

EXECUTIVE SUMMARY

The *Health of Boston 2009* provides a review of select health conditions, risk behaviors, and social determinants of health. It presents a broad picture of health in our city and identifies individuals and communities at greatest risk for certain 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 report is divided into 16 sections. Each section begins with an introduction describing the featured health indicators, followed by a short explanation of emerging trends and/or changes in the data elements. Each chapter concludes with a summary, list of references, and notes that clarify the data analysis. This executive summary highlights significant findings from each of the sixteen sections, and discusses the persistence of disparities in health outcomes among Black and Latino Boston residents.

Health Disparities

Boston's Black and Latino residents experience higher levels of chronic disease, mortality, and poorer health outcomes than White residents. These health inequities are driven by the interaction of several factors including racism, poverty, and residential segregation. Data presented in the HOB2009 report consistently demonstrate the health inequities. For Boston's Black residents, these inequities in health begin early in life and persist throughout the lifetime of an individual. Birth data demonstrate the percentage of low birthweight births and preterm births has been higher among Black infants than other racial/ethnic groups for the last 15 years. The infant mortality rates have consistently been highest for Black infants since data has been collected on infant mortality by race. Data on health conditions for Boston residents demonstrate several alarming trends across numerous diseases. The incidence of new cases of chlamydia, gonorrhea and HIV is consistently higher for Black residents of Boston than Asian, Latino and White residents. Compared to White adults, higher percentages of Boston's Black adults reported having asthma and diabetes. Hospitalizations for asthma in children under age 5, diabetes, and heart disease were highest among Black residents when compared with other racial/ethnic groups from 1998 to 2007. Black residents have higher overall mortality rates as well as higher diabetes, heart disease and cancer mortality rates than Asian, Latino or White residents. In addition to poorer disease outcomes and higher rates of death, the rates for nonfatal assault-related gunshot and stabbings and homicides were highest for Boston's Black residents in each year from 2000-2007.

Latino residents also consistently experience poorer health outcomes than White residents in Boston. Data on health conditions for all Boston residents suggest Latino residents consistently had the second highest HIV and AIDS incidence rates from 1999 to 2006 among all racial/ethnic groups. Incidence rates for chlamydia, gonorrhea and syphilis among Latino residents have time and again been higher than the rates for White residents. Higher percentages of Latino women reported having asthma than White and Asian women. Among racial/ethnic groups, Black Bostonians consistently had the highest diabetes hospitalization rate and heart disease hospitalization rate from 1998 through 2007. However, the diabetes hospitalization rate for Latinos increased 200% from 1998 to 2006 and heart disease hospitalization rates for Latinos increased 87% from 1998 to 2004. Compared to White adults in 2006, a higher percentage of Latino adults reported depressive symptoms 15 or more days during the past month. Mortality data from 2007 reveal that Latinos had the highest

substance abuse mortality rate among the reported racial/ethnic groups. From 1999 to 2007, the Latino rate increased more than 500%. Additionally, Latino residents had the second highest rate for nonfatal assault-related gunshot and stabbing victims in each year from 2000 to 2008.

Efforts to eliminate these inequities must acknowledge and address the role of social determinants. Under Mayor Menino's leadership, individuals, community based organizations, health care providers, policymakers, and city agencies came together to create a blueprint for eliminating health inequities. By creating programs and policies that acknowledge the social and cultural context of disease, progress can be made in preventing and managing disease.

Demographics

The city has become more racially and ethnically diverse over the past several decades. In 2007, approximately 28% of Boston residents were foreign born, originating from a wide array of countries such as Haiti, China and Colombia. This diverse population brings 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 1980 (6.4%) to 2007 (16.9%). Understanding the diversity within our city is essential to combating racial/ethnic disparities that persist in medical care for a number of health conditions and services.

Socioeconomic Status

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 varies dramatically by racial and ethnic groups, gender and age. Key Points from the Socioeconomic Status section include:

- 20.4% of Boston residents had income below the poverty level and almost one-third of Boston's children lived in households with income below the poverty level.
- 51.8% of female-headed households with children under age 5 lived below the poverty level.
- Over one-third (37%) of Latino adults had less than a high school diploma.
- The unemployment rate among Black males (18.8%) was almost four times the rate among White males (5.0%).
- 30% of those who were homeless in 2008 were children.

