Introduction: Mortality

Death is a consequence of the human condition – mortality. However, the timing of one's death is most often related to health factors such as disease and injury. Because death often results from disease and injury, mortality data help to describe the impact of disease on society. State and federal guidelines mandate the recording of certain information on death certificates that provide some of the most reliable data available to public health professionals. In aggregate, this information is used to calculate mortality, or death, rates that allow us to determine the leading causes of death and to help identify disparities among populations.

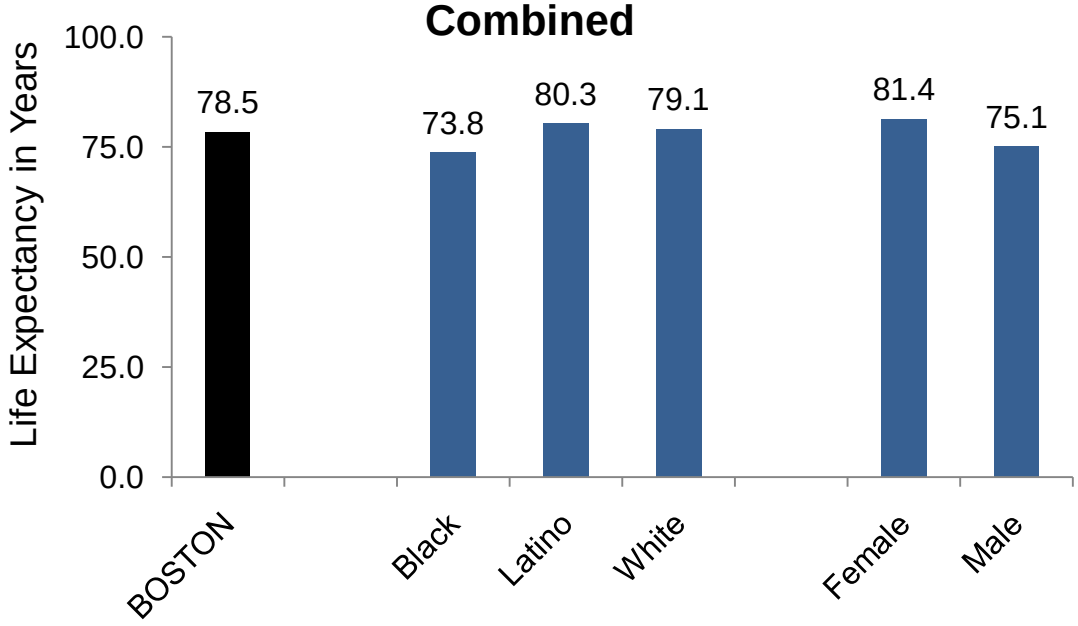
The mortality rate, or death rate, is a common measure of the number of deaths in a given population, and allows populations of different sizes to be standardized and compared. Life expectancy data are generated from death data and provide an additional measure of the general welfare of a population (i.e. populations with shorter life expectancy may not be as healthy as those with longer life expectancy) (1)**.**

Mortality data can serve several important purposes. Mortality data can be used to evaluate the general efficacy of a health care system, specific programs, and new preventive or curative procedures (1). Regular review of mortality data can assist in the identification of high mortality areas and high-risk groups within these areas. This information can be used to direct resources to where they are most needed (1). Additionally, these data can be used to elucidate the natural history of a disease and identify links between risk factors and diseases.

The following section describes Boston's mortality data. It compares overall mortality rates and leading causes of death for males and females, as well as for different racial/ethnic groups. Mortality rates for each neighborhood are also shown. This section also looks more specifically at deaths from injury, diabetes, and heart disease.

Healthy People 2010 Target (2): Reduce diabetes deaths to 46 deaths per 100,000 population

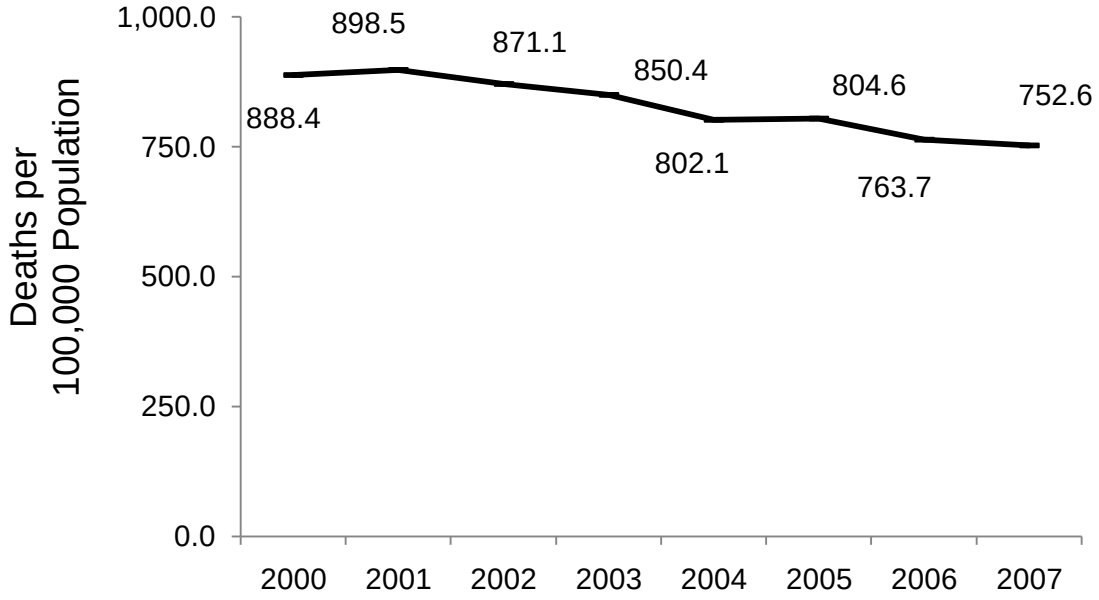
Figure 16.1 **Life Expectancy by Race/Ethnicity and Gender, 2005-2007 Combined**



NOTE: Life expectancy could not be calculated for Asians due to the small number of deaths among Asians.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- Life expectancy is approximately 78.5 years for the Boston population born between 2005 and 2007.
- Boston females born in 2005 to 2007 could expect to live about six years longer than Boston males born during the same period.
- Estimated life expectancy for White Boston residents has increased slightly compared to the 2004-2006 estimates (data not shown), while it has decreased slightly for Black and Latino residents.
- Estimated life expectancy is highest for Boston's Latino residents. Black Boston residents have a lower life expectancy than Boston residents overall.

