA SOURCE: Boston Behavioral Risk Factor Survey 2008, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ Figure 9.2 Seriously Considered Attempting Suicide During Past Year by Selected Indicators, 2009

In 2009, 12% of Boston Public High Schools students seriously considered attempting suicide during the past year. A higher percentage of females compared to males seriously considered attempting suicide. A higher percentage of LGB students (including “not sure”) compared to heterosexual students seriously considered suicide. There were no significant differences observed by race/ethnicity or lifetime in the US.

Figure 9.2 Seriously Considered Attempting Suicide During Past Year by Selected Indicators, 2009



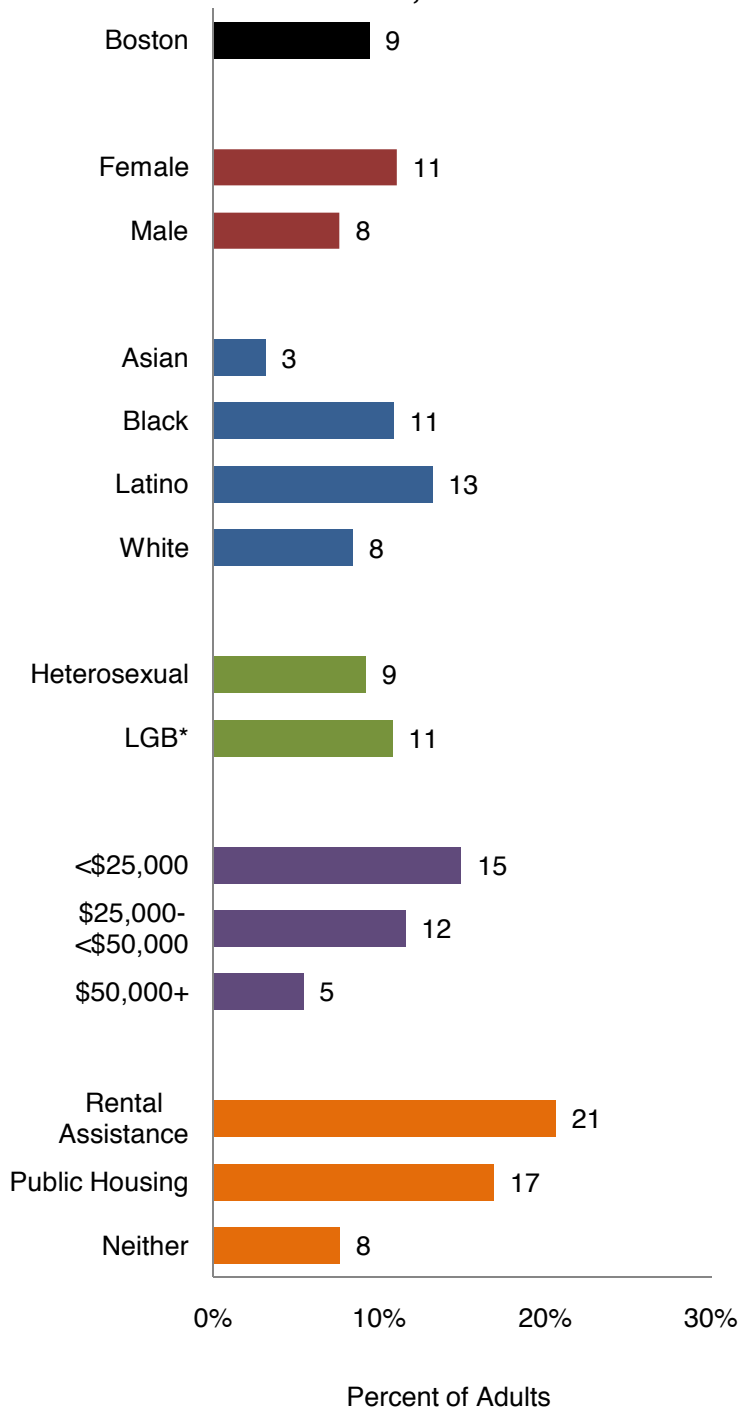
*Includes lesbian, gay, bisexual and "Not sure"

DATA SOURCE: Boston Behavioral Risk Factor Survey 2008, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ Fig 9.3 Felt Sad, Blue, or Depressed 15+ Days of Past Month by Selected Indicators, 2010

In 2010, 9% of Boston adults reported persistent symptoms of depression (i.e., feeling sad, blue, or depressed for more than 14 days during the past month). Among Boston adults, a higher percentage of adults with annual household income less than \$25,000 reported persistent symptoms of depression compared to adults with annual household income greater than \$50,000. A higher percentage of adults receiving rental assistance and living in public housing reported persistent symptoms of depression compared to adults neither receiving rental assistance nor residing in public housing. A lower percentage of Asian residents reported persistent symptoms of depression compared to other races. For gender and sexual orientation, the percentage of adults reporting these persistent symptoms was statistically similar.

Figure 9.3 Felt Sad, Blue, or Depressed 15+ Days of Past Month by Selected Indicators, 2010



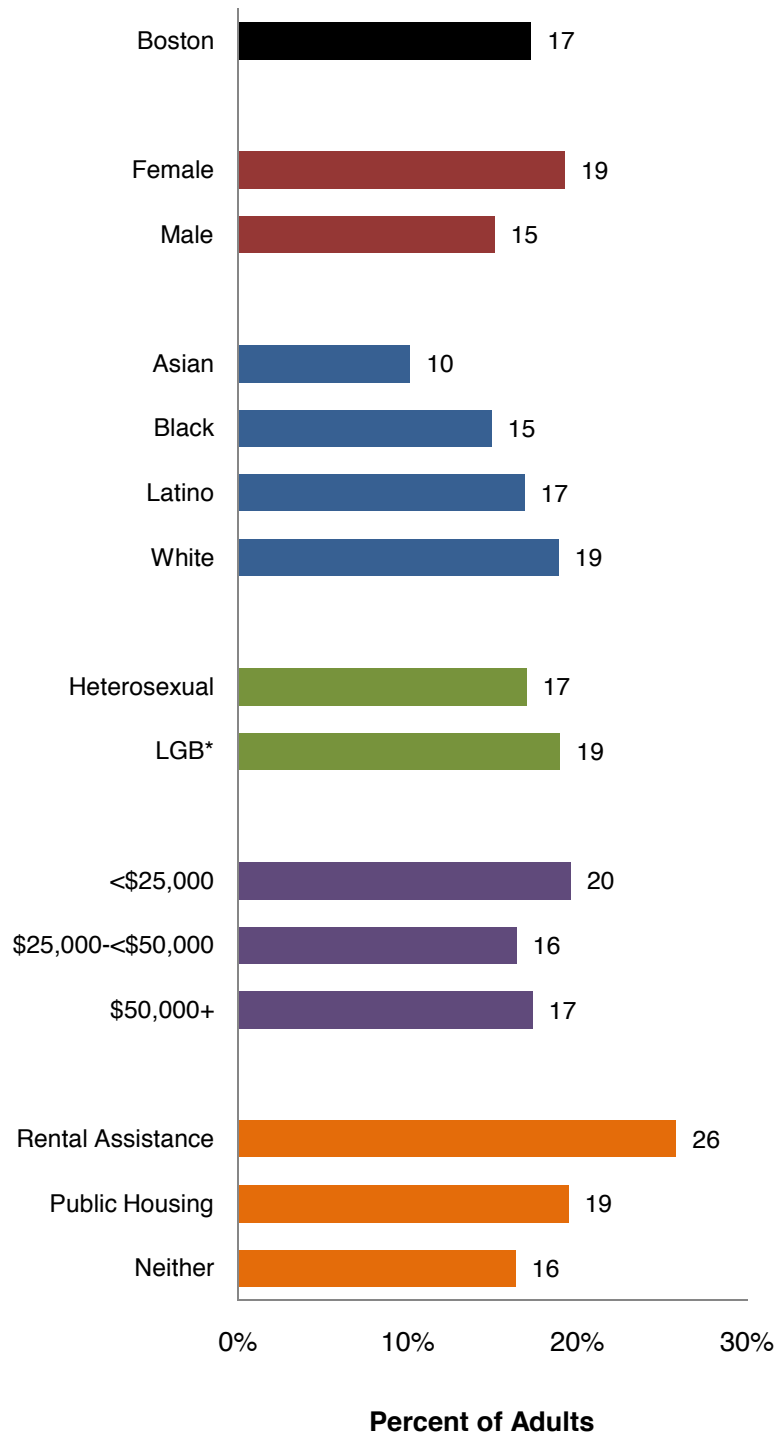
*Includes lesbian, gay, bisexual and 'Not sure'

DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ Fig 9.4 Felt Worried, Tense, or Anxious 15+ Days of Past Month by Selected Indicators, 2010

Nearly one in five adults in Boston reported persistent symptoms of anxiety (i.e., feeling worried, tense, or anxious for more than 15 days during the past month). A higher percentage of adults receiving rental assistance reported persistent symptoms of anxiety in comparison to adults neither residing in public housing nor receiving rental assistance. There were no significant differences observed by gender, race/ethnicity, sexual orientation, or household income.

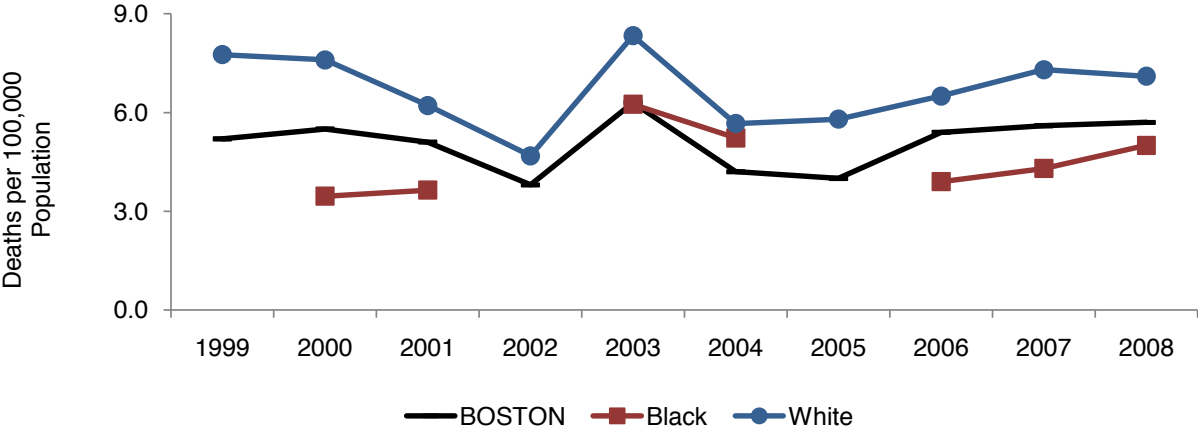
Fig 9.4 Felt Worried, Tense, or Anxious 15+ Days of Past Month by Selected Indicators, 2010



*Includes lesbian, gay, bisexual and 'Not sure'

DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Figure 9.5 Suicide Rate by Race/Ethnicity*, Boston, 1999-2008†



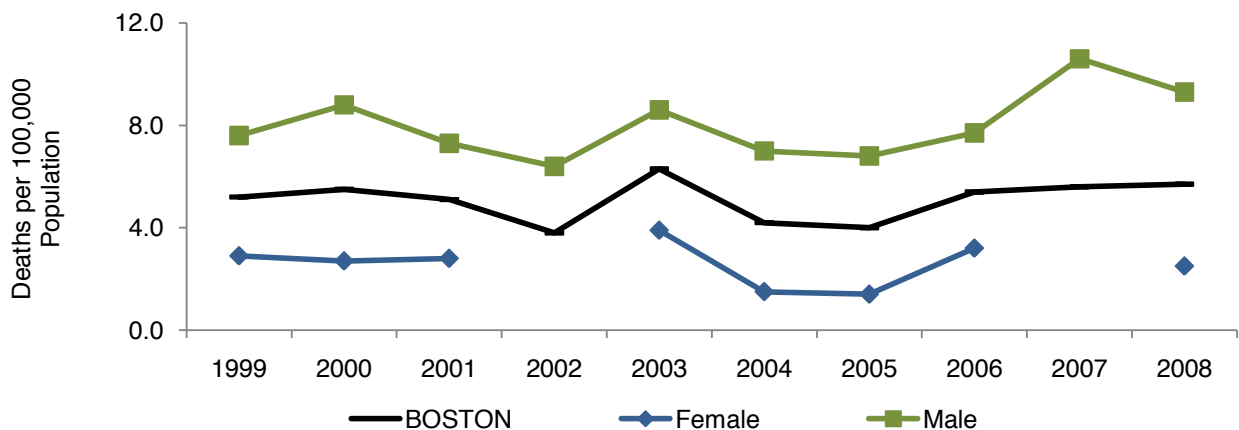
*Rates are not presented for Asians and Latinos for 1999-2008, or Blacks in 2002 and 2005, due to the small number of cases.
 †Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident live births and deaths, Massachusetts Department of Public Health

■ Figure 9.5 Suicide by Race/Ethnicity*, Boston, 1999-2008†

From 1999-2008, the suicide rate for White Boston residents has been consistently higher than the rate for Black Boston residents, as well as for Boston residents overall.

Figure 9.6 Suicide Rate by Gender*, Boston 1999-2008†



*Rates are not presented for females for 2002 and 2007 due to the small number of cases.

†Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident live births and deaths, Massachusetts Department of Public Health

■ **Figure 9.6 Suicide by Gender*, Boston ,1999-2008†**

In Boston, the suicide rate for males was consistently and considerably higher than for females from 1999 to 2008. In 2008, the rate for males (9.3 deaths per 100,000 population) was over 3 times the female rate (2.5 deaths per 100,000 population). From 2007 to 2008, the suicide rate for male Boston residents decreased 12%.

Substance Abuse



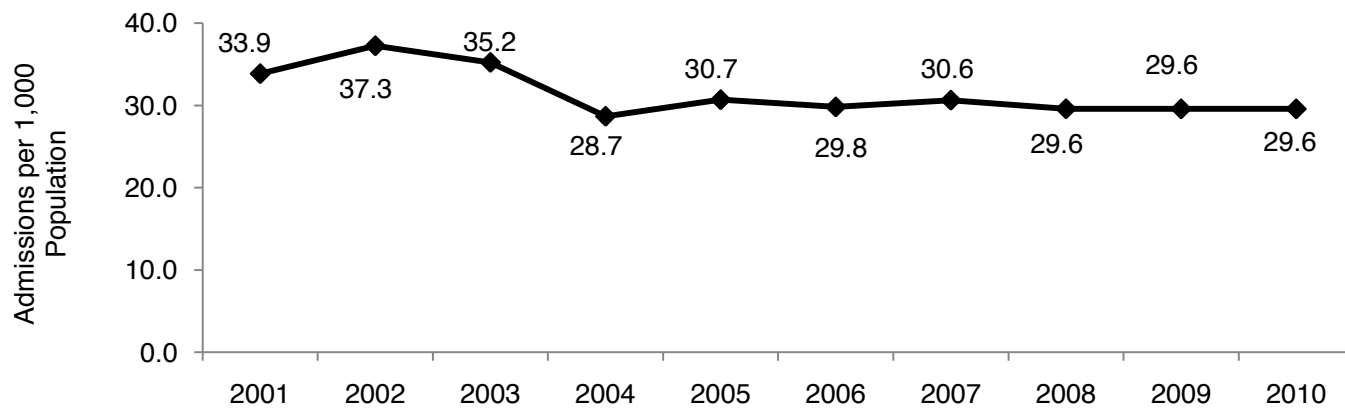
Substance abuse involves the excessive use of alcohol, illicit substances (e.g., marijuana, cocaine, heroin, methamphetamines, ecstasy), or the use of licit substances (e.g., prescription drugs such as Vicodin and OxyContin), in a non-prescribed manner to achieve an altered physiological state. There is a substantial increased risk of morbidity and mortality associated with alcohol and drug abuse (1). Abuse of alcohol or other drugs over time can lead to physical and/or psychological dependence on these substances. An individual is said to have an addiction to a substance when the nature and intensity of the cravings for the substance contributes to a pattern of unhealthy or self-destructive decisions in order to satisfy the perceived need for the substance.

Individual-level risk factors such as socioeconomic status, family history, incarceration, and stressful life events (e.g., psychological distress, death of a loved one) are associated with drug use (2). Increasingly, evidence suggests that social factors may contribute to one's decision to initiate drug use and shape substance use behavior (1). For example, the availability of supportive social networks or factors associated with neighborhood poverty may influence substance use behaviors.

Fortunately, effective treatment for drug and alcohol dependence exists. Treatment providers offer a wide array of services (e.g., behavioral therapy) and medications that aim to help the individual break his or her dependence on the substance.

This section considers three types of indicators of substance abuse: admissions to publicly funded substance abuse treatment programs, hospitalizations due to substance abuse, and substance abuse mortality, which is defined as deaths in which alcohol or drugs are believed to have played a causal role.

Figure 10.1 Substance Abuse Treatment Admissions, 2001-2010

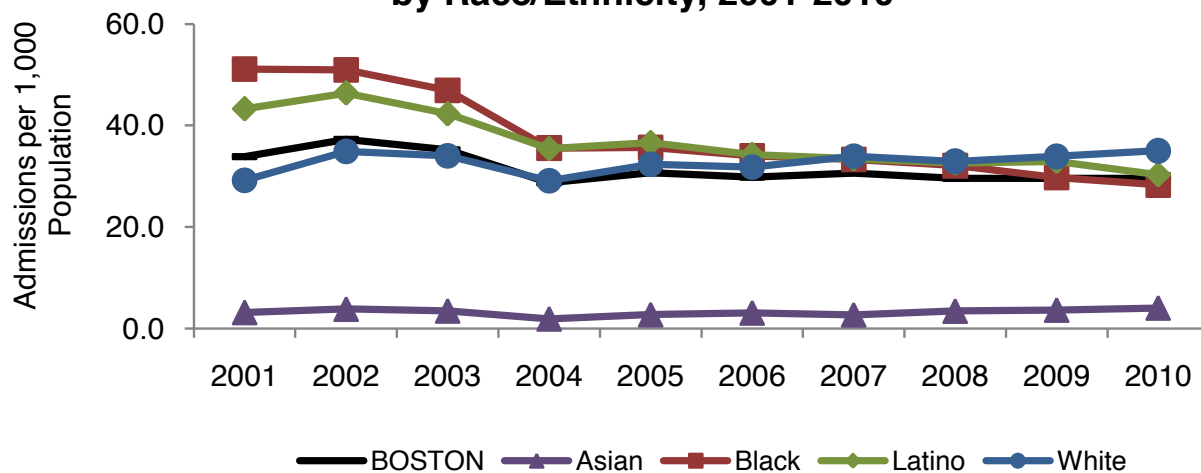


DATA SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse

■ **Figure 10.1 Substance Abuse Treatment Admissions, 2001-2010**

From 2002 to 2004, substance abuse treatment admission rates decreased for all four reported racial/ethnic groups. However from 2005 to 2010, the White resident admission and Asian resident admission rates increased to their previous levels, while the Black resident and Latino resident admission rates continued to fall. From 2001 to 2010, the Black resident and Latino resident treatment admission rates decreased 45% and 30%, respectively.

Figure 10.2 Substance Abuse Treatment Admissions by Race/Ethnicity, 2001-2010

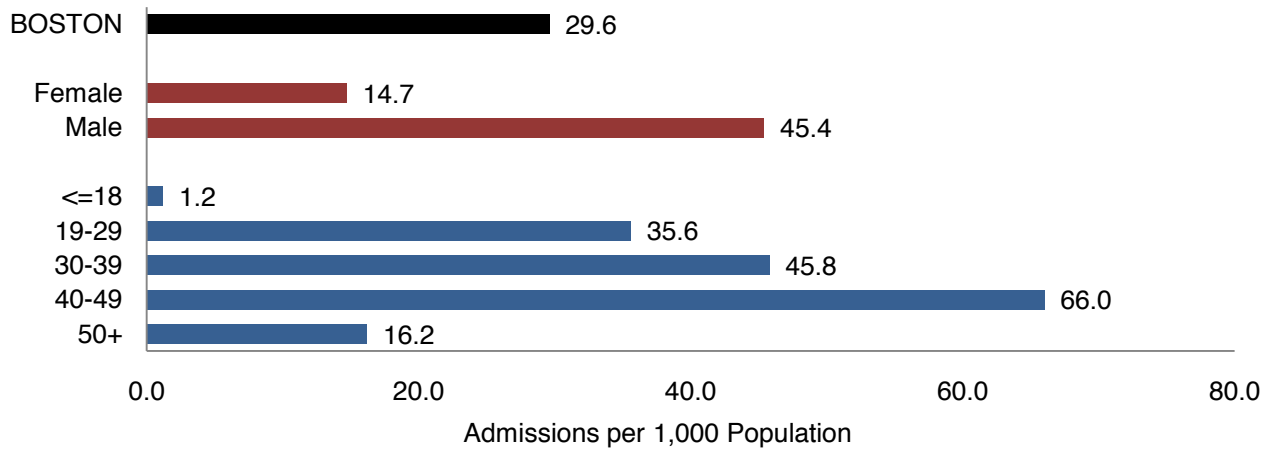


DATA SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse

■ **Figure 10.2 Substance Abuse Treatment Admissions by Race/Ethnicity, 2001-2010**

From 2002 to 2004, substance abuse treatment admission rates decreased for all four reported racial/ethnic groups. However from 2005 to 2010, the White resident admission and Asian resident admission rates increased to their previous levels, while the Black resident and Latino resident admission rates continued to fall. From 2001 to 2010, the Black resident and Latino resident treatment admission rates decreased 45% and 30%, respectively.

Figure 10.3 Substance Abuse Treatment Admissions by Gender and Age, 2010

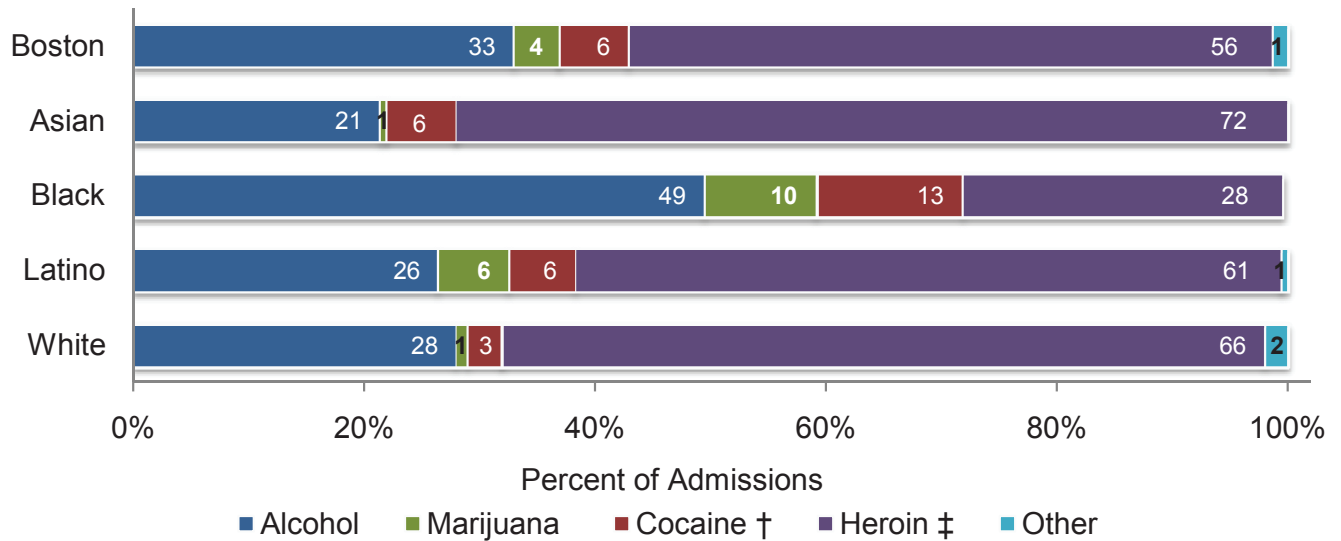


DATA SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse

■ **Figure 10.3 Substance Abuse Treatment Admissions by Gender and Age Group, 2010**

In 2010, the substance abuse treatment admissions rate for males was more than three times the rate for females. The rate for adults ages 40 to 49 was highest among the age groups.

Figure 10.4 Substance Abuse Treatment Admissions by Primary Drug and Race/Ethnicity, 2010



† Powder and crack cocaine
 ‡ Other opiates and synthetics
 § Other/unknown substances

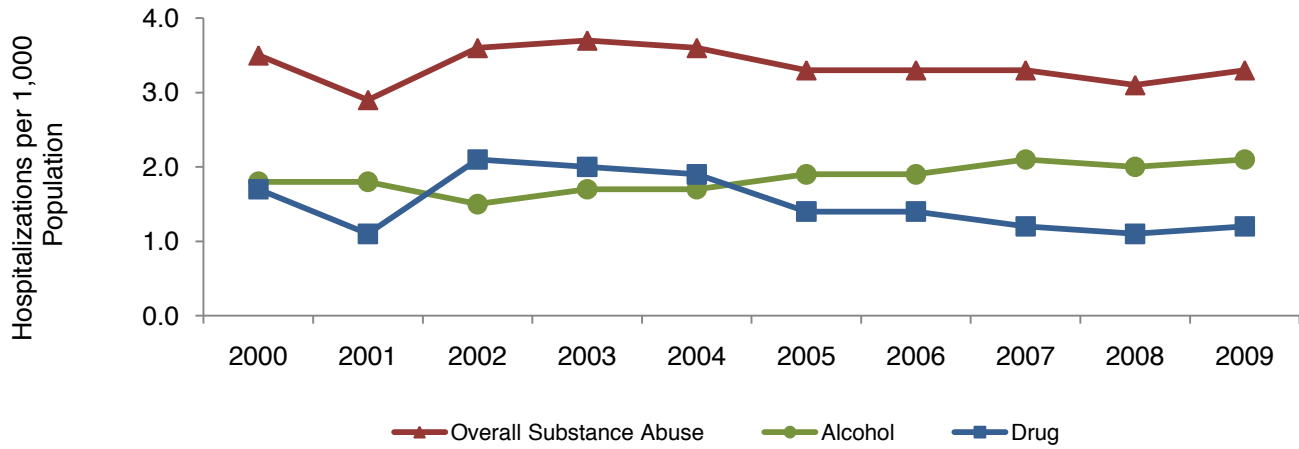
DATA SOURCE: Massachusetts Department of Public Health, Bureau of Substance Abuse

■ Figure 10.4 Substance Abuse Treatment Admissions by Primary Drug and Race/Ethnicity, 2010

In 2010, Heroin (including other opiates and synthetics) was most often cited as the primary drug among Asian, White and Latino resident admissions to substance abuse treatment. Alcohol was cited most often among Black resident treatment admissions.

Higher percentages of Black residents admitted for treatment cited alcohol, cocaine, and marijuana as their primary drug compared to their Asian, White, and Latino counterparts.

Figure 10.5 Substance Abuse Hospitalizations, 2000-2009



DATA SOURCE: Acute Care Hospital Case Mix Files, Massachusetts Division of Health Care Finance and Policy.

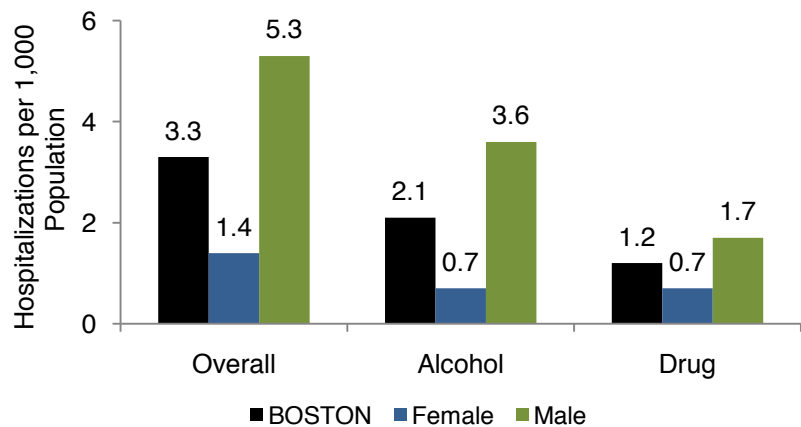
■ Figure 10.5 Substance Abuse Hospitalizations, 2000-2009

The overall substance abuse hospitalization rate increased 28% from 2001 to 2003. From 2005 to 2009, the rate has remained stable at approximately 11% below the 2003 level. From 2002 to 2009 the drug abuse hospitalization rate decreased 43% while the alcohol abuse hospitalization rate increased 40%.

■ Figure 10.6 Substance Abuse Hospitalizations by Gender, 2009

Male substance abuse hospitalization rates (overall, alcohol, and drug) were two to five times the corresponding female rates.

Figure 10.6 Substance Abuse Hospitalizations by Gender, 2009

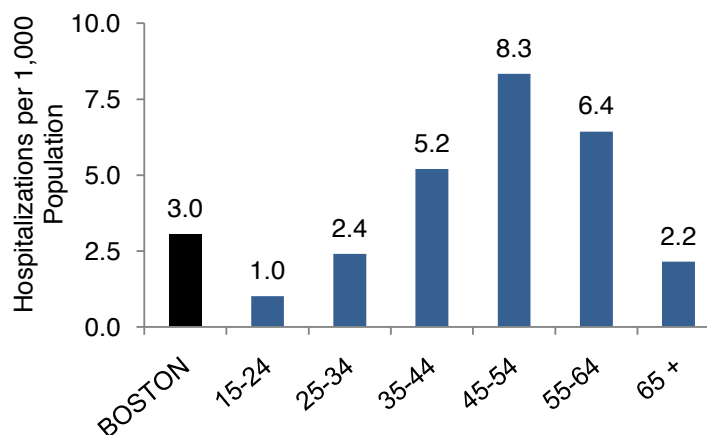


DATA SOURCE: Acute Care Hospital Case Mix Files, Massachusetts Division of Health Care Finance and Policy.

■ Figure 10.7 Substance Abuse Hospitalizations by Age, 2009

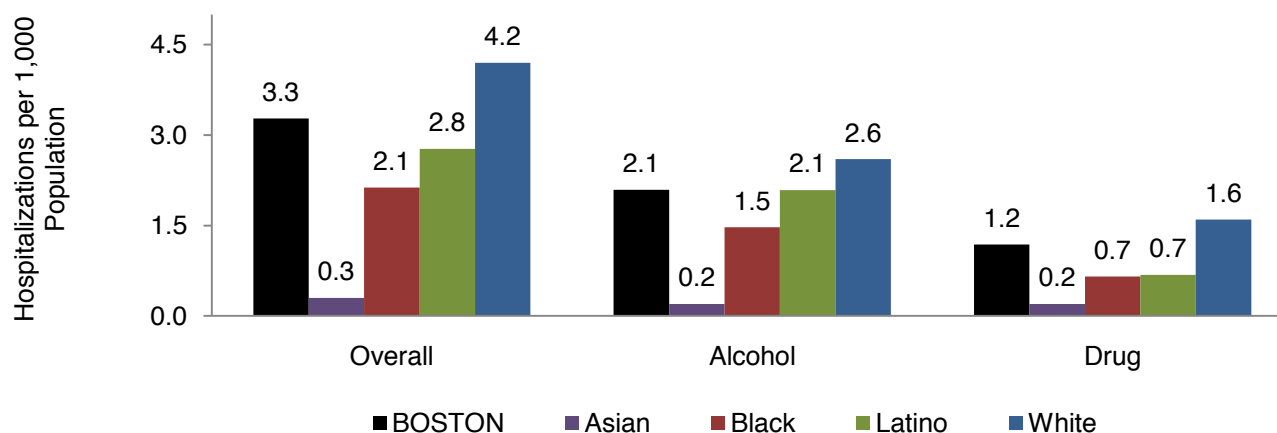
Adults ages 45 to 54 experienced the highest substance abuse hospitalization rate across age groups.

Figure 10.7 Substance Abuse Hospitalizations by Age, 2009



DATA SOURCE: Acute Care Hospital Case Mix Files, Massachusetts Division of Health Care Finance and Policy.

Figure 10.8 Substance Abuse Hospitalizations by Race/Ethnicity, 2009

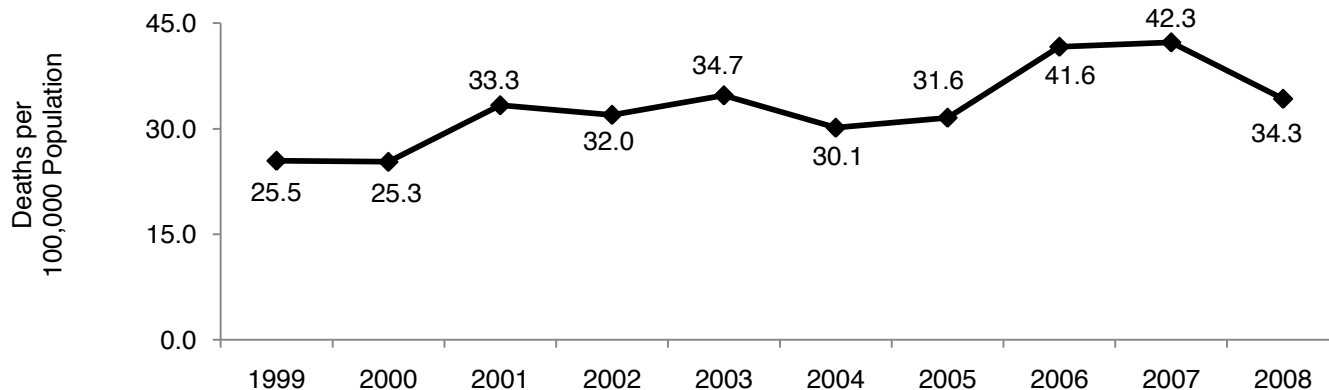


DATA SOURCE: Acute Care Hospital Case Mix Files, Massachusetts Division of Health Care Finance and Policy.

■ Figure 10.8 Substance Abuse Hospitalizations by Race/Ethnicity, 2009

In 2009, the overall substance abuse hospitalization rate for White residents was 100% higher than the rate for Black residents, 50% higher than the rate for Latino residents, and 1300% higher than the rate for Asian residents. Similarly, the alcohol and drug abuse hospitalization rates were highest for White residents and lowest for Asian residents.

Figure 10.9 Substance Abuse Mortality, 1999-2008*



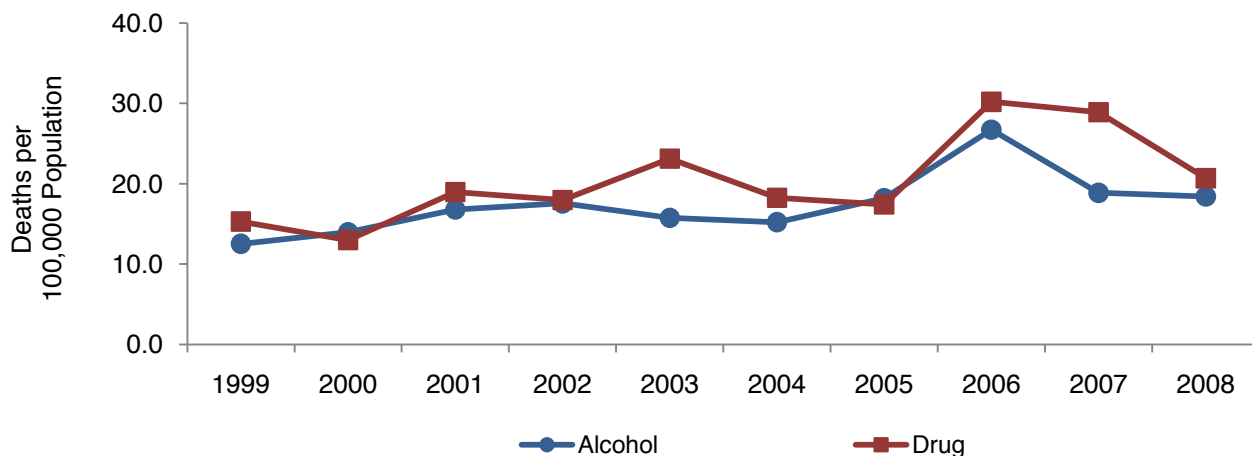
*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

■ **Figure 10.9 Substance Abuse Mortality, 1999-2008***

From 2004 to 2007, the overall substance abuse mortality rate increased 41%. After peaking in 2007 at 42.3 deaths per 100,000 population, the rate decreased 19% from 2007 to 2008.

Figure 10.10 Substance Abuse Mortality by Type, 1999-2008*



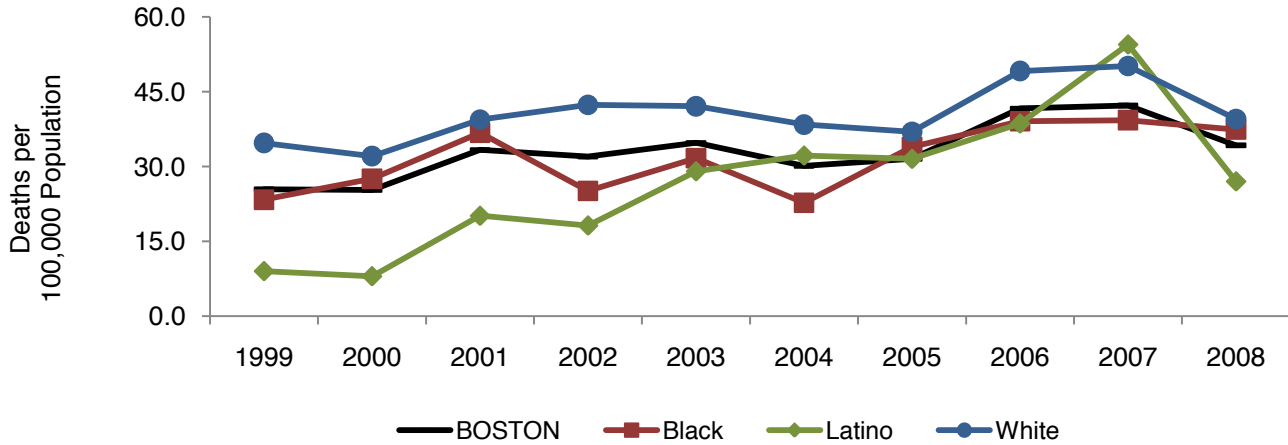
*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

■ **Figure 10.10 Substance Abuse Mortality by Type, 1999-2008***

After peaking in 2006, both the drug-related and alcohol-related mortality rates decreased by 31% from 2006 to 2008.

Figure 10.11 Substance Abuse Mortality by Race/Ethnicity*, 1999-2008 †



*Rates are not presented for Asians for 1999-2008 due to the small number of cases.

† Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

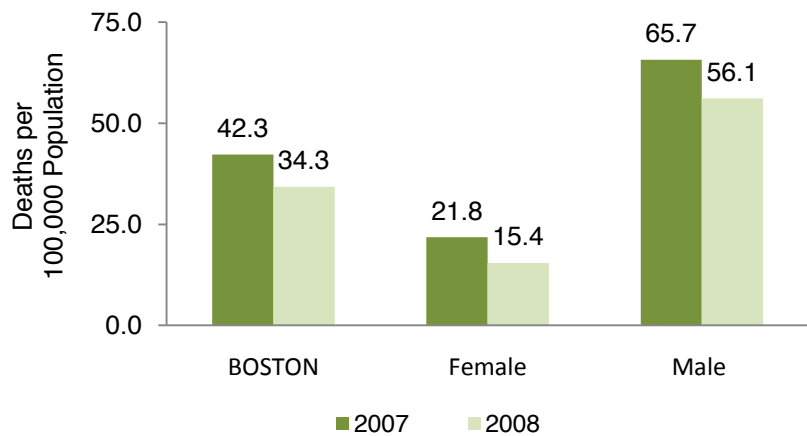
Figure 10.11 Substance Abuse Mortality by Race/Ethnicity*, 1999-2008†

In 2008, White residents had the highest substance abuse mortality rate (39.5) compared to Black and Latino residents. From 2007 to 2008, the Latino resident substance abuse mortality rate decreased by 50%. However, the 2008 rate for Latino residents was three times the level observed in 1999. From 2007 to 2008, the Black resident and White resident substance abuse mortality rates decreased 5% and 22%, respectively.

Figure 10.12 Substance Abuse Mortality by Gender, 2007 and 2008*

In both 2007 and 2008, the male substance abuse mortality rate was at least three times the female rate.

Figure 10.12 Substance Abuse Mortality by Gender, 2007 and 2008*



* Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

Violence



Violence is widely recognized as a major public health issue in addition to being a criminal justice problem. The fatal and non-fatal outcomes resulting from violent victimization and perpetration have a negative impact on individual and community health.

Violence-related behaviors that may cause physical and emotional harm include carrying a weapon, physical fighting, harassment, and bullying. Violence can occur in a variety of social contexts ranging from the home, school, work, neighborhood, and electronically via the internet.

Victimization, stress, anxiety, and fear of living in a violence-prone neighborhood all affect health. The economic toll of violence is enormous ranging from years of potential life lost, increases in health care-related costs, decreases in property values, and the disruption of social services (1).

Contextual and situational risk factors for violence include family stress, access to guns, media depictions of violent behavior, low levels of community participation, and neighborhood poverty (2). Prevention strategies targeting families, schools, and neighborhoods include: the creation of coalitions of religious and community leaders; efforts to improve communication and relationships between police and the communities; creation of neighborhood crime watch programs; establishing after school programs and other places for youth to safely 'hang out'; the incorporation of conflict resolution programs into school curricula; gun buy-back programs; and increased presence of police in high crime areas.

This section provides information on violence-related perceptions and behaviors, as well as measures of non-fatal and fatal victimization.

Figure 11.1 Carried a Weapon Within the Past Month by Selected Indicators, 2007 and 2009 Combined

Sixteen percent of Boston public high school students reported carrying a weapon during the past month.

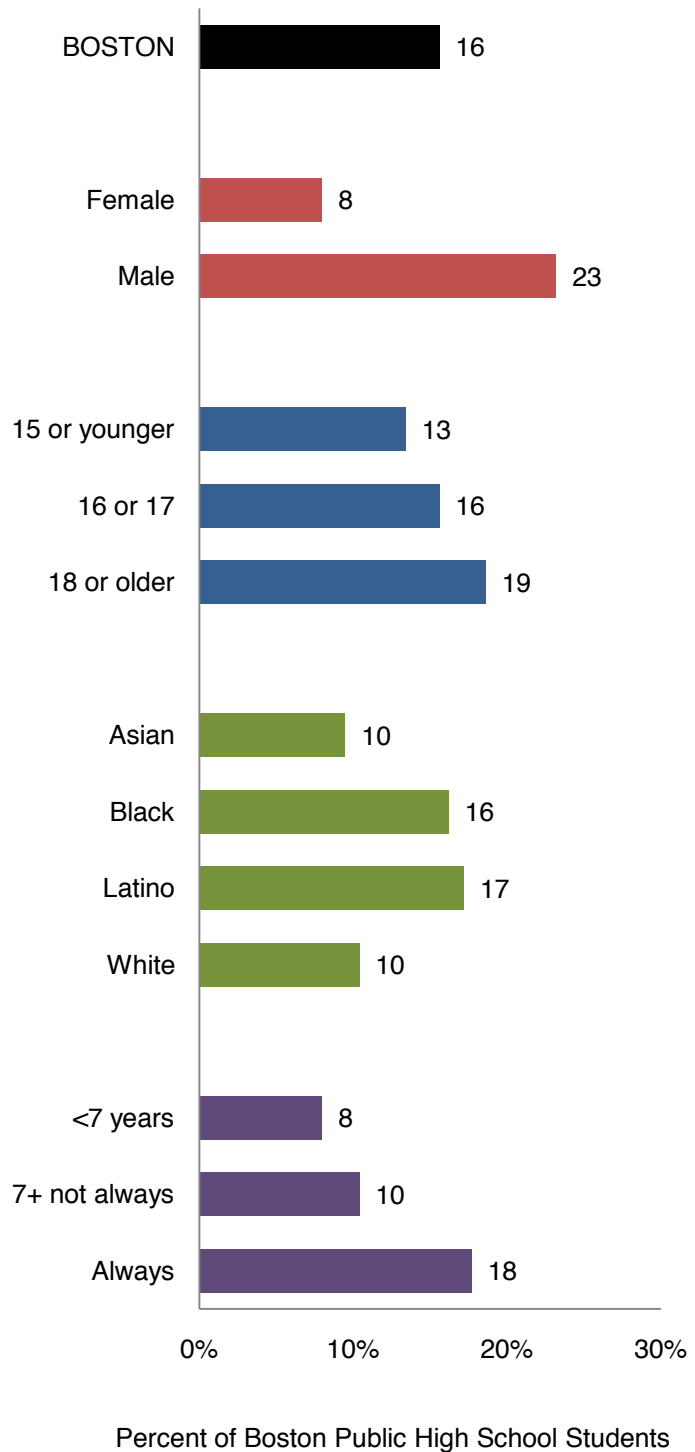
A higher percentage of male high school students reported carrying a weapon during past month than female high school students.

Across age groups, a statistically similar percentage of high school students reported carrying a weapon during the past month.

A higher percentage of Latino students reported carrying a weapon compared to White students.

A higher percentage of students who have always lived in the US reported carrying a weapon during past month compared to students who lived outside the US during part of their lifetime.

Figure 11.1 Carried a Weapon Within the Past Month by Selected Indicators, 2007 and 2009 Combined



DATA SOURCE: Youth Risk Behavior Survey 2007 and 2009, Youth Risk Behavior Surveillance System (YRBSS), Centers for Disease Control and Prevention (CDC)

■ **Figure 11.2 How Easy to Get a Gun by Selected Indicators, 2008**

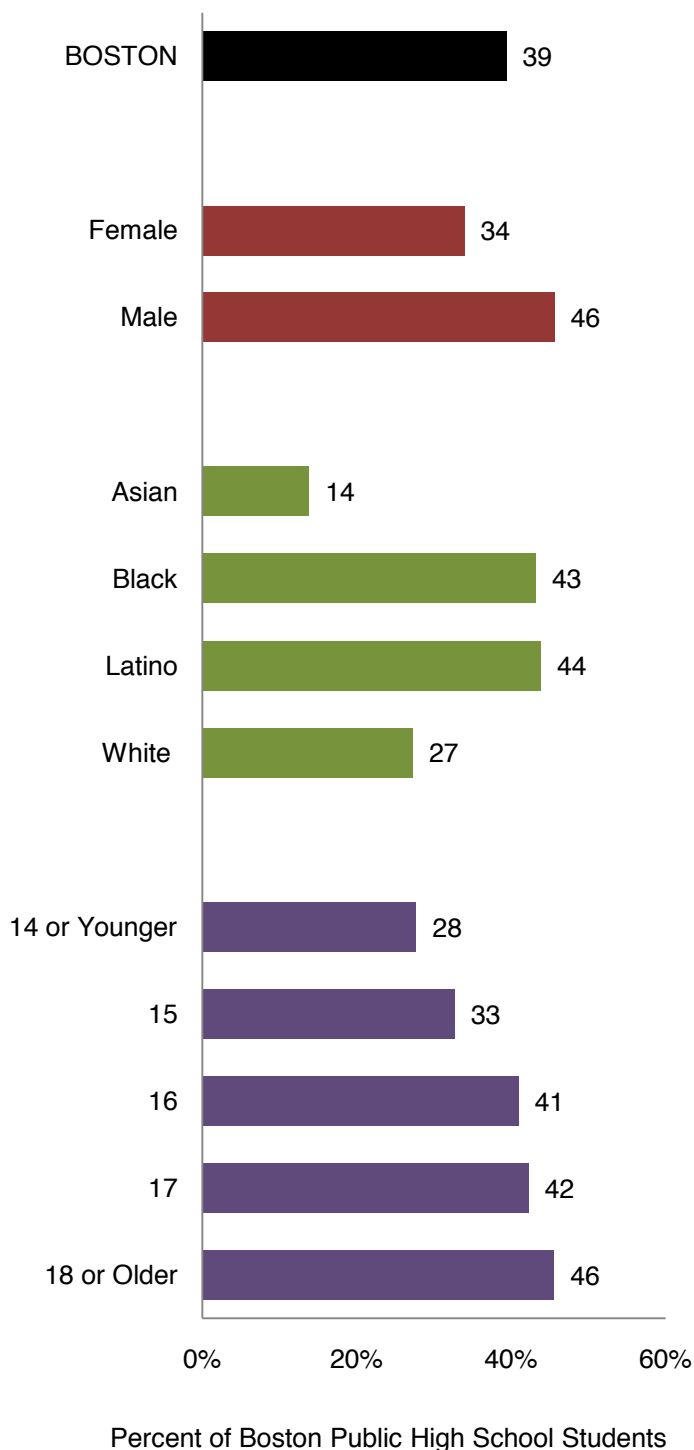
In 2008, 39% of Boston high school students reported that it is fairly easy or very easy to get a gun.

A higher percentage of male students reported that it is easy to get a gun compared to females.

A higher percentage of Black and Latino students reported that it is easy to get a gun compared to Asian and White students.

A lower percentage of students ages 15 years and younger reported that it is easy to get a gun compared to students ages 16 and older.

Figure 11.2 How Easy to Get a Gun by Selected Indicators, 2008



DATA SOURCE: Boston Youth Survey, 2008; Harvard Youth Violence Prevention Center through a Cooperative agreement with the Center for Disease Control and Prevention

Figure 11.3 Bullied in the Past 30 Days by Selected Indicators, 2008

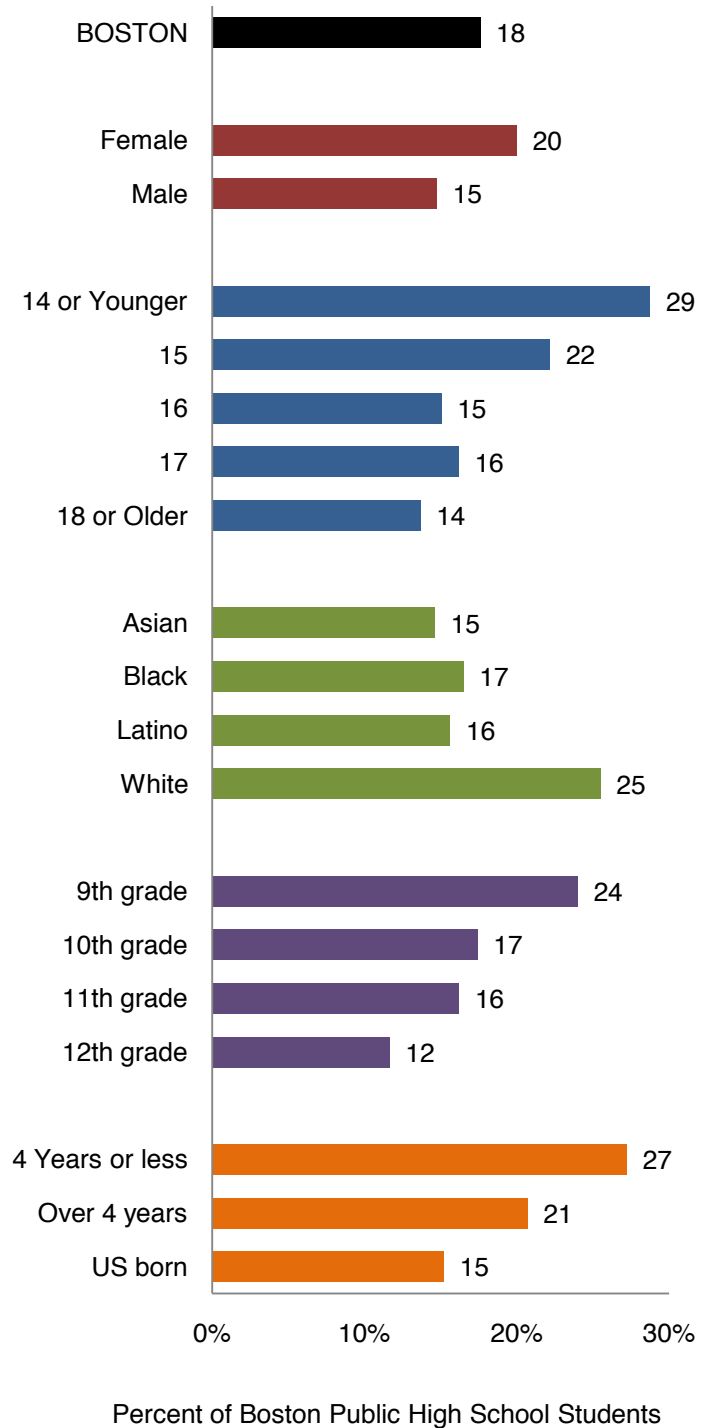
In 2008, 18% of Boston high school students reported being bullied in the past 30 days.

A higher percentage of females compared to males reported being bullied.

A higher percentage of students ages 15 years and younger reported being bullied compared to students ages 18 years and older. A higher percentage of students in 9th grade reported being bullied compared to those in the 12th grade.

There were no significant differences in the percentages of students being bullied across racial/ethnic groups.

Figure 11.3 Bullied in the Past 30 Days by Selected Indicators, 2008



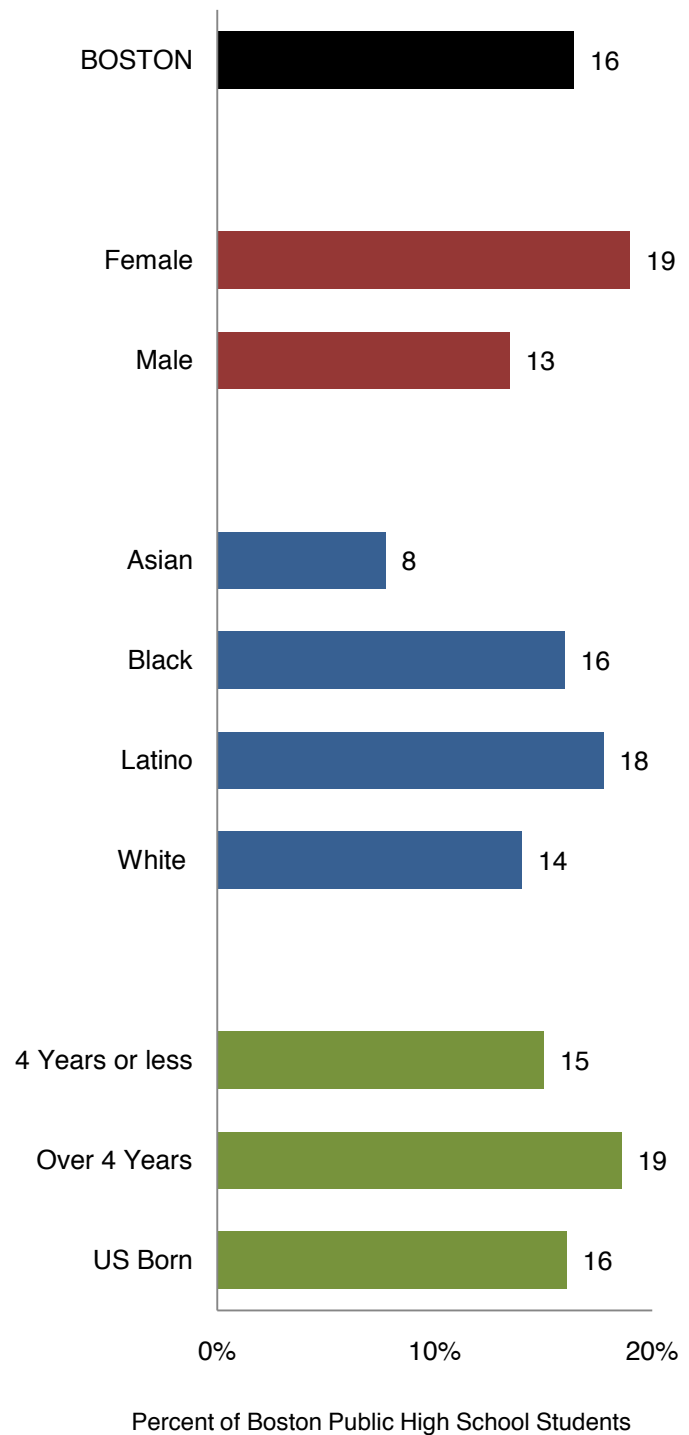
DATA SOURCE: Boston Youth Survey, 2008; Harvard Youth Violence Prevention Center through a Cooperative agreement with the Center for Disease Control and Prevention

■ **Figure 11.4 Physical Violence in Home by Selected Indicators, 2008**

In 2008, 16% of Boston public high school students reported having been physically abused at home.

A higher percentage of female students reported being physically abused compared to males. There were no significant differences by Race/Ethnicity or number of years in the US.

Figure 11.4 Physical Violence in Home by Selected Indicators, 2008



DATA SOURCE: Boston Youth Survey, 2008; Harvard Youth Violence Prevention Center through a Cooperative agreement with the Center for Disease Control and Prevention

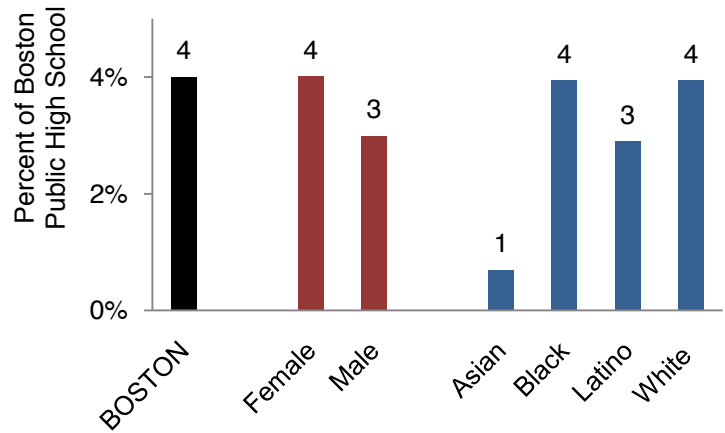
■ **Figure 11.5 Ever been Forced to Engage in Sexual Intercourse Against Will by Gender and Race/Ethnicity, 2008**

Four percent of Boston public high school students reported having been forced to engage in sexual intercourse against their will.

A similar percentage of female and male students reported having been forced into sexual intercourse.

There were no significant differences by race/ethnicity

Figure 11.5 Ever Been Forced to Engage in Sexual Intercourse Against Will by Gender and Race/Ethnicity, 2008



DATA SOURCE: Boston Youth Survey, 2008; Harvard Youth Violence Prevention Center through a Cooperative agreement with the Center for Disease Control and Prevention

■ **Figure 11.6 Perception Among Youth That Police Treated them with Respect by Selected Indicators, 2008**

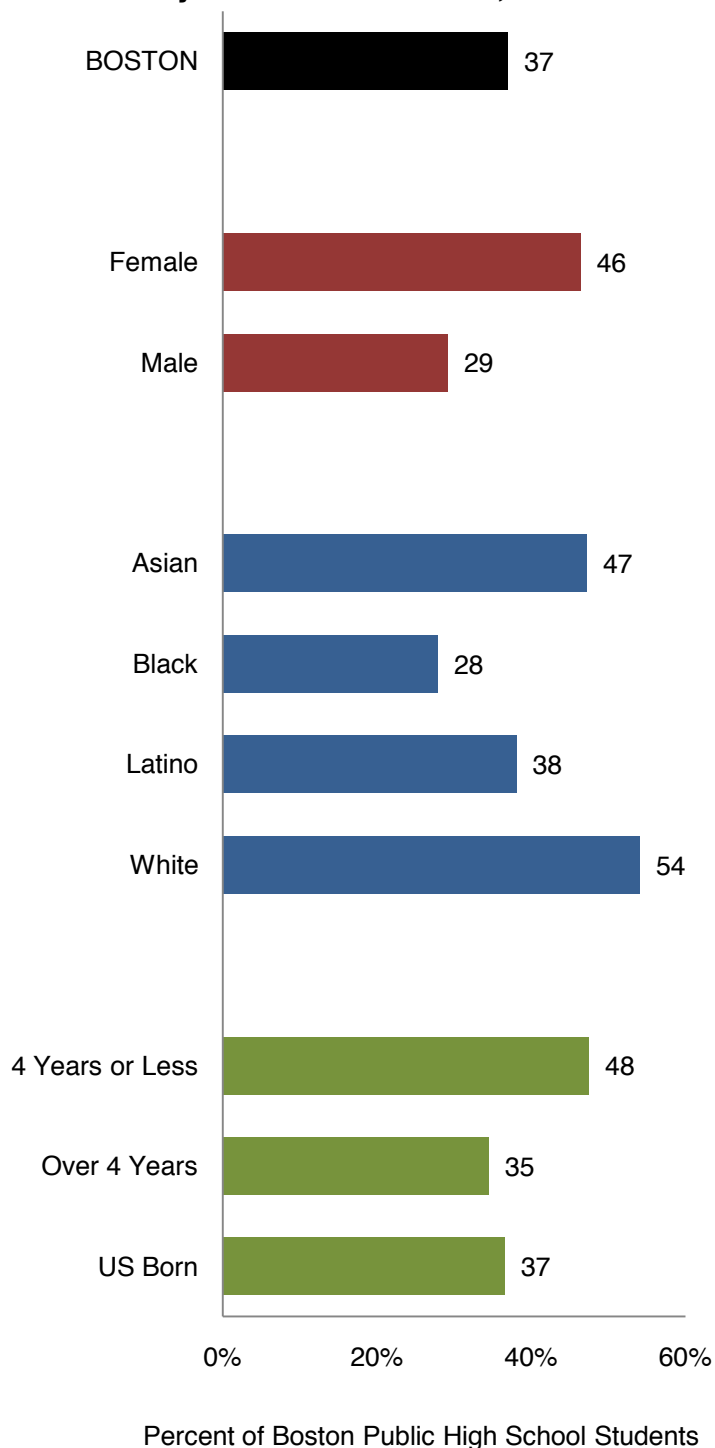
Thirty seven percent of Boston public high school students felt that police treated them with respect in the past 12 months when they came into contact with them.

A lower percentage of male students reported having been treated with respect compared to females.

A lower percentage of Black students reported having been treated with respect by police compared to White students.

There were no significant differences in the percentage who reported being treated with respect by number of years in the US.

Figure 11.6 Perception Among Youth That Police Treated Them with Respect by Selected Indicators, 2008

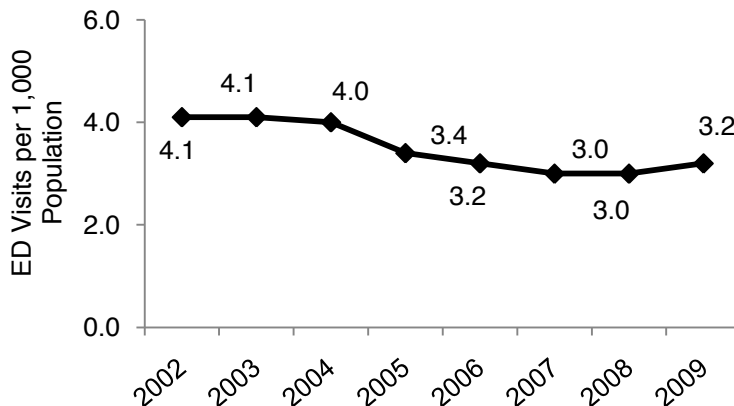


DATA SOURCE: Boston Youth Survey, 2008; Harvard Youth Violence Prevention Center through a Cooperative agreement with the Center for Disease Control and Prevention

■ **Figure 11.7 Emergency Department Visits for Unarmed Fights 2002-2009**

The age-adjusted rate of emergency department visits due to unarmed fights increased slightly (by 7%) between 2008 and 2009. Overall, the rate decreased 22% between 2002 and 2009.