Community Assets

Community assets are the resources that improve the quality of community life and provide a healthier environment for residents. The maps presented in this section demonstrate that Boston residents have access to an array of community assets. Boston has a considerable amount of green space dispersed throughout the city. Boston neighborhoods are fairly well resourced in terms of community and religious organizations, and public institutions. Each neighborhood has numerous houses of worship, community organizations, a public library, a community center, and a large supermarket. Most also have a health center, and a YMCA or Boys and Girls Club. Less evenly distributed are Farmer's markets, community gardens, and food pantries.

In addition to physical assets, social assets can impact health. A survey conducted to assess components of social cohesion among Boston neighborhood residents revealed the following key points:

- 60% of Boston residents reported agreeing or strongly agreeing that there are adults in their neighborhood that can be counted on to look out for children and teens.
- 70% or more of residents in each Boston neighborhood reported agreeing or strongly agreeing that people in their neighborhood are willing to help each other.
- Less than half of Boston residents reported their neighborhood as being very safe. While about 70% of residents in Back Bay and West Roxbury reported their neighborhoods as being very safe, only a quarter or less of residents in Mattapan, North Dorchester, and Roxbury did so.

Access to Health Care

Individuals at greater risk of not accessing the health care they need include low income residents, people with physical and mental disabilities, those whose primary language is not English, the uninsured and underinsured, recent immigrants, and certain racial/ethnic groups. The data presented in the Access to Health Care section were collected prior to the institution of Massachusetts' laws to cover the uninsured population. Key points from the Access to Health Care section:

- A lower percentage of adults living in East Boston (79%) reported having health insurance coverage compared to Boston overall (92%).
- Among insured residents in both 2005 and 2006, higher percentages of Black and Latino adults reported cost as a barrier to seeing a doctor in the preceding 12 months than White adults.
- In 2006, a lower percentage of Asian (71%) adults reported having a personal doctor or health care provider than White (88%) adults.
- In 2005, a lower percentage of Latino adults (61%) visited the dentist within the past year compared to White adults (74%).
- A lower percentage of East Boston residents (58%) reported visiting the dentist within the past year compared to Boston overall (72%).
- A lower percentage of Latino residents (53%) reported having insurance to cover routine dental care compared to Black residents (69%) in 2005.

Environmental Health

The environment can influence the health of a population. Several diseases are linked to environmental conditions including, but not limited to diarrheal diseases, unintentional injuries, respiratory infections, and lead poisoning. Elevated blood lead levels in children have been linked to nervous system damage, behavior and learning difficulties, stunted growth and hearing disorders. A review of data on elevated blood lead levels demonstrates the follow key point:

- There has been a 91% decline in the percent of children who were screened and had elevated blood lead levels from 1995 to 2008. This percentage has declined every year since 1995. In 1995, 13.5% of children screened for lead in the blood had elevated blood lead levels while in 2008, 1.2% of those screened had elevated blood lead levels.

Health Behaviors

Personal health-related behaviors, such as tobacco use, diet, physical activity and alcohol consumption, have a substantial influence on overall health outcomes. Influencing individuals

to adopt more positive personal health behaviors can be one of the most cost-effective tools for achieving and maintaining good health.

Health Behaviors data suggest progress in smoking among high school students and adults:

- There was a decrease in the percentage of high school students who reported smoking from 2001 (15%) to 2007 (7%).
- There was a decline in the percentage of adults who smoked cigarettes from 2001 (24%) to 2006 (16%).

These data also suggest additional need for improvement in the areas of physical activity and binge alcohol drinking:

- Lower percentages of Asian (22%), Black (29%), and Latino (27%) Boston public high school students engaged in regular physical activity than White high school students (40%). This was also true for Asian (41%), Black (47%), and Latino (46%) adults compared to White adults (64%).
- Higher percentages of White high school students (32%) and White adults (32%) reported binge drinking alcohol than Black high school students (12%) and Black adults (12%), respectively.

Natality and Infant Mortality

Natality and Infant Mortality data provide important measures of the well-being of infants, children, and pregnant women. Several factors including maternal health, infant birth weight, socioeconomic conditions, racism, and access to medical care, play a role in the birth of healthy infants and having infants survive to their first birthday.

Natality and Infant Mortality data suggest progress or sustained improvement in the areas of maternal smoking during pregnancy and access to adequate prenatal care:

- Self-reported maternal smoking during pregnancy declined by 61.9% between 1995 and 2007 for Boston overall. This decline was evident in Black, Latino and White women.
- The majority of births to Boston women in all racial/ethnic groups had adequate prenatal care.

