Massachusetts Deaths 2010

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TABLE OF CONTENTS

Note to Readers

Please review the information below before reading the report.

1. **Population Sources.** Since the year 2010 is one in which the Census Bureau conducted a decennial count of the population, we were able to use the Census Bureau counts for 2010 as the denominators for state rates.

   The Massachusetts Department of Public Health Race Allocated Census 2010 Estimates (MRACE 2010), which are population estimates based upon the Census 2010 Summary File 1, was used to calculate city and town rates. In this estimates file, the Census 2010 race categories, "Two or more races" and "Some other race" are redistributed to the MDPH standard race categories: Non-Hispanic White, Non-Hispanic Black, Non-Hispanic Asian and Pacific Islander, and Non-Hispanic American Indian and Alaska Native. All persons in the Census 2010 Hispanic ethnicity category are counted as "Hispanic" race in the MDPH estimates. This kind of file is often referred to as a "bridged" file, that is, one that bridges the new race and ethnicity collections to the conventionally used categories. These population estimates are available from MassCHIP (http://masschip.state.ma.us).

   When state rates were calculated by race and Hispanic ethnicity, e.g., age adjusted death rates, we used the 2010 bridged population file, MARS (Modified Age, Race/Ethnicity, and Sex) file, which is produced by the National Center for Health Statistics (NCHS) and the Census Bureau Population Estimates Program. This file has data by single year or age, sex, race and Hispanic ethnicity in the five mutually exclusive categories used by the Department: White Non-Hispanic, Black Non-Hispanic, Asian Non-Hispanic, American Indian/Alaska Native Non-Hispanic.

2. **Comparisons with National Death Statistics.** Preliminary statistics for the United States for 2010 are used and when no preliminary data is available, then final statistics for 2009 are used as comparison to give a sense how Massachusetts statistics differ from those of the US.

3. **Resident deaths.** All data in this publication are resident data unless otherwise stated. Resident data include all events that occur to residents of the Commonwealth, wherever they occur.

4. **Race and Ethnicity.** In the text, the race categories, White, Black, American Indian, Asian, and Hispanic are mutually exclusive, for example, when we refer to White residents, this means White non-Hispanic residents.

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Massachusetts Deaths 2010. Boston, MA: Division of Research and Epidemiology, Bureau of Health Information, Statistics, Research, and Evaluation, Massachusetts Department of Public Health. January 2013.

Table 1. Trends in Mortality Characteristics, Massachusetts: 2000-2010

Year		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Resident deaths[1]												
	Number	56,591	56,733	56,881	56,194	54,419	53,776	53,293	52,690	53,341	51,915	52,420
	Crude rate[2,3,4]	889.5	887.1	887.0	875.2	848.1	840.4	827.9	816.9	820.9	787.4	800.6
	Age-adjusted rate[5]	812.2	803.4	793.8	772.6	739.3	720.6	717.6	704.4	703.5	675.1	672.7
Race/ethnicity of decedent [6,7]												
White non-Hispanic	Number	52,959	52,792	52,839	52,050	50,439	49,639	49,132	48,518	49,059	47,520	48,010
	Percent[8]	93.6	93.1	92.9	92.6	92.7	92.3	92.2	92.1	92.0	91.5	91.6
	Age-adjusted rate	814.5	804.4	796.0	775.2	744.7	725.0	723.3	711.1	710.7	682.8	684.4
Black non-Hispanic	Number	2,109	2,226	2,275	2,378	2,225	2,263	2,233	2,211	2,222	2,288	2,278
	Percent	3.7	3.9	4.0	4.2	4.1	4.2	4.2	4.2	4.2	4.4	4.3
	Age-adjusted rate	933.5	951.0	935.6	949.1	866.2	865.8	838.4	820.5	805.8	812.2	702.6
Asian non-Hispanic	Number	467	510	531	579	531	570	635	610	692	697	759
	Percent	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4
	Age-adjusted rate	401.4	396.9	397.6	411.9	353.7	345.0	379.0	342.0	372.5	353.1	364.8
Hispanic	Number	1,014	1,059	1,166	1,121	1,115	1,230	1,194	1,264	1,275	1,337	1,308
	Percent	1.8	1.9	2.0	2.0	2.1	2.3	2.2	2.4	2.4	2.6	2.5
	Age-adjusted rate	585.2	556.5	591.0	520.6	482.1	500.4	479.9	477.7	458.2	439.8	443.9
Gender of decedent [7]												
Female	Number	30,465	30,780	30,427	30,053	29,067	28,695	28,508	27,851	28,246	27,356	27,368
	Age-adjusted rate	688.8	689.5	674.4	659.3	632.3	617.8	612.7	596.3	595.9	572.8	567.2
Male	Number	26,126	25,953	26,454	26,141	25,352	25,079	24,785	24,838	25,095	24,557	25,051
	Age-adjusted rate	988.7	957.6	955.1	923.3	878.0	852.5	858.9	853.3	852.2	822.1	811.9
Age of decedent [7]												
<1 year	Number	377	407	397	383	376	391	369	380	381	366	319
1-14 years	Number	181	169	167	149	137	113	124	128	119	118	113
15-24 years	Number	403	444	460	490	517	489	471	505	421	440	453
25-44 years	Number	2,375	2,571	2,490	2,484	2,247	2,173	1,953	2,023	1,906	1,974	1,823
45-64 years	Number	7,841	8,004	8,344	8,476	8,347	8,355	8,660	8,560	8,426	8,688	8,753
65-74 years	Number	9,746	9,323	8,922	8,611	8,126	7,905	7,572	7,494	7,425	7,380	7,423
75-84 years	Number	17,554	17,416	17,262	16,973	16,342	15,632	15,333	14,781	14,970	13,943	13,639
85+ years	Number	18,113	18,395	18,838	18,627	18,327	18,718	18,811	18,816	19,692	19,004	19,888

1. Deaths presented in all tables and figures are resident deaths. 2. Deaths per 100,000 residents. 3. See Glossary for further definition of terms and rates. 4. Rate calculations are based on resident population estimates. 5. Rates are age-adjusted per 100,000 residents using the 2000 US standard population. 6. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in race categories. Please see the Technical Notes in the Appendix for a more detailed explanation. 7. Column sum may not equal total because the race, gender or age of some decedents was unknown. 8. Percent of all resident deaths in that year.