Figure 11.7 Emergency Department Visits for Unarmed Fights, 2002-2009



DATA SOURCE: Emergency Department Visit Database, Massachusetts Division of Health Care Finance and Policy

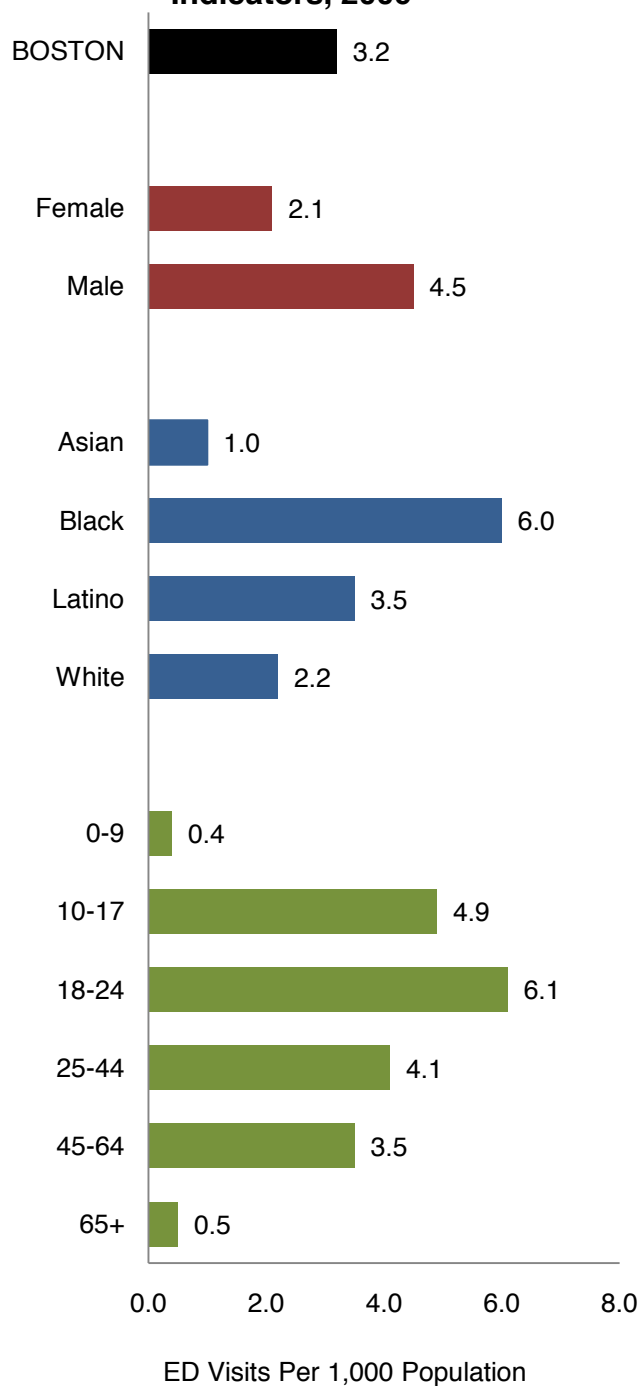
■ **Figure 11.8 Emergency Department Visits for Unarmed Fights by Select Indicators, 2009**

In 2009, the male rate of emergency department (ED) visits due to unarmed fights was more than twice the female rate.

The 18 to 24 age group had the highest age-specific rate of ED visits due to unarmed fights.

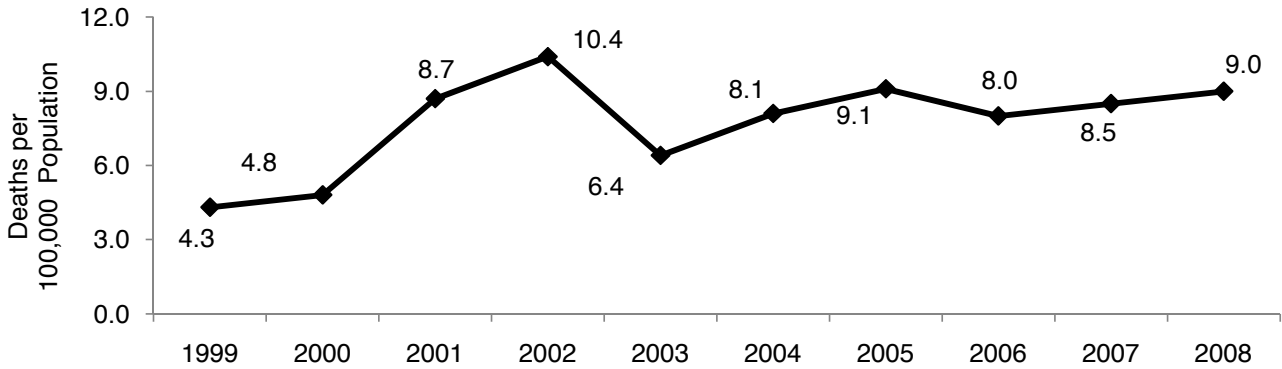
Black residents had the highest rate of ED visits due to unarmed fights compared to other racial/ethnic groups. The rate for Black residents was almost three times the rate for White residents and almost twice the rate for Latino residents

Figure 11.8 Emergency Department Visits for Unarmed Fights by Selected Indicators, 2009



DATA SOURCE: Emergency Department Visit Database, Massachusetts Division of Health Care Finance and Policy

Figure 11.9 Homicides, 1999-2008*

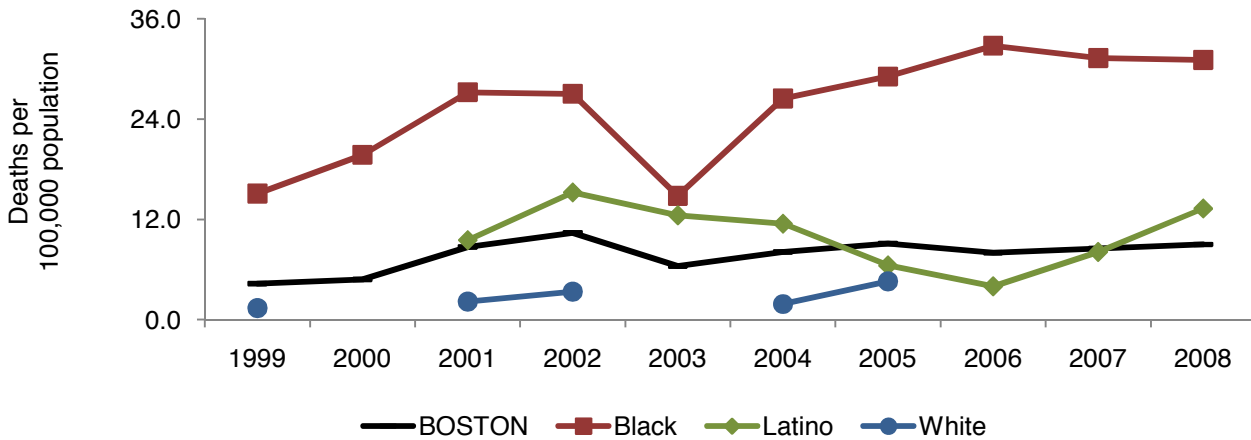


*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.
 DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

■ **Figure 11.9 Homicides, 1999-2008**

From 2007 to 2008, the age-adjusted homicide rate increased slightly by 6%. The number of homicides in 2008 was more than double the number in 1999.

Figure 11.10 Homicides by Race/Ethnicity*, 1999-2008†



*Rates are not presented for Asians from 1999-2008 and Whites in 2000, 2003, and 2006-2008 due to the small number of cases.

†Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

■ **Figure 11.10 Homicides by Race/Ethnicity, 1999-2008**

The rate of homicide was highest for Black residents in each year from 1999 to 2008 despite a 45% drop in the rate from 2002 to 2003. Latino residents had the second highest rates and White residents had the lowest rates during 1999-2008.

Cancer



Cancer is caused by changes in genes that control cell growth and death. The American Cancer Society states, “Cancer occurs when cells in a part of the body begin to grow out of control. Normal cells divide and grow in an orderly fashion, but cancer cells do not. They continue to grow and crowd out normal cells.” Cancer is the overall leading cause of death among Boston residents, responsible for more deaths than heart disease, stroke, or injuries.

Biological, behavioral, social, and environmental factors influence the risk of getting and surviving cancer. Age, gender, and genetics are prominent biological factors. The risk for cancer tends to increase with age, where most cancers are diagnosed in individuals ages 55 or over (1). Overall, cancer death rates are higher for males in comparison to females. Individuals with a family history of cancer are at a higher risk of developing cancer. Additionally, certain viruses, such as human papillomavirus (HPV), hepatitis B, hepatitis C, and human immunodeficiency virus (HIV) can increase one’s risk. (2).

Race and ethnicity, are also associated with cancer risk. White females have the highest incidence rate for breast cancer; however, Black females have the highest breast cancer mortality rate (3).

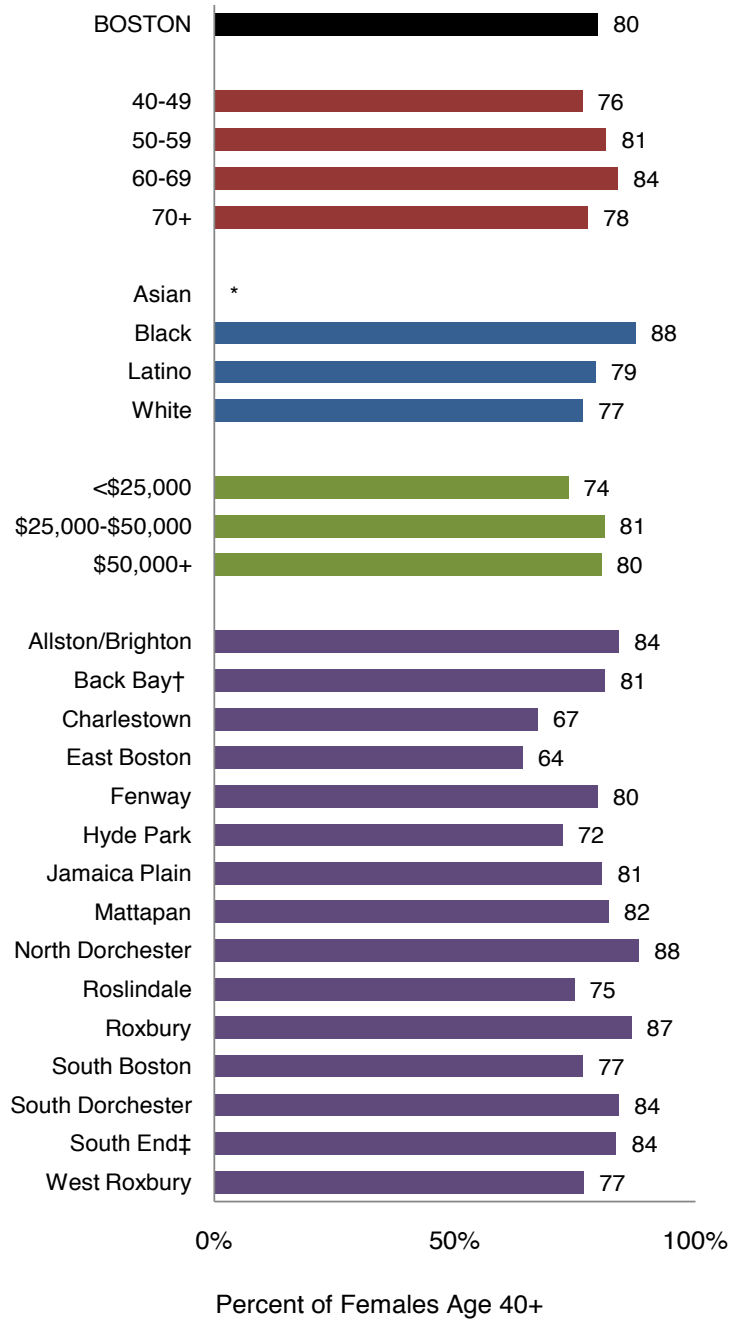
Behavioral factors such as tobacco use, excessive alcohol intake, poor dietary habits, and physical inactivity are associated with higher risk of cancer. Environmental factors including prolonged exposure to ultraviolet rays from the sun and to environmental toxins may additionally increase one’s risk. Receiving and having access to regular medical care and culturally appropriate services are essential components of effective cancer prevention and treatment strategies (4).

This section presents data about reported cancer incidence and leading types of cancer deaths (i.e., cancer mortality).

■ Figure 12.1 Mammogram within the Past Year by Selected Indicators, 2010

Among Boston females age 40+, 80% had a mammogram within the past year. In North Dorchester, this percentage was significantly higher than Boston overall while in East Boston, the percentage was significantly lower than Boston overall. The percentage of women who had a mammogram within the past year in East Boston was also significantly lower than in Roxbury and South Dorchester. There were no significant differences among age, race/ethnicity, or household income.

Figure 12.1 Mammogram within the Past Year by Selected Indicators, 2010



* Insufficient sample size for Asian residents

† Includes Beacon Hill, downtown, North End and the West End

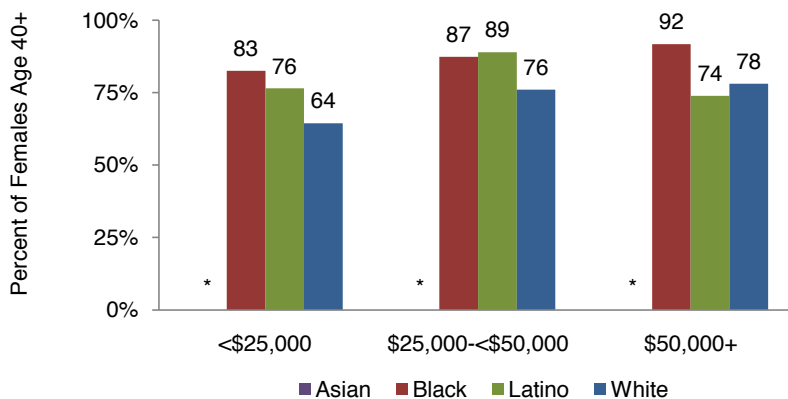
‡ Includes Chinatown

DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Figure 12.2 Mammogram within the Past Year by Race/Ethnicity and Household Income, 2010

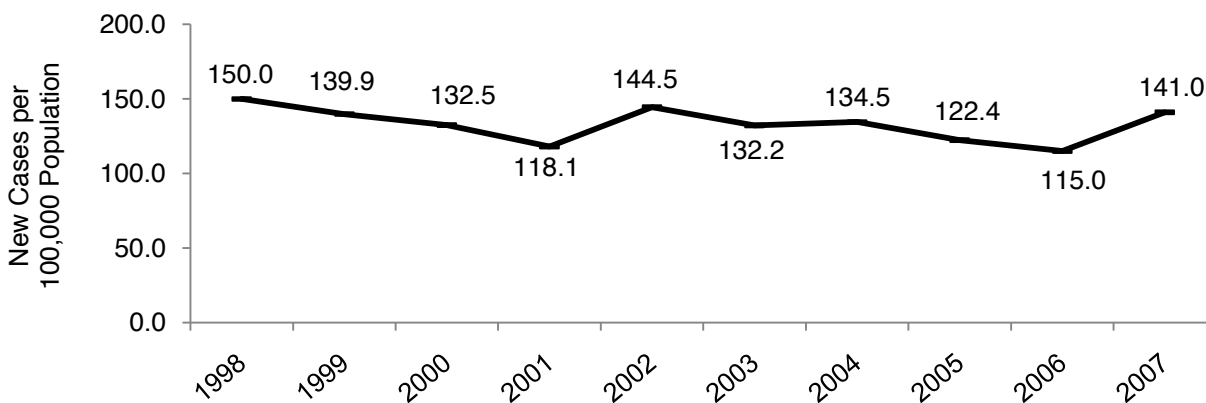
Among adult females 40 years of age and over with a household income less than \$25,000, fewer White females had a mammogram within the past year compared to Black females. This racial difference was also seen among those with a household income of \$50,000+. There were no significant differences among races in the \$25,000-\$50,000 household income range.

Figure 12.2 Mammogram within the Past Year by Race/Ethnicity and Household Income, 2010



*Insufficient sample size for Asian residents
 DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Figure 12.3 Breast Cancer Incidence, 1998-2007

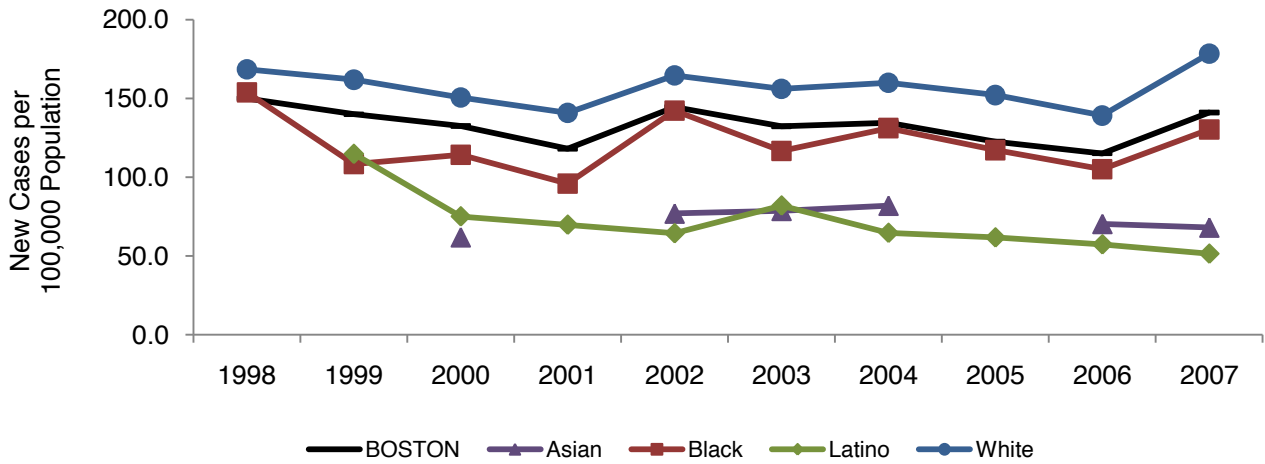


DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

Figure 12.3 Breast Cancer Incidence, 1998-2007

The breast cancer incidence rate for female Boston residents was fairly stable from 1998 to 2007.

Figure 12.4 Breast Cancer Incidence by Race/Ethnicity*, 1998-2007



*Rates are not presented for Latino residents for 1998 and Asian residents for 1998, 1999, 2001, and 2005 due to the small number of cases.

DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

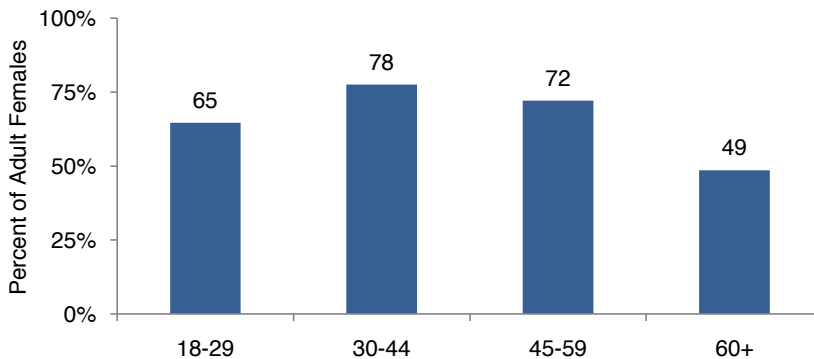
■ **Figure 12.4 Breast Cancer Incidence by Race/Ethnicity*, 1998-2007**

The breast cancer incidence rate for female Boston residents remained statistically similar within each racial/ethnic group from 1998 to 2007. White female residents had a higher rate of breast cancer than Asian female residents for every year from 1998 to 2007 in which data for Asian female residents are presented.

■ **Figure 12.5 Pap Test within the Past Year by Age, 2010**

A higher percentage of females ages 30-44 had a pap test within the past year compared to women ages 18-29 and 60+ years.

Figure 12.5 Pap Test within the Past Year by Age, 2010

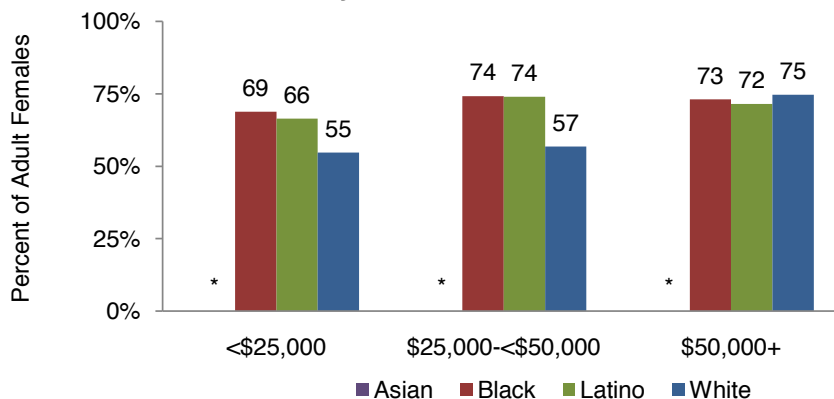


DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ **Figure 12.6 Pap Test within the Past Year by Race/Ethnicity and Household Income, 2010**

In 2010, there were no significant differences in the percentage of adult females who had a pap test within the past year by race/ethnicity and income.

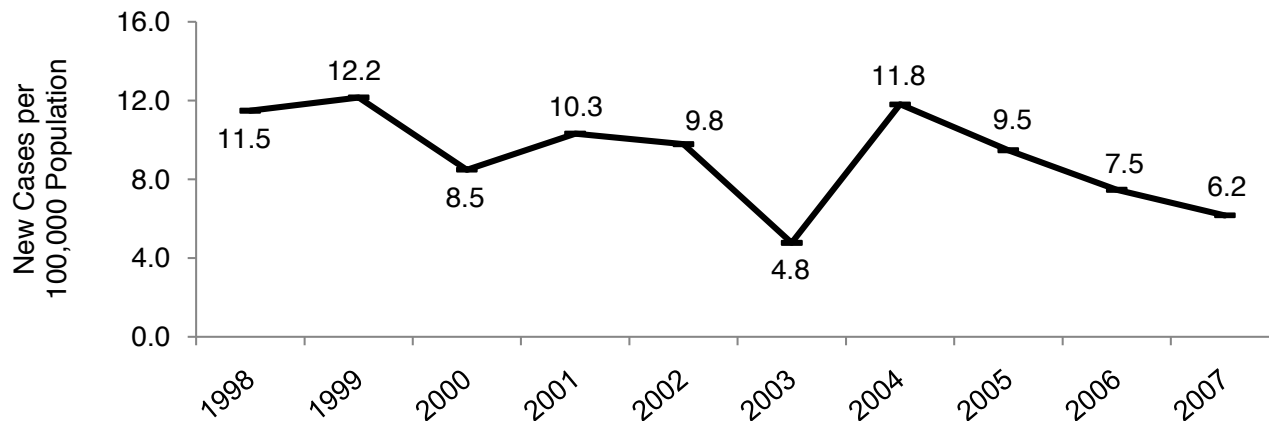
Figure 12.6 Pap Test within the Past Year by Race/Ethnicity and Household Income, 2010



*Insufficient sample size for Asian residents

DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Figure 12.7 Cervical Cancer Incidence, 1998-2007



DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

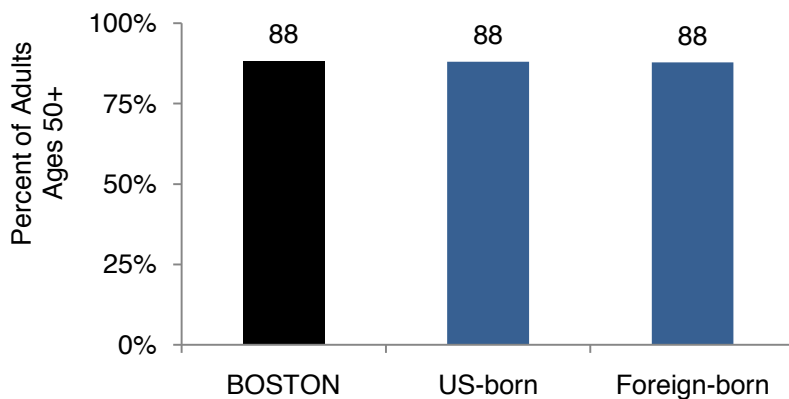
■ **Figure 12.7 Cervical Cancer Incidence, 1998-2007**

The cervical cancer incidence rate for female Boston residents remained statistically similar from 1998 to 2007.

■ Figure 12.8 Colonoscopy or Sigmoidoscopy within the Past Five Years by Place of Birth, 2010

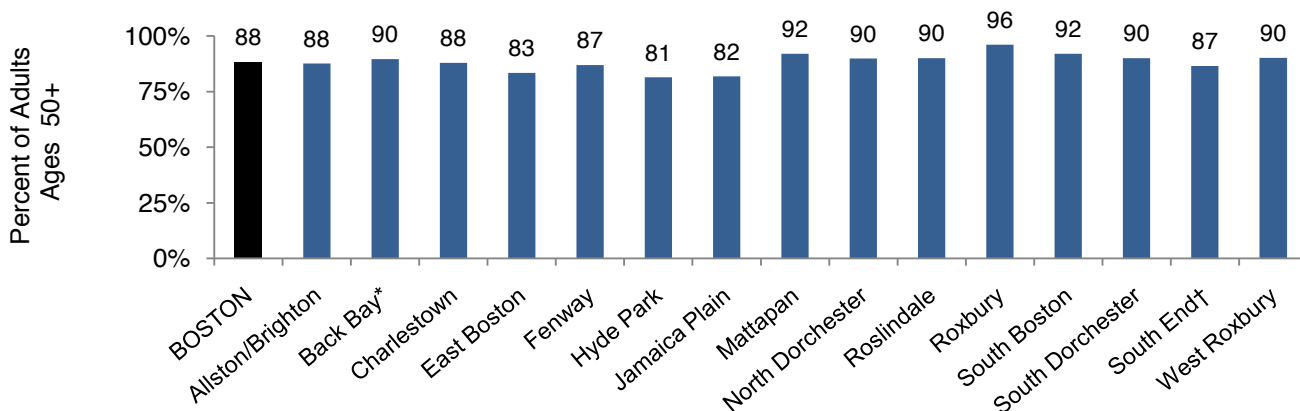
There was no difference in the percentage of adults age 50+ who had a colonoscopy of sigmoidoscopy within the past five years, by place of birth.

Figure 12.8 Colonoscopy or Sigmoidoscopy within the Past Five Years by Place of Birth, 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Figure 12.9 Colonoscopy or Sigmoidoscopy within the Past Five Years by Neighborhood, 2010



*Includes Beacon Hill, Downtown, North End and the West End

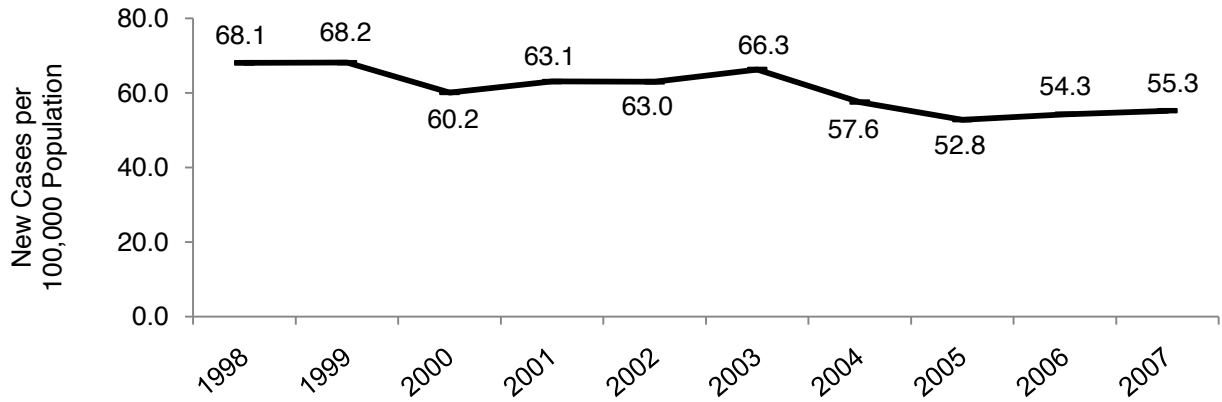
† Includes Chinatown

DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ Figure 12.9 Colonoscopy or Sigmoidoscopy within the Past Five Years by Neighborhood, 2010

In 2010, 88% of adults over the age of 50, had a colonoscopy of sigmoidoscopy within the past five years. There was no significant difference at the neighborhood level.

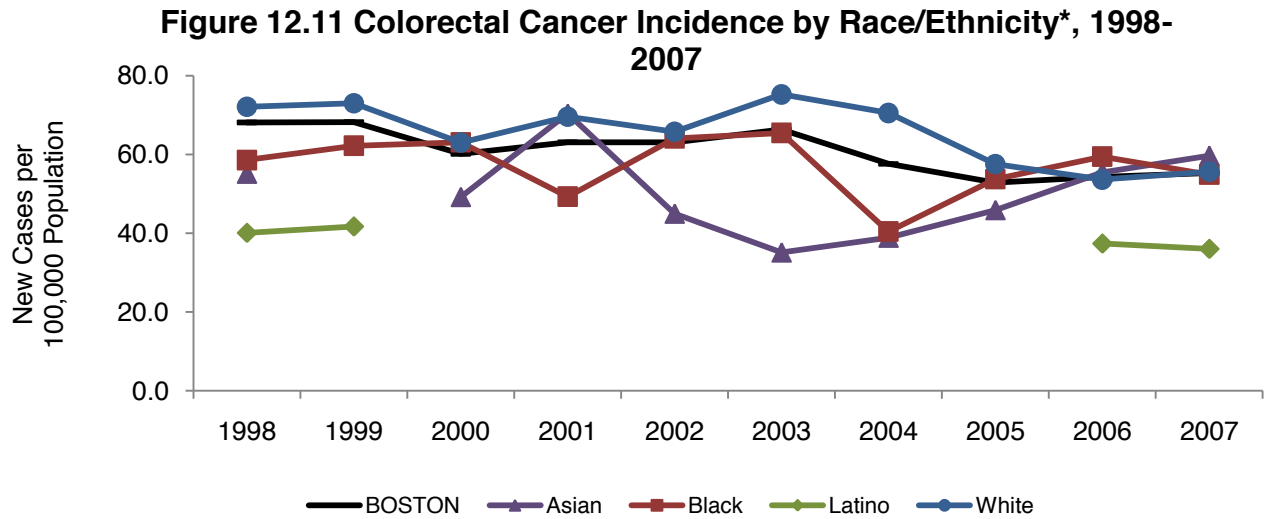
Figure 12.10 Colorectal Cancer Incidence, 1998-2007



DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

■ **Figure 12.10 Colorectal Cancer Incidence, 1998-2007**

The colorectal cancer incidence rate remained statistically similar from 1998 to 2007 for Boston residents.



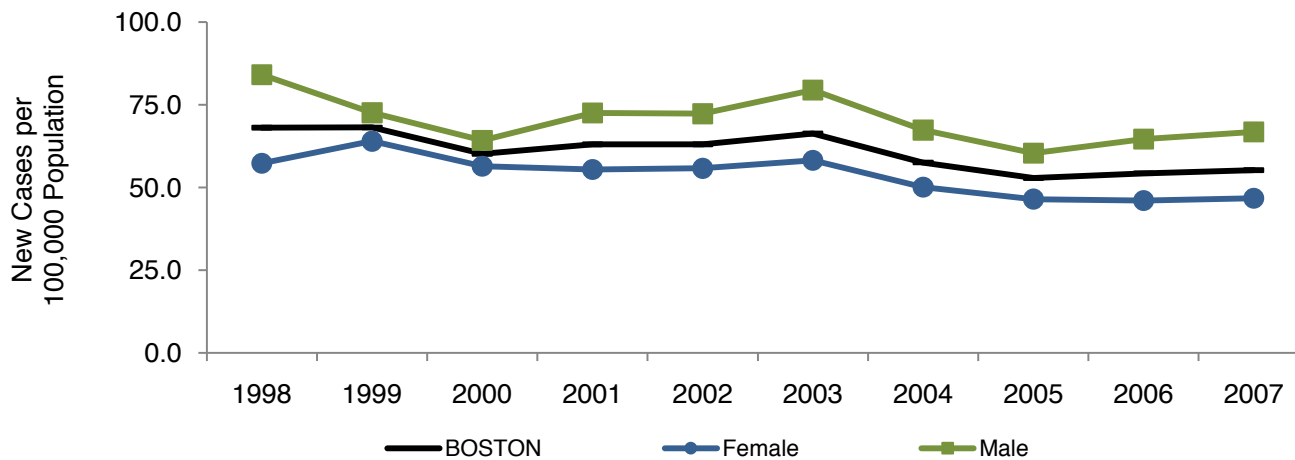
* Rates are not presented for Latino residents for 2000-2005 and Asian residents for 1999 due to the small number of cases.

DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

■ Figure 12.11 Colorectal Cancer Incidence by Race/Ethnicity*, 1998-2007

The colorectal cancer incidence rate for Boston residents remained statistically similar both within and across racial and ethnic groups from 1998 to 2007.

Figure 12.12 Colorectal Cancer Incidence by Gender, 1998-2007

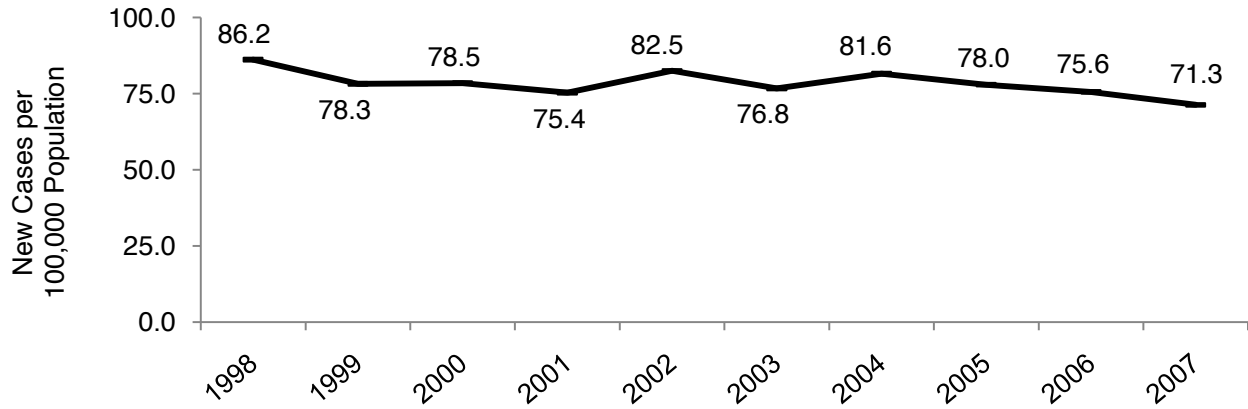


DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

■ **Figure 12.12 Colorectal Cancer Incidence by Gender, 1998-2007**

The colorectal cancer incidence rate for Boston residents remained statistically similar within each gender group from 1998 to 2007. The rates for female and male residents were statistically similar for all years except 1998 and 2007, when the rates were higher among male residents.

Figure 12.13 Lung Cancer Incidence, 1998-2007

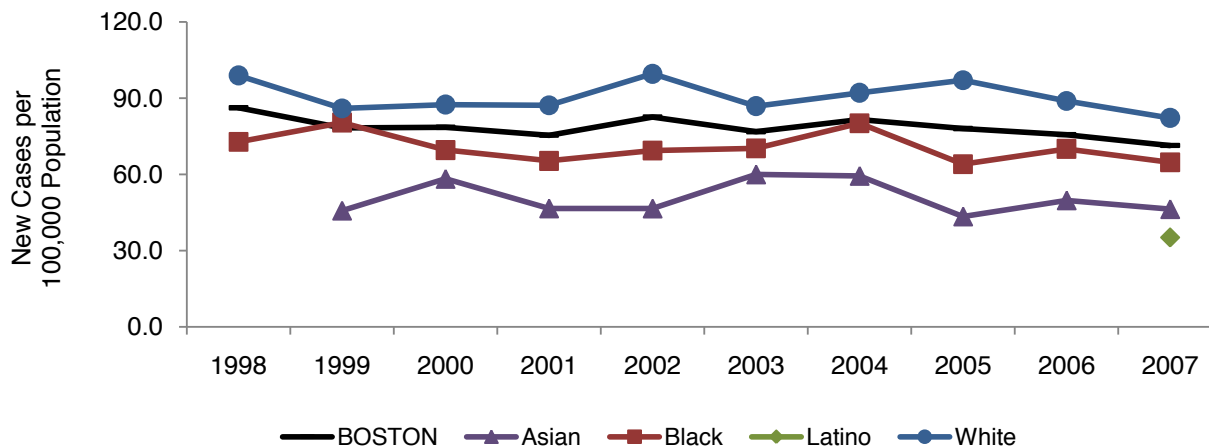


DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

■ **Figure 12.13 Lung Cancer Incidence, 1998-2007**

The lung cancer incidence rate for Boston residents remained statistically similar from 1998 to 2007.

Figure 12.14 Lung Cancer Incidence by Race/Ethnicity*, 1998-2007



* Rates are not presented for Latino residents for 1998-2006 and Asian residents for 1998 due to the small number of cases.

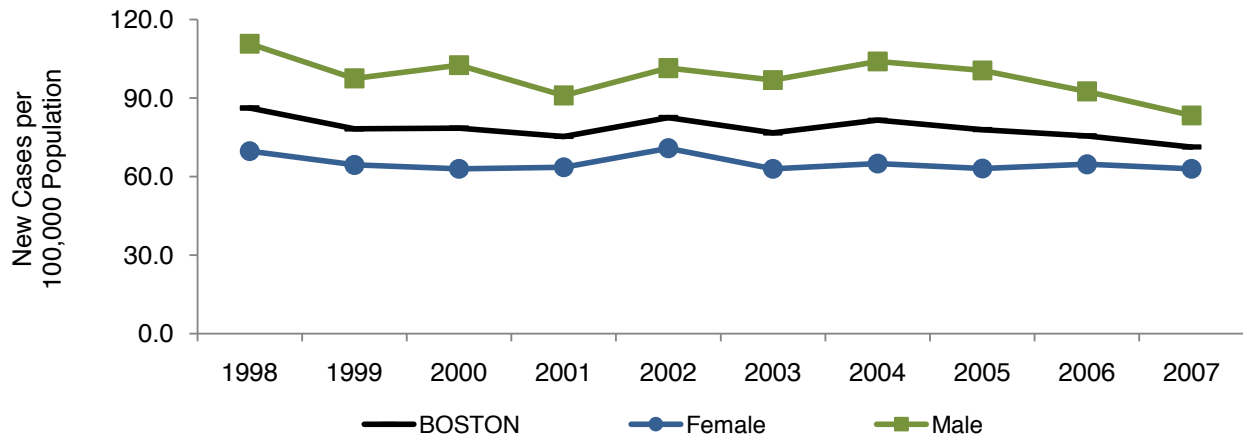
DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

■ Figure 12.14 Lung Cancer Incidence by Race/Ethnicity*, 1998-2007

The lung cancer incidence rate remained statistically similar within each racial/ethnic group from 1998 to 2007 for Boston residents.

In 2007, White residents had a higher rate of lung cancer than Latino residents. White residents also had a significantly higher rate of lung cancer than Asian residents in 1999, 2001, 2002, and 2005 thru 2007.

Figure 12.15 Lung Cancer Incidence by Gender, 1998-2007



DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

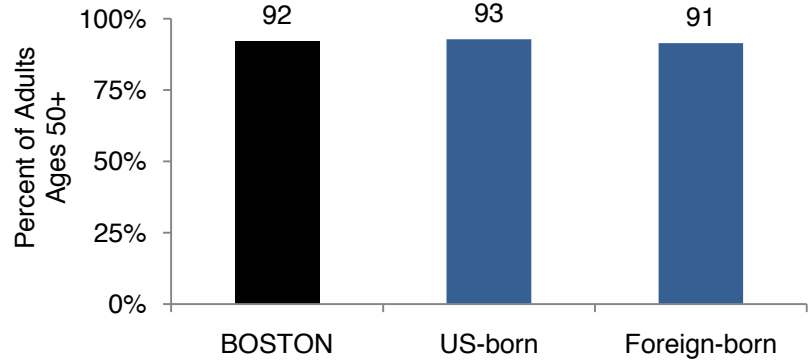
■ **Figure 12.15 Lung Cancer Incidence by Gender, 1998-2007**

The lung cancer incidence rate remained statistically similar within each gender group from 1998 to 2007. For the years presented with the exception of 2007, male residents had a statistically higher rate of lung cancer than female residents.

■ Figure 12.16 Digital Rectal Exam within the Past Five Years by Place of Birth, 2010

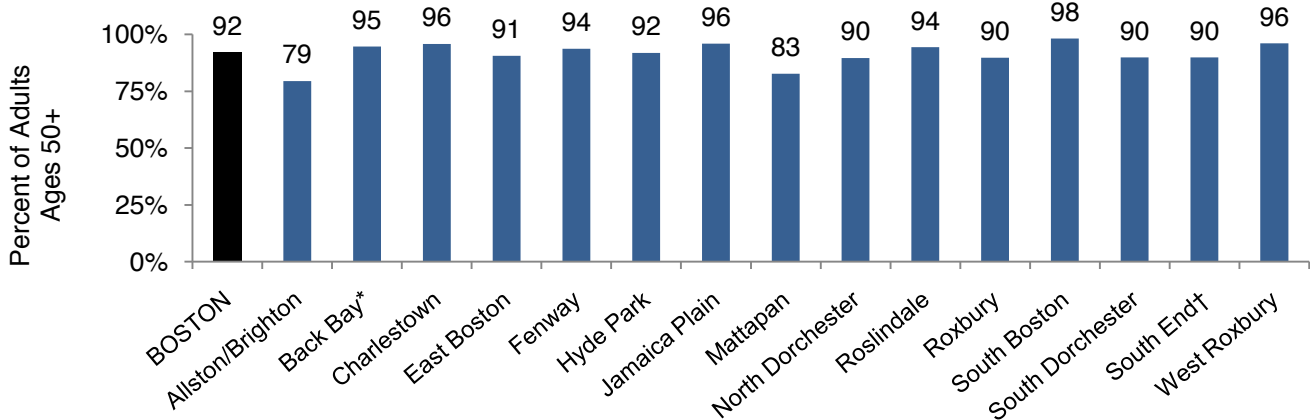
There was no significant difference in the percentage of adults age 50+ who had a digital rectal exam within the past five years, by place of birth.

Figure 12.16 Digital Rectal Exam within the Past Five Years by Place of Birth, 2010



DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

Figure 12.17 Digital Rectal Exam within the Past Five Years by Neighborhood, 2010



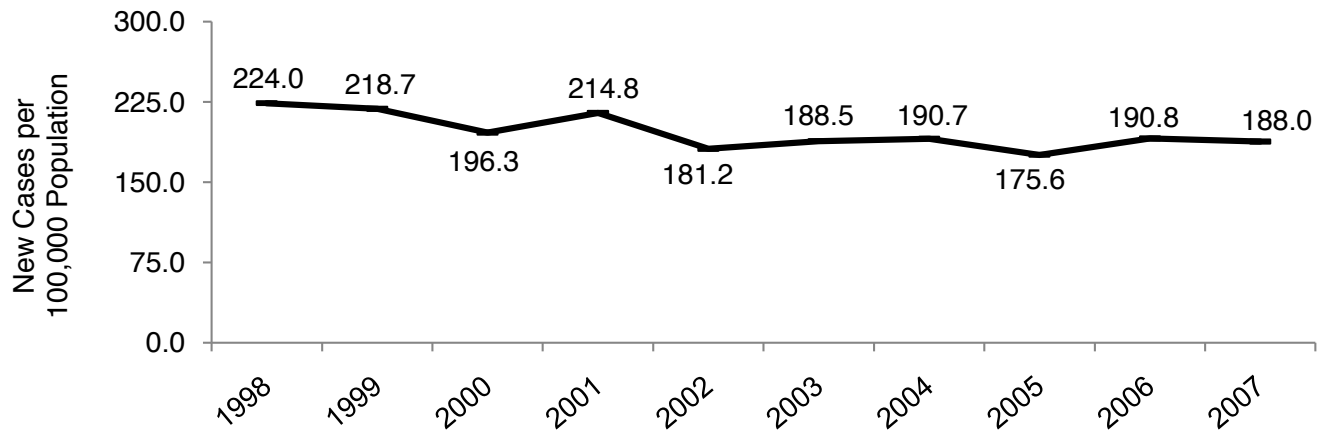
* Includes Beacon Hill, Downtown, North End and the West End

† Includes Chinatown

DATA SOURCE: Boston Behavioral Risk Factor Survey 2010, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

■ Figure 12.17 Digital Rectal Exam within the Past Five Years by Neighborhood, 2010

In 2010, 92% of Boston adults over the age of 50 had a digital rectal exam within the past five years. There was no significant difference at the neighborhood level.

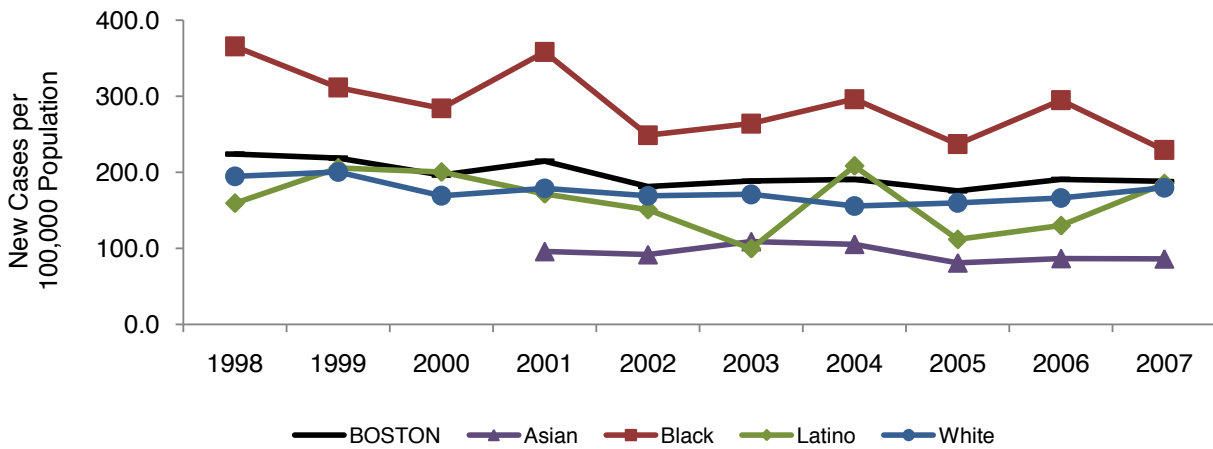
Figure 12.18 Prostate Cancer Incidence, 1998-2007

DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

■ **Figure 12.18 Prostate Cancer Incidence, 1998-2007**

The prostate cancer incidence rate remained statistically similar from 1998 to 2007 for male Boston residents.

Figure 12.19 Prostate Cancer Incidence by Race/Ethnicity*, 1998-2007

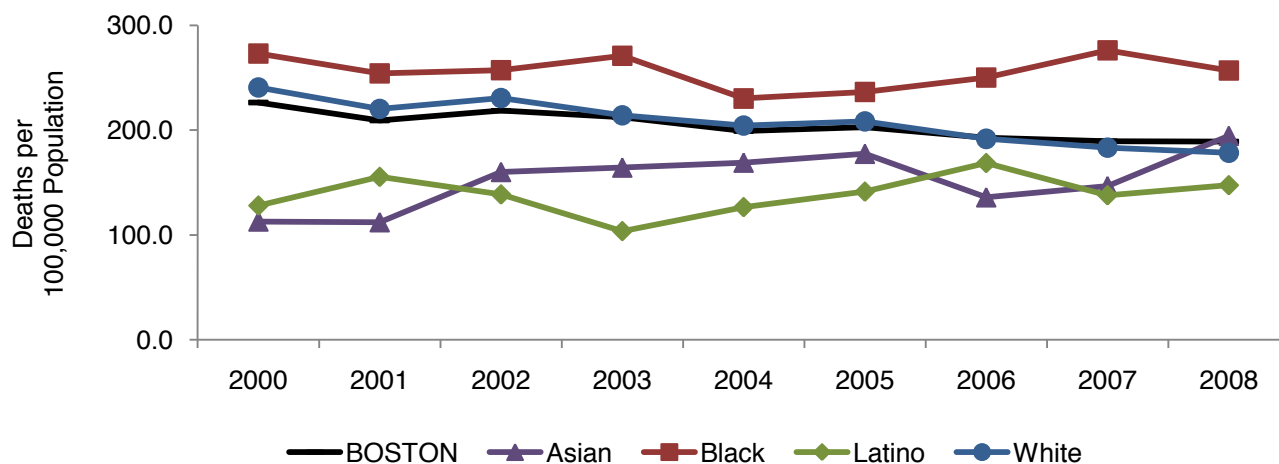


* Rates are not presented for Asian residents for 1998-2000 due to the small number of cases.
 DATA SOURCE: Massachusetts Department of Public Health, Massachusetts Cancer Registry

■ **Figure 12.19 Prostate Cancer Incidence by Race/Ethnicity*, 1998-2007**

The prostate cancer incidence rate for Black male residents decreased from 1998 to 2007.

Black male residents had statistically higher rates of prostate cancer than White male residents from 1998 to 2006. Black male residents also had higher rates than Latino male residents in 1998, 2001, 2003, 2005, and 2006. Asian male residents had lower rates of prostate cancer compared with Black male residents for all reported years. Asian male residents also had lower rates of prostate cancer compared to White male residents in 2001, 2002, 2005, and 2007.

Figure 12.20 Cancer Mortality by Race/Ethnicity*, 2000-2008

* Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

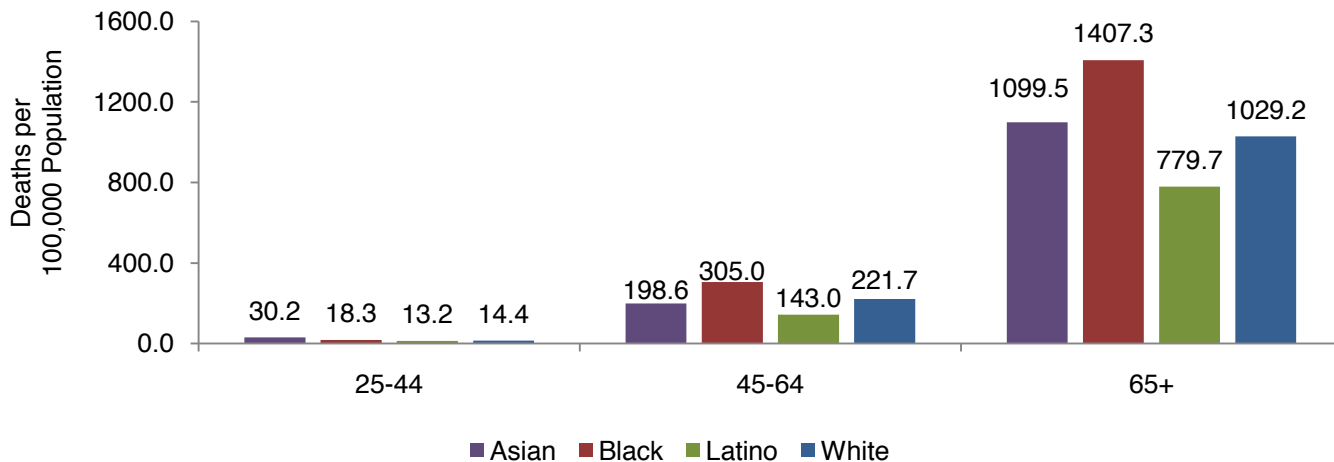
■ Figure 12.20 Cancer Mortality* by Race/Ethnicity, 2000-2008

From 2000 to 2008, the overall age-adjusted cancer mortality rate decreased 16%.

Across all years, Black Boston residents had the highest age-adjusted cancer mortality rate among all racial/ethnic groups.

A comparison of cancer mortality rates between 2000 and 2008 shows that the rate decreased 25% for White residents and increased 74% for Asian residents.

Figure 12.21 Cancer Mortality* by Age and Race/Ethnicity, 2008



*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

■ **Figure 12.21 Cancer Mortality* by Age and Race/Ethnicity, 2008**

Boston residents ages 65 and older had the highest age-specific cancer mortality rate for each racial/ethnic group.

Within age groups, Black residents had the highest cancer mortality rate among residents ages 45 to 64 and residents ages 65 and over. Asian residents had the highest cancer mortality rate among residents ages 25 to 44.

■ Figure 12.22 Cancer Mortality* by Leading Types of Cancer, 2006-2008

The ten leading types of cancer deaths between 2006 and 2008 among Boston residents were similar from year to year. Age-adjusted cancer mortality rates were highest for lung, prostate, female breast, colorectal, and pancreas cancer for all three years.

Between 2006 and 2008, the lung cancer mortality rate decreased 12% and the female breast cancer rate decreased 21%. Although the rate for prostate cancer remained nearly the same between 2006 and 2008, it increased from 2006 to 2007. The colorectal cancer mortality rate increased 10% between 2006 and 2008.

Figure 12.22 Cancer Mortality* by Leading Types of Cancer, 2006-2008

Cancer	Count	Rate
2006		
Lung	255	52.9
Female breast	80	28.6
Prostate	49	28.6
Colorectal	97	19.5
Pancreas	53	10.9
Leukemia	40	8.1
Ovary	22	7.9
Liver	34	7.1
Non-hodgkins lymphoma	34	6.9
Stomach	23	4.6
All cancers	944	192.7
2007		
Lung	229	47.4
Prostate	56	32.2
Female breast	55	19.2
Colorectal	84	17.1
Pancreas	59	12.0
Liver	42	8.6
Non-Hodgkins Lymphoma	37	7.3
Esophagus	32	6.6
Leukemia	33	6.4
Stomach	28	5.7
Bladder	24	4.8
All cancers	930	189.5
2008		
Lung	226	46.8
Prostate	48	28.8
Female breast	66	22.7
Colorectal	105	21.5
Pancreas	69	14.1
Liver	47	9.6
Leukemia	32	6.3
Non-Hodgkins Lymphoma	30	6.0
Bladder	25	5.1
Ovary	24	4.9
All cancers	927	189.1

* Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

■ Figure 12.23 12.23 Cancer Mortality* by Leading Types of Cancer by Race/Ethnicity, 2006-2008

Asian

The all-cancer age-adjusted mortality rate for Boston's Asian population increased 43% from 2006 to 2008.

Lung cancer was the leading type of cancer mortality among Boston's Asian residents each year from 2006 to 2008.

Black

From 2006 to 2008, prostate, lung, and female breast cancer were the top three leading types of cancer mortality among Boston's Black residents.

In 2006, lung cancer was the leading type of cancer mortality among Black residents. In 2007 and 2008, prostate cancer was the leading type of cancer mortality.

Figure 12.23 Cancer Mortality* by Leading Types of Cancer by Race/Ethnicity, 2006-2008

Asian	Count	Rate
2006		
Lung	9	30.5
Liver	8	25.1
Colorectal	5	16.3
All cancer	41	135.9
2007		
Lung	10	35.1
Liver	7	24.5
All cancer	43	146.6
2008		
Lung	16	51.2
Colorectal	9	30.4
Liver	8	24.5
All cancer	60	194.6

Black	Count	Rate
2006		
Lung	56	57.2
Prostate	13	49.2
Female breast	29	44.5
Colorectal	29	32
Liver	13	11.3
All cancer	246	250.2
2007		
Prostate	20	80.5
Lung	55	57.5
Female Breast	22	33.9
Pancreas	23	24.9
Colorectal	18	20
All cancer	259	276.3
2008		
Prostate	19	72.7
Lung	50	51.3
Female Breast	24	40.0
Colorectal	30	31.4
Pancreas	24	26.0
All cancer	248	257.0

* Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

■ Figure 12.23 Cancer Mortality* by Leading Types of Cancer by Race/Ethnicity, 2006-2008

Latino

Lung cancer was the leading type of cancer mortality among Boston Latino residents in 2008, claiming 22.3 lives per 100,000 population..

Figure 12.23 Cancer Mortality* by Leading Types of Cancer by Race/Ethnicity, 2006-2008

Latino	Count	Rate
2006		
Female Breast	5	32.0
Pancreas	7	19.5
Lung	5	14.5
All cancer	47	168.6
2007		
Lung	9	31.3
Colorectal	5	15.6
All cancer	42	137.9
2008		
Lung	7	22.3
Liver	6	19.6
Female Breast	5	17.5
All cancer	43	147.5

* Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

■ Figure 12.23 Cancer Mortality* by Leading Types of Cancer by Race/Ethnicity, 2006-2008

White

Lung, prostate, female breast, colorectal and pancreas cancer were the top five leading types of cancer mortality among Boston White residents from 2006 to 2008. The age-adjusted mortality rate for lung and prostate cancer decreased from 2007 to 2008 (4% and 18%, respectively); however, during the same time period the age-adjusted mortality rate for female breast and colorectal cancer increased (21% and 10%, respectively).

Figure 12.23 Cancer Mortality* by Leading Types of Cancer by Race/Ethnicity, 2006-2008

White	Count	Rate
2006		
Lung	185	60.7
Female Breast	44	24.6
Prostate	30	24.6
Colorectal	60	18.4
Pancreas	34	10.9
All cancer	607	191.8
2007		
Lung	155	50.5
Prostate	33	27.0
Colorectal	56	17.4
Female Breast	31	16.3
Pancreas	33	10.0
All cancer	582	183.4
2008		
Lung	152	48.3
Prostate	26	22.2
Female Breast	37	19.8
Colorectal	62	19.2
Pancreas	38	11.9
All cancer	570	178.4

* Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

Figure 12.24 Leading Types of Cancer Mortality* by Gender, 2006-2008

BOSTON MALES			BOSTON FEMALES		
Cancer	Count	Rate	Cancer	Count	Rate
2006			2006		
Lung	138	71.3	Lung	117	41.2
Prostate	49	28.6	Breast	78	27.9
Colorectal	42	21.5	Colorectal	55	17.9
Liver	27	12.9	Pancreas	33	11.2
Leukemia	22	10.9	Ovary	22	7.9
All cancers	454	235.8	All cancers	490	167.3
2007			2007		
Lung	118	60.4	Lung	111	38.4
Prostate	56	32.2	Breast	55	19.2
Colorectal	38	19.5	Colorectal	46	14.7
Liver	29	14.5	Pancreas	39	12.6
Esophagus	23	11.4	Uterine	15	5.1
All cancers	472	248.3	All cancers	458	154.5
2008			2008		
Lung	129	67.3	Lung	97	34.0
Prostate	48	28.8	Breast	66	22.7
Colorectal	56	28.5	Colorectal	49	15.8
Pancreas	32	17.2	Pancreas	37	12.3
Liver	35	17.1	Ovary	24	8.2
All cancers	467	243.3	All cancers	460	154.7

* Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

■ **Figure 12.24 Cancer Mortality* by Leading Types of Cancer by Gender, 2006-2008**

In 2008, the male cancer mortality rate was 1.6 times the female rate. Lung cancer was the leading type of cancer mortality for Boston males and females for each year from 2006 to 2008. The age-adjusted lung cancer mortality rate decreased 11% for females and increased 11% for males from 2007 to 2008.

Mortality



Life expectancy refers to the average number of years people born in a given year are expected to live based on a set of age-specific death rates (1). Life expectancy data are generated from death data and provide an additional measure of the general welfare of a population (i.e., populations with shorter life expectancy may not be as healthy as those with longer life expectancy). The most recent data report that the average life expectancy for an American is 77.7 years (2). However, there is substantial variation by gender, race/ethnicity, and education. The life expectancy of American females is 80.2 years compared to 75.1 years for males. Blacks have the lowest life expectancy of 73.2 years compared with 78.2 years for Whites (2).

Mortality rates also help in understanding the overall health of a population. The mortality, or death rate, is a common measure of the number of deaths in a given population and allows populations of different sizes to be standardized and compared. The leading causes of death in the US are malignant neoplasms (i.e., cancer), diseases of the heart, cerebrovascular disease (e.g., stroke), chronic lower respiratory diseases, and accidents (unintentional injuries) (2). Mortality trends vary by age, gender, race/ethnicity, and neighborhood of residence.

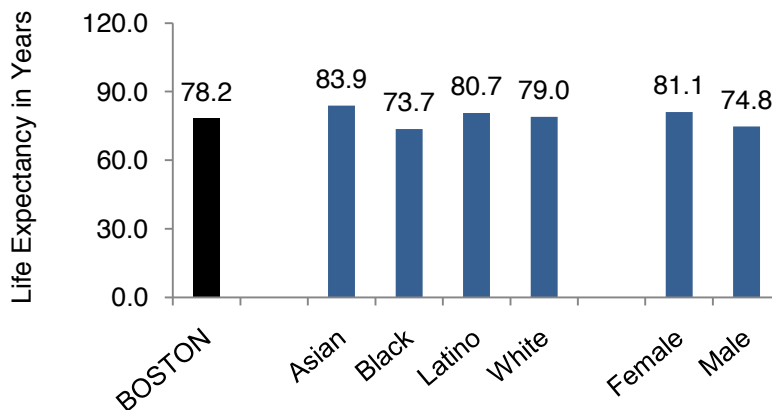
The following section presents indicators of life expectancy and mortality among Boston residents.

■ **Figure 13.1 Life Expectancy by Race/Ethnicity and Gender, 2003, 2004, 2005, 2007, 2007, and 2008* Combined**

For combined years 2003-2008, the average life expectancy for Boston residents was 78.1 years. Estimated average life expectancy is highest for Boston's Asian residents followed by Boston's Latino and White residents. The life expectancy was similar among Latino and White residents. Black residents have a lower life expectancy than Boston residents overall. The life expectancy for Black residents was more than five years below that for Latino and White residents.

The average life expectancy for females was more than six years higher than for males.

Figure 13.1 Life Expectancy by Race/Ethnicity and Gender, 2003, 2004, 2005, 2006, 2007, and 2008* Combined



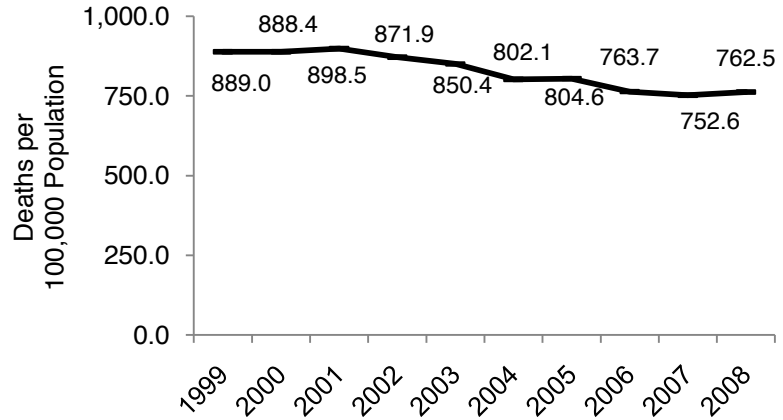
*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

Figure 13.2 All-Cause Mortality, 1999-2008*

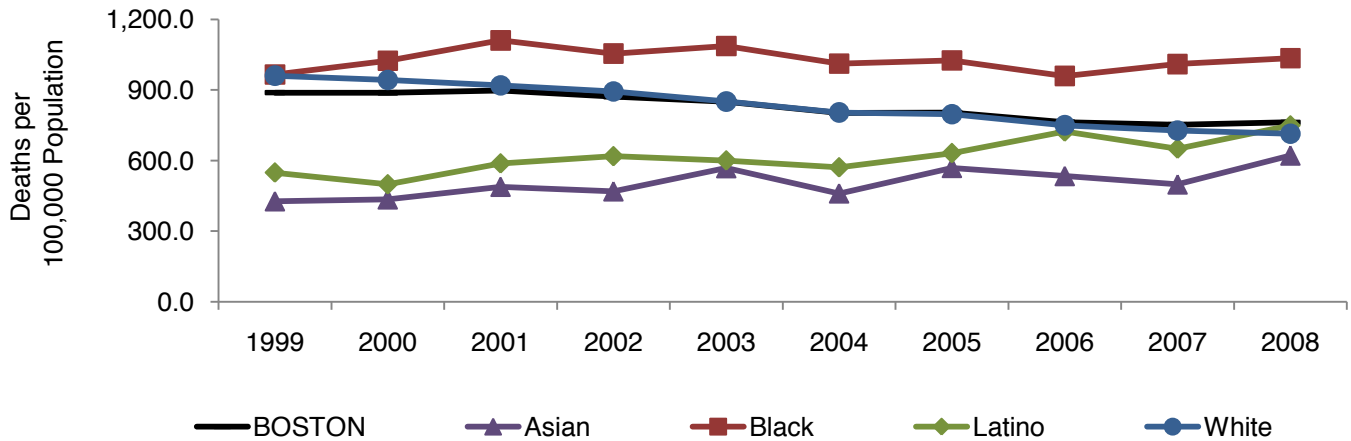
The age-adjusted all-cause mortality rate in Boston has been decreasing for most of the decade. In 2008, the all-cause mortality rate for Boston residents was 762.5 deaths per 100,000 population. The rate was stable from 2007, but decreased 14% from 1999.

Figure 13.2 All-Cause Mortality, 1999-2008*



*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.
 DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

Figure 13.3 All-Cause Mortality by Race/Ethnicity, 1999-2008*



*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.
 DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

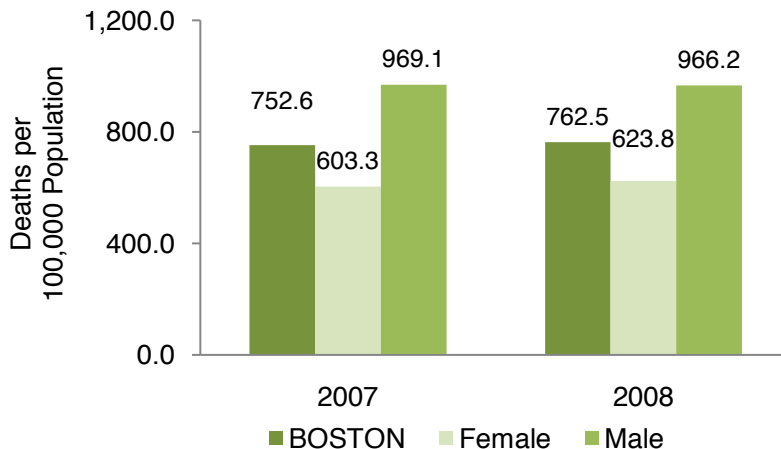
Figure 13.3 All-Cause Mortality by Race/Ethnicity, 1999-2008*

The age-adjusted all-cause mortality rate for Black residents was consistently higher than for other racial/ethnic groups between 2000 and 2008. In 2008, the all-cause mortality rate for Blacks was 66% higher than the rate for Asians, 38% higher than the rate for Latinos, and 45% higher than the rate for Whites.