Figure 16.2 **Mortality, 2000-2007**

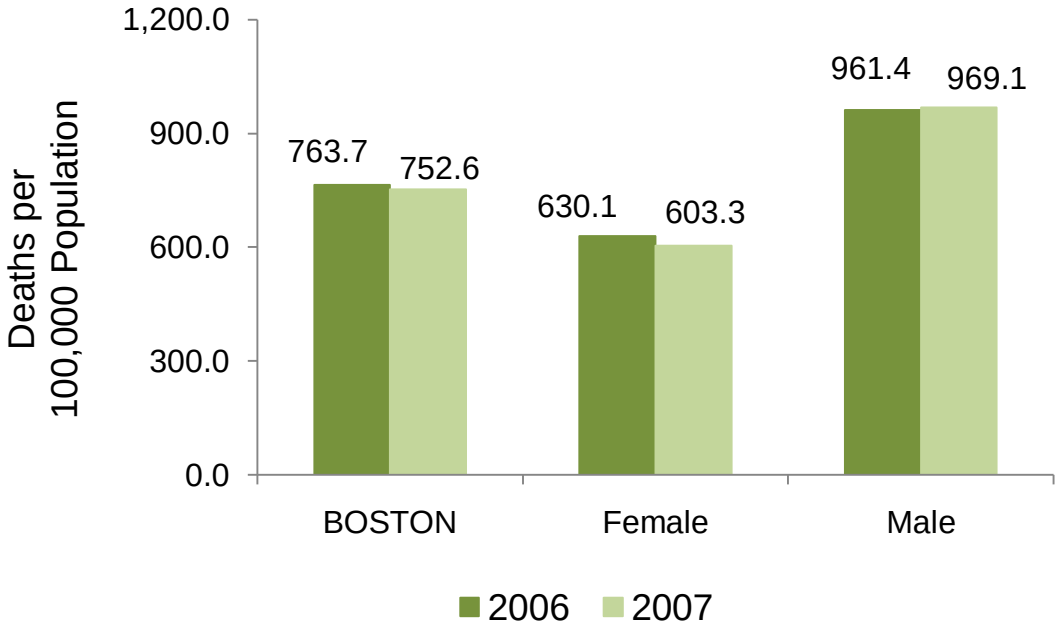


	1999	2000	2001	2002	2003	2004	2005	2006	2007
Count	4,491	4,500	4,575	4,412	4,287	4,063	4,070	3,864	3,812

NOTE: Data are presented as age-adjusted rates.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission, Research and Evaluation Office

- In 2007, the overall age-adjusted mortality rate for Boston residents was 752.6 deaths per 100,000 population, a one-year change of 1.5%. The 2007 rate was 15.3% lower than the rate in 2000.

Figure 16.3 **Mortality by Gender, 2006 and 2007**

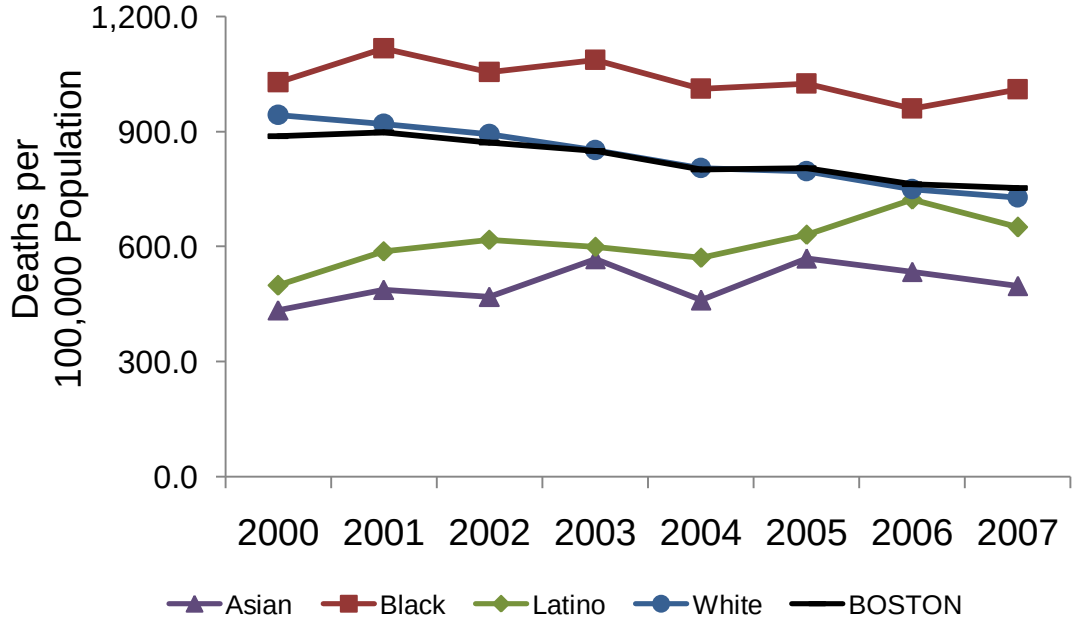


Count	BOSTON	Female	Male
2005	4,070	2,089	1,981
2006	3,864	2,000	1,864
2007	3,812	1,934	1,878

NOTES: Data are presented as age-adjusted rates. These data do not include persons whose gender was not reported, except in the Boston overall count and rate.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- In 2007, the age-adjusted mortality rate for Boston males was 60.6% higher than the rate for females.
- The mortality rate for females decreased 4.3% from 2006 to 2007, while the mortality rate for males increased 0.8% during the same time period.

Figure 16.4 **Mortality by Race/Ethnicity, 2000-2007**



Rate	1999	2000	2001	2002	2003	2004	2005	2006	2007
Asian	426.7	434.7	488.5	469.0	568.0	460.3	569.0	534.3	498.5
Black	966.1	1,028.1	1,116.8	1,054.9	1,087.4	1,012.1	1,025.8	959.7	1,010.3
Latino	548.8	498.7	587.7	618.4	600.3	570.9	631.7	723.3	650.5
White	960.9	942.8	919.6	892.6	851.2	804.5	797.2	750.0	727.9
BOSTON	889.0	888.4	898.5	871.1	850.4	802.1	804.6	763.7	752.6

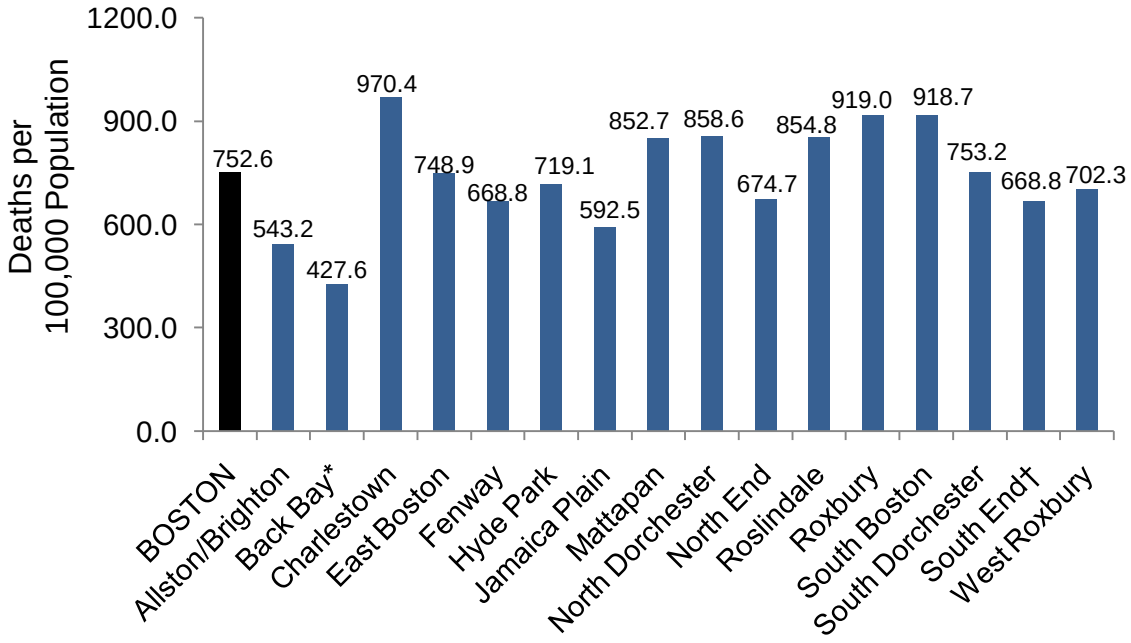
Count	1999	2000	2001	2002	2003	2004	2005	2006	2007
Asian	126	128	147	135	165	135	166	156	144
Black	953	1,015	1,103	1,041	1,058	991	990	938	980
Latino	171	172	197	216	205	200	212	233	214
White	3,232	3,177	3,115	3,005	2,845	2,717	2,683	2,513	2,451
BOSTON	4,491	4,500	4,575	4,412	4,287	4,063	4,070	3,864	3,812

NOTES: Data are presented as age-adjusted rates. These data do not include persons whose race/ethnicity was not reported, except in the Boston overall count and rate.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- In every year from 2000 to 2007, the age-adjusted mortality rate was higher for Black residents than for other racial/ethnic groups. In 2007, the rate for Blacks was more than twice the rate (103% higher) for Asians, 55.3% higher than the rate for Latinos, and 38.8% higher than the rate for Whites.