Table 2. Five Leading Causes of Death[1], Age-Adjusted Rates, Massachusetts and United States: 1999-2010

Year[2]	Age-Adjusted Rates	Heart Disease		Cancer		Stroke	
		MA	US[3]	MA	US[3]	MA	US[3]
1999	Rate	222.1	265.9	206.6	201.6	50.2	61.4
	% of Total	27.9	30.3	24.8	23.0	6.4	7.0
2000	Rate	216.7	258.2	206.1	200.9	50.9	60.9
	% of Total	27.1	29.5	24.8	23.0	6.4	6.9
2001	Rate	211.0	247.7	200.0	195.8	46.7	57.9
	% of Total	26.7	28.9	24.2	22.9	6.2	6.8
2002	Rate	201.1	240.4	200.1	194.0	48.1	56.3
	% of Total	26.0	28.4	24.0	22.8	6.0	6.7
2003	Rate	196.6	232.3	193.0	190.1	45.0	53.5
	% of Total	26.0	28.0	24.1	22.7	6.0	6.5
2004	Rate	182.8	217.0	188.4	185.8	42.5	50.0
	% of Total	25.3	27.2	24.5	23.1	6.0	6.3
2005	Rate	172.2	211.0	184.9	183.8	38.1	46.6
	% of Total	24.6	26.6	24.5	22.8	5.5	5.9
2006	Rate	168.8	199.4	186.3	180.8	36.7	43.6
	% of Total	24.2	25.9	25.1	23.1	5.4	5.7
2007	Rate	165.7	199.4	179.2	180.8	35.0	43.6
	% of Total	24.2	25.9	24.6	23.1	5.1	5.7
2008	Rate	165.5	190.9	177.8	178.4	33.7	42.2
	% of Total	24.1	25.4	24.4	23.2	4.9	5.6
2009	Rate	155.2	179.8	174.0	173.6	32.2	38.9
	% of Total	23.6	24.6	25.1	23.3	4.9	5.3
2010	Rate	149.4	178.5	171.0	172.5	31.2	39.0
	% of Total	22.9	24.1	24.7	23.3	4.8	5.2

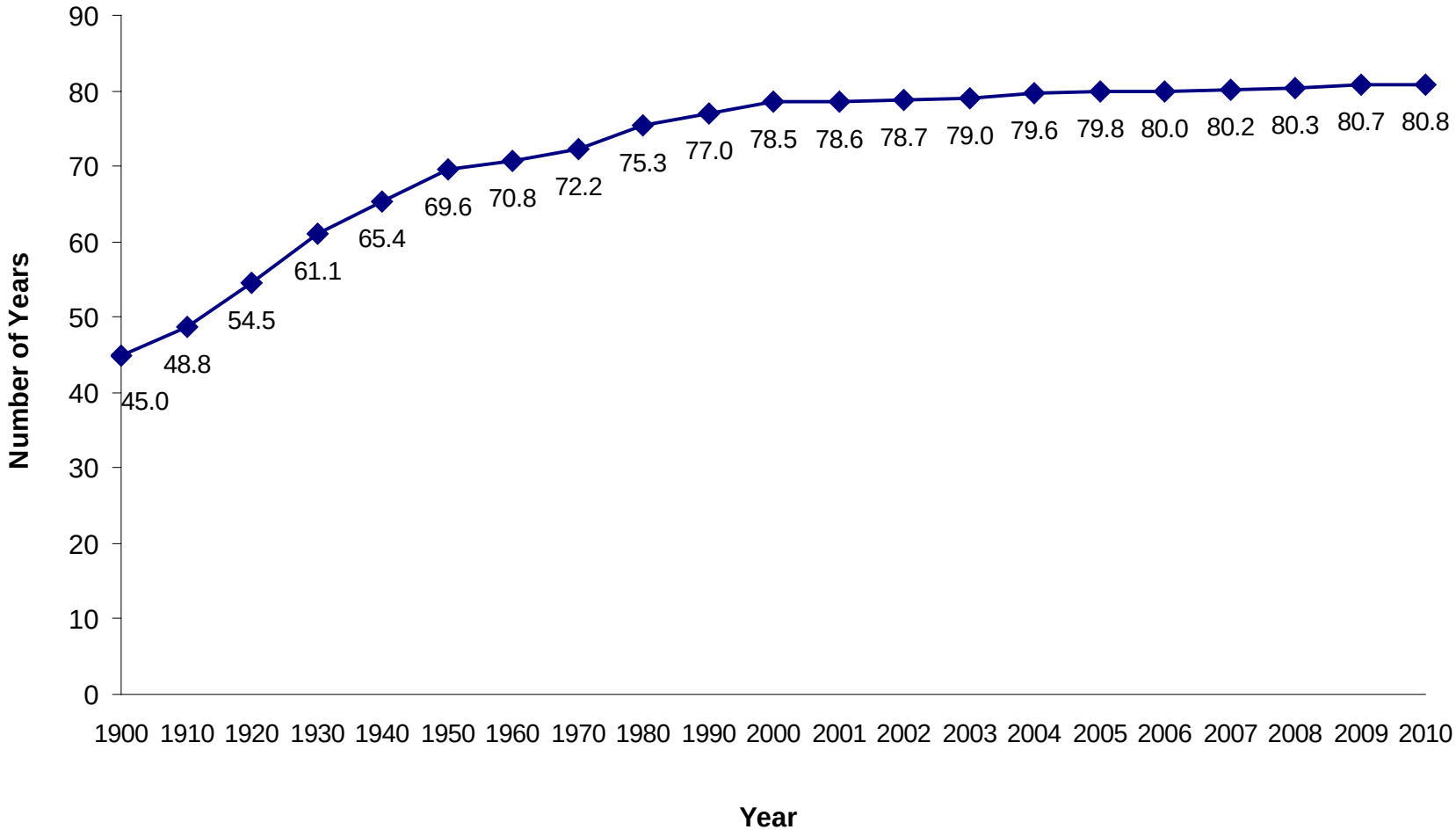
1. Cause of death: the disease or injury that initiated the events leading to death; or the circumstances of the unintentional or intentional injury that resulted in the death. 2. Data coded according to ICD-10. ICD-9 and ICD-10 codes used in this publication are listed in the Appendix. 3. US data for 2010 obtained from NCHS. Deaths: Deaths: Preliminary Data for 2010. NCHS, January 2012. Volume 60, Number 4.