■ **Figure 13.4 All-Cause Mortality by Gender, 2007 and 2008***

For both 2007 and 2008, the all-cause age-adjusted mortality rate was higher for males than for females. In 2008, the rate for males was 55% higher than the rate for females.

Figure 13.4 All-Cause Mortality by Gender, 2007 and 2008*



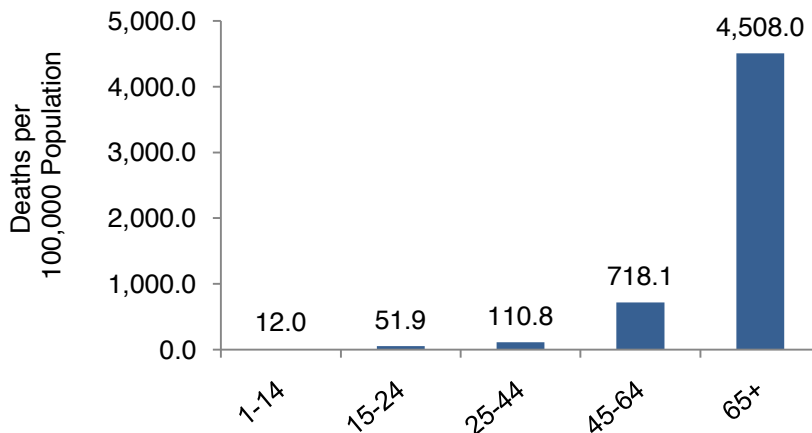
*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

■ **Figure 13.5 All-Cause Mortality by Age, 2008***

Boston residents ages 65 and over had the highest age-specific all-cause mortality rate.

Figure 13.5 All-Cause Mortality by Age, 2008*



*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

■ **Figure 13.6 Top Five Leading Causes of Mortality, 2006-2008***

The leading causes of death among Boston residents are ranked by age-adjusted mortality rates.

Cancer remained Boston's leading cause of death in 2008, followed by heart disease, injuries, stroke, and COPD (chronic obstructive pulmonary disease). From 2006 to 2008, the rates of death from all of these causes decreased, except COPD which increased from 2007 to 2008.

Figure 13.6 Top Five Leading Causes of Mortality, 2006-2008*

Leading Causes	Count	Rate
2006		
Cancer	944	192.7
Heart Disease	813	161.0
Injuries	316	55.3
Stroke	209	41.4
Chronic Obstructive Pulmonary Disease	139	28.3
All causes	3,864	763.7
2007		
Cancer	930	189.5
Heart Disease	802	159.5
Injuries	304	53.6
Stroke	175	34.3
Chronic Obstructive Pulmonary Disease	138	27.9
All causes	3,812	716.9
2008		
Cancer	927	189.1
Heart Disease	801	158.3
Injuries	274	46.8
Stroke	174	33.9
COPD	152	30.5
All causes	3,878	762.5

*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

■ **Figure 13.7 Leading Causes of Mortality by Age, 2006, 2007, and 2008* Combined**

The top leading causes of death varied by age. From 2006 to 2008 combined, injuries caused the most deaths among Boston residents ages one to forty-four. Among those injuries were homicides, suicides, deaths caused by motor vehicle accidents, and other types of accidents (data for substance abuse deaths, homicides, and suicides are presented in other sections).

Cancer and heart disease were the top two leading causes of death among adults ages 45 and over.

Figure 13.7 Leading Causes of Mortality by Age, 2006, 2007, and 2008* Combined

Ages	Count	Rate
1-14		
Injuries	15	5.5
Heart Disease	5	1.8
15-24		
Injuries	152	44.6
Cancer	9	2.6
25-44		
Injuries	284	44.8
Cancer	98	15.5
Heart Disease	86	13.6
HIV/AIDS	32	5.1
Chronic Liver Disease	14	2.2
Stroke	14	2.2
45-64		
Cancer	748	238.4
Heart Disease	418	133.2
Injuries	274	87.3
Chronic Liver Disease	77	24.5
Diabetes	74	23.6
65+		
Cancer	1,944	1,056
Heart Disease	1,903	1,034
Stroke	477	258.7
COPD	379	204.3
Nephritis/Nephrosis	286	154.9

*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

Figure 13.8 Leading Causes of Mortality by Gender, 2007 and 2008*

BOSTON MALES	Count	Rate	BOSTON FEMALES	Count	Rate
2007			2007		
Cancer	472	248.3	Heart Disease	396	120.7
Heart Disease	406	218.9	Cancer	458	117.9
Injuries	224	83.8	Stroke	121	35.9
Chronic Obstructive Pulmonary Disease	66	37.1	Injuries	80	26.3
Nephritis/Nephrosis	65	34.6	Chronic Obstructive Pulmonary Disease	72	22.9
Pneumonia/Influenza	51	30.5	Diabetes	56	18.0
Stroke	54	30.3	Pneumonia/Influenza	57	16.0
Diabetes	52	27.2	Alzheimer's Disease	57	15.5
Septicemia	31	17.8	Nephritis/Nephrosis	49	15.2
Chronic Liver Disease	32	14.7	Septicemia	47	13.8
All causes	1,878	969.1	All causes	1,934	603.3
2008			2008		
Cancer	467	243.3	Cancer	460	154.5
Heart Disease	381	206.0	Heart Disease	420	126.4
Injuries	196	71.4	Stroke	104	29.9
Chronic Obstructive Pulmonary Disease	70	39.5	Chronic Obstructive Pulmonary Disease	84	26.1
Stroke	70	39.5	Injuries	78	25.3
Nephritis/Nephrosis	54	31.5	Nephritis/Nephrosis	74	23.2
Pneumonia/Influenza	46	27.1	Alzheimer's Disease	81	21.2
Diabetes	44	22.7	Diabetes	49	16.1
Alzheimer's Disease	27	17.2	Septicemia	46	14.5
Septicemia	32	17.1	Pneumonia/Influenza	50	14.2
Chronic Liver Disease	28	12.3	Chronic Liver Disease	15	5.7
All causes	1,867	966.2	All causes	2,011	624.3

*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

■ **Figure 13.8 Leading Causes of Mortality by Gender, 2007 and 2008***

In 2008 and 2007, cancer and heart disease were the top two leading causes of death for males and females.

In 2008, for all leading causes except Alzheimer's disease, the age-adjusted mortality rates for males were higher than the rates for females.

■ Figure 13.9 Top Five Leading Causes of Mortality among Asian Residents, 2006-2008*

Boston's Asian residents generally have lower mortality rates in comparison to other racial/ethnic groups in Boston. However, from 2007 to 2008, the age-adjusted overall mortality rate for Asians increased 25%. This increase was largely attributable to a 40% increase in the number of deaths caused by cancer.

Figure 13.9 Top Five Leading Causes of Mortality among Asian Residents, 2006-2008*

Asian	Count	Rate
2006		
Cancer	41	135.9
Heart Disease	28	99.0
Stroke	15	51.5
Chronic Obstructive Pulmonary Disease	11	39.1
Alzheimer's Disease	7	26.0
All causes	156	534.3
2007		
Cancer	43	146.6
Heart Disease	26	86.6
Stroke	10	35.0
Chronic Obstructive Pulmonary Disease	7	25.4
Alzheimer's Disease	6	22.3
All causes	144	498.5
2008		
Cancer	60	194.6
Heart Disease	23	79.6
Stroke	12	43.0
Injuries	12	40.2
Pneumonia/Influenza	7	24.4
All causes	183	622.0

*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

■ Figure 13.10 Top Five Leading Causes of Mortality among Black Residents, 2006-2008*

Cancer and heart disease were the leading causes of death among Black Boston residents each year from 2006 to 2008. However, the age-adjusted cancer mortality rate decreased 7% for Blacks between 2007 and 2008; the age-adjusted heart disease mortality rate increased 27% between 2006 and 2008.

While the age-adjusted injuries mortality rate decreased 10% from 2006 to 2008, the rate for stroke increased 20% from 2007 to 2008.

Figure 13.10 Top Five Leading Causes of Mortality among Black Residents, 2006-2008*

Black	Count	Rate
2006		
Cancer	246	250.2
Heart Disease	160	176.7
Injuries	107	80.1
Stroke	49	56.0
Diabetes	38	39.4
All causes	938	959.7
2007		
Cancer	259	276.3
Heart Disease	186	198.0
Injuries	99	72.8
Stroke	40	45.5
Diabetes	38	41.1
All causes	980	1,010.3
2008		
Cancer	248	257.0
Heart Disease	209	224.6
Injuries	97	72.4
Stroke	48	54.8
Nephritis/Nephrosis	37	40.1
All causes	1,003	1,035.2

*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

■ Figure 13.11 Top Five Leading Causes of Mortality among Latino Residents, 2006-2008*

Cancer and heart disease were the top two leading causes of death among Boston's Latino residents between 2006 and 2008.

Age-adjusted rates for cancer, heart disease, and stroke increased from 2007 to 2008. The mortality rate for injuries decreased from 2007 to 2008.

Figure 13.11 Top Five Leading Causes of Mortality among Latino Residents, 2006-2008*

Latino	Count	Rate
2006		
Heart Disease	43	176.3
Cancer	47	168.6
Injuries	36	43.7
Stroke	9	36.6
Diabetes	8	30.8
All causes	233	723.3
2007		
Cancer	42	137.9
Heart Disease	32	116.2
Injuries	38	53.6
Stroke	9	32.6
Alzheimer's Disease	6	32.3
All causes	214	650.5
2008		
Cancer	43	147.5
Heart Disease	36	141.7
Stroke	9	50.1
Nephritis/Nephrosis	11	47.1
Injuries	31	44.0
All causes	229	749.4

*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

■ Figure 13.12 Top Five Leading Causes of Mortality among White Residents, 2006-2008*

Cancer, heart disease, and injuries were the top three leading causes of death among Boston’s White residents between 2006 and 2008. The age-adjusted mortality rates for cancer, heart disease, injuries, and stroke decreased from 2007 to 2008.

Figure 13.12 Top Five Leading Causes of Mortality Among White Residents, 2006-2008*

White	Count	Rate
2006		
Cancer	607	191.8
Heart Disease	577	163.7
Injuries	160	53.3
Stroke	135	37.8
Chronic Obstructive Pulmonary Disease	106	32.2
All causes	2,513	750.0
2007		
Cancer	582	183.4
Heart Disease	551	160.9
Injuries	164	53.9
Chronic Obstructive Pulmonary Disease	109	32.0
Stroke	115	31.0
All causes	2,451	727.9
2008		
Cancer	570	178.4
Heart Disease	532	153.1
Injuries	131	41.7
Chronic Obstructive Pulmonary Disease	126	36.7
Stroke	102	28.2
All causes	2,429	714.2

*Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010.

DATA SOURCE: Boston Resident Deaths, Massachusetts Department of Public Health

Notes and Data Analysis for BOSTON Health Indicators Section

Figure 4.1 Births, 1999-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.2 Birth Rate, 1999-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.3 Births by Race/Ethnicity, 1999-2009

NOTE: The number of births shown for 2002 and 2003 may differ from previous publications due to an update in the birth file. These data do not include births whose race/ethnicity was not reported.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.4 Births by Maternal Age, 2009

NOTE: These data do not include persons whose age was not reported.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.5 Births Among Adolescents Ages 15-17 by Race/Ethnicity, 1999-2009

NOTE: There were too few adolescent births among Asians ages 15-17 in 2002, 2003, and 2004 to permit the presentation of rates. These data do not include persons whose race/ethnicity was not reported, except in the overall Boston rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.6 Births Among Adolescents Ages 18-19 by Race/Ethnicity, 1999-2009

NOTE: There were too few adolescent births among Asians ages 18-19 in 2008 to permit the presentation of a rate. These data do not include persons whose race/ethnicity was not reported, except in the overall Boston rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.7 Adequate Prenatal Care by Race/Ethnicity, 1999-2009

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the overall Boston percentage.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.8 Low Birth Weight Births, 1999-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.9 Low Birth Weight Births by Race/Ethnicity, 1999-2009

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the overall Boston rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.10 Preterm Births, 1999-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.11 Preterm Births by Race/Ethnicity, 1999-2009

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the overall Boston percentage.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.12 Infant Mortality, 1996-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.13 Infant Mortality by Race/Ethnicity, 1996-2009

NOTE: Rates are not presented for Asians for the time period and Whites in 2004 due to the small number of infant deaths. These data do not include persons whose race/ethnicity was not reported, except in the overall Boston rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.14 Neonatal and Postneonatal Infant Mortality, 1999-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.15 Infant Mortality by Low Birth Weight Status, 2009

NOTE: The numbers and rates shown for 2008 may differ from previous publications due to an update to the linked birth/death file.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 4.16 Infant Mortality by Preterm Birth Status, 2009

NOTE: The numbers and rates shown for 2008 may differ from previous publications due to an update to the linked birth/death file.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 5.1 Children with Elevated Blood Lead Levels, 1995-2010

DATA ANALYSIS: Boston Public Health Commission Office of Environmental Lead

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 5.2 Children with Elevated Blood Lead Levels by Neighborhood, 2010

*Includes Beacon Hill, Downtown, and the West End

†Includes Chinatown

NOTE: These data do not include children whose neighborhood of residence was unknown.

DATA ANALYSIS: Boston Public Health Commission Office of Environmental Lead

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 5.3 Children with Elevated Blood Lead Levels by Age, 2010

NOTE: These data do not include children whose age was not reported.

DATA ANALYSIS: Boston Public Health Commission Office of Environmental Lead

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 5.4 Children with Elevated Blood Lead Levels by Gender, 2010

NOTE: These data do not include children whose sex was not reported.

DATA ANALYSIS: Boston Public Health Commission Office of Environmental Lead

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 6.1 Asthma Among Public High School Students by Selected Indicators, 2009

NOTE: Combination of two survey questions. Respondents were asked, "Has a doctor or nurse ever told you that you have asthma?" and "Do you still have asthma?" Point estimates vary from those produced by CDC because of differences in calculation of the current asthma variable.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.2 Asthma Among Adults by Selected Indicators, 2010

NOTE: Combination of two survey questions. Respondents asked, “Have you ever been told by a doctor, nurse or other health professional that you had asthma?” If answer was “yes,” respondents were then asked, “Do you still have asthma?” Data reflect percent of adults who answered “yes” to both questions.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.3 Asthma Among Adults by Race/Ethnicity and Gender, 2008 and 2010 Combined

NOTE: Combination of two survey questions. Respondents asked, “Have you ever been told by a doctor, nurse or other health professional that you had asthma?” If answer was “yes,” respondents were then asked, “Do you still have asthma?” Data reflect percent of adults who answered “yes” to both questions.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.4 Asthma Hospitalizations by Age Group, 2009

NOTE: Age-specific rates are presented here. These data do not include persons whose age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.5 Asthma Hospitalizations by Age Group and Gender, 2009

NOTE: Age-specific rates are presented here. These data do not include persons whose gender or age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.6 Asthma Hospitalizations for Children Ages 2 and Under by Gender, 2000-2009

NOTE: Age-specific rates are presented here. These data do not include persons whose gender and age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.7 Asthma Hospitalizations for Children Ages 2 and Under by Race/Ethnicity, 2008 and 2009

NOTE: Age-specific rates are presented here. These data do not include persons whose gender and age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.8 Asthma Hospitalizations for Children Ages 3 to 5 by Gender, 2000-2009

NOTE: Age-specific rates are presented here. These data do not include persons whose gender and age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.9 Asthma Hospitalizations for Children Ages 3 to 5 by Race/Ethnicity, 2008 and 2009

NOTE: Age-specific rates are presented here. These data do not include persons whose gender and age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.10 Asthma Emergency Department (ED) Visits for Children Ages 2 and Under by Gender, 2002-2009

NOTE: Age-specific rates are presented here. These data do not include persons whose gender and age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.11 Asthma Emergency Department (ED) Visits for Children Ages 2 and Under by Race/Ethnicity, 2008 and 2009

NOTE: Age-specific rates are presented here. These data do not include persons whose gender and age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.12 Asthma Emergency Department (ED) Visits for Children Ages 3 to 5 by Gender, 2002-2009

NOTE: Age-specific rates are presented here. These data do not include persons whose gender and age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.13 Asthma Emergency Department (ED) Visits for Children Ages 3 to 5 by Race/Ethnicity, 2008 and 2009

NOTE: Age-specific rates are presented here. These data do not include persons whose gender and age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.14 Public High School Students with Diabetes by Selected Indicators, 2007

NOTE: Survey question reads, "Has a doctor or nurse ever told you that you have diabetes?"

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.15a Adults with Diabetes by Selected Indicators, 2010

NOTE: Survey question reads "Have you ever been told by a doctor that you have diabetes?"

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.15b Adults with Diabetes by Year, 2001, 2003, 2005, 2006, 2008 and 2010

NOTE: Survey question reads "Have you ever been told by a doctor that you have diabetes?"

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.16 Diabetes Hospitalizations by Year, 2000-2009

NOTE: Age-adjusted rates are presented here

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.17 Diabetes Hospitalizations of Adults by Age and Gender, 2009

NOTES: Age-specific rates are presented here. These data do not include persons whose age and gender was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.18 Diabetes Hospitalizations by Race/Ethnicity and Year, 2008 and 2009

NOTE: Age-adjusted rates are presented here. These data do not include persons whose race/ethnicity was not reported except, in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.19 Diabetes Mortality by Gender, 2001-2008*

NOTES: Data are presented as age-adjusted rates. These data do not include persons whose gender was not reported except, in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.20 Diabetes Mortality by Race/Ethnicity*, 2001-2008 †

NOTES: Data are presented as age-adjusted rates. These data do not include persons whose race/ethnicity was not reported except, in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.21 Heart Disease Hospitalizations, 2000-2009

NOTE: Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.22 Heart Disease Hospitalizations by Race/Ethnicity, 2007 and 2008

NOTE: These data do not include persons who race and age were not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.23 Heart Disease Hospitalizations by Gender, 2009

NOTE: These data do not include persons whose sex was not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.24 Heart Disease Hospitalizations by Race/Ethnicity and Gender, 2009

NOTE: These data do not include persons whose sex and race/ethnicity were not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.25 Heart Disease Hospitalizations by Age and Race/Ethnicity, 2009

NOTE: These data do not include persons whose age and race/ethnicity were not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.26 Heart Disease Mortality, 2002-2008

NOTE: Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.27 Heart Disease Mortality by Race/Ethnicity, 2000-2008

NOTE: These data do not include persons who race and age were not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.28 Heart Disease Mortality by Race/Ethnicity, 2008

NOTE: These data do not include persons who race and age were not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.29 Heart Disease Mortality by Gender, 2008

NOTE: These data do not include persons whose sex was not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.30 Heart Disease Mortality by Race/Ethnicity and Gender, 2008

NOTE: These data do not include persons whose sex and race/ethnicity were not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.31 Heart Disease Mortality by Type of Heart Disease, 2008

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.32 Adults with High Blood Pressure by Selected Indicators, 2010

NOTE: Survey question reads: “How tall are you with your shoes on? How much do you weigh without your shoes on? Body Mass Index (BMI) is calculated from self-reported weight and height. For adolescents, a BMI for age percentile is used to determine overweight/obese. Overweight in adolescents is defined as a BMI at or between the 85th and 95th percentile and obese is defined as a BMI at or above 95th percentile for the same age and sex

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.33 Public High School Students Who are Overweight or Obese by Selected Indicators, 2009

NOTE: Survey question reads: “How tall are you with your shoes on? How much do you weigh without your shoes on? Body Mass Index (BMI) is calculated from self-reported weight and height. For adolescents, a BMI for age percentile is used to determine overweight/obese. Overweight in adolescents is defined as a BMI at or between the 85th and 95th percentile and obese is defined as a BMI at or above 95th percentile for the same age and sex

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.34 Public High School Students Who are Overweight or Obese by Race and Gender, 2007 and 2009 Combined

NOTE: Body Mass Index (BMI) is calculated from self-reported weight and height. An adult who has a BMI of 30 or higher is considered obese. These data do not include persons of ‘Other’ or unknown race/ethnicity

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.35 Obesity in Adults by Selected Indicators, 2010

NOTE: Body Mass Index (BMI) is calculated from self-reported weight and height. An adult who has a BMI of 30 or higher is considered obese. These data do not include persons of ‘Other’ or unknown race/ethnicity

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 6.36 Obesity Among Adults by Year, 2001, 2003, 2005, 2006, 2008, and 2010

NOTE: Body Mass Index (BMI) is calculated from self-reported weight and height. An adult who has a BMI of 30 or higher is considered obese.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.1 High School Students Who Ever Had Sex by Selected Indicators, 2009

NOTE: Survey question reads: “Have you ever had sexual intercourse?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.2 Ever Tested for HIV Among High School Students by Selected Indicators, 2009

NOTE: Survey question reads: “Have you ever been tested for HIV, the virus that causes AIDS? (Do not count tests done if you donated blood.)”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.3 Condom Use During Last Sex Among High School Students by Selected Indicators, 2007 and 2009 Combined

NOTE: Survey question reads: “The last time you had sexual intercourse, did you or your partner use a condom?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.4 Chlamydia Rates * by Gender and Age, 2010

NOTE: These data do not include persons whose sex and age were not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.5 Chlamydia Rates* by Age Within Gender, 2010

NOTE: These data do not include persons whose sex and age were not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.6 Gonorrhea Rates*† by Gender and Age, 2010

NOTE: These data do not include persons whose sex and age were not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.7 Gonorrhea Rates*† by Age Within Gender, 2010

NOTE: These data do not include persons whose sex and age were not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.8 Syphilis Rates*† by Gender and Age, 2010

NOTE: These data do not include persons whose sex and age were not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.9 HIV Incidence Rates, 1999-2009

NOTE: These data do not include persons living in correctional facilities. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.10 HIV Incidence by Race/Ethnicity*, 1999-2009

NOTE: These data do not include persons whose race/ethnicity was not reported (except in the Boston overall rate) and persons living in correctional facilities. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.11 HIV Incidence by Gender, 2000-2009

NOTE: These data do not include persons whose gender was not reported (except in the Boston overall rate) and persons living in correctional facilities. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.12 HIV Incidence by Primary Reported Mode of Exposure, 2009

NOTE: These data do not include persons living in correctional facilities. Rates are not presented for MSM/IDU due to

the small number of cases in 2009.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.13 HIV Incidence by Place of Birth, 2009

NOTE: These data do not include persons whose place of birth was not reported or persons living in correctional facilities.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.14 HIV Incidence Rates by Neighborhood, 2006-2009

NOTE: These data do not include homeless persons or individuals whose neighborhood of residence was not reported (except in the Boston overall rate), correctional facilities, or drug treatment programs. Rates are not presented for Allston/Brighton, Charlestown, Fenway, Hyde Park, Roslindale, South Boston, and West Roxbury in 2006-2009 due to the small number of cases. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.15 Individuals Living with HIV/AIDS by Place of Birth, 2009

NOTE: These data do not include persons living in correctional facilities.

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 7.16 Individuals Living with HIV/AIDS by Race/Ethnicity, 2000-2009

NOTE: These data do not include persons whose race/ethnicity was not reported (except in the Boston overall percentage) and persons living in correctional facilities.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 7.17 Individuals Living with HIV/AIDS by Gender, 2000-2009

NOTE: These data do not include persons whose gender was not reported (except in the Boston overall percentage) and persons living in correctional facilities.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 8.1 Pertussis Cases, 2003-2009

NOTE: Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.2 Pertussis Cases by Gender, 2009

NOTE: These data do not include persons whose sex was not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.3 Pertussis Cases by Race/Ethnicity, 2009

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Data are not presented for Asians and Latinos due to the small number of cases. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.4 Salmonella Cases, 2003-2009

NOTE: Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.5 Salmonella Cases by Age, 2009

NOTE: These data do not include persons whose age was not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.6 Salmonella Cases by Gender, 2009

NOTE: These data do not include persons whose sex was not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.7 Salmonella Cases by Race/Ethnicity, 2009

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.8 Tuberculosis Cases, 2003-2009

NOTE: Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.9 Tuberculosis Cases by Age Group, 2009

NOTE: These data do not include persons whose age was not reported, except in the Boston overall rate. Data are presented as crude incidence rates. Data are not presented for age groups 50-59 and 60-69 due to the small number of cases.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.10 Tuberculosis Cases by Gender, 2009

NOTE: These data do not include persons whose sex was not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 8.11 Tuberculosis Cases by Race/Ethnicity, 2009

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Data are presented as crude incidence rates.

DATA ANALYSIS: Boston Public Health Commission, Communicable Disease Control Division

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Notes and Data Analysis for Demographic Section

Figure 9.1 Sad or Hopeless for Two Weeks Straight During Past Year by Selected Indicators, 2009

NOTES: Survey question reads “During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 9.2 Seriously Considered Attempting Suicide During Past Year by Selected Indicators, 2009

NOTES: Survey question reads “ During the past 12 months, did you every seriously consider attempting suicide?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Fig 9.3 Felt Sad, Blue, or Depressed 15+ Days of Past Month by Selected Indicators, 2010

NOTES: Survey question reads “During the Past 30 days, for about how many days have you felt sad, blue, or depressed?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Fig 9.4 Felt Worried, Tense, or Anxious 15+ Days of Past Month by Selected Indicators, 2010

NOTES: Survey question reads “During the past 30 days, for about how many days have you felt worried, tense, or anxious?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 9.5 Suicide by Race/Ethnicity* and Year, Boston, 1999-2008†

NOTES: Data are presented as age-adjusted rates. Rates are not presented for Asian and Latino residents due to insufficient sample size. Rates for Black residents in 1999, 2002, and 2005 were not shown due to insufficient sample size.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 9.6 Suicide by Gender* and Year, Boston 1999-2008†

NOTES: Data are presented as age-adjusted rates. Rates are not presented for females in 2002 and 2007 due to insufficient sample size.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.1 Substance Abuse Treatment Admissions, 2001-2010

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Substance abuse treatment admissions rates cannot be compared to rates presented in previous Health of Boston reports due to changes in case identification methods. An individual client may have more than one admission per year. The data shown are for fiscal years July 2000-June 2010. DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.2 Substance Abuse Treatment Admissions by Race/Ethnicity, 2001-2010

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Substance abuse treatment admissions rates cannot be compared to rates presented in previous Health of Boston reports due to changes in case identification methods. An individual client may have more than one admission per year. The data shown are for fiscal years July 2000-June 2010.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.3 Substance Abuse Treatment Admissions by Gender and Age, 2010

NOTE: These data do not include persons whose gender or age was not reported, except in the Boston overall rate. Substance abuse treatment admissions rates cannot be compared to rates presented in previous Health of Boston reports due to changes in case identification methods. An individual client may have more than one admission per year. The data shown are for fiscal years July 2009-June 2010.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.4 Substance Abuse Treatment Admissions by Primary Drug and Race/Ethnicity, 2010

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Substance abuse treatment admissions rates cannot be compared to rates presented in previous Health of Boston reports due to changes in case identification methods. An individual client may have more than one admission per year. The data shown are for fiscal years July 2009-June 2010.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.5 Substance Abuse Hospitalizations, 2000-2009

NOTE: Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.6 Substance Abuse Hospitalizations by Gender, 2009

NOTE: Data are presented as age-adjusted rates. These data do not include persons whose gender was not reported, except in the Boston overall rate

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.7 Substance Abuse Hospitalizations by Age, 2009

NOTE: Data are presented as age-specific rates. These data do not include persons whose age was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.8 Substance Abuse Hospitalizations by Race/Ethnicity, 2009

NOTE: Data are presented as age-adjusted rates. These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.9 Substance Abuse Mortality, 1999-2008*

NOTE: Data are presented as age-adjusted rates. Mortality rates for substance abuse cannot be compared to rates presented in previous Health of Boston reports due to changes in case definitions. For more information please see the Glossary.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.10 Substance Abuse Mortality by Type, 1999-2008*

NOTE: Data are presented as age-adjusted rates. Mortality rates for alcohol abuse and drug abuse cannot be compared to rates presented in previous Health of Boston reports due to changes in case definitions. For more information please see the Glossary

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.11 Substance Abuse Mortality by Race/Ethnicity*, 1999-2008 †

NOTE: Data are presented as age-adjusted rates. These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Mortality rates for substance abuse cannot be compared to rates presented in previous Health of Boston reports due to changes in case definitions. For more information please see the Glossary.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 10.12 Substance Abuse Mortality by Gender, 2007 and 2008*

NOTE: Data are presented as age-adjusted rates. These data do not include persons whose gender was not reported, except in the Boston overall rate. Mortality rates for substance abuse cannot be compared to rates presented in previous Health of Boston reports due to changes in case definitions. For more information please see the Glossary.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 11.1 Carried a Weapon Within the Past Month by Selected Indicators, 2007 and 2009 Combined

NOTE: Survey question reads, “During the past 30 days, on how many days did you carry a weapon such as a gun, knife or club?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 11.2 How Easy to Get a Gun by Selected Indicators, 2008

NOTE: Survey question reads “How easy would it be for you to get a gun?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 11.3 Bullied in the Past 30 Days by Selected Indicators, 2008

NOTE: Survey question reads “In the past 30 days, has someone or a group of people repeatedly hurt you or made you feel bad by teasing, picking on or making fun of you?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 11.4 Physical Violence in Home by Selected Indicators, 2008

NOTE: Survey question reads “think about the adults who live in your home. In the past 12 Months, have any of these things happened to you; an adult pushed, grabbed or shoved you, an adult kicked, bit or punched you, an adult hit you with something that could hurt your body, an adult choked you or burned you”?

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 11.5 Ever Been Forced to Engage in Sexual Intercourse Against Will by Gender and Race/Ethnicity, 2008

NOTE: Survey question reads “In the past 12 months, have you been forced-physically, or with threats or weapons-to have sex when you didn’t want to? This could have been by anyone, and could have happened at home or anywhere else. (Include oral sex, intercourse, or anal sex)”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 11.6 Perception Among Youth That Police Treated Them with Respect by Selected Indicators, 2008

NOTE: Survey question reads “During the past 12 months, did you feel that you were treated with respect when you had contact with the police?”

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 11.7 Emergency Department Visits for Unarmed Fights, 2002-2009

NOTE: Data are presented as age-adjusted rates

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 11.8 Emergency Department Visits for Unarmed Fights by Selected Indicators, 2009

NOTE: Gender and Race/Ethnicity data are presented as age-adjusted rates. Age data are presented as age specific data

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 11.9 Homicide, 1999-2008

NOTE: Data are shown as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research & Evaluation Office

Figure 11.10 Homicide by Race/Ethnicity, 1999-2008

NOTE: Data are shown as age-adjusted rates. Asians are not shown due to small numbers

DATA ANALYSIS: Boston Public Health Commission Research & Evaluation Office

Figure 12.1 Mammogram within the Past Year by Selected Indicators, 2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.2 Mammogram within the Past Year by Race/Ethnicity and Household Income, 2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.3 Breast Cancer Incidence, 1998-2007

NOTE: Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.4 Breast Cancer Incidence by Race/Ethnicity, 1998-2007

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate.

Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.5 Pap Test within the Past Year by Age, 2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.6 Pap Test within the Past Year by Race/Ethnicity and Household Income, 2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.7 Cervical Cancer Incidence, 1998-2007

NOTE: Data are presented as age-adjusted rates

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.8 Colonoscopy or Sigmoidoscopy within the Past 5 years by Place of Birth, 2010

NOTE: Data are presented as age-adjusted rates

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.9 Colonoscopy or Sigmoidoscopy within the Past 5 Years by Neighborhood, 2010

NOTE: Data are presented as age-adjusted rates

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.10 Colorectal Cancer Incidence, 1998-2007

NOTE: Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.11 Colorectal Cancer Incidence by Race/Ethnicity*, 1998-2007

NOTE: These data do not include persons whose race/ethnicity was not reported. Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.12 Colorectal Cancer Incidence by Gender, 1998-2007

NOTE: These data do not include persons whose gender was not reported. Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.13 Lung Cancer Incidence, 1998-2007

NOTE: Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.14 Lung Cancer Incidence by Race/Ethnicity, 1998-2007

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.15 Lung Cancer Incidence by Gender, 1998-2007

NOTE: These data do not include persons whose gender was not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry
 GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.16 Digital Rectal Exam within the Past 5 years by Place of Birth, 2010

NOTE: Data are presented as age-adjusted rates

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 12.17 Digital Rectal Exam within the Past 5 years by Neighborhood, 2010

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 12.18 Prostate Cancer Incidence, 1998-2007

NOTE: Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.19 Prostate Cancer Incidence by Race/Ethnicity, 1998-2007

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Massachusetts Department of Public Health, Massachusetts Cancer Registry

GRAPHIC: Boston Public Health Commission Research and Evaluation Office

Figure 12.20 Cancer Mortality* by Race/Ethnicity, 2000-2008

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 12.21 Cancer Mortality by Age and Race/Ethnicity, 2008*

NOTE: These data do not include persons whose age or race/ethnicity was not reported, except in the Boston overall rate. Data are presented as age-specific rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 12.22 Cancer Mortality by Leading Types of Cancer, 2006-2008*

NOTE: Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 12.23 Leading Types of Cancer Mortality by Race/Ethnicity, 2006-2008*

NOTE: These data do not include persons whose race/ethnicity was not reported. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 12.24 Leading Types of Cancer Mortality* by Gender, 2006-2008*

NOTE: These data do not include persons whose gender was not reported. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 13.1 Life Expectancy by Race/Ethnicity and Gender, 2003, 2004, 2005, 2006, 2007, and 2008*

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 13.2 All-Cause Mortality, 1999-2008*

NOTE: Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 13.3 All-Cause Mortality by Race/Ethnicity, 1999-2008*

NOTE: These data do not include persons whose race/ethnicity was not reported, except in the Boston overall rate. Data are presented as age-adjusted rates..

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 13.4 All-Cause Mortality by Gender, 2007 and 2008*

NOTE: These data do not include persons whose gender was not reported, except in the Boston overall rate. Data are presented as age-adjusted rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 13.5 All-Cause Mortality by Age, 2008*

NOTE: These data do not include persons whose age was not reported, except in the Boston overall rate. Data are presented as age-specific rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 13.6 Top Five Leading Causes of Mortality, 2006-2008*

NOTE: Data are presented as age-adjusted rates. The rates shown are deaths per 100,000 population.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 13.7 Leading Causes of Mortality by Age, 2006, 2007, and 2008* Combined

NOTE: These data do not include persons whose age was not reported. Data are presented as age-specific rates.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office. The rates shown are deaths per 100,000 population.

Figure 13.8 Leading Causes of Mortality by Gender, 2007 and 2008*

NOTE: These data do not include persons whose gender was not reported, except in the Boston overall rate. Data are presented as age-adjusted rates. The rates shown are deaths per 100,000 population.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 13.9 Top Five Leading Causes of Mortality Among Asian Residents, 2006-2008*

NOTE: These data do not include persons whose race/ethnicity was not reported. Data are presented as age-adjusted rates. The rates shown are deaths per 100,000 population.

Figure 13.10 Top Five Leading Causes of Mortality Among Black Residents, 2006-2008*

NOTE: These data do not include persons whose race/ethnicity was not reported. Data are presented as age-adjusted rates. The rates shown are deaths per 100,000 population.

Figure 13.11 Top Five Leading Causes of Mortality Among Latino Residents, 2006-2008*

NOTE: These data do not include persons whose race/ethnicity was not reported. Data are presented as age-adjusted rates. The rates shown are deaths per 100,000 population.

Figure 13.12 Top Five Leading Causes of Mortality Among White Residents, 2006-2008*

NOTE: These data do not include persons whose race/ethnicity was not reported. Data are presented as age-adjusted rates. The rates shown are deaths per 100,000 population.

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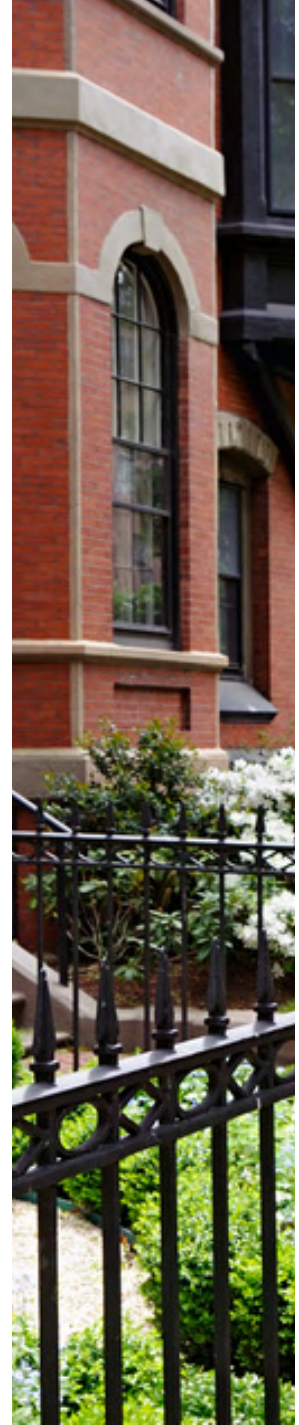
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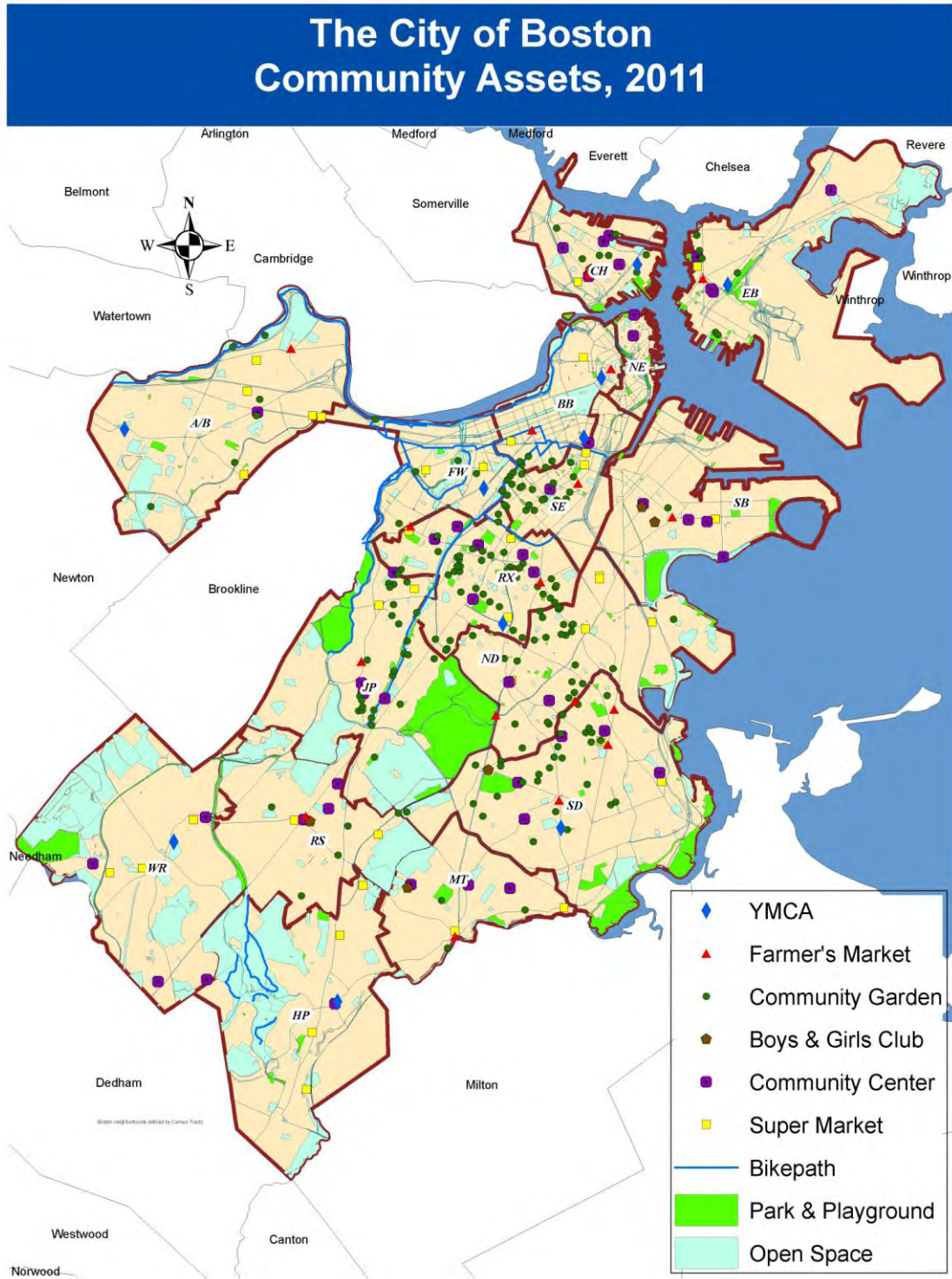
Neighborhood Demographic and Socioeconomic Profiles

City of Boston

Boston has been described as a city of neighborhoods with each having its own personality and distinct appeal. Differences in community-level assets, both physical and social, contribute to observed differences in health behaviors and health experiences across communities.

For the purposes of this report, the community areas within Boston have been grouped into 16 neighborhoods. For each neighborhood, this section provides a brief history, description of the population, and a map of selected community assets.



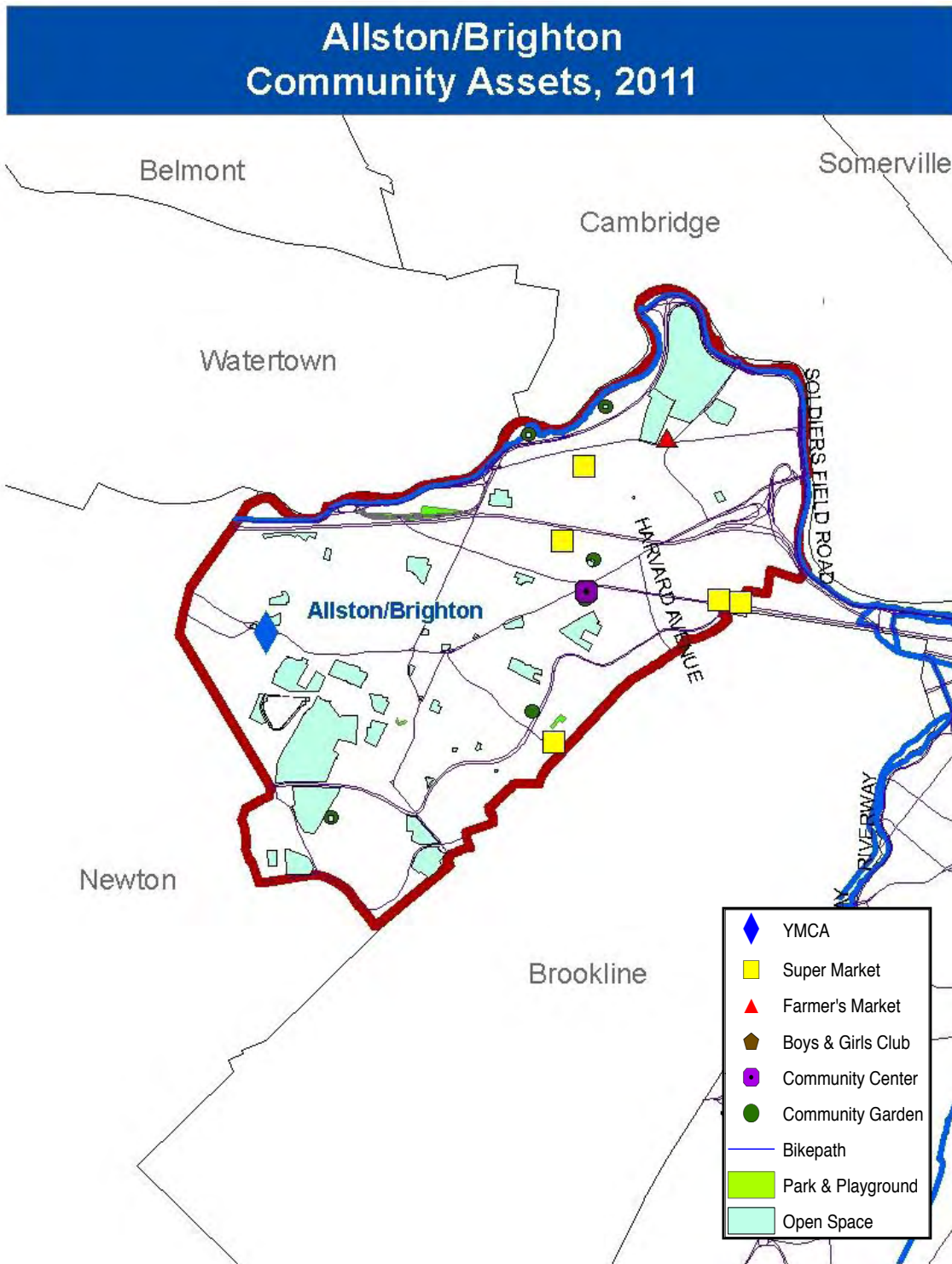


Allston/Brighton

Allston/Brighton is one of Boston's largest neighborhoods. Allston/Brighton was first a part of Watertown and then a section of Cambridge. In 1807, the neighborhood ceded from Cambridge and took the name Brighton. In 1873, Allston/Brighton was annexed to Boston.

Once an industrial area, which served as a meatpacking center of New England, Allston/Brighton is now home to a blend of commercial and residential areas. It has a large college student presence drawn by its proximity to several major universities including Boston College, Boston University, and Harvard University.



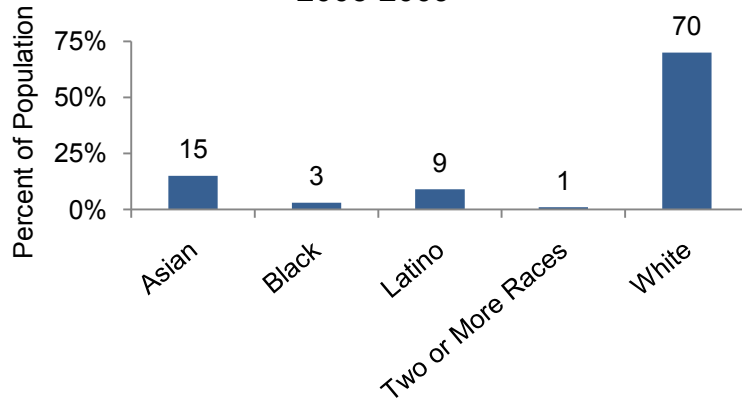


■ **Figure 14.1 Population Estimate by Race/Ethnicity, Allston/Brighton, 2005-2009**

In 2005-2009, Allston/Brighton had a population estimate of 70,974 residents. Of these, 49% were females and 51% were males (data not shown).

In 2005-2009, 70% of Allston/Brighton residents identified themselves as White. Fifteen percent identified themselves as Asian, 9% as Latino, and 3% as Black residents.

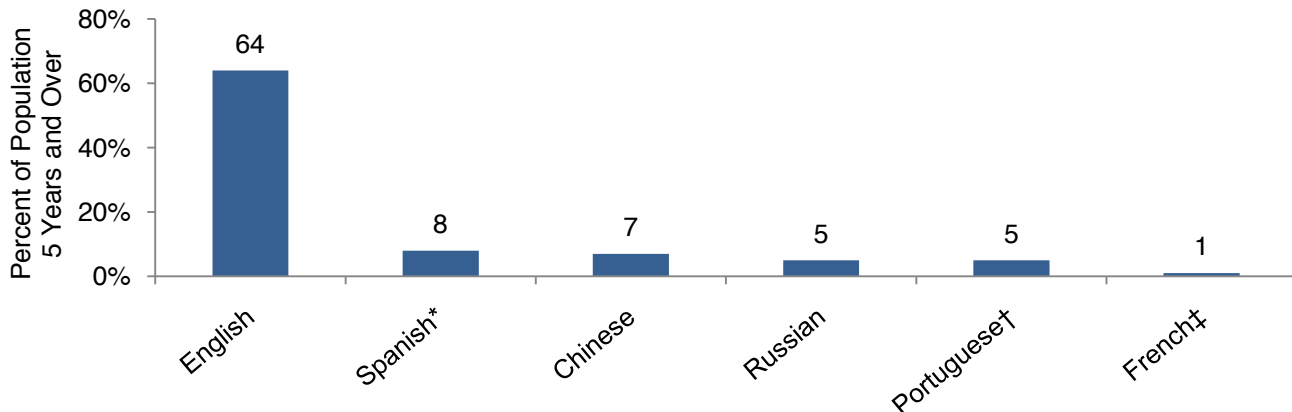
Figure 14.1 Population Estimate by Race/Ethnicity*, Allston/Brighton, 2005-2009



*Individuals who were identified as "Other race" were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 14.2 Languages Spoken at Home, Allston/Brighton, 2005-2009



*Spanish includes Spanish Creole

†Portuguese includes Portuguese Creole

‡French includes Patois, Cajun, and French Creole

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

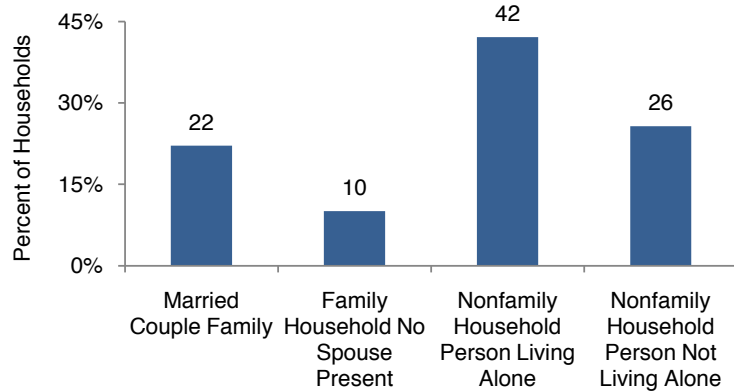
■ **Figure 14.2 Languages Spoken at Home, Allston/Brighton, 2005-2009**

In 2005-2009, just over one-third (36%) of Allston/Brighton residents spoke a language other than English at home. Other than English, primary languages spoken at home were Spanish (8%), Chinese (7%), Russian (5%), Portuguese (5%), and French (1%).

■ **Figure 14.3 Type of Household, Allston/Brighton, 2005-2009**

Among household types in Allston-Brighton, the highest percentage of households consisted of individuals living alone. Thirty-two percent of all households were considered family households. Of all households, 22% were married couple families, that is, families in which the householder was living with a spouse.

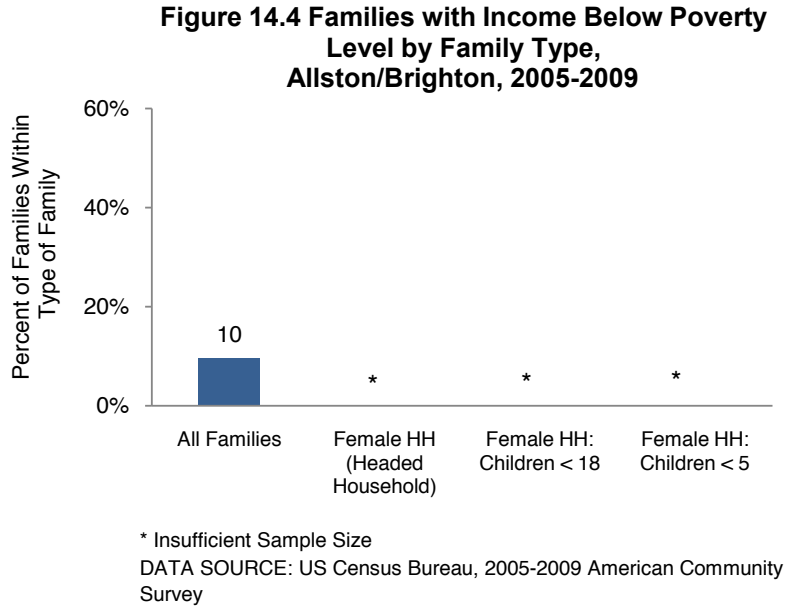
Figure 14.3 Type of Household, Allston/Brighton, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 14.4 Families with Income Below Poverty Level by Family Type, Allston/Brighton, 2005-2009**

The average median annual household income of Allston/Brighton residents was \$55,842. Nineteen percent of Allston/Brighton residents were living on income below the poverty level (data not shown). In addition, 10% of all families had an income below the poverty level.



■ **Figure 14.5 Housing Tenure, Allston/Brighton, 2005-2009**

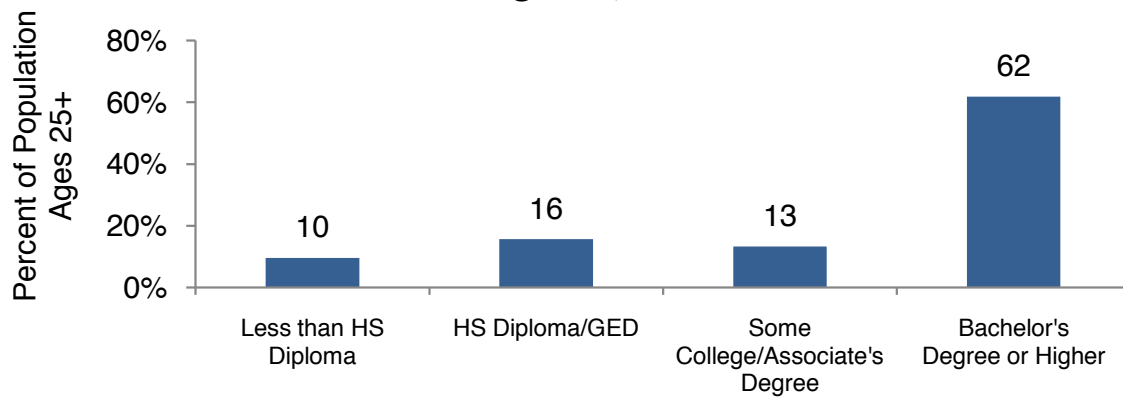
In Allston/Brighton, 74% of occupied units were renter-occupied.

Figure 14.5 Housing Tenure, Allston/Brighton, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
26%	74%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 14.6 Educational Attainment, Allston/Brighton, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 14.6 Educational Attainment, Allston/Brighton, 2005-2009**

In Allston/Brighton, the majority of the population (62%) had a Bachelor's degree or higher. This was significantly higher than for the three lower levels of educational attainment.

Back Bay Beacon Hill West End

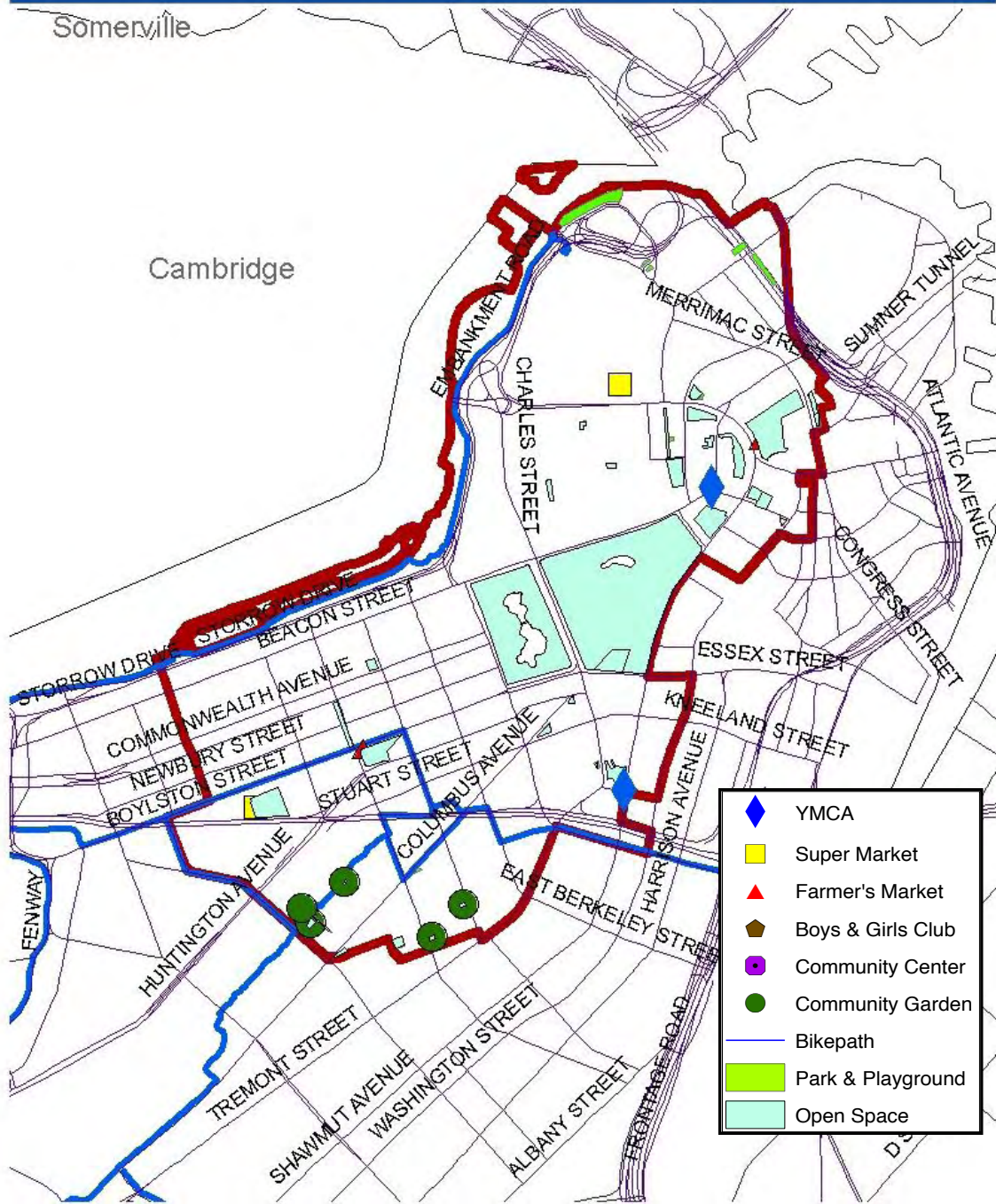
The Back Bay/Beacon Hill/The West End area, known as Shawmut by Native Americans, was a narrow peninsula distinguished by a three-peaked hill called Trimount. The Back Bay was an actual bay until the last half of the 1800's when the tidewater flats of the Charles River were filled and transformed into stable, buildable land. Back Bay, often associated with rows of Victorian brownstone homes, is well-known for commercial areas such as Newbury Street and cultural icons such as the Boston Public Library's McKim Building.

Beacon Hill was once the center of the African-American community in Boston. The African Meeting House, built in 1808, is the nation's oldest African-American Church and the oldest standing African Meeting House. Beacon Hill remains an historic neighborhood lined with 19th Century townhouses and is home to the gold leaf domed Massachusetts State House. Beacon Hill was designated an historic landmark in 1962.

In the late 1950's, the West End was part of a controversial urban renewal project which destroyed the homes of working class residents to make way for the construction of high-rise buildings. Many residents were apparently forced to relocate to substandard housing. These days the West End is home to a vibrant mix of commercial and residential properties.



Back Bay / Beacon Hill / West End Community Assets, 2011

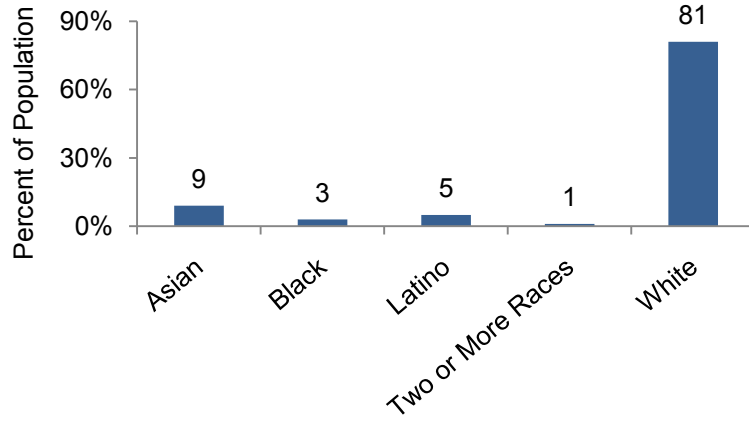


■ **Figure 15.1 Population Estimate by Race/ Ethnicity, Back Bay, 2005-2009**

In 2005-2009, the estimated population of the Back Bay neighborhood, including Downtown, Beacon Hill, and the West End, was 38,154 residents. Of these, 53% were females and 47% were males (data not shown).

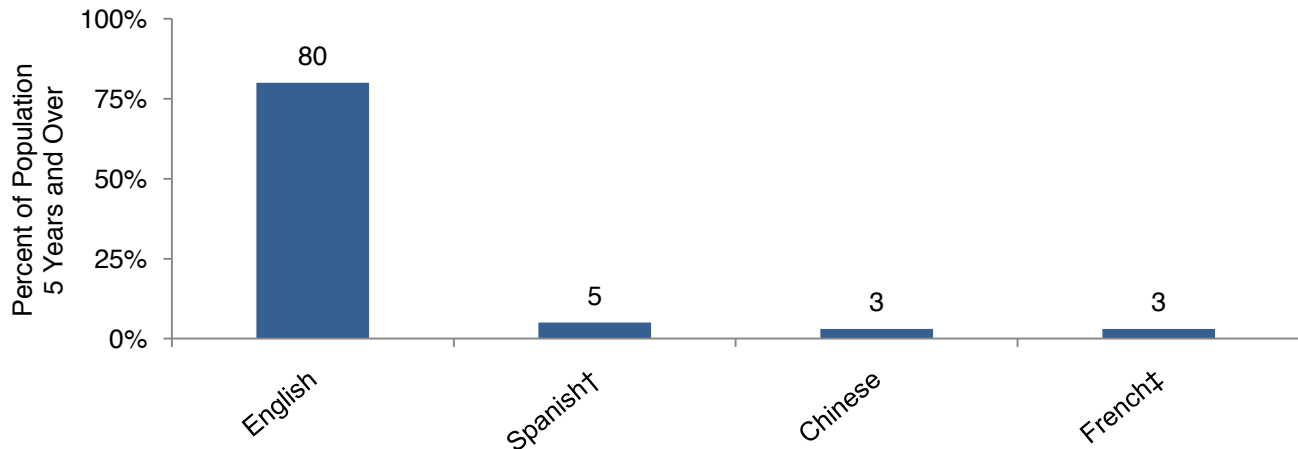
Eighty-one percent of Back Bay residents identified themselves as White. Nine percent identified themselves as Asian, 5% as Latino, and 3% as Black residents.

Figure 15.1 Population Estimate by Race/Ethnicity*, Back Bay†, 2005-2009



*Individuals who were identified as "Other race" were not included due to insufficient sample size.
 †Back Bay includes Beacon Hill, Downtown, and the West End
 DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 15.2 Languages Spoken at Home, Back Bay*, 2005-2009



*Back Bay includes Beacon Hill, Downtown, and the West End
 †Spanish includes Spanish Creole
 ‡French includes Patois, Cajun, and French Creole
 DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 15.2 Languages Spoken at Home, Back Bay, 2005-2009**

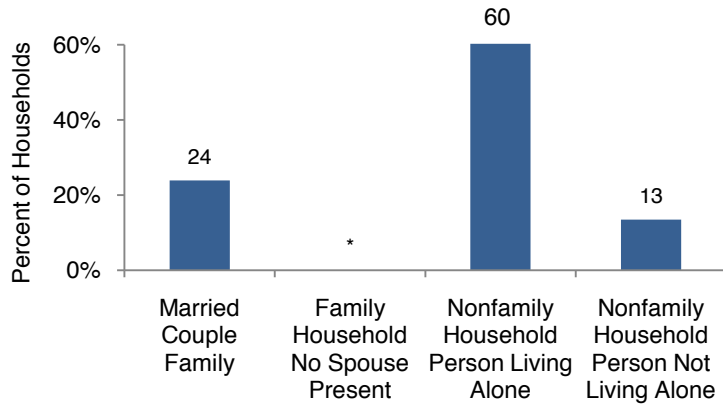
Twenty percent of Back Bay residents spoke a language other than English at home. Other than English, primary languages spoken at home were Spanish (5%), Chinese (3%), and French (3%).

■ **Figure 15.3 Type of Household, Back Bay, 2005-2009**

In the Back Bay, the highest percentage of households consisted of individuals living alone. Of all households, 24% were married couple families, that is, families in which the householder was living with a spouse.

The average median annual household income in Back Bay was \$71,356. Eleven percent of Back Bay residents had an income below the poverty level (data not shown).

Figure 15.3 Type of Household, Back Bay†, 2005-2009



* Insufficient Sample Size

† Includes Beacon Hill, Downtown, and the West End,

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 15.4 Housing Tenure, Back Bay, 2005-2009**

In the Back Bay, 65% of occupied units were renter-occupied.