- The Boston mortality rate was higher in 2007 than in 2000 for Asians, Blacks, and Latinos, but was lower for Whites.

Figure 16.5 **Mortality by Neighborhood, 2007**



	BB	CH	EB	FW	HP	JP	MT	ND	NE	RS	RX	SB	SD	SE	WR
Count	107	122	272	75	253	137	113	463	94	403	379	288	291	207	286

ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay, CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE= North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End, and WR=West Roxbury

*Includes Beacon Hill, Downtown, and the West End

†Includes Chinatown

NOTE: Data are presented as age-adjusted rates. These data do not include homeless persons or individuals whose neighborhood of residence was not reported, except in the Boston overall rate and count.

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

DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- In 2007, Charlestown had the city's highest age-adjusted mortality rate followed by Roxbury and South Boston. The Charlestown rate was almost 30% higher than the rate for Boston overall.

- The lowest age-adjusted mortality rate in 2007 was for the Back Bay, followed by the rate for Allston/Brighton.

Figure 16.6 **Top Five Leading Causes of Mortality, 2002-2007**

Leading Causes	Count	Rate
2002		
Cancer	1,072	218.4
Heart Disease	964	191.7
Injuries	275	47.6
Stroke	227	44.6
Chronic Obstructive Pulmonary Disease	156	31.6
All causes	**4,412**	**871.1**
2003		
Cancer	1,036	212.3
Heart Disease	992	198.2
Injuries	279	48.2
Stroke	222	43.3
Chronic Obstructive Pulmonary Disease	203	41.2
All causes	**4,287**	**850.2**
2004		
Cancer	977	199.3
Heart Disease	879	174.2
Stroke	245	48.4
Injuries	242	41.4
Chronic Obstructive Pulmonary Disease	172	34.7
All causes	**4,063**	**802.1**
2005		
Cancer	992	202.9
Heart Disease	828	164
Stroke	213	41.8
Injuries	241	41.1
Chronic Obstructive Pulmonary Disease	179	35.8
All causes	**4,070**	**804.6**
2006		
Cancer	944	192.7
Heart Disease	751	148.4
Injuries	316	55.3
Stroke	209	41.4
Substance Abuse*	176	33.5
All causes	**3,864**	**763.7**
2007		
Cancer	930	189.5
Heart Disease	741	147.3
Injuries	304	53.6
Stroke	175	34.3
Substance Abuse*	165	31.2
All causes	**3,812**	**716.9**

*Included among substance abuse deaths are a significant number of those identified as injury deaths.
NOTE: Data are presented as age-adjusted rates and represent deaths per 100,000 population.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- Leading causes of death among Boston residents are established by ranking age-adjusted mortality rates.

- Cancer remained Boston's leading cause of death in 2007, followed by heart disease, injuries, stroke, and substance abuse. From 2006 to 2007, the rates of death from all of these causes decreased.

- Between 2002 and 2007, Boston's leading causes were similar from year to year, with cancer and heart disease always ranking first and second, respectively, and stroke and injuries sharing the third and fourth ranks.

Figure 16.7 **Top Five Leading Causes of Mortality Among Asian Residents, 2002-2007**

Leading Causes	Count	Rate
2002		
Cancer	47	160.1
Heart Disease	18	65.3
Nephritis/Nephrosis	8	29.7
Injuries	9	28.9
Pneumonia/Influenza	6	22.3
All causes	**135**	**469.0**
2003		
Cancer	49	164.3
Heart Disease	33	117.8
Injuries	14	37.4
Stroke	10	35.4
Chronic Obstructive Pulmonary Disease	9	32.9
All causes	**165**	**568.0**
2004		
Cancer	51	169.1
Heart disease	16	55.9
Chronic Obstructive Pulmonary Disease	8	28.5
Stroke	7	24.3
Injuries	8	22.3
All causes	**135**	**460.3**
2005		
Cancer	53	177.5
Heart Disease	22	79.2
Stroke	13	45.5
Chronic Obstructive Pulmonary Disease	7	26.0
Nephritis/Nephrosis	6	21.4
All causes	**166**	**569.0**
2006		
Cancer	41	135.9
Heart Disease	28	99.0
Stroke	15	51.5
Chronic Obstructive Pulmonary Disease	11	39.1
Alzheimer's Disease	7	26.0
All causes	**156**	**534.3**
2007		
Cancer	43	146.6
Heart Disease	23	79.2
Stroke	10	35.0
Chronic Obstructive Pulmonary Disease	7	25.4
Alzheimer's Disease	6	22.3
All causes	**144**	**498.5**

NOTE: Data are presented as age-adjusted rates and represent deaths per 100,000 population.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- Boston's Asian residents generally have lower mortality rates than other racial and ethnic groups in Boston.
- For every year between 2002 and 2007, cancer was the leading cause of death for Asians, followed by heart disease.
- With the exception of cancer mortality, age-adjusted mortality rates for each leading cause of death decreased for the Asian population from 2006 to 2007.

Figure 16.8 **Top Five Leading Causes of Mortality Among Black Residents, 2002-2007**

Leading Causes	Count	Rate
2002		
Cancer	251	257.3
Heart Disease	205	220.7
Stroke	56	63.1
Injuries	76	54.6
Diabetes	47	48.3
All causes	**1,041**	**1054.9**
2003		
Cancer	268	271.0
Heart Disease	225	239.1
Injuries	85	64.9
Stroke	51	57.9
Diabetes	50	54.9
All causes	**1,058**	**1087.4**
2004		
Cancer	227	230.2
Heart Disease	182	192.3
Stroke	59	67.2
Injuries	78	55.8
Diabetes	40	42.0
All causes	**991**	**1012.1**
2005		
Cancer	231	236.6
Heart Disease	198	221.7
Stroke	55	60.0
Injuries	77	56.6
Nephrites/Nephrosis	40	45.0
All causes	**990**	**1,025.8**
2006		
Cancer	246	250.2
Heart Disease	141	157.1
Injuries	107	80.1
Stroke	49	56.0
Diabetes	38	39.4
All causes	**938**	**959.7**
2007		
Cancer	259	276.3
Heart Disease	167	182.1
Injuries	99	72.8
Stroke	40	45.5
Diabetes	38	41.1
All causes	**980**	**1,010.3**

NOTE: Data are presented as age-adjusted rates and represent deaths per 100,000 population.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- Cancer and heart disease were the leading causes of death among Black Boston residents each year from 2002 through 2007.

- From 2006 to 2007, the age-adjusted heart disease and mortality rate for Black residents increased 15.9%.

- The age-adjusted cancer mortality rate increased 10.4% for Blacks from 2006 to 2007. The age-adjusted cancer mortality rate was higher for Black residents than for Asian, Latino, and White residents from 2002 to 2007.