Table 2 (continued). Five Leading Causes of Death[1], Age-Adjusted Rates, Massachusetts and United States: 1999-2010

Year[2]	Age-Adjusted Rates	Influenza/Pneumonia		Unintentional Injuries		All Causes	
		MA	US[3]	MA	US[3]	MA	US[3]
1999	Rate	30.3	23.4	19.3	35.9	808.8	881.9
	% of Total	3.9	2.7	2.3	4.1		
2000	Rate	29.1	23.7	20.2	35.6	812.2	872.0
	% of Total	3.7	2.8	2.4	3.9		
2001	Rate	24.0	21.8	21.9	34.3	803.5	855.0
	% of Total	3.1	2.6	2.6	4.0		
2002	Rate	27.3	22.7	20.5	35.3	793.8	846.8
	% of Total	4.0	2.7	2.0	4.2		
2003	Rate	26.0	22.0	20.1[7]	37.3	772.6	832.7
	% of Total	3.6	2.7	2.5	4.3		
2004	Rate	24.9	19.8	19.4	37.7	739.3	800.8
	% of Total	3.6	2.5	2.5	4.7		
2005	Rate	24.2	20.3	27.4	39.1	720.6	798.8
	% of Total	3.6	2.6	3.5	4.8		
2006	Rate	22.0	17.7	31.4	38.5	717.6	776.4
	% of Total	3.3	2.3	4.1	4.8		
2007	Rate	19.4	17.7	30.5	38.5	704.4	776.4
	% of Total	2.9	2.3	4.0	4.9		
2008	Rate	20.0	16.2	28.6	40.0	703.5	760.2
	% of Total	3.0	2.2	3.8	5.1		
2009	Rate	16.8	16.2	28.5	37.0	675.1	741.0
	% of Total	2.6	2.2	3.9	4.8		
2010	Rate	15.9	15.1	28.3	37.1	672.7	746.2
	% of Total	2.5	2.0	3.9	4.8		

1. Cause of death: the disease or injury that initiated the events leading to death; or the circumstances of the unintentional or intentional injury that resulted in the death.
2. Data coded according to ICD-10. ICD-9 and ICD-10 codes used in this publication are listed in the Appendix. 3. US data for 2010 obtained from NCHS. Deaths: Deaths: Preliminary Data for 2010. NCHS, January 2012. Volume 60, Number 4.

Figure 1. Life Expectancy at Birth[1], Massachusetts: 1900-2010



[1]Life Expectancy at birth calculated using the Greville Abridged Life Table Method (source: Dublin LI. Length of Life - A Study of the Life Table. Ronald Press Co. New York. 1949).

Figure 2. Expected Years of Life Remaining at Different Ages by Race and Hispanic Ethnicity, Massachusetts: 2010