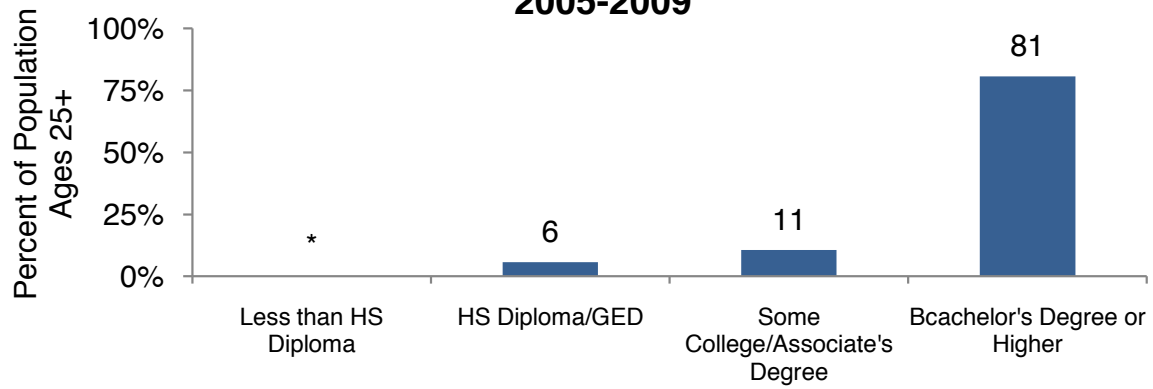
Figure 15.4 Housing Tenure, Back Bay*, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
35%	65%

*Includes Downtown, Beacon Hill, and the West End

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 15.5 Educational Attainment, Back Bay†, 2005-2009



*Insufficient sample size

†Includes Beacon Hill, Downtown, and the West End

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 15.5 Educational Attainment, Back Bay , 2005-2009**

In Back Bay, 81% of the population had a Bachelor's degree or higher. This was significantly higher than for the three lower levels of educational attainment.

Charlestown

Charlestown was settled in 1629 (one year before Boston) and became a city in 1847. In 1874, the City of Charlestown was annexed to Boston. Charlestown's history and economic development were strongly influenced by the presence of the Navy Yard, which operated between 1801 and 1973.

Two of the most visited sites on Boston's Freedom Trail are in Charlestown – the Bunker Hill Monument and the U.S.S. Constitution. The Bunker Hill Monument commemorates one of the bloodiest and most destructive battles of the 1775 Revolutionary War. The U.S.S. Constitution, the U.S. Navy's oldest commissioned ship, is docked in the Charlestown Navy Yard.



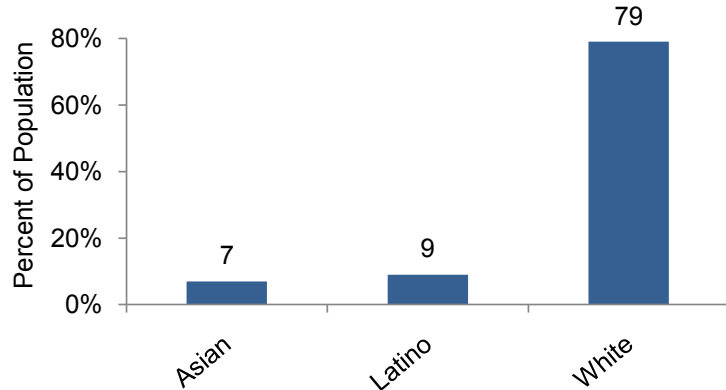


■ **Figure 16.1 Population Estimate by Race/Ethnicity, Charlestown, 2005-2009**

In 2005-2009, Charlestown had an estimated population of 18,236 residents. Of these, 54% were females and 46% were males (data not shown).

In 2005-2009, 79% of Charlestown residents identified themselves as White, 9% as Latino, and 7% as Asian.

Figure 16.1 Population by Race/Ethnicity*, Charlestown, 2005-2009



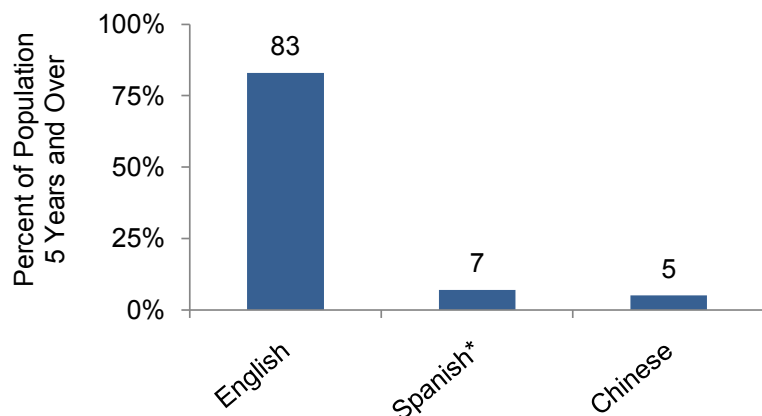
*Individuals who were identified as "Black," "Other race," or "Two or more races" were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 16.2 Languages Spoken at Home, Charlestown, 2005-2009**

Just over one-sixth (17%) of Charlestown residents spoke a language other than English at home. Other than English, primary languages spoken at home were Spanish (7%) and Chinese (5%).

Figure 16.2 Languages Spoken at Home, Charlestown, 2005-2009



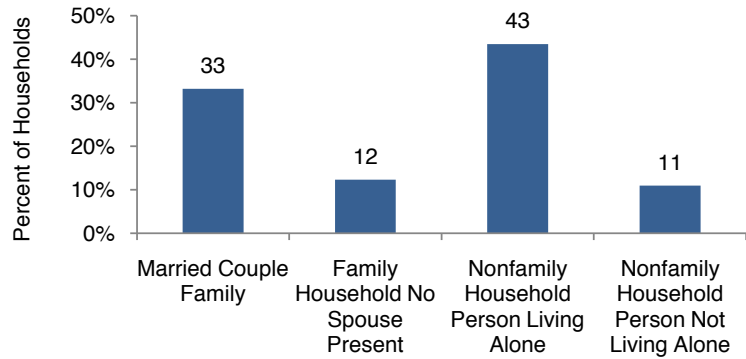
*Spanish includes Spanish Creole

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 16.3 Type of Household, Charlestown, 2005-2009**

In Charlestown, the highest percentage of households consisted of individuals living alone. Of all households, 33% consisted of married couple families and 12% were family households with no spouse present. Eleven percent of households consisted of individuals not living alone.

Figure 16.3 Type of Household, Charlestown, 2005-2009

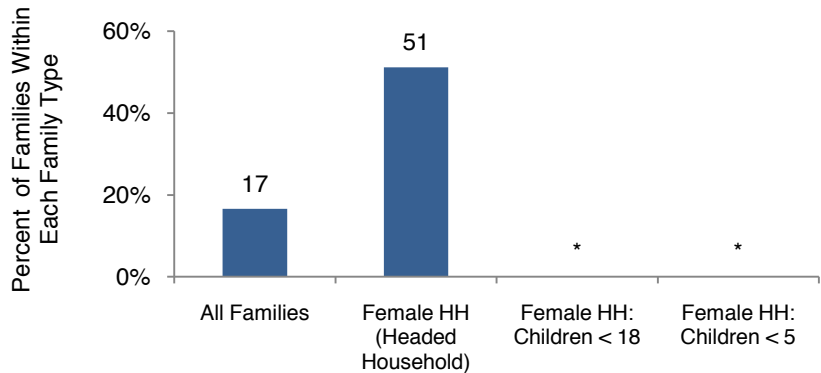


DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 16.4 Families with Income Below Poverty Level by Family Type, Charlestown, 2005-2009**

The average median household income of residents in Charlestown was \$76,898. Although 16% of all Charlestown residents were living on income below the poverty level (data not shown), 51% of all female-headed households had an income below the poverty level.

Figure 16.4 Families with Income Below Poverty Level by Family Type, Charlestown, 2005-2009



* Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 16.5 Housing Tenure, Charlestown, 2005-2009**

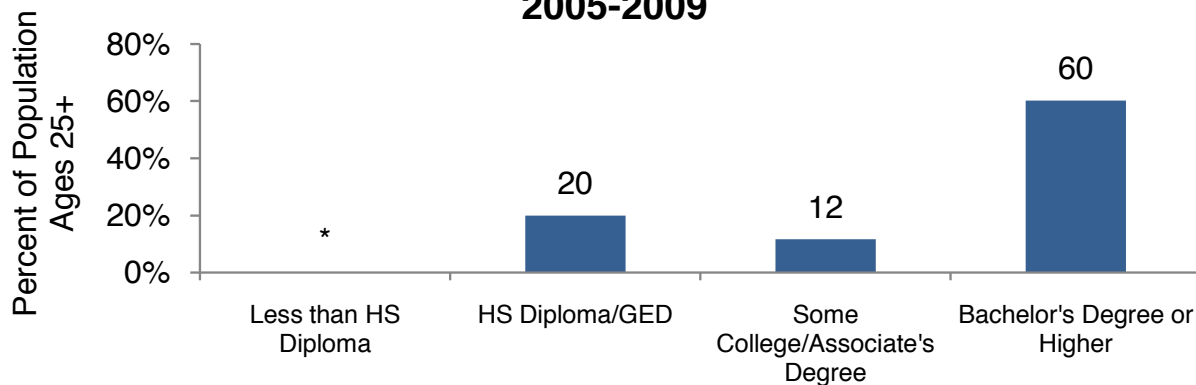
In Charlestown, about half (51%) of occupied units were renter-occupied.

Figure 16.5 Housing Tenure, Charlestown, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
49%	51%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 16.6 Educational Attainment, Charlestown, 2005-2009



*Insufficient sample size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 16.6 Educational Attainment, Charlestown, 2005-2009**

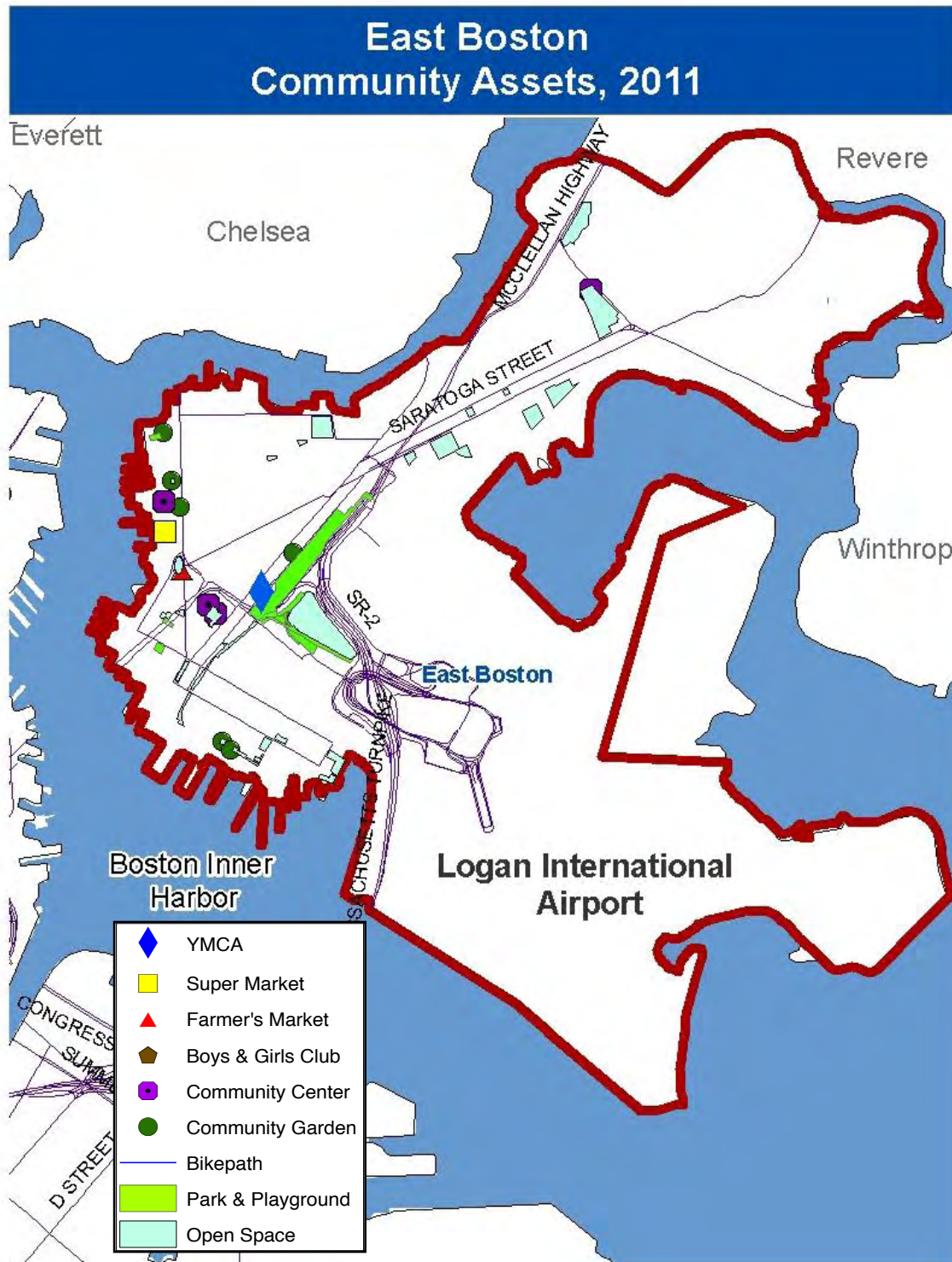
For one-fifth of the population in Charlestown, the highest level of educational attainment was a high school diploma/GED. The majority of the population (60%) had a Bachelor's degree or higher.

East Boston

East Boston was created when five Boston Harbor Islands were expanded and connected. The project began in 1830 and took 150 years to complete. The two larger islands, Noddles and Hog Islands, now form the residential section of the neighborhood. Logan Airport, which takes up over half of the neighborhood's 2.5 square miles, sits on Apple, Bird, and Governor's Islands.

Throughout its history, East Boston has served as home to various groups of immigrants. The Irish were the first group to settle in East Boston, followed by Russian Jews and Italians in the late 1800s. At the turn of the 20th century, East Boston was home to the largest Jewish community in New England. The neighborhood was predominantly Italian for most of the 20th century and is now home to many immigrants from South and Central America, Asia, and the Caribbean.



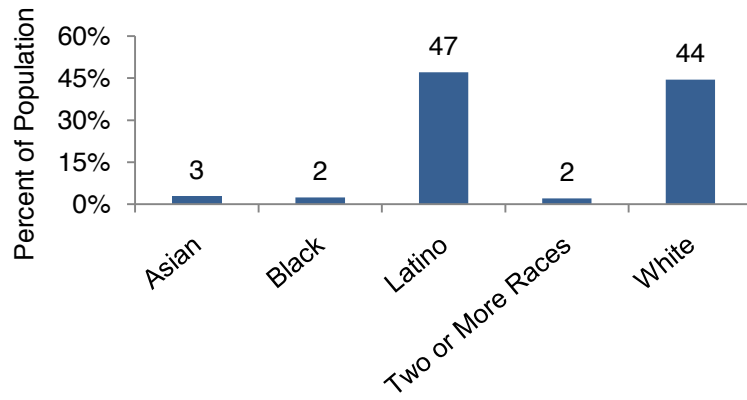


■ **Figure 17.1 Population Estimate by Race/Ethnicity, East Boston, 2005-2009**

In 2005-2009, East Boston had an estimated population of 43,814 residents. Of these 43% were females and 57% were males (data not shown).

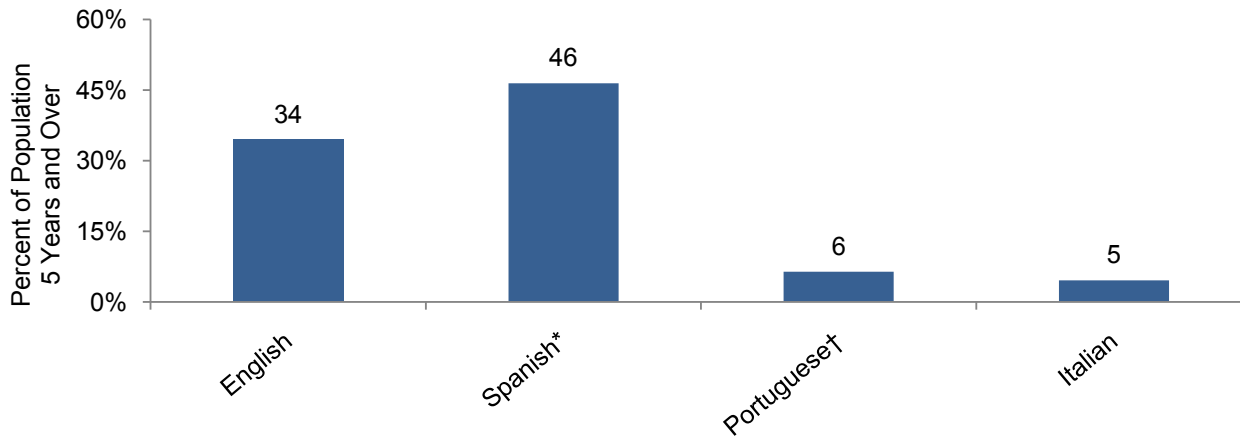
In 2005-2009, 47% of East Boston residents identified themselves as Latino. Forty-four percent identified themselves as White, 3% as Asian, and 2% as Black residents.

Figure 17.1 Population Estimate by Race/Ethnicity*, East Boston, 2005-2009



*Individuals who were identified as "Other race" were not included due to insufficient sample size
 DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 17.2 Languages Spoken at Home, East Boston, 2005-2009



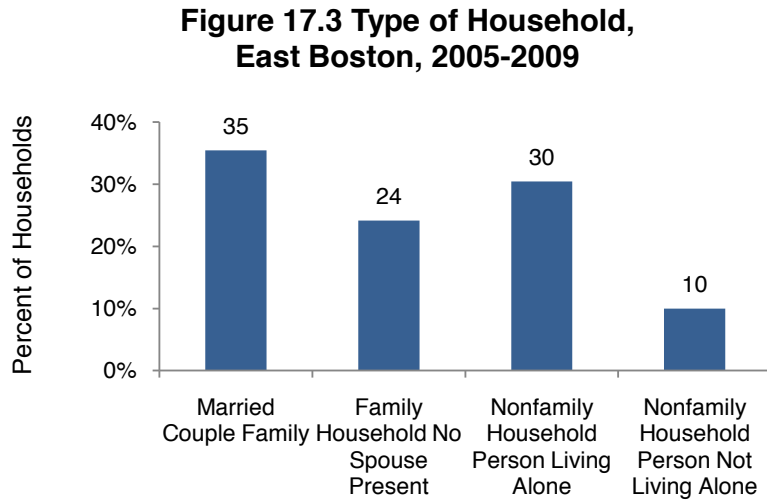
*Spanish includes Spanish Creole
 †Portuguese includes Portuguese Creole
 DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 17.2 Languages Spoken at Home, East Boston, 2005-2009**

In 2005-2009, the most frequently reported language spoken at home in East Boston was Spanish or Spanish Creole, with 46% of the population reporting these languages. About one-third (34%) of East Boston residents reported English as the primary language spoken at home. Other languages spoken at home included Portuguese or Portuguese Creole (6%) and Italian (5%).

Figure 17.3 Type of Household, East Boston, 2005-2009

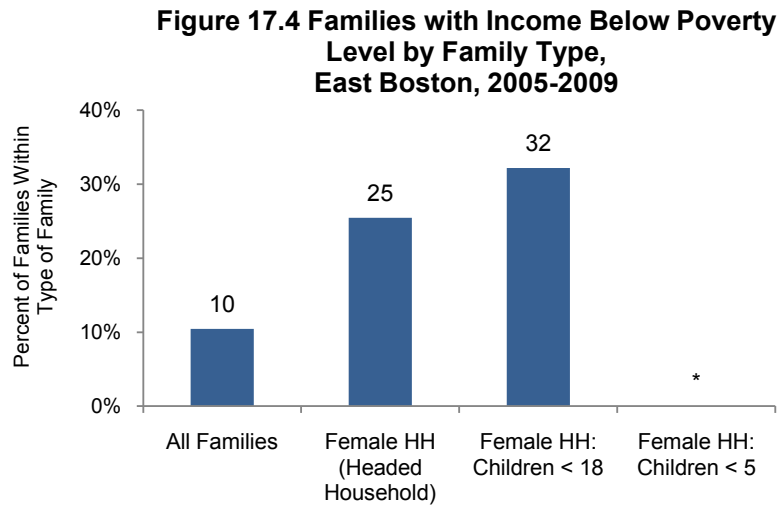
Among household types in East Boston, the highest percentage consisted of married couple families (35%). For non-family households, a higher percentage consisted of individuals living alone compared to individuals not living alone.



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 17.4 Families with Income Below Poverty Level by Family Type, East Boston, 2005-2009

The average median annual household income for residents in East Boston was \$42,487. Thirteen percent of all residents in East Boston were living on income below the poverty level (data not shown). By family type, a higher percentage of female-headed households with children under the age of 18 (32%) and a higher percentage of female headed households (25%) had an income below the poverty level compared with all families (10%).



* Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 17.5 Housing Tenure, East Boston, 2005-2009

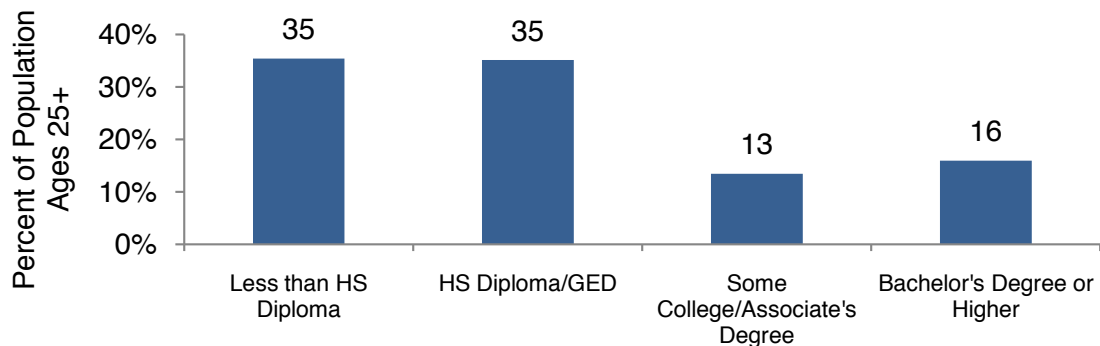
In East Boston, 70% of occupied units were renter-occupied.

Figure 17.5 Housing Tenure, East Boston, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
30%	70%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 17.6 Educational Attainment, East Boston, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 17.6 Educational Attainment, East Boston, 2005-2009**

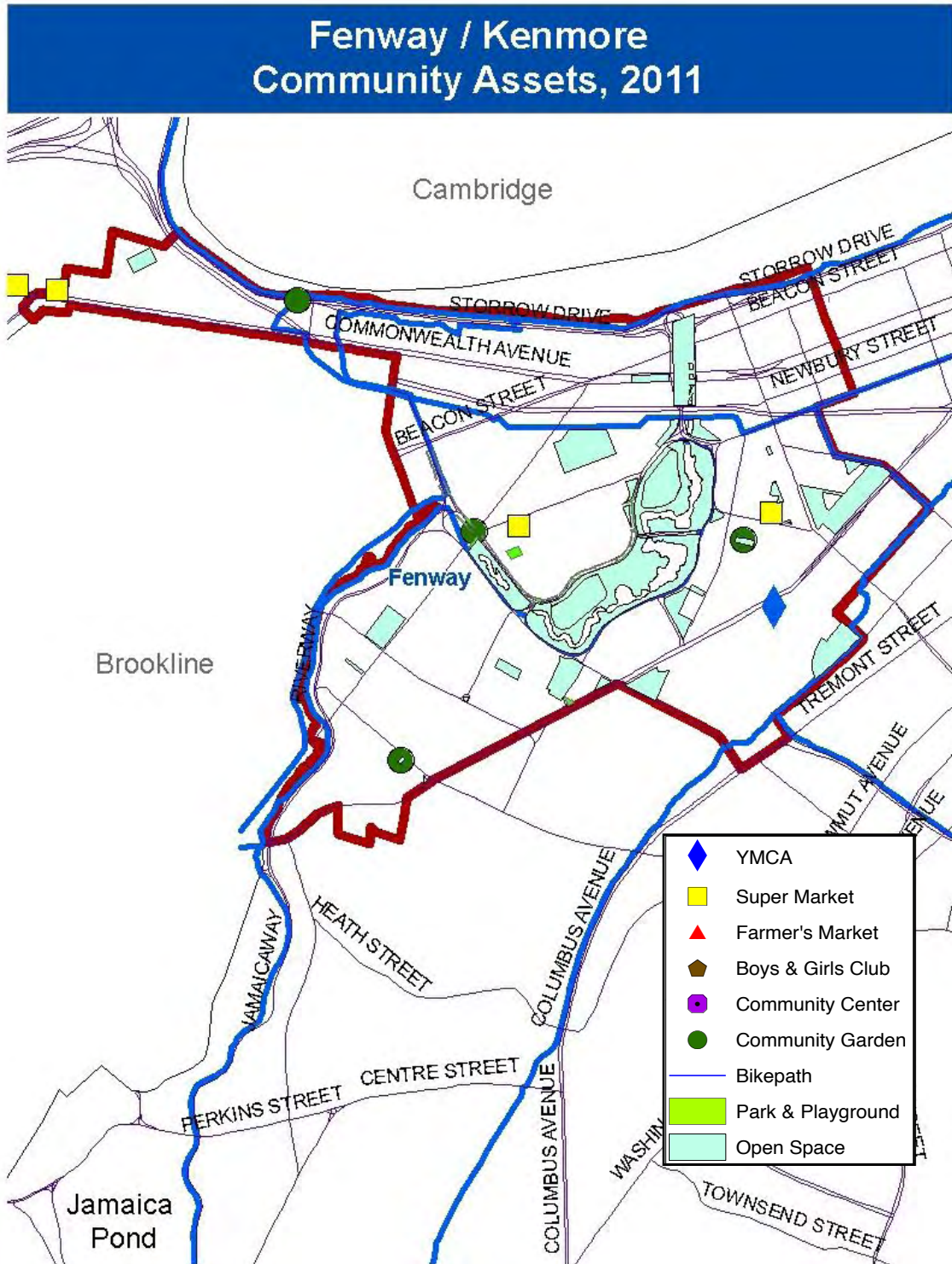
About one-fifth of the population of East Boston had a Bachelor's degree higher (16%). Higher percentages of the population had either less than a high school diploma (35%) or a high school diploma/GED (35%).

Fenway / Kenmore

The Fenway/Kenmore neighborhood was annexed to Boston in 1870 and was expanded in the same landfill project that created the Back Bay. The number of cultural institutions located in the Fenway/Kenmore area (including Boston Symphony Hall, the Museum of Fine Arts, and the Isabella Stewart Gardner Museum) prompted the city to dub the neighborhood's Huntington Avenue the "Avenue of the Arts."

The Longwood area includes many of the nation's leading medical institutions including Harvard Medical School, Brigham and Women's Hospital, the Beth Israel/Deaconess Medical Center, Children's Hospital, Dana Farber Cancer Institute, and Joslin Diabetes Center. The home of the Boston Red Sox, Fenway Park, is also located in the neighborhood.



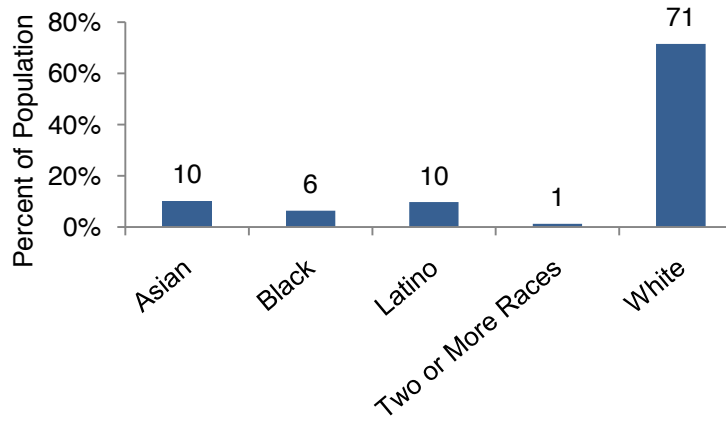


■ **Figure 18.1 Population Estimate by Race/Ethnicity, Fenway, 2005-2009**

In 2005-2009, Fenway had an estimated population of 32,610 residents. Of these residents, 52% were females and 48% were males (data not shown).

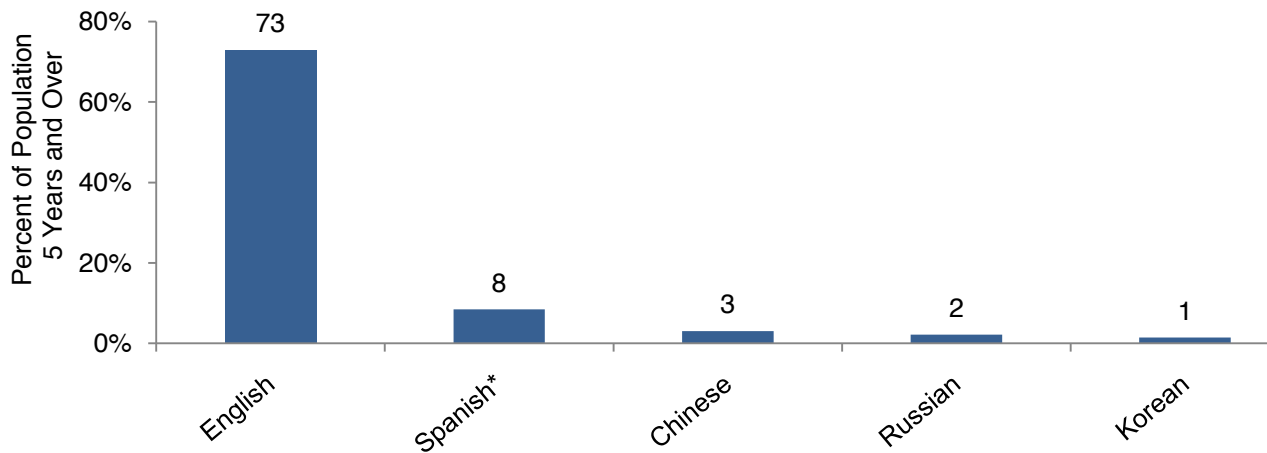
In 2005-2009, 71% of Fenway residents identified themselves as White, 10% as Latino, 10% as Asian, and 6% as Black.

Figure 18.1 Population Estimate by Race/Ethnicity*, Fenway, 2005-2009



*Individuals who were identified as "Other race" were not included due to insufficient sample size
 DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 18.2 Languages Spoken at Home, Fenway, 2005-2009



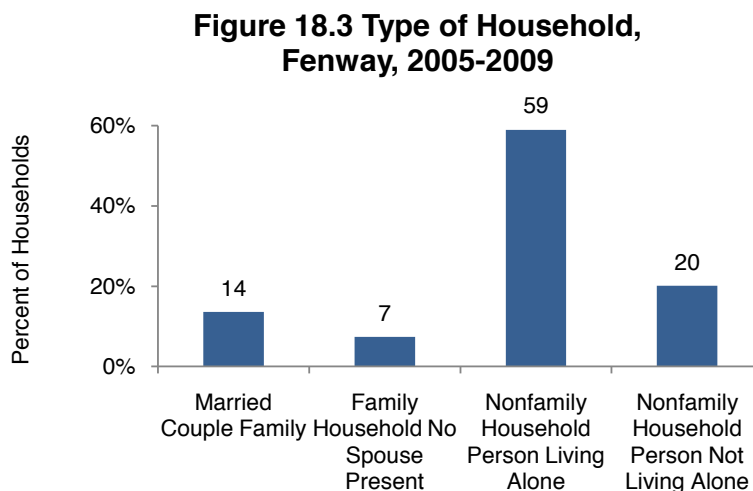
*Spanish includes Spanish Creole
 DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 18.2 Languages Spoken at Home, Fenway, 2005-2009**

In 2005-2009, 73% of Fenway residents reported English as the primary language spoken at home followed by Spanish (8%), Chinese (3%), Russian (2%), and Korean (1%).

■ **Figure 18.3 Type of Household, Fenway, 2005-2009**

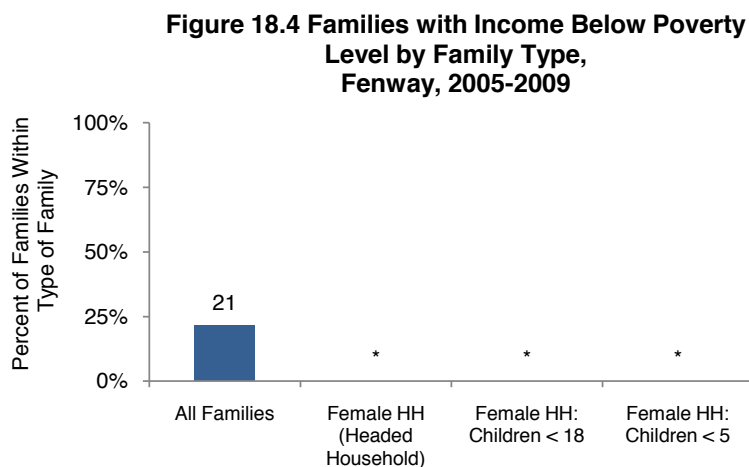
The majority of households in Fenway consisted of individuals living alone (59%). Twenty-one percent of households were considered family households, while 20% of households consisted of individuals not living alone.



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 18.4 Families with Income Below Poverty Level by Family Type, Fenway, 2005-2009**

The average median annual household income for residents in Fenway was \$29,889. Thirty-six percent of residents in Fenway were living on income below the poverty level (data not shown); and 21% of all families had an income below the poverty level.



* Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 18.5 Housing Tenure, Fenway, 2005-2009**

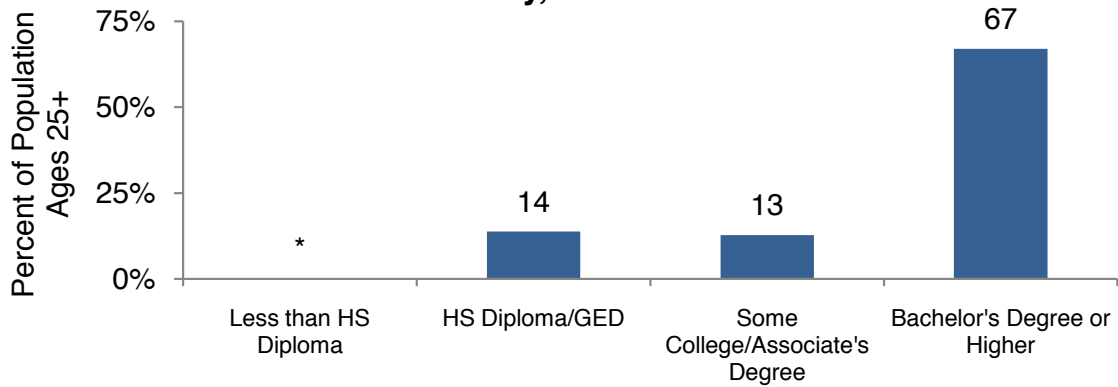
In Fenway, 90% of occupied units were renter-occupied.

Figure 18.5 Housing Tenure, Fenway, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
10%	90%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 18.6 Educational Attainment, Fenway, 2005-2009



*Insufficient sample size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 18.6 Educational Attainment, Fenway, 2005-2009**

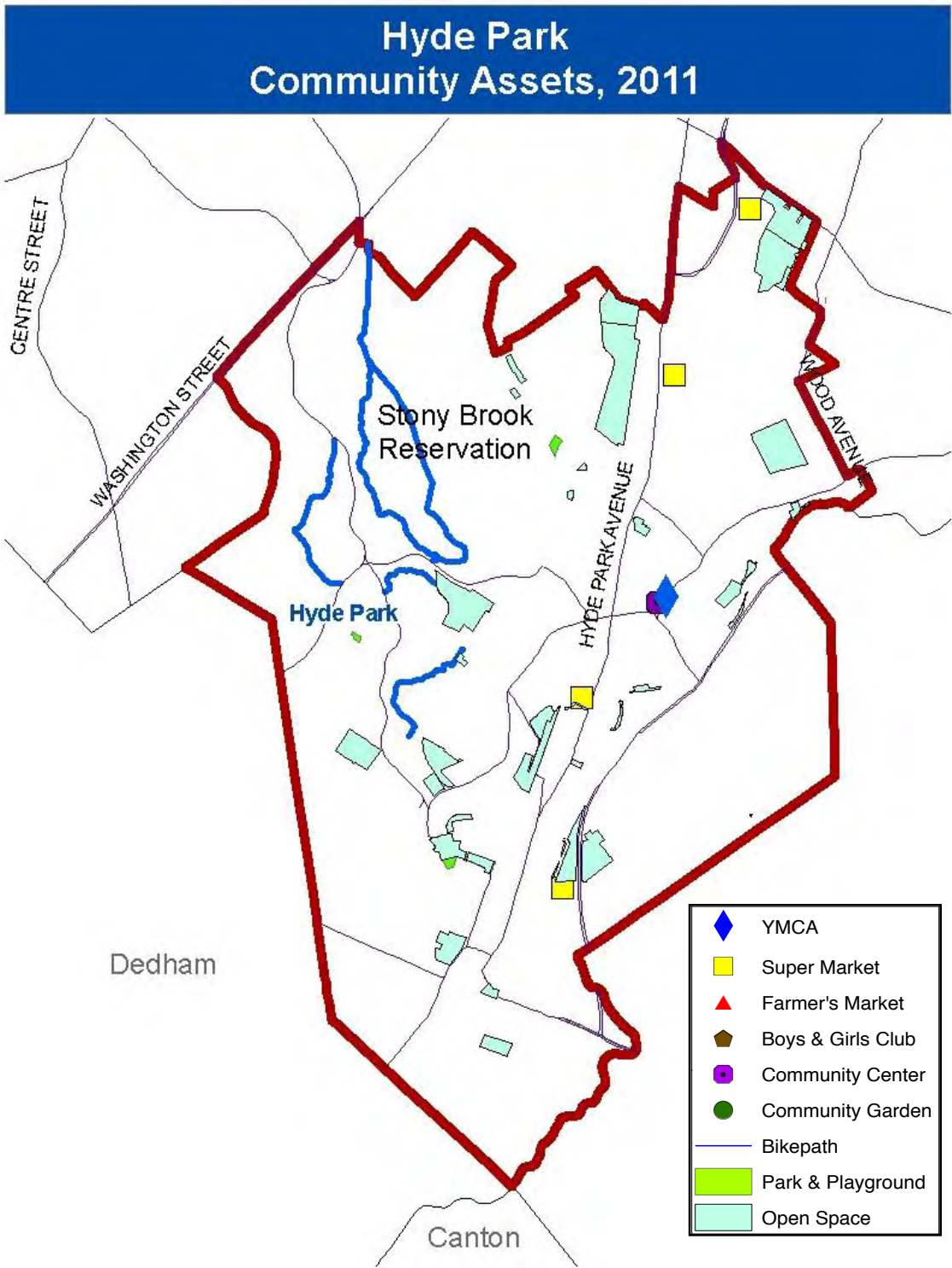
In Fenway, 67% of the population had received a Bachelor's degree or higher. This was significantly higher than for other levels of educational attainment.

Hyde Park

Hyde Park was known as “Tist” by the area’s Wampanoag Indians. It was incorporated as a town in 1868 and in 1912, became the last neighborhood to be annexed to Boston.

In the 1800s, several prominent civil right activists, abolitionists and suffragists, including Sarah and Angelina Grimke and William Monroe Trotter, called this neighborhood home. The 54th Regiment, the renowned Black Civil War regiment trained at Camp Meigs in the Readville section of Hyde Park. The city’s mayor, Thomas Menino, is a longtime resident of Readville as well.



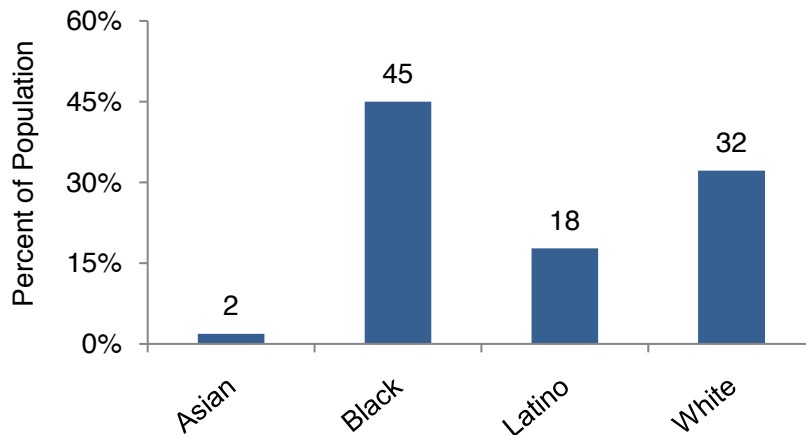


■ **Figure 19.1 Population Estimate by Race/Ethnicity, Hyde Park, 2005-2009**

In 2005-2009, Hyde Park had an estimated population of 35,419 residents. Of these residents, 53% were females and 47% were males (data not shown).

According to the 2005-2009 American Community Survey, 45% of Hyde Park residents identified themselves as Black. Thirty-two percent of residents identified themselves as White, 18% identified themselves as Latino, and 2% as Asian.

Figure 19.1 Population Estimate by Race/Ethnicity*, Hyde Park, 2005-2009



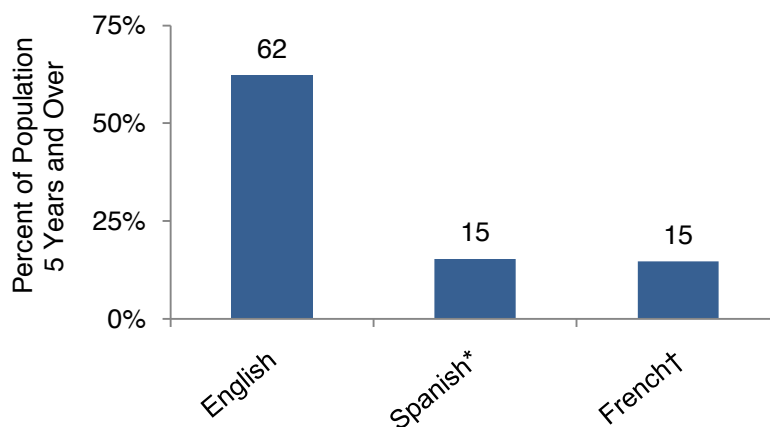
*Individuals who were identified as “Other race” or “Two or more races” were not included due to insufficient sample size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 19.2 Languages Spoken at Home, Hyde Park, 2005-2009**

Over one-third (38%) of Hyde Park residents spoke a language other than English at home. Other than English, primary languages spoken at home were Spanish (15%) and French (15%).

Figure 19.2 Languages Spoken at Home, Hyde Park, 2005-2009



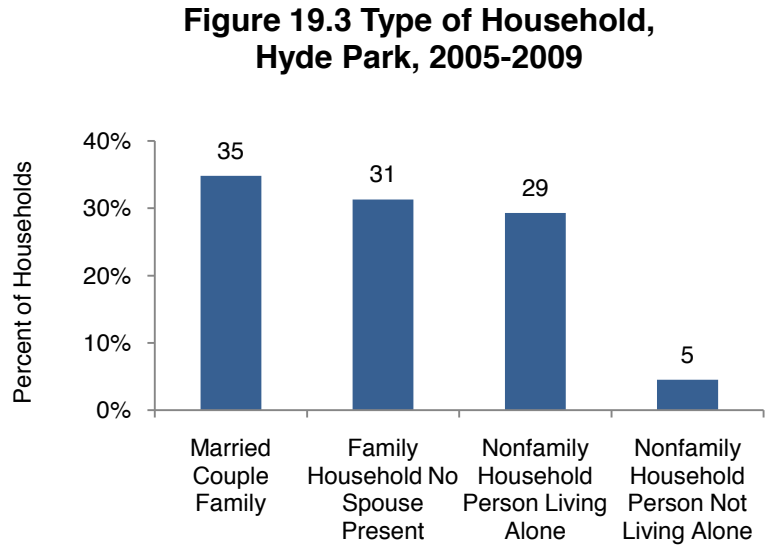
*Spanish includes Spanish Creole

†French includes Patois, Cajun, and French Creole

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 19.3 Type of Household, Hyde Park, 2005-2009**

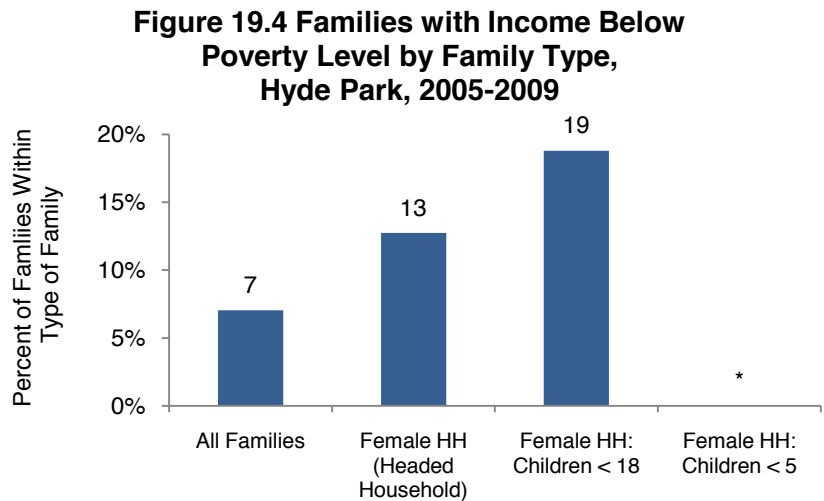
Sixty-six percent of all households in Hyde Park were considered family households. Twenty-nine percent of households consisted of individuals living alone.



Data Source: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 19.4 Families with Income Below Poverty Level by Family Type, Hyde Park, 2005-2009**

The average median annual household income for residents in Hyde Park was \$54,300. Ten percent of all residents had an income below poverty level (data not shown). By family type, a higher percentage of female headed households with children under the age of 18 (19%) had an income below poverty level compared with all families (7%) living in Hyde Park.



*Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 19.5 Housing Tenure, Hyde Park, 2005-2009**

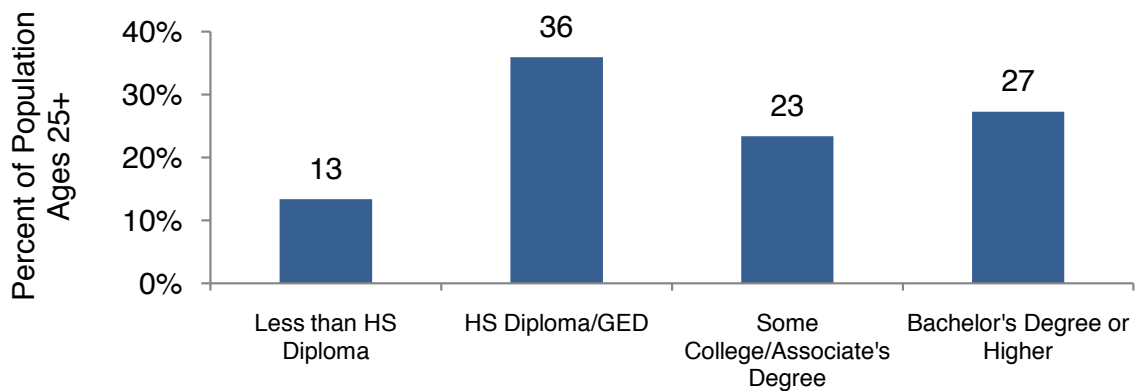
In Hyde Park, 57% of occupied units were owner-occupied.

Figure 19.5 Housing Tenure, Hyde Park, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
57%	43%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 19.6 Educational Attainment, Hyde Park, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 19.6 Educational Attainment, Hyde Park, 2005-2009**

In Hyde Park, 13% of the population had less than a high school diploma. Just little over one-fourth of the population (27%) had received a Bachelor's degree or higher.

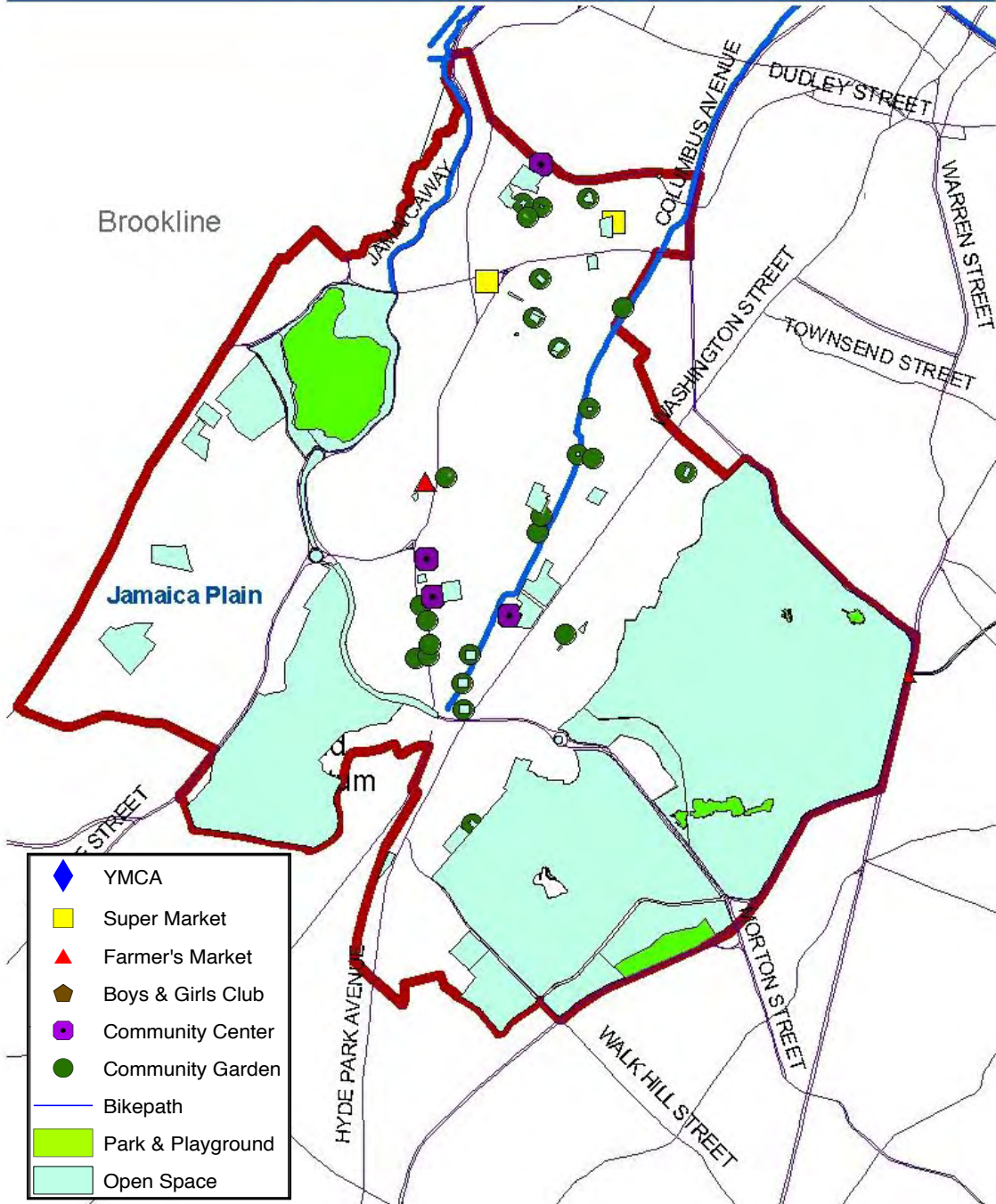
Jamaica Plain

Jamaica Plain, originally part of the Town of Roxbury, was annexed to Boston in 1874. In the mid-19th century, 24 breweries were built along the Stony Brook that ran along the Jamaica Plain/Roxbury line. Drawn to the work at these breweries, German immigrants settled around Hyde Square. The availability of work in area factories also brought Irish immigrants to the neighborhood.

Jamaica Plain has much planned green space. In 1848, the beautiful Forest Hills Cemetery opened, with graves and monuments integrated into the natural landscape. Jamaica Pond and the Arnold Arboretum were incorporated into Boston's Emerald Necklace, Frederick Law Olmstead's renowned linked series of parklands. Today, the neighborhood is a diverse one, with large Latino and gay and lesbian communities.



Jamaica Plain Community Assets, 2011

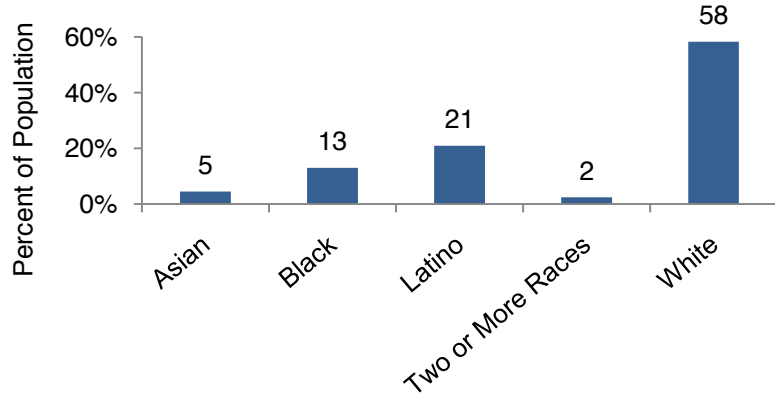


■ **Figure 20.1 Population Estimate by Race/Ethnicity, Jamaica Plain, 2005-2009**

In 2005-2009, Jamaica Plain had an estimated population of 31,559 residents. Of these, 54% were females and 46% males (data not shown).

According to the 2005-2009 American Community Survey, 58% of Jamaica Plain residents identified themselves as White, 21% identified as Latino, 13% identified as Black, 5% identified as Asian, and 2% as two or more races.

Figure 20.1 Population Estimate by Race/Ethnicity*, Jamaica Plain, 2005-2009



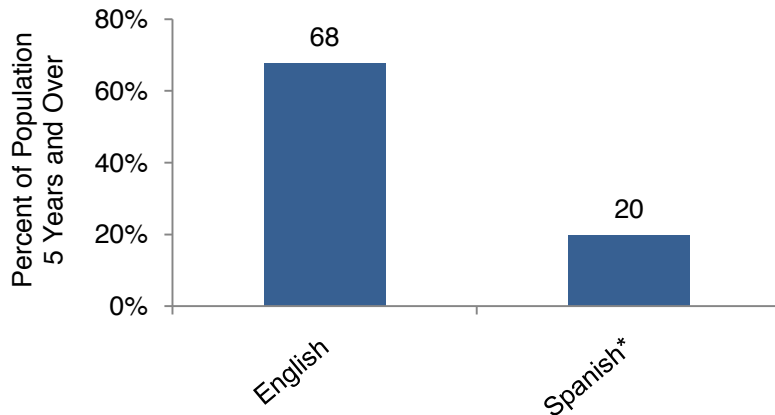
*Individuals who were identified as "Other race" were not included due to insufficient sample size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 20.2 Languages Spoken at Home, Jamaica Plain, 2005-2009**

Nearly one-third (32%) of Jamaica Plain residents speak a language other than English at home. Other than English, the primary language spoken at home was Spanish.

Figure 20.2 Languages Spoken at Home, Jamaica Plain, 2005-2009



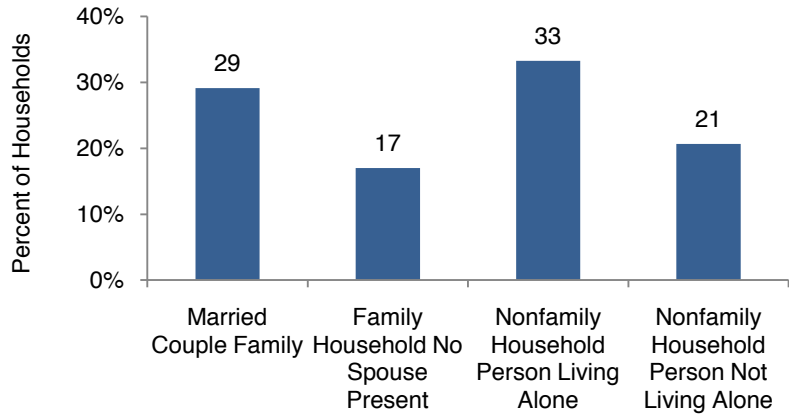
*Spanish includes Spanish Creole

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 20.3 Type of Household, Jamaica Plain, 2005-2009**

Thirty-three percent of all households in Jamaica Plain consisted of individuals living alone, while 46% were considered family households. Twenty-one percent of households consisted of individuals living with other non-family individuals.

Figure 20.3 Type of Household, Jamaica Plain, 2005-2009

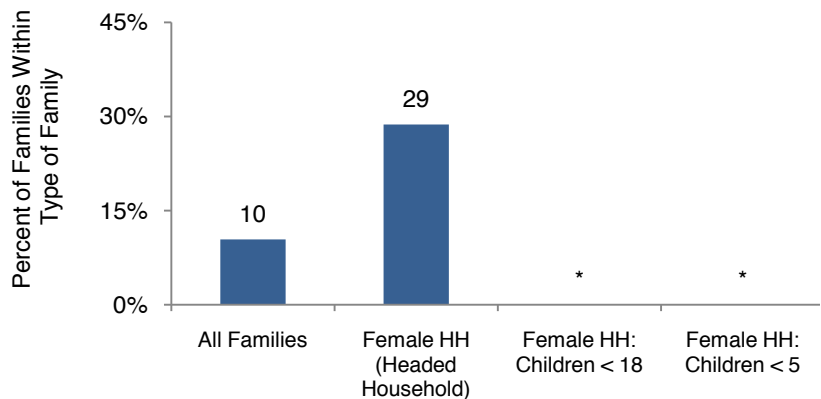


DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 20.4 Families with Income Below Poverty Level by Family Type, Jamaica Plain, 2005-2009**

The average median annual household income for Jamaica Plain residents was \$68,039. Fifteen percent of all residents in Jamaica Plain (data not shown) and 10% of all families were living on income below the poverty level. Twenty-nine percent of female-headed households had an income below the poverty level.

Figure 20.4 Families with Income Below Poverty Level by Family Type, Jamaica Plain, 2005-2009



* Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 20.5 Housing Tenure, Jamaica Plain, 2005-2009**

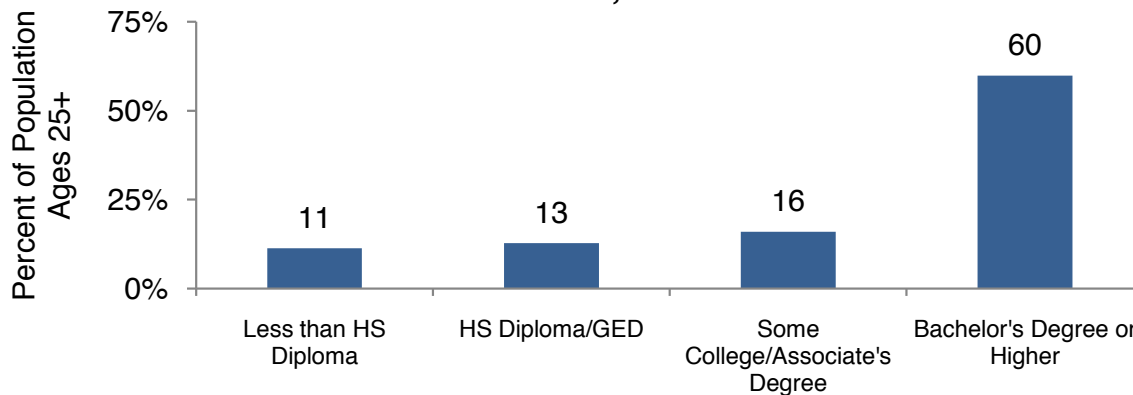
In Jamaica Plain, about half (48%) of occupied units were owner-occupied.

Figure 20.5 Housing Tenure, Jamaica Plain, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
48%	52%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 20.6 Educational Attainment, Jamaica Plain, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 20.6 Educational Attainment, Jamaica Plain, 2005-2009**

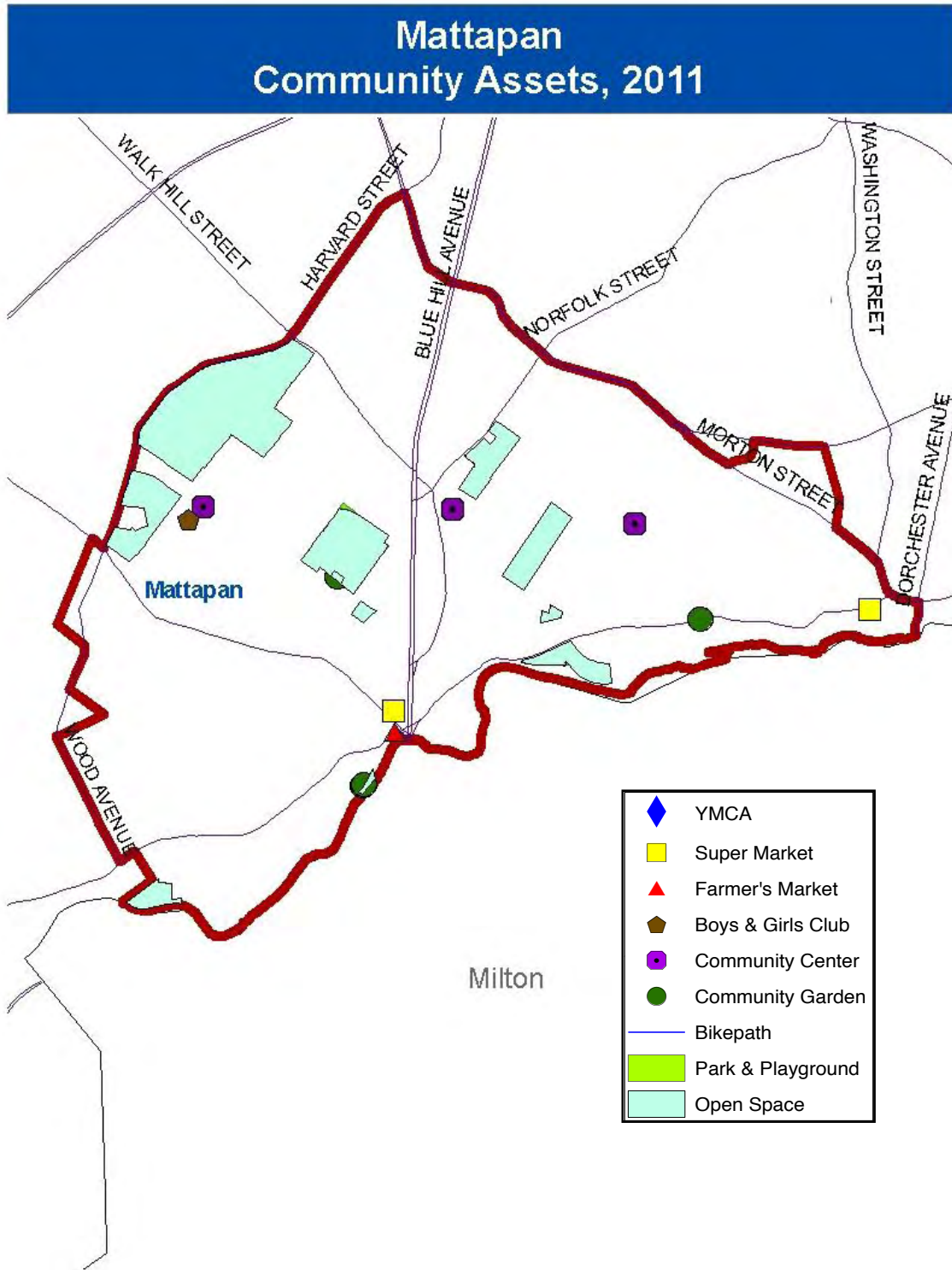
In Jamaica Plain, the percent of the population increased with level of educational attainment. Eleven percent had less than a high school diploma, 13% had a high school diploma/GED, 16% had some college/Associate's degree, and 60% had a Bachelor's degree or higher.

Mattapan

Mattapan, originally a section of Dorchester, was annexed to Boston in 1870. Mattapan is the original Mattahunt tribe's name for the area.

At the turn of the 20th century, the neighborhood became home to Irish and Jewish immigrant groups. From the 1920s through the 1950s, Blue Hill Avenue was the center of Boston's Jewish community. Over the last two decades, Mattapan has become home to many Haitian immigrants. The neighborhood now has the largest Haitian community in Massachusetts.