Figure 16.9 **Top Five Leading Causes of Mortality Among Latino Residents, 2002-2007**

Leading Causes	Count	Rate
2002		
Cancer	40	138.7
Heart Disease	30	129.8
Stroke	12	50.8
Injuries	38	47.4
Diabetes	11	38.7
All causes	**216**	**618.4**
2003		
Heart Disease	35	140.0
Cancer	38	103.7
Chronic Obstructive Pulmonary Disease	7	37.3
Injuries	32	37.0
Nephrites/Nephrosis	7	28.7
All causes	**205**	**600.3**
2004		
Cancer	41	126.6
Heart Disease	31	112.1
Stroke	13	43.6
Injuries	25	34.7
Nephrites/Nephrosis	6	25.6
All causes	**200**	**570.9**
2005		
Cancer	46	141.4
Heart Disease	32	110.1
Injuries	28	39.5
Chronic Obstructive Pulmonary Disease	7	30.6
Substance Abuse*	19	28.7
All causes	**212**	**631.7**
2006		
Cancer	47	168.6
Heart Disease	38	162.9
Injuries	36	43.7
Stroke	9	36.6
Substance Abuse*	22	30.9
All causes	**233**	**723.3**
2007		
Cancer	42	137.9
Heart Disease	29	106.5
Injuries	38	53.6
Substance Abuse*	27	48.0
Stroke	9	32.6
All causes	**214**	**650.5**

*Included among substance abuse deaths are a significant number of those identified as injury deaths.
NOTE: Data are presented as age-adjusted rates and represent deaths per 100,000 population.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- Cancer and heart disease were the leading causes of death for Latino Bostonians between 2002 and 2007.

- From 2006 to 2007, the cancer and heart disease mortality rates for Latinos decreased 18.2% and 34.6%, respectively.

- The Latino age-adjusted rates of death from these two causes were lower than those for Black and White residents.

Figure 16.10 **Top Five Leading Causes of Mortality Among White Residents, 2002-2007**

Leading Causes	Count	Rate
2002		
Cancer	733	230.5
Heart Disease	708	205.4
Injuries	150	4904.0
Stroke	152	41.3
Chronic Obstructive Pulmonary Disease	123	37.6
All causes	**3005**	**892.6**
2003		
Cancer	698	214.2
Heart Disease	677	203.8
Chronic Obstructive Pulmonary Disease	158	47.3
Injuries	145	46.5
Stroke	152	41.4
All causes	**2,845**	**851.2**
2004		
Cancer	655	204.3
Heart Disease	645	185.4
Stroke	166	46.0
Injuries	126	42.8
Chronic Obstructive Pulmonary Disease	135	40.4
All causes	**2,717**	**804.5**
2005		
Cancer	656	208.4
Heart Disease	572	160.8
Injuries	129	42.8
Chronic Obstructive Pulmonary Disease	134	39.9
Stroke	139	37.6
All causes	**2,683**	**797.2**
2006		
Cancer	607	191.8
Heart Disease	540	151.6
Injuries	160	53.3
Substance Abuse*	109	39.6
Stroke	135	37.8
All causes	**2,513**	**750.0**
2007		
Cancer	582	183.4
Heart Disease	517	148.8
Injuries	164	53.9
Substance Abuse*	101	36.3
Chronic Obstructive Pulmonary Disease	109	32.0
All causes	**2,451**	**727.9**

*Included among substance abuse deaths are a significant number of those identified as injury deaths.
NOTE: Data are presented as age-adjusted rates and represent deaths per 100,000 population.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- White Boston residents' first and second leading causes of death for the years 2002-2007 were cancer and heart disease.

- Between 2002 and 2007, age-adjusted mortality rates for White Boston residents declined 27.6% for heart disease, and 20.4% for cancer.

Figure 16.11 **Leading Causes of Mortality by Gender, 2006 and 2007**

2006						
MALES				**FEMALES**		
	Count	Rate			Count	Rate
Cancer	454	235.8		Cancer	490	167.3
Heart Disease	359	201.4		Heart Disease	392	115.5
Injuries	218	78.7		Stroke	133	40.0
Substance Abuse*	122	48.5		Injuries	98	32.3
Stroke	76	41.5		Chronic Obstructive Pulmonary Disease	74	24.2
Chronic Obstructive Pulmonary Disease	65	35.8		Substance Abuse*	54	19.9
Diabetes	57	30.3		Nephritis/Nephrosis	60	19.2
Nephritis/Nephrosis	53	29.7		Pneumonia/Influenza	61	17.5
Pneumonia/Influenza	44	25.7		Septicemia	43	14.2
Septicemia	36	19.3		Diabetes	41	14.0
All causes	**1,864**	**961.4**		**All causes**	**2,000**	**630.1**

2007						
MALES				**FEMALES**		
	Count	Rate			Count	Rate
Cancer	472	248.3		Cancer	458	117.9
Heart Disease	364	200.4		Heart Disease	377	113.8
Injuries	224	83.8		Stroke	121	35.9
Substance Abuse*	121	47.6		Injuries	80	26.3
Chronic Obstructive Pulmonary Disease	66	37.1		Chronic Obstructive Pulmonary Disease	72	22.9
Nephritis/Nephrosis	65	34.6		Diabetes	56	18.0
Pneumonia/Influenza	51	30.5		Pneumonia/Influenza	57	16.0
Stroke	54	30.3		Substance Abuse*	44	16.0
Diabetes	52	27.2		Alzheimer's Disease	57	15.5
Septicemia	31	17.8		Nephritis/Nephrosis	49	15.2
Chronic Liver Disease	32	14.7		Septicemia	47	13.8
All causes	**1,878**	**969.1**		**All causes**	**1,934**	**603.3**

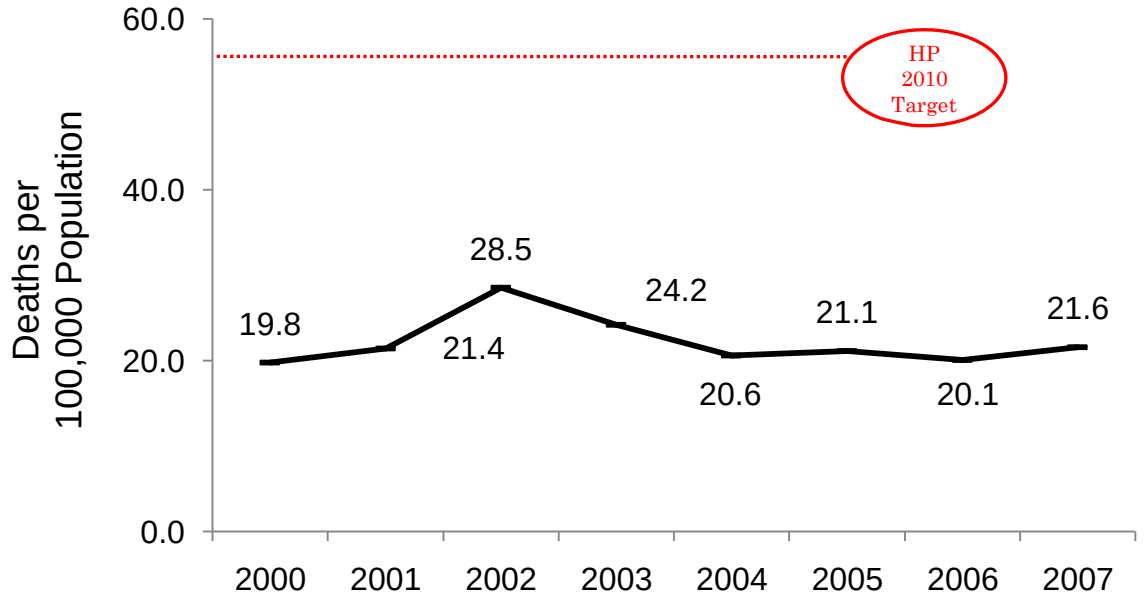
*Included among substance abuse deaths are a significant number of those identified as injury deaths.
NOTE: Data are presented as age-adjusted rates and represent deaths per 100,000 population. These data do not include persons whose sex was not reported, except in the Boston overall count and rate.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- For both male and female Boston residents, cancer was the leading cause of death in 2006 and 2007, followed by heart disease.

