Data Report

A presentation and analysis of disparities in Boston

The Disparities Project

Boston Public Health Commission
Mayor Thomas M. Menino

2nd Printing

The Disparities Project is an initiative of Mayor Thomas M. Menino and the Boston Public Health Commission.

Its goal is to reduce disparities in health based on race and ethnicity.

This edition was printed June 2005.
For more information or to view this report on-line, please visit **www.bphc.org/disparities.**

Other reports released by the Boston Public Health Commission as part of the Disparities Project:

Hospital Working Group Report
Action steps and recommendations for Boston hospitals

Mayor's Task Force Blueprint
A plan to eliminate racial and ethnic disparities in health

The goal of these reports is to have the City's institutions and organizations come together and take action on suggestions that promote fairness, equality and good health for all of Boston's citizens.

This is the second printing of the Data Report.

Changes made during the second printing were to the following pages:

page 19: table 3 and accompanying text
page 20: caption for figure 27
page 23: figure 31
page 26: Lung cancer narrative
page 35: figure 60
page 36: HIV / AIDS narrative
page 37: Asthma narrative and caption for figure 66
page 40: figure 74 and caption for figure 75
page 44: caption for figure 84
page 45: caption for figure 87

Design by Boston Public Health Commission, Communications Department.

Dear Fellow Bostonians:

As the nation's first health department, the Boston Public Health Commission has worked for more than two centuries to protect the health of Boston residents. We have encountered and responded to many significant public health challenges, from the great epidemics of the 18th century to the occupational hazards posed by a rapidly industrializing economy in the 19th century, to HIV/AIDS, obesity and chronic diseases in the 20th and 21st centuries. In virtually every era certain populations were often in poorer health than others; more vulnerable to disease and less likely to receive adequate care. The poorest residents often suffered more as did immigrants, Black Bostonians and other populations that faced discrimination.

During the past century, a time of great progress in health care and in public health, no city was more highly regarded than Boston with its state-of-the-art hospitals, its outstanding community health centers, and its innovative community-oriented public health campaigns. Yet, many people, indeed, people living within the shadow of our most distinguished institutions, have not shared equally in the benefits. As research has shown, in the last several years Asian, Black, and Latino residents, as well as recent immigrants, are less healthy than White, native-born Americans; have less access to medical treatment; and experience worse outcomes when they get treatment.

Mayor Thomas M. Menino, numerous health care leaders and community-based coalitions and others are trying to address this enormous gap. Any such response must examine the possible reasons for the disparities, and it must thoroughly consider what is already known about the unequal burden of disease, disability, and death across the many racial and ethnic groups that make up our population. In this report, we highlight the socio-economic factors most likely to contribute to the inequalities – such as the persistence of racism, the burden of poverty, and the declining availability of affordable health insurance. We also present the most recent health data from a wide variety of sources. Our emphasis is on Boston-specific information, although at times we draw on national information.

This report has been prepared and released as part of a major citywide initiative led by the Mayor and the Boston Public Health Commission. The initiative has involved the work of the Mayor's Task Force on Racial and Ethnic Health Care Disparities and a Citywide Hospital Working Group, both of which the Mayor organized more than a year ago. The reports of these two groups, which are being released in conjunction with this one, provide more context and, most important, a series of concrete and achievable action steps. We hope the reports together will promote a coordinated movement to eliminate these unacceptable inequities.

John Auerbach, MBA
Executive Director
Boston Public Health Commission

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Acknowledgements

This report is the result of the work and dedication of many Boston Public Health Commission staff.

The analysis of the data in this report was prepared by the BPHC Research Office under the direction of **Mary Ostrem,** DrPH. The Research Office staff who contributed were ***Veronica Banks, MPH, Leslie Chen, BS, Eleni Digenis-Bury, MPH, Dan Dooley, BA, Osasu Osayimwen,*** *MBBS, MPH, and* ***Phyllis Sims,*** *MS.*

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Special thanks to ***Linda Lowenthal*** and ***Scott Troppy,*** MPH for their contributions.

Highlights of this Report

- Boston is an increasingly diverse city, with more than half the population now made up of Asian, Black, and Latino residents. One in every four Bostonians was born outside the United States, and 8.2% of all Bostonians speak little or no English.

- Across the lifespan, Boston's racial and ethnic groups have strikingly disparate risks of illness and death.

    - Black Bostonians, as a group, have worse health than all other residents on a broad range of indicators, with higher rates of preterm birth, overweight, diabetes, hypertension, heart disease, hospitalization, cancer mortality, and premature death from a variety of conditions.

    - Latino Bostonians, as a group, have worse health than White residents on certain health indicators. Examples include asthma hospitalization and mortality, HIV, overweight, diabetes, and mental health. Asian Bostonians, as a group, have greater barriers to care than Whites and higher rates of tuberculosis and hepatitis B.

    - Socio-economic factors play a major role in health disparities. A growing body of evidence demonstrates that social and environmental issues – poverty, housing quality, public safety, access to supermarkets and recreational centers – greatly influence the health of individuals, families and populations. For example, in a number of the neighborhoods with higher rates of violence, residents are less likely to exercise outside.

    - The generally lower income and education levels of Black and Latino Bostonians do not adequately explain the city's health disparities. For example, upper-income Black families with more education have higher infant mortality rates than lower-income Whites with less education.

    - Personal behavior such as smoking – while important to health – also does not adequately explain the disparities. For example, although smoking is linked to women's risk of having a preterm baby, Black women who do not smoke have a higher preterm birth rate than White women who do smoke.

    - For people of color, discrimination and racism contribute to long-term and potentially debilitating stress and anxiety. And real or perceived discrimination, both individual and systemic, creates barriers to health treatment.

RACE / ETHNICITY IN BOSTON

What is race?

Despite what most of us grew up believing, our modern understanding is that race is not a biological or genetic concept. No gene can identify whether someone is "Black" or "White." Rather, the idea of race was created by the dominant people in a given society to classify people into social categories[1,2]. For the most part, people with black or brown skin have been classified into lower categories than those with white skin. Different societies have different racial categories based on their unique social histories. In the U.S., slavery and discrimination have systematically oppressed people of African descent. Both Black and Latino people in this country have had less access to health, education, employment, wealth, and a range of other social benefits.

What is ethnicity?

People belonging to a given ethnic group may share a geographic origin, language, history, and/or religious tradition. An ethnic group may consist of residents of a particular country (the Dominican Republic), a subpopulation within a particular country (the Hmong people), or a group of people from several countries (Latinos*).

*Is "Latino" a race or an ethnicity?

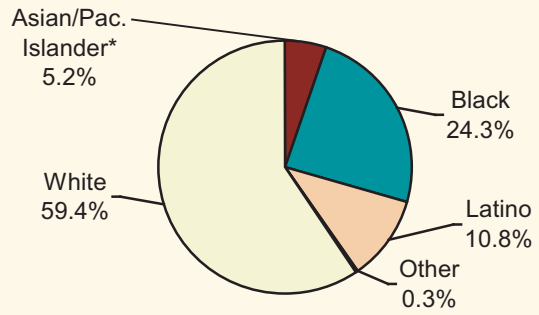
People whose ethnicity is classified as Latino may also consider themselves to belong to a racial group like Black, White, or Asian. The 2000 Census instructed Latinos to indicate a racial group. But many Latinos do not identify with any of these groups. Rather, they consider their Latino ethnicity to be equivalent to their race. That is how we report the data. We use the terms "Asian," "Black," and "White" to describe the self-identified race of people who are not of Latino ethnicity.

Cross reference
For a more detailed discussion of race and ethnicity, read page 7 of the Mayor's Task Force Blueprint, another report released as part of the Disparities Project. The report is also available on-line at **www.bphc.org/disparities.**

Boston is a racially and ethnically diverse city. In 1990, almost 60% of all Bostonians were White. By 2000, slightly more than half its residents were Asian, Black, Latino, or of another race. Latino, Asian, and immigrant populations have grown the fastest in the past decade.

FIGURE 1

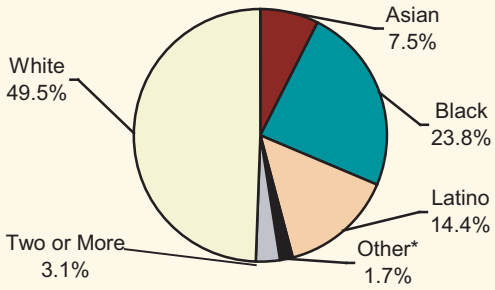
Boston's population in 1990, by race/ethnicity



*In 1990, Pacific Islanders were part of the Asian group, and no multiracial category was provided.
SOURCE: Census 1990, U.S. Department of Commerce

FIGURE 2

Boston's population in 2000, by race/ethnicity

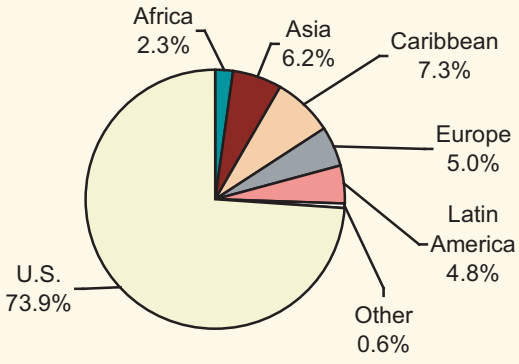


*In 2000, Pacific Islanders were part of the "Other" group, and people could report belonging to two or more racial groups.
SOURCE: Census 2000, U.S. Department of Commerce

One in every four Boston residents was born outside the U.S. Boston residents come from countries representing every region of the world: 73.7% of Boston's Asian residents, 24.8% of its Black residents, 42.9% of its Latino residents, and 11.6% of its White residents are immigrants (data not shown).

FIGURE 3

Place of origin of Boston residents



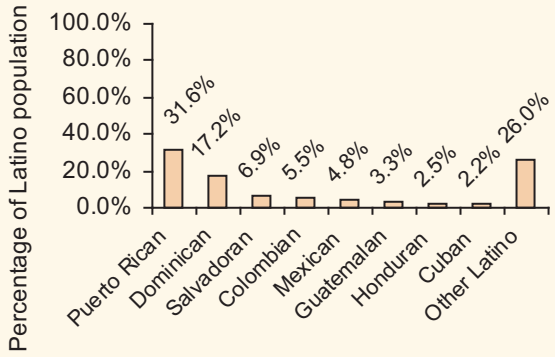
SOURCE: Census 2000, U.S. Department of Commerce

The 2000 Census offered respondents the option to list ethnicity, as well as the required category of race. Virtually all Latinos and Asians listed an ethnic origin. Almost 2/3 of Black Bostonians did not list an ethnic origin. It is likely that the vast majority of these residents were, in fact, native-born African Americans, the descendent of Africans brought to the United States as slaves hundreds of years ago. The Census did not offer Black respondents a way to indicate that. We do know that more than 75% of Boston's Black population, regardless of ancestry, was born in the United States.

These charts are not intended to indicate whether respondents were U.S. born or immigrants. Respondents may be from families who have lived in the U.S. for generations or they may be recent arrivals. The charts simply reflect how the respondents choose to identify their ethnicity.

FIGURE 4

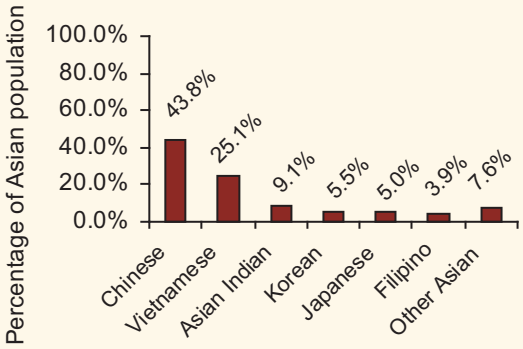
ETHNIC ORIGINS OF BOSTON'S LATINO RESIDENTS



SOURCE: Census 2000, U.S. Department of Commerce

FIGURE 5

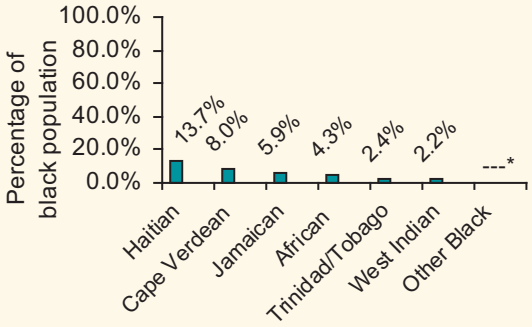
ETHNIC ORIGINS OF BOSTON'S ASIAN RESIDENTS



SOURCE: Census 2000, U.S. Department of Commerce

FIGURE 6

ETHNIC ORIGINS OF BOSTON'S BLACK RESIDENTS



*63.5% reported no ancestry group or one w ith <2.0% of the total Black population.
SOURCE: Census 2000, U.S. Department of Commerce

Health Disparities for Other Ethnic Populations

In the following chapters we show data on Black, Latino, and Asian populations as compared to White residents. In addition to these racial/ethnic populations, a small proportion of Boston residents indicate that their race is Native American (approximately 0.4% of the total population). Significant evidence suggests that Native Americans suffer from serious health disparities in the United States[3] but Boston's population is too small to permit much analysis. Boston also has a number of ethnic subpopulations such as recent Russian immigrants that may experience poorer health outcomes for a number of reasons. Further analysis of these populations, as with other immigrant subpopulations, will need to wait until additional data are available.

Boston's residents come from more than 115 countries and belong to many ethnic groups. But this report categorizes them into just four major racial/ethnic groups: Asian, Black, Latino, and White. Grouping people with diverse ethnic backgrounds into a few categories has serious drawbacks. One of the most important is that major health differences between subpopulations can be obscured. Unfortunately, however, health data that indicate ethnicity are rarely available. The previous charts show how diverse Boston's Black, Latino, and Asian communities are in ethnic and national origins.

The accompanying Mayor's Task Force Blueprint and Hospital Working Group Report outline steps for collecting health data that better reflect ethnic differences.

RACIAL AND ETHNIC DISPARITIES

What are racial and ethnic disparities?

The National Institutes of Health of the U.S. federal government defines health disparities as "differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States."[4] These groups may be defined by any number of demographic characteristics, such as gender, socio-economic class, sexual orientation, or geography. In this report, we consider disparities based on race or ethnicity that are striking even when other factors are accounted for. When we observe differences between groups based on race or ethnicity, we deduce that some manifest inequity between groups is causing these disparities.

Why do these racial and ethnic differences in health exist since race and ethnicity are not biological or genetic?

Differences in health between people of different races and ethnicities are not due to biological or genetic differences. In fact, research has found at least as much genetic variation within racial groupings as between racial groupings[5]. Racial categories were created by people for social reasons, and racial differences in health are caused by differences in social factors. These include discrimination and racism, poverty, and lack of access to resources like education, housing, and health care.

Cross reference
For a more detailed discussion of health disparities, read page 8 of the Mayor's Task Force Blueprint, another report released as part of the Disparities Project. The report is also available on-line at **www.bphc.org/disparities.**

This report is not intended to definitively identify or explain societal and institutional inequities that lead to poorer health for Asian, Black, Latino, and immigrant populations. However, it will highlight some of the ways that poverty, racism, segregation, language differences, and lack of access to health care contribute to these disparities.

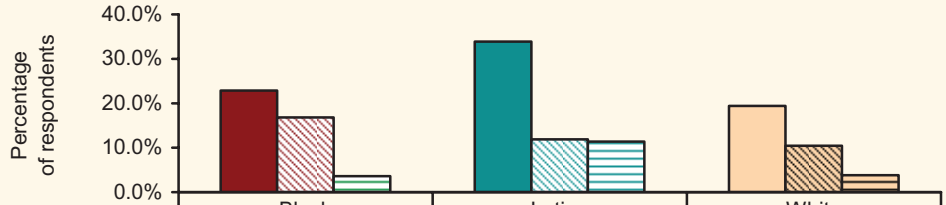
Socio-economic Status and Race/Ethnicity

Many studies have demonstrated that lower socio-economic status – as defined, for example, by poverty or limited educational opportunities – is likely to result in poorer health because of limited access to healthful foods, sub-standard housing, greater public safety risks, and other factors[6,7,8,9].

Within each racial group in Boston, poorer residents are more likely than middle- or upper-income residents to report that they have only fair or poor health. Since more Blacks and Latinos than Whites have low incomes, the impact of this phenomenon is magnified.

FIGURE 7

BOSTON ADULTS RATING THEIR OVERALL HEALTH AS "FAIR" OR "POOR," BY RACE/ETHNICITY AND INCOME



	Black	Latino	White
Solid bar: <$25,000	22.9%	33.9%	19.4%
Diagonal bar: $25,000-$49,999	16.8%	11.9%	10.4%
Horizontal bar: $50,000 or more	3.6%	11.4%	3.8%

Note: Data about Asian residents not shown due to inadequate sample size
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Across racial groups, poorer residents are more likely to report worse health.