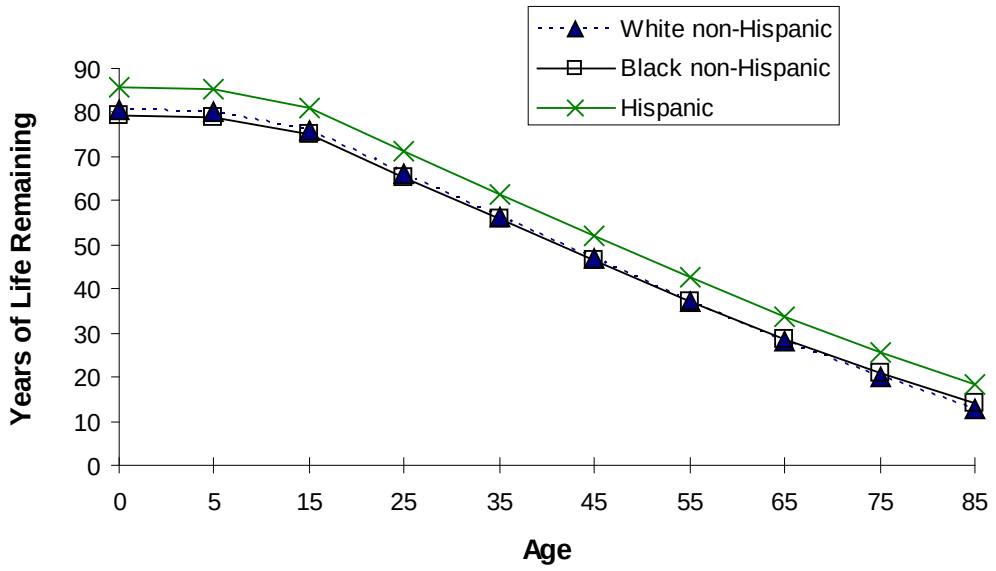
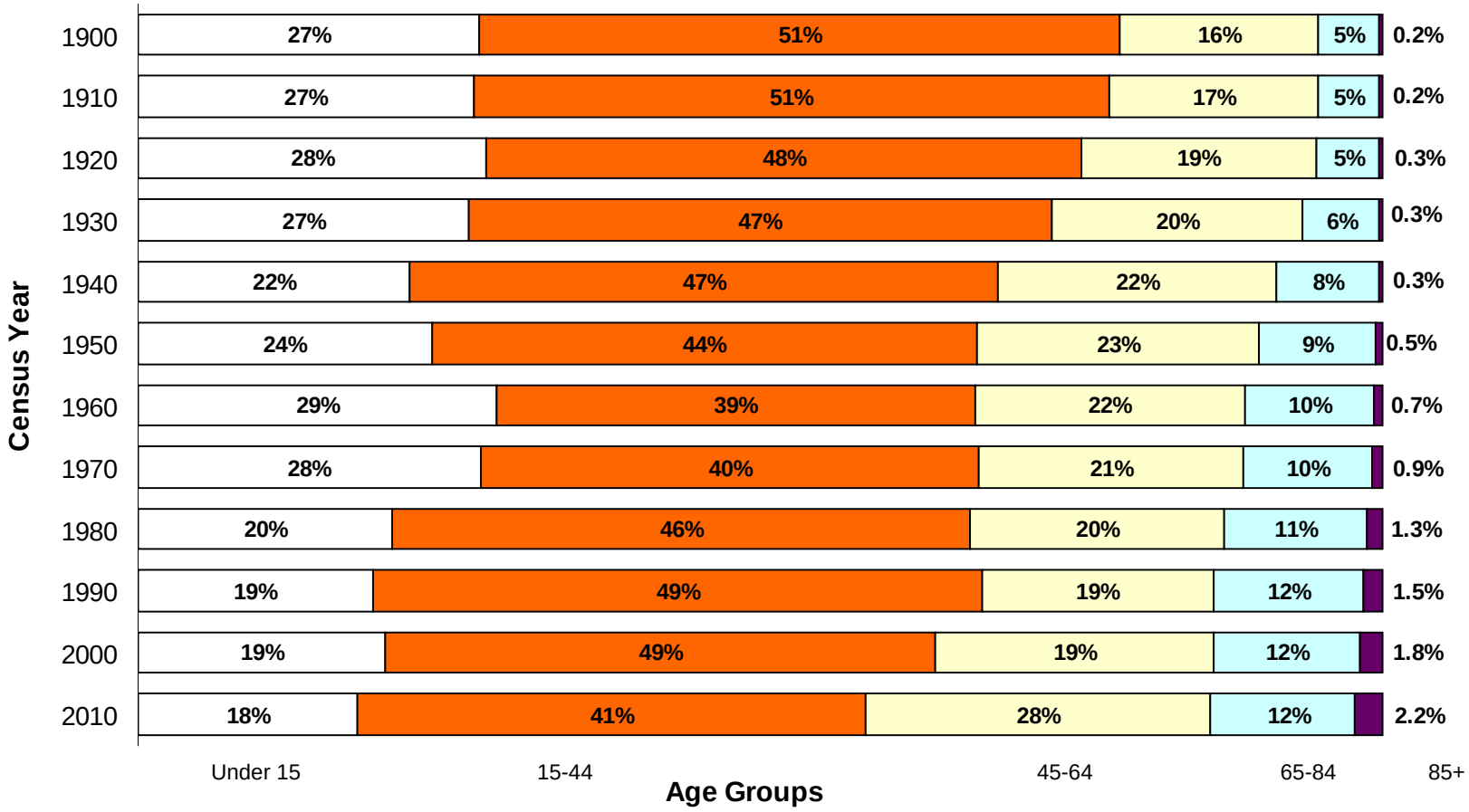


Table 3. Years of Life Remaining[1] by Race and Hispanic Ethnicity and Gender, Massachusetts: 2010

At Age:	All	Females	White non-Hispanic Females	Black non-Hispanic Females	Hispanic Females[2]	Males	White non-Hispanic Males	Black non-Hispanic Males	Hispanic Males[2]
Birth	80.8	83.2	83.0	83.2	90.9	78.3	78.3	75.0	83.1
<1	80.2	82.5	82.3	82.9	90.2	77.7	77.6	74.8	82.7
05-14	76.2	78.6	78.3	79.1	86.3	73.7	73.7	70.9	78.8
15-24	66.3	68.6	68.3	69.2	76.4	63.8	63.7	61.1	68.8
25-34	56.6	58.7	58.4	59.3	66.5	54.2	54.1	52.1	59.3
35-44	47.0	49.0	48.7	49.6	56.7	44.8	44.6	43.0	50.0
45-54	37.6	39.4	39.1	40.1	47.1	35.5	35.3	33.8	40.9
55-64	28.6	30.1	29.9	31.1	37.8	26.7	26.5	25.4	32.3
65-74	20.2	21.4	21.2	23.1	29.0	18.7	18.5	18.0	24.4
75-84	12.8	13.7	13.5	15.8	21.5	11.6	11.4	11.9	17.4
85	7.3	7.7	7.5	9.7	16.2	6.6	6.4	7.5	11.9

1. Years of Life Remaining calculated using the Greville Abridged Life Table Method (source: Dublin LI. Length of Life - A Study of the Life Table. Ronald Press Co. New York. 1949). 2. Population estimates are from 2010 bridged population file, MARS (Modified Age, Race/Ethnicity, and Sex) file. 3. There are well-known difficulties in calculating accurate mortality rates for Massachusetts smaller populations such as Asians, Native Americans and Hispanics- please use caution.