- With the exception of stroke and Alzheimer's disease, age-adjusted mortality rates were higher for males than for females for all causes shown.

- Marked differences in mortality existed for some causes. For example, the age-adjusted cancer mortality rate for males in 2007 was more than double the rate for females. The rate for injury for males was also more than three times the rate for females in 2007.

Figure 16.12 **Diabetes Mortality, 2000-2007**

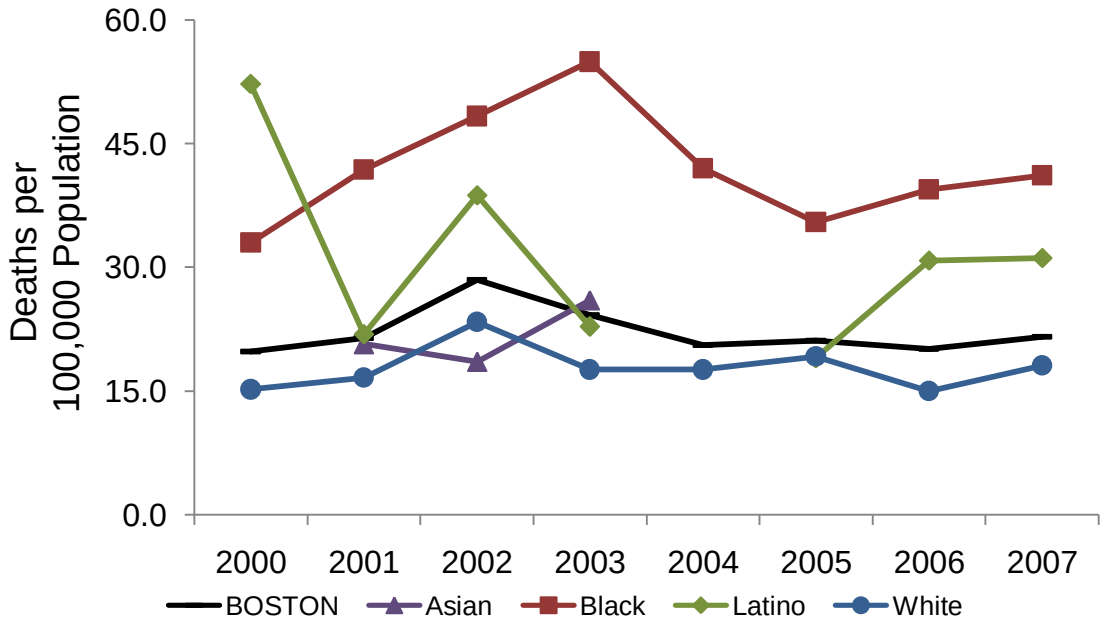


Count	2000	2001	2002	2003	2004	2005	2006	2007
BOSTON	98	107	140	120	101	104	98	108

NOTE: Data are presented as age-adjusted rates.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- The 2007 diabetes mortality rate was 9% higher than in the year 2000.

Figure 16.13 **Diabetes Mortality by Race/Ethnicity, 2000-2007**



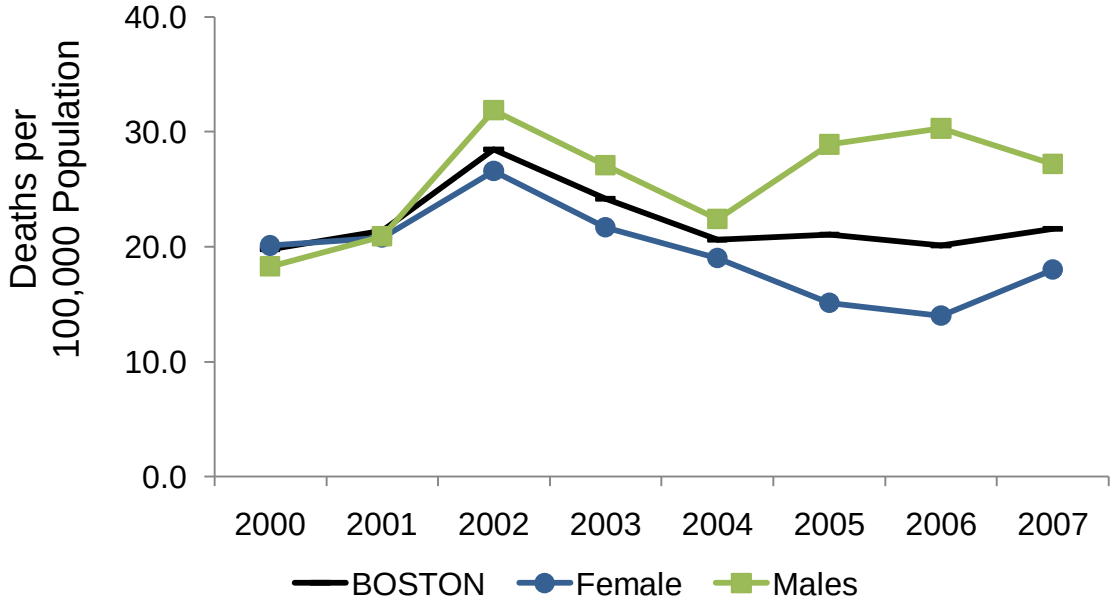
Rate	2000	2001	2002	2003	2004	2005	2006	2007
Asian	n<5	20.7	18.6	26.0	n<5	n<5	n<5	n<5
Black	33.0	41.8	48.3	54.9	42.0	35.5	39.4	41.1
Latino	52.2	21.9	38.7	22.8	n<5	19.0	30.8	31.1
White	15.2	16.6	23.4	17.6	17.6	19.2	15.0	18.1
BOSTON	19.8	21.4	28.5	24.2	20.6	21.1	20.1	21.6

Count	2000	2001	2002	2003	2004	2005	2006	2007
Asian	n<5	6	5	7	n<5	n<5	n<5	n<5
Black	31	40	47	50	40	33	38	38
Latino	14	5	11	6	n<5	6	8	8
White	51	56	76	57	55	60	48	59
BOSTON	98	107	140	120	101	104	98	108

NOTES: Too few deaths among Asians and Latinos to permit the presentation of rates. Data are presented as age-adjusted rates. These data do not include persons whose race/ethnicity was not reported, except in the Boston overall count and rate.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- From 2001 to 2007, Boston's Black residents had the highest age-adjusted diabetes mortality rate among all racial/ethnic groups. Their highest rate, which occurred in 2003, was approximately twice as high as the rate for the city of Boston and three times as high as the rate for White residents.
- From 2006 to 2007, Latino residents had the second highest age-adjusted diabetes mortality rate.
- Between 2000 and 2007, the diabetes mortality rate increased 24.5% for Blacks and 19.1% for Whites. Although the rate decreased 40.4% for Latinos during this time, it increased between 2005 and 2007.