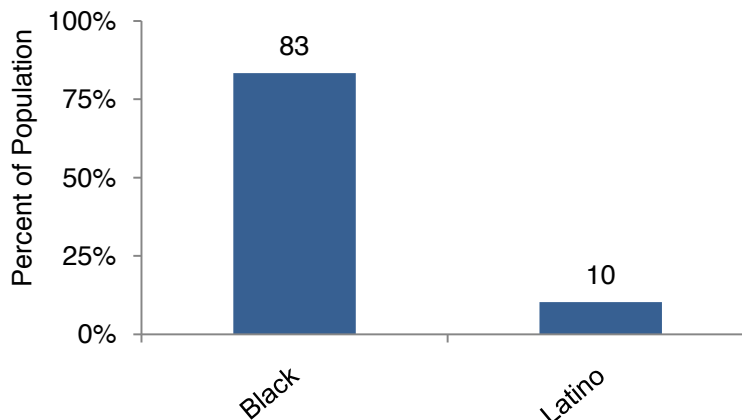


■ **Figure 21.1 Population Estimate by Race/Ethnicity, Mattapan, 2005-2009**

In 2005-2009, Mattapan had an estimated population of 18,317 residents. Of these, 58% were females and 42% were males (data not shown).

In 2005-2009, 83% of Mattapan residents identified themselves as Black and 10% as Latino.

Figure 21.1 Population Estimate by Race/Ethnicity*, Mattapan, 2005-2009



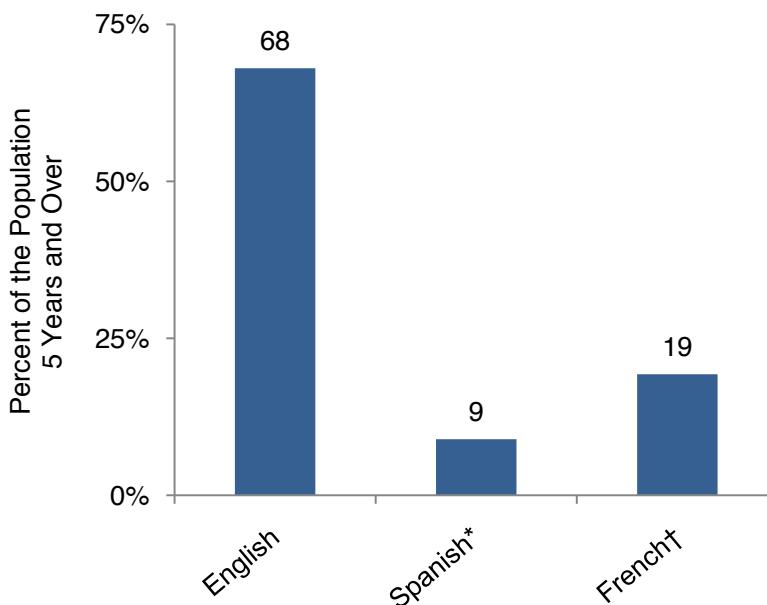
*Individuals who were identified as "Asian," "White," "Other race," or "Two or more races" were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 21.2 Languages Spoken at Home, Mattapan, 2005-2009**

Just under a third (32%) of Mattapan residents spoke a language other than English at home. Other than English, primary languages spoken at home were French (19%) and Spanish (9%).

Figure 21.2 Languages Spoken at Home, Mattapan, 2005-2009



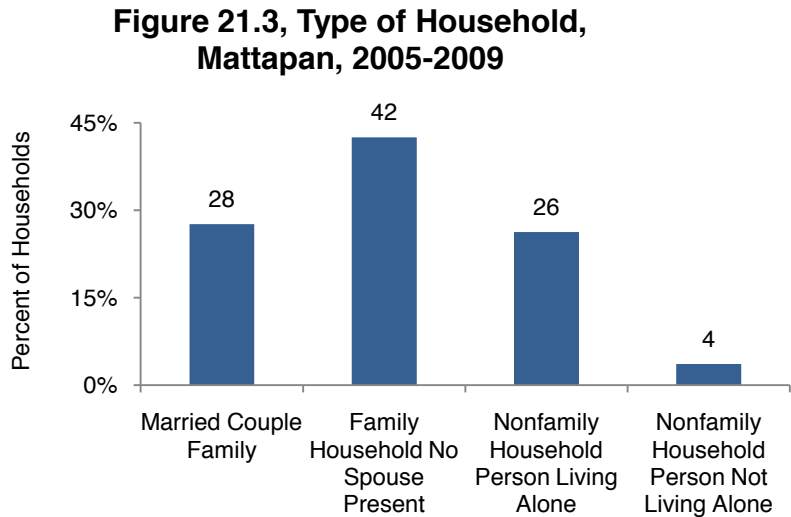
*Spanish includes Spanish Creole

†French includes Patois, Cajun, and French Creole

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 21.3, Type of Household, Mattapan, 2005-2009

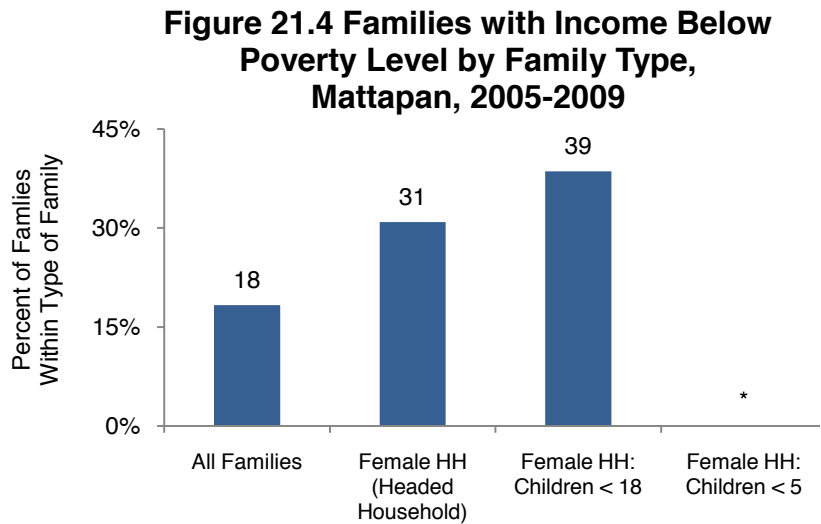
In Mattapan, 70% of households were considered family households. Among household types, the highest percentage were family households without a spouse present. The lowest percentage of households were nonfamily households with individuals not living alone.



DATA SOURCE: U.S. Census Bureau, 2005-2009 American Community Survey

Figure 21.4 Families with Income Below Poverty Level by Family Type, Mattapan, 2005-2009

The average median annual household income for Mattapan residents was \$44,376. Twenty-three percent of Mattapan residents and 18% of all families were living on income below the poverty level (data not shown). A higher percentage of female headed households (31%) and female headed households with children under the age of 18 (39%) had an income below the poverty level compared with all families (18%).



* Insufficient Sample Size

DATA SOURCE: U.S. Census Bureau, 2005-2009 American Community Survey

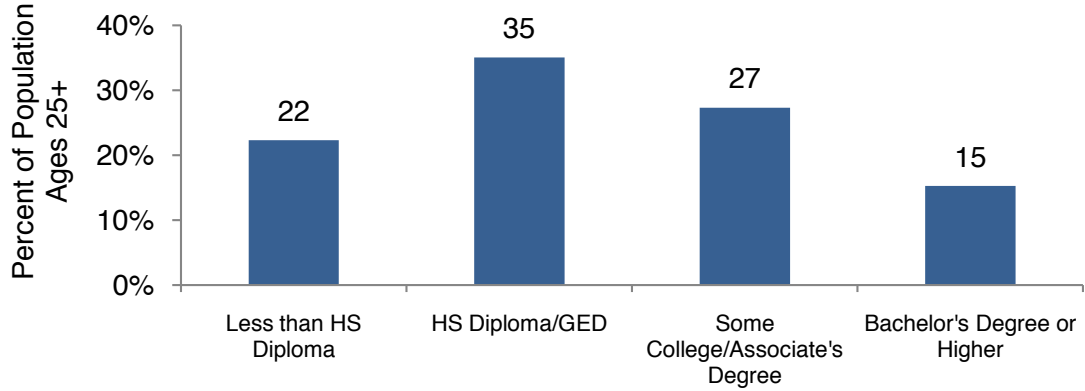
Figure 21.5 Housing Tenure, Mattapan, 2005-2009

In Mattapan, just over half (55%) of occupied units were renter-occupied.

Owner-Occupied Units	Renter-Occupied Units
45%	55%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 21.6 Educational Attainment, Mattapan, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 21.6 Educational Attainment, Mattapan, 2005-2009**

Less than one-fifth of the population in Mattapan had a Bachelor's degree or higher (15%). A higher percent of the population had only a high school diploma/GED (35%).

North Dorchester

Dorchester was known as Mattapan by the Wampanoag Indians; the Puritans named the area Dorchester after the English town from which they immigrated. Dorchester was annexed by Boston in 1870.

North Dorchester includes Edward Everett Square and Uphams Corner, where the Puritans' first settlement was established. Boston's oldest home, the James Blake House (built in 1648) and one of the country's oldest cemeteries, the Old Burial Ground (established in 1634) are located in this area. The John F. Kennedy Library, the University of Massachusetts/Boston, and the Massachusetts Archives and Historical Museum are located in North Dorchester's Harbor Point (formerly known as Columbia Point). Malibu Beach is also located in North Dorchester.



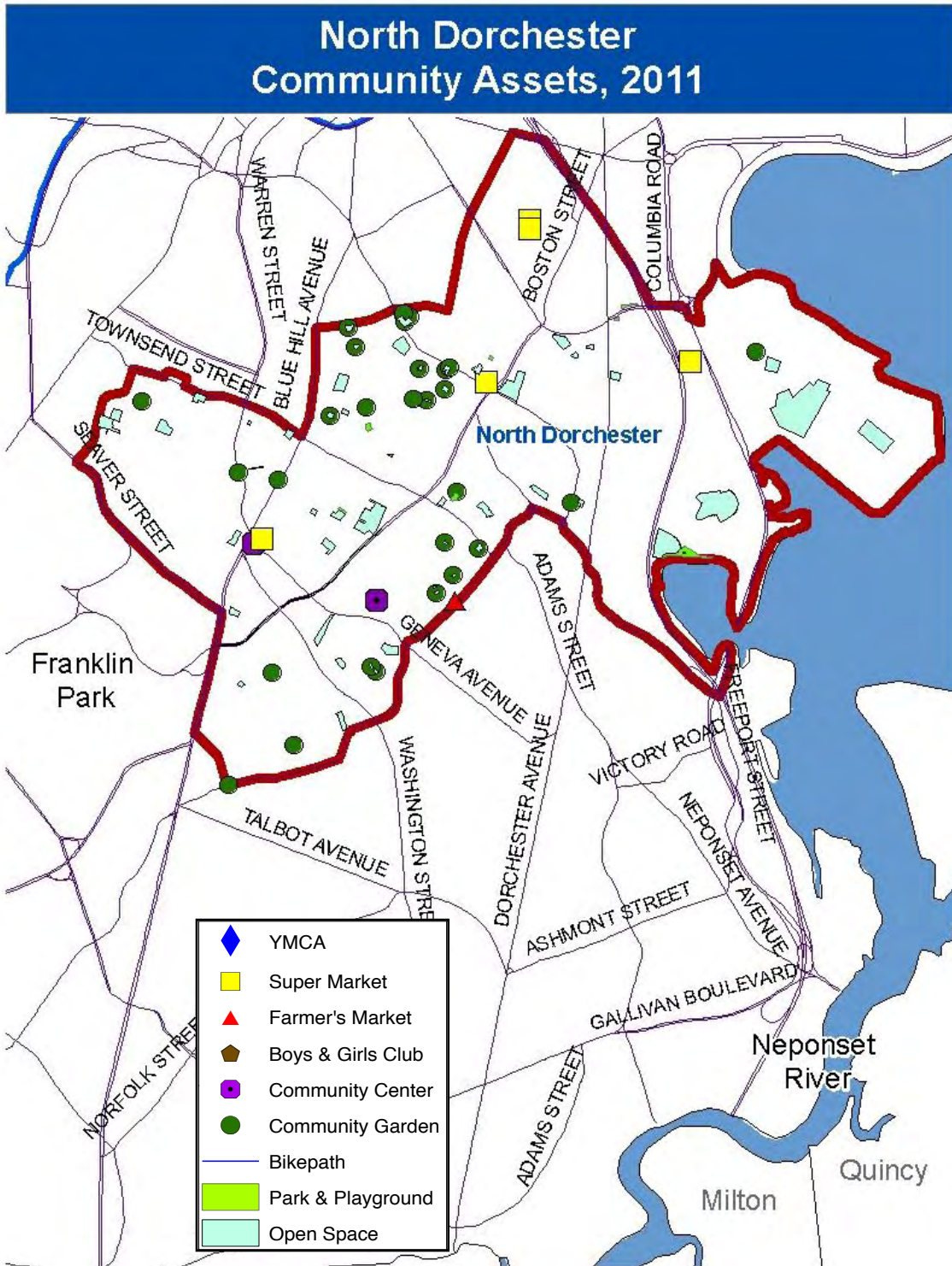
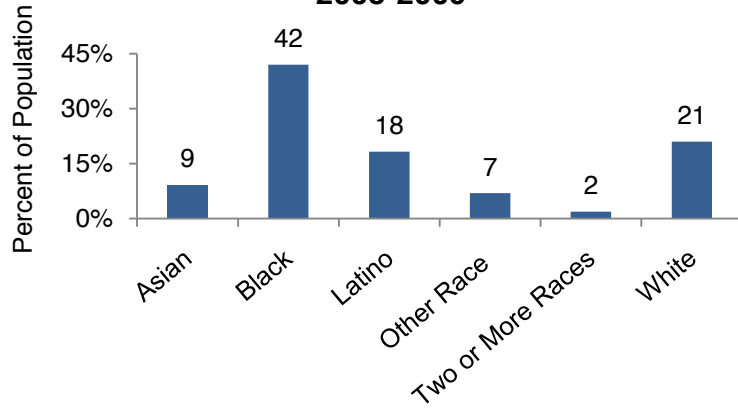


Figure 22.1 Population by Race/Ethnicity, North Dorchester, 2005-2009

In 2005-2009, North Dorchester had an estimated population of 79,049 residents. Of these, 52% were females and 48% were males (data not shown).

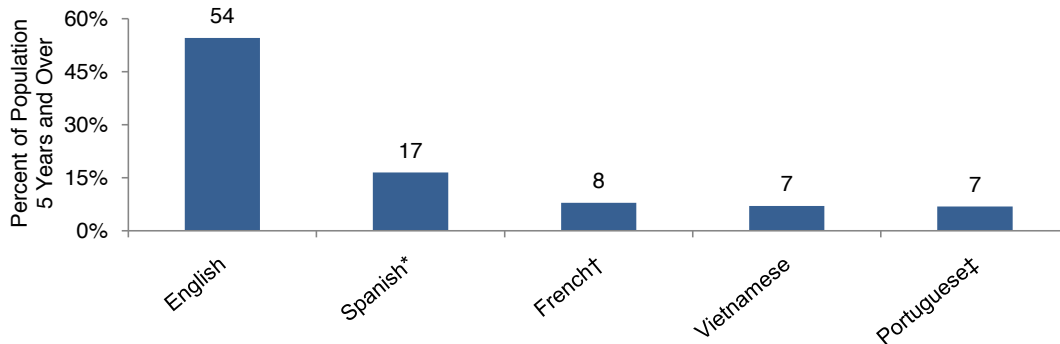
In 2005-2009, 42% of North Dorchester residents identified themselves as Black, 21% as White, 18% as Latino, 9% as Asian, 7% as other race (which includes American Indians, Alaskan Natives, Native Hawaiians, Pacific Islanders, and some other races), and 2% as belonging to two or more races.

Figure 22.1 Population Estimate by Race/Ethnicity, North Dorchester, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 22.2 Languages Spoken at Home, North Dorchester, 2005-2009



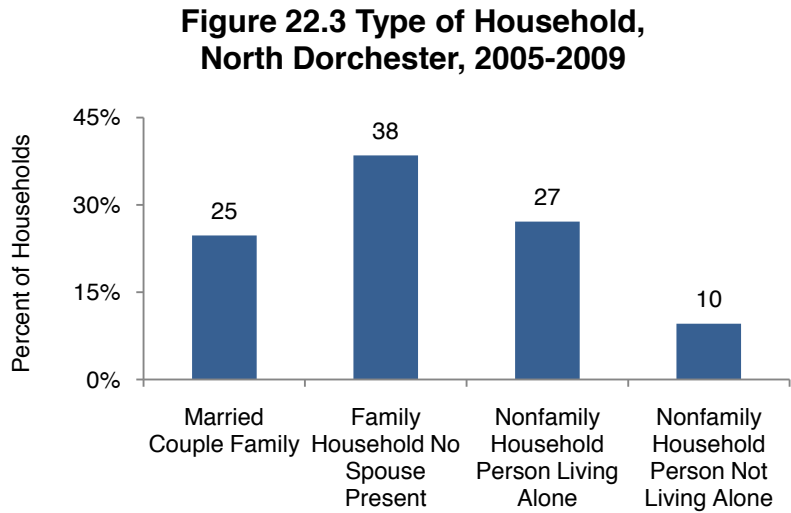
*Spanish includes Spanish Creole
 †French includes Patois, Cajun, and French Creole
 ‡Portuguese includes Portuguese Creole
 DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 22.2 Languages Spoken at Home, North Dorchester, 2005-2009

Just under half (46%) of North Dorchester residents spoke a language other than English at home. Other than English, primary languages spoken at home were Spanish (17%), French (8%), Vietnamese (7%), and Portuguese (7%).

Figure 22.3 Type of Household, North Dorchester, 2005-2009

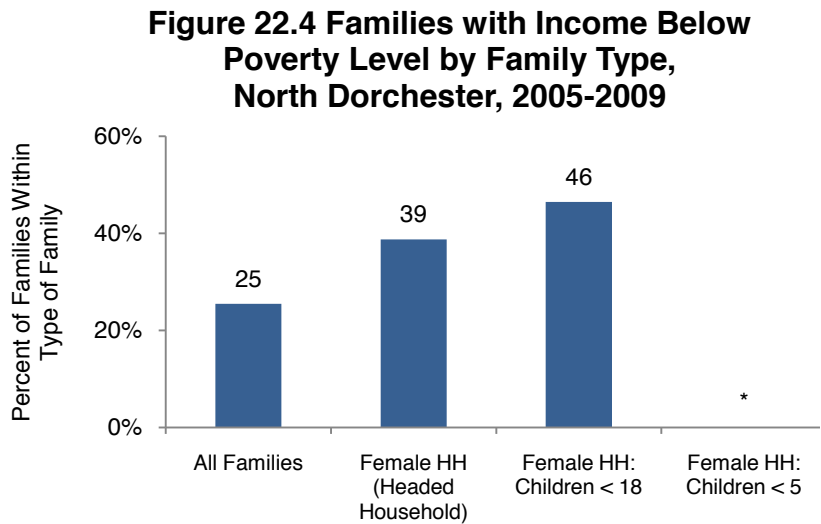
In North Dorchester, 63% of all households were considered family households, while 27% of all households consisted of individuals living alone. The highest percentage of household types consisted of family households without a spouse present.



DATA SOURCE: U.S. Census Bureau, 2005-2009 American Community Survey

Figure 22.4 Families with Income Below Poverty Level by Family Type, North Dorchester, 2005-2009

The average median annual household income for residents in North Dorchester was \$35,466. Twenty-seven percent of all residents (data not shown) and 25% of all families were living on income below the poverty level. A higher percentage of female headed households (39%) and female headed households with children under the age of 18 (46%) had an income below poverty compared with all families.



* Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 22.5 Housing Tenure, North Dorchester, 2005-2009

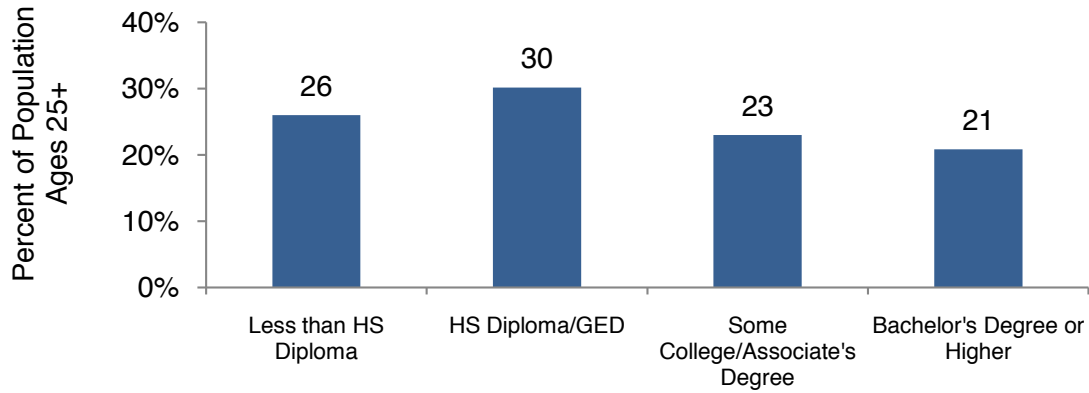
In North Dorchester, 68% of occupied units were renter-occupied.

Figure 22.5 Housing Tenure, North Dorchester, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
32%	68%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 22.6 Educational Attainment, North Dorchester, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 22.6 Educational Attainment, North Dorchester, 2005-2009**

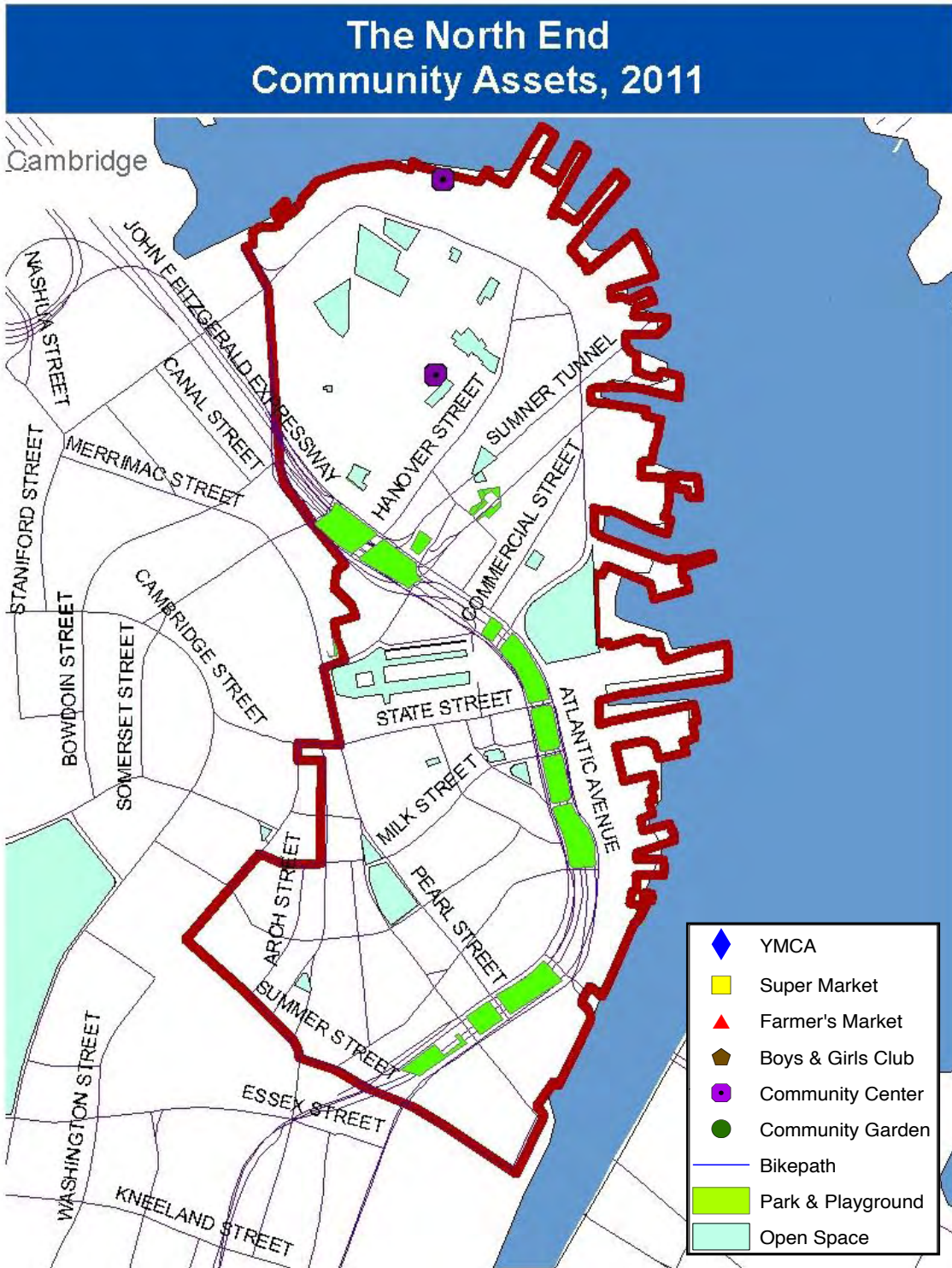
In North Dorchester, a little over one-fifth of the population (21%) had a Bachelor's degree or higher. Higher percentages of the population had a high school diploma/GED (30%), or less than a high school diploma (26%).

North End

The North End is known as Boston's first neighborhood. By the 1750s, it had a thriving commercial base, a busy seaport, and large estates for its wealthy merchants. Paul Revere, known for his 1775 ride to warn of the approach of British soldiers, was born in the North End and also named Boston's first health officer in 1799.

The number of Irish immigrants settling in the North End increased dramatically in the 1840s as the Famine Irish arrived. By the 1920s, Italian immigrants became the largest immigrant group in the North End. The 1930 Census reported that 44,000 residents of Italian descent lived in the North End. The Italian influence continues in the neighborhood's wealth of Italian restaurants, stores, and social clubs.

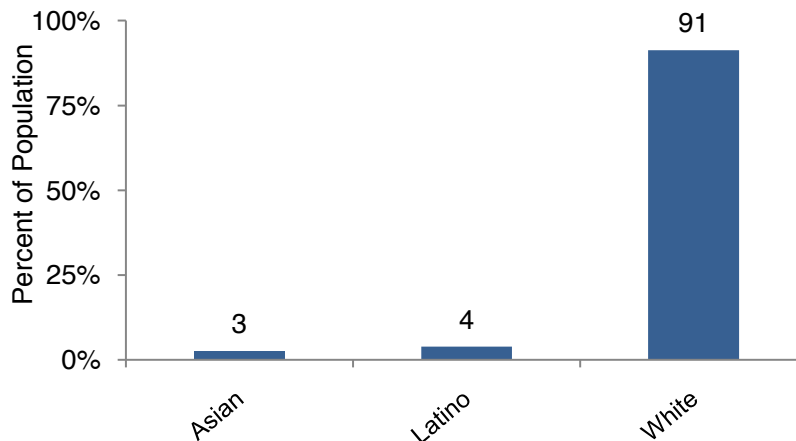




■ **Figure 23.1 Population Estimate by Race/Ethnicity, North End, 2005-2009**

In 2005-2009, the North End, had an estimated population of 12,969 residents. Of these, 55% were females and 45% were males (data not shown).

Figure 23.1 Population Estimate by Race/Ethnicity*, North End, 2005-2009



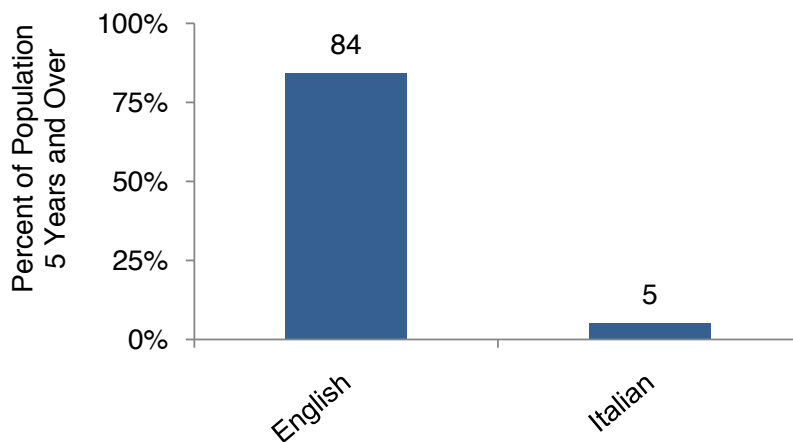
*Individuals who were identified as "Other race" or "Two or more races" were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 23.2 Languages Spoken at Home, North End, 2005-2009**

In 2005-2009, 84% of North End residents reported English as the primary language spoken at home followed by Italian (5%). Other, less common languages were of insufficient sample size to report.

Figure 23.2 Languages Spoken at Home, North End, 2005-2009



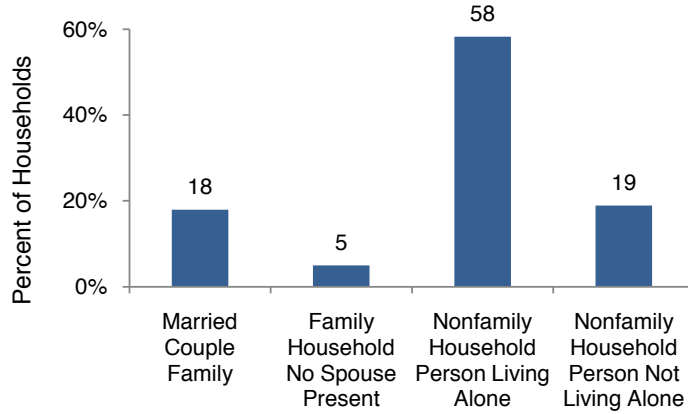
DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 23.3 Type of Household, North End, 2005-2009

In the North End, 23% of all households were considered family households. The majority of households consisted of individuals living alone (58%).

The average median annual household income for residents in the North End was \$74,834. Ten percent of North End residents were living on income below the poverty level (data not shown).

Figure 23.3 Type of Household, North End, 2005-2009



Data Source: US Census Bureau, 2005-2009 American Community Survey

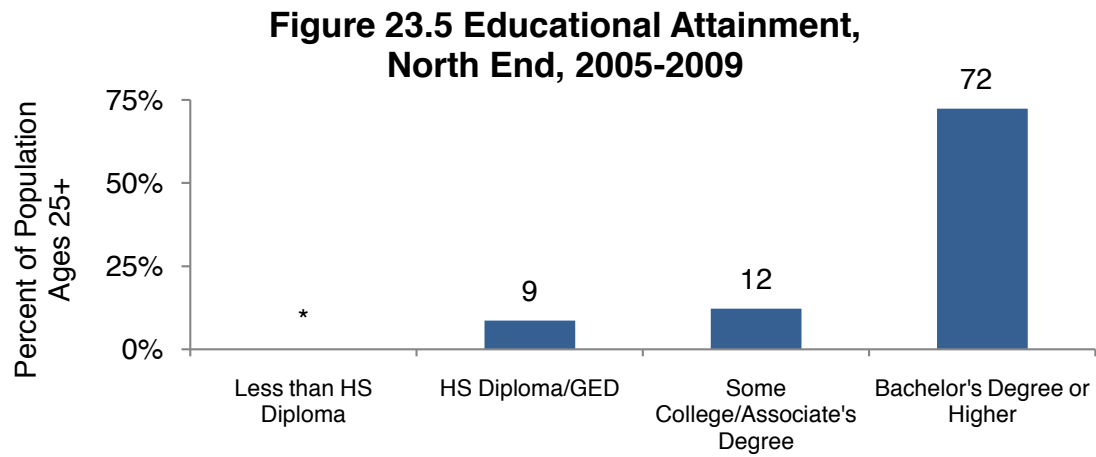
Figure 23.4 Housing Tenure, North End, 2005-2009

In the North End, 67% of occupied units were renter-occupied.

Figure 23.4 Housing Tenure, North End, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
33%	67%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey



*Insufficient sample size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 23.5 Educational Attainment, North End, 2005-2009**

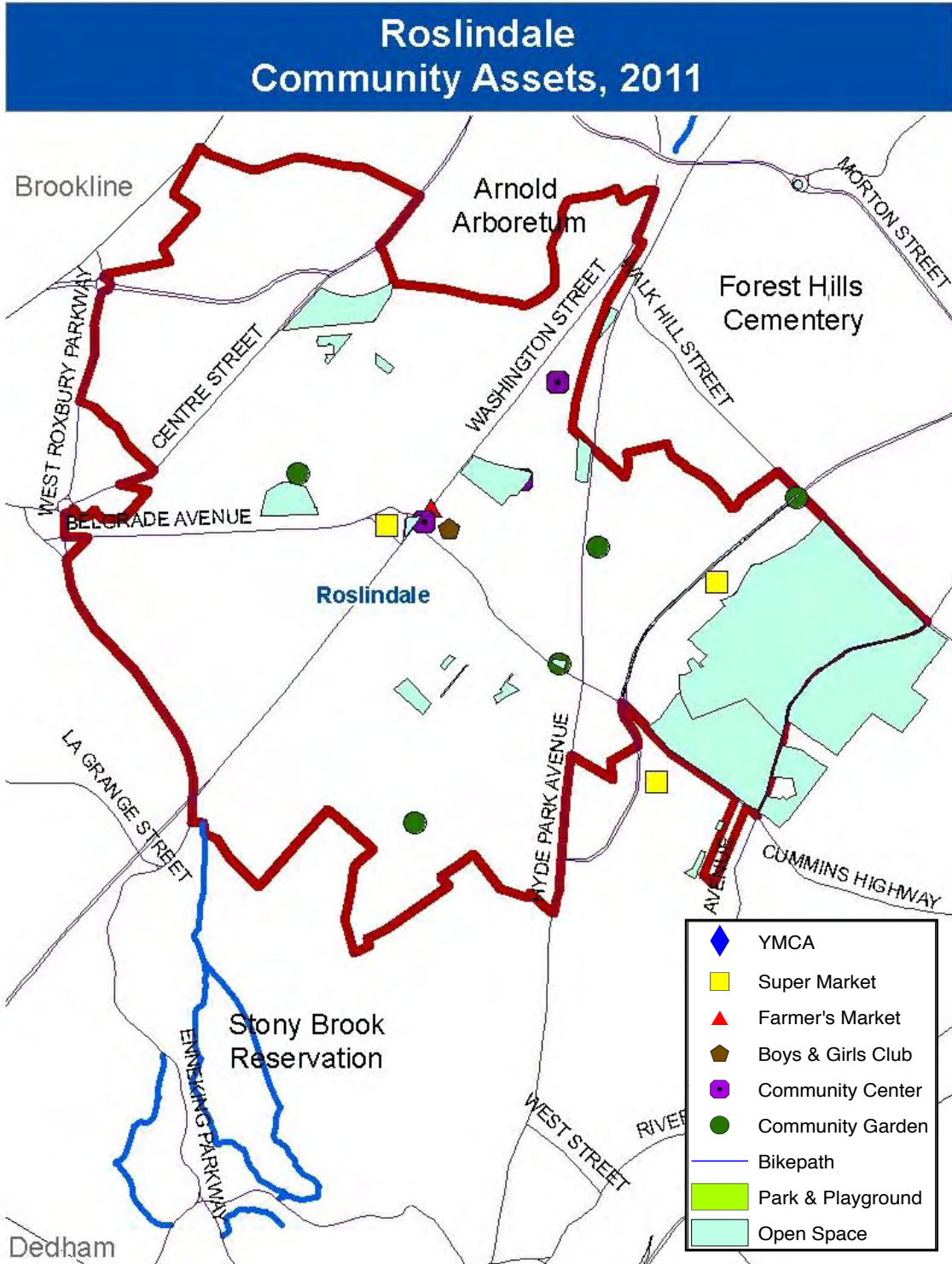
In the North End, nearly three-fourths of the population had attained a Bachelor's degree or higher (72%). This was significantly higher than for other levels of educational attainment.

Roslindale

Roslindale was originally part of the City of Roxbury and was called South Street Crossing. The establishment of a post office branch in 1870 precipitated the name change when the Postal Service rejected the name South Street Crossing. Officials decided to name the area after Roslyn, a town in Scotland; “dale” was added as the area was surrounded by hills. The neighborhood was annexed to the City of Boston with West Roxbury in 1873.

For most of the 20th century, Roslindale Square was a thriving business district. The 1970s brought competition from suburban malls, which forced businesses to close, stores to remain vacant, and the Square to be devoid of shoppers. An active local revitalization effort that began in the 1980s earned Roslindale Square a “Main Street” award from the National Trust for Historic Preservation. It is known nationally as a model of neighborhood economic revitalization.



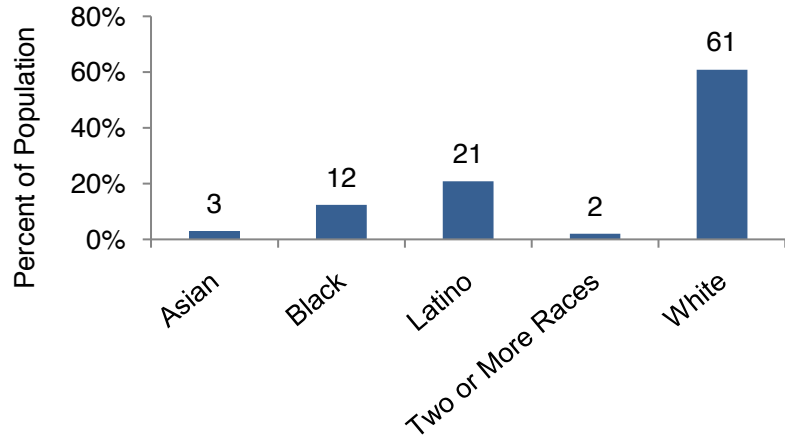


■ **Figure 24.1 Population Estimate by Race/Ethnicity, Roslindale, 2005-2009**

In 2005-2009, the estimated population of Roslindale was 37,035 residents. Of these, 46% were females and 54% were males (data not shown).

Sixty-one percent of Roslindale residents identified themselves as White, 21% identified as Latino, 12% as Black, and 3% as Asian.

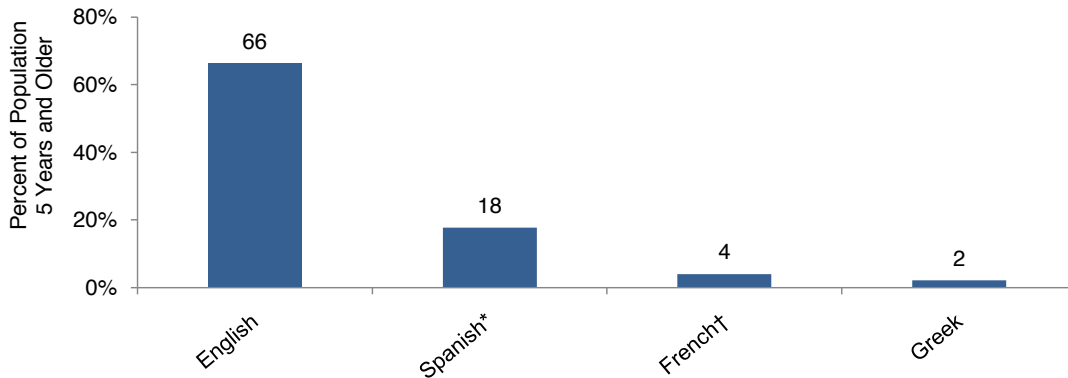
Figure 24.1 Population Estimate by Race/Ethnicity*, Roslindale, 2005-2009



*Individuals who were identified as "Other race" were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 24.2 Languages Spoken at Home, Roslindale, 2005-2009



*Spanish includes Spanish Creole

†French includes Patois, Cajun, and French Creole

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

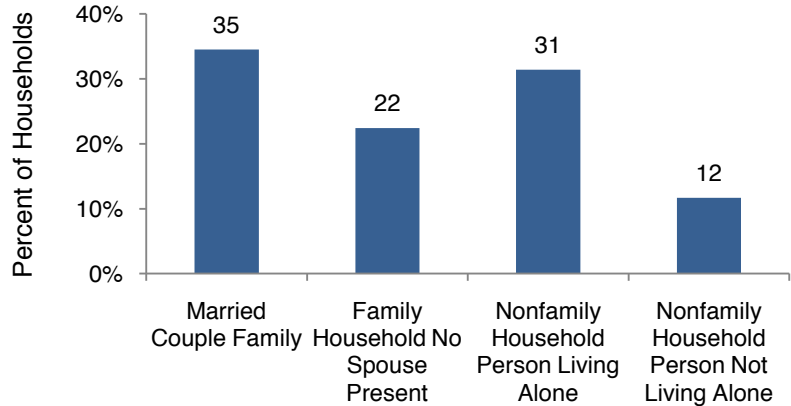
■ **Figure 24.2 Languages Spoken at Home, 2005-2009**

For Roslindale residents age 5 years and over, English (66%) was the language most frequently reported as being spoken at home, followed by Spanish (18%), French (4%), and Greek (2%).

Figure 24.3 Type of Household, Roxbury, 2005-2009

In Roslindale, 57% of all households were considered family households. Of family households, there was a higher percentage of married couple families compared with families without a spouse present. Thirty one percent of households consisted of individuals living alone. Twelve percent of households were individuals not living alone.

Figure 24.3 Type of Household, Roslindale, 2005-2009

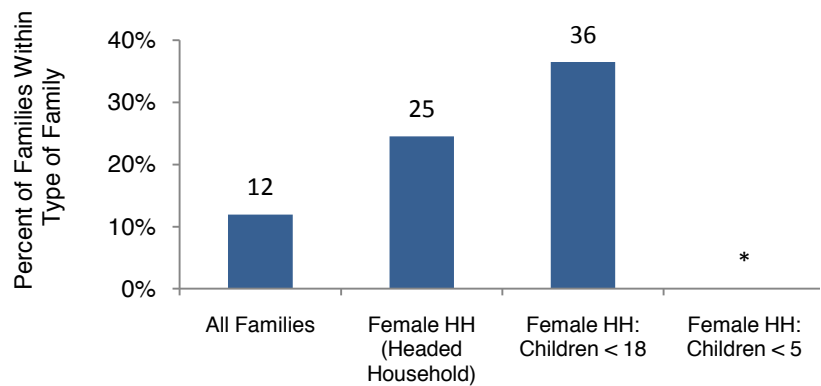


DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 24.4 Families with Income Below Poverty Level by Family Type, Roslindale, 2005-2009

The average median annual household income for residents in Roslindale was \$65,817. Fourteen percent of Roslindale residents were living on income below the poverty level (data not shown). By family type, a higher percentage of female headed households with children under the age of 18 (36%) had income below the poverty level compared with all families (12%).

Figure 24.4 Families with Income Below Poverty Level by Family Type, Roslindale, 2005-2009



*Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 24.5 Housing Tenure, Roslindale, 2005-2009

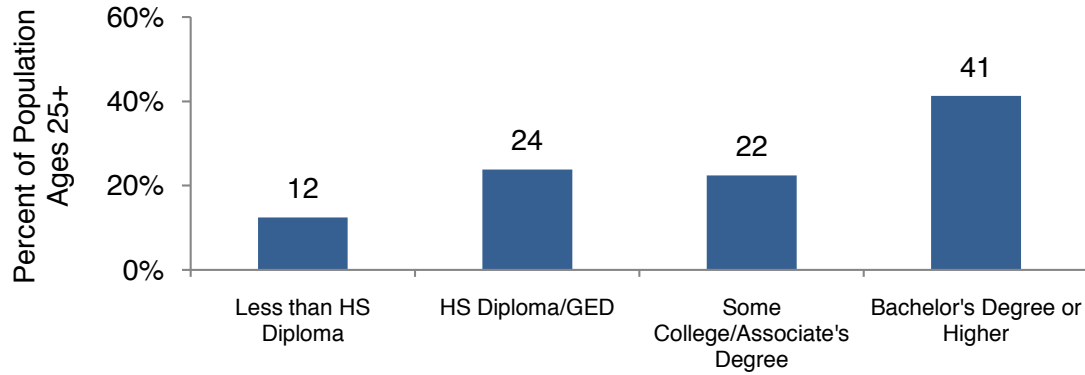
In Roslindale, just over half (56%) of occupied units were owner-occupied.

Figure 24.5 Housing Tenure, Roslindale, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
56%	44%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 24.6 Educational Attainment, Roslindale, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

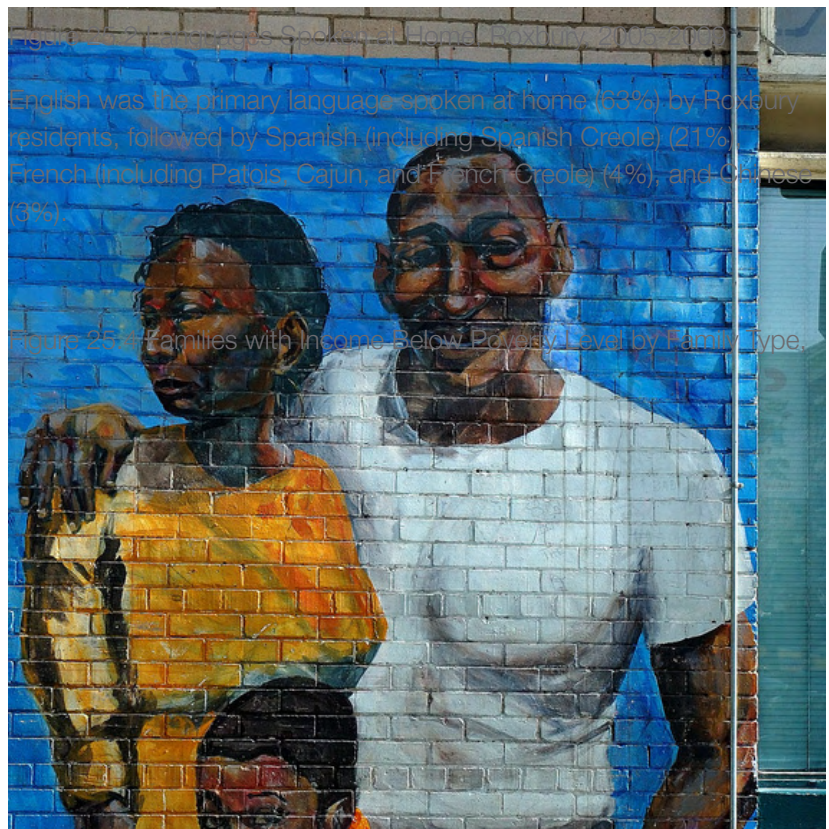
■ **Figure 24.6 Educational Attainment, Roslindale 2005-2009**

In Roslindale, 41% of the population had a Bachelor's degree or higher. This was significantly higher than for all other levels of educational attainment in Roslindale.

Roxbury

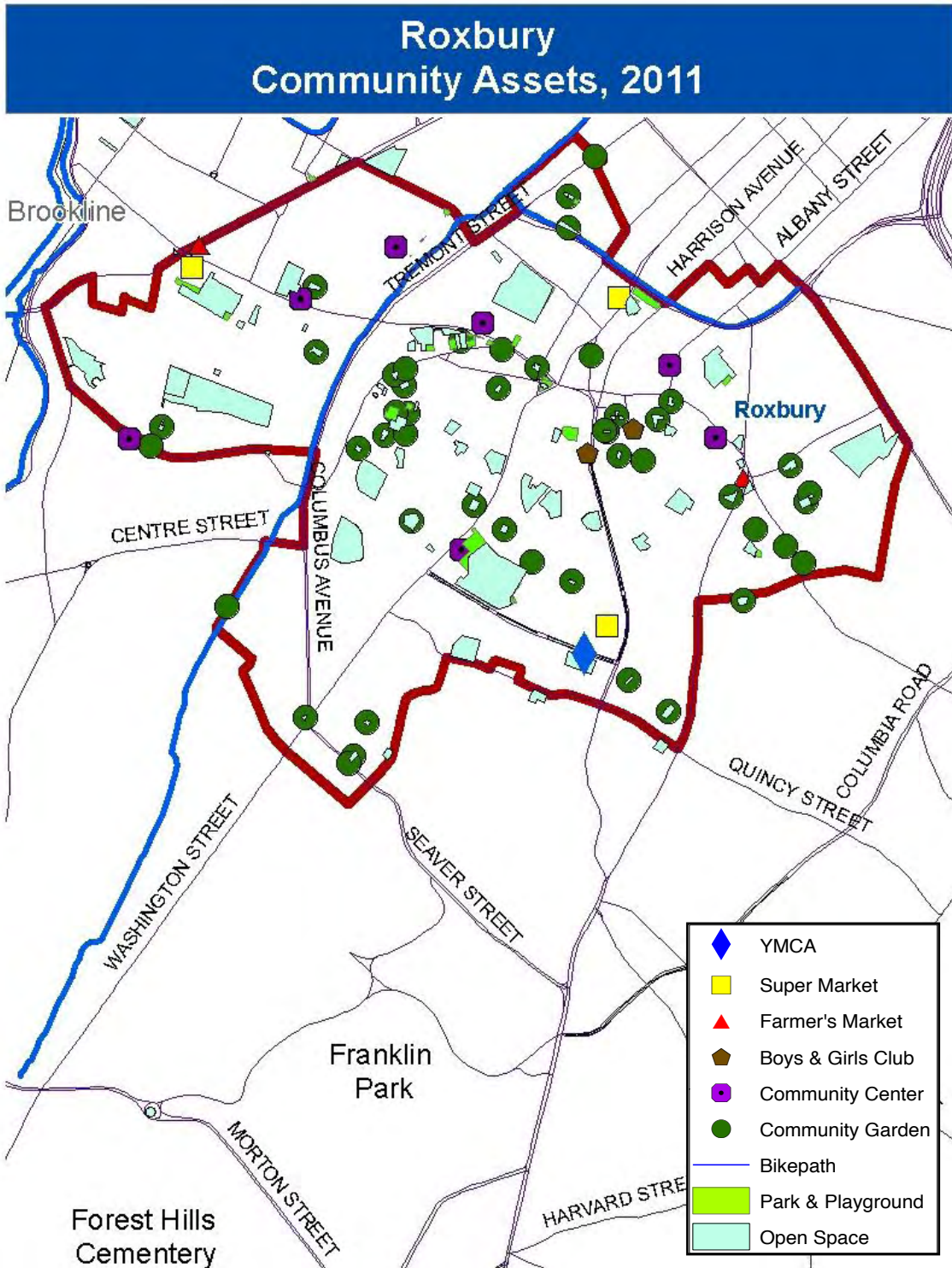
When founded in 1630, Roxbury was a large independent community that included what are now Mission Hill, West Roxbury, Roslindale, and Jamaica Plain. The many outcroppings of a locally found stone called puddingstone led the colonists to call it “Rocksberry,” which was later shortened to “Roxbury.” The community was incorporated as a city in 1846 and was annexed to Boston in 1868.

In the 1880s, the 527-acre Franklin Park was designed by Frederick Law Olmsted as the “largest and final jewel” in Boston’s Emerald Necklace. English, Irish, and German immigrants were the first Europeans to settle in Roxbury. In the early 1900s, a large Jewish community lived in the Grove Hall area along Blue Hill Avenue. The movement of Black Boston residents from Beacon Hill to the South End and then to Roxbury and the large migration of Black residents from the South to Northern cities after World War II established Roxbury as the center of the Black community in Boston.



English was the primary language spoken at home (63%) by Roxbury residents; followed by Spanish (including Spanish Creole) (21%), French (including Patois, Cajun, and French Creole) (4%), and Chinese (3%).

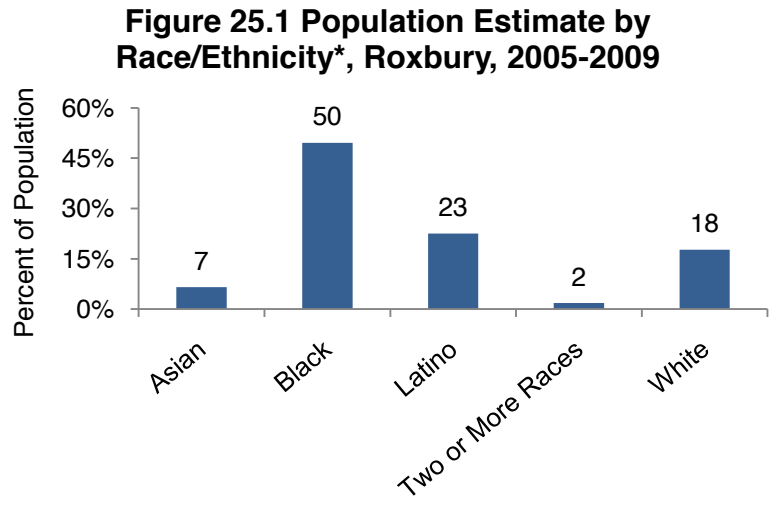
Figure 25 Families with Income Below Poverty Level by Family Type



■ **Figure 25.1 Population Estimate by Race/Ethnicity, Roxbury, 2005-2009**

In 2005-2009, Roxbury had an estimated population of 52,642 residents. Of these, 52% were females and 48% were males (data not shown).

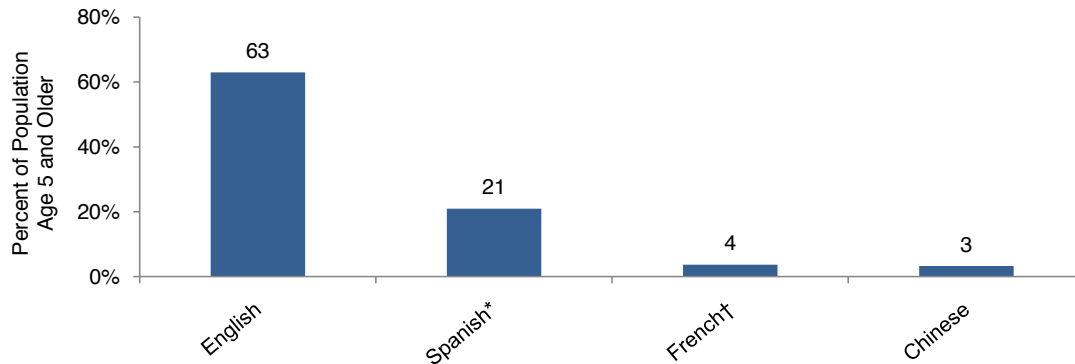
In 2005-2009, 50% of Roxbury residents identified themselves as Black, 23% identified as Latino, 18% identified as White, and 7% identified as Asian. Two percent of residents of Roxbury identified themselves as belonging to two or more racial/ethnic groups.



*Individuals who were identified as "Other race" were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 25.2 Languages Spoken at Home, Roxbury, 2005-2009



*Spanish includes Spanish Creole

†French includes Patois, Cajun, and French Creole

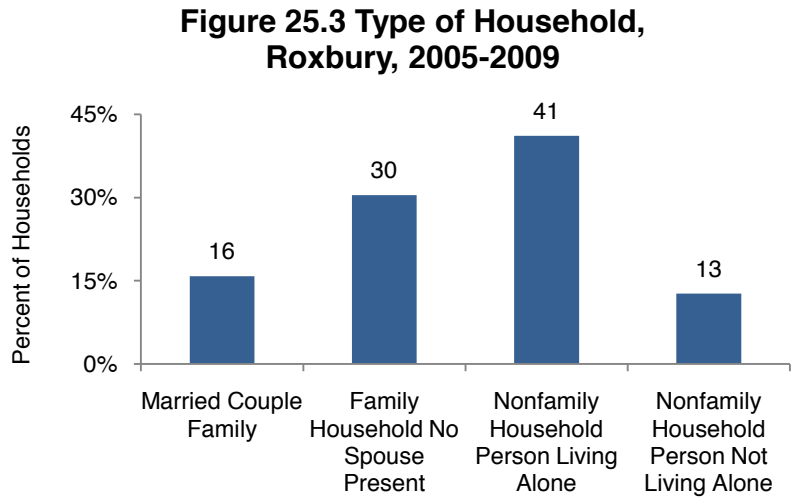
DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 25.2 Languages Spoken at Home, Roxbury, 2005-2009**

English was the primary language spoken at home (63%) by Roxbury residents, followed by Spanish (including Spanish Creole) (21%), French (including Patois, Cajun, and French Creole) (4%), and Chinese (3%).

Figure 25.3 Type of Household, Roxbury, 2005-2009

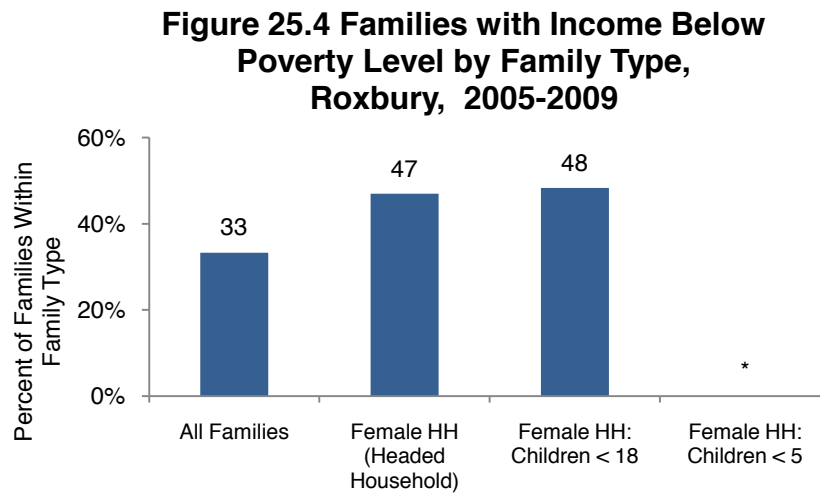
In Roxbury, the highest percentage of households consisted of individuals living alone (41%). Of family households, a higher percentage consisted of families without a spouse present.



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 25.4 Families with Income Below Poverty Level by Family Type, Roxbury, 2005-2009

The average median annual household income for Roxbury residents was \$28,490. Thirty-eight percent of residents were living on income below the poverty level (data not shown). A higher percentage of female headed households (47%) and female headed households with children under the age of 18 (48%) had income below the poverty level compared with all families (33%).



*Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

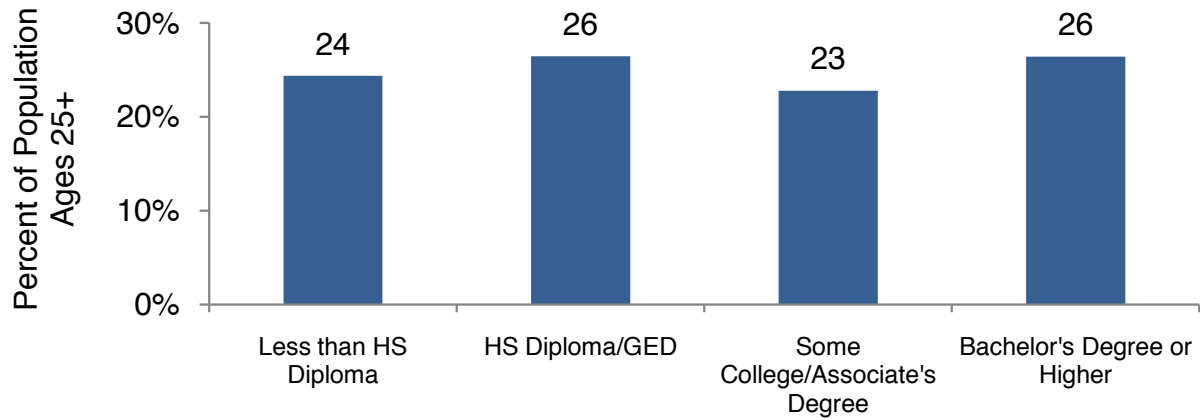
Figure 25.5 Housing Tenure, Roxbury, 2005-2009

In Roxbury, 79% of occupied units were renter-occupied.

Owner-Occupied Units	Renter-Occupied Units
21%	79%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 25.6 Educational Attainment, Roxbury, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 25.6 Educational Attainment, Roxbury, 2005-2009**

Educational attainment in Roxbury was similarly distributed among the four levels. One-fourth of the population had less than a high school diploma, 26% had a high school diploma/GED, 23% had some college/Associate's degree, and 26% had a Bachelor's degree or higher.

South Boston

South Boston was known as “Mattapanock” by Native Americans and then as “Dorchester Neck” by the colonists. Annexed in 1804, it was one of Boston’s first neighborhoods.

During the mid-1800s, the neighborhood was a major industrial center with foundries, machine shops, shipyards, and refineries. The neighborhood’s industrial growth led to an influx of Irish and other immigrants in the middle and late 1800s.

Through the 20th century, the neighborhood’s connection to Boston’s maritime economy, shipyard, and railroad jobs provided work for South Boston residents. In addition to shipyards and other waterfront industries, the neighborhood has miles of beaches and waterfront parks. In 1905, a Frederick Law Olmstead-designed motorway that runs the length of the beaches was completed – originally called the Strandway, it is now William J. Day Boulevard.

In the 1970s, the neighborhood received national attention for its violent opposition to school desegregation. It received national attention again in the 1990s when gay and lesbian groups were banned from marching in the Saint Patrick’s Day parade.



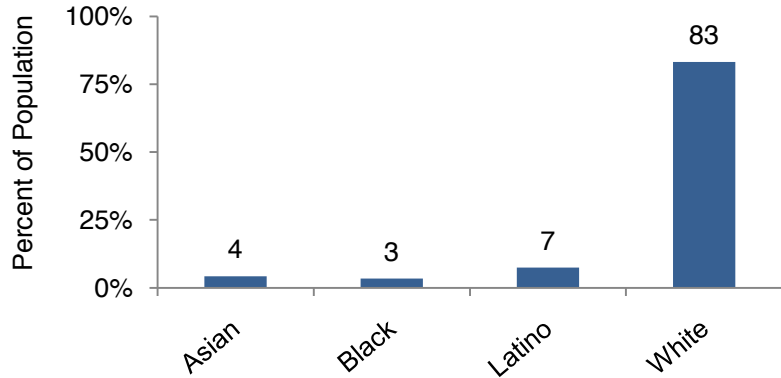


■ **Figure 26.1 Population Estimate by Race/Ethnicity, South Boston, 2005-2009**

In 2005-2009, the estimated population of South Boston was 35,352 residents. Of these, 54% were females and 46% were males (data not shown).

In 2005-2009, 83% of South Boston residents identified themselves as White, 7% identified as Latino, 4% identified as Asian, and 3% identified as Black.

Figure 26.1 Population Estimate by Race/Ethnicity*, South Boston, 2005-2009



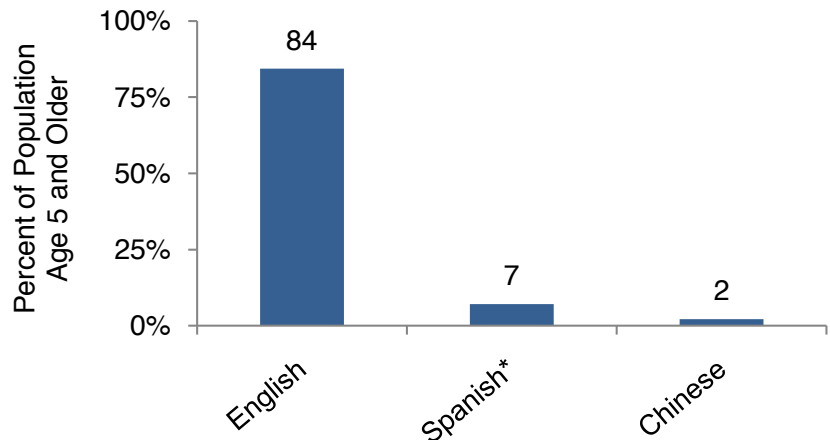
*Individuals who were identified as "Other race" or "Two or more races" were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 26.2 Languages Spoken at Home, South Boston, 2005-2009**

English was the primary language spoken at home (84%) by South Boston residents, followed by Spanish (including Spanish Creole) (7%) and Chinese (2%).