Figure 3. Changes in Age Composition of the Population, Massachusetts: 1900-2010



Source: US Census Bureau 1900-1999. Resident death data for 2000 are calculated using the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2000 (MMARS00), released October 2006. Population estimates for 2010 are from the NCHS Modified Age, Race/Ethnicity, & Sex Estimates 2009, released July, 2010.

Figure 4. Trends in Percentage of Deaths from Selected Causes, Massachusetts: 1842-2010

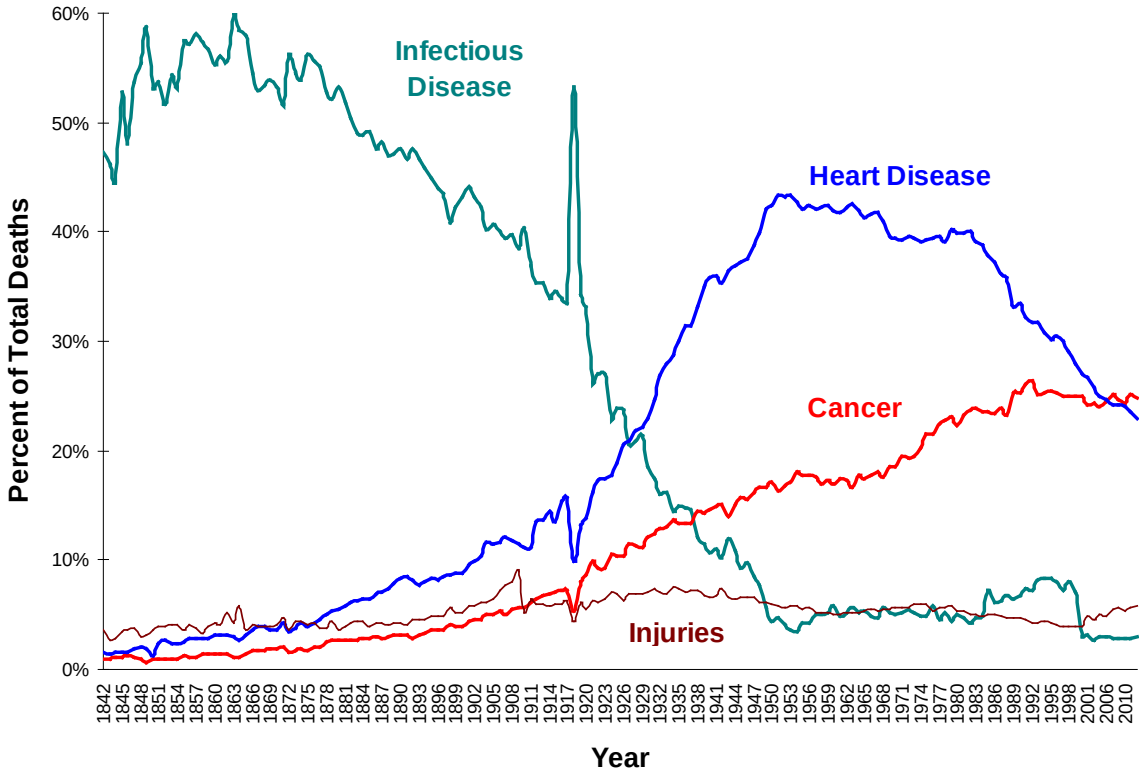
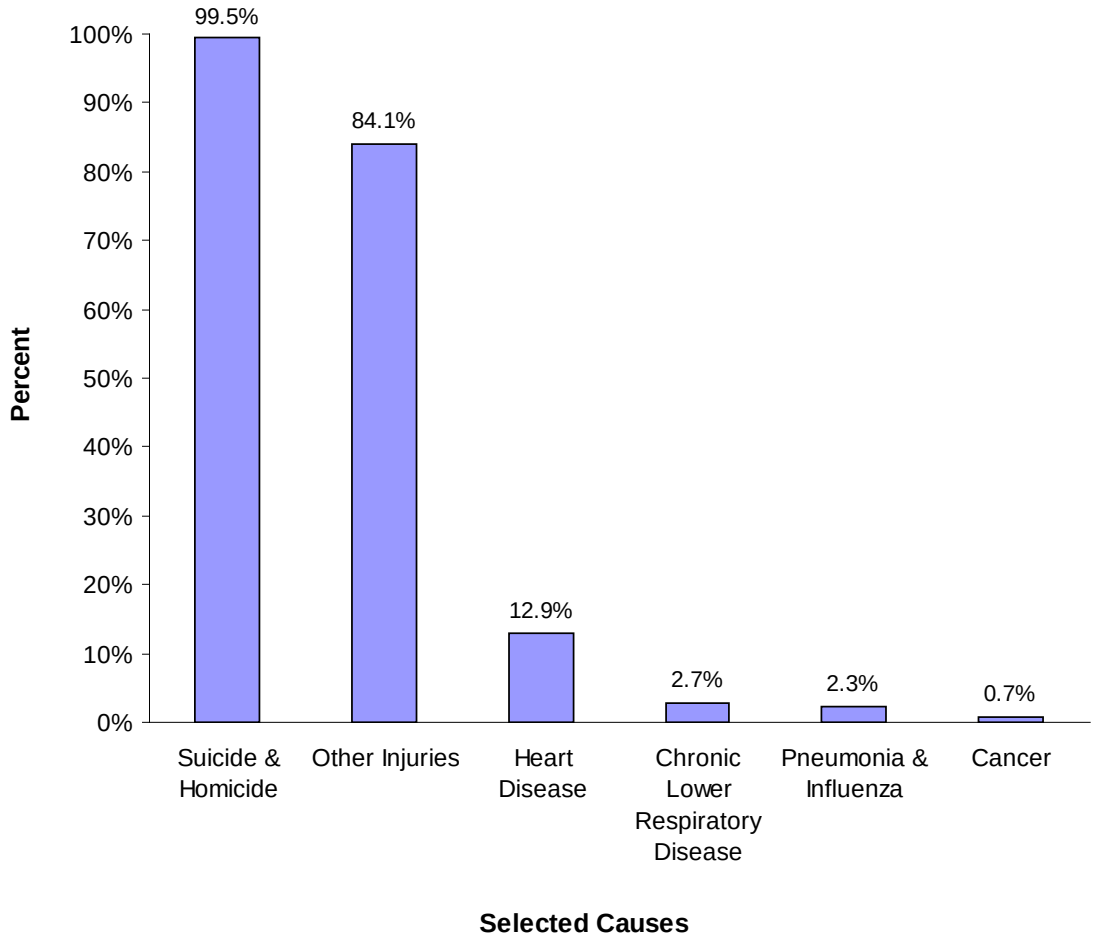