Figure 16.14 **Diabetes Mortality by Gender, 2000-2007**



Rate	2000	2001	2002	2003	2004	2005	2006	2007
BOSTON	19.8	21.4	28.5	24.2	20.6	21.1	20.1	21.6
Female	20.1	20.8	26.6	21.7	19.0	15.1	14.0	18.0
Male	18.3	20.9	31.9	27.1	22.4	28.9	30.3	27.2

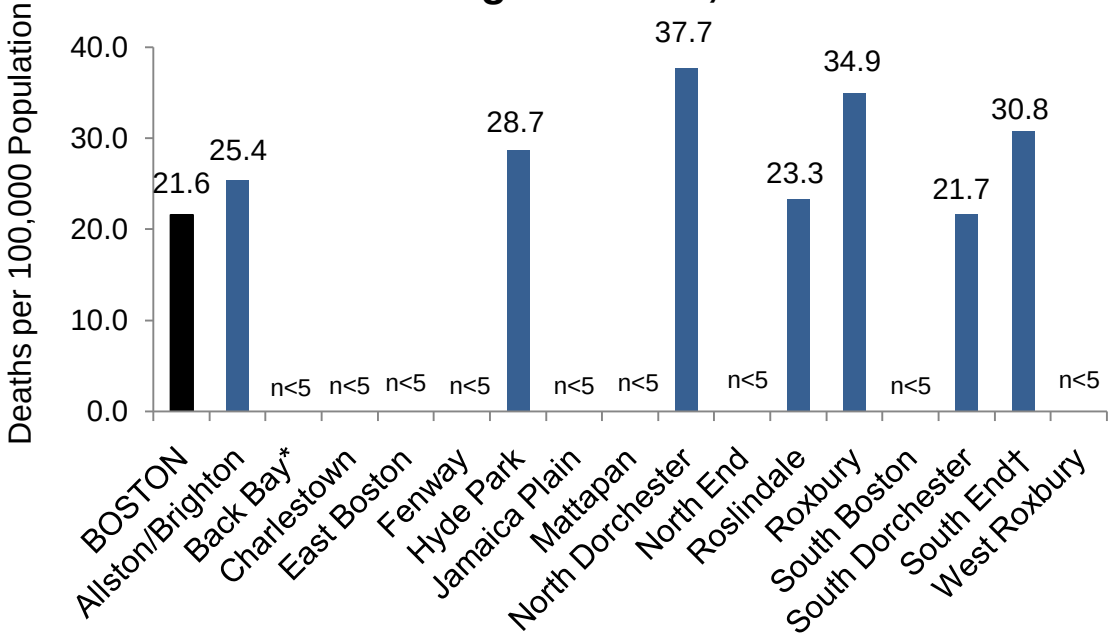
Count	2000	2001	2002	2003	2004	2005	2006	2007
BOSTON	98	107	140	120	101	104	98	108
Female	62	66	79	67	57	46	41	56
Male	36	41	61	53	44	58	57	52

NOTES: Data are presented as age-adjusted rates. These data do not include persons whose gender was not reported, except in the Boston overall count and rate.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- From 2001 through 2007, the age-adjusted diabetes mortality rate was higher for Boston's male residents than female residents. In 2007, the rate for males was 1.5 times the rate for females.

- Between 2000 and 2007, the diabetes mortality rate for males increased almost 50%. However, from 2006 to 2007, the rate for males decreased 10.2%, while the rate for females increased 28.6%.

Figure 16.15 **Diabetes Mortality by Neighborhood, 2007**



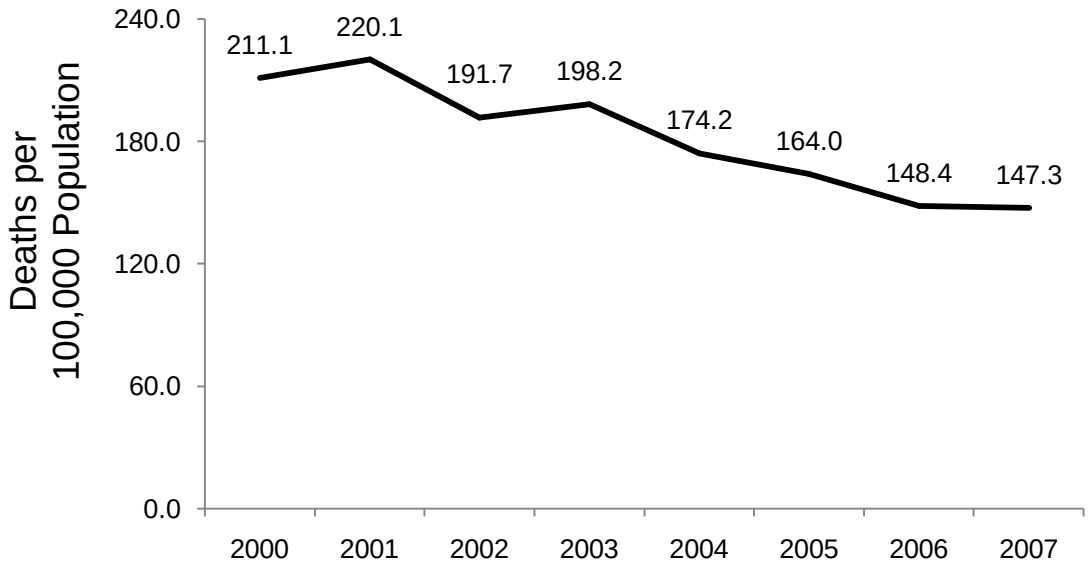
	BOS	A/B	BB	CH	EB	FW	HP	JP	MT	ND	NE	RS	RX	SB	SD	SE	WR
Count	108	13	n<5	n<5	n<5	n<5	10	n<5	n<5	19	n<5	10	10	n<5	8	10	n<5

* Includes Beacon Hill, Downtown, and the West End
† Includes Chinatown
ABBREVIATIONS KEY: A/B=Allston/Brighton, BB=Back Bay, CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE= North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End, and WR=West Roxbury
NOTES: Too few deaths among residents of Back Bay, Charlestown, East Boston, Fenway, Jamaica Plain, Mattapan, North End, South Boston, and West Roxbury to permit the presentation of rates. Data are presented as age-adjusted rates. These data do not include homeless persons or individuals whose neighborhood of residence was not reported, except in the Boston overall rate and count.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- Among the Boston neighborhoods with at least five diabetes deaths in 2007, North Dorchester had the highest age-adjusted mortality rate. This rate was 74.5% higher than Boston's rate. Roxbury had the second highest rate which was 61.6% higher than the Boston rate.

- Of the neighborhoods for which age-adjusted diabetes mortality rates were available, the lowest rate was seen in South Dorchester.