Figure 26.2 Languages Spoken at Home, South Boston, 2005-2009

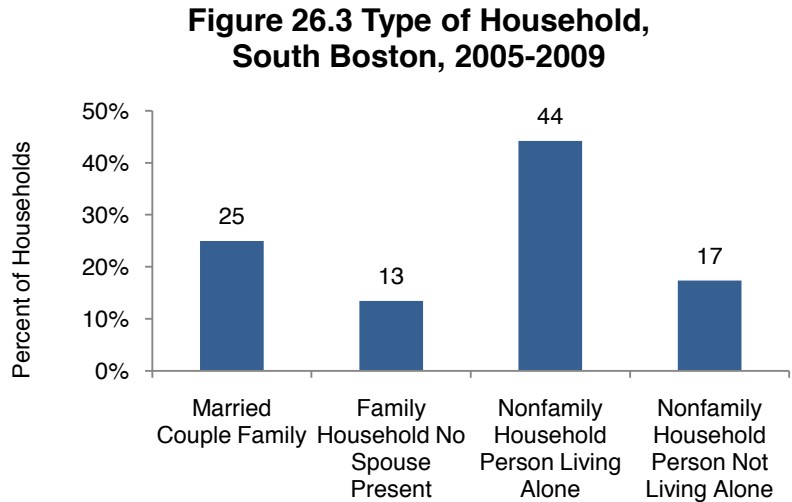


*Spanish includes Spanish Creole

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 26.3 Type of Household, South Boston, 2005-2009**

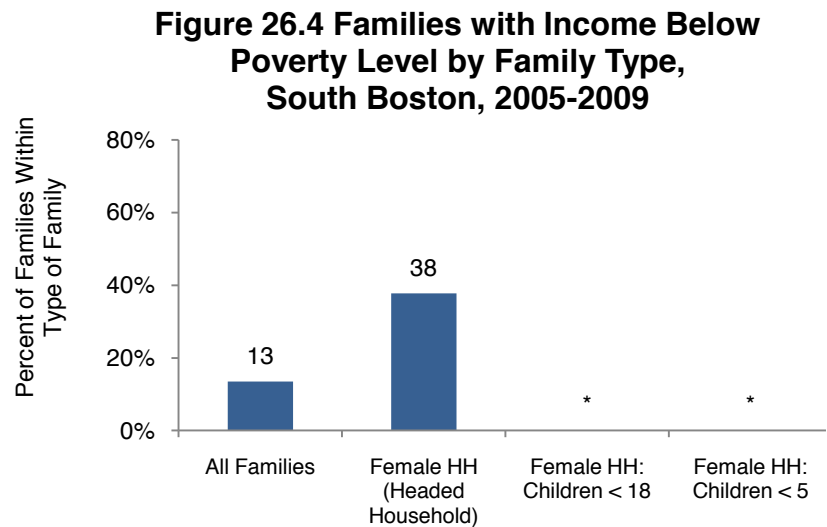
In South Boston, the highest percentage of households consisted of individuals living alone (44%). Thirty-eight percent of all households were considered family households and 17% were nonfamily households with individuals not living alone.



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 26.4 Families with Income Below Poverty Level by Family Type, South Boston, 2005-2009**

The average median annual household income for residents in South Boston was \$61,565. Sixteen percent of all South Boston residents (data not shown) and 13% of all families were living on income below the poverty level. Thirty-eight percent of female-headed households had an income below poverty level.



* Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 26.5 Housing Tenure, South Boston, 2005-2009**

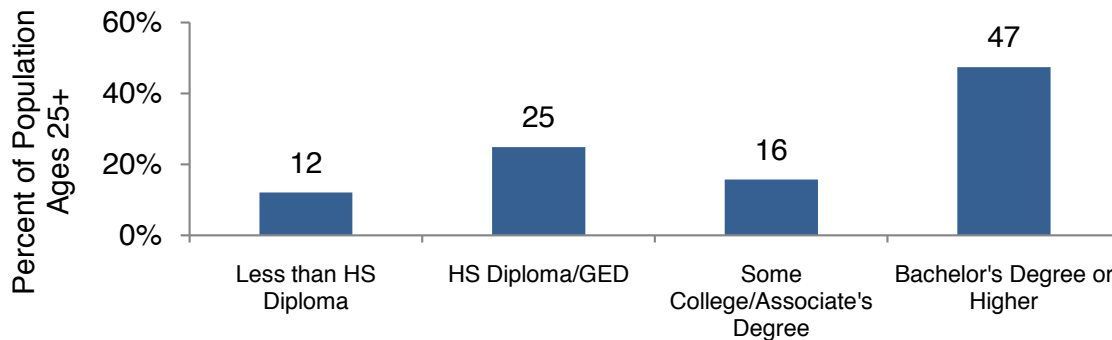
In South Boston, just over half (56%) of occupied units were renter-occupied.

Figure 26.5 Housing Tenure, South Boston, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
44%	56%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 26.6 Educational Attainment, South Boston, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 26.6 Educational Attainment, South Boston, 2005-2009**

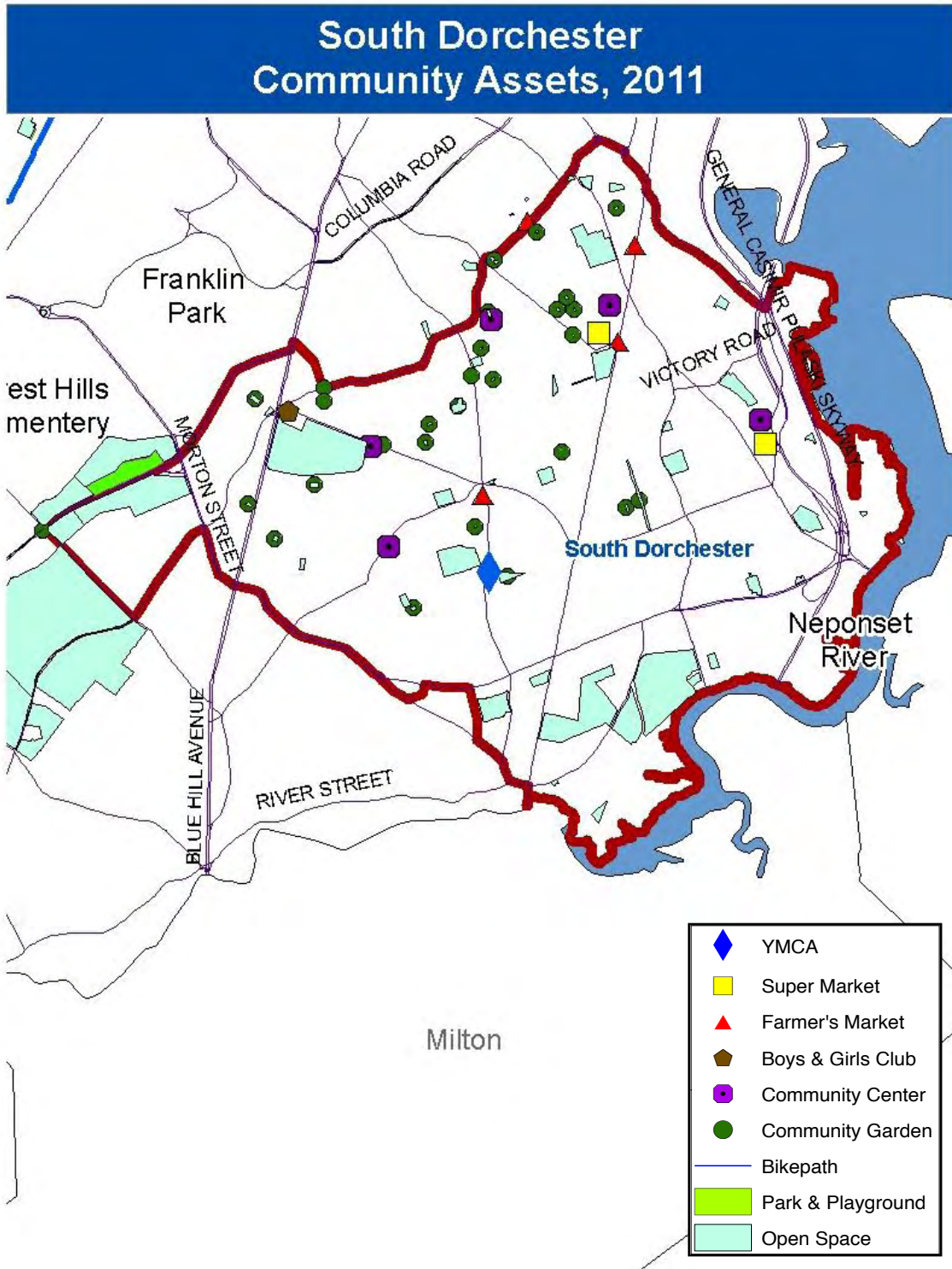
Almost half of the population in South Boston (47%) had a Bachelor's degree or higher. This was significantly greater than for all other levels of educational attainment in South Boston.

South Dorchester

Dorchester was named after the town of Dorchester in England, from which Puritans emigrated. The Wampanoag Indians had called the area Mattapan. Dorchester was annexed to Boston in 1870.

Many historic sites are located in South Dorchester. The Walter Baker Chocolate Mill was established in Lower Mills in 1765. Over the last 20 years, the mill has been converted to apartments and condominiums. The Pierce House, built in 1683, is Boston's second oldest home. William J. Devine Golf Course at Franklin Park, laid out in 1892, is the country's oldest public golf course.



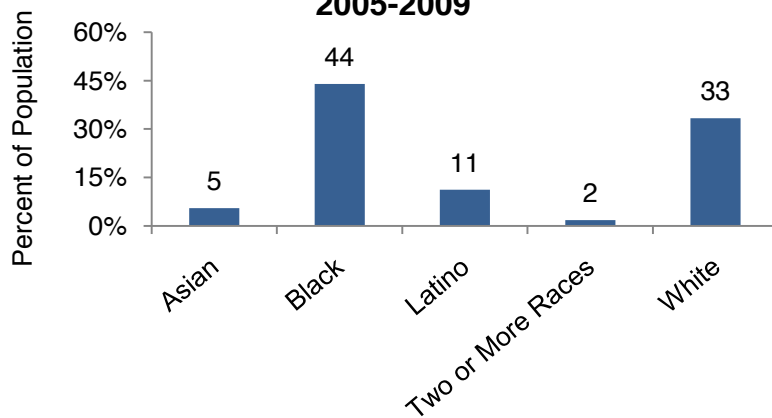


■ **Figure 27.1 Population Estimate by Race/Ethnicity, South Dorchester, 2005-2009**

From 2005-2009, South Dorchester had an estimated population of 47,817 residents. Of these, 54% were females and 46% were males (data not shown).

From 2005-2009, 44% of South Dorchester residents identified themselves as Black, 33% identified as White, 11% identified as Latino, and 5% identified as Asian. Two percent of South Dorchester residents identified themselves as belonging to two or more racial/ethnic groups.

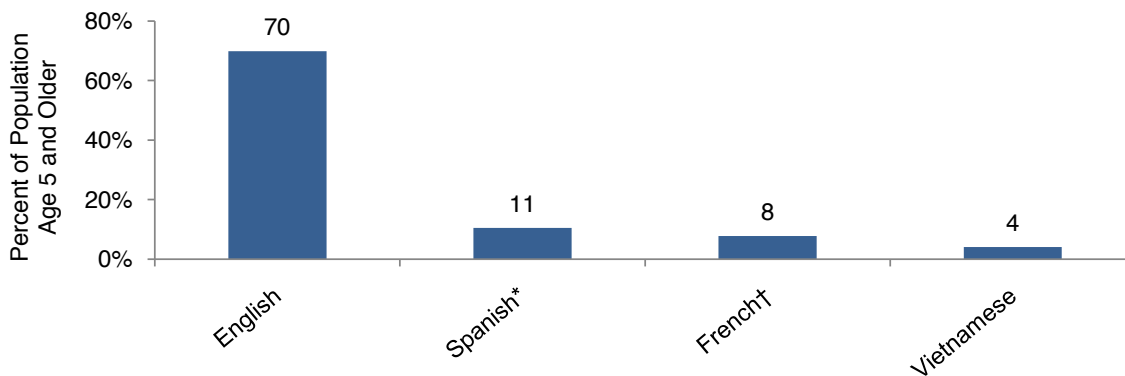
Figure 27.1 Population Estimate by Race/Ethnicity*, South Dorchester, 2005-2009



*Individuals who were identified as “Other race” were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 27.2 Languages Spoken at Home, South Dorchester, 2005-2009



*Spanish includes Spanish Creole

†French includes Patois, Cajun, and French Creole

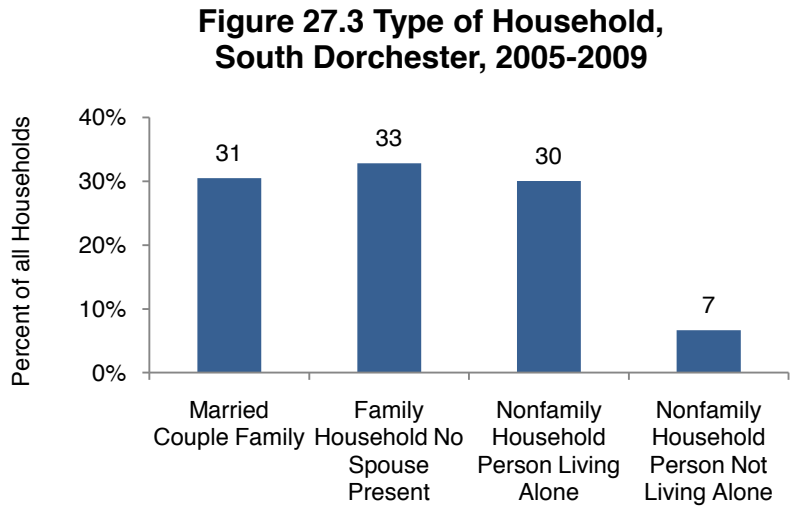
DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 27.2 Languages Spoken at Home, South Dorchester, 2005-2009**

English was the primary language spoken at home (70%) by South Dorchester residents, followed by Spanish (including Spanish Creole) (11%), French (including Patois, Cajun, and French Creole) (8%), and Vietnamese (4%).

Figure 27.3 Type of Household, South Dorchester, 2005-2009

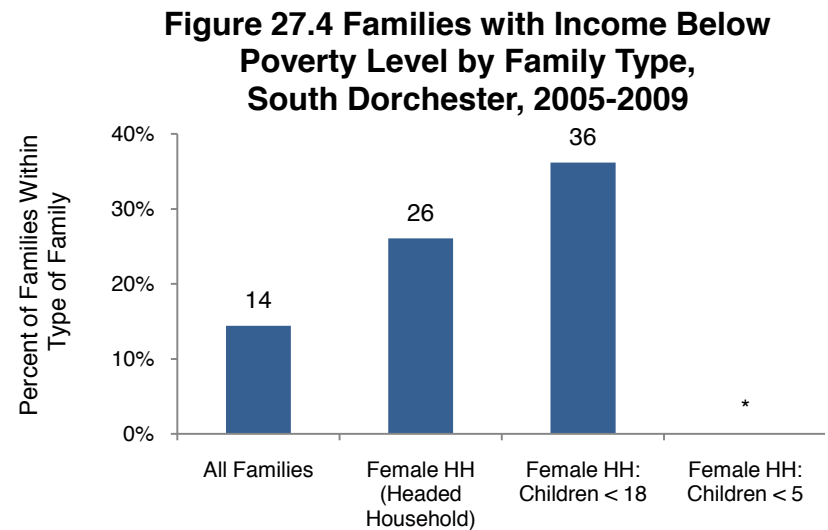
In South Dorchester, 64% of all households were considered family households. Thirty percent of all households consisted of individuals living alone. By type, the lowest percentage of households were considered nonfamily households with individuals not living alone (7%).



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 27.4 Families with Income Below Poverty Level by Family Type, South Dorchester, 2005-2009

In South Dorchester, the average median annual household income was \$47,460. Sixteen percent of residents in South Dorchester were living on income below the poverty level (data not shown). By family type, a higher percentage of female headed households with children under the age of 18 (36%) and of all female headed households (26%) had an income below the poverty level compared with all families (14%).



*Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 27.5 Housing Tenure, South Dorchester, 2005-2009

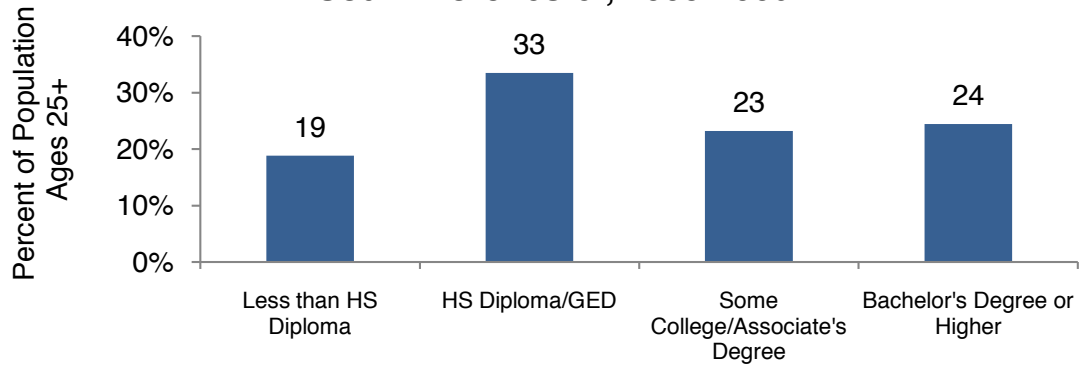
In South Dorchester, just over half (56%) of occupied units were renter-occupied.

Figure 27.5 Housing Tenure, South Dorchester, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
44%	56%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 27.6 Educational Attainment, South Dorchester, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 27.6 Educational Attainment, South Dorchester, 2005-2009**

One-third of the population in South Dorchester had a high school diploma/GED (33%). Lower percentages of the population had higher levels of educational attainment.

South End/ Chinatown

The South End and Chinatown were combined when reporting data in this report; however, the two are distinct neighborhoods with unique histories.

The South End was originally called “Boston Neck” as it was a narrow strip of land connecting Boston to the mainland. In the 1830s, the land was in-filled and Victorian townhouses were built for Boston’s wealthy merchant class.

Boston City Hospital, the country’s first municipal hospital, was established in 1864 in the South End. Churches and synagogues were built to accommodate growing congregations. The combination of inexpensive housing and proximity to social, health, and religious services have brought a variety of cultures, religions, and beliefs to the South End.

Today the South End neighborhood is home to a large gay and lesbian community and a mix of families and young professionals. As the largest Victorian neighborhood in the United States, the South End is a Landmark District and listed in the National Registry of Historical Places. The population in the South End/Chinatown in 2000 was 33,502, an 8.3% increase compared with 1990.

Chinatown, located between Boston’s downtown crossing and the South End, serves as the cultural and social center for the Asian community in New England. In the late nineteenth century, with the completion of the trans-continental railroad, Chinese men began moving to Boston to work in New England’s growing manufacturing industry. Chinatown’s beginnings can be traced to these early workers who set up tents and lived on Ping On Alley.



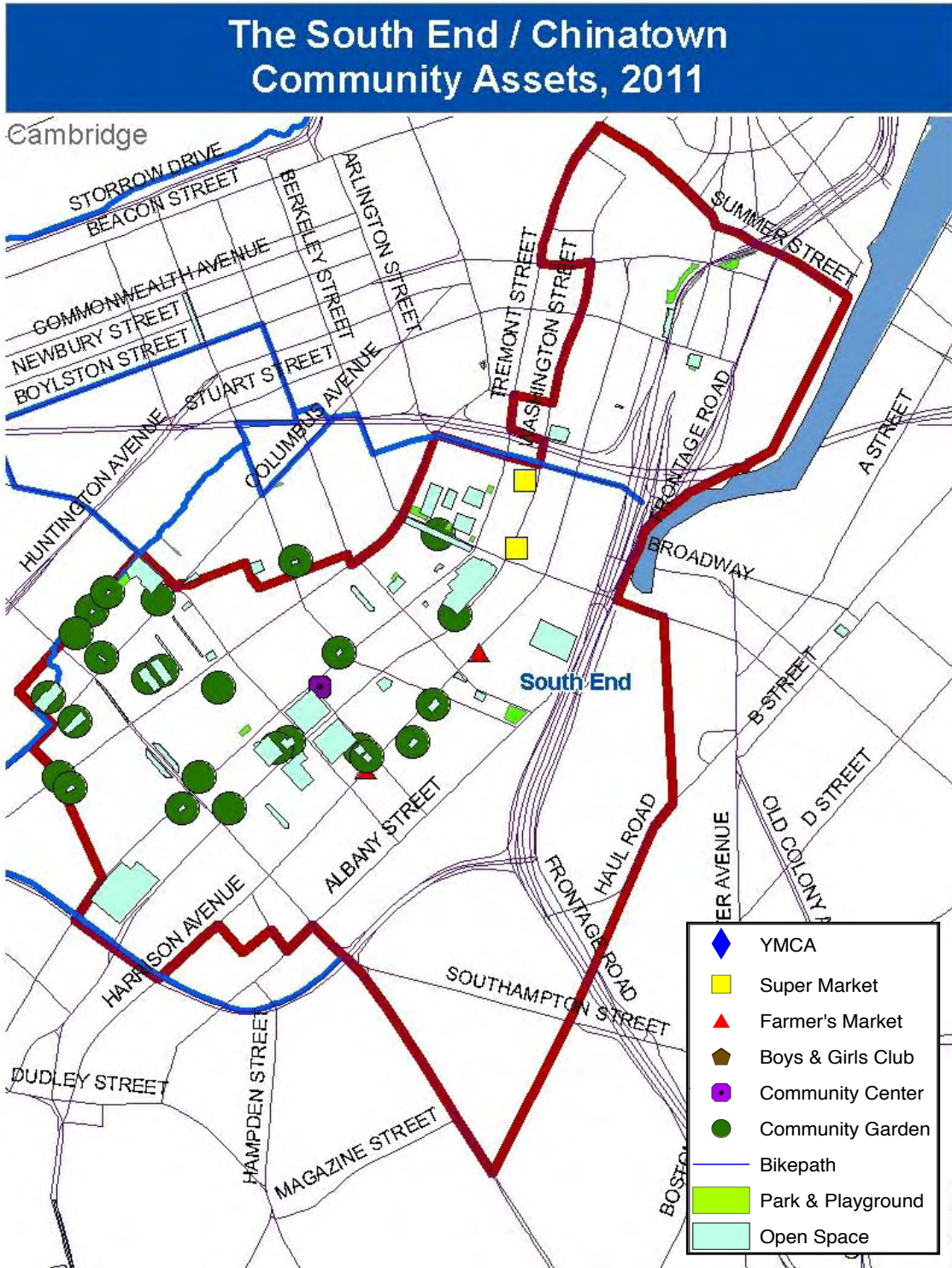
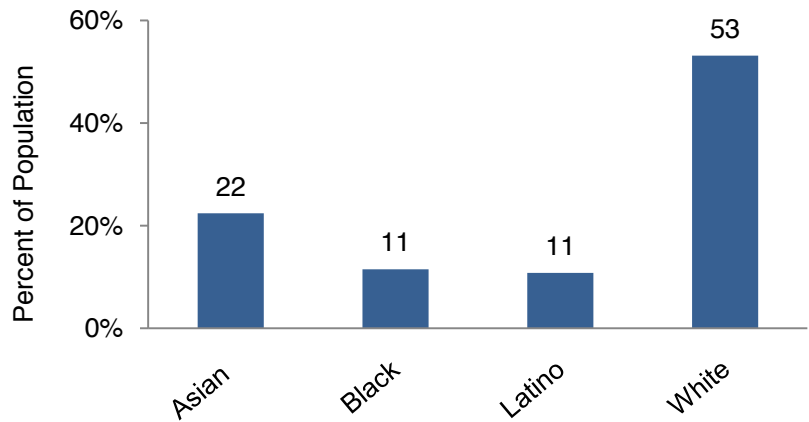


Figure 28.1 Population Estimate by Race/Ethnicity, South End, 2005-2009

In 2005-2009, the South End had an estimated population of 42,073 residents. Of these, 47% were females and 53% were males (data not shown).

In 2005-2009, more than half of South End residents identified themselves as White (53%). Twenty-two percent of South End residents identified themselves as Asian. About 11% of South End residents identified themselves as Latino and 11% as Black.

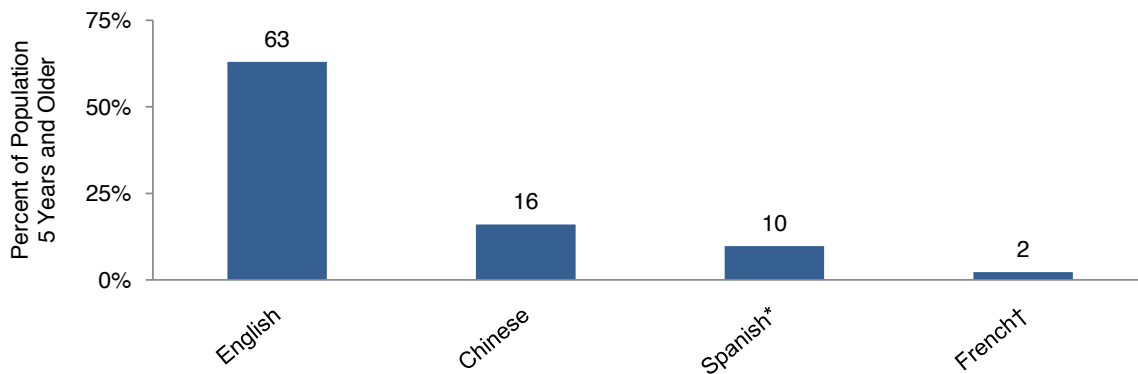
Figure 28.1 Population Estimate by Race/Ethnicity*, South End, 2005-2009



*Individuals who were identified as "Other race" or "Two or more races" were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 28.2 Languages Spoken at Home, South End, 2005-2009



*Spanish includes Spanish Creole

†French includes Patois, Cajun, and French Creole

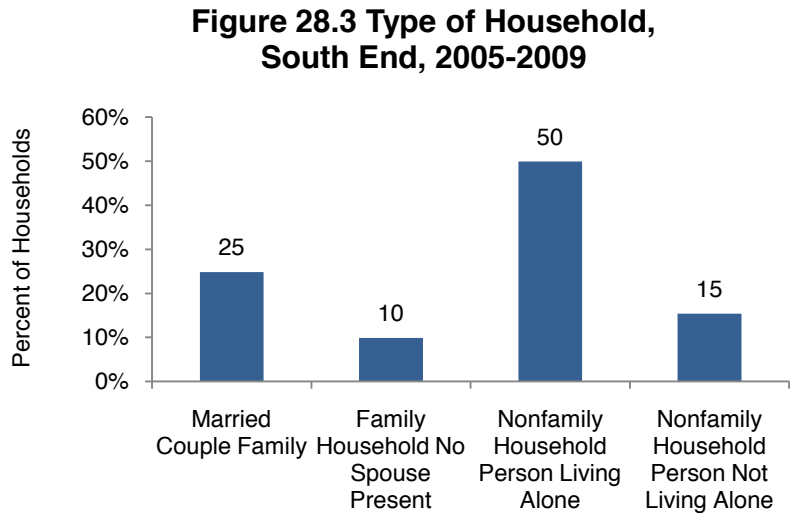
DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 28.2 Languages Spoken at Home, South End, 2005-2009

In 2005-2009, English was the primary language spoken at home (63%) among South End residents, followed by Chinese (16%), Spanish (10%) and French (2%).

Figure 28.3 Type of Household, South End, 2005-2009

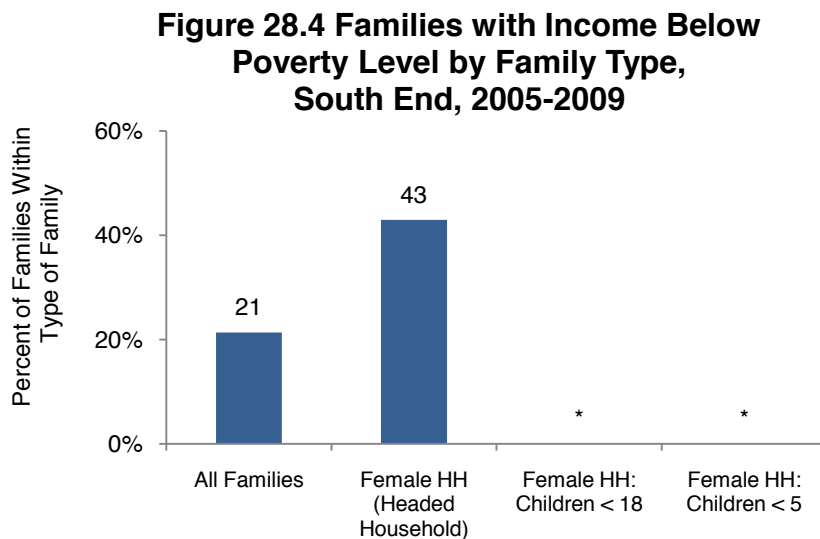
In the South End, half of all households consisted of individuals living alone (50%). Thirty-five percent of households were considered family households and 15% of all households consisted of nonfamily individuals living together.



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 28.4 Families with Income Below Poverty Level by Family Type, South End, 2005-2009

In the South End, the average median annual household income was \$54,778. Twenty-seven percent of residents (data not shown) and 21% of all families in the South End were living on income below the poverty level.



* Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 28.5 Housing Tenure, South End, 2005-2009

In the South End, 65% of occupied units were renter-occupied.

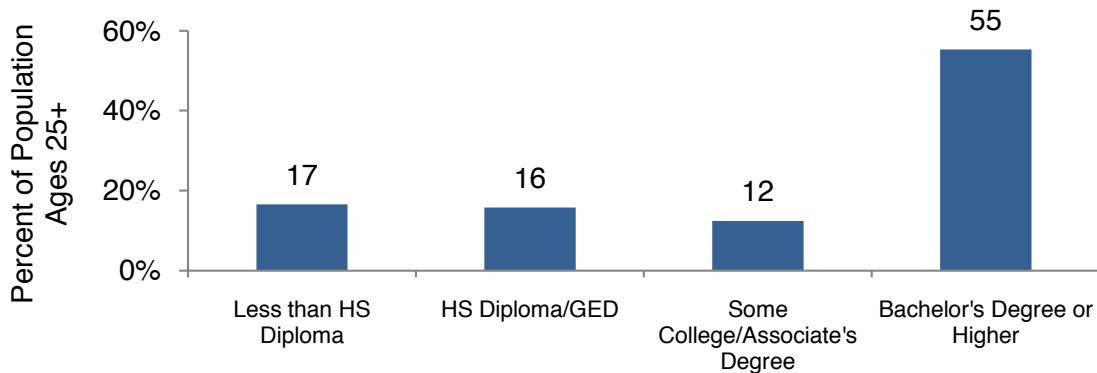
Figure 28.5 Housing Tenure, South End*, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
35%	65%

*Includes Chinatown

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 28.6 Educational Attainment, South End, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 28.6 Educational Attainment, South End, 2005-2009**

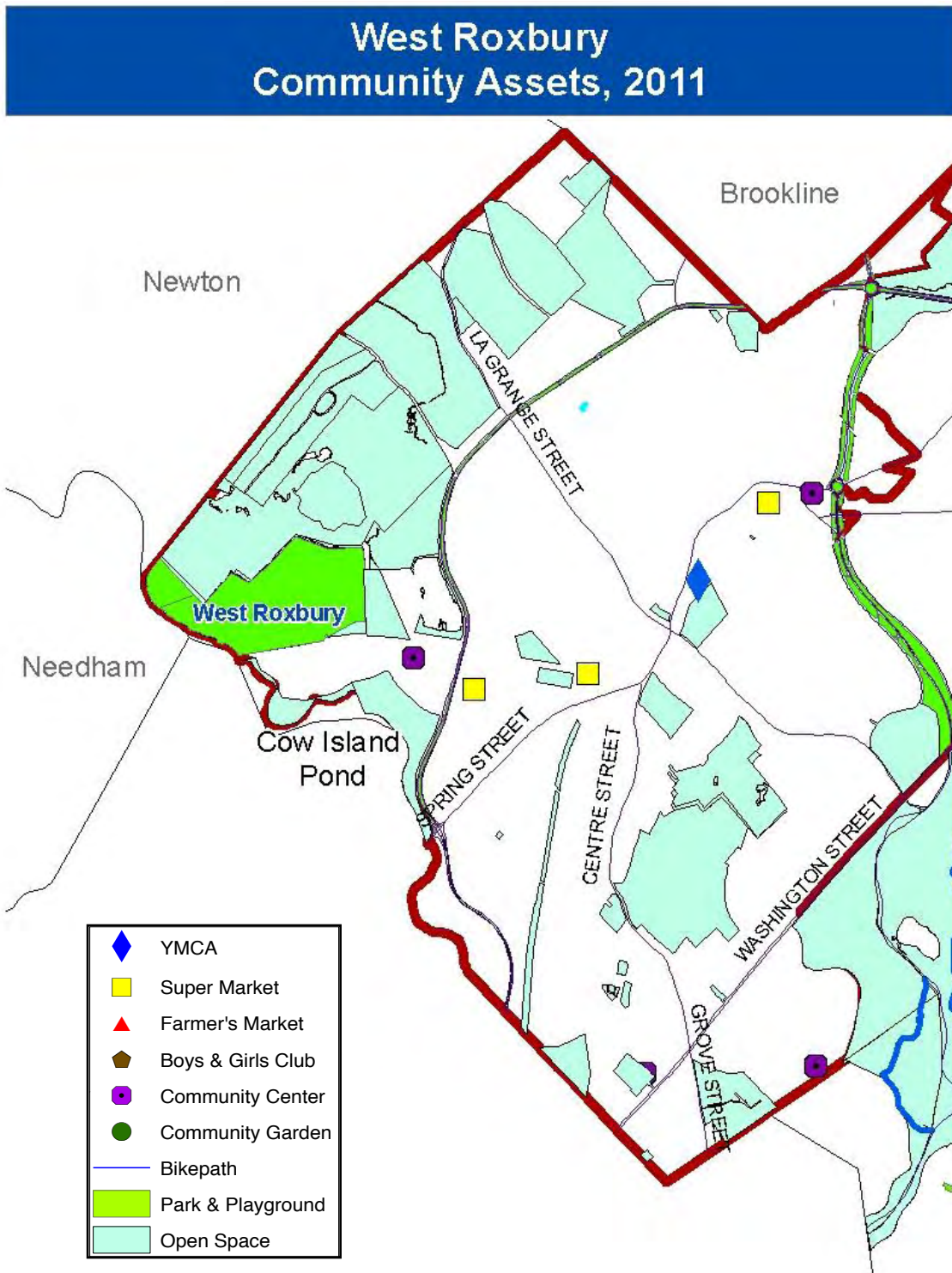
Over half of the population in the South End had a Bachelor's degree or higher (55%). This was significantly higher than for other levels of educational attainment.

West Roxbury

Before 1630, West Roxbury was home to the Wampanoag Indian Tribe. When first inhabited by the Puritans, West Roxbury was part of the town of Roxbury and included the neighborhoods of Roslindale and Jamaica Plain. In 1851, West Roxbury broke away from Roxbury and formed its own government. The neighborhood was annexed by Boston in 1874.

In 1841, Brook Farm was established by Transcendentalists in West Roxbury as an experimental cooperative farm. Its members and regular visitors included many 19th century progressive writers and philosophers including Nathaniel Hawthorne, Ralph Waldo Emerson, Margaret Fuller, and Horace Greeley.



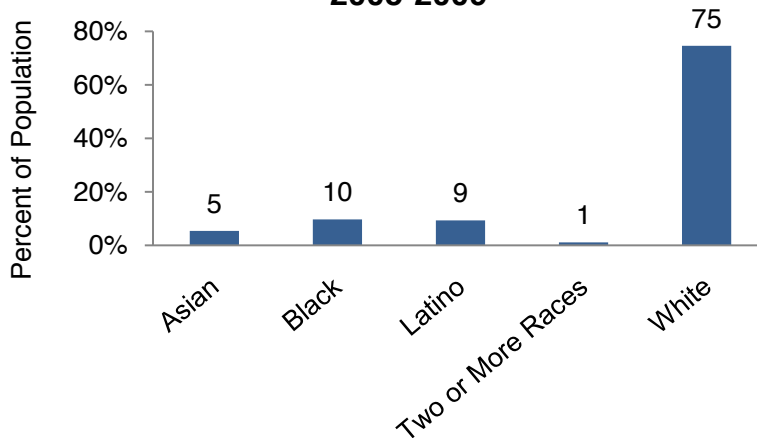


■ **Figure 29.1 Population Estimate by Race/Ethnicity*, West Roxbury, 2005-2009**

In 2005-2009, West Roxbury had an estimated population of 28,808 residents. Of these, 53% were females and 47% were males (data not shown).

In 2005-2009, 75% of West Roxbury residents identified themselves as White. Ten percent of residents identified themselves as Black, and 9% of residents identified themselves as Latino. Five percent of residents identified themselves Asian. About 1% of residents identified as belonging to two or more races.

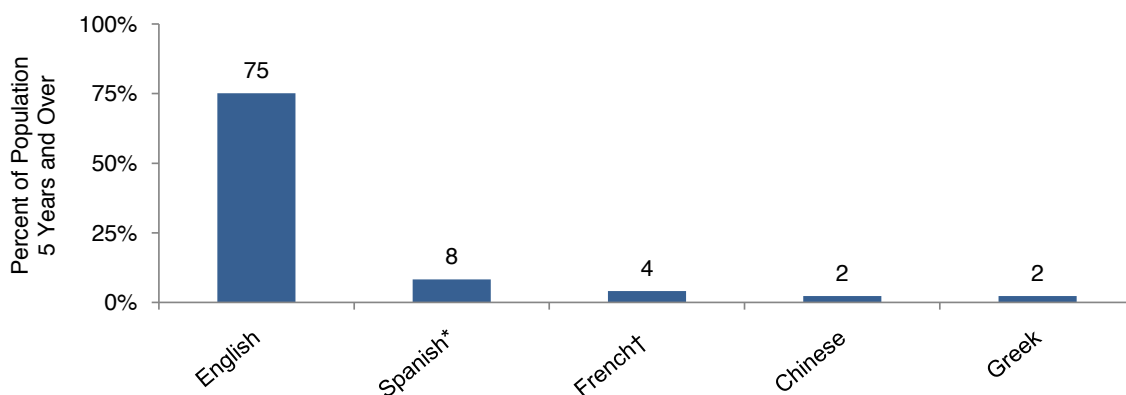
Figure 29.1 Population Estimate by Race/Ethnicity*, West Roxbury, 2005-2009



*Individuals who were identified as “Other race” were not included due to insufficient sample size.

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 29.2 Languages Spoken at Home, West Roxbury, 2005-2009



*Spanish includes Spanish Creole

†French includes Patois, Cajun, and French Creole

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

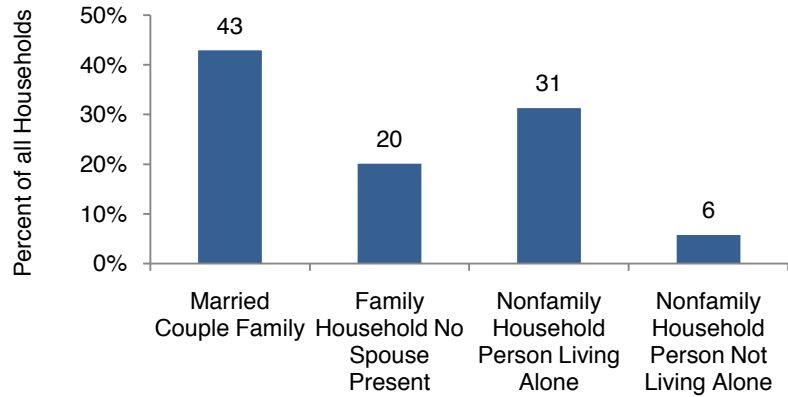
■ **Figure 29.2 Languages Spoken at Home, West Roxbury, 2005-2009**

In 2005-2009, 75% of West Roxbury residents reported English as the primary language spoken at home followed by Spanish (8%), French (4%), Chinese, and Greek (2% each).

■ **Figure 29.3 Type of Household, West Roxbury, 2005-2009**

Sixty-three percent of all households in West Roxbury were considered family households. By type, the highest percentage of households consisted of married couple families (43%); while the lowest percentage of households were nonfamily households with individuals not living alone. In West Roxbury, the average median annual household income was \$73,737 and 5% of all residents were living on income below the poverty level (data not shown).

Figure 29.3 Type of Household, West Roxbury, 2005-2009



DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 29.4 Housing Tenure, West Roxbury, 2005-2009**

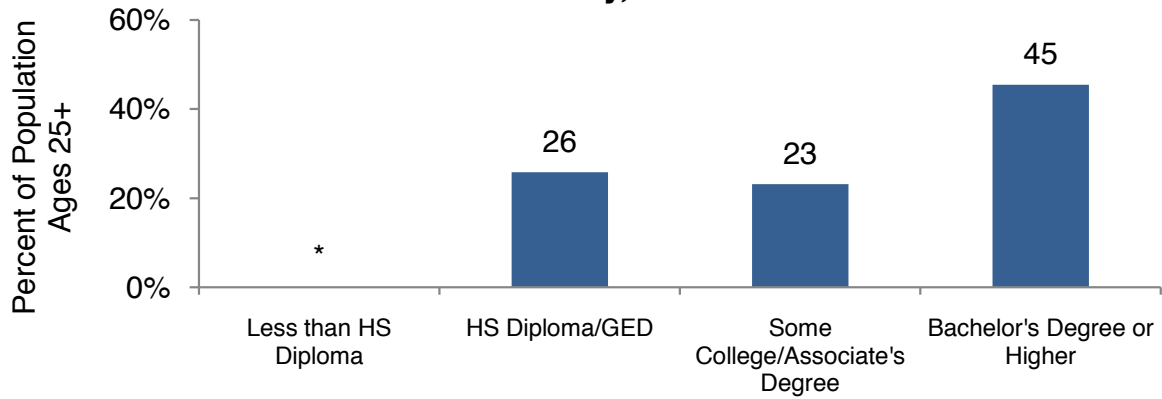
In West Roxbury, 66% of occupied units were owner-occupied.

Figure 29.4 Housing Tenure, West Roxbury, 2005-2009

Owner-Occupied Units	Renter-Occupied Units
66%	34%

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

Figure 29.5 Educational Attainment, West Roxbury, 2005-2009



*Insufficient Sample Size

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

■ **Figure 29.5 Educational Attainment, West Roxbury, 2005-2009**

In West Roxbury, 45% of the population had a Bachelor's degree or higher. This was significantly higher than for the other three levels of educational attainment.

Notes and Data Analysis for Neighborhood Demographic and Socioeconomic Profiles

Figure 14.1 Population Estimate by Race/Ethnicity, Allston/Brighton, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 14.2 Languages Spoken at Home, Allston/Brighton, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 14.3 Type of Household, Allston-Brighton, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 14.4 Families with Income Below Poverty Level by Family Type, Allston-Brighton, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 14.5 Housing Tenure, Allston/Brighton, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 14.6 Educational Attainment, Allston/Brighton, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 15.1 Population Estimate by Race/Ethnicity, BackBay, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 15.2 Languages Spoken at Home, BackBay, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 15.3 Type of Household, Back Bay, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the

householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 15.4 Housing Tenure, Back Bay, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 15.5 Educational Attainment, Back Bay, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 16.1 Population Estimate by Race/Ethnicity, Charlestown 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 16.2 Languages Spoken at Home, Charlestown, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 16.3 Type of Household, Charlestown, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 16.4 Families with Income Below Poverty Level by Family Type, Charlestown, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 16.5 Housing Tenure, Charlestown, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 16.6 Educational Attainment, Charlestown, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 17.1 Population Estimate by Race/Ethnicity, East Boston, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 17.2 Languages Spoken at Home, East Boston, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 17.3 Type of Household, East Boston, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 17.4 Families with Income Below Poverty Level by Family Type, East Boston, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 17.5 Housing Tenure, East Boston, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 17.6 Educational Attainment, East Boston, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 18.1 Population Estimate by Race/Ethnicity, Fenway, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 18.2 Languages Spoken at Home, Fenway, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 18.3 Type of Household, Fenway, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 18.4 Families with Income Below Poverty Level by Family Type, Fenway, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder.

Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 18.5 Housing Tenure, Fenway, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 18.6 Educational Attainment, Fenway, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 19.1 Population Estimate by Race/Ethnicity, Hyde Park, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 19.2 Languages Spoken at Home, Hyde Park, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 19.3 Type of Household, Hyde Park, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 19.4 Families with Income Below Poverty Level by Family Type, Hyde Park, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 19.5 Housing Tenure, Hyde Park, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 19.6 Educational Attainment, Hyde Park, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 20.1 Population Estimate by Race/Ethnicity, Jamaica Plain, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 20.2 Languages Spoken at Home, Jamaica Plain, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 20.3 Type of Household, Jamaica Plain, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 20.4 Families with Income Below Poverty Level by Family Type, Jamaica Plain, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 20.5 Housing Tenure, Jamaica Plain, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 20.6 Educational Attainment, Jamaica Plain, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 21.1 Population Estimate by Race/Ethnicity, Mattapan, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 21.2 Languages Spoken at Home, Mattapan, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 21.3 Type of Household, Mattapan, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 21.4 Families with Income Below Poverty Level by Family Type, Mattapan, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 21.5 Housing Tenure, Mattapan, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 21.6 Educational Attainment, Mattapan, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 22.1 Population Estimate by Race/Ethnicity, North Dorchester, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 22.2 Languages Spoken at Home, North Dorchester, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 22.3 Type of Household, North Dorchester, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 22.4 Families with Income Below Poverty Level by Family Type, North Dorchester, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 22.5 Housing Tenure, North Dorchester, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 22.6 Educational Attainment, North Dorchester, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 23.1 Population Estimate by Race/Ethnicity, North End, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 23.2 Languages Spoken at Home, North End, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 23.3 Type of Household, North End, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 23.4 Housing Tenure, North End, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 23.5 Educational Attainment, North End, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 24.1 Population Estimate by Race/Ethnicity, Roslindale, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 24.2 Languages Spoken at Home, Roslindale, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 24.3 Type of Household, Roslindale, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 24.4 Families with Income Below Poverty Level by Family Type, Roslindale, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty

threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 24.5 Housing Tenure, Roslindale, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 24.6 Educational Attainment, Roslindale, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 25.1 Population Estimate by Race/Ethnicity, Roxbury, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 25.2 Languages Spoken at Home, Roxbury, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 25.3 Type of Household, Roxbury, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 25.4 Families with Income Below Poverty Level by Family Type, Roxbury, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 25.5 Housing Tenure, Roxbury, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 25.6 Educational Attainment, Roxbury, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 25.6 Population by Marital Status, Roxbury, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 26.1 Population Estimate by Race/Ethnicity, South Boston, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 26.2 Languages Spoken at Home, South Boston, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 26.3 Type of Household, South Boston, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 26.4 Families with Income Below Poverty Level by Family Type, South Boston, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 26.5 Housing Tenure, South Boston, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 26.6 Educational Attainment, South Boston, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 27.1 Population Estimate by Race/Ethnicity, South Dorchester, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 27.2 Languages Spoken at Home, South Dorchester, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 27.3 Type of Household, South Dorchester, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the

householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 27.4 Families with Income Below Poverty Level by Family Type, South Dorchester, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold. The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 27.5 Housing Tenure, South Dorchester, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 27.6 Educational Attainment, South Dorchester, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 28.1 Population Estimate by Race/Ethnicity, South End, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 28.2 Languages Spoken at Home, South End, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 28.3 Type of Household, South End, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 28.4 Families with Income Below Poverty Level by Family Type, South End, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The data on poverty status of households were derived from answers to the income questions. Since poverty is defined at the family level and not the household level, the poverty status of the household is determined by the poverty status of the householder. Households are classified as poor when the total income of the householder's family is below the appropriate poverty threshold. (For nonfamily householders, their own income is compared with the appropriate threshold.) The income of people living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the family size in determining the appropriate threshold.

The poverty thresholds vary depending on three criteria: size of family, number of related children, and, for 1- and 2-person families, age of householder.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 28.5 Housing Tenure, South End, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 28.6 Educational Attainment, South End, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 29.1 Population Estimate by Race/Ethnicity, West Roxbury, 2005-2009

NOTE: Other race includes American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders and some other races.

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 29.2 Languages Spoken at Home, West Roxbury, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 29.3 Type of Household, West Roxbury, 2005-2009

NOTE: Data are estimates based on the American Community Survey. The census defines a family household as one in which there is at least one person living in the household who is related by marriage, blood, or adoption to the householder (head of household).

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 29.4 Housing Tenure, West Roxbury, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

Figure 29.5 Educational Attainment, West Roxbury, 2005-2009

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

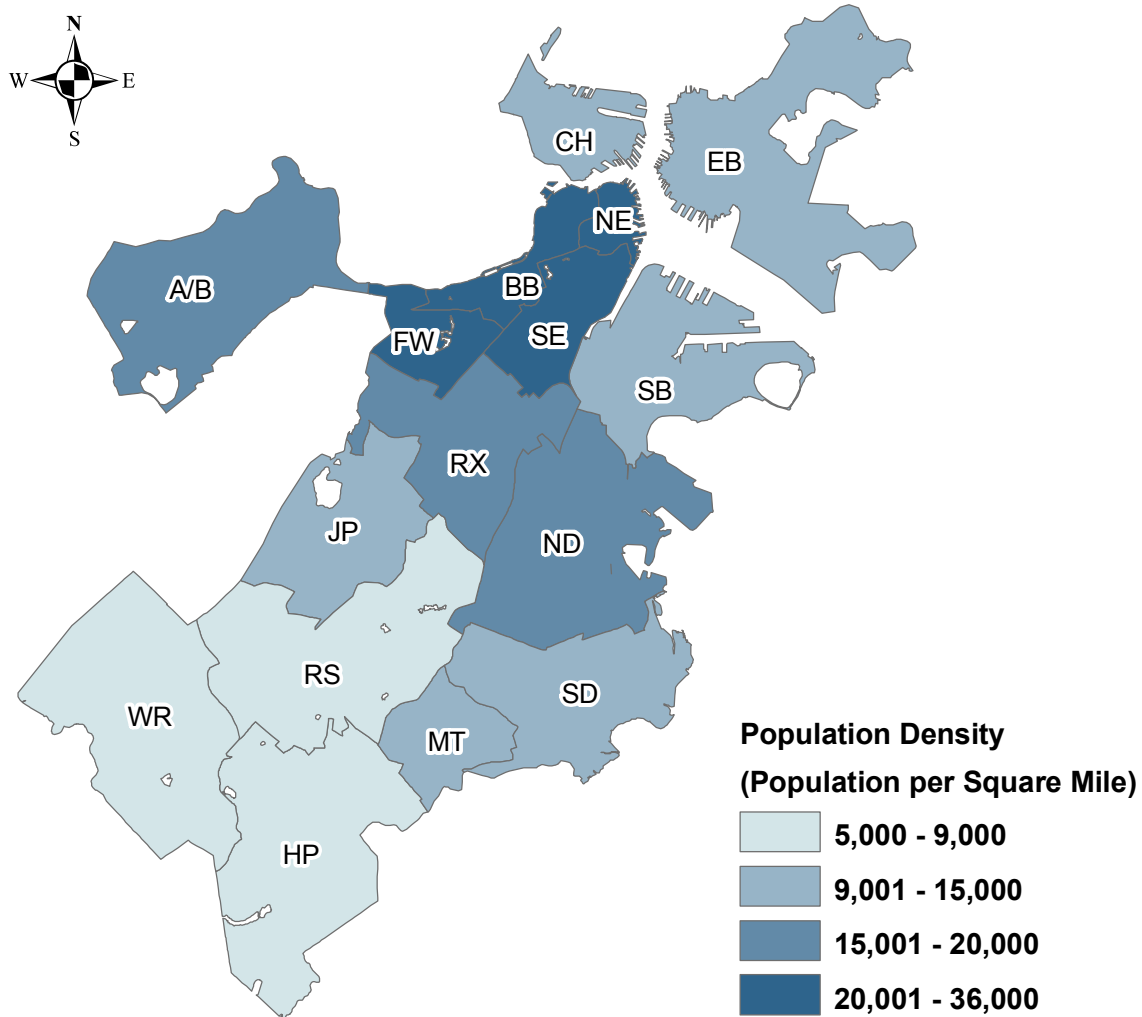
Selected Neighborhood Indicators

- Infant Mortality
- Low Birth Weight
- Pre-term Birth
- Smoking
- Excessive Alcohol Consumption
- Physical Activity
- Fruit and Vegetable Consumption
- Salmonella
- Chlamydia
- Gonorrhea
- Syphilis
- Asthma
- Diabetes
- Obesity
- Heart Disease Hospitalizations
- Life Expectancy
- Homicide
- Suicide
- Substance Abuse Mortality
- Leading Causes of Death

Neighborhoods are the physical and social environments of our daily lives. Characteristics of the neighborhoods, including physical “built” environments and community resources, are recognized social determinants influencing mental and physical health. Health experiences can vary dramatically among Boston neighborhoods. In describing the health experience of Boston residents it is critical to look at the distribution of health indicators across neighborhoods. This section provides maps of specific indicators. It starts with maps of socio-demographic indicators. Maps of health indicators including infant mortality, asthma, Chlamydia infection, and mortality follow.



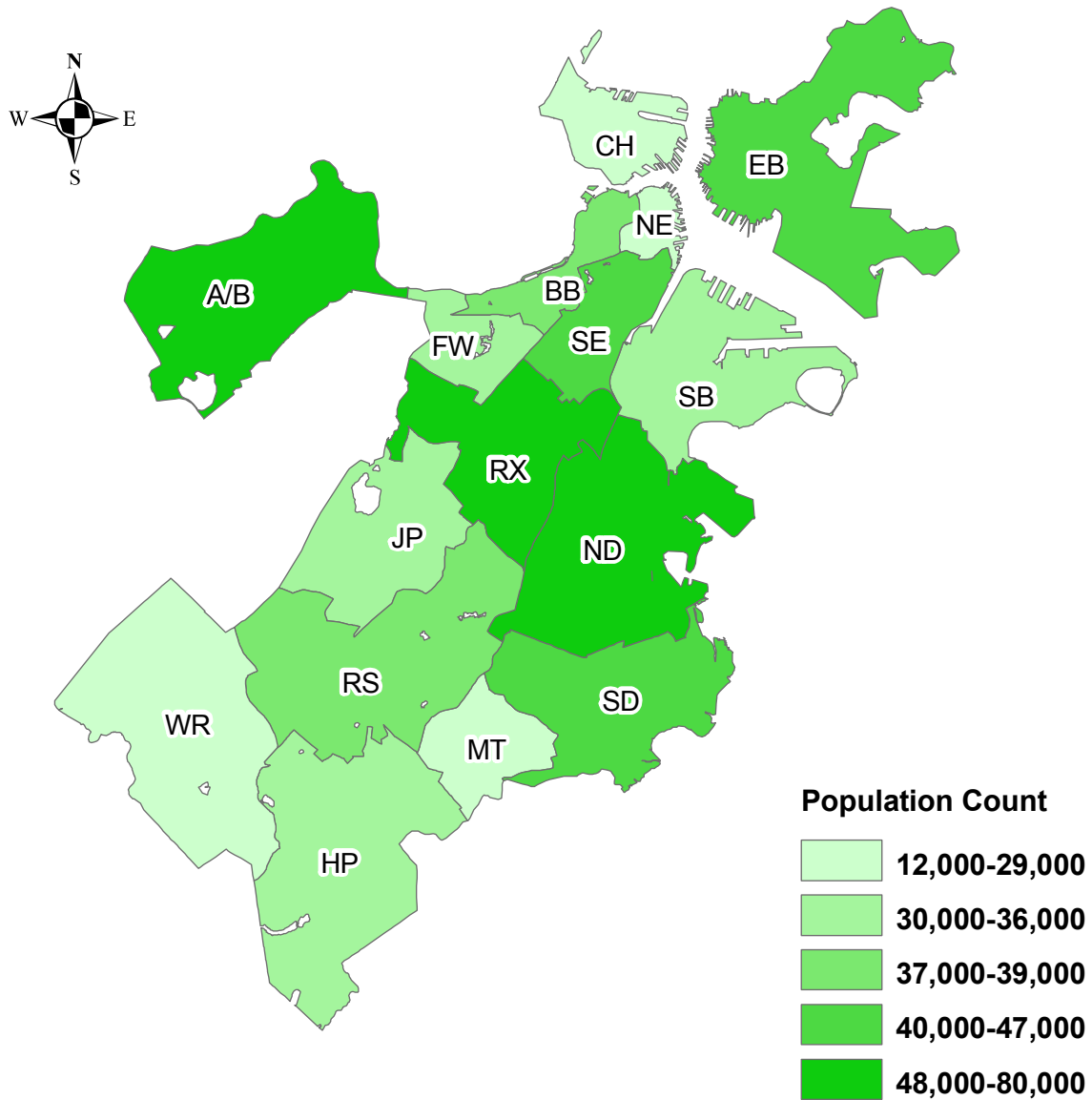
Figure 30.1a Population Density, 2005-2009



■ **Figure 30.1a Population Density, 2005-2009**

Back Bay, Fenway, North End and South End are the most densely populated neighborhoods in Boston. Back Bay is the most densely populated with 35,280 people per square mile

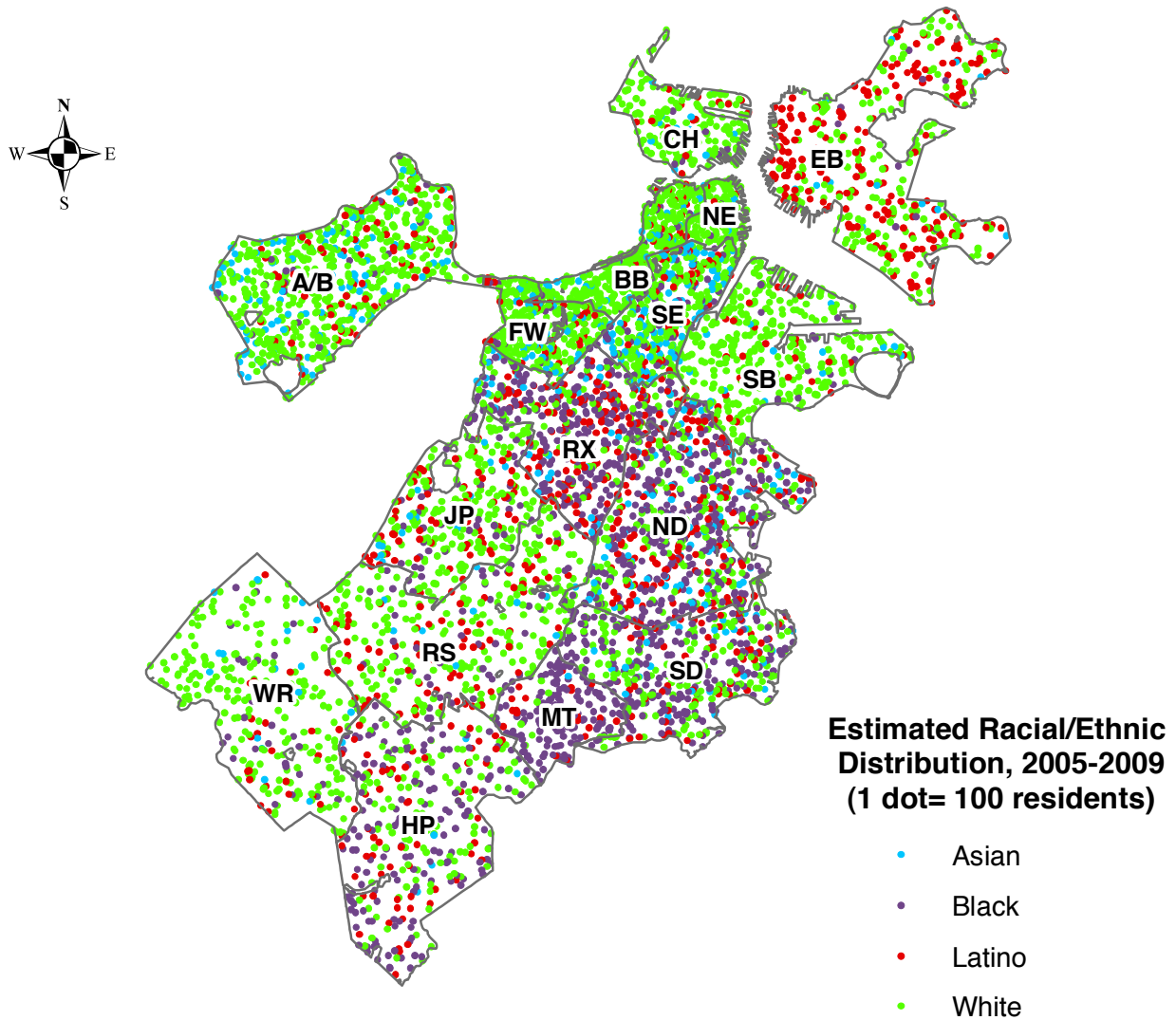
Figure 30.1b Population Count, 2005-2009



■ Figure 30.1b Population Count, 2005-2009

This map visually represents the population count of Boston residents across Boston neighborhoods.

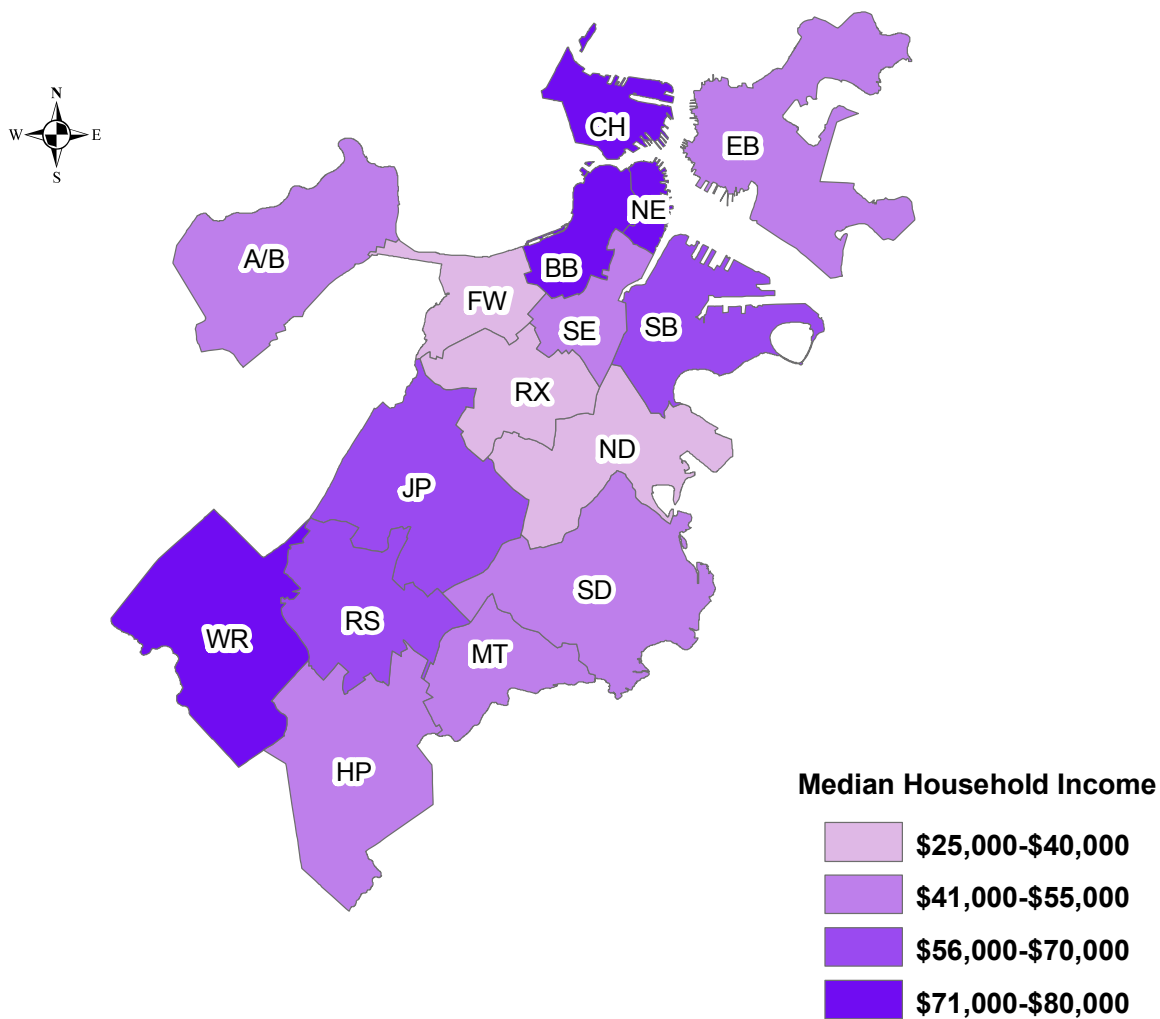
Figure 30.2 Estimated Racial/Ethnic Distribution, 2005-2009



■ Figure 30.2 Estimated Racial/Ethnic Distribution, 2005-2009

This map visually represents the racial/ethnic distribution of Boston residents across Boston neighborhoods.