These data also suggest additional need for improvement in the areas of adolescent births, low birthweight births, preterm births, and infant mortality:

- Boston's adolescent birth rate declined slowly from 1995 to 2005, falling 53.9%; however, Boston's adolescent birth rate increased 12.2% from 2005 to 2007
- From 2005 to 2007, the percentage of low birthweight (LBW) babies to Black women decreased; however, for each year of 1995-2007, Black women have had the highest percentage of LBW babies.
- With the exception of 1997, Black women in Boston had the greatest percentage of preterm births every year between 1995 and 2007.
- Boston infant mortality rates (IMR) have consistently been highest for Black infants and continue to be so despite the 14.4% decrease in IMR from 2006 to 2007. The IMR for Black infants was 11.3 deaths per 1,000 live births. Black infants accounted for 27.0% of all Boston births in 2007, but 48.0% of all infant deaths.

Sexual Health

Sexual health is a critical component of physical and mental well-being. Effective sexual health promotion must include awareness and education for residents of all ages, providing appropriate promotion and prevention services, supporting service providers to play an active role in promotion, and individual and community-level capacity building.

Sexual Health data suggest progress or sustained improvement in the areas of condom usage, and the incidence of HIV and AIDS:

- Approximately 7 out of 10 sexually active public high school students reported using a condom the last time they had sex.
- Approximately one-third of sexually active adults with one partner in the past 12 months reported using a condom while over three-fourths of those with five or more partners in the past 12 months reported using a condom at last sexual intercourse.
- Between 1995 and 2006, the HIV incidence rate for all racial/ethnic groups declined. The rate for Blacks declined by 47.5%, for Latinos by 31.7% and Whites by 25.0%.
- Between 1995 and 2006, the AIDS incidence rate for all racial/ethnic groups declined. The rate for Whites declined by 73.3%, for Blacks by 60.9% and for Latinos by 51.6%.

These data also suggest additional need for improvement in the areas of chlamydia, gonorrhea, and syphilis infection:

- The rate of new chlamydia cases among Boston residents in 2007 was 66% higher than in 1999.
- For every year between 1999 and 2007, Black Boston residents had a far higher rate of new cases of chlamydia, gonorrhea and HIV, compared to White and 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 as well as drug-resistant strains of widespread infectious diseases are among the many potential threats.

Infectious Diseases data suggest progress in the area of tuberculosis infection:

- The reported TB incidence rate decreased by 20% from 2006 to 2007.

These data also suggest additional need for improvement in the areas of pertussis and salmonella infection:

- The incidence rate of reported pertussis increased 11.9% from 2006 to 2007.
- Latino Boston residents had the highest incidence of reported pertussis, a rate 1.7 times that of Boston overall.
- The highest incidence rates of reported pertussis among Boston neighborhoods in 2007 were in East Boston and West Roxbury.
- Asian Boston residents had the highest incidence of reported salmonella infection with 92.6 new cases per 100,000 residents.

Mental Health

Mental health encompasses much more than the absence of mental illness or mental disorders (1). Mental health embodies an individual's psychological capacity to make healthy decisions that promote her or his overall quality of life. People living with poor mental health can often

experience mental and/or emotional pain as well as a diminished ability to make healthy decisions.

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

- A lower percentage of Boston high school students reported they had been seriously considering attempting suicide in 2007 (11%) than in 2001 (16%).
- Boston's suicide rate increased 40% from 2005 to 2007, after declining 37% during the previous two years from 2003 to 2005.
- A higher percentage of Black (11%) and Latino (11%) adults compared to White (5%) adults reported experiencing physical symptoms (for example a headache, an upset stomach, tensing of muscles, or a pounding heart) as a result of how they were treated based on their race in 2006.

Substance Abuse

Substance abuse involves the excessive use of alcohol or use of drugs in a non-prescribed manner to achieve an altered physiological state. Alcohol and drugs directly affect the central nervous system of the body. Misuse of alcohol or other drugs over time can lead to physical and/or psychological dependence on these substances.

Substance Abuse data suggest progress or sustained improvement in substance abuse mortality overall:

- The substance abuse age-adjusted mortality rate decreased 6.9% from 2006 to 2007.

These data also suggest additional need for improvement in substance abuse mortality among Latinos:

- In 2007, Latino's had the highest substance abuse mortality rate among all reported racial/ethnic groups. From 1999 to 2007, the Latino rate increased more than 500%. The rate for Blacks and Whites decreased 20.3% and 8.3%, respectively, from 2006 to 2007.

Violence

Violence resulting in physical injuries may involve the use of weapons or no weapons, and can occur in a variety of social contexts such as domestic violence, child and elder abuse, and teen dating violence.