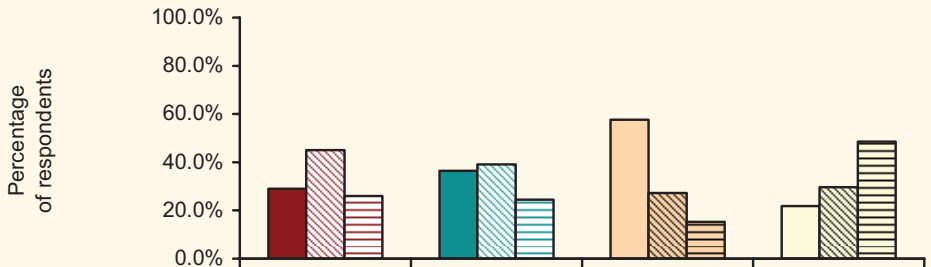
Poverty

A higher percentage of Asians, Blacks, and Latinos than Whites earn less than $25,000 a year. In addition, a far lower percentage of Asians, Blacks, and Latinos earn $50,000 a year or more.

Meanwhile, a higher percentage of Asians, Blacks, and Latinos live below the federal poverty level of $9,570 a year for one person and $19,350 for a family of four. This is true for both adults and children.

FIGURE 8

INCOME OF BOSTON RESIDENTS, BY RACE/ETHNICITY



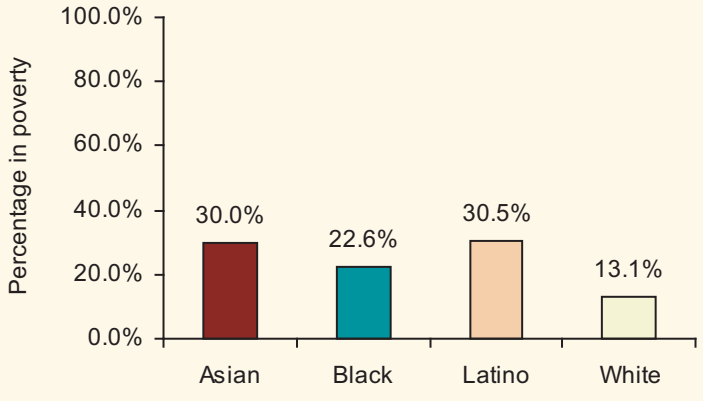
	Asian	Black	Latino	White
Solid bar: <$25,000	29.0%	36.4%	57.6%	21.8%
Diagonal bar: $25,000-$49,999	45.0%	39.1%	27.2%	29.6%
Horizontal bar: $50,000 or more	26.0%	24.5%	15.2%	48.5%

SOURCE: Census 2000, U.S. Department of Commerce

Asian, Black, and Latino Bostonians are poorer on average than White residents.

FIGURE 9

BOSTON POPULATION (ALL AGES) LIVING IN POVERTY, BY RACE/ETHNICITY

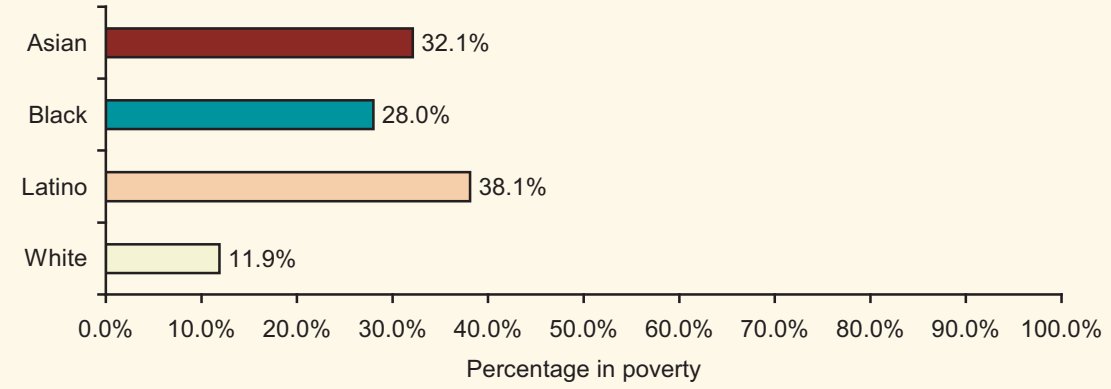


SOURCE: Census 2000, U.S. Department of Commerce

Poverty rates are higher for Asian, Black, and Latino Bostonians than for White Bostonians.

FIGURE 10

BOSTON CHILDREN LIVING IN POVERTY, BY RACE/ETHNICITY



SOURCE: Census 2000, U.S. Department of Commerce

Poverty rates are higher for Asian, Black, and Latino children than for White children.

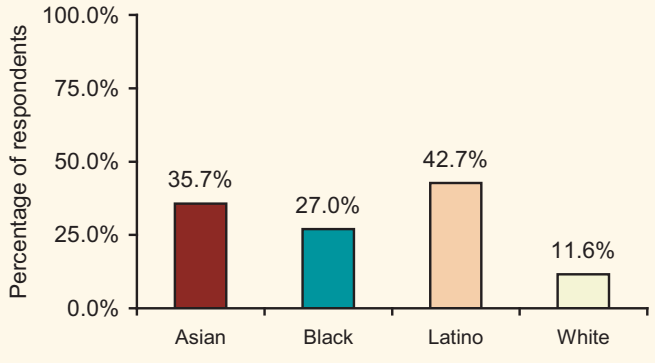
Education

Educational attainment is a measure of socio-economic status because more training often offers the opportunity for higher income. Asian, Black and Latino residents of Boston are less likely to have earned a high school diploma than White residents.

A greater proportion of White and Asian Boston residents than Black or Latino residents have earned a bachelor's degree or beyond. Among Asians, comparatively high proportions have either very low or very high education levels, suggesting substantial diversity within this group of Boston residents.

FIGURE 11

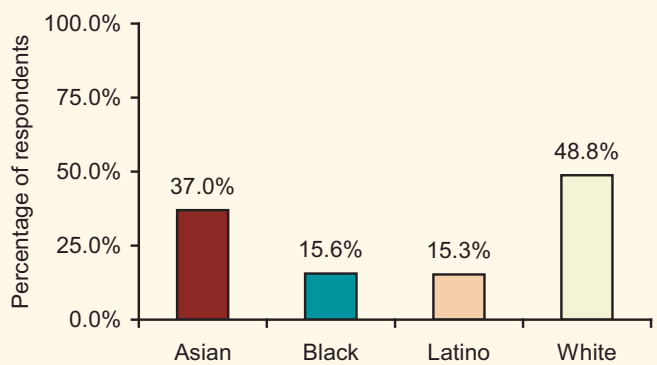
BOSTON ADULTS WITHOUT A HIGH SCHOOL DIPLOMA, BY RACE/ETHNICITY



SOURCE: Census 2000, U.S. Department of Commerce

FIGURE 12

BOSTON ADULTS WITH AT LEAST A BACHELOR'S DEGREE, BY RACE/ETHNICITY



SOURCE: Census 2000, U.S. Department of Commerce

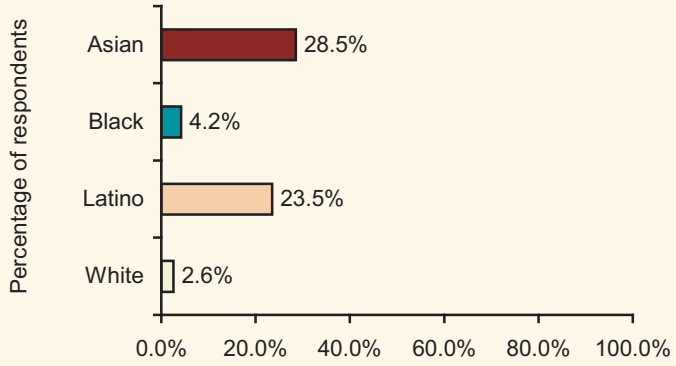
White residents have the highest educational levels.

Language

Access to health services – as well as to better-paying jobs – may be limited for people who do not speak English. Non-English-speaking residents may find the health care system difficult to navigate, and interpreter services may be inadequate[10,11]. About a quarter of Asian and Latino adults in Boston speak little or no English; 84.7% of Boston's non-English-speakers were born in another country.

FIGURE 13

BOSTON ADULTS WHO SPEAK LITTLE OR NO ENGLISH, BY RACE/ETHNICITY



SOURCE: Census 2000, U.S. Department of Commerce

Asian and Latino residents are most likely to speak little or no English.

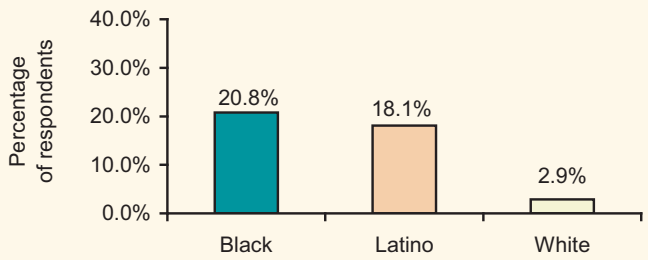
The Experience of Racism and Discrimination

Recent studies have demonstrated that the experience of racism and discrimination is directly linked to poorer health. This is thought to be related, in part, to the physiological as well as psychological impact of living with a greater degree of stress and anxiety. In addition, racism and discrimination can create barriers to adequate health care, better paying jobs, and certain housing.

Surveys show that Black and Latino people often experience subjective feelings of discrimination in the workplace and when they are getting health care. In Boston, Black residents are more than five times as likely as White residents to report being treated worse than co-workers because of their race, and nearly six times more likely to report such racial discrimination in health care. Latino residents are three times as likely as White residents to report experiences of bias in both work and health care settings.

FIGURE 14

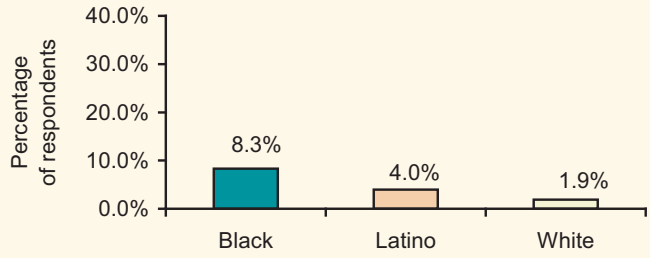
Boston Adults Who Report Having Been Treated Worse Than People of Other Races at Work during the Previous Year, by Race/Ethnicity



Note: Data about Asian residents not shown due to inadequate sample size
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

FIGURE 15

Boston Adults Who Report Having Been Treated Worse Than People of Other Races When Seeking Health Care during the Previous Year, by Race/Ethnicity



Note: Data about Asian residents not shown due to inadequate sample size
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Particularly at work, Black and Latino Bostonians report being treated worse than others.

Differential Treatment by the Health Care System

Most Bostonians of all races believe they are treated equally when seeking health care, but Black residents are more likely to believe they are treated worse than others and White residents are more likely to believe they are treated better.

TABLE 1

How Boston Residents Feel They Are Treated Compared to Others When Seeking Health Care, by Race/Ethnicity

	Better	Same	Worse	Better than Some/ Worse than Others
Asian	---*	90.7%	---*	---*
Black	4.1%	84.6%	8.3%	2.8%
Latino	12.8%	80.3%	4.0%	2.6%
White	20.4%	77.2%	1.9%	---*

*Data not shown due to inadequate sample size
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

A Look at the Research: A large body of evidence shows that Blacks and other populations of color receive differential treatment in the health care system for a wide range of health conditions, such as mental health, cardiovascular health, and pain management. Differential treatment includes being treated less frequently and less aggressively than Whites; being less likely to receive guideline-adherent treatment and follow-up, to be informed about all medical options, and to obtain all of the medical information they want[12].

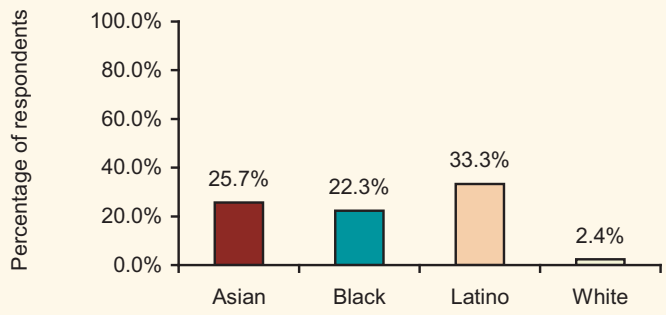
Stress and Health

The extent to which people think about race and ethnicity in their daily lives can suggest how much stress they experience in this area. In Boston, Asians, Blacks, and Latinos are clearly more aware of race than Whites are. For some members of these groups, the stress of dealing with racism affects mental and physical health.

About 20% of Black residents say they have felt upset about how they were treated on the basis of their race in the past 30 days, and 11% say that they have had physical symptoms related to the way they were treated because of their race or ethnicity. In addition, many Asian, Black and Latino residents report thinking about their race constantly.

FIGURE 16

Boston Adults Who Report Thinking about their Race "Constantly," by Race/Ethnicity



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

A third of Latino residents report thinking about their race constantly.

Lack of Health Insurance and Other Measures of Access

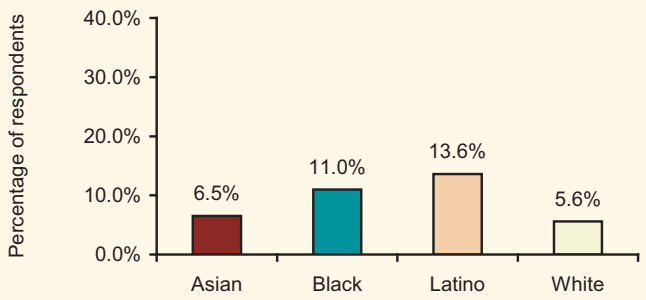
When people lack health insurance, they are less likely to seek preventive care or early treatment of illness. They are more likely to postpone seeing a doctor until their symptoms are more serious and more complicated to treat. The expense of co-payments or uncovered services may discourage even people with insurance from seeking care. Since people of color are more likely to be uninsured and more likely to have a low income, lack of health insurance with comprehensive and affordable benefits is probably partly responsible for health care disparities.

Latino residents of Boston are the most often uninsured, followed by Black residents. One in 7 Latinos, 1 in 9 Black residents, 1 in 15 Asian residents and 1 in 18 White residents have no insurance coverage.

Even among those with insurance, Asian, Black, and Latino residents of Boston have trouble affording necessary care more often than Whites do.

FIGURE 17

PERCENTAGE OF ADULT BOSTON RESIDENTS WITHOUT HEALTH INSURANCE, BY RACE/ETHNICITY

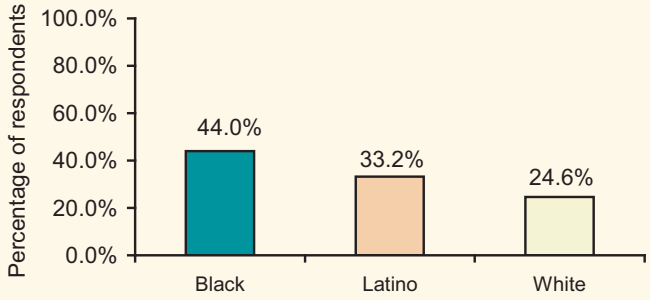


SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Lack of health insurance is most frequent in Boston's Latino population.

FIGURE 18

UNINSURED BOSTON ADULTS WHO COULD NOT AFFORD TO SEE A DOCTOR WHEN THEY NEEDED ONE IN THE PREVIOUS YEAR, BY RACE/ETHNICITY



Note: Data about Asian residents not shown due to inadequate sample size

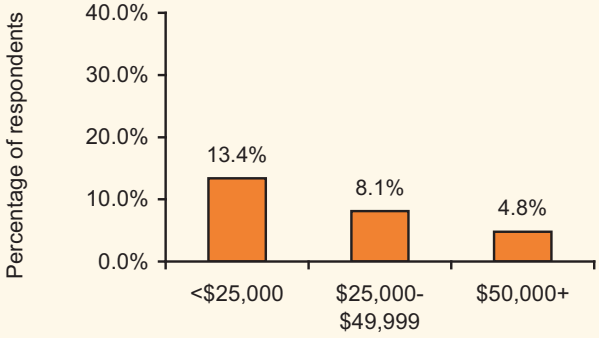
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

More uninsured Black and Latino Bostonians than uninsured White Bostonians report that cost has prevented them from seeing a doctor when necessary.

Whether insured or uninsured, more Black and Latino Boston residents report that cost has prevented them from seeing a doctor when they needed to. For the insured, this may be because their coverage is less adequate, with high deductibles or co-payments. The uninsured may have fewer alternative financial reserves or more expensive conditions.

FIGURE 19

BOSTON ADULTS WHO COULD NOT AFFORD TO SEE A DOCTOR WHEN THEY NEEDED ONE IN THE PREVIOUS YEAR, BY INCOME

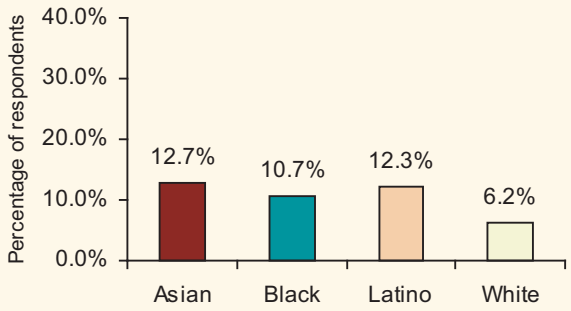


SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

More low-income Bostonians than high-income Bostonians report that cost has prevented them from seeing a doctor when necessary.