Figure 30.3 Median Household Income, 2005-2009

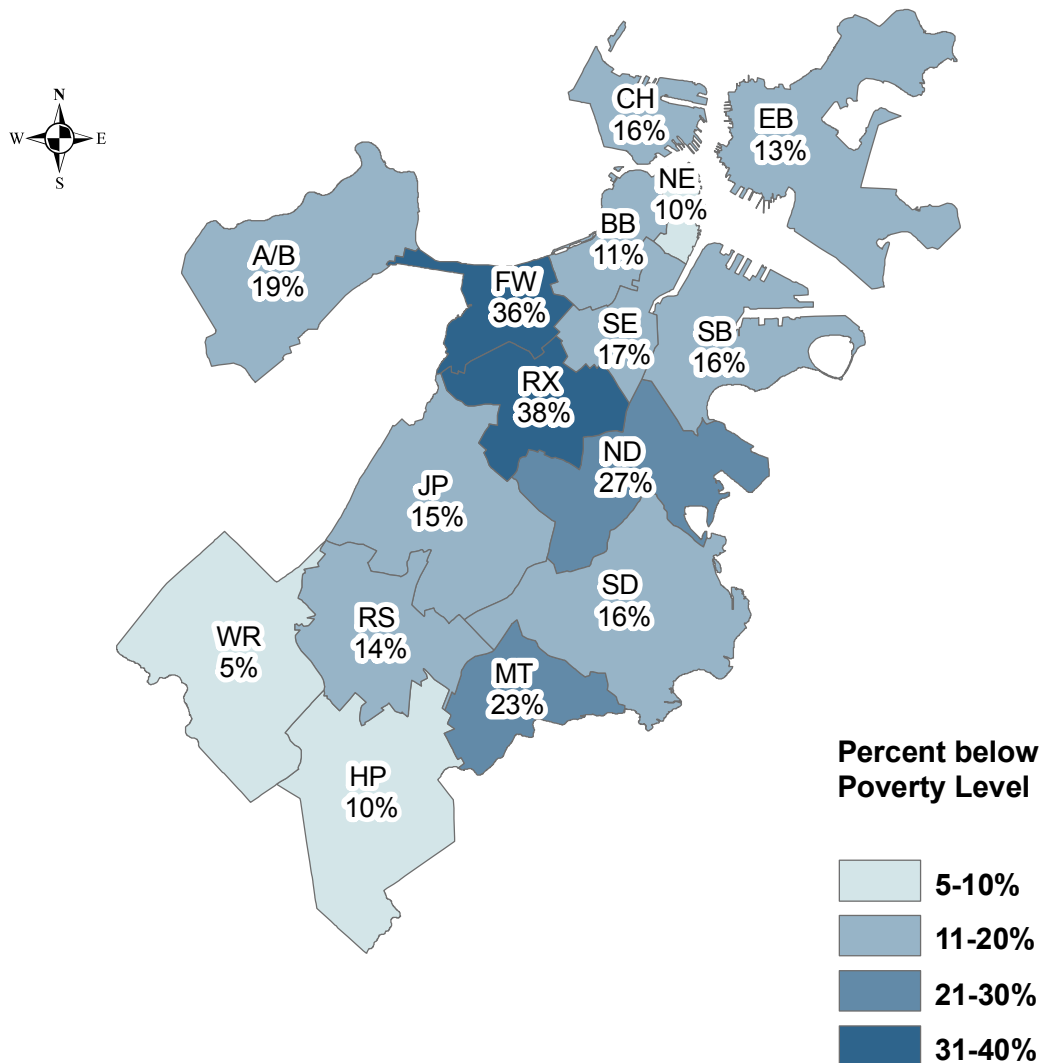


■ Figure 30.3 Median Household Income, 2005-2009

The estimated median annual household income of Boston residents in 2009 was \$55,979.

In 2005-2009, Charlestown had the highest median household income at \$ 76,898 among Boston neighborhoods. Roxbury had the lowest household income at \$ 28,490 among Boston neighborhood.

Figure 30.4 Individuals Living below Poverty Level, 2005-2009

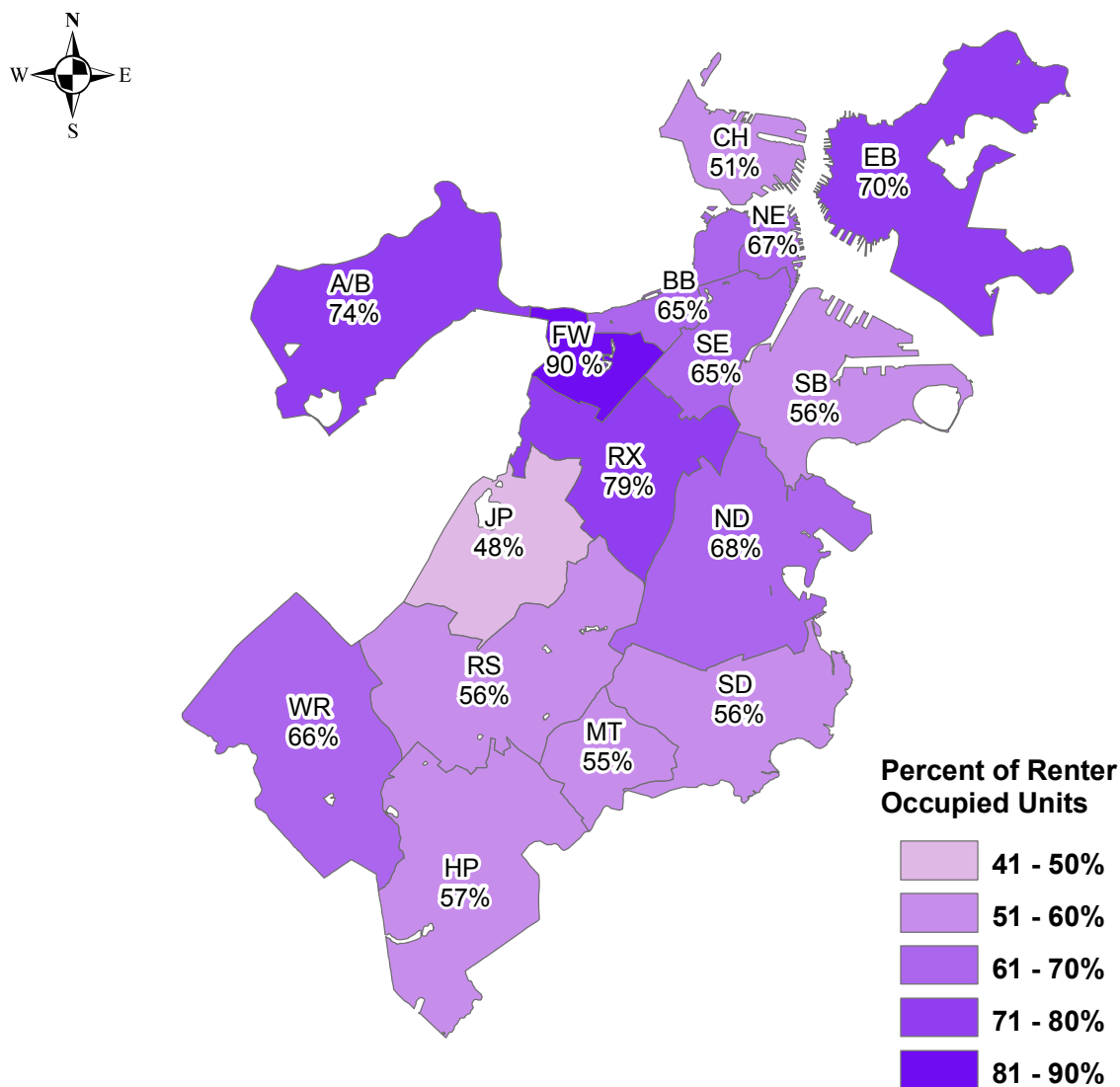


■ **Figure 30.4 Individuals Living Below Poverty Level, 2005-2009**

In 2009, an estimated 17% of Boston residents lived below the poverty level.

In 2005-2009, Roxbury had the highest percentage (38%) of individuals living below poverty level among Boston neighborhoods. West Roxbury had the lowest percentage of individuals (5%) living below poverty level among Boston neighborhood.

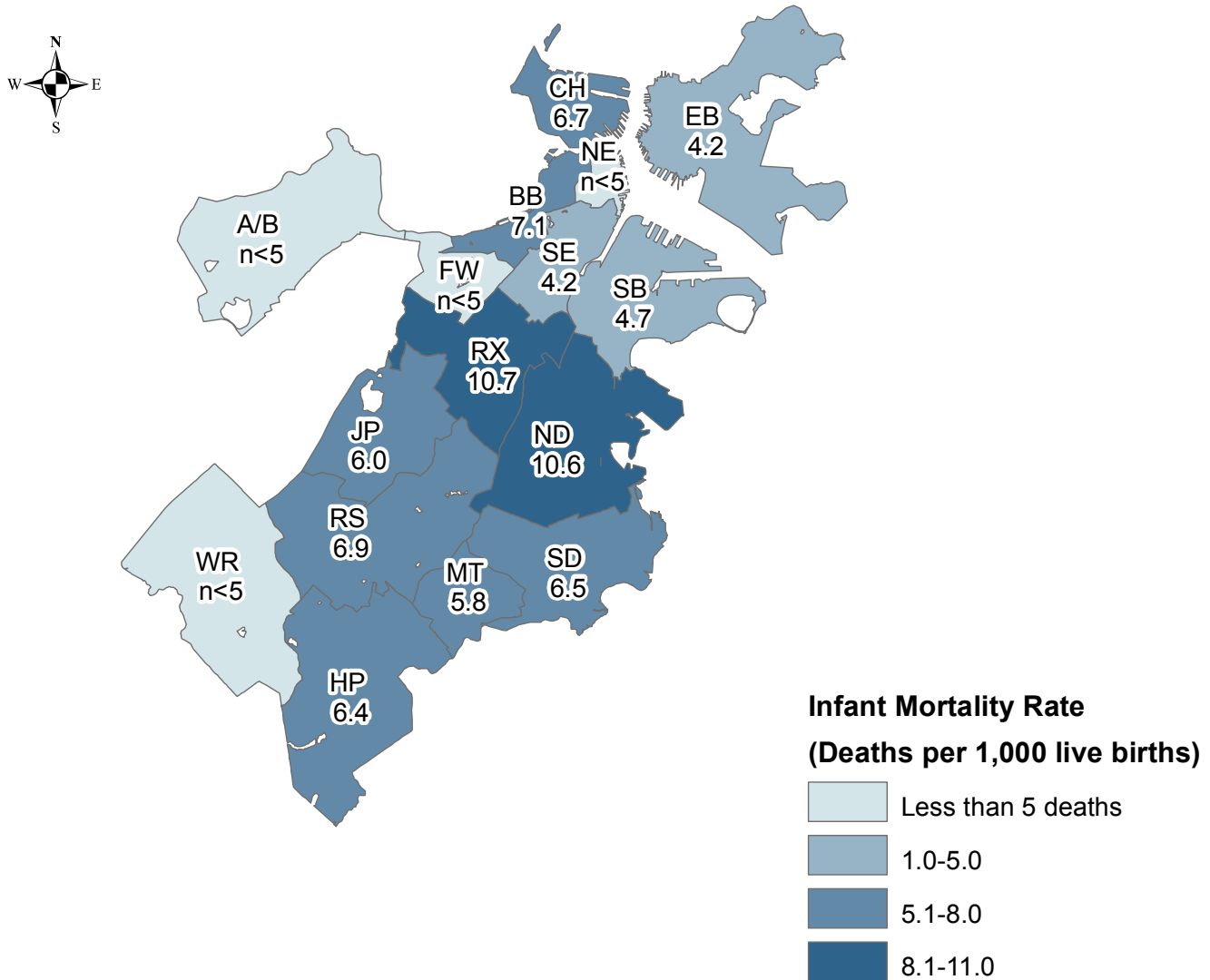
Figure 30.5 Renter-Occupied Units, 2005-2009



■ **Figure 30.5 Renter-Occupied Units, 2005-2009**

This map presents the estimated percentage of housing units that were occupied by renters in each neighborhood. In 2009, 63% of occupied housing units in Boston were renter occupied (data not shown). In 2005-2009, Fenway and Roxbury had the highest and second highest percentage of renter occupied units, 90% and 70%, respectively. Charlestown had the lowest percentage of renter occupied units.

Figure 30.6 Infant Mortality, 2006, 2007, and 2008 Combined

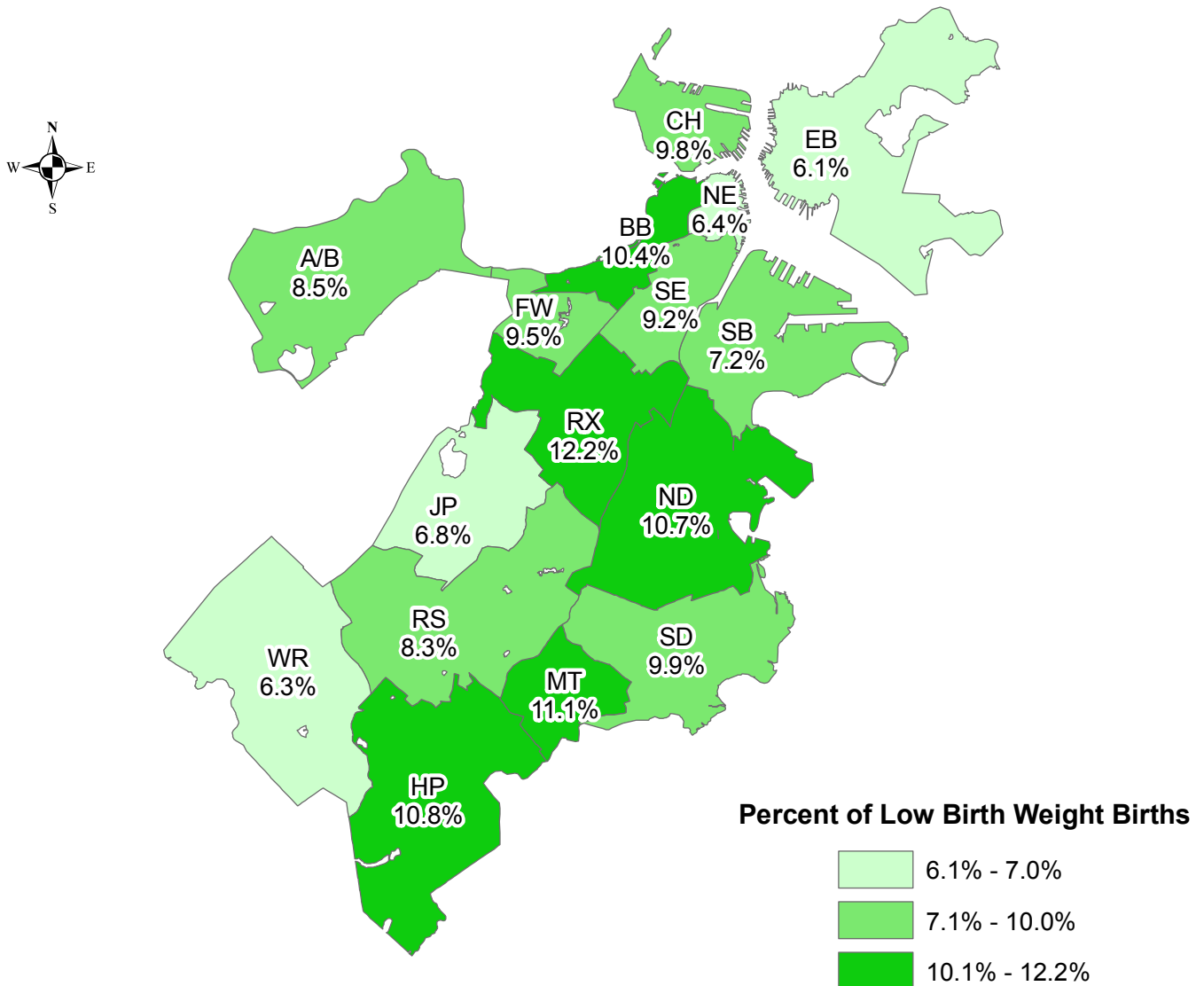


■ **Figure 30.6 Infant Mortality, 2006, 2007, and 2008**

During 2006-2008 combined, Roxbury and North Dorchester had the highest infant mortality rates (IMRs) among Boston neighborhoods. Those rates were 65% and 63%, respectively, higher than the overall Boston rate of 6.5 infant deaths per 1,000 live births (data not shown).

The IMRs for East Boston, Mattapan, South Boston, and the South End were below the overall Boston rate. Allston/Brighton, Fenway, and the North End had too few infant deaths to permit the presentation of IMRs.

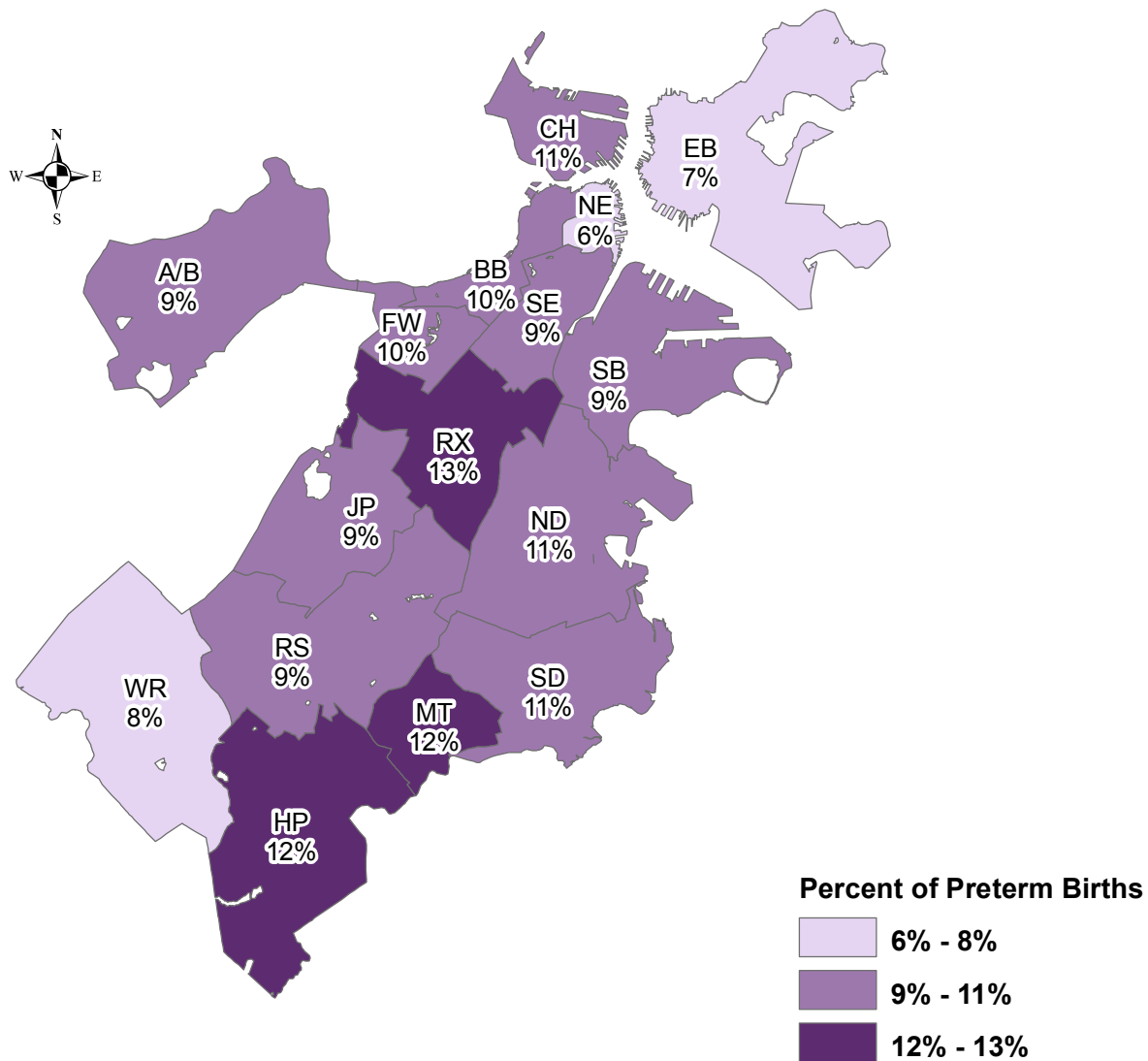
Figure 30.7 Low Birth Weight Births, 2007, 2008 and 2009 Combined



■ **Figure 30.7 Low Birth Weight Births, 2007, 2008, and 2009**

Roxbury had the highest percentage of low birth weight (LBW) births among Boston neighborhoods during 2007-2009 combined. This percentage was 31% higher than the overall Boston percentage of 9.3% for the same time period (data not shown). West Roxbury and East Boston had the lowest percentages of LBW births among the Boston neighborhoods..

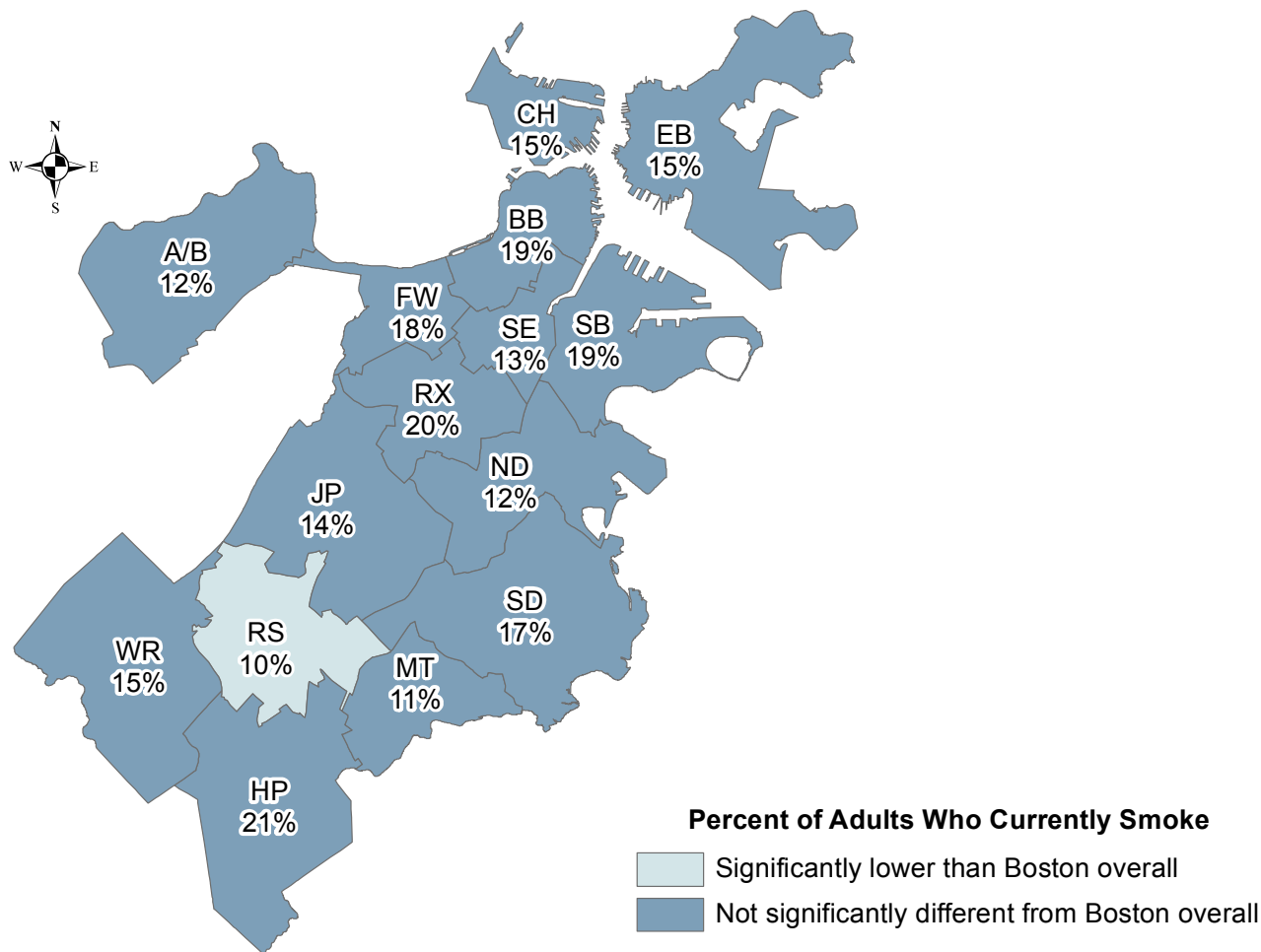
Figure 30.8 Preterm Births, 2007, 2008, and 2009 Combined



■ Figure 30.8 Preterm Births, 2007, 2008, and 2009

During 2007-2009 combined, Roxbury had the highest percentage of preterm births at 13%. This was 30% higher than the overall Boston percentage of 10% during the same time period (data not shown). East Boston, North End, and West Roxbury had the lowest percentages of preterm births among the Boston neighborhoods.

Figure 30.9 Adults Who Currently Smoke, 2008 and 2010 Combined



■ **Figure 30.9 Adults Who Currently Smoke, 2008 and 2010 Combined**

For years 2008 and 2010 combined, the percentage of adults who reported smoking was statistically similar across all Boston neighborhoods except Roslindale, which had a significantly lower percentage of reported adult smokers.

Figure 30.10 Excessive Alcohol Consumption Among Adults in the Past Month, 2008 and 2010 Combined

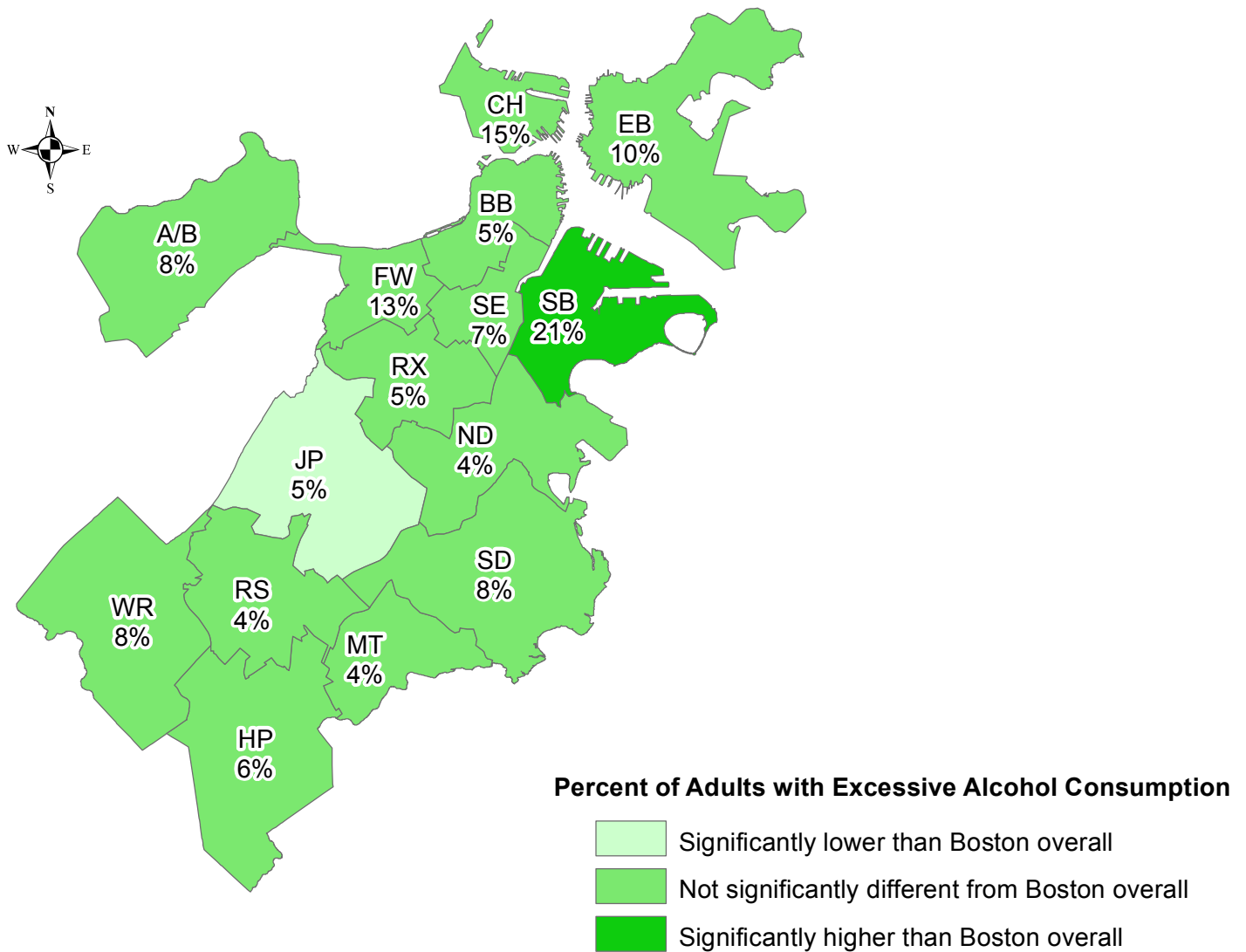
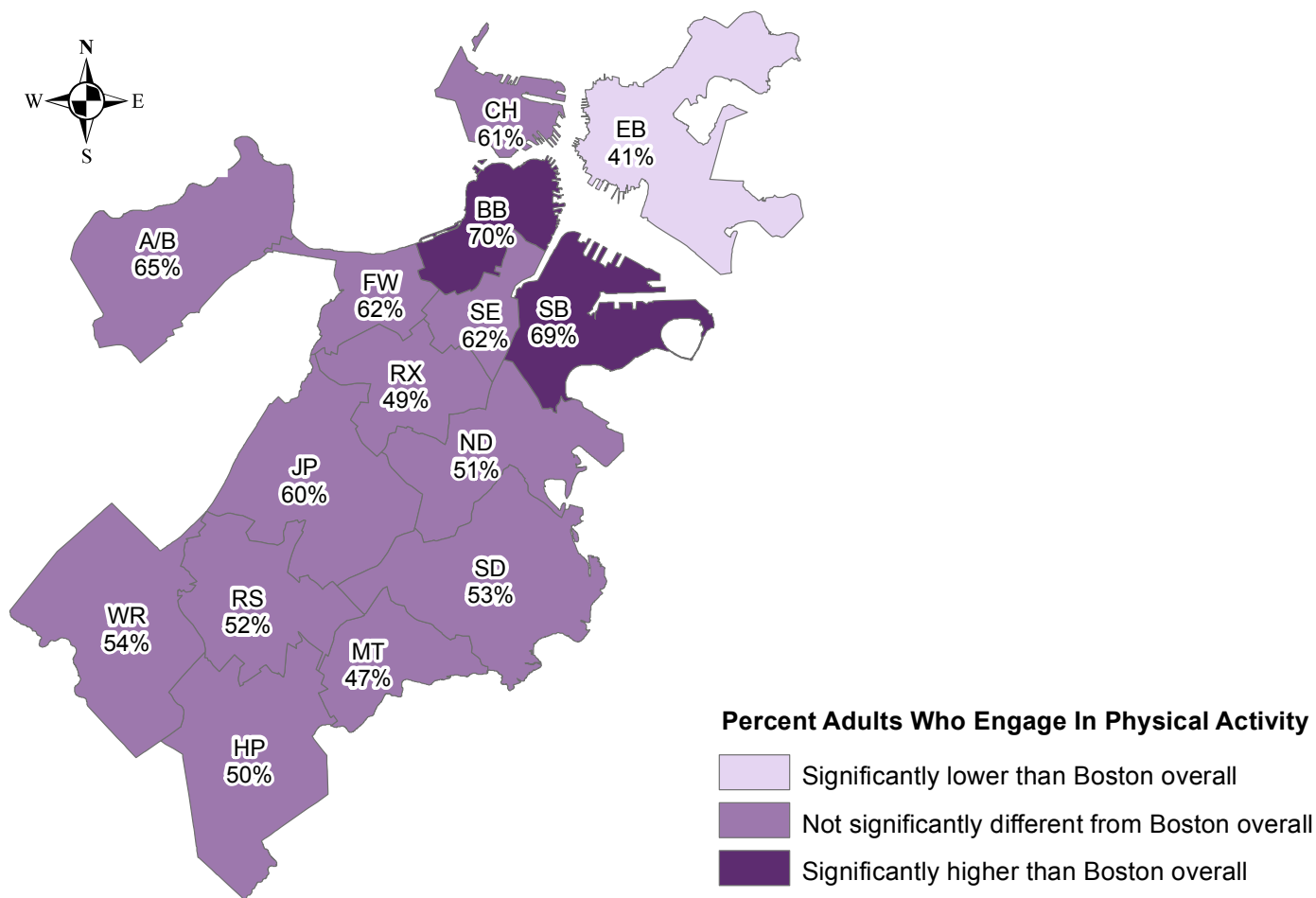


Figure 30.10 Excessive Alcohol Consumption Among Adults in the Past Month, 2008 and 2010 Combined

Excessive alcohol consumption is a pattern of alcohol drinking defined in this report as consuming an average of more than two drinks per day for men and more than one drink per day for women during a one month period.

For the years 2008 and 2010 combined, a higher percentage of adults in South Boston reported excessive alcohol consumption compared to Boston overall. A lower percentage of adult residents in Jamaica Plain reported excessive alcohol consumption compared to Boston overall.

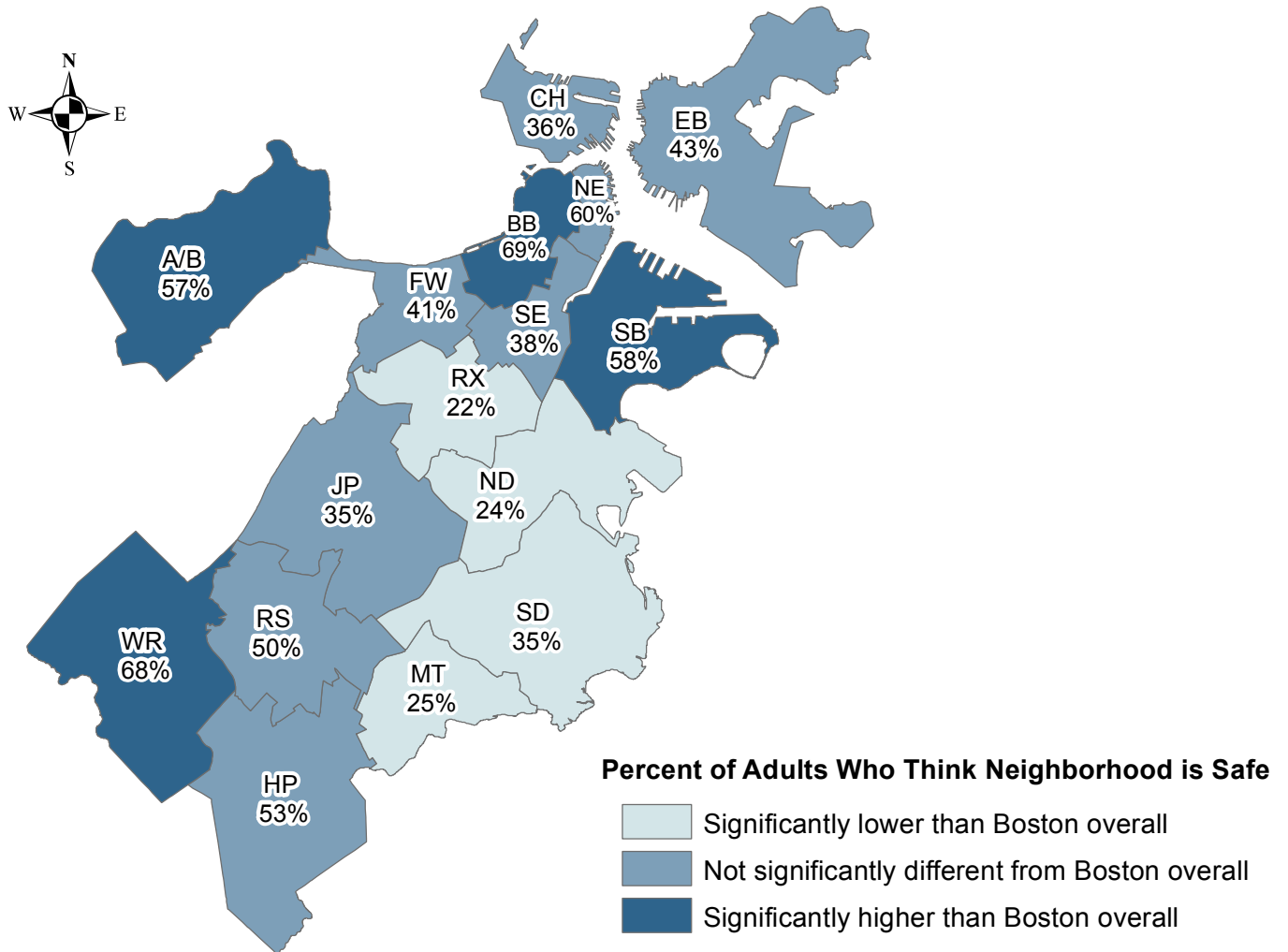
Figure 30.11 Adults Who Engage in Regular Physical Activity, 2008 and 2010 Combined



■ **Figure 30.11 Adults Who Engage in Regular Physical Activity, 2008 and 2010 Combined**

For years 2008 and 2010 combined, a higher percentage of adults in Back Bay and South Boston reported engaging in regular physical activity compared to Boston overall. In East Boston, a lower percentage of adult residents reported engaging in regular physical activity compared to Boston overall.

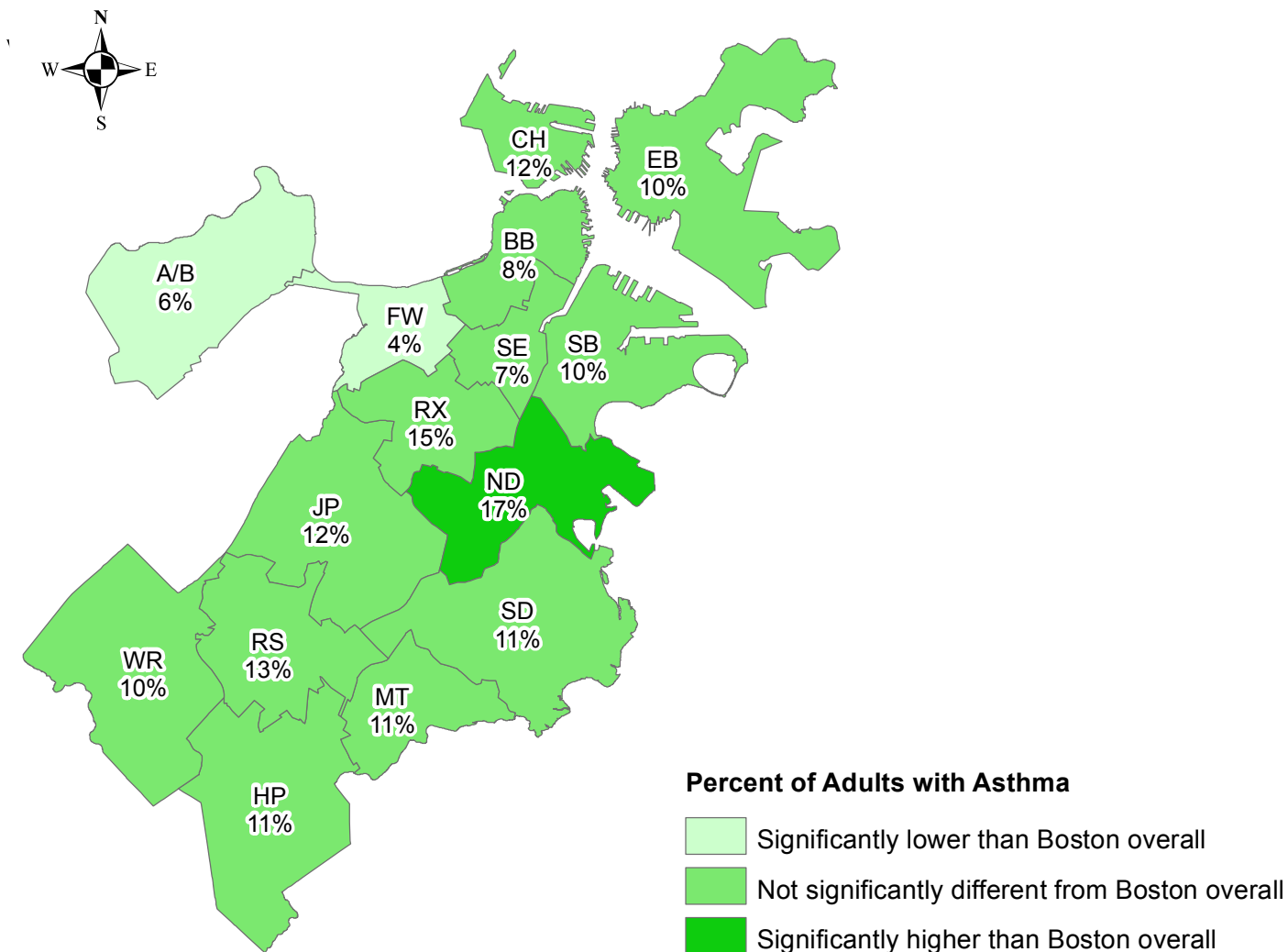
Figure 30.12 Adults Who Think Their Neighborhood is Safe, 2008



■ **Figure 30.12 Adults Who Think Their Neighborhood is Safe, 2008**

Among Boston adults, 43% consider their neighborhood safe. A lower percentage of adults in Mattapan, South Dorchester, North Dorchester and Roxbury compared to Boston overall considered their neighborhoods safe. A higher percentage of adults in Allston/Brighton, South Boston, Back Bay and West Roxbury considered their neighborhoods safe compared to Boston overall.

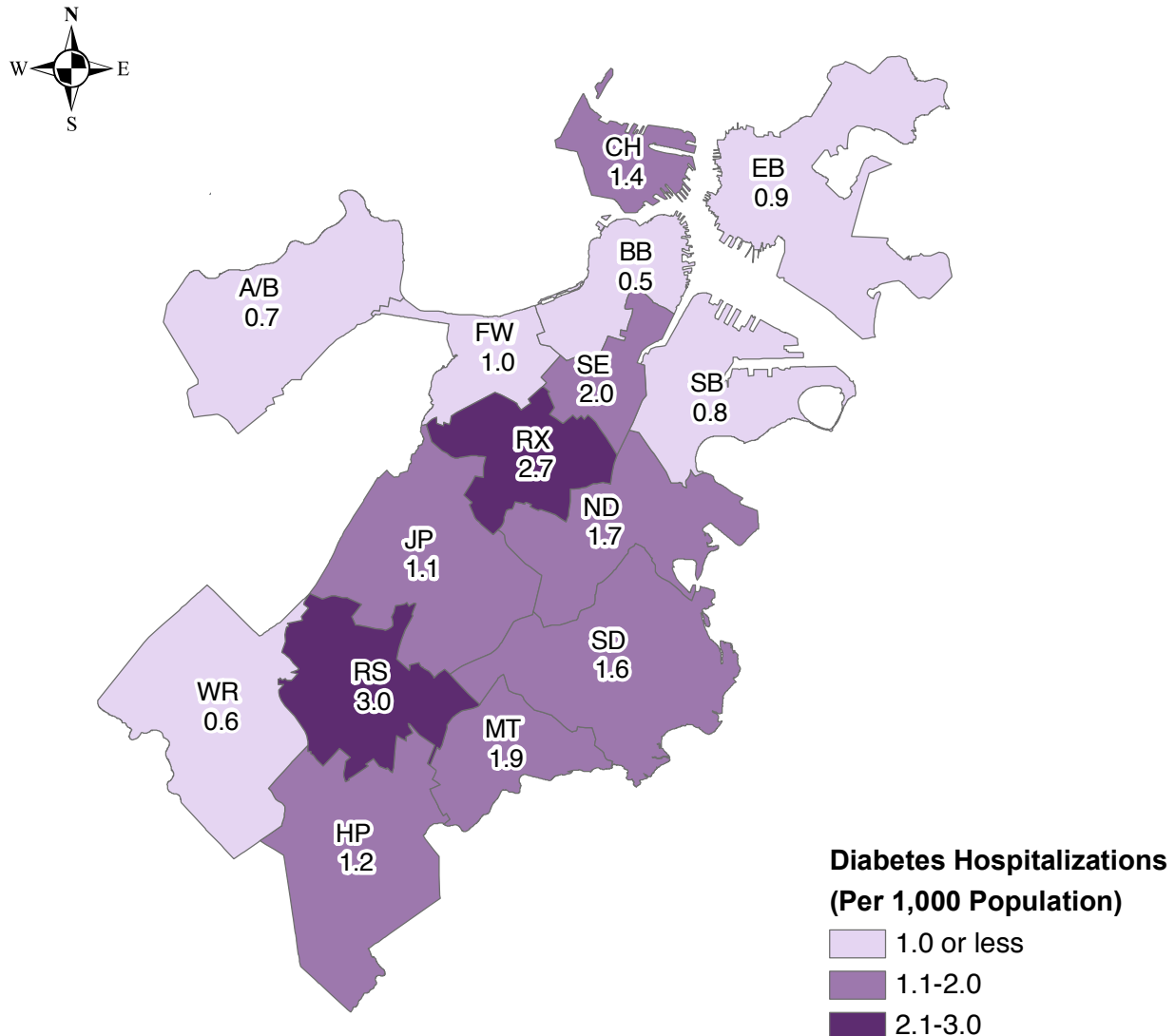
Figure 30.13 Adults with Asthma, 2008 and 2010 Combined



■ **Figure 30.13 Adults with Asthma, 2008 and 2010 Combined**

For the years 2008 and 2010 combined, a lower percentage of adult residents living in Allston/Brighton and Fenway reported having asthma compared to Boston overall. A higher percentage of adult residents living in North Dorchester reported having asthma compared to Boston overall.

Figure 30.14 Diabetes Hospitalizations, 2007, 2008, and 2009 Combined



■ Figure 30.14 Diabetes Hospitalizations, 2007, 2008, and 2009 Combined

For the combined years 2007-2009, the average annual age-adjusted rate of diabetes hospitalizations varied across neighborhoods. The diabetes hospitalization rates for Roxbury and Roslindale were more than twice the rate for Boston overall (1.2 per 1,000 population).

Figure 30.15 Obese Adult Residents, 2008 and 2010 Combined

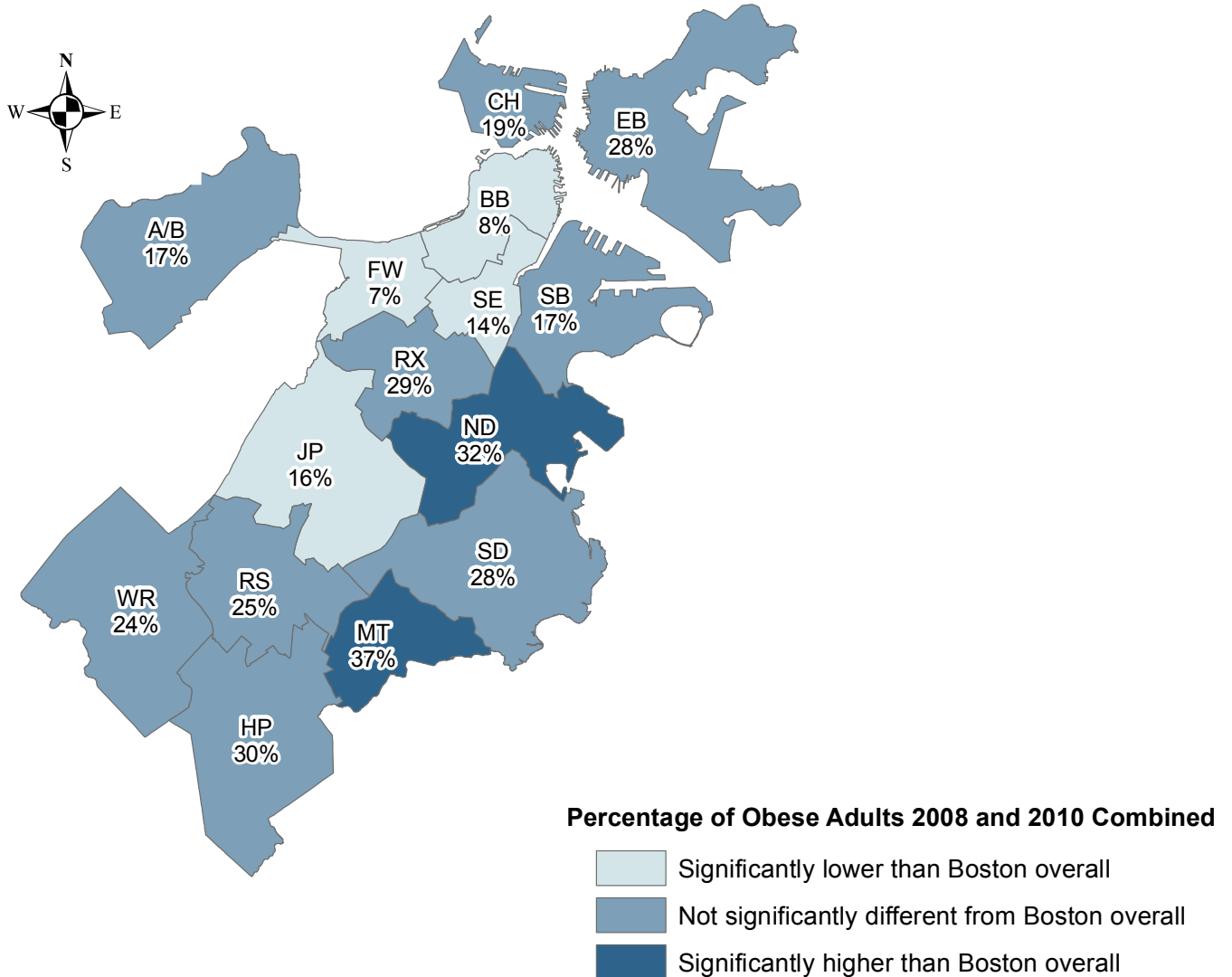
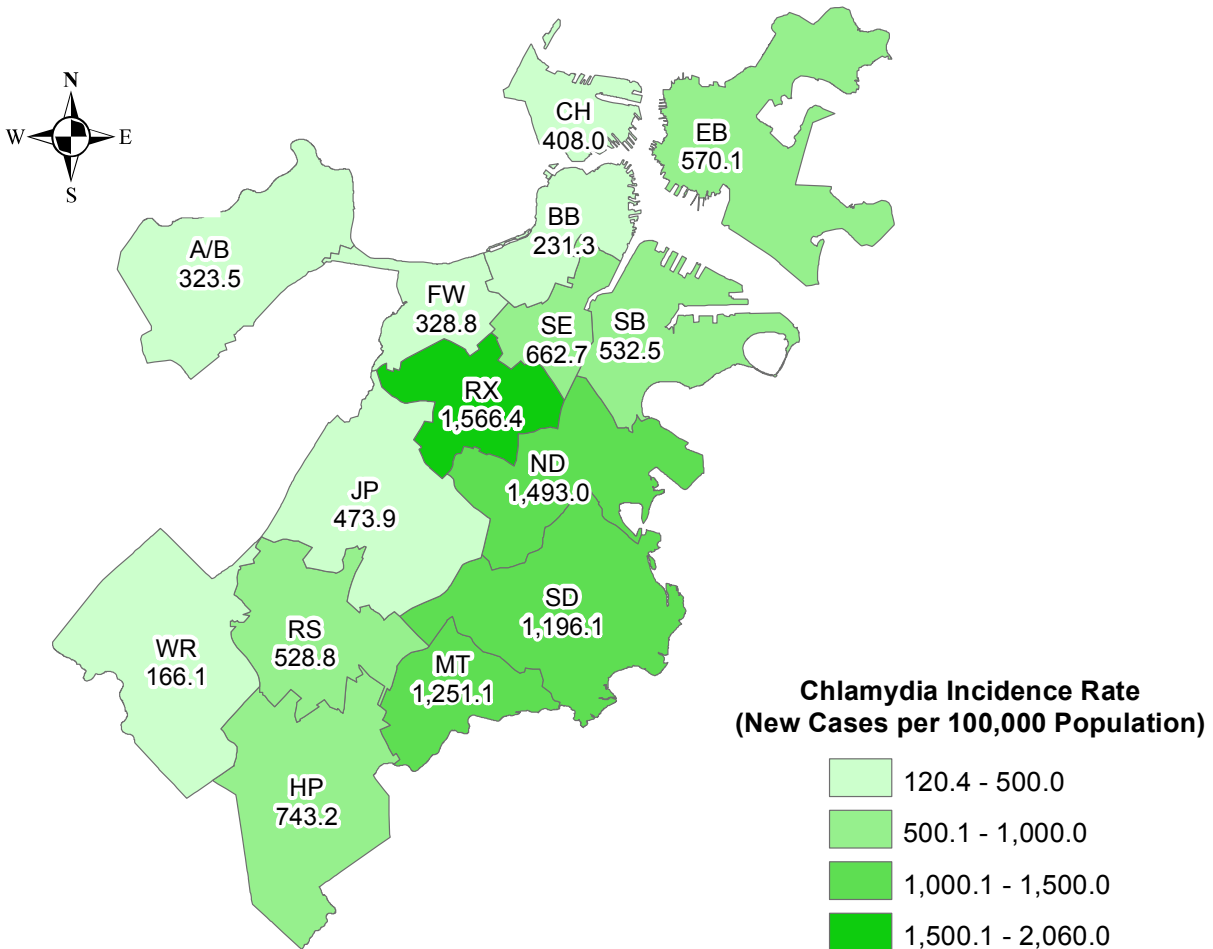


Figure 30.15 Obese Adults, 2008 and 2010 Combined

For 2008 and 2010 combined, 22% of Boston residents were obese (data not shown), although this percentage varied across neighborhoods. A higher percentage of adults in Mattapan and North Dorchester were obese compared to Boston overall. A lower percentage of adults in Back Bay, Fenway, Jamaica Plain and the South End were obese compared to Boston overall.

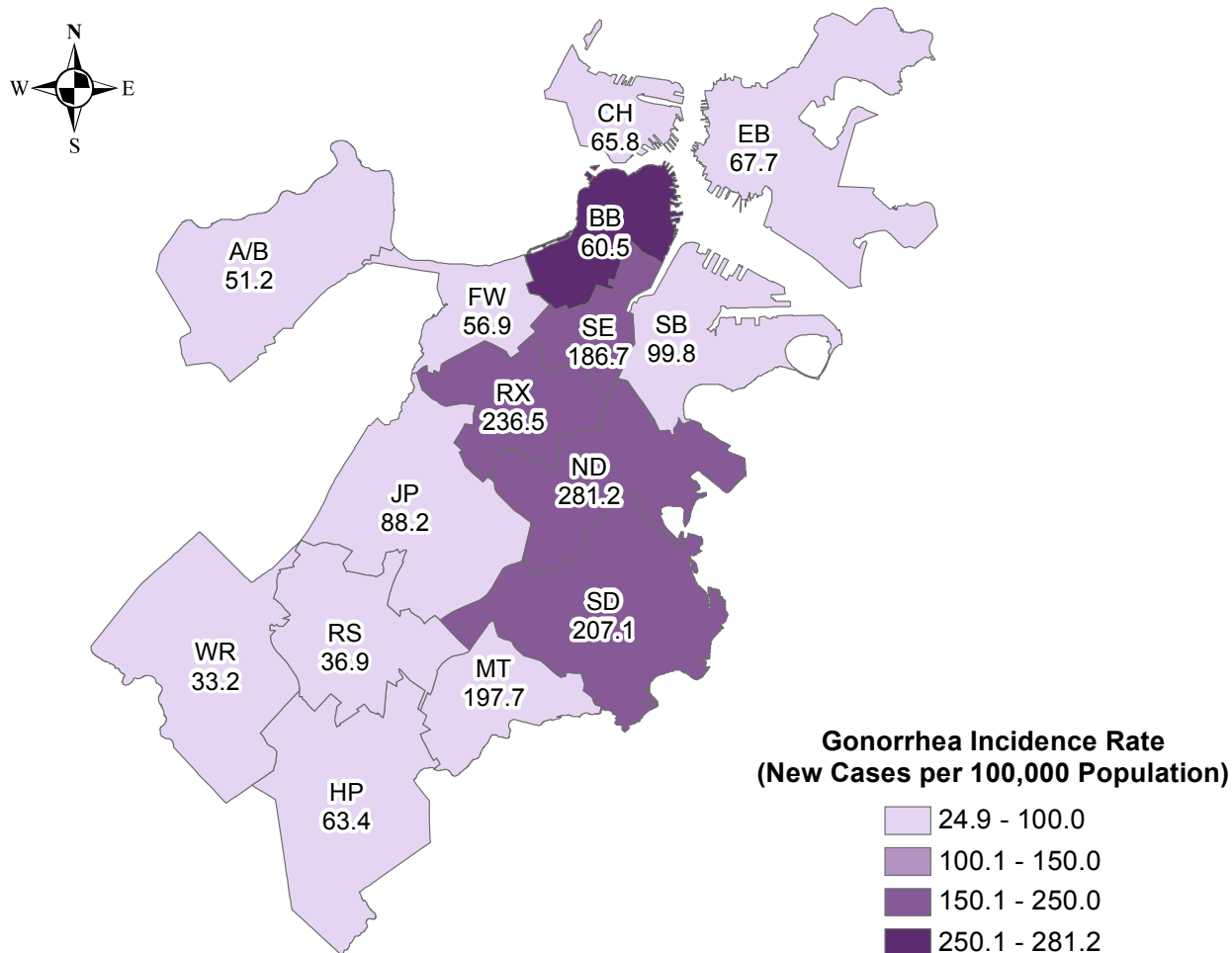
Figure 30.16 Chlamydia Rates, 2010



■ **Figure 30.16 Chlamydia Rates, 2010**

Geographic differences in the incidence of chlamydia were observed among neighborhoods in Boston. In 2010, several neighborhoods had a chlamydia incidence rate well above the overall city rate of 751.8 new cases per 100,000 population (data not shown). Roxbury, North Dorchester, Mattapan, and South Dorchester all had rates higher than the Boston overall rate. Roxbury had the highest rate (1,566.4 new cases per 100,000) which was slightly more than double the Boston city rate.

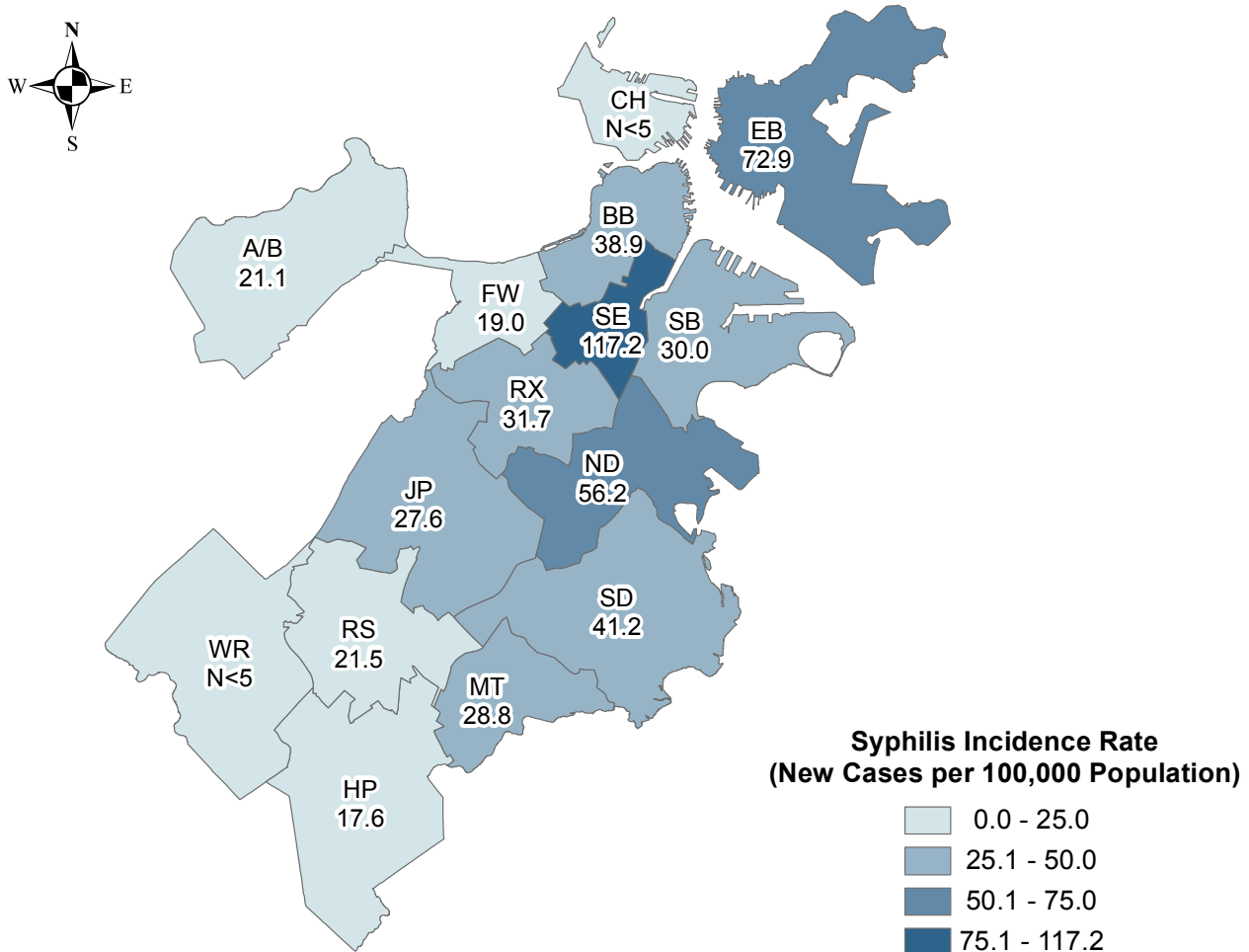
Figure 30.17 Gonorrhea Rates, 2010



■ **Figure 30.17 Gonorrhea Rates, 2010**

Geographic differences in gonorrhea rates were observed among the neighborhoods in Boston. In 2010, North Dorchester, Roxbury, South Dorchester, Mattapan and the South End all had rates higher than the Boston overall rate of 127.0 new cases per 100,000 population (data not shown). North Dorchester had the highest rate (281.2 new cases per 100,000), which was more than twice the overall city rate. Roxbury had the second highest gonorrhea rate (236.5 per 100,000 population), which was nearly twice the Boston overall rate.

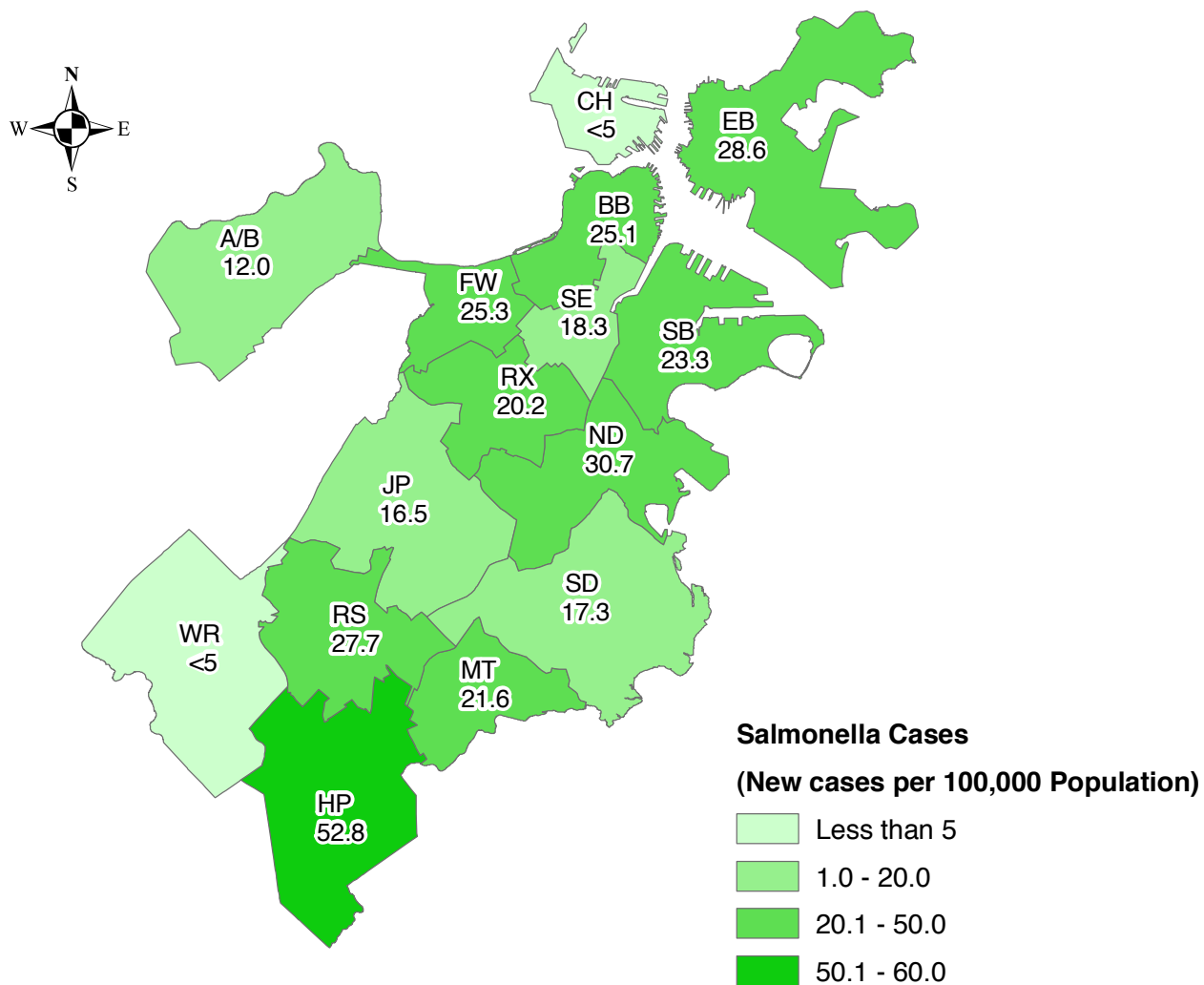
Figure 30.18 Syphilis Rates, 2010



■ **Figure 30.18 Syphilis Rates, 2010**

In 2010, the South End, East Boston, North Dorchester, and South Dorchester had syphilis rates higher than the Boston overall rate of 38.0 new cases per 100,000 population (data not shown). The South End had the highest syphilis rate (117.2 new cases per 100,000 population), which was slightly more than three times the Boston overall rate.