Violence data suggest progress or sustained improvement in resident perceptions about guns in their neighborhoods:

- Fewer than 25% of residents in each Boston neighborhoods reported believing that there were more guns in their neighborhood compared to a year ago.
- The percentage of high school students who reported being threatened or injured with a weapon at school was lower in 2007 (6%) than in 2001 (9%).
- The percentage of adults who reported having experienced physical or sexual violence was lower in 2006 (12%) than in 2001 (22%), 2003 (27%), and 2005 (22%).

These data also suggest additional need for improvement in the areas of teen dating violence, nonfatal assault-related gunshot and stabbing injuries, and homicides:

- Approximately one in eleven public high school students reported being physically hurt by a date or someone with whom they were going out in 2007.

- A higher percentage of Mattapan (36%), North Dorchester (37%), Roxbury (29%), and South Dorchester (19%) residents than residents of Boston overall (13%) reported gunshots and shootings as being a big problem. These neighborhoods had the highest rates of nonfatal assault-related gunshot and stabbing injuries and homicides among all Boston neighborhoods.
- The homicide rate for Black Boston residents exceeded that of other racial/ethnic groups for every year from 1999 to 2007. During this nine-year period, more than two-thirds of Boston resident homicides were Black residents.
- The rate for nonfatal assault-related gunshot and stabbing victims was highest for Boston's Black residents in each year from 2000-2007. The 2007 rate for Black residents was the highest of the 8-year period, 11 times the rate for Whites and 2.6 times the rate for Boston overall.

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 Diseases data suggest additional need for improvement in the areas of general physical health and the impact of specific chronic diseases:

- About one in thirteen Boston adults reported poor physical health (physical health not good 15 or more days during the past month) in 2005 and 2006.
- A higher percentage of Black adults reported having asthma and diabetes than White adults in 2005 and 2006.
- In 2007, the asthma hospitalization rate for Boston's Black children under age five was almost three times the rate for Asian children and three and a half times the rate for White children. With the exception of 2002, Black children consistently had the highest asthma hospitalization rate from 1998 through 2007.
- Among racial/ethnic groups, Black Bostonians consistently had the highest diabetes hospitalization rate from 1998 through 2007. Black residents have also consistently had the highest heart disease hospitalization rate from 1998 through 2007.
- The percentages of overweight Latino and Black students were higher than the percentages of overweight Asian and White students.
- In both 2005 and 2006, the percentage of obese adults was higher among Black and Latino females than White females.

Cancer

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

Cancer data suggest progress or sustained improvement in the areas of cancer screening and colorectal cancer incidence:

- In 2005 and 2006, more than two out of every three women over age 40 in Boston reported having a mammogram in the past year and more than two-thirds of Boston women ages 18 and older reported having a Pap test within the past year.
- The age-adjusted colorectal cancer incidence rate in Boston decreased 26.1% from 70.8 cases per 100,000 population in 1995 to 52.3 cases per 100,000 population in 2005.

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

- In 2007, the age-adjusted cancer mortality rate was highest for Blacks and Whites, 276.3 and 183.4 deaths per 100,000 population, respectively.
- From 1995-2005, Boston Black men had a statistically higher rate of prostate cancer incidence than the other racial/ethnic groups.
- Lung cancer was the leading cause of cancer mortality each year from 2005 to 2007. Boston Latinos consistently had the lowest age-adjusted lung cancer rate from 1995 to 2005, while Boston Whites consistently had the highest.

Mortality

Death is a consequence of the human condition – mortality. 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 among certain racial/ethnic groups:

- In 2007, the overall age-adjusted mortality rate for Boston residents was 15.3% lower than the rate in 2000.
- Cancer remained Boston’s leading cause of death in 2007, followed by heart disease, injuries, stroke, and substance abuse. From 2006 to 2007, the rates of death from all of these causes decreased.
- With the exception of cancer mortality, age-adjusted mortality rates for each leading cause of death decreased for the Asian population from 2006 to 2007.
- From 2006 to 2007, the cancer and heart disease mortality rates for Latinos decreased 18.2% and 34.6%, respectively.
- Between 2002 and 2007, age-adjusted mortality rates for White Boston residents declined 27.6% for heart disease, and 20.4% for cancer.

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

- Estimated life expectancy is highest for Boston’s Latino residents followed by Boston’s White residents. Black Boston residents have a lower life expectancy than Boston residents overall.
- The age-adjusted cancer mortality rate increased 10.4% and the age-adjusted heart disease mortality increased 16% for Black residents from 2006 to 2007.

The entire Health of Boston 2009 report and additional data can be found on the Boston Public Health Commission’s website at www.bphc.org/hob.