Table 4. Distribution of Deaths by Place of Occurrence, Massachusetts: 2006-2010

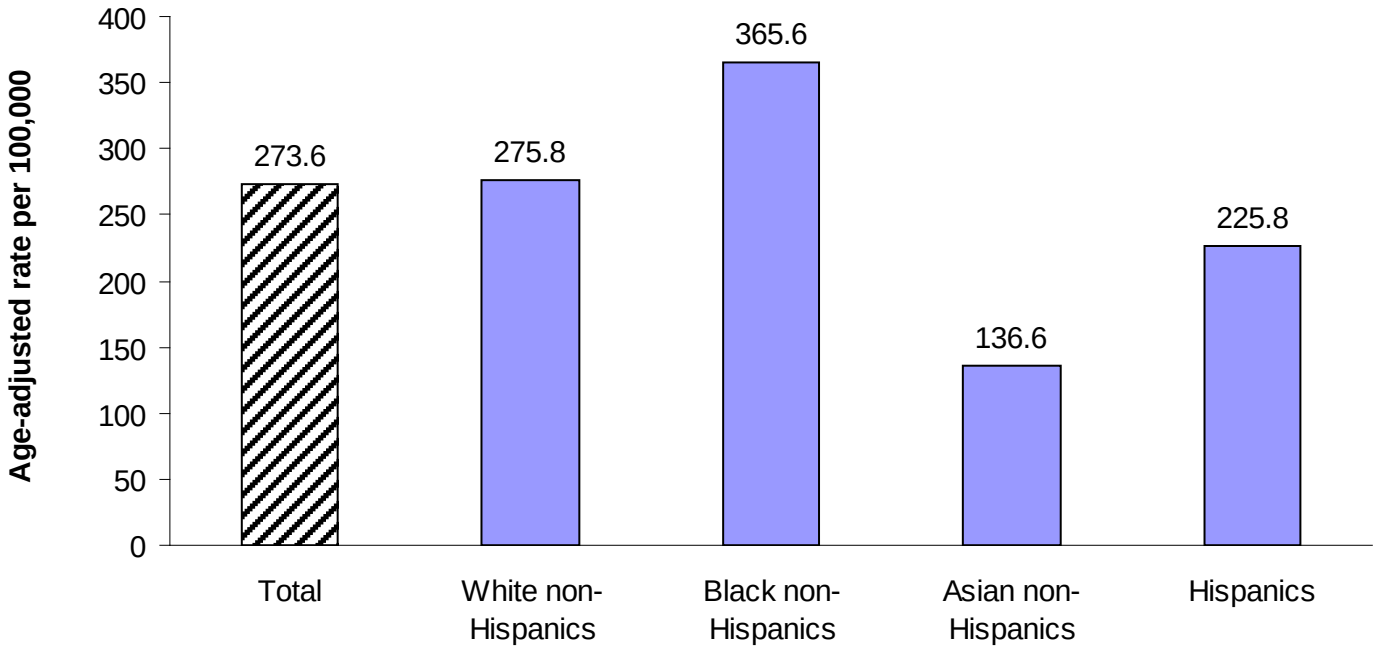
Type of Place where Death Occurred	2006		2007		2008		2009		2010	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Hospital (inpatient/outpatient)	22,512	42%	22,097	42%	22,301	42%	21,197	41%	20,668	39%
Dead on Arrival	692	1%	613	1%	585	1%	504	1%	454	1%
Nursing Home	16,205	30%	15,924	30%	16,098	30%	15,185	29%	15,261	29%
At Home	12,372	23%	12,524	24%	12,490	23%	12,940	25%	13,481	26%
Other	1,491	3%	1,498	3%	1,820	3%	2,060	4%	2,545	5%
Unknown	21	0.04%	34	0.1%	47	0.1%	29	0.1%	11	0.02%

Figure 5. Proportion of Deaths Certified by Medical Examiner[1] for Selected Causes of Death, Massachusetts: 2010



1. See the Appendix section, "Circumstance for Referral to the Office of the Chief Medical Examiner (OCME)" for a list of circumstances requiring referral to the Medical Examiner's Office.