FIGURE 20

BOSTON ADULTS WHO COULD NOT AFFORD TO SEE A DOCTOR WHEN THEY NEEDED ONE IN THE PREVIOUS YEAR, BY RACE/ETHNICITY



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

More Asian, Black, and Latino Bostonians than White Bostonians report that cost has prevented them from seeing a doctor when necessary.

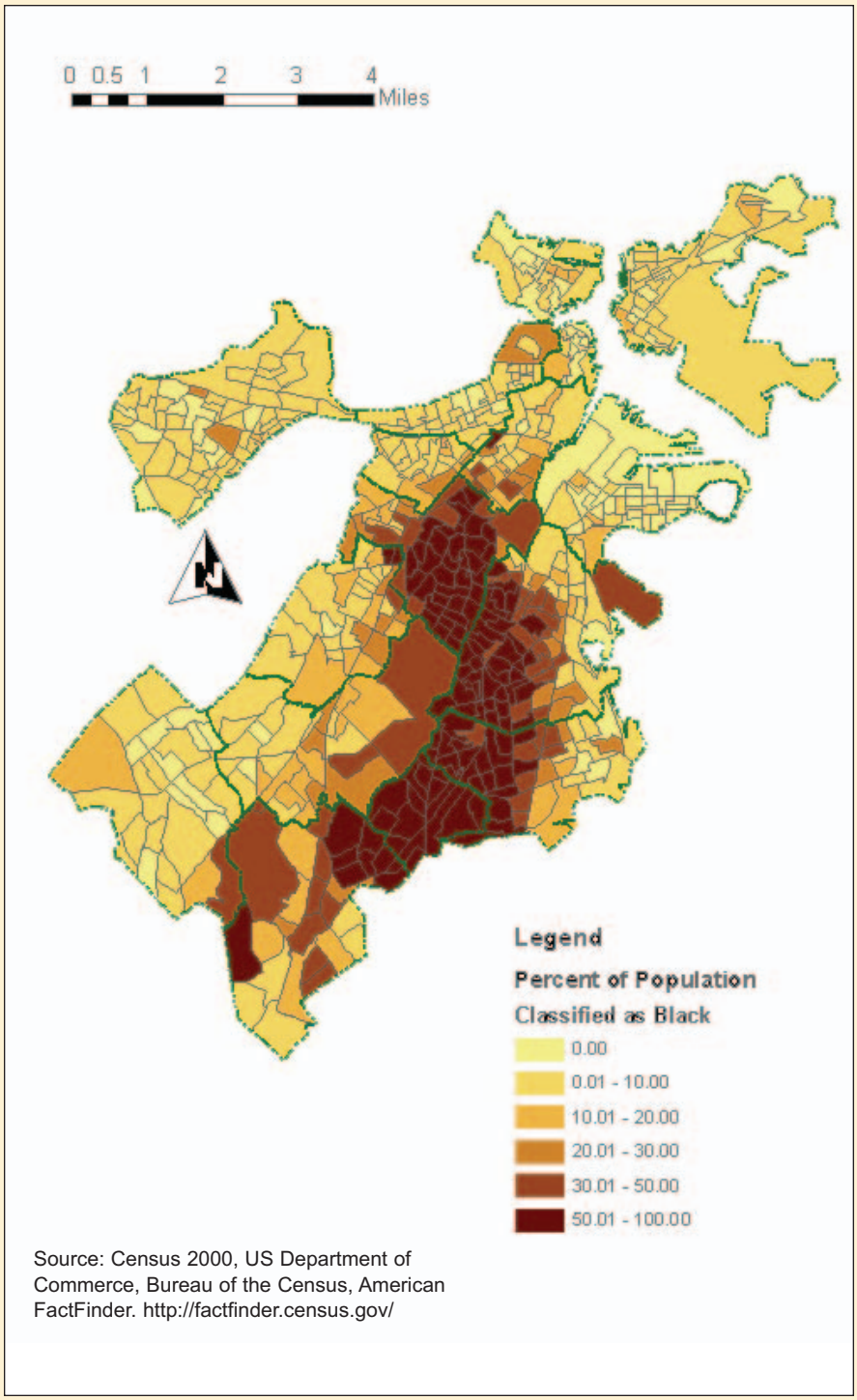
Neighborhood Characteristics

Segregation and Environmental Conditions

As in most communities, racial and ethnic groups are distributed unevenly throughout Boston. People tend to live near others of the same race/ethnicity.

In 1990, approximately 72% of the city's Black residents lived in three neighborhoods – Roxbury, Dorchester and Mattapan. By 2000, this figure had decreased to 69%. According to the 2000 U.S. Census about 92% of Boston's Black population can be found in seven neighborhoods – Roxbury, Dorchester, Mattapan, Hyde Park, Jamaica Plain, the South End and Roslindale. These same neighborhoods are home to about 63% of the city's Latino residents. Another 17% of Latinos live in East Boston.

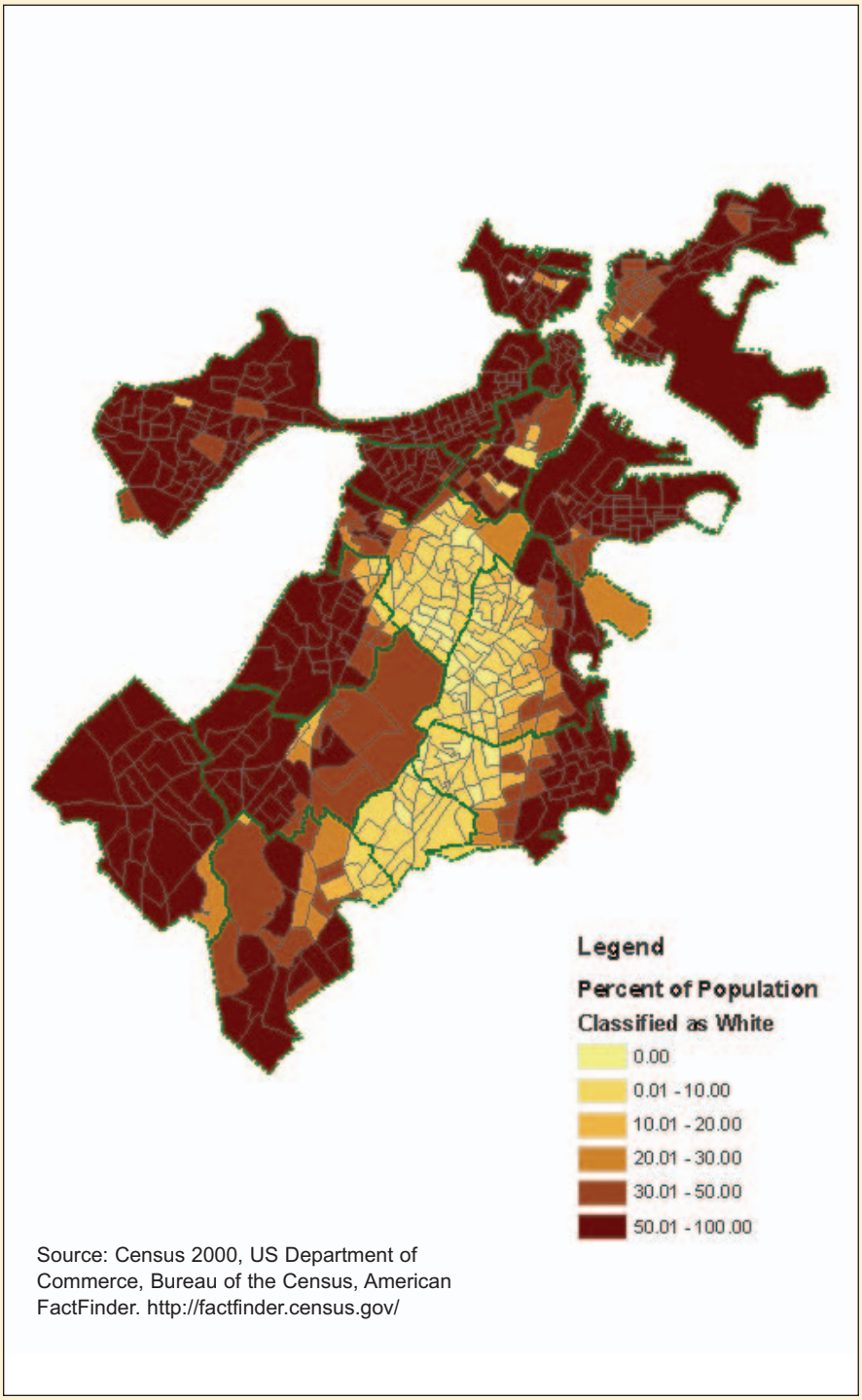
RESIDENCES OF BLACK POPULATION IN BOSTON



Source: Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

FIGURE 21

RESIDENCES OF WHITE POPULATION IN BOSTON



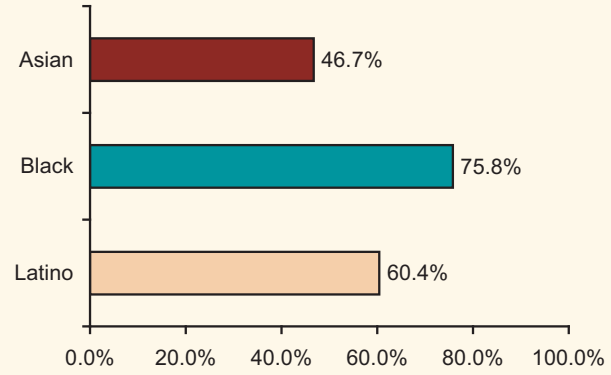
Source: Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

FIGURE 22

The Index of Dissimilarity[12] is a frequently used measure that describes the extent to which residential segregation exists in a community. It compares the number of people of a given racial or ethnic group in a census tract with the number of people of another group, in this case Whites. The index shows the percentage of people who would have to move (theoretically) so that each census tract in the city would have equal numbers of Black and White residents, or Asian and White residents, or Latino and White residents. For example, in Boston, 46.7% of Asian or White residents would have to move to make the mix of Asians and Whites equal.

FIGURE 23

Boston Index of Dissimilarity



SOURCE: Frey WH and Myers D, Social Science Data Analysis Network

A Look at the Research...
Residential segregation has been linked to disparities in infant mortality, overall mortality, teenage childbearing, tuberculosis, cardiovascular disease, availability of healthy food options, and exposure to toxic air pollutants[13].

The highest level of segregation in Boston is between Black and White residents.

TABLE 2

Asthma Hospitalization of Boston Residents under Age 18, by Race/Ethnicity

	Asthma Hospitalization per 1,000 children under 18
Asian	2.5
Black	6.5
Latino	5.6
White	1.6

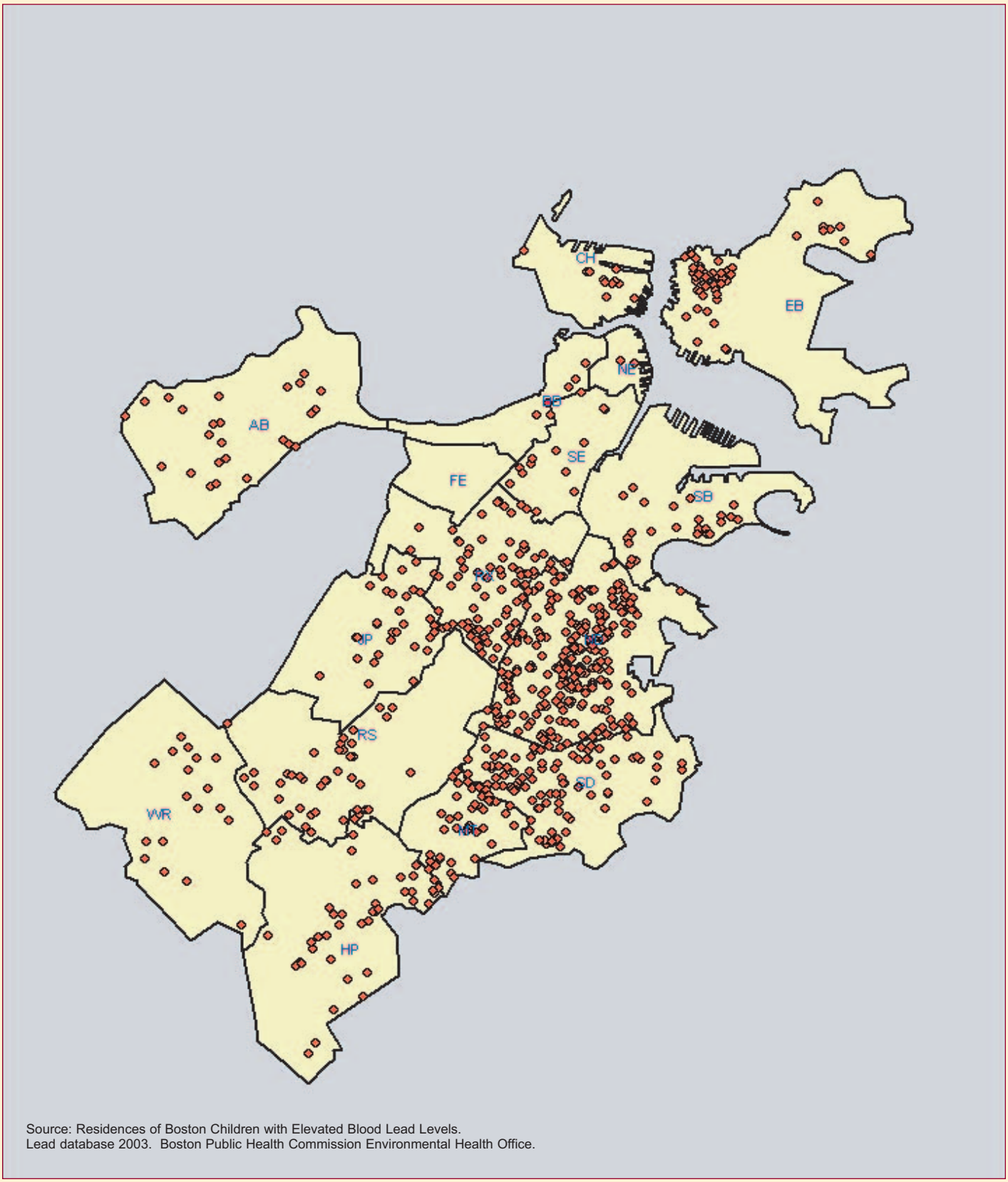
Source: Asthma Hospitalization of Boston Residents Under Age 18, by Race/Ethnicity. Acute Care Hospital Case Mix files 1998-2002. Massachusetts Division of Health Care Finance and Policy.

Environmental Conditions

Unhealthy environmental conditions may lead to the onset or exacerbation of certain medical problems. Certain neighborhoods have poorer air quality (because of pollutants from local businesses or exhaust fumes from vehicles) and a high proportion of substandard housing, which may expose residents to toxic substances such as lead, mold or mildew. This probably contributes to racial and ethnic health disparities in Boston, because unhealthy environmental conditions can trigger or exacerbate certain medical problems. One example is asthma, which has become more common worldwide since the 1980s and can be triggered by allergen such as cockroach droppings and pollen or airborne irritants such as tobacco smoke.

Another is lead poisoning, which can cause serious health problems for young children. Elevated blood lead levels in children are concentrated in neighborhoods of Boston that are predominantly Black (Dorchester, Mattapan, and Roxbury), largely as a result of substandard housing.

Residences of Boston Children with Elevated Blood Lead Levels



Source: Residences of Boston Children with Elevated Blood Lead Levels.
Lead database 2003. Boston Public Health Commission Environmental Health Office.

FIGURE 24

CHAPTER III

HEALTH DISPARITIES FOR BLACK BOSTONIANS

In reviewing the data that demonstrate the disparities we are trying to account for and remedy, it is appropriate to begin with Black Bostonians. This is the city's largest racial category of people of color; Boston's 140,000 Black residents make up almost a quarter of the population. And the health status of Black Bostonians powerfully illustrates the magnitude of the disparities. On a broad range of indicators, Black Bostonians have worse health than residents of other racial and ethnic groups. Although Asians, Latinos or others are worse off with respect to some health indicators, Blacks have the most consistent pattern of disparities and, overall, the biggest deficits.

Specific health data regarding ethnic subpopulations is lacking for all racial groups on the local and national level. However, we do have some idea about the ethnic origins of most racial/ethnic groups in Boston based on Census data and this can often help us understand that variation in health status may exist within larger populations. Unfortunately, this is not the case with Black residents as approximately two-thirds did not specify an ethnic origin.

Mortality

Death Rates and Leading Causes of Death

The leading causes of death for Black and White Bostonians are cancer, heart disease, stroke, and injuries. Across the board, death rates are higher for Black Bostonians. The most dramatic differences are seen in the case of diabetes, where the death rate for Blacks is 2 times as high, and for HIV/AIDS, where it is 4 times greater.