Figure 16.16 **Heart Disease Mortality, 2000-2007**

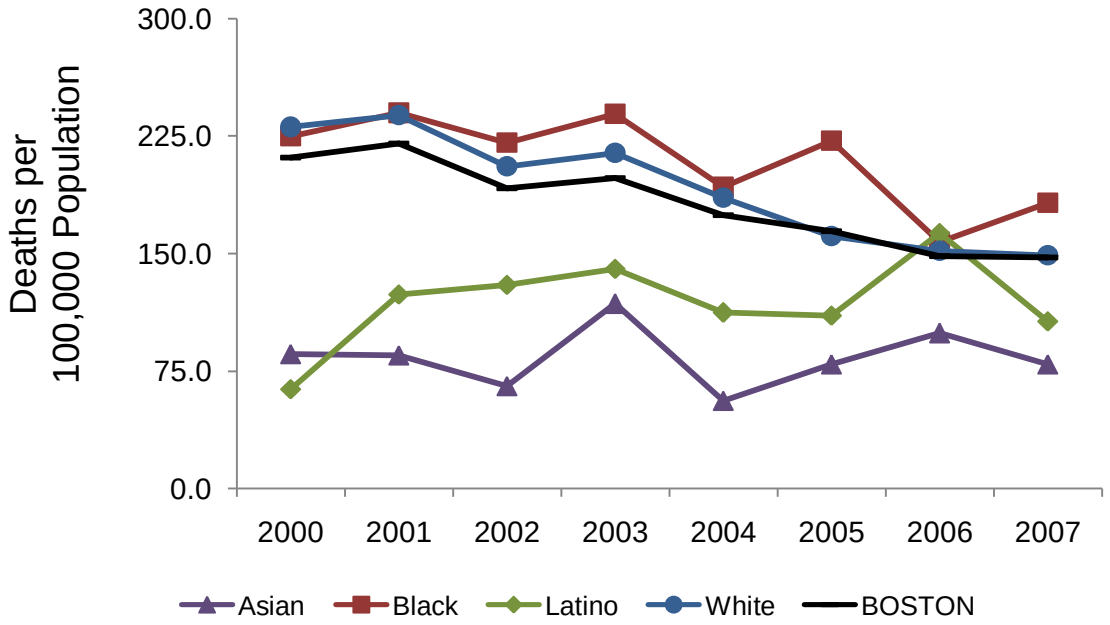


Count	2000	2001	2002	2003	2004	2005	2006	2007
BOSTON	1,067	1,112	964	992	879	828	751	741

NOTE: Data are presented as age-adjusted rates.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- Age-adjusted heart disease mortality rates in Boston have been declining steadily since 2001.
- The 2007 rate decreased 30.2% from 2000.

Figure 16.17 **Heart Disease Mortality by Race/Ethnicity, 2000-2007**



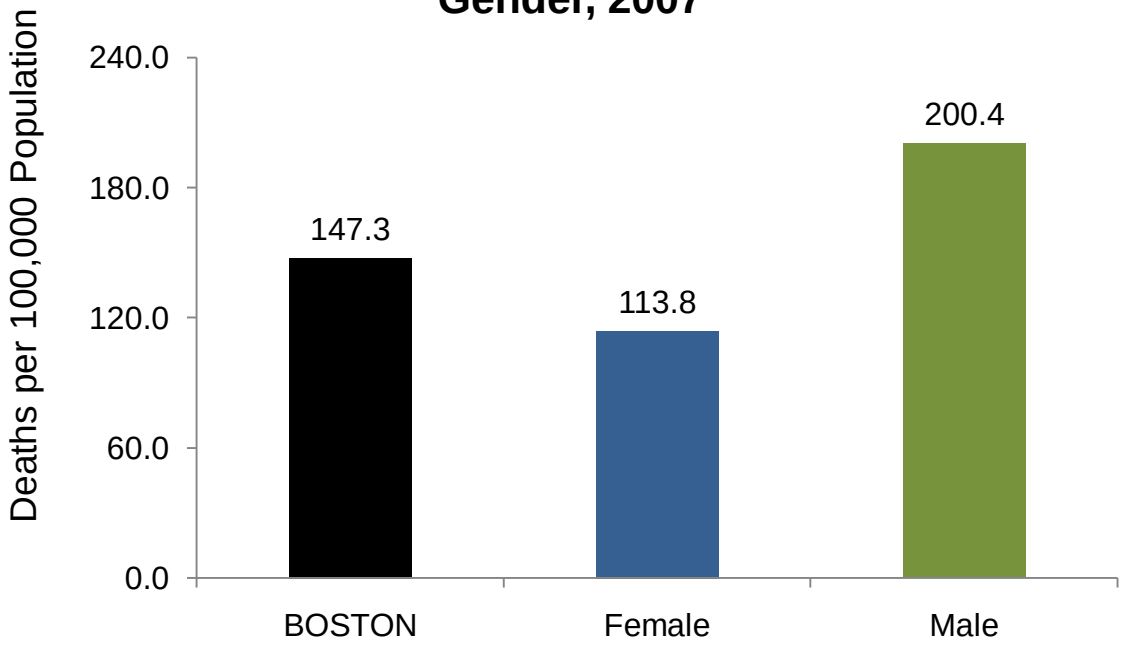
Rate	2000	2001	2002	2003	2004	2005	2006	2007
Asian	85.6	85.0	65.3	117.8	55.9	79.2	99.0	79.2
Black	224.8	239.6	220.7	239.1	192.3	221.7	157.1	182.1
Latino	63.3	123.9	129.8	140.0	112.1	110.1	162.9	106.5
White	230.6	238.1	205.4	214.2	185.4	160.8	151.6	148.8
BOSTON	211.1	220.1	191.7	198.2	174.2	164.0	148.4	147.3

Count	2000	2001	2002	2003	2004	2005	2006	2007
Asian	25	24	18	33	16	22	28	23
Black	216	221	205	225	182	198	141	167
Latino	20	32	30	35	31	32	38	29
White	802	834	708	698	645	572	540	517
BOSTON	1,067	1,112	964	992	879	828	751	741

NOTES: Data are presented as age-adjusted rates. These data do not include persons whose race/ethnicity was not reported, except in the Boston overall count and rate.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- Heart Disease is one of the leading causes of death for all racial/ethnic groups in Boston. In 2007, the highest age-adjusted heart disease mortality rate was for Blacks, followed by Whites and Latinos.
- Between 2000 and 2007, the rate declined 35% for Whites, 19% for Blacks, and 8% for Asians. The rate for Latinos increased 68%.
- From 2006 to 2007, the heart disease age-adjusted mortality rate decreased for Asians, Latinos, and Whites, but increased for Blacks.

Figure 16.18 **Heart Disease Mortality by Gender, 2007**

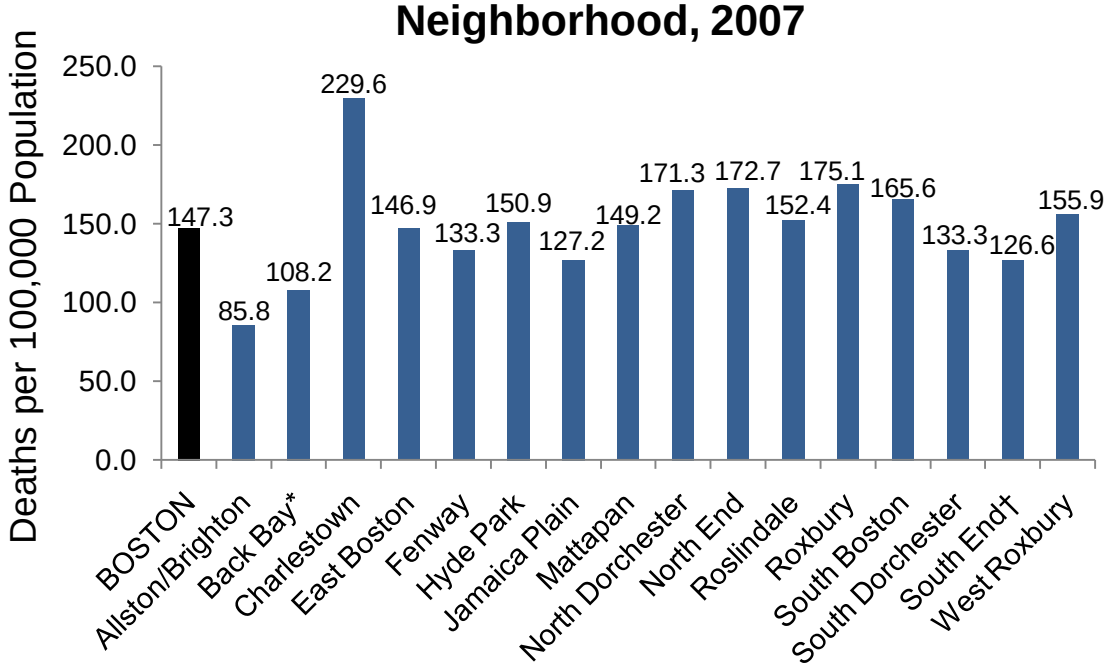


	BOSTON	Female	Male
Count	741	377	364

NOTES: Data are presented as age-adjusted rates. These data do not include persons whose gender was not reported, except in the Boston overall count and rate.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- In 2007, the age-adjusted rate of heart disease mortality for Boston males was almost twice the rate for Boston females and slightly more than a third higher than the rate for Boston overall.