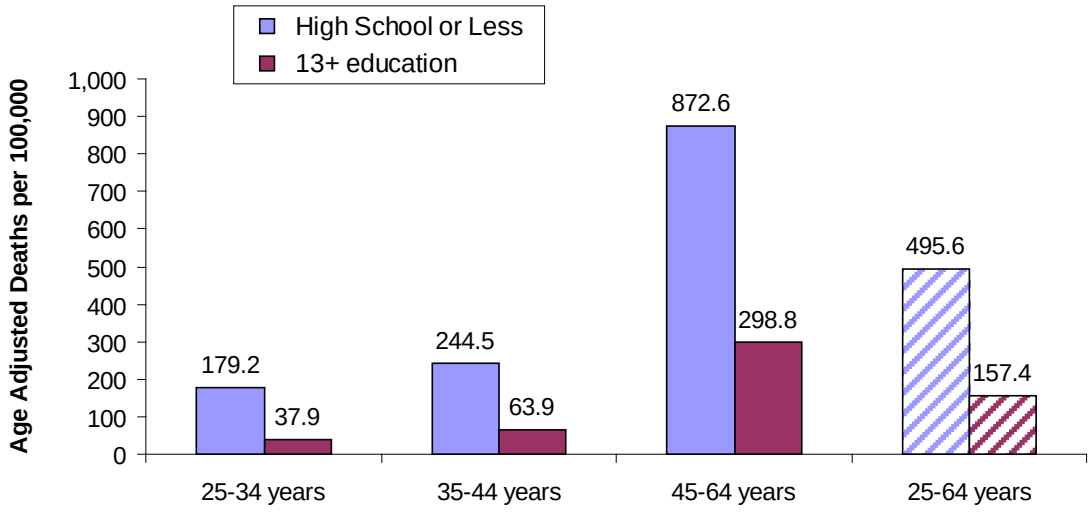
Figure 6. Premature Mortality Rate[1] (PMR) by Race and Hispanic Ethnicity, Massachusetts: 2010



1. Premature Mortality Rate is defined as deaths that occur before the age of 75 years per 100,000, age-adjusted to the 2000 US standard population under 75 years of age.

Table 5. Age-Adjusted Death Rates for Ages 25-64 Years by Educational Attainment, Massachusetts: 2010

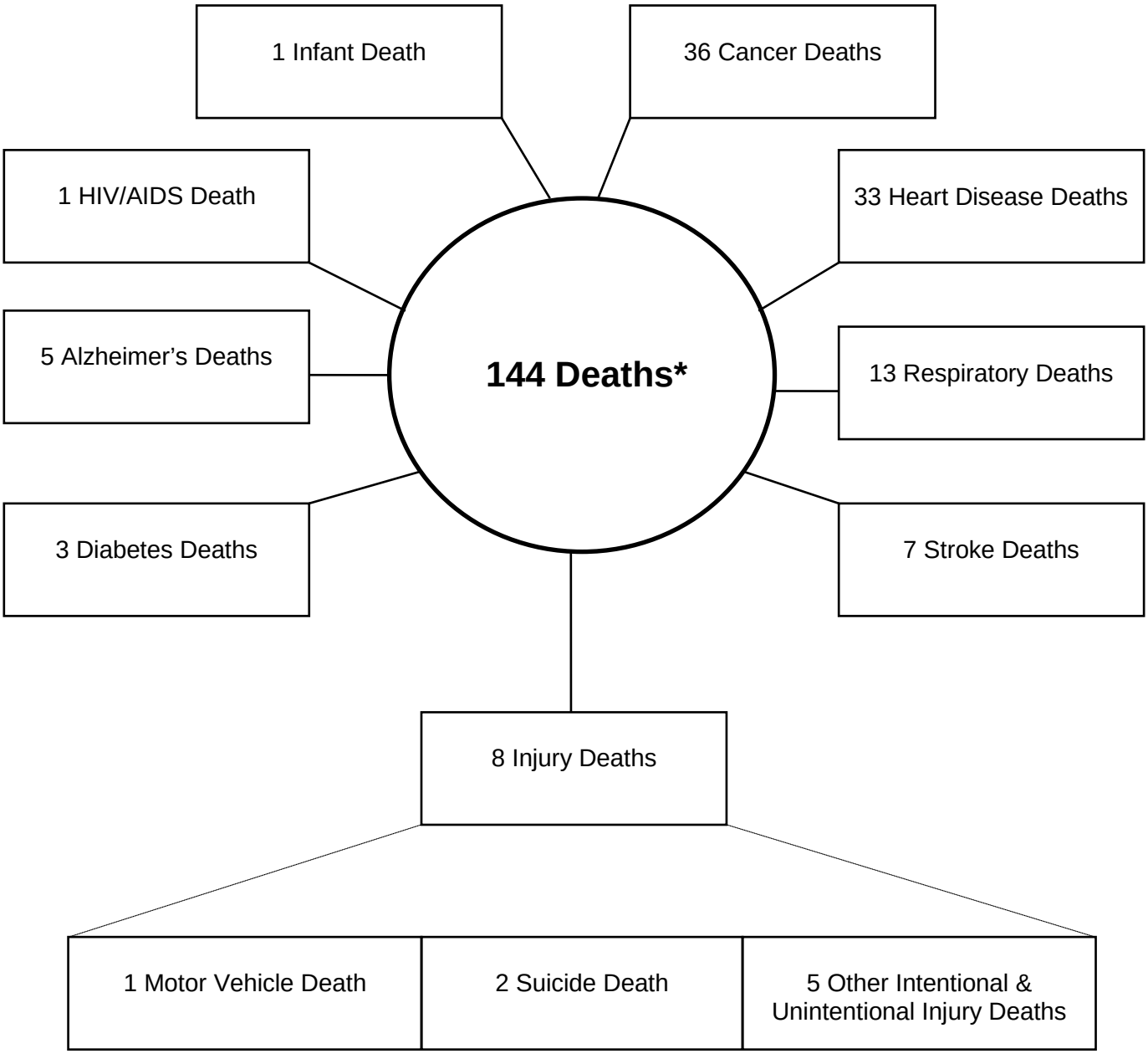
	Age-Specific Rates			Age-Adjusted Rates
	25-34 years	35-44 years	45-64 years	25-64 years
Years of school completed				
High school or less	179.2	244.5	872.6	**495.6**
13+ Education	37.9	63.9	298.8	**157.4**



Source: C15001: SEX BY AGE BY EDUCATIONAL ATTAINMENT FOR THE POPULATION 18 YEARS AND OVER - Universe: Population 18 Years And Over. 2007-2009 American Community Survey 3-Year Estimates.