TABLE 3

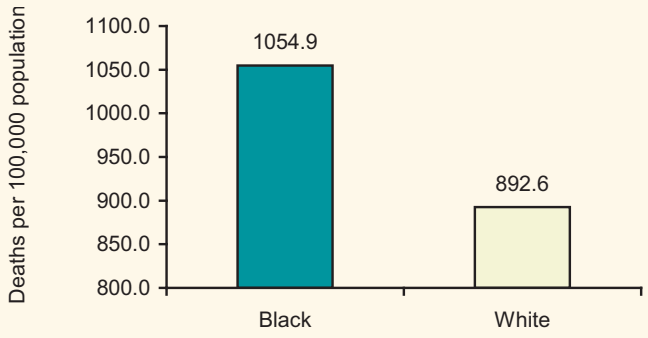
Selected Leading Causes of Death in Boston: Black and White Residents

	Age-Adjusted Rates / **Black**	Age-Adjusted Rates / **White**
Cancer	257.3	230.5
Heart disease	220.7	205.4
Stroke	63.1	41.3
Injuries	54.6	49.4
Diabetes	48.3	23.4
HIV/AIDS	33.2	8.1

SOURCES: Boston resident deaths, Massachusetts Department of Public Health, Census 2000, U.S. Department of Commerce

FIGURE 25

Boston Death Rates From All Causes: Black and White residents



SOURCE: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

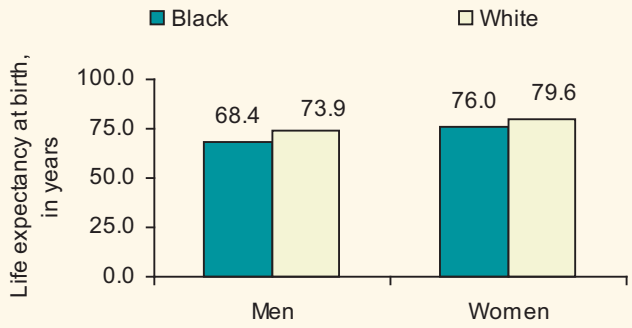
Life Expectancy

Black residents of Boston, on average, die earlier than their White counterparts. This is true for both men and women. Black women can expect to live an average of 76.0 years, 3.6 years less than White women. Black men can expect to live an average of 68.4 years, 5.5 years less than White men.

Black residents are also significantly more likely than Whites to die prematurely (before age 75). The high rate of premature death among Blacks is the result of death from cancer, heart disease, injury, and HIV/AIDS. A large number of early deaths or differences between groups in the rate of early death, are cause for concern about the general health of a community.

FIGURE 26

LIFE EXPECTANCY OF BLACK AND WHITE BOSTON RESIDENTS, BY SEX

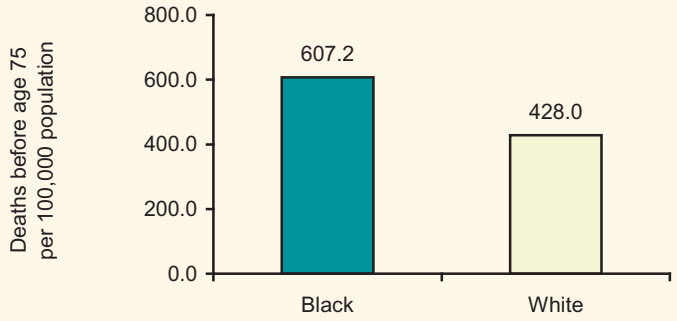


SOURCE: Boston resident births and deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

Black residents have a 42% higher premature death rate than White residents; Black men have the lowest life expectancy.

FIGURE 27

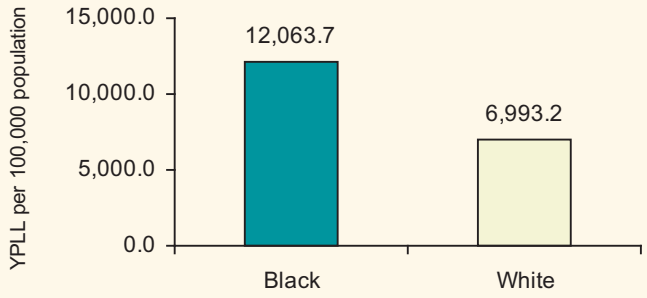
BOSTON PREMATURE DEATH RATES: BLACK AND WHITE RESIDENTS



SOURCE: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

FIGURE 28

BOSTON YPLL RATES: BLACK AND WHITE RESIDENTS



SOURCE: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

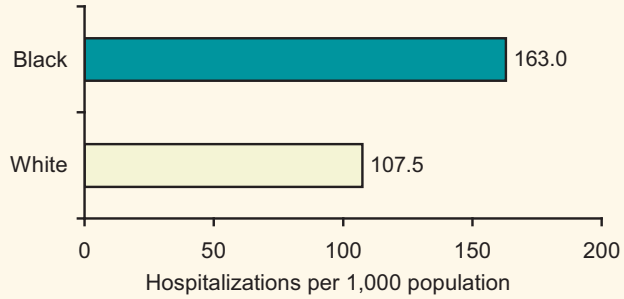
In Boston, some 12,064 years of potential life per 100,000 Black residents are lost to early death in one year, far higher than the rate of loss for Whites.

Years of Potential Life Lost

The Years of Potential Life Lost (YPLL) measurement estimates how many years of life in a community are lost to premature death.

FIGURE 29

BOSTON HOSPITALIZATION RATES: BLACK AND WHITE RESIDENTS



SOURCE: Acute Case Mix, Massachusetts Division of Health Care Finance and Policy; Census 2000, U.S. Department of Commerce

Hospitalization rates for Black Bostonians are more than 50% higher than for Whites.

Hospitalization

Hospitalization rates measure the amount of illness in a community, the frequency of complications in people who have chronic illnesses such as hypertension and diabetes, and the prevalence of acute illnesses and conditions such as heart attacks and injuries.

Maternal and Infant Health

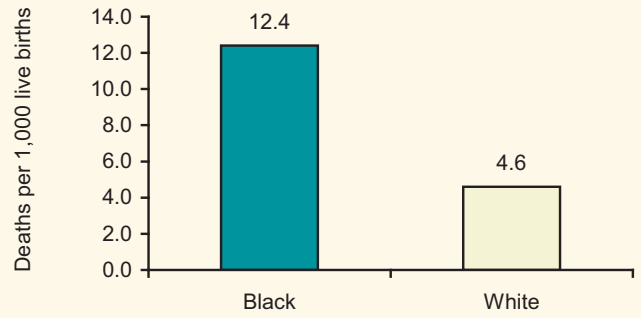
Societies throughout the world use the health of pregnant women and newborns as an indicator of the health of the whole community. Pregnancy and the first year of life are times of particular vulnerability, and problems with general health, access to medical care, quality of care, and the physical and social environment often affect childbearing women and infants before they affect other parts of a population.

In Boston, babies born to Black women die in their first year 2 to 4 times as often as babies born to mothers of other racial and ethnic groups. This is true at every level of maternal education. Most of the disparity is attributable to the higher rate of premature births among Black women, but the reasons for this rate of prematurity are not fully known.

Prematurity may be measured by birth weight, gestational age at delivery, slow growth in the womb or a combination of these measures. By any of them, Black babies are more likely to be premature. In particular, Black babies are more likely to be born at a very low birth weight (less than 3.3 pounds). Only 2% of Boston's babies are termed "very low birth weight" but they account for 73% of the city's infant deaths.

FIGURE 30

Boston Infant Mortality Rates: Black and White Women

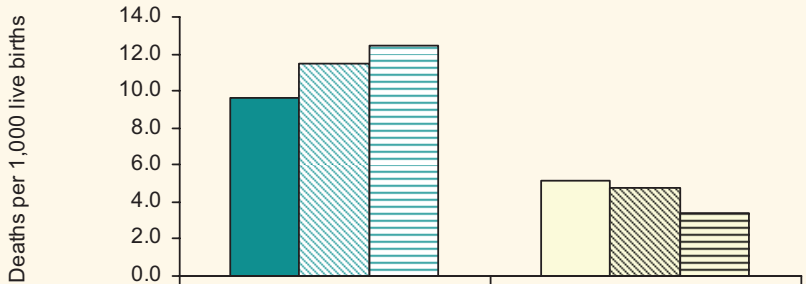


SOURCES: Boston resident live births and infant deaths, Massachusetts Department of Public Health

Deaths occurring before a baby's first birthday are significantly more frequent among Black Bostonians.

FIGURE 31

Boston Infant Mortality Rates, by Maternal Education Level: Black and White Women



	Black	White
■ Solid bar: <HS diploma	9.6	5.2
▧ Diagonal bar: HS diploma	11.5	4.8
⊟ Horizontal bar: Bachelor's degree+	12.4	3.4

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

Differences across racial/ethnic groups in maternal education do not account for the differences we see in infant mortality.

TABLE 4

Very Low Birth Weight among Infants Born to Boston Women: Black and White Residents

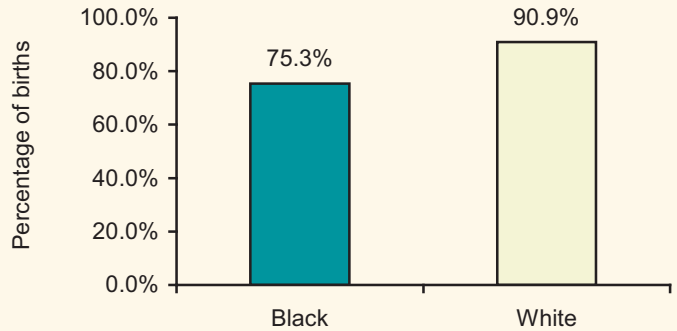
Very Low Birth Weight	Black	White
Percent weighing less than 3.3 lbs. at birth	3.6%	1.2%

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

Black babies are three times more likely to be born at a very low birth weight.

FIGURE 32

Boston Women with Adequate Prenatal Care: Black and White Residents



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

Black Boston women do have a significantly lower level of "adequate prenatal care" utilization compared with White women. "Adequacy" is determined by how early a woman receives prenatal care and how many times she visits a care provider during her pregnancy. However, studies have shown that access to adequate prenatal care is not enough to close the racial gap in infant mortality.

White women are twenty percent more likely than Black women to receive adequate prenatal care.

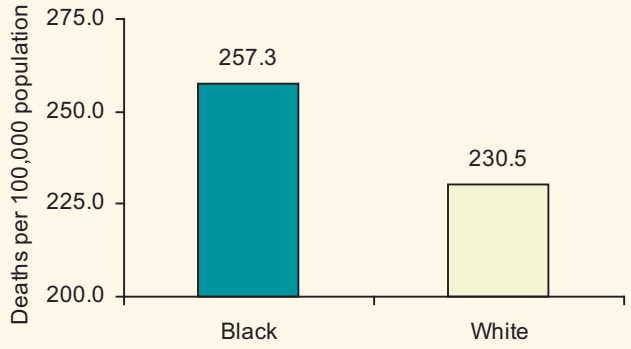
Cancer

Four types of cancer—lung, colorectal, breast, and prostate—contribute the most to Boston's cancer death rates. They account for half of all cancer deaths among Boston residents. Lung cancer is the leading cause of cancer mortality in Boston, with 26.1% of all cancer deaths. Colorectal cancer contributes 11.4%, breast cancer 7.8%, and prostate 5.4% of all cancer deaths.

Black Bostonians have a higher death rate from cancer than White Bostonians. In particular, they are more likely to die of breast, prostate, and cervical cancers, even though they are slightly more likely than Whites to be screened for these diseases. On the other hand, they are somewhat less likely to die of lung cancer.

FIGURE 33

Boston Cancer Mortality Rates: Black and White Residents



SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

Death rates from all forms of cancer are 12% higher for Black Bostonians.

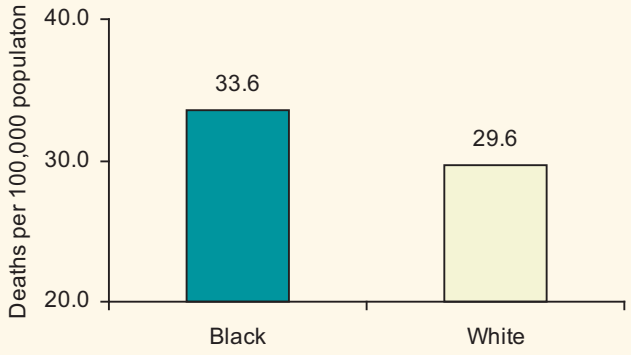
A Look at the Research...

Nationally, Black women are more likely to die of breast cancer than women of other races and ethnicities. This is generally thought to be related to delayed detection and treatment. But in Boston, Black women have the highest mammography rates of all groups and the gap with White mortality rates for breast cancer is smaller[14].

Breast Cancer

FIGURE 34

Boston Breast Cancer Mortality Rates: Black and White Residents

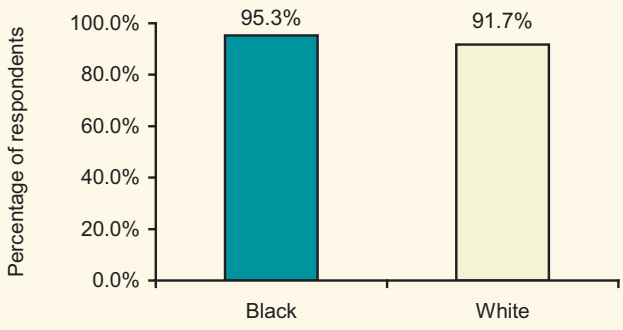


SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

The death rate from breast cancer is slightly higher among Black Boston women than among White women.

FIGURE 35

Boston Women Age 40 or Older Who Have Ever Had a Mammogram to Screen for Breast Cancer: Black and White Residents



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

In Boston Black women over 40 are more likely to have a mammography screening than White women, suggesting that access to this service is not the reason for the higher mortality rates.

A Look at the Research...

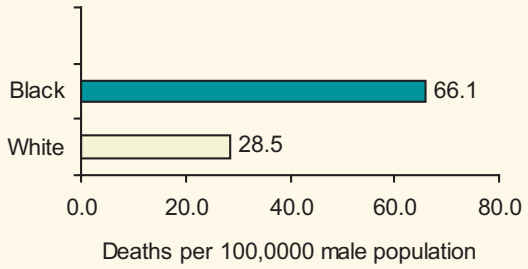
While some cancer screening rates for Black Bostonians are relatively high, access to screening may obscure other reasons for their higher mortality rates. Input from community residents and their health care providers suggests that Black patients may be less likely to be aware of the test findings or may have less access to follow-up care.

Prostate Cancer

Current recommendations are for Black men to begin prostate cancer screening at age 40 and for men of other races and ethnicities to begin screening at age 50. A higher proportion of White men than Black men have received the recommended screening, although the difference between groups is not statistically significant.

FIGURE 36

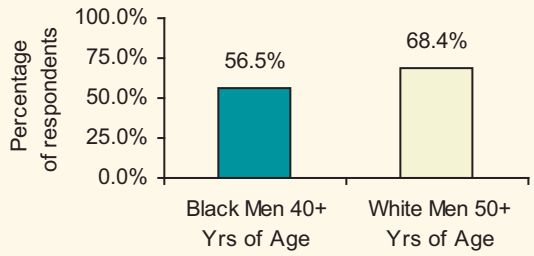
BOSTON PROSTATE CANCER MORTALITY RATES: BLACK AND WHITE MEN



SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

FIGURE 37

BOSTON MEN WHO HAVE EVER HAD A PSA TEST TO SCREEN FOR PROSTATE CANCER: BLACK AND WHITE RESIDENTS



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

The prostate cancer death rate of Black men in Boston is the city's highest; more than twice the rate for White Bostonians.

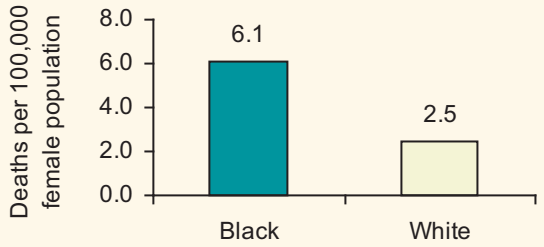
A Look at the Research...

American Black men have the world's highest prostate cancer rate[15], and their rate of death from prostate cancer is more than twice as high as White men[16].

Cervical Cancer

FIGURE 38

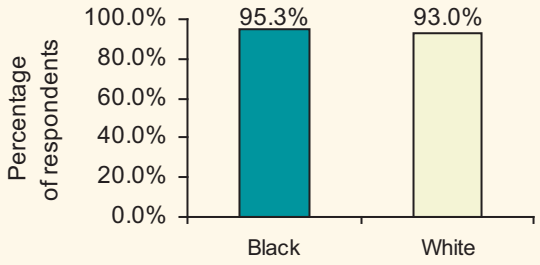
BOSTON CERVICAL CANCER MORTALITY RATES: BLACK AND WHITE WOMEN



SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

FIGURE 39

BOSTON WOMEN WHO HAVE EVER HAD A PAP TEST TO SCREEN FOR CERVICAL CANCER: BLACK AND WHITE RESIDENTS



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Black women in Boston have a significantly higher rate of death from cervical cancer than White women, even though they have a higher rate of screening for this disease.