Figure 16.19 **Heart Disease Mortality by Neighborhood, 2007**



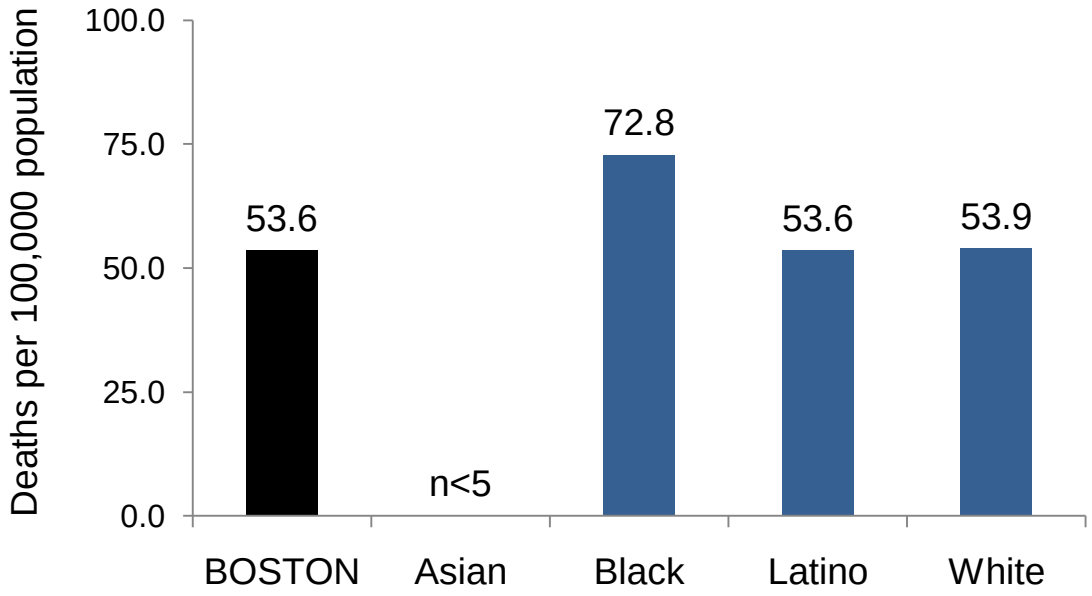
	BOS	A/B	BB	CH	EB	FW	HP	JP	MT	ND	NE	RS	RX	SB	SD	SE	WR
Count	741	46	27	26	54	15	53	28	21	85	24	75	71	52	50	40	66

*Includes Beacon Hill, Downtown and the West End
† Includes Chinatown
ABBREVIATIONS KEY: BOS=Boston, A/B=Allston/Brighton, BB=Back Bay, CH=Charlestown, EB=East Boston, FW=Fenway, HP=Hyde Park, JP=Jamaica Plain, MT=Mattapan, ND=North Dorchester, NE=North End, RS=Roslindale, RX=Roxbury, SB=South Boston, SD=South Dorchester, SE=South End, and WR=West Roxbury
NOTES: Data are presented as age-adjusted rates. These data do not include homeless persons or individuals whose neighborhood of residence was not reported, except in the Boston overall rate and count.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission Research and Evaluation Office

- Heart disease mortality varied greatly among Boston neighborhoods in 2007. Charlestown had the highest age-adjusted heart disease mortality rate and Allston/Brighton, the lowest. The rate for Charlestown was 56% higher than the overall Boston rate and the rate for Allston/Brighton, 42% lower.

- Several other neighborhoods such as North Dorchester, the North End, Roxbury, the South End, and others had age-adjusted heart disease mortality rates that exceeded the rate for Boston overall.

Figure 16.20 **All-Injury Mortality by Race/Ethnicity, 2007**



	BOSTON	Asian	Black	Latino	White
Count	304	n<5	99	38	164

NOTES: Data are presented as age-adjusted rates. These data do not include persons whose race/ethnicity was not reported, except in the Boston overall count and rate. There were too few injury deaths among Asians to permit the calculation of a rate.
DATA SOURCE: Boston resident deaths, Massachusetts Department of Public Health
DATA ANALYSIS: Boston Public Health Commission, Research and Evaluation Office

- With the exception of Boston's Asian population, injury ranks in the top 5 leading causes of death for all racial/ethnic groups in Boston. In 2007, age-adjusted injury mortality rate for injuries was highest for Blacks.

- In 2007, the injury age-adjusted mortality rate for Blacks was 35.8% higher than the overall Boston injury age-adjusted mortality rate.

Summary: Mortality

In 2005, the age-adjusted mortality rate for the Black population in the U.S. was 1010.3 (per 100,000) compared with 727.9 for the White population. Life expectancy for the White population was 5.1 years longer than the life expectancy for the Black population (1). Nationally, this gap between Blacks and Whites in (age-adjusted) death rate for all causes has decreased only slightly from 1950 to 2000.

Boston mortality data is similar to the national data. For Boston residents born between 2005 and 2007, the life expectancy is 78.5 years. The life expectancy for Black residents is 73.8 years – 6.5 years shorter than the life expectancy for Latino residents and 5.3 years shorter than the life expectancy for White residents. The life expectancy for female residents was 81.4 years, 6.3 years longer than for males.

In 2007, the leading cause of death in Boston (using age-adjusted mortality rates) was cancer, followed by heart disease, injuries, and stroke. Black residents had the highest mortality rates for each of these causes of death compared to other groups. Among Black residents, the age-adjusted mortality rate for cancer was 276.3 (46% higher than overall city rate); the rate for heart disease was 182.1 (24% higher than the city rate); the rate for injury was 72.8 (49% higher than the city rate); and the rate for stroke was 45.5 (63% higher than the city rate). Black residents also had the highest age-adjusted diabetes mortality rate among all racial/ethnic groups.

For both male and female Boston residents, cancer was the leading cause of death in 2006 and 2007, followed by heart disease. In 2007, the age-adjusted rate for injury for males was more than three times the rate for females; the age-adjusted cancer mortality rate for males was more than double the rate for females; and the age-adjusted rate of heart disease mortality for males was almost twice the rate for females.

References

1. *Data Bases for Mortality Measurement.* **United Nations.** New York : United Nations, 1981. Papers of the Meeting of the United Nations/World Health Organization Working Group on Data Bases for Measurement of Levels, Trends, and Differentials in Mortality. pp. 15-17.

2. **Department of Health and Human Services.** Healthy People 2010 Midcourse Review Focus Area 5 Diabetes. *Healthy People 2010.* [Online] April 7, 2007. [Cited: February 18, 2009.] http://www.healthypeople.gov/data/midcourse/html/focusareas/FA05TOC.htm.