Figure 30.19 Salmonella Cases, 2009

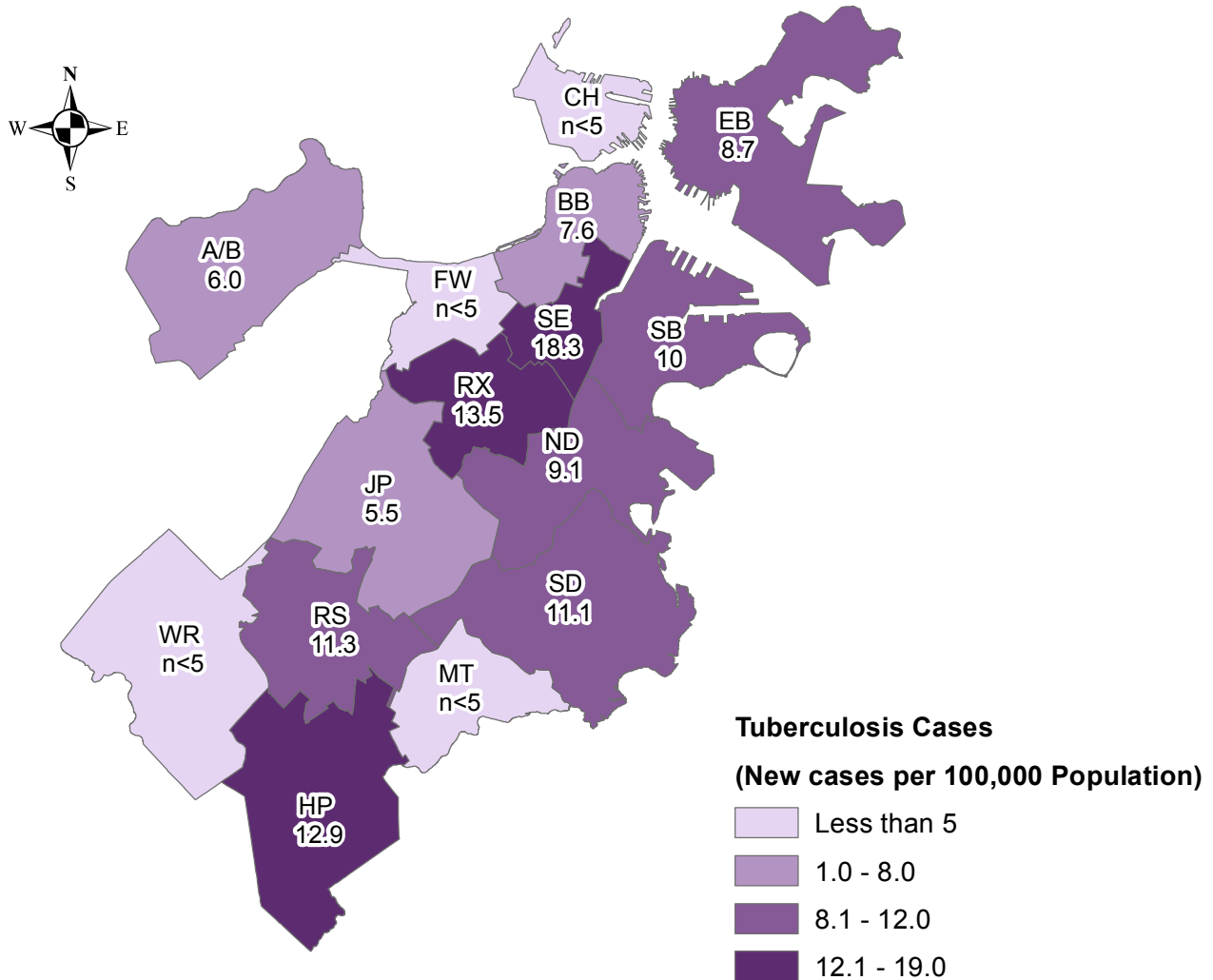


■ **Figure 30.19 Salmonella Cases, 2009**

The highest incidence rates of reported Salmonella infection among Boston neighborhoods in 2009 were in East Boston, Hyde Park and North Dorchester. In part, these rates may reflect differences in local diagnostic practices.

In 2009, Hyde Park had the highest incidence rate of reported Salmonella infection (52.8 new cases per 100,000 population); 2.3 times as high as the overall Boston rate.

**Figure 30.20 Tuberculosis Cases ,
2007, 2008 and 2009 Combined**



■ **Figure 30.20 Tuberculosis Cases, 2007, 2008, and 2009 Combined**

Hyde Park, Roslindale, Roxbury, South Dorchester and South End had the highest average incidence rates of reported tuberculosis among Boston neighborhoods for 2007-2009. In part, this may be related to immigration of individuals from countries with high rates of tuberculosis.

The South End had the highest average incidence rate of reported tuberculosis, 1.9 times as high as the overall Boston rate.

Figure 30.21 Heart Disease Hospitalization, 2007, 2008, and 2009 Combined

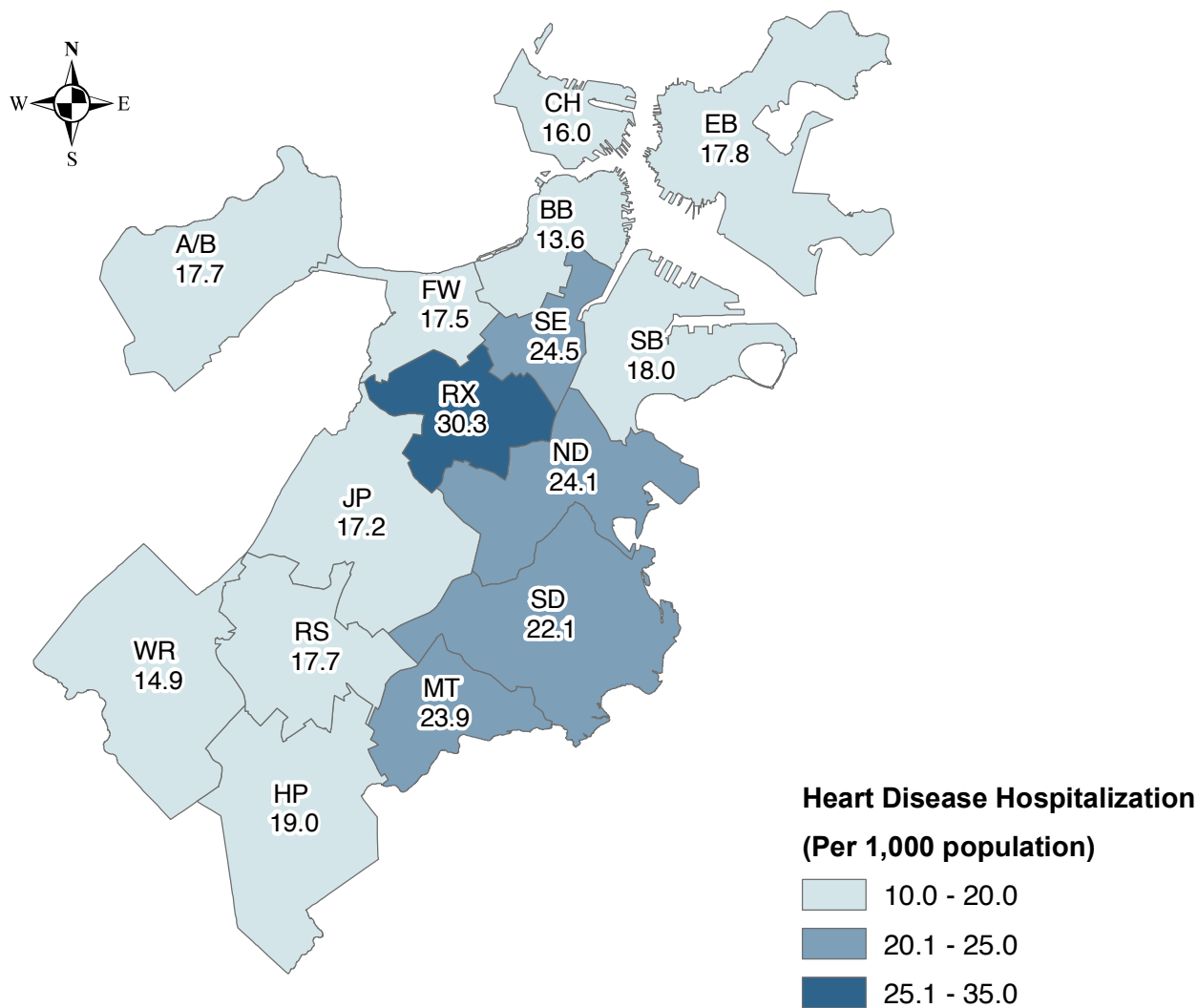


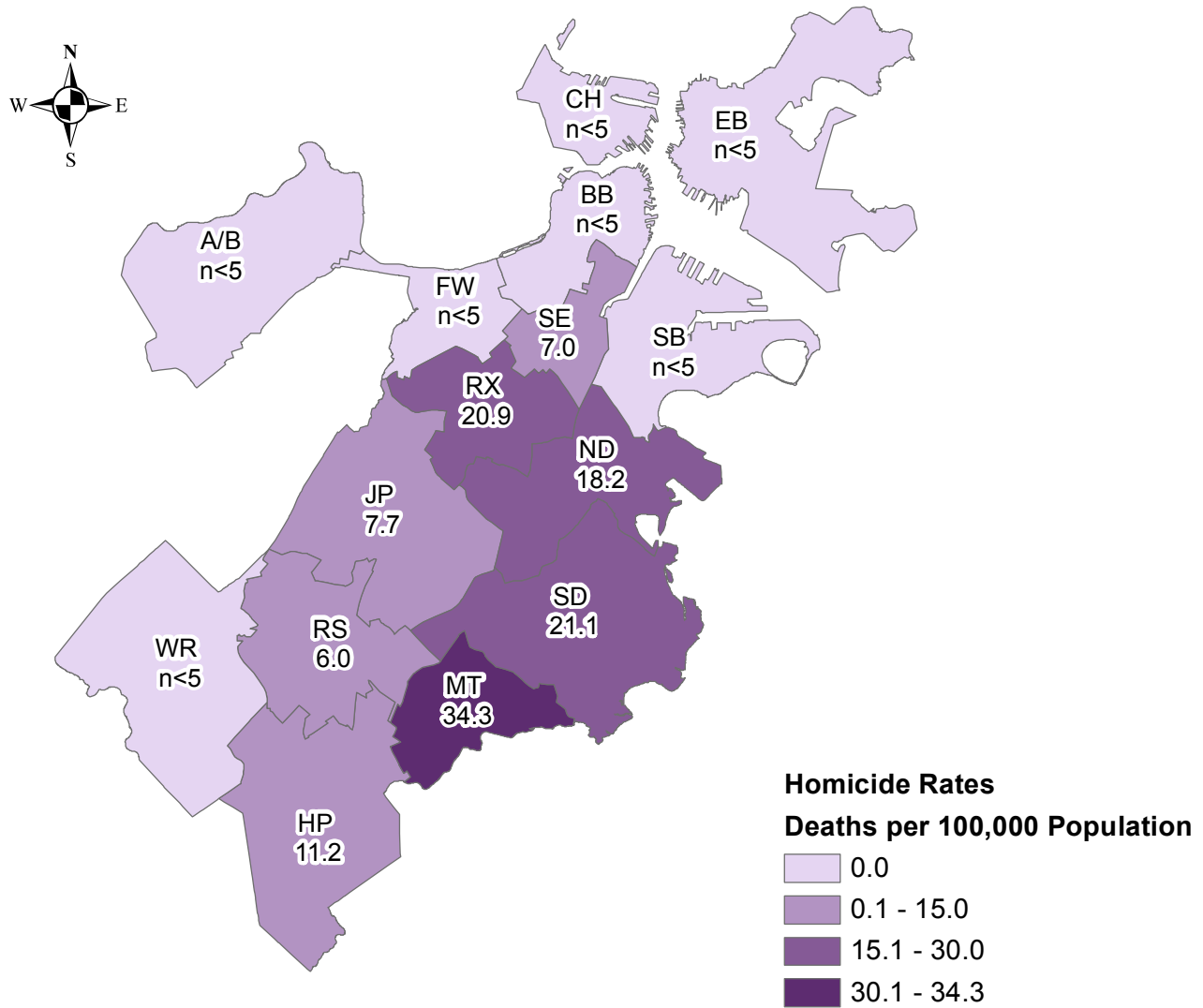
Figure 30.21 Heart Disease Hospitalizations, 2007, 2008, and 2009 Combined

During the combined years 2007-2009, five Boston neighborhoods had a higher average annual heart disease hospitalization rate than the average overall Boston rate of 19.4 per 1,000 population.

Roxbury's rate was the highest, followed by the South End, North Dorchester, Mattapan, and South Dorchester.

The rate for Roxbury was more than 50% higher than the overall Boston rate.

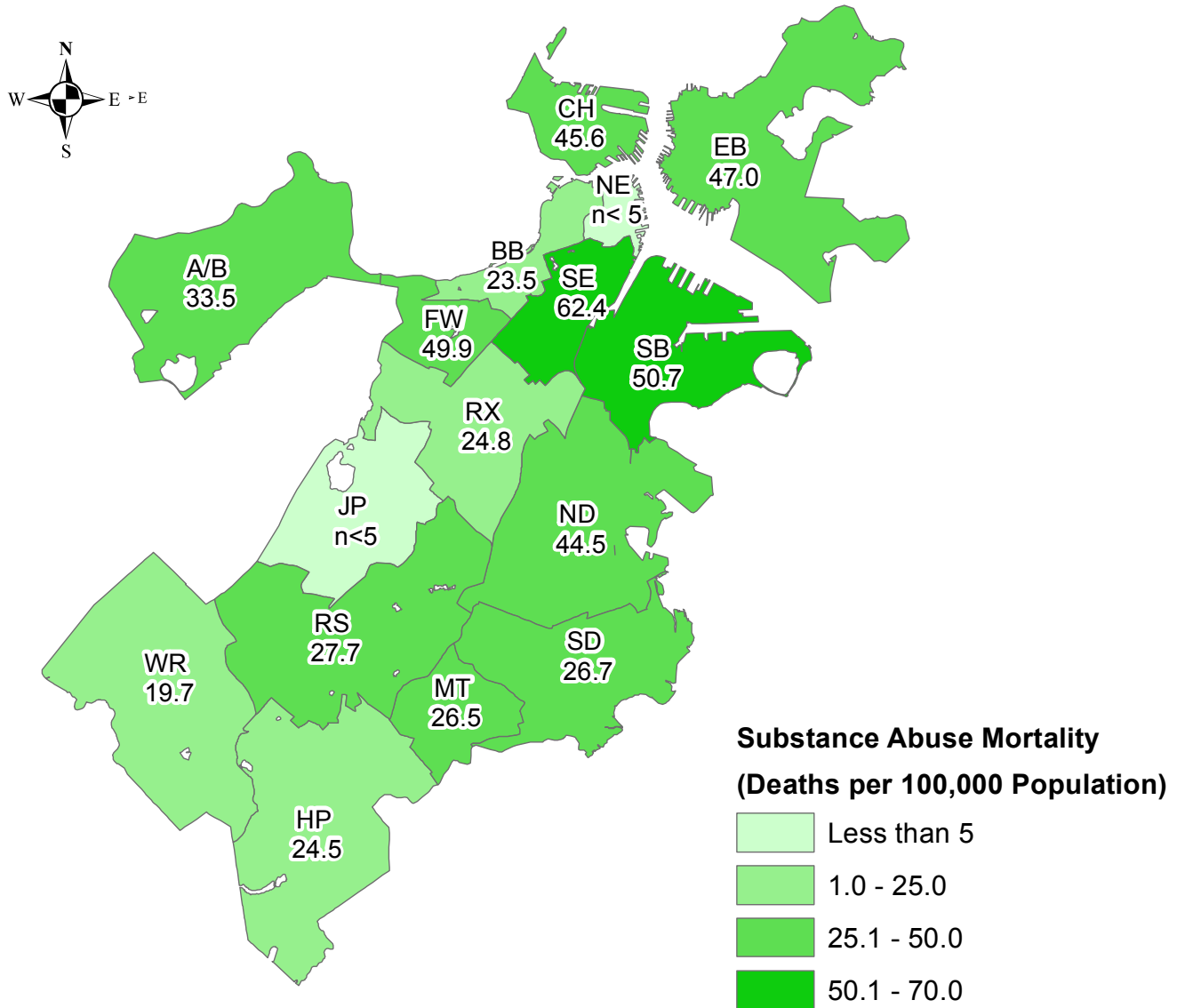
Figure 30.22 Homicides, 2006, 2007, and 2008 Combined



■ Figure 30.22 Homicides, 2006, 2007, and 2008 Combined

In 2006, 2007, and 2008 combined, homicide rates in Mattapan, South Dorchester, Roxbury, North Dorchester, and Hyde Park, were higher than the Boston overall rate of 8.5 deaths per 100,000 population (data not shown). Mattapan’s homicide rate was approximately four times higher than Boston overall.

Figure 30.23 Substance Abuse Mortality , 2008



■ **Figure 30.23 Substance Abuse Mortality, 2008**

In 2008, the South End had the highest substance abuse mortality rate at 62.4 deaths per 100,000 population among Boston neighborhoods. In addition to the South End, Charlestown, East Boston, Fenway, North Dorchester, and South Boston had a substance abuse mortality rate greater than the Boston overall rate.

Notes and Data Analysis for Neighborhood Health Indicators Section Maps

Figure 30.1a Population Density by Neighborhood, 2005-2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Neighborhoods were defined by Census Tracts

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.1b Population Count by Neighborhood, 2005-2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Neighborhoods were defined by Census Tracts

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.2 Estimated Racial/Ethnic Distribution by Neighborhood, 2005-2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Neighborhoods were defined by Census Tracts

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.3 Estimated Median Household Income by Neighborhood, 2005-2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Neighborhoods were defined by Zip Codes

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.4 Estimated Percent of Individuals below Poverty Level by Neighborhood, 2005-2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Neighborhoods were defined by Zip Codes

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.5 Percent of Renter Occupied Housing Units by Neighborhood, 2005-2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Neighborhoods were defined by Census Tracts

DATA SOURCE: US Census Bureau, 2005-2009 American Community Survey

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.6 Infant Mortality by Neighborhood, 2006-2008

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Birth data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in the Health of Boston 2010. Neighborhoods were defined by Census Tracts

DATA SOURCE: Boston resident live births and deaths, Massachusetts Department of Public Health

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.7 Low Birth Weight Births by Neighborhood, 2006-2008

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Birth data for 2009 are not yet available from the Massachusetts Department of Public Health. Neighborhoods were defined by Census Tracts

DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.8 Preterm Births by Neighborhood, 2006- 2008

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Birth data for 2009 are not yet available from the Massachusetts Department of Public Health.

Neighborhoods were defined by Census Tracts

DATA SOURCE: Boston resident live births, Massachusetts Department of Public Health

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.9 Adults who Currently Smoke, 2006 and 2008 combined

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Calculated as adults who have smoked at least 100 cigarettes in their life and report smoking every day or some days. Neighborhoods were defined by Zip Codes.

DATA SOURCE: Boston Behavioral Risk Factor Survey 2006 and 2008, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.10 Excessive Alcohol Consumption Among Adults in Past Month, 2006 and 2008 Combined

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Data reflects survey question, "During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?". Neighborhoods were defined by Zip Codes.

DATA SOURCE: Boston Behavioral Risk Factor Survey 2006 and 2008, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.11 Adults Who Engage in Regular Physical Activity, 2006 and 2008 Combined

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Calculated as adults who have done moderate activities for at least 30 minutes per day on five days of a usual week or vigorous activities for at least 20 minutes per day on three days of a usual week. Neighborhoods

were defined by Zip Codes.

DATA SOURCE: Boston Behavioral Risk Factor Survey 2006 and 2008, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.12 Adults Who Think Their Neighborhood is Safe, 2008

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Survey question reads, “Do you consider your neighborhood very safe, somewhat safe or not safe?”

Neighborhoods were defined using Census Tracts

DATA SOURCE: Boston Neighborhood Survey, 2008; Harvard Youth Prevention Center through cooperative agreement with the Center for Disease Control and Prevention

DATA ANALYSIS: Harvard Youth Violence Prevention Center

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.13 Adults with Asthma, 2006 and 2008 Combined

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Combination of two survey questions. Respondents asked, “Have you ever been told by a doctor, nurse or other health professional that you had asthma?” If answer was “yes,” respondents were then asked, “Do you still have asthma?” Data reflect percent of adults who answered “yes” to both questions.

Neighborhoods were defined by Zip Codes.

DATA SOURCE: Boston Behavioral Risk Factor Survey 2006 and 2008, Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.14 Diabetes Hospitalizations, 2007, 2008 and 2009 Combined

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Age-adjusted rates are presented here. Neighborhoods were defined by Zip Codes.

DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.15a Adults Who are Obese, 2003 and 2005 Combined

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan,

ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Body Mass Index (BMI) is calculated from self-reported weight and height. An adult who has a BMI of 30 or higher is considered obese. These data do not include persons of 'Other' or unknown race/ethnicity.

Neighborhoods are defined by Zip Codes

DATA SOURCE: Boston Behavioral Risk Factor Survey, 2003 and 2005, Boston Behavior Surveillance System (BBRFSS), Boston Public Health Commission

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.15b Adults Who are Obese, 2006 and 2008 Combined

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Body Mass Index (BMI) is calculated from self-reported weight and height. An adult who has a BMI of 30 or higher is considered obese. These data do not include persons of 'Other' or unknown race/ethnicity.

Neighborhoods are defined by Zip Codes

DATA SOURCE: Boston Behavioral Risk Factor Survey, 2006 and 2008, Boston Behavior Surveillance System (BBRFSS), Boston Public Health Commission

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.16 Chlamydia Rates by Neighborhood, 2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTES: These data do not include homeless persons, individuals whose neighborhood of residence was not reported, inmates of correctional facilities, and clients of drug treatment programs, except in the Boston overall counts and rates. Data are presented as crude incidence rates. Neighborhoods were defined by Zip Codes.

DATA SOURCE: Massachusetts Department of Public Health, STD Division

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.17 Gonorrhea Rates by Neighborhood, 2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

A rate is not presented for West Roxbury due to the small number of new gonorrhea cases.

NOTES: These data do not include homeless persons, individuals whose neighborhood of residence was not

reported, inmates of correctional facilities, and clients of drug treatment programs, except in the Boston overall counts and rates. Data are presented as crude incidence rates. Neighborhoods were defined by Zip Codes.

DATA SOURCE: Massachusetts Department of Public Health, STD Division

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.18 Syphilis Rates by Neighborhood, 2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTES: Rates are not presented for Charlestown and West Roxbury due to the small number of new syphilis cases. These data do not include homeless persons, individuals whose neighborhood of residence was not reported, inmates of correctional facilities, and clients of drug treatment programs, except in the Boston overall counts and rates. Data are presented as crude incidence rates. Neighborhoods were defined by Zip Codes.

DATA SOURCE: Massachusetts Department of Public Health, STD Division

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.19 Salmonella Rate by Neighborhood, 2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTES: Rates are not presented for Charlestown and West Roxbury due to the small number of new syphilis cases. These data do not include homeless persons, individuals whose neighborhood of residence was not reported, inmates of correctional facilities, and clients of drug treatment programs, except in the Boston overall counts and rates. Data are presented as crude incidence rates. Neighborhoods were defined by Zip Codes.

DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

DATA ANALYSIS: Boston Public Health Commission Communicable Disease Control Division

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.20 Tuberculosis Rates by Neighborhood, 2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTES: Rates are not presented for Charlestown and West Roxbury due to the small number of new syphilis cases. These data do not include homeless persons, individuals whose neighborhood of residence was not reported, inmates of correctional facilities, and clients of drug treatment programs, except in the Boston overall counts and

rates. Data are presented as crude incidence rates. Neighborhoods were defined by Zip Codes.

DATA SOURCE: Communicable Disease Database, Boston Public Health Commission, Communicable Disease Control Division

DATA ANALYSIS: Boston Public Health Commission Communicable Disease Control Division

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.21 Heart Disease Hospitalizations, 2009

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTES: Rates are not presented for Charlestown and West Roxbury due to the small number of new syphilis cases. These data do not include individuals whose neighborhood of residence was not reported. Data are presented as age-adjusted rates. Neighborhoods were defined by Zip Codes.

DATA SOURCE: Acute Case Mix Files, Massachusetts Division of Health Care Finance and Policy

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.22 Homicides by Neighborhoods, 2006-2008 Combined

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, North End, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Data are presented as age-adjusted rates. Neighborhoods are defined by Zip Codes

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Figure 30.23 Substance Abuse Mortality by Neighborhood, 2008

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay (includes Beacon Hill, Downtown, and the West End), CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End (includes Chinatown), and WR=West Roxbury

NOTE: Death data for 2009 are not yet available from the Massachusetts Department of Public Health. Unless otherwise indicated, data presented here are the same data presented in Health of Boston 2010. Data are presented as age-adjusted rates. Mortality rates for alcohol abuse, and drug abuse cannot be compared to rates presented in previous Health of Boston reports due to changes in case definitions. In JP and NE substance abuse deaths were less than 5, too few deaths to calculate rates. For more information please see the Glossary.

DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

MAP CREATED BY: Boston Public Health Commission Research and Evaluation Office

Technical Notes

- Rates
- Population
- Racial and Ethnic Designators
- Age-Adjusted Mortality
- Boston Neighborhoods
- U.S. Census Poverty Designation

Rates

A rate is a measure of some event, disease, or condition in relation to a population per unit of time, for instance, the number of deaths due to heart disease per 100,000 population in a given year. Three types of rates are presented in this report: crude rates, age-specific rates (ASRs), and age-adjusted rates (AARs).

Crude rates are used to present data pertaining to the entire population, such as all of Boston, or to present data pertaining to an entire group within a population, such as all males or females. A crude rate is calculated by dividing the number of events for the entire population by the total population. It is usually calculated on the basis of every 100,000 people or, in the case of birth rates, every 1,000 females.

Age-specific rates take into account the size and age distribution of the population. They enable the reader to compare different groups without being concerned that differences in health status are due to differences in the size of the groups or in the distribution of ages. An ASR is calculated by dividing the number of events among people in an age group by the number of people in that age group. ASRs for deaths and for communicable diseases are usually calculated on the basis of every 100,000 people.

Age-adjusted rates are used to present data for comparison among several populations, such as Boston neighborhoods, in which distribution of age can differ considerably. The calculation for AARs takes into account the differences in age distribution and adjusts for them. The AAR is calculated by applying the age-specific rates in a population for a specific event such as death to a standard population (typically, the 2000 U.S. standard population). AARs are used for Boston mortality, hospital, and emergency department data.

New cases of a communicable disease such as salmonella are presented as incidence rates, which may be age-specific or crude. In Health of Boston 2011, cancer incidence rates are presented as age-adjusted. Incidence rates are usually reported on the basis of every 100,000 people per year.

Population

Two types of population statistics are used in this report. The first type is the census of the population taken every ten years by the federal government, a literal count of people living in the United States. The second type is population estimates made by the U.S. Census Bureau. Some data from the 2010 U.S. Census are presented in the Boston Demographic and Socioeconomic Profile sections in Health of Boston 2011.

The national decennial census provides the best actual count of the U.S. population. It presents data to the level of small areas called census tracts, each of which has only a few thousand residents, to larger areas such as zip codes. Census tracts or zip codes can be combined to produce Boston neighborhood-level analyses. Zip-code based populations from the 2000 U.S. Census were used in calculating the rates of infectious diseases, sexually transmitted infections by neighborhood, hospitalizations, emergency department visits, and substance abuse treatment presented in this report. The 2010 U.S. Census was used in calculating rates of sexually transmitted infections, including HIV incidence rates. Census tract based populations from the 2000 U.S. Census were used in calculating birth and death rates.

Racial and Ethnic Designations

The classification of race/ethnicity used in this report varies by data source. All racial and ethnic designations except those from the death certificate, some hospital discharge data, and some emergency department data are self-reported.

Several cautions should be kept in mind when using data reported by race/ethnicity. Race and ethnicity are social constructions, not biological facts. There is often more genetic variation between members of the same race than between members of different races. In addition, the meanings of these designations are highly subject to historical, cultural, and political forces. Not only do these designations change over time, but there is also a very subjective element that influences who is considered a member of one group or another. The concept of race can be notably vague: the term “Black,” for example, includes people describing themselves as African American, African, or Caribbean, groups with distinct histories and differing health risks.

Nevertheless, racial designations are useful in that they are nearly universally used by people in the United States to describe themselves, and they permit us to identify and address health inequities that exist across racial and ethnic groups.

Boston-specific data in this report are presented for each racial and ethnic subgroup when numbers are large enough to allow calculation of percentages or reliable rates. Few sources have data in large enough numbers to allow presentation of data about smaller groups such as the many ethnicities included in the category “Asian.”

Since Latinos can be of any race, federal data sources often report Latino persons within the race categories Black or White. In Health of Boston 2011, however, Latino ethnicity is presented alongside other racial/ethnic groups. Prior to 2008, Massachusetts’ hospitalization and emergency department visits data by race/ethnicity was subject to variation in reporting practices by hospitals. Also, because of changes made by the U.S. Census Bureau in the collection and reporting of population data by race/ethnicity, it does not recommend comparing 1990 U.S. Census population data by race/ethnicity with 2000 and 2010 U.S. Census population data by race/ethnicity.

Age-Adjusted Mortality

The age-adjusted rate (AAR) of mortality is calculated by applying the age-specific rate for death in a population to the year 2000 standard U.S. population and multiplying by 100,000.

The International Classification of Disease (ICD) is a coding system developed by the World Health Organization (WHO) and 10 international centers. The ICD system standardizes medical terms used on death certificates and groups them for statistical purposes. The International Classification of Disease, Ninth Revision, Clinical Modification (ICD-9-CM) is used for categorizing and classifying morbidity data from inpatient and outpatient records of hospitals. It should not be confused with the International Classification of Disease used for categorizing and classifying mortality data from death certificates, whose revision from ICD-9 to ICD-10 became effective with 1999 mortality data.

Mortality data from death certificates are coded using ICD-10. The change from ICD-9 to ICD-10 means that causes of death classified according to the ICD-10 are not precisely comparable to causes of death classified according to ICD-9.

Boston Neighborhoods

Neighborhoods can be defined in a number of ways. In this report, zip codes and census tracts are used to identify neighborhood boundaries since this information is often collected with Boston health data. In Health of Boston 2011, most charts and maps presenting neighborhood data use neighborhood definitions based on zip codes. However, charts and maps presenting birth data, death data, American Community Survey data and Census 2000 data rely on neighborhood definitions based on census tracts.

U.S. Census Poverty Designation

There are two predominant definitions of poverty. One is defined by the U.S. Census Bureau and referred to as “poverty thresholds,” and the other is defined by the Department of Health and Human Services and referred to as “poverty guidelines.” The poverty definition present in Health of Boston 2011 is that of the U.S. Bureau of the Census. Poverty estimates are derived from the U.S. Bureau of the Census, American Community Survey (ACS) for 2009 and the five year period 2005-2009.

The U.S. Census Bureau’s definition of poverty is a federal definition characterized by a series of “poverty thresholds” which specify before-taxes, monetary income maximums, in dollars, an individual and/or family can earn in a given year and still be declared impoverished. This definition is based on same household of residence and takes into account family size and whether or not any members in one or two-person familial units are over the age of 65. It does not include any income that may have been generated through federal financial assistance programs, capital gains, or from children under the age of 15; foster children are not included in the calculations.

Starting in 1969, poverty thresholds have been modified annually to account for inflation according to rates specified by the Consumer Price Index. Poverty thresholds are not adjusted for regional differences in mean/median income levels, nor do they include prison inmates, residents of nursing homes, students who live in on-campus university housing, and persons who live in military barracks; however, persons living in shelters are included.

DATA SOURCES AND LIMITATIONS

Census 2000 and Census 2010, U.S. Department of Commerce, U.S. Census Bureau, American Fact Finder.

The U.S. census is conducted every ten years. Census 2000 data were used in the calculation of most rates for Health of Boston 2011. Census 2010 data were used in the calculation of sexually transmitted disease incidence rates, including HIV incidence. Since the population data used for these rates did not change from year to year, the impact of actual year to year population changes on rates is largely unknown. As a result, observed rate changes over time may to some extent reflect actual changes in the underlying population. Additionally, undercounts of certain subpopulations may occur when people, for example, undocumented immigrants, avoid being recorded in the census for fear of contact with the government or for other reasons.

The collection and coding of race and ethnicity data has changed significantly over time. Hispanic ethnicity was not asked until 1930, and then was limited to Mexican ancestry. It was collected in 1940 for all Hispanics/Latinos, but not again until 1970, and then only in samples, not in the count of the whole population. Beginning in 1980, Hispanic origin has been a regular part of the data collection. The capacity to distinguish race groups from Hispanic/Latino origin was not built into the census until 1980.

HIV/AIDS. HIV/AIDS Surveillance Program, Massachusetts Department of Public Health.

New cases HIV/AIDS infection are reported to the Massachusetts Department of Public Health by diagnosing physicians and laboratories. Undiagnosed cases may influence the accuracy of reported cases and impede interpretation of HIV/AIDS case data.

Boston Behavioral Risk Factor Surveillance System (BBRFSS). Boston Behavioral Risk Factor Surveillance System (BBRFSS), Boston Public Health Commission.

The Boston Behavioral Risk Factor Surveillance System (BBRFSS) is a system of telephone health surveys of adults ages 18 and over that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury.

The Boston Public Health Commission conducts an independent survey every other year modeled after the Boston Behavioral Risk Factor Surveillance System (BRFSS) survey. Over time, the survey has been modified by the Commission to be more reflective of health risk behaviors specific to the Boston population. However, the Boston version, now called the Boston Behavior Risk Factor Surveillance System (BBRFSS) survey, has maintained many standard core questions included in the BRFSS used by the State. Results from the survey are used by the Commission to plan and implement health initiatives; to identify health problems within a population; to identify racial/ethnic disparities in access to and utilization of health care, in risk behaviors, and selected health conditions; to establish and monitor health objectives; to support health-related legislative activities; to evaluate disease prevention activities and programs, and to assist in getting grants and other funding.

Boston Neighborhood Survey (BNS), 2008; Harvard Youth Prevention Center through a Cooperative agreement with the Centers for Disease Control and Prevention.

The BNS is a telephone survey of Boston adults (18 and older) conducted every two years. It is designed to provide

information about some important socio-demographic characteristics of Boston neighborhoods. Among other topics the 2008 BNS asked respondents about: (1) community norms and neighborhood resources, (2) respondents' sense of community well-being and perceptions of community safety, (3) demographic characteristics, and (4) the well-being of neighborhood youth. The survey, which is conducted in both English and Spanish, provides results for Boston overall and for Boston neighborhoods.

Funding for the survey is provided by the Centers for Disease Control and Prevention. The Boston Neighborhood Survey was supported by Grant/Cooperative Agreement Number U49 CE000740 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the Harvard Youth Violence Prevention Center and do not necessarily represent the official views of CDC.

Boston Youth Survey (BYS), 2008; Harvard Youth Violence Prevention Center through a Cooperative agreement with the Centers for Disease Control.

The BYS is conducted every two years among Boston public high school students in grades 9-12. It results from a partnership among the City of Boston Office of Human Services, Boston Public Health Commission, and the Harvard Youth Violence Prevention Center. The survey contains questions covering a wide array of topics including violence perpetration, violence victimization, and perceptions of drug use.

Census 2000, U.S. Department of Commerce, U.S. Census Bureau, American Fact Finder.

The U.S. census is conducted every ten years. Census 2000 data were used in the calculation of rates for Health of Boston 2011. Since the population data used for these rates did not change from year to year, the impact of actual year to year population changes on rates is largely unknown. As a result, observed rate changes over time may to some extent reflect actual changes in the underlying population. Additionally, undercounts of certain subpopulations may occur when people, for example, undocumented immigrants, avoid being recorded in the census for fear of contact with the government or for other reasons.

The collection and coding of race and ethnicity data has changed significantly over time. Hispanic ethnicity was not asked until 1930, and then was limited to Mexican ancestry. It was collected in 1940 for all Hispanics/Latinos, but not again until 1970, and then only in samples, not in the count of the whole population. Beginning in 1980, Hispanic origin has been a regular part of the data collection. The capacity to distinguish race groups from Hispanic/Latino origin was not built into the census until 1980.

Deaths. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Division of Research and Epidemiology, Registry of Vital Records and Statistics.

Death data used by the Boston Public Health Commission pertain only to Boston residents.

Death records are completed with the assistance of an informant, typically a family member or funeral director, which may result in errors (for example, in race/ethnicity reporting) that would not occur in self-reported data.

Inconsistencies in the recording of immediate cause of death, intervening causes, and the underlying cause of death have been documented nationally, which may result in under- or over-reporting of certain causes. Data are embargoed until after public release by the Massachusetts Department of Public Health, approximately 14 months after the close of the data year.

Death due to homicide as reported by the Boston Police Department (not included in report) applies to any homicide that occurs in Boston without regard to the actual city of residence of the deceased. As a result, the number of homicides reported by the Boston Public Health Commission (i.e., Boston resident homicides) will likely differ from those reported by the Boston Police Department.

Emergency Department Visits. Massachusetts Division of Health Care Finance and Policy.

The hospital emergency department data represent visits not individuals. As with hospital discharge data, unduplicated counts of individuals using emergency department services is not available.

The collection of race/ethnicity information differs by reporting hospital. Some facilities request self-reported information from patients while others have staff report patient race/ethnicity. Due to changes in reporting practices, race/ethnicity data for 2008 and 2009 cannot be compared to data for previous years.

HIV/AIDS. HIV/AIDS Surveillance Program, Massachusetts Department of Public Health.

New cases HIV/AIDS infection are reported to the Massachusetts Department of Public Health by diagnosing physicians and laboratories. Undiagnosed cases may influence the accuracy of reported cases and impede interpretation of HIV/AIDS case data.

Hospitalizations. Acute Care Hospital Case Mix files. Massachusetts Division of Health Care Finance and Policy.

The hospital discharge data do not represent individuals but rather discharges from Massachusetts hospitals.

The collection of race/ethnicity information differs by reporting hospital. Some facilities request self-reported information from patients, while others have staff report patient race/ethnicity. Due to changes in reporting practices, race/ethnicity data for 2008 and 2009 cannot be compared to data for previous years.

Infectious Diseases (pertussis, salmonella, and tuberculosis). Boston Public Health Commission, Communicable Disease Control Division.

Data from communicable disease surveillance systems are limited by the degree to which people with a condition seek health care that results in testing and reporting to the system. Many such diseases are asymptomatic or mild, or are treated presumptively without formal testing, and for some conditions, reporting may be less than complete. All of these factors may contribute to underestimates of the frequency of disease and/or distortions in the pattern of disease seen in the reported data.

Lead Screening. Boston Public Health Commission, Environmental Health, Boston Childhood Lead Poisoning Prevention Program.

In Boston, annual screening of children between 6 and 48 months of age is mandatory.

The blood-lead level data reported in this report are solely related to the screened population.

Sexually Transmitted Infections (chlamydia, gonorrhea, and syphilis). Massachusetts Department of

Public Health, Center for Clinical and Laboratory Services, Division of Sexually Transmitted Disease (STD) Prevention.

New cases of chlamydia, syphilis and gonorrhea infection are reported to the Massachusetts Department of Public Health by diagnosing physicians and laboratories. Undiagnosed cases and variations in screening practices and compliance with reporting requirements may influence the accuracy of reported sexually transmitted diseases. Due to changes in case identification practices, counts and rates of sexually transmitted diseases presented in Health of Boston 2011 cannot be compared to data in previous Health of Boston reports.

Substance Abuse Treatment Admissions. Massachusetts Department of Public Health, Center for Community Health, Bureau of Substance Abuse Services.

The MDPH Bureau of Substance Abuse Services funds and licenses treatment facilities which submit data every year on the people they serve. The data reflect admissions, not individuals: an individual may be admitted for substance abuse treatment more than once.

It should also be noted that this dataset provides information only about people who have been admitted for treatment of substance abuse problems, not the total number who are experiencing such difficulties.

Due to changes in case identification practices, counts and rates of substance abuse treatment admissions cannot be compared to data presented in previous Health of Boston reports.

Youth Risk Behavioral Surveillance System (YRBSS). Youth Risk Behavior Surveillance System (YRBSS), Centers for Disease Control and Prevention (CDC).

The Youth Risk Behavior Surveillance System (YRBSS) is a system of national school-based surveys conducted by the Centers for Disease Control and Prevention (CDC) every other year among public high school students in grades 9-12. It is currently conducted in 44 states and 22 cities. The survey contains questions related to risk behaviors such as unintentional injuries and violence, alcohol and drug use, tobacco use, and sexual behavior; unhealthy eating behaviors, physical inactivity; and the prevalence of obesity and asthma.

The Boston Public Health Commission uses results from the YRBSS to identify the prevalence of health risk behaviors among Boston youth, identify racial/ethnic disparities, plan and implement health initiatives, support health-related legislative activities, assist in getting grants and other funding, and other activities.

Glossary

This glossary provides the reader with definitions of terms commonly used throughout this report.

Age-Adjusted Rate (AAR): Used to present data for comparison among several populations, such as Boston neighborhoods, in which distribution of age can differ considerably. The calculation for AARs takes into account the differences in age distribution and adjusts for them. The age adjusted rate of one group can then be compared to the age adjusted rate of another group with confidence that differences in the rates of the two areas or groups do not stem from differences in the age structure of their populations. The AAR is calculated by applying the age-specific rate in a population (for a specific event such as death) to a standard population. The year 2000 standard U.S. population is used in this report.

Acquired Immune Deficiency Syndrome (AIDS): See HIV/AIDS.

Adolescent Births: Births to adolescents 15 to 17 years of age.

African American: All persons self-identified as of African descent and do not self-identify as Latino.

Age Specific Rate (ASR): The number of events such as deaths or diseases per year in a given age group per 100,000 people in that age group.

Age-Specific Birth Rate: The number of live births to women in an age group divided by the female population of that age group, expressed per 1,000 females in that age group.

Age-Specific Hospitalization or Emergency Department Visit Rate: The number of hospitalizations or emergency department visits per year in a given age group per 1,000 people in that age group.

Alcohol Related Deaths: Death induced by alcohol use/abuse, such as liver disease due to alcohol consumption, and accidental alcohol overdose. This category does not include deaths indirectly due to alcohol use, such as deaths due to injuries occurring while intoxicated or deaths caused by another person who was intoxicated. The alcohol-related death code definition is from National Vital Statistics Reports, Vol. 58, No. 19, May 20, 2010 (page 120). ICD-10 codes E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, and Y15 are used across multiple cause levels to identify alcohol-related deaths. Due to changes in case identification practices, counts and rates of alcohol-related deaths cannot be compared to data presented in previous Health of Boston reports.

Asian: All persons self-identified as Asian or Pacific Islander (e.g., Chinese, Japanese, Hawaiians, Cambodians, Vietnamese, Asian Indians, and Filipinos) who do not also identify themselves as Latino.

Asthma: Asthma is a chronic inflammatory condition defined by sudden periodic attacks of difficulty in breathing accompanied by wheezing caused by a spasm of the bronchial tubes. Also see the Selected Health Indicators-Chronic Diseases section of this report.

Boston Behavioral Risk Factor Surveillance System (BBRFSS): see Data Sources and Limitations and Technical Notes sections of this report.

Birth Rate: The number of live births per year, per 1,000 women ages 15-44.

Birth Weight: The weight of an infant at the time of delivery. It may be recorded in either grams or pounds/ounces. If recorded in pounds/ounces, it is converted to grams for use in this report based on the following formula: 1 pound = 453.6 grams; 1,000 grams = 2 pounds and 3 ounces.

Black: All persons self-identified as Black (e.g., African Americans, Haitians, West Indians) who do not also identify themselves as Latino.

Blood Cholesterol: A waxy, fat-like substance found in the human body and many foods. Levels of cholesterol in the blood that are too high are a major risk factor for coronary heart disease, which can lead to a heart attack.

Blood-Lead Levels: The amount of lead in micrograms per deciliter, detected in the blood during finger stick screening or venous confirmation blood tests.

Body Mass Index (BMI): Calculated by dividing a person's weight in kilograms by his or her height in meters squared (kg/m^2); a measure of the appropriateness of weight in relation to height and allows for categorization of people into weight classes. This calculation is used to screen and monitor populations in order to detect risks of health or nutritional disorders. BMI is used differently with children than with adults and is plotted according to age and sex-specific charts. The BMI cutpoints for adults are as follows:

Overweight BMI of 25.0 to 29.9

Obese BMI of 30.0 or more

Boston Neighborhood Survey (BNS): see Data Sources and Limitations and Technical Notes sections of this report.

Cancer: A group of diseases characterized by uncontrolled growth and spread of abnormal cells. Also see Selected Health Indicators-Cancer section of this report.

Breast Cancer – A disease of uncontrolled cell growth in the breast tissue of both men and women.

Cervical Cancer – A disease in which cancer cells develop in the cervix.

Colorectal Cancer – Also known as colon cancer, is a disease of uncontrolled cell growth in the colon or rectum.

Lung Cancer – Lung cancer is a disease in which cancer cells develop in lung tissue.

Ovarian Cancer – Ovarian cancer is a disease in which malignant cancer cells are formed in the ovary.

Cardiovascular Disease (CVD): A group of diseases that affect the heart, including high blood pressure, coronary heart disease, stroke, congestive heart failure, and congenital heart defects. ICD-10 codes I00-I09, I11, I13, I20-I51, I60-I69, and I70 are used in identifying CVD deaths for analysis.

Census 2000: The count of the entire American population undertaken by the U.S. Census Bureau in 2000. Census 2000 should not be confused with the year 2000 standard population, which is a set of population weights used to calculate age-adjusted rates.

Chlamydia: A sexually transmitted disease caused by the bacterium *Chlamydia trachomatis*. About half of infected men, and three-quarters of infected women, have no symptoms. Chlamydia can permanently damage a woman's reproductive organs if not treated promptly.

Chronic Disease: Chronic diseases are diseases or health conditions that are of long duration, slow progression, and may require ongoing medical care; asthma, diabetes, heart disease, stroke, cancer, and arthritis are examples of chronic diseases. In Boston, chronic diseases are among the leading cause of illness, disability, and death (see Selected Health Indicators-Chronic Diseases section of this report).

Chronic Obstructive Pulmonary Disease (COPD): Diseases including bronchitis, asthma, emphysema, and allergies from inhaled organic dust particles, which decrease the ability of the lungs to oxygenate the blood. The leading cause of COPD is smoking. ICD-10 codes J40-J47 are used in identifying COPD deaths, and DRG code 88 is used for identifying COPD hospitalizations for analysis.

Codes (hospital and death): The hospitalization codes used are typically from the Diagnostic Related Groupings (DRGs) of the International Classification of Diseases, 9th Revision Clinical Modification (ICD9-CM) codes. The cause-of-death codes are from the International Classification of Diseases, 10th Revision (ICD-10), ICD9-CM and ICD10 are products of the World Health Organization (WHO).

Community Assets: Community assets are the resources that improve the quality of community life and provide a healthier environment for residents.

Colonoscopy: A colorectal cancer screening test that is similar to flexible sigmoidoscopy, except the doctor uses a longer, thin, flexible, lighted tube to check for polyps or cancer inside the rectum and the entire colon. During the test, the doctor can find and remove most polyps and some cancers. Colonoscopy also is used as a follow-up test if anything unusual is found during one of the other screening tests. Also see Flexible Sigmoidoscopy.

Confidence Interval: A range of values based on a chosen probability level within which the true value of a population parameter is likely found. With a 95% confidence interval, one can assume the true value has a high probability of being contained within the interval (i.e., falling between the two values that define the endpoints of the interval).

Coronary Artery Disease (CAD): A disease of the heart caused by narrowing or blockage of the arteries supplying the heart muscle. ICD-10 codes I11, I20-I25, I26-I28, I51.6 are used to identify deaths due to CAD for analysis.

Crude Rates: A crude rate is calculated by dividing the number of events for the entire population by the total population. It is usually calculated on the basis of every 100,000 people. Crude rates are used to present data pertaining to the entire population, such as all of Boston, or to present data pertaining to an entire group within a population, such as all males or females. Also see the Technical Notes section of this report.

Death Rate: The number of deaths per year per 100,000 people. This can be presented as an age-specific rate, crude rate, or age-adjusted rate.

Demographics: The statistical study of characteristics of human populations and of population distributions such as age, sex, and race/ethnicity.

Diabetes: Diabetes Mellitus is a group of diseases in which the body cannot effectively regulate blood glucose (sugar) due to deficiencies in producing or utilizing a hormone called insulin. ICD-10 codes E10-E14 are used to identify deaths due to diabetes for the purpose of analysis.

Diagnostic Related Grouping (DRG) Codes: Codes used to classify reasons for hospitalization into groups. Also see Codes (hospital and death).

Digital rectal exam (DRE): A screening test used to detect early prostate cancer before it causes any symptoms. The prostate is checked internally for size and any lumps or other abnormalities.

Drug Related Deaths: Deaths due to use of drugs other than alcohol and tobacco, including direct physiological causes as well as some accidental deaths in which drug use/abuse is involved. This classification does not include deaths indirectly due to drug use, such as death due to injuries occurring while under the influence of drugs or deaths caused by another person under the influence of drugs. The codes definition used is from National Vital Statistics Reports, Vol. 58, No. 19, May 20, 2010 (pages 119-120). ICD-10 codes D52.1, D59.0, D59.2, D61.1, D64.2, E06.4, E16.0, E23.1, E24.2, E27.3, E66.1, F11.0-F11.5, F11.7-F11.9, F12.0-F12.5, F12.7-F12.9, F13.0- F13.5, F13.7-F13.9, F14.0-F14.5, F14.7-F14.9, F15.0- F15.5, F15.7-F15.9, F16.0-F16.5, F16.7-F16.9, F17.0, F17.3-F17.5, F17.7-F17.9, F18.0-F18.5, F18.7-F18.9, F19.0-F19.5, F19.7-F19.9, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2, J70.3, J70.5, K85.3, L10.5, L27.0, L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R50.2, R78.1, R78.2, R78.3, R78.4, R78.5, X40-X44, X60-X64, X85, and Y10-Y14 are used across multiple cause levels for identifying drug-related deaths. Due to changes in case identification practices, counts and rates of drug-related deaths cannot be compared to data presented in previous Health of Boston reports.

Flexible Sigmoidoscopy: This is a screening test used to detect colorectal cancer. For this test, the doctor puts a short, thin, flexible, lighted tube into the rectum to check for polyps or cancer inside the rectum and lower third of the colon. Also see Colonoscopy.

Gonorrhea: A sexually transmitted disease caused by the bacterium *Neisseria gonorrhoeae*. Symptoms in men can include a burning sensation when urinating, a white, yellow, or green discharge from the penis, or painful or swollen testicles. Symptoms in women can include a painful or burning sensation when urinating, increased vaginal discharge, or vaginal bleeding between periods. Many men and women have no symptoms.

Healthy People 2010 Goals and Objectives: Targets established by the U.S. Public Health Service, in conjunction with the Centers for Disease Control and Prevention and the National Center for Health Statistics, to assist communities with health promotion and disease prevention efforts and to establish health status goals to be met by the year 2010.

Heart Disease: A group of conditions, including valve and conductive disorders as well as hypertensive diseases. ICD-10 codes I00-I09, I11, I13, and I20-I51 are used in identifying heart disease deaths for analysis.

Hispanic: See Latino.

HIV/AIDS: The human immunodeficiency virus (HIV) infection, which leads to Acquired Immune Deficiency Syndrome (AIDS) or other HIV-related infections. ICD-10 codes B20-B24 are used for identifying HIV/AIDS deaths.

HIV+ or HIV Infected: Having tested positive for the antibodies to human immunodeficiency virus (HIV), meaning that one is infected with the virus, with or without major related conditions. DRG codes 701-716 are used for identifying HIV hospitalizations for analysis.

Homeless: The federal government defines “homeless” to mean (1) an individual who lacks a fixed, regular, and adequate night-time residence; and (2) an individual who has a primary night-time residency that is (i) a supervised publicly or privately operated shelter designed to provide temporary living accommodations (including welfare hotels, congregate shelters, and transitional housing for the mentally ill); (ii) an institution that provides a temporary residence for individuals intended to be institutionalized; or (iii) a public or private place not designed for, or ordinarily used

as, a regular sleeping accommodation for human beings. This term does not include any individual imprisoned or otherwise detained under an Act of Congress or a state law.

Homicide: A death intentionally caused by a person other than the deceased. ICD-10 codes X85-Y09 and Y87.1 are used in identifying homicides for analysis.

Hospitalization: A patient's continuous stay of one night or more in the hospital for observation, care, diagnosis, or treatment before being released by the hospital, or before death. Hospitalization data presented in this report represents only hospitalizations from acute, short-stay, non-federal hospitals.

Human Immunodeficiency Virus (HIV): The virus that is responsible for causing AIDS.

Human Papillomavirus (HPV): A virus that is capable of infecting humans and has been shown to lead to some types of cancer in some people, such as cervical cancer.

Incidence: The number of new cases of a particular disease over a period of time (usually a year) and in relation to the population in which it occurs.

Incidence Rates: Incidence rates are the number of new cases in a given time period divided by the number of people at risk in the population at the beginning of the study. Incidence rates are usually reported on the basis of every 100,000 people per year. New cases of a communicable disease such as hepatitis are presented as an incidence rate, which may be age-specific or crude.

Infant Mortality Rate (IMR): The number of deaths under one year of age per 1,000 live births.

Infectious Diseases: Infectious diseases are illnesses resulting from the presence of pathogenic microbial agents, such as viruses, bacteria, fungi, parasites, and prions. Transmission can occur from one person or species to another.

Injury: Injury deaths include five categories: homicides, suicides, motor vehicle-related injuries, (other) unintentional injuries, and "undetermined" injuries (for which it was not determined on the death certificate whether the injury was intentional). The latter two categories are frequently presented together in this report. ICD-10 codes are used for identifying the type of injury that resulted in death. The determination of intent appearing on a death certificate or in medical records is for purposes of medical record-keeping only. Visits to emergency departments, clinics, hospitals, physician offices, and other outpatient facilities for treatment of injuries are identified by type of injury using ICD-9-CM E codes.

Insufficient Sample Size: In this report the phrase "insufficient sample size" is used on occasion when certain data points are not presented. This occurs when survey data are stratified by population groups and as a result, there is not a large enough sample (number of survey respondents or recorded health events) to allow the presentation of reliable point estimates. Data are also not presented if a sample size is too low to protect the confidentiality of the respondents.

Intentional Injury: Intentional injury arises from assault and battery, homicide, or suicide.

International Classification of Diseases, 10th Revision (ICD-10) Codes: Mortality data used in this report from 1999 and later years are classified according to the International Classification of Diseases, 10th Revision (ICD-10), released by the World Health Organization in 2000 and adopted by the United States National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention. ICD-10 classification replaces ICD-9 classification. For more information on these codes and their use, see <http://www.cdc.gov/nchs/icd9.htm#ICD-10-CM>.

Intentional Injury: Intentional injury arises from assault and battery, homicide, or suicide.

Latino: Includes people of any race (Asian, Black, White, or Other) self-identified as Hispanic or Latino (such as Puerto Rican, Mexican, Cuban, Spanish, or Dominican).

Lead Screening: The measurement of blood-lead levels in children to identify those who have been exposed to toxic levels of environmental lead. In Boston, annual screening of children between 6 and 48 months of age is mandatory.

Low Birth Weight (LBW): Birth weight of less than 2,500 grams or 5 pounds, 8 ounces.

Mammogram: A mammogram is an X-ray of the breast which is used to screen for breast cancer. Mammograms are considered the best method for detecting breast cancer early when it is easier to treat and before it is big enough to feel or cause symptoms.

Median: Median is the middle value in a distribution. The median divides the total frequency into two parts. One half of the cases are below the median and one half of the cases are above the median. This should not be confused with mean, which is the arithmetic average of a set of values.

Mental Health: A term used to describe a state of well-being and an individual's psychological capacity to make healthy decisions that promote his or her overall quality of life. Also see the Selected Health Indicators-Mental Health section of this report.

Micrograms Per Deciliter ($\mu\text{g}/\text{dL}$): A measurement unit for level of lead in a measured quantity of blood: a billionth of a gram in a tenth of a liter. Children with blood lead levels of 10 $\mu\text{g}/\text{dL}$ or higher are considered to have elevated blood lead levels.

Moderate Physical Activity: Defined here as activities that cause small increases in breathing or heart rate.

Multiracial: An Individual from two or more racial or ethnic groups.

Mortality: Death, or the relative frequency of death per unit of population in a specific time period.

n<5: A notation used to indicate that for this health indicator there were fewer than five occurrences (for example, births, deaths, new case of a disease) and therefore a rate could not be presented. Also see the Note to Readers section of this report.

Nativity: See Birth rate.

Neighborhood: One of 16 distinct geographical areas in Boston. See the Technical Notes section of this report.

Newborns/Neonates: Infants from the time of their birth through the first 27 days of age.

Nephritis/Nephrosis: Inflammation of the kidneys (nephritis), or kidney disease with severe protein loss and fluid retention or degenerative changes in the kidneys without inflammation (nephrosis). For data from 1999 and later years, ICD-10 codes N00-N07, N17-N19, and N25-N27 are used to identify deaths from nephritis/nephrosis for analysis.

Obesity: Obesity is a condition in which an accumulation of excess body fat has occurred to the extent that it may lead to adverse health events. Adults with a Body Mass Index (BMI) of equal to or greater than 30 kg/m² are considered obese. Obesity for high school students is determined by a BMI percentile standard ranking of 95% or higher.

Overweight: Similar to obesity but not as severe, 'overweight' is a term that describes a condition in which an accumulation of excess body fat has occurred to the extent that it may lead to adverse health events. Adults with a Body Mass Index (BMI) of at least 25 kg/m² and less than 30 kg/m² are considered overweight. High school students with a BMI percentile standard ranking of at least 85% but less than 95% are considered overweight.

Pap Test (or Pap Smear): This is a screening test used to detect precancers or changes to the cervix that might progress to cervical cancer if not appropriately treated. A few cells and mucus from the cervix and the area around it are collected and sent to a laboratory lab to check if the cells are normal. The Pap Test is recommended for sexually active females.

Pertussis: Also known as "whooping cough," an acute bacterial disease involving the respiratory tract, transmitted by direct contact with airborne droplets from mucous membranes. Symptoms include repeated coughing and expelling of mucous.

Pneumonia/Influenza: Bacterial or viral infections of the lungs that primarily affect the aged and persons with compromised immune systems. ICD-10 codes J10-J18 are used to identify deaths due to pneumonia/influenza for analysis.

Point Estimate: A single value calculated from survey sample data indicating the estimated percentage of a population with a given characteristic. A point estimate serves as the "best guess" for an unknown population parameter and should be interpreted with information that considers the standard error associated with the estimate. See Note to the Readers section of this report.

Population: The sum total of residents. Population statistics in this report are drawn from two main sources. The first is the census of the population taken every ten years by the federal government which provides a literal count of people living in the United States. The second is population estimates made by the U.S. Census Bureau American Community Survey.

Poverty Level: A poverty level is the minimum level of income deemed necessary to achieve an adequate standard of living in a given country. The poverty definition present in The Health of Boston 2011 is that of the U.S. Bureau of the Census. Small adjustments are made to these thresholds based on the age composition of the family. Also see Data Sources and Limitations section and Technical Notes section of this report.

Pregnancy: The condition of carrying a developing embryo or fetus in the uterus.

Preterm Births: A preterm birth refers to the birth of a baby less than 37 weeks gestational age. Preterm births are the major cause of neonatal mortality in the United States.

Regular Physical Activity: Defined for adolescents as engaging in physical activity for at least one hour per day on five or more days during the past week. For adults, regular activity is defined as engaging in vigorous activity 20 minutes per day on 3 or more days during the past week or engaging in moderate activity for 30 minutes per day on 5 or more days during the past week.

Risk Factor: A characteristic or agent whose presence increases the probability of occurrence of a particular disease, injury, cause of death, or birth outcome.

Salmonellosis (salmonella): Bacterial infection transmitted by ingestion of contaminated food including raw and undercooked eggs, meat, poultry, raw milk, and water. Symptoms include diarrhea, fever, and abdominal cramps.

Sample Size: Sample size refers to the number of observations of a statistical sample. For survey data, the sample size refers to the number of people who responded to the survey. Also see definition for insufficient sample size.

Septicemia: A serious infection caused by bacteria in the blood, which is sometimes called blood poisoning. Symptoms include fevers and chills, rapid breathing and heart rate, changes in mental state (such as irritability, feeling very tired, or anxious), and feeling shock. Septicemia progresses rapidly, and can be fatal.

Sexually Transmitted Infections (STI's): Infection spread by transfer of organisms from person to person during sexual contact. Also known as Sexually Transmitted Diseases (STD's).

Socioeconomic Status (SES): An economic and sociological measure based on income, education, and occupation that describes an individual's or family's economic and social position relative to others. Socioeconomics is the statistical study of the social and economic characteristics of a population, such as education and poverty levels. Also see Socioeconomic Profile sections of this report.

Standard Population: An estimate of the U.S. population in which the age, race, and sex distributions are known, resulting in a set of population weights that can be used to calculate age-adjusted rates. In this report, the year 2000 U.S. standard population is used to calculate age-adjusted mortality rates.

Statistical Significance: A certain group of statistical tests that determine whether findings accurately describe the population of interest or whether they can be explained by chance.

Stratification: Stratification refers to the process of grouping members of the population into relatively homogeneous subgroups before sampling to allow the presentation of reliable rates.

Stroke (also known as a cerebrovascular accident): A stroke occurs when a blood vessel in the brain bursts or when the blood supply to part of the brain is blocked, depriving the brain of oxygen. ICD-10 codes I60-I69.

Substance Abuse Deaths: Death in which drugs and/or alcohol played a causal role (see codes for Alcohol-Related Deaths and Drug-Related Deaths). Due to changes in case identification practices, counts and rates of substance abuse deaths cannot be compared to data presented in previous Health of Boston reports.

Suicide: The intentional and voluntary taking of one's own life. For data from 1999 and later years, ICD-10 codes X60-X84 and Y87.0 are used in identifying suicides for analysis.

Syphilis: A sexually transmitted disease caused by the bacterium *Treponema pallidum*. The first stage of syphilis is usually a sore (chancre), followed by skin rashes and lesions of the mucous membrane, fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue. Although signs and symptoms of initial infection can subside without treatment, untreated syphilis can cause complications many years later, including paralysis, blindness, dementia, and death.

Tuberculosis (TB): A bacterial infection that primarily affects the lungs. TB is transmitted via airborne droplets through sneezing, coughing, or spitting. People who are infected with latent TB do not have symptoms and cannot transmit the bacteria to others. People with active TB experience symptoms including chronic cough, pain in the chest, coughing up blood or sputum, fatigue, weight loss, and fever.

Unintentional Injury: (An accidental injury). The following ICD-10 codes are used in identifying unintentional injury deaths for analysis: V01.0, V01.1, V01.9, V05.0, V05.1, V05.9, V06.0, V06.1, V06.9, V09.1, V09.3, V09.9, V10.0, V10.1-V10.5, V10.9, V11.0-V11.5, V11.9, V15.0-V15.5, V15.9, V16.0-V16.5, V16.9, V17.0-V17.5, V17.9, V18.0-V18.5, V18.9, V19.3, V19.8, V19.9, V80.0-V80.2, V80.7-V80.9, V81.2-V81.9, V82.2-V82.9, V87.9, V88.9, V89.1, V89.3, V89.9, V90-V95, V96.0-V96.2, V96.8-V96.9, V97.0-V97.3, V97.8-V97.9, V98-V99, W00-X59, Y85.0, Y85.9, and Y86. Codes used by Healthy People 2010 are slightly different.

Vigorous Physical Activity: Defined here as activity that causes large increases in breathing or heart rate.

Violent Crime: An act that can result in a fatal or non-fatal outcome and has a negative impact on the community.

White: All persons self-identified as White who do not also identify themselves as Latino.

Youth Risk Behavioral Surveillance System (YRBSS): See Data Sources and Limitations and Technical Notes sections of this report.



Building a Healthy Boston