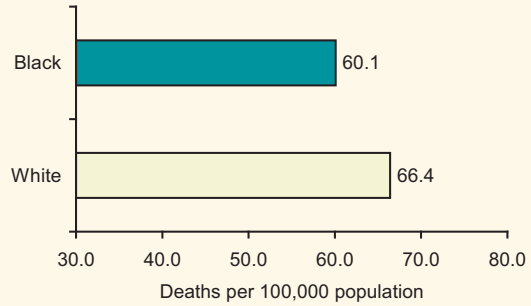
Lung Cancer

Lung cancer is one category where Black Bostonians are healthier than White Bostonians. In Boston, Whites have about a 10% higher rate of death from lung cancer than Blacks. This is largely because White Bostonians have historically been more likely than Black Bostonians to smoke cigarettes. For example, White high school students are likelier to smoke than Black students. And in a review of smoking among pregnant women in Boston from 1990 to 1996, White women were almost 40% more likely to smoke than Black women.

However, in recent years smoking has declined more rapidly in predominantly White neighborhoods than in predominantly Black neighborhoods of Boston. This may narrow the lung cancer gap between Black and White residents in future decades.

FIGURE 40

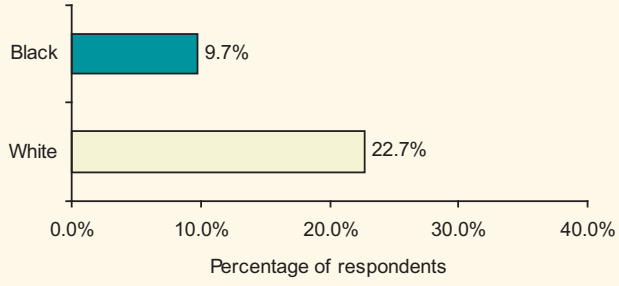
BOSTON LUNG CANCER MORTALITY RATES: BLACK AND WHITE RESIDENTS



SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

FIGURE 41

BOSTON HIGH SCHOOL STUDENTS WHO SMOKE CIGARETTES: BLACK AND WHITE RESIDENTS



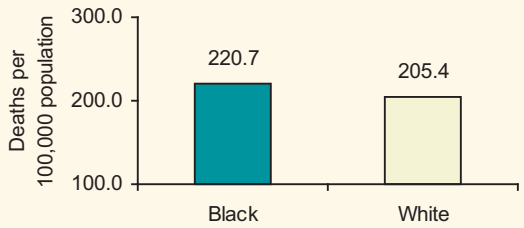
SOURCE: Youth Risk Behavior Survey, Massachusetts Department of Education and the Boston Public Schools

Lung cancer and smoking are health areas in which White adults and youth experience worse outcomes than their Black counterparts.

Heart Disease and Hypertension

FIGURE 42

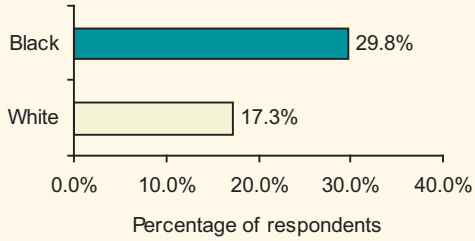
Boston Heart Disease Mortality Rates: Black and White Residents



SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

FIGURE 43

Boston Adults Who Have Ever Been Told They Have Hypertension: Black and White Residents

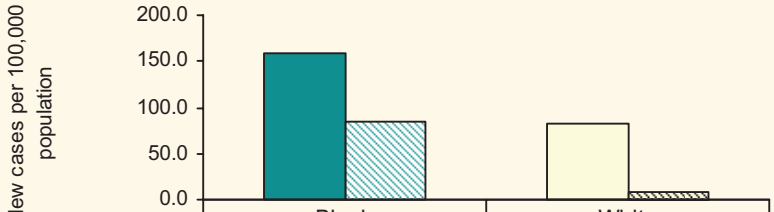


SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Black Bostonians have higher rates of death from heart disease and more than 70% higher rates of hypertension than Whites.

FIGURE 44

Boston HIV/AIDS Incidence Rates: Black and White Residents



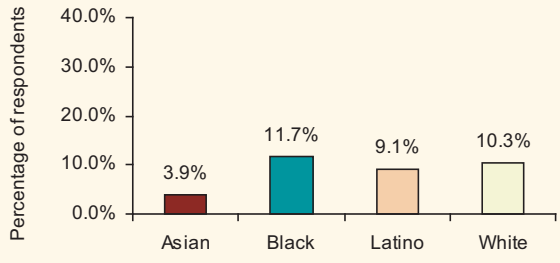
	Black	White
■ Solid bar: Male	158.7	82.9
▨ Diagonal bar: female	85.5	7.4

SOURCE: HIV/AIDS Surveillance Program, Massachusetts Department of Public Health

HIV/AIDS

Incidence of HIV/AIDS is higher for Blacks than Whites among both men and women; for women the rate is more than 10 times as high.

Boston Adults Who Have Ever Been Told by a Doctor That They Have Asthma, by Race/Ethnicity



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

FIGURE 45

Asthma

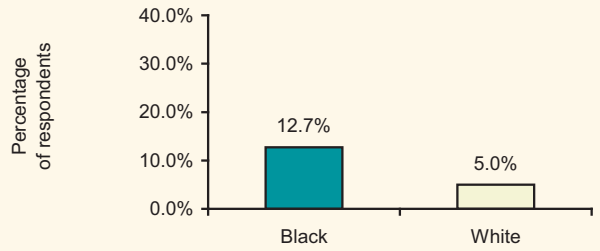
Black adults are more likely than any other group to have asthma.

Diabetes

Diabetes is more common among Black than White Bostonians at every level of income. It also may be more serious. Compared with other city residents who have diabetes, Black residents are significantly more likely to be hospitalized for the disease. And diabetes is more likely to contribute to their death.

FIGURE 46

Boston Adults Who Have Ever Been Told by a Doctor That They Have Diabetes: Black and White Residents



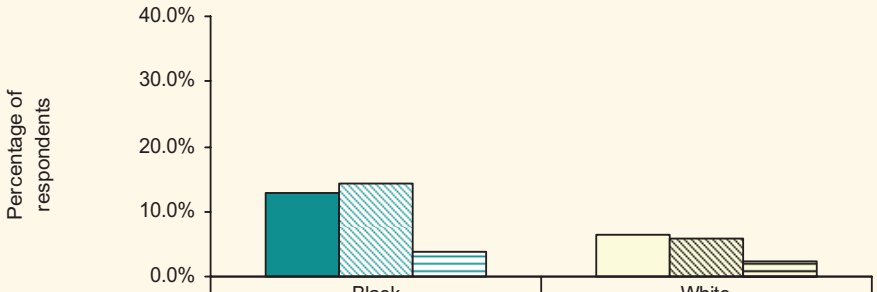
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Black adult residents of Boston are 2 times as likely as White residents to have diabetes.

Diabetes is more common among lower-income people of all racial/ethnic groups. But even within income categories, Black Boston residents have more diabetes than White residents, indicating that it is not just an income-related disparity.

FIGURE 47

Boston Adults Who Have Ever Been Told by a Doctor That They Have Diabetes, by Race/Ethnicity and Income



	Black	White
Solid bar: <$25,000	12.8%	6.4%
Diagonal bar: $25,000-$49,999	14.3%	5.8%
Horizontal bar: $50,000 or more	3.7%	2.3%

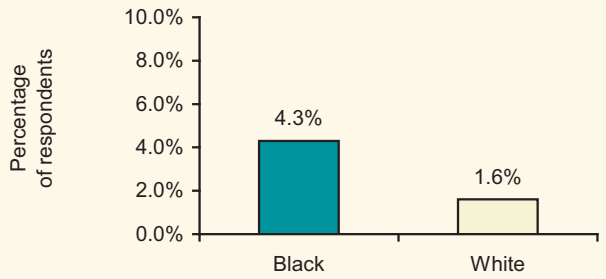
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Within each income category, more Black adults than White adults have diabetes.

Diabetes is associated with excess body weight, and overweight is more common in Boston's Black population than in other racial/ethnic groups. But this does not fully explain the higher rate of diabetes among Black Bostonians. Even among adults who are at or below normal weight, diabetes is more common in Black Bostonians.

FIGURE 48

UNDERWEIGHT/NORMAL-WEIGHT BOSTON ADULTS WHO HAVE EVER BEEN TOLD BY A DOCTOR THAT THEY HAVE DIABETES: BLACK AND WHITE RESIDENTS



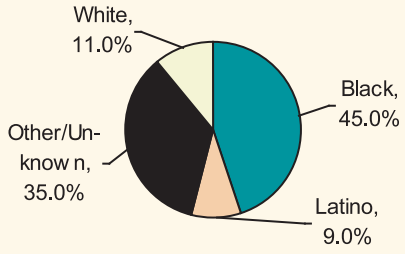
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Black adults who are underweight or normal-weight are more than twice as likely as White adults to have diabetes.

Black Boston residents are more likely to be hospitalized for diabetes. Black residents make up about one-third of all Boston adults with diabetes but 45.0% of adult diabetes hospitalization.

FIGURE 49

BOSTON ADULT HOSPITALIZATION FOR DIABETES, BY RACE/ETHNICITY

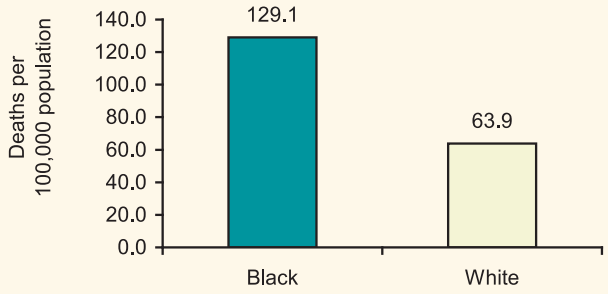


SOURCE: Acute Case Mix, Massachusetts Division of Health Care Finance and Policy

Almost half of all adult Hospitalization for diabetes are Black residents.

FIGURE 50

DIABETES AS AN IMMEDIATE OR UNDERLYING CAUSE OF DEATH AMONG BOSTON RESIDENTS: BLACK AND WHITE RESIDENTS



SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

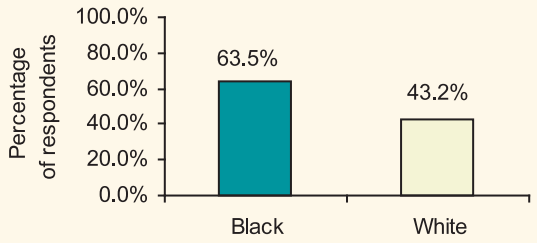
Diabetes is twice as likely to be a contributing factor in the death of Black residents.

Overweight/Obesity and Physical Activity

Excess weight and inadequate exercise are thought to contribute to a number of diseases, such as diabetes, heart disease and certain cancers[18]. At every level of income, Black Bostonians are more likely than White Bostonians to be overweight or obese, and less likely to get the recommended amount of exercise for optimal health.

FIGURE 51

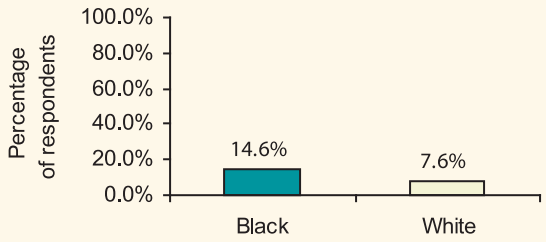
BOSTON ADULTS WHO ARE OVERWEIGHT OR OBESE: BLACK AND WHITE RESIDENTS



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

FIGURE 52

BOSTON HIGH SCHOOL STUDENTS WHO ARE OVERWEIGHT OR OBESE: BLACK AND WHITE RESIDENTS



SOURCE: Youth Risk Behavior Survey, Massachusetts Department of Education and the Boston Public Schools

Black adults and youth are more overweight and obese than their White counterparts.

FIGURE 53

What is the Body Mass Index?

Overweight and Obesity are determined by the Body Mass Index (BMI). The BMI is a score that takes into account both height and weight in determining whether people are at a healthy weight.

$$\frac{\text{(your weight in pounds)}}{\text{(your height in inches) x (your height in inches)}} \times 703 = \text{your BMI}$$

Example:

$$\frac{(\ 220\ \text{lbs}\ )}{(75\ \text{inches}) \times (75\ \text{inches})} \times 703 = 27.5$$

Underweight: <18.5

Normal: 18.5-24.9

Overweight: 25.0-29.9

Obese: 30.0 or higher

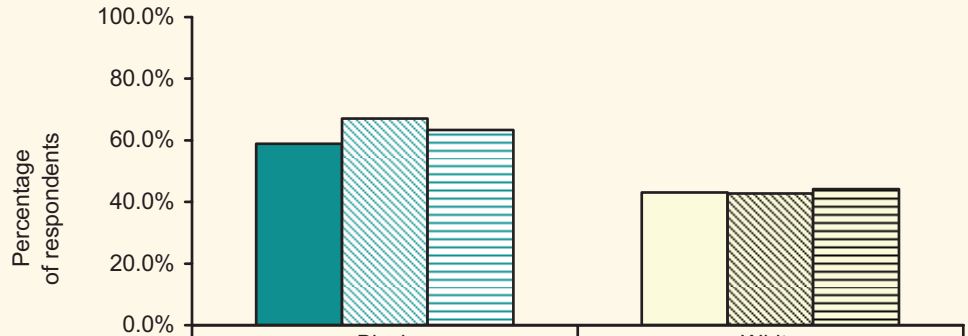
A Look at the Research...

Research has shown that neighborhoods of color have fewer healthy food options. Studies found more than twice as many fast food restaurants in Black neighborhoods as compared to White neighborhoods[19] and an average of four times as many supermarkets in White neighborhoods as in Black neighborhoods.[20] Access to healthy food options is clearly correlated with health behavior; one study found that fruit and vegetable intake for Black study subjects increased by 32% for each additional supermarket in the census area.[21]

Income and neighborhood characteristics often affect people's access to healthful foods and to opportunities for exercise. But income alone does not appear to account for the higher level of overweight and obesity among Black Bostonians. Black Bostonians earning more than $50,000 have higher obesity rates than the lowest-income White Bostonians.

FIGURE 54

BOSTON ADULTS WHO ARE OVERWEIGHT OR OBESE, BY INCOME: BLACK AND WHITE RESIDENTS



	Black	White
Solid bars: <$25,000	58.9%	43.1%
Diagonal bars: $25,000-$49,999	67.1%	42.8%
Horizontal bars: $50,000 or more	63.4%	44.2%

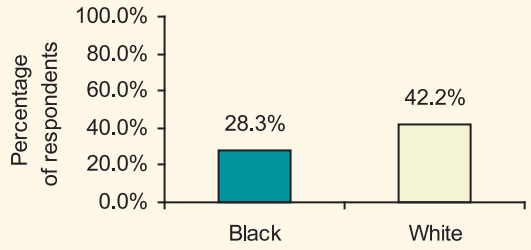
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Regardless of income level, Black adults are more overweight and obese than White adults.

Few Boston adults get the recommended 30 minutes of exercise on 5 or more days per week. But Black residents are significantly less likely than White residents to have sufficient physical activity, whether they are adults or high school students.

FIGURE 55

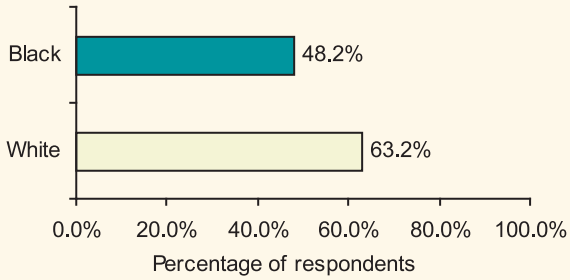
BOSTON ADULTS GETTING SUFFICIENT EXERCISE: BLACK AND WHITE RESIDENTS



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

FIGURE 56

BOSTON HIGH SCHOOL STUDENTS GETTING SUFFICIENT EXERCISE: BLACK AND WHITE RESIDENTS

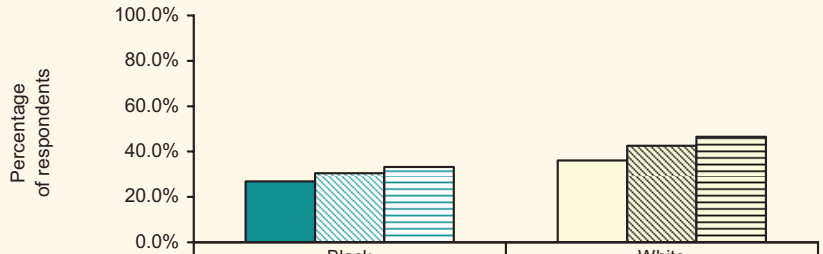


SOURCE: Youth Risk Behavior Survey, Massachusetts Department of Education and the Boston Public Schools

Independent of race, adequate exercise is correlated with income. A significantly lower percentage of low-income than high-income Boston adults engage in the recommended amount of physical activity. However, income level alone is insufficient to explain the difference between Black and White residents. Even Black residents earning more than $50,000 per year are significantly less likely to report sufficient exercise than White residents earning less than $25,000 per year.

FIGURE 57

BOSTON ADULTS GETTING SUFFICIENT EXERCISE, BY INCOME: BLACK AND WHITE RESIDENTS



	Black	White
Solid bars: <$25,000	26.8%	36.1%
Diagonal bars: $25,000-$49,999	30.5%	42.6%
Horizontal bars: $50,000 or more	33.2%	46.5%

SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

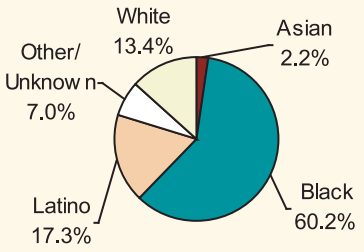
A Look at the Research...
Nationally, lack of physical activity is believed to be an underlying reason for tens of thousands of deaths per year.[22]

Violence

Black Bostonians are disproportionately affected by violence. Though Black residents make up one-fourth of Boston's population, they account for more than half its nonfatal gunshot and stabbing injuries. Homicide fatality rates for Black Bostonians are almost 8 times the rate for Whites. About half of all injury deaths for Black residents are attributable to homicide.

FIGURE 58

Boston Nonfatal Gunshot and Stabbing Violence Injuries, by Race/Ethnicity

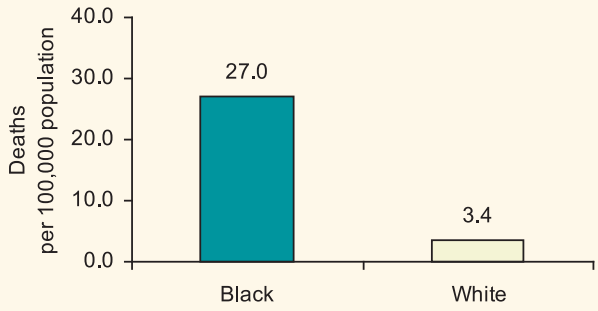


SOURCE: Weapon-Related Injury Surveillance System, Massachusetts Department of Public Health

Black residents make up 60% of Boston's victims of nonfatal gunshot and stabbing violence.

FIGURE 59

Boston Homicide Rates: Black and White Residents



SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

Black Bostonians are much more likely than Whites to die from homicide.

A Look at the Research...
Many studies have looked at the relationship between racial segregation and homicide rates. One such study found that homicide was the cause of death exhibiting the largest impact on racial differentials in life expectancy.[23]

CHAPTER IV

HEALTH DISPARITIES FOR LATINO BOSTONIANS

The health data on Latinos in Boston present a complex picture. No single subgroup predominates in the Latino population. Of Boston's approximately 85,000 Latinos, almost 32% are Puerto Rican. The next largest subgroups are Dominicans (17%), Salvadorans (7%), and Colombian (5.5%).

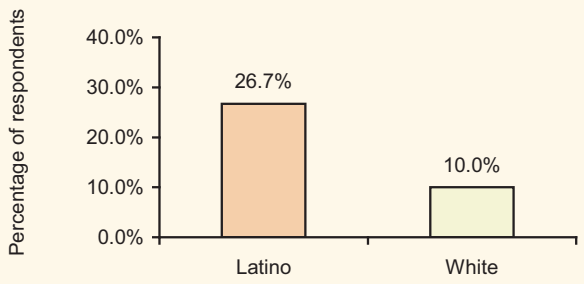
These subpopulations differ considerably from one another on many health indicators; unless this variability is taken into account, the data may be meaningless, because they may reflect an average of relatively healthy and relatively unhealthy populations. Unfortunately, however, that level of detail is often not available.

Immigrants and people born in the United States may also differ in health status, which presents another complication in analyzing the data. For many ethnic populations, people who were born in other countries and moved to the U.S. are generally healthier than the subsequent generations born in the U.S. (though they may be at higher risk of certain infectious diseases that are more common in their countries of origin).

In spite of these limitations, there is much we do know about the health status of Latinos in Boston. On average, Latinos do slightly better than Whites on general indicators such as mortality, premature death and years of potential life lost. They experience lower rates of death from cancer and heart disease, the leading causes of death in Boston, than Whites or Blacks. But numerous indicators, which we highlight in this chapter, show Latinos at great health risk in certain areas.

FIGURE 60

BOSTON ADULTS RATING THEIR OVERALL HEALTH AS "FAIR" OR "POOR": LATINO AND WHITE RESIDENTS



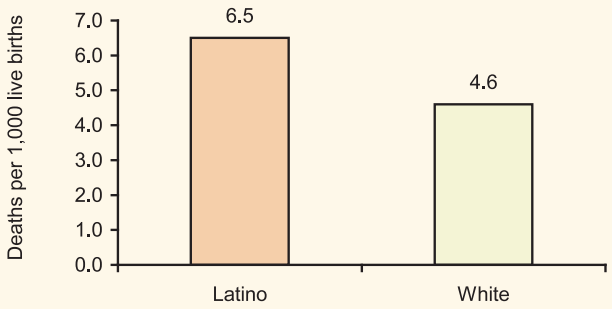
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Self-Assessed Health Status

Latinos are 2 1/2 times as likely as White residents to report being unhealthy. More than a quarter of Latino residents characterize their health as only "fair" or "poor" (as opposed to "good" or "excellent").

FIGURE 61

BOSTON INFANT MORTALITY RATES: LATINO AND WHITE RESIDENTS



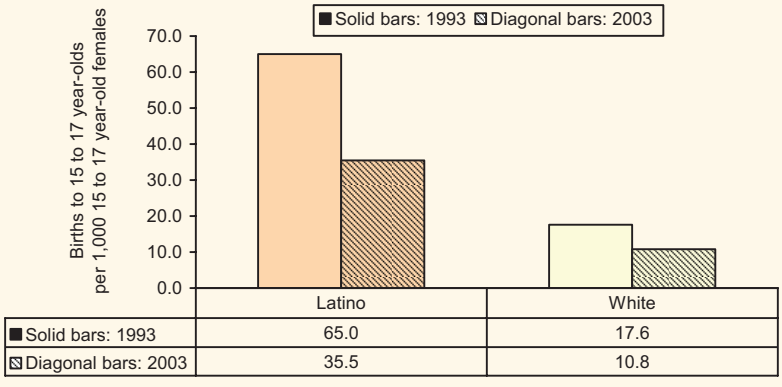
SOURCES: Boston resident live births and infant deaths, Massachusetts Department of Public Health

Infant Mortality

Infant mortality rates are not as high for Latinos as for Black Bostonians, but they are higher than the rates for Whites.

Deaths occurring before a baby's first birthday are more common among Latinos than Whites.

BOSTON BIRTH RATES FOR 15 TO17 YEAR-OLDS: LATINO AND WHITE RESIDENTS



	Latino	White
Solid bars: 1993	65.0	17.6
Diagonal bars: 2003	35.5	10.8

SOURCES: Boston resident live births, Massachusetts Department of Public Health; Censuses 1990 and 2000, US Department of Commerce

FIGURE 62

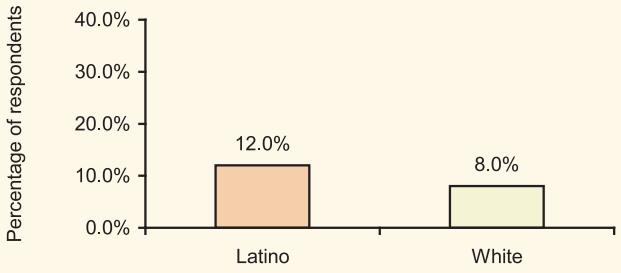
Adolescent Births

While adolescent birth rates have fallen steeply in all racial/ethnic groups over recent years, teen birth rates remain significantly higher for Latinos than for Whites.

Mental Health

FIGURE 63

BOSTON ADULTS REPORTING POOR MENTAL HEALTH ON 15 OR MORE DAYS IN THE PREVIOUS MONTH: LATINO AND WHITE RESIDENTS



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

A Look at the Research...
Disparities in mental health assessment and treatment have been widely documented; Blacks and Latinos have been found to be less likely than Whites to receive guideline-adherent treatment for anxiety disorders and depression.[24]

Latinos are 50% more likely than Whites to report poor mental health.

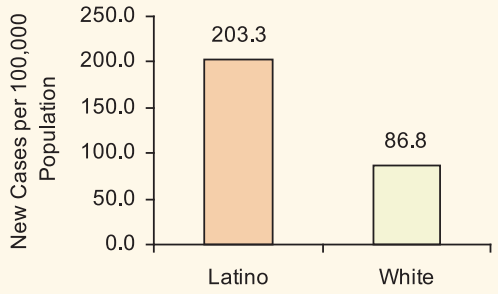
Infectious Disease

Hepatitis

Latinos have more new cases of hepatitis C compared to Whites.

FIGURE 64

BOSTON HEPATITIS C INCIDENCE RATES: LATINO AND WHITE RESIDENTS



SOURCE: Communicable Disease Database, Boston Public Health Commission Communicable Disease Control Division

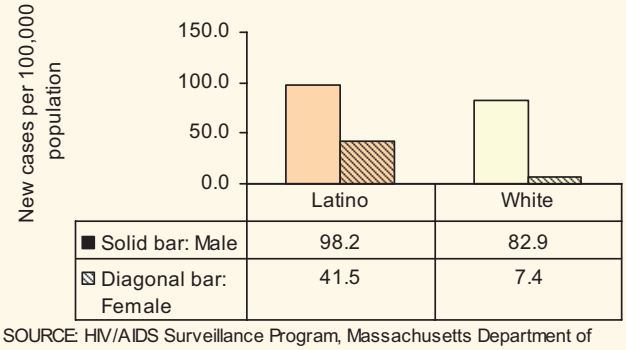
Latinos are more than twice as likely as Whites to have hepatitis C.

HIV/AIDS

Latinos are less likely than Black Bostonians to have HIV/AIDS, but more likely than Whites. The death rate from HIV/AIDS for Latinos is 54% higher than the rate for White Bostonians.

FIGURE 65

BOSTON HIV/AIDS INCIDENCE RATES: LATINO AND WHITE RESIDENTS



SOURCE: HIV/AIDS Surveillance Program, Massachusetts Department of Public Health

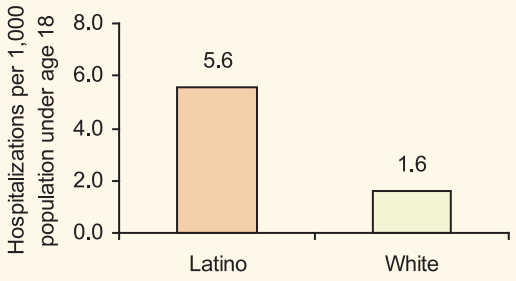
HIV/AIDS incidence rates are higher for Latinos than for Whites; 6 times as high among women.

Asthma

Although Latino adults are slightly less likely to have asthma than either White or Black Bostonians, asthma hospitalizations are much more common among Latino children than White children. Latinos are also significantly more likely than Whites to die from asthma.

FIGURE 66

ASTHMA HOSPITALIZATION OF BOSTON CHILDREN UNDER AGE 18: LATINO AND WHITE RESIDENTS

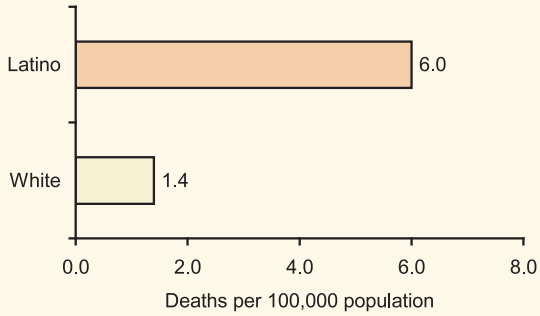


SOURCE: Acute Case Mix, Massachusetts Division of Health Care Finance and Policy; Census 2000, U.S. Department of Commerce

The hospitalization rate for Latino children is 3 times the rate for White children.

FIGURE 67

BOSTON ASTHMA MORTALITY RATES: LATINO AND WHITE RESIDENTS

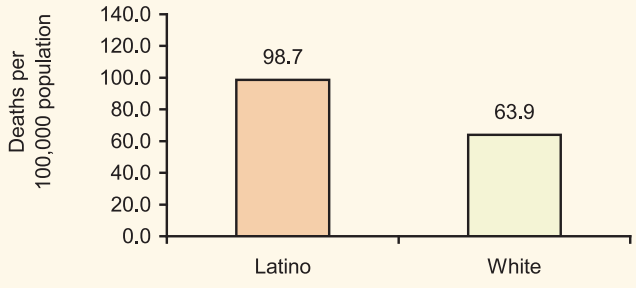


SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

The death rate from asthma is more than 4 times as high for Latinos as for White residents.

FIGURE 68

DIABETES AS AN IMMEDIATE OR UNDERLYING CAUSE OF DEATH IN BOSTON: LATINO AND WHITE RESIDENTS



SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

Diabetes

Latinos are slightly more likely than Whites to have diabetes and they are more likely to die from it.

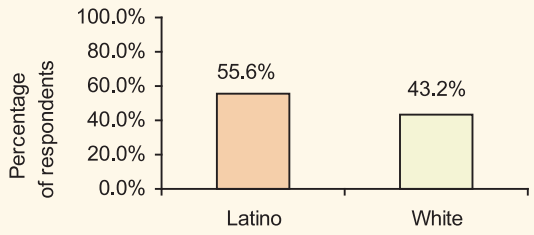
Diabetes is 50% more likely to be a contributing factor to the death of Latino residents.

Overweight/Obesity and Physical Activity

Latino adults are less likely to be overweight than Black adults, but more likely than White adults. Among high school students, Latinos are more likely to be overweight than any other group. Latinos are less likely than Whites, and about as likely as Blacks, to get enough exercise for optimal health.

FIGURE 69

BOSTON ADULTS WHO ARE OVERWEIGHT OR OBESE: LATINO AND WHITE RESIDENTS

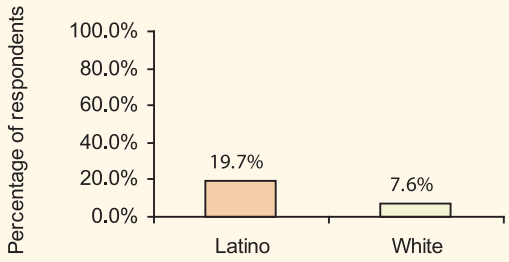


SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Latino adults and high school students are both more likely than Whites to be overweight or obese. Latino students are more than twice as likely as White students to be overweight or obese.

FIGURE 70

BOSTON HIGH SCHOOL STUDENTS WHO ARE OVERWEIGHT OR OBESE: LATINO AND WHITE RESIDENTS



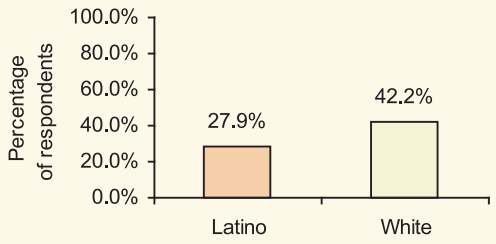
SOURCE: Youth Risk Behavior Survey, Massachusetts Department of Education and the Boston Public Schools

A Look at the Research...

A review of studies from across the country found African American girls, Latino girls and boys, and children from low-income households to be at particular risk for pediatric overweight. Pediatric overweight[25] leads to increased risk for other chronic conditions later in life.

FIGURE 71

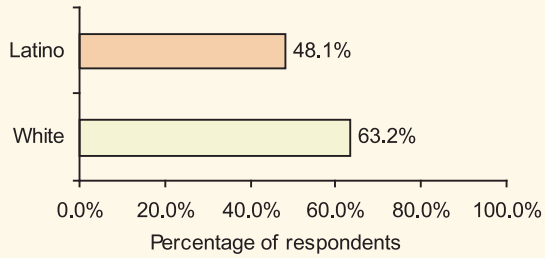
BOSTON ADULTS GETTING SUFFICIENT EXERCISE: LATINO AND WHITE RESIDENTS



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

FIGURE 72

BOSTON HIGH SCHOOL STUDENTS GETTING SUFFICIENT EXERCISE: LATINO AND WHITE RESIDENTS



SOURCE: Youth Risk Behavior Survey, Massachusetts Department of Education and the Boston Public Schools

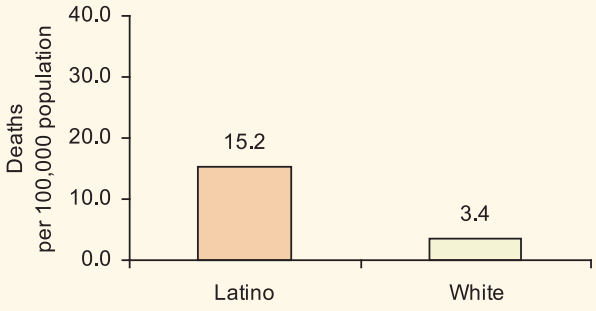
Latino residents are significantly less likely than White residents to get enough physical activity.

Violence

Latino Bostonians are more than 4 times as likely to die from homicide as Whites. In Boston, approximately half of all injury deaths for Latino residents are attributable to homicide.

FIGURE 73

BOSTON HOMICIDE RATES: LATINO AND WHITE RESIDENTS



SOURCES: Boston resident deaths, Massachusetts Department of Public Health; Census 2000, U.S. Department of Commerce

Access to Care

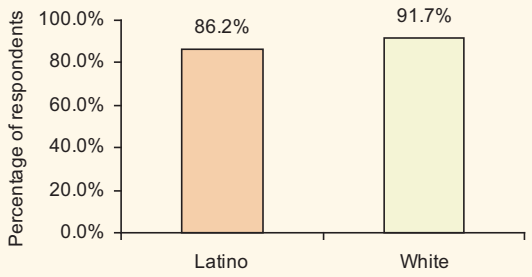
Latino Bostonians have significant disparities with Whites on certain measures of access to health care, which suggests a risk to their health. Almost a quarter of Latino adults in Boston speak little or no English (which can make it difficult for them to access health services), and Latino adults are more likely than any other group to be uninsured. In fact, they are more than twice as likely to be uninsured as White Bostonians.

Screening

Latinos also appear to have less access than Whites to certain screening tests for cancer. This suggests that if they have this type of cancer, it may be diagnosed and treated later than it would be for a White patient. Although Latinos have the lowest overall cancer death rate of all other race groups in Boston, they have the 2nd highest rate of prostate cancer deaths.

FIGURE 74

Boston Women Age 40 or Older Who Have Ever Had a Mammogram to Screen for Breast Cancer: Latino and White Residents

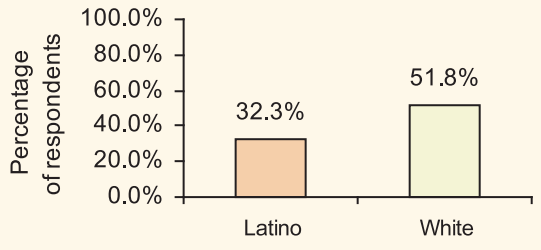


SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Latinas are somewhat less likely than White women to have had a mammogram.

FIGURE 75

Boston Men Age 40 or Older Who Have Ever Had a PSA Test to Screen for Prostate Cancer: Latino and White Residents

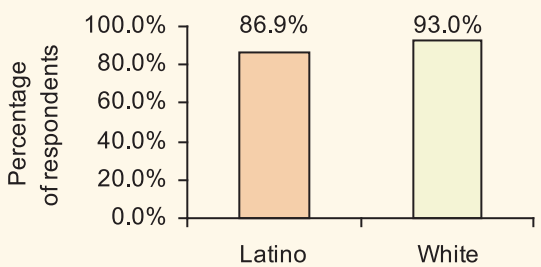


SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Latinos are 38% less likely than White men to have had a screening for prostate cancer.

FIGURE 76

Boston Women Who Have Ever Had a Pap Test to Screen for Cervical Cancer: Latino and White Residents



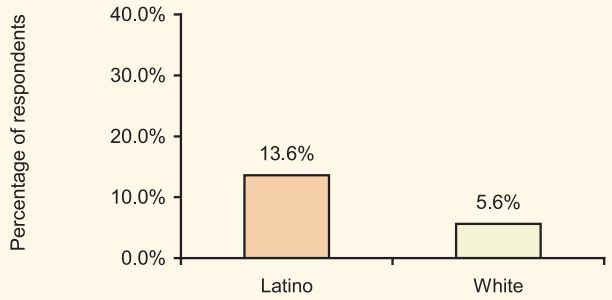
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Latinas are somewhat less likely than White women to have had a Pap test.

Health Insurance

FIGURE 77

PERCENTAGE OF ADULT BOSTON RESIDENTS WITHOUT HEALTH INSURANCE: LATINO AND WHITE RESIDENTS



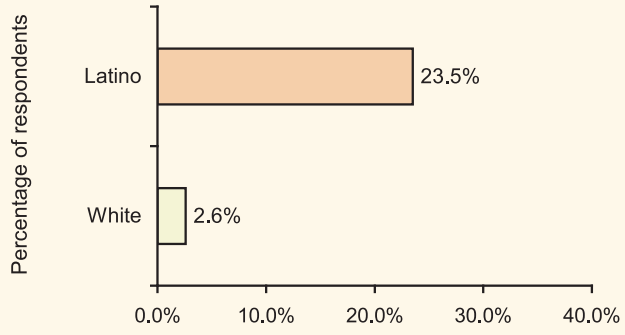
SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

A Look at the Research...
A Commonwealth Fund study found that 80% of low-income Latinos were uninsured at some point from 1996 to 1999 compared with 66% of low-income Blacks and 63% of low-income Whites. Two of five Latinos and one third of Blacks with incomes above 200% of poverty were uninsured at some point during a four year period compared with one of four Whites in this income group. More than a third of Latinos were never insured with private coverage, even though they worked full time all four years.[26]

Latinos have the highest percentage of uninsured adults among all racial populations. They are more than twice as likely to be uninsured as White Bostonians.

FIGURE 78

BOSTON ADULTS WHO SPEAK LITTLE OR NO ENGLISH: LATINO AND WHITE RESIDENTS



SOURCE: Census 2000, U.S. Department of Commerce

Language

About a quarter of adult Latino Boston residents speak little or no English which can create a barrier to care.

HEALTH DISPARITIES FOR ASIAN BOSTONIANS

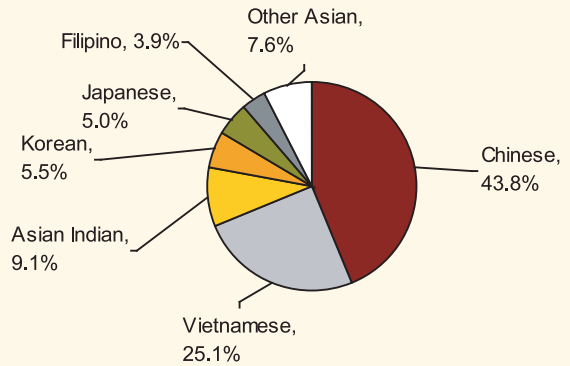
Asians account for 8% of Boston's population. As with Latinos, no single subpopulation predominates. Of the city's 44,345 Asians, about 44% are Chinese and 25% are Vietnamese. The next largest subgroups are Asian Indians (10%), Koreans (6%), and Japanese (6%). The Asian population appears to be more socio-economically diverse than other populations of color.

Because the Asian population is relatively small and has so much ethnic and socio-economic diversity, there is less meaningful, reliable information on their health status than there are for other groups.

What general data are available appear to show Asians doing better than all other racial groups. For example, Asians have the lowest rates of mortality, premature death, and years of potential life lost. As with Latinos, however, these findings may obscure major differences between subpopulations. In addition, Asians may be particularly affected by some of the socio-economic factors we discussed earlier, including access to care.

FIGURE 79

ETHNIC ORIGINS OF BOSTON'S ASIAN RESIDENTS



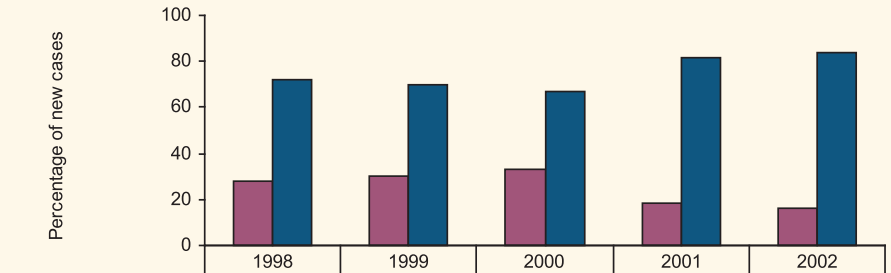
SOURCE: Census 2000, U.S. Department of Commerce

Infectious Disease

Some infectious diseases, such as tuberculosis, are more common in other countries than in the United States. For that reason, immigrants from certain countries are more likely to have these diseases.

FIGURE 80

BOSTON TUBERCULOSIS CASES, BY PLACE OF BIRTH



	1998	1999	2000	2001	2002
Percent U.S.-born	28.1	29.9	32.9	18.7	16.4
Percent foreign-born	71.9	70.1	67.1	81.3	83.6

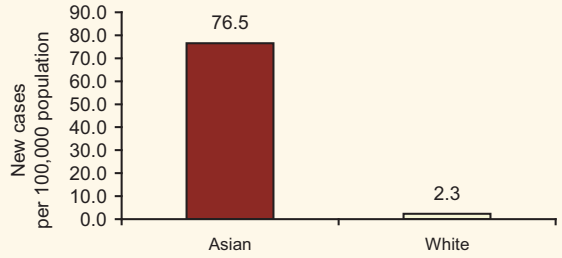
SOURCE: Communicable Disease Database, Boston Public Health Commission Communicable Disease Control Division

Tuberculosis

A growing percentage of people with tuberculosis are foreign-born. The largest percentage of them is Asian.

FIGURE 81

BOSTON TUBERCULOSIS INCIDENCE RATES: ASIAN AND WHITE RESIDENTS

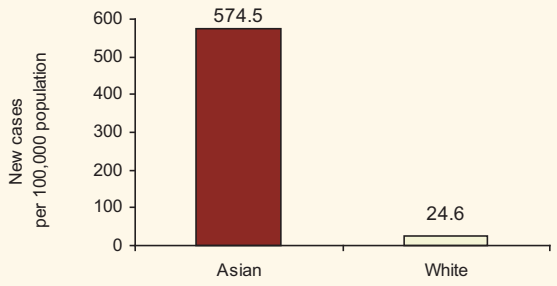


SOURCE: Communicable Disease Database, Boston Public Health Commission Communicable Disease Control Division

Tuberculosis incidence rates for Asian Bostonians are 33 times the rate for White Boston residents.

FIGURE 82

CHRONIC HEPATITIS B INCIDENCE RATES, BY RACE/ETHNICITY



SOURCE: Communicable Disease Database, Boston Public Health Commission Communicable Disease Control Division

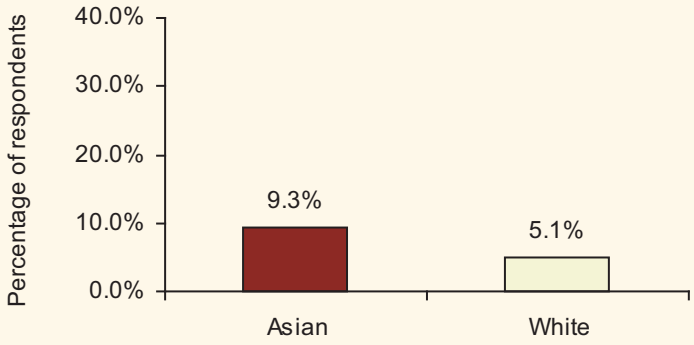
Hepatitis

Asian Bostonians are 23 times as likely to have hepatitis B as their White counterparts and have the highest rate of all groups.

Violence

FIGURE 83

Boston High School Students Missing School Because They Feel Unsafe: Asian and White Residents



SOURCE: Youth Risk Behavior Survey, Massachusetts Department of Education and the Boston Public Schools

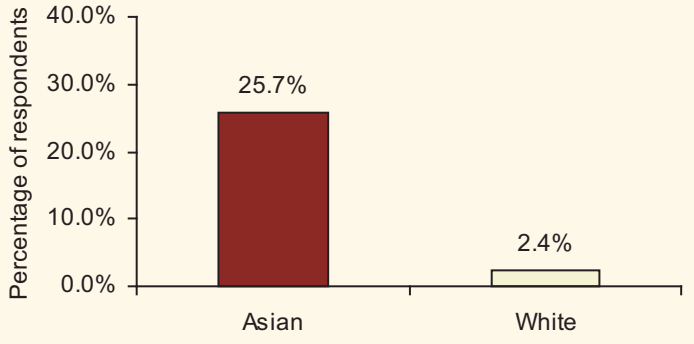
Asian high school students are 80% more likely than White students to miss school because they feel unsafe.

Racism and Discrimination

Asian Bostonians are much more likely than White Bostonians to report being constantly aware of their race.

FIGURE 84

Boston Adults Who Report Thinking about Their Race "Constantly": Asian and White Residents

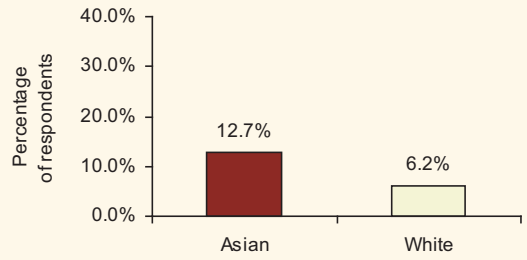


SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

More than 25% of Asian residents say that they think about their race constantly. They are 10 times as likely to say this as Whites. This may indicate concern that they will experience racial discrimination.

FIGURE 85

BOSTON ADULTS WHO COULD NOT AFFORD TO SEE A DOCTOR WHEN THEY NEEDED ONE IN THE PREVIOUS YEAR: ASIAN AND WHITE RESIDENTS



SOURCE: Behavioral Risk Factor Surveillance System, Massachusetts Department of Public Health and Boston Public Health Commission

Access to Care

Like Latinos, Asian Bostonians have disparities with Whites on some measures of access to care. In particular, they are more likely than any other group to have trouble affording medical care. They are also more likely to speak little or no English, which can make it difficult to communicate with care providers.

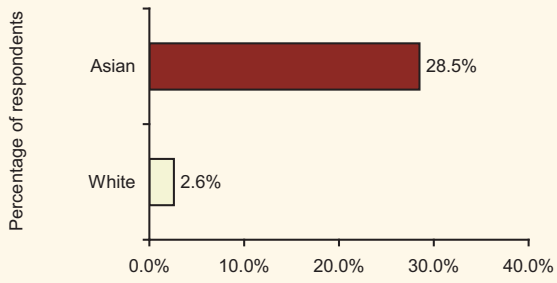
Cost is a significant obstacle to care for Asian Boston residents. More Asians than any other group said they had not been able to see a doctor when they needed to because of the cost of services.

Language

From understanding insurance forms and hospital signage to discussing a medical problem with a clinician, communicating effectively in the health care system is essential to access. An interpreter can help non-English-speakers communicate, but such services are not always available.

FIGURE 86

BOSTON ADULTS WHO SPEAK LITTLE OR NO ENGLISH: ASIAN AND WHITE RESIDENTS

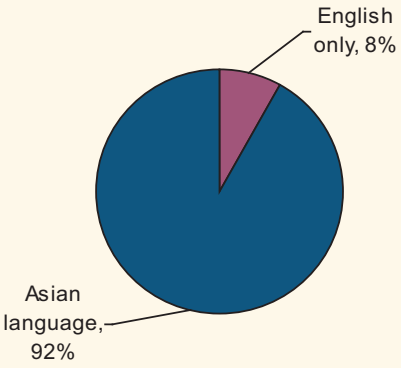


SOURCE: Census 2000, U.S. Department of Commerce

More than a quarter of adult Asian Boston residents speak little or no English. Asians are more likely to have limited English than any other group. Limited English is especially prevalent in the Chinese population.

FIGURE 87

LANGUAGE SPOKEN AT HOME BY CHINESE-ANCESTRY RESIDENTS OF BOSTON'S CHINATOWN



SOURCE: Census 2000, U.S. Department of Commerce

In Chinatown, more than 90% of the Chinese-ancestry population speaks an Asian language at home.

TECHNICAL NOTES

Rates

Age-adjusted rates are used to present data for comparison among several populations, to take into account the fact that there may be more older people (who have high rates of death) in one population than in another. The AAR is calculated by applying the age-specific death rate in a population to a standard population (typically, the 2000 US standard population).

Incidence rates are used to report new cases of disease during a specified time period and are calculated on the basis of every 100,000 people.

Statistical Significance

An array of statistical tools is available to determine whether findings, typically differences observed between groups, are large enough that they are not likely to have been due to chance. Essentially, statistical significance testing provides an assessment of how reasonable it would be to conclude that an observed difference is real. It is not capable of overcoming other issues such as noncomparable samples or too few cases in a sample, but is a valuable guide to the interpretation of rates, proportions, and similar measures.

Statistical significance is only one measure of significance. There may be findings that have other important relevance clinically or for public health programs, regardless of statistical significance. An absence of statistical significance should not be used to imply an absence of other significance.

Population

All data presented in this report pertain to Boston residents only.

Population statistics are from the census of the population taken every ten years by the federal government. The census provides the best actual count of the population.

Population projections are developed by the Census Bureau and other institutions to take into account migration and other changes occurring in the population between census years. Estimates of population changes between census years have some drawbacks. They do not typically account for changes in the racial composition of a community, and they do not generally permit neighborhood-level analyses. Perhaps most importantly, even small errors in the accuracy of projections for neighborhoods or other population subgroups can result in large distortions in the resulting statistical estimates.

To provide data on people of Latino ethnicity, who may be of any race, this report uses the 2000 US census for Boston census tracts, produced by the Bureau of the Census, and MISER and Massachusetts Department of Public Health population estimates, for denominators for rate calculations. This avoids the double-counting which would result if Latinos were included in the White, Black, and Asian racial categories as well as in the Latino categories. However, in hospitalization data, Latinos are reported in the White, Black, Latino, or Asian category, depending on the individual hospital's practices. This produces unreliability in data reporting, and readers must interpret hospitalization data by race/ethnicity with caution.

GLOSSARY

Adolescent Birth Rate: The number of live births to adolescents aged 15 to 17 per thousand female 15 to17 year-olds.

Age Adjusted Mortality Rate (AAR): The age adjusted mortality rate is calculated by applying the age specific mortality rates in a population to the 2000 US standard population. The age adjusted rate of one area or group can be compared to the age adjusted rate of another area or 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.

Asian: All persons self-identified as Asian or Pacific Islander (e.g., Chinese, Japanese, Hawaiians, Cambodians, Vietnamese, Asian Indians, Filipinos) who do not 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.

Behavioral Risk Factor Surveillance System (BRFSS): A random telephone survey of Massachusetts adults ages 18 years and older. The survey is sponsored by the Centers for Disease Control and Prevention (CDC) and is conducted annually in all 50 states. The BRFSS collects information regarding various health-related issues, such as behavior, attitudes, knowledge, access to health care, and opinions on health policy issues. The responses to the survey provide important information regarding the prevalence of risk factors that are responsible for causing premature death, illness, and disability among Massachusetts residents.

Birthweight: The weight of an infant at the time of delivery. It may be recorded in either grams or pounds/ounces: 1 pound = 453.6 grams; 1,000 grams = 2 pounds and 3 ounces.

Black: All persons self-identified as Black (e.g., African American, Haitian, West Indian) who do not identify themselves as Latino.

Body Mass Index (BMI): Calculated by dividing a person's weight in kilograms by his or her height in meters squared (kg/m2); a measure of the appropriateness of weight in relation to height.
The BMI cutpoints for adults are as follows:
Overweight; BMI of 25.0 to 29.9
Obese; BMI of 30.0 or more

Colonoscopy: A visual screening examination for colorectal cancer, of the lining of the colon and rectum.

Death Rate: The number of deaths per year per 100,000 population.

Demographics: Characteristics of human populations such as age, sex, and race/ethnicity.

Diabetes: A chronic metabolic disease characterized by inadequate insulin production by the pancreas or inadequate utilization of insulin in converting food to energy.

Heart Disease: A group of diseases affecting the heart, including valve and conductive disorders as well as hypertensive diseases.

HIV/AIDS: Human immunodeficiency virus infection or Acquired Immune Deficiency Syndrome, which follows HIV infection, often after a period of years.

Homicide: A death intentionally caused by a person other than the deceased.

Human Immunodeficiency Virus (HIV): The virus responsible for causing AIDS.

Incidence: The number of new cases of a particular disease over a period of time and in relation to the population in which it occurs.

Infant Mortality Rate (IMR): The number of deaths under one year of age per 1,000 live births.

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).

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. 10 µg/dL is the threshhold used in this report to denote elevated blood lead levels in children.

Low Birthweight (LBW): Birthweight less than 2,500 grams (or 5.5 lbs).

Mammogram: A radiographic examination of the breast to screen for malignancies.

µg/dL: Micrograms per deciliter. A measurement unit for level of lead in a measured quantity of blood: a billionth of a gram in a tenth of a liter.

Mortality: Death, or the relative frequency of death per unit of population in a specific time period; death rate.

Pap Test: A screening to detect cancerous or precancerous conditions of the uterine cervix.

Prematurity: Birth too early, at too low a birthweight, following abnormally slow intrauterine growth, or a combination of these factors. Prematurity is strongly associated with illness and death in infants.

Preterm Birth: Delivery at less than 37 completed weeks' gestation.

Risk Factor: A characteristic or agent whose presence increases the probability of occurrence of a particular disease, injury, cause of death, or birth outcome.

Sigmoidoscopy: A screening examination for colorectal cancer of the rectum and lower colon.

Socioeconomics: The statistical study of the social and economic characteristics of a population, such as education and poverty levels.

Statistical Significance: A certain group of statistical tests determines whether findings accurately describe the population of interest or whether they can be explained by chance. If these tests identify the findings to be outside of the range of chance, they are considered to have statistical significance.

Standard Population: An estimate of the US population in which the age, race, and sex distributions are known, resulting in a set of population weights that can be used to calculate adjusted mortality rates. In this report, the year 2000 US standard population is used to calculate age-adjusted mortality rates.

Stroke: A cerebrovascular accident. 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.

Very Low Birth Weight (VLBW): Birthweight less than 1,500 grams (or 3.3 lbs).

White: All persons self-identified as White who do not also identify themselves as Latino.

Years of Potential Life Lost: An estimate of years lost in a population due to premature death, in this report defined as deaths occurring before age 75. YPLL estimates may be presented in terms of numbers or rates.

Youth Risk Behavior Surveillance System (YRBSS): A surveillance system developed by the Centers for Disease Control and Prevention (CDC) to monitor the prevalence of youth behaviors that influence health. The survey consists of representative samples of ninth- through twelfth-graders in the United States and the District of Columbia.

DATA SOURCES

Figure 1. Boston's Population in 1990, by Race/Ethnicity. Census 1990, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 2. Boston's Population in 2000, by Race/Ethnicity. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 3. Place of Origin, Boston Residents. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 4. Ethnic Origins of Boston's Largest Latino Subpopulations. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 5. Ethnic Origins of Boston's Largest Asian Subpopulations. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 6. Ethnic Origins of Boston's Largest Black Subpopulations. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 7. Boston Adults Rating Their Overall Health as "Fair" or "Poor," by Race/Ethnicity and Income. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 8. Income of Boston Residents, by Race/Ethnicity. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 9. Boston Population (All Ages) Living in Poverty, by Race/Ethnicity. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder.

Figure 10. Boston Children in Living in Poverty, by Race/Ethnicity. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 11. Boston Adults without a High School Diploma, by Race/Ethnicity. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 12. Boston Adults with at Least a Bachelor's Degree, by Race/Ethnicity. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 13. Boston Adults Who Speak Little or No English, by Race/Ethnicity. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 14. Boston Adults Who Report Having Been Treated Worse Than People of Other Races at Work during the Previous Year, by Race/Ethnicity. Behavioral Risk Factor Survey 2003. Behavioral Risk Factor Surveillance System. Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 15. Boston Adults Who Report Having Been Treated Worse Than People of Other Races When Seeking Health Care during the Previous Year, by Race/Ethnicity. Behavioral Risk Factor Survey 2003. Behavioral Risk Factor Surveillance System. Massachusetts Department of Public Health and Boston Public Health Commission.

Table 1. How Boston Residents Feel They Are Treated Compared with Others When Seeking Health Care, by Race/Ethnicity. Behavioral Risk Factor Survey 2003. Behavioral Risk Factor Surveillance System. Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 16. Boston Adults Who Report Thinking about Their Race "Constantly," by Race/Ethnicity. Behavioral Risk Factor Survey 2003. Behavioral Risk Factor Surveillance System. Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 17. Percentage of Adult Boston Residents without Health Insurance, by Race/Ethnicity. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 18. Uninsured Boston Adults Who Could Not Afford to See a Doctor When They Needed One in the Previous Year, by Race/Ethnicity. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 19. Boston Adults Who Could Not Afford to See a Doctor When They Needed One in the Previous Year, by Income. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 20. Boston Adults Who Could Not Afford to See a Doctor When They Needed One in the Previous Year, by Race/Ethnicity. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 21. Residences of Black Population in Boston. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 22. Residences of White Population in Boston. Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 23. Boston Index of Dissimilarity 2000. Frey WH and Myers D. Social Science Data Analysis Network. http://www.censusscope.org/us/s25/p7000/print_chart_ dissimilarity.html

Table 2. Asthma Hospitalization of Boston Residents Under Age 18, by Race/Ethnicity. Acute Care Hospital Case Mix files 1998-2002. Massachusetts Division of Health Care Finance and Policy.

Figure 24. Residences of Boston Children with Elevated Blood Lead Levels. Lead database 2003. Boston Public Health Commission Environmental Health Office.

Table 3. Selected Leading Causes of Death in Boston: Black and White Residents. Boston resident deaths 2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 25. Boston Death Rates from All Causes: Black and White Residents. Boston resident deaths 2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 26. Life Expectancy of Black and White Boston Residents, by Sex. Boston resident births and deaths 2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 27. Boston Premature Death Rates: Black and White Residents. Boston resident deaths 2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 28. Boston YPLL Rates: Black and White Residents. Boston resident deaths 2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 29. Boston Hospitalization Rates: Black and White Residents. Acute Care Hospital Case Mix files 2002. Massachusetts Division of Health Care Finance and Policy.

Figure 30. Boston Infant Mortality Rates: Black and White Women. Resident infant deaths 2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics.

Figure 31. Boston Infant Mortality Rates, by Maternal Education Level: Black and White Women. Linked resident live births and infant deaths 1996-2001. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics.

Table 4. Very Low Birthweight among Infants Born to Boston Women: Black and White Residents. Resident live births 1999-2001. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics.

Figure 32. Boston Women with Adequate Prenatal Care: Black and White Residents. Resident live births 2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics.

Figure 33. Boston Cancer Mortality Rates: Black and White Residents. Boston resident deaths 2000-2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 34. Boston Breast Cancer Mortality Rates: Black and White Women. Boston resident deaths 2000-2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 35. Boston Women Age 40 or Older Who Have Ever Had a Mammogram to Screen for Breast Cancer: Black and White Residents. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 36. Boston Prostate Cancer Mortality Rates: Black and White Men. Boston resident deaths 1995-2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 37. Boston Men Who Have Ever Had a PSA Test to Screen for Prostate Cancer: Black and White Residents. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 38. Boston Cervical Cancer Mortality Rates: Black and White Women. Boston resident deaths 1995-2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 39. Boston Women Who Have Ever Had a Pap Test to Screen for Cervical Cancer: Black and White Residents. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 40. Boston Lung Cancer Mortality Rates: Black and White Residents. Boston resident deaths 2000-2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 41. Boston High School Students Who Smoke Cigarettes: Black and White Residents. Youth Risk Behavior Survey 2003. Boston School Department, Unified Student Services.

Figure 42. Boston Heart Disease Mortality Rates: Black and White Residents. Boston resident deaths 2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 43. Boston Adults who Have Ever Been Told They Have Hypertension: Black and White Residents. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 44. Boston HIV/AIDS Incidence Rates: Black and White Residents. Reported cases of HIV/AIDS as of February 2004. AIDS Reporting System. Massachusetts Department of Public Health, Bureau of Communicable Disease Control, HIV/AIDS Surveillance Program

Figure 45. Boston Adults Who Have Ever Been Told by a Doctor That They Have Asthma, by Race/Ethnicity and Income. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 46. Boston Adults Who Have Ever Been Told by a Doctor That They Have Diabetes: Black and White Residents. Behavioral Risk Factor Survey 2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 47. Boston Adults Who Have Ever Been Told by a Doctor That They Have Diabetes, by Race/Ethnicity and Income. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 48. Underweight/Normal-Weight Boston Adults Who Have Ever Been Told by a Doctor That They Have Diabetes: Black and White Residents. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health

Figure 49. Boston Adult Hospitalization for Diabetes, by Race/Ethnicity. Acute Care Hospital Case Mix files 1999-2001. Massachusetts Division of Health Care Finance and Policy.

Figure 50. Diabetes as an Immediate or Underlying Cause of Death among Boston Residents: Black and White Residents. Boston resident deaths 2001-2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

Figure 51. Boston Adults Who Are Overweight or Obese, by Income: Black and White Residents. Behavioral Risk Factor Survey 1999-2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

Figure 52. Boston High School Students Who Are Overweight or Obese: Black and White Residents. Youth Risk Behavior Survey 2003. Boston School Department, Unified Student Services.

Figure 53. What is the Body Mass Index? Department of Health and Human Services, Centers for Disease Control and Prevention. BMI--Body Mass Index: Home. http://www.cdc.gov/nccdphp/dnpa/bmi/index.htm

Figure 54. Boston Adults Who Are Overweight or Obese, by Income: Black and White Residents. Behavioral Risk Factor Survey 2001. Behavioral Risk Factor Surveillance System. Boston: Massachusetts Department of Public Health and Boston Public Health Commission.

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Figure 56. Boston High School Students Getting Sufficient Exercise: Black and White Residents. Youth Risk Behavior Survey 2003. Boston School Department, Unified Student Services.

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Figure 67. Boston Asthma Mortality Rates: Latino and White Residents. Boston resident deaths 1999-2002. Massachusetts Department of Public Health, Center for Health Information, Statistics, Research, and Evaluation, Registry of Vital Records and Statistics; Census 2000, US Department of Commerce, Bureau of the Census, American FactFinder. http://factfinder.census.gov/

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References

1 Krieger, N. Does racism harm health? Did child abuse exist before 1962? On explicit questions, critical science, and current controversies: an ecosocial perspective. American Journal of Public Health 2003; 93: 194-198.

2 Freeman HP. Commentary on the meaning of race in science and society. Cancer Epidemiology, Biomarkers and Prevention. 2003; 12: 232s-236s.

3 Centers for Disease Control and Prevention, Office of Minority Health. National Health Care Disparities Report 2004.

4 National Institutes of Health. Addressing health disparities: the NIH program of action. Available at: http://healthdisparities.nih.gov/whatare.html. Accessed April 29, 2005.

5 Rothenberg NA, Pritchard JK, Weber JL, Cann HM, Kidd KK, Zhivotovsky LA, Feldman MW. Genetic structure of human populations. Science. 2002; 298: 2381-2385.

6 Kawachi I and O'Neill MS. Exploration of health disparities. Environmental Health Perspectives 2005; 100-107

7 Mensah GA, Mokdad AH, Ford ES, Greenlund KJ, Croft JB. State of disparities in cardiovascular health in the United States. Circulation 2005; 111:1233-1241.

8 Krieger N, Chen JT, Waterman PD, Rehkopf DH, Subramanian SV. Painting a truer picture of US socioeconomic and racial/ethnic health inequalities: he Public Health Disparities Geocoding Project. American Journal of Public Health 2005; 95:312-23.

9 Singh GK, Miller BA, Hankey BF, Edwards BK. Area socioeconomic variations in U.S. cancer incidence, mortality, stage, treatment, and survival, 1975–1999. NCI Cancer Surveillance Monograph Series, Number 4. Bethesda, MD: National Cancer Institute, 2003. NIH Publication No. 03-5417.

10 Brach C, Fraser I, Paez K. Crossing the language chasm. Health Affairs 2005; 24: 424-434.

11 Hargraves JL. Race, ethnicity and preventive services: no gains for Hispanics. Center for Studying Health System Change: Issue Brief: 2001; 34: 1-4.

12 van Ryn M and Fu SS. Paved with good intentions: do public health and human service providers contribute to racial/ethnic disparities in health? American Journal of Public Health. 2003; 93: 248-255.

13 University of Michigan, Population Studies Center: Racial Segregation Measurement Project. Available at http://enceladus.isr.umich.edu/race/seg.html. Accessed April 29, 2005.

14 Acevedo-Garcia D, Lochner KA, Osypuk TL, and Subramanian SV. Future directions in residential segregation and health research: a multilevel approach. American Journal of Public Health. 2003; 93: 215-221.

15 Breast: U.S. racial/ethnic patterns, National Cancer Institute. Available at http://www.cancer.gov/statistics/cancertype/ breast-racial-ethnic. Accessed March 22, 2005

16 Prostate cancer. New York University School of Medicine, Center for Immigrant Health. Available at http://www.nyu.edu/cih,cancer/stats.html. Accessed March 22, 2005

17 J. Boyd. Racial differences and clinical outcome from cervical cancer. Medscape Portals 2000. Available at http://www,medscape.com/viewarticle/413141. Accessed March 22, 2005

18 Centers for Disease Control and Prevention. At a Glance 2004: Physical activity and good nutrition: essential elements to prevent chronic diseases and obesity.

19 Bloc JP, Scribner RA, DeSalvo KB. Fast food, race/ethnicity, and income: a geographic analysis. American Journal of Preventive Medicine. 2004; 27: 211-7.

20 Morland K, Wing S, Dietz Roux A, Poole C. Neighborhood characteristics associated with the location of food stores and food services places. American Journal of Preventive Medicine. 2002; 22: 23-9.

21 Morland K, Wing S, Diez Roux A. The contextual effect of the local food environment on residents' diets: the atherosclerosis risk in communities study. American Journal of Public Health 2003; 92: 1761-7.

22 Department of Health and Human Services, Centers for Disease Control and Prevention. Physical activity and good nutrition: Essential elements to prevent chronic diseases and obesity. At a Glance 2004. Available at http://www.cdc.gov/nccdphp/aag/aag_dnpa.htm. Accessed on May 2, 2005.

23 Potter LB. Socioeconomic determinants of white and black males' life expectancy differentials. Demography. 1980; 28: 303-321.

24 Young AS, Klap R, Sherbourne CD, Wells KB. The quality of care for depressive and anxiety disorders in the United States. Archives of General Psychiatry. 2001; 58: 55-61.

25 Ritchie LD, Ivey SL, Woodward-Lopez G, Crawford PB. Alarming trends in pediatric overweight in the United States. Soz Praventivmed. 2003; 48: 168-77.

26 Doty MM and Holmgren AL. Unequal access: insurance instability among low-income workers and minorities. 2004: Commonwealth Fund Issue Brief #729.

Notes

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