Figure 7. Daily Mortality Statistics, Massachusetts: 2010

Every day in 2010, in Massachusetts there were on average:



*includes 37 deaths due to other causes

Table 6. Top Ten Leading Underlying Causes of Death by Age, Massachusetts: 2010

	Age Groups (number of deaths)								
Rank[1]	**<1 year**	**1-14 years**	**15-24 years**	**25-44 years**	**45-64 years**	**65-74 years**	**75-84 years**	**85+ years**	**All**
1	Short gestation and LBW (68)	Cancer (20)	Unintentional Injuries (166)	Unintentional Injuries (475)	Cancer (3,317)	Cancer (2,925)	Cancer (3,814)	Heart Disease (5,753)	**Cancer (12,973)**
2	Congenital malformations (50)	Unintentional Injuries (18)	Homicide (85)	Cancer (279)	Heart Disease (1,595)	Heart Disease (1,429)	Heart Disease (2,982)	Cancer (2,591)	**Heart Disease (11,996)**
3	SIDS (34)	Homicide (10)	Suicide (78)	Heart Disease (214)	Unintentional Injuries (559)	Chronic Lower Respiratory Disease (460)	Chronic Lower Respiratory Disease (848)	Stroke (1,291)	**Stroke (2,504)**
4	Pregnancy Complications (32)	Congenital malformations (9)	Cancer (22)	Suicide (211)	Chronic liver disease (331)	Stroke (283)	Stroke (679)	Alzheimer's Disease (1,194)	**Chronic Lower Respiratory Disease (2,380)**
5	Complications of placenta (27)	ill-defined conditions-signs and symptoms (9)	Heart Disease (17)	Homicide (80)	Chronic Lower Respiratory Disease (245)	Diabetes (192)	Alzheimer's Disease (470)	Chronic Lower Respiratory Disease (810)	**Unintentional Injuries (2,043)**
6	Bacterial sepsis of newborn (9)	In situ neoplasms (5)	Ill-defined conditions-signs and symptoms (12)	Ill-defined conditions-signs and symptoms (52)	Suicide (221)	Nephritis (170)	Nephritis (434)	Influenza & Pneumonia (701)	**Alzheimer's Disease (1,770)**
7	Respiratory distress (8)	Heart Disease (3)	Congenital malformations (11)	Chronic liver disease (41)	Diabetes (216)	Unintentional Injuries (140)	Influenza & Pneumonia (340)	Nephritis (606)	**Nephritis (1378)**
8	Circulatory System (7)	Perinatal conditions (3)	Injuries of Undetermined Intent (8)	Stroke (34)	Stroke (207)	Septicemia (135)	Diabetes (289)	Unintentional Injuries (417)	**Influenza & Pneumonia (1,285)**
9	Pulmonary hemorrhage (7)	Suicide (3)	Stroke (4)	HIV/AIDS (28)	Nephritis (143)	Influenza & Pneumonia (122)	Unintentional Injuries (263)	Ill-defined conditions-signs and symptoms (367)	**Diabetes (1,024)**
10	Intrauterine Hypoxia (5)	Injuries of Undetermined Intent (3)	Influenza & Pneumonia (4)	Diabetes (23)	Septicemia (112)	Chronic liver disease (117)	Septicemia (217)	Diabetes (302)	**Septicemia (758)**
All Causes	**319**	**113**	**453**	**1,823**	**8,753**	**7,423**	**13,639**	**19,888**	**52,420**

1. Ranking based on number of deaths. The number of deaths is shown in parentheses.

Note: Injuries are subdivided into 4 separate categories by intent (unintentional, homicide, suicide) and injuries of undetermined intent (deaths where investigation has not determined whether injuries were accidental or purposely inflicted).

Table 7. Leading Underlying Causes of Death, Numbers and Age-Specific Rates by Gender, Massachusetts: 2010

		Total		Female		Male	
Age	**Cause of death[1]**	**Number**	**Rate[2]**	**Number**	**Rate[2]**	**Number**	**Rate[2]**
1-14 years	**TOTAL**	**113**	**10.4**	**41**	**7.7**	**72**	**13.0**
	Cancer	20	1.8	7	1.3	13	2.3
	Unintentional Injuries	18	1.7	8	1.5	10	1.8
	Congenital malformations	10	0.9	1	--[5]	9	1.6
	Heart Disease	9	0.8	5	0.9	4	--[5]
15-24 years	**TOTAL**	**453**	**48.3**	**114**	**24.4**	**339**	**72.0**
	Unintentional Injuries	166	17.7	36	7.7	130	27.6
	Homicide	85	9.1	12	2.6	73	15.5
	Suicide	78	8.3	20	4.3	58	12.3
	Cancer	22	2.3	7	1.5	15	3.2
25-44 years	**TOTAL**	**1,823**	**105.2**	**608**	**68.8**	**1,215**	**143.1**
	Unintentional Injuries	475	27.4	119	13.5	356	41.9
	Cancer	279	16.1	147	16.6	132	15.5
	Heart Disease	214	12.4	61	6.9	153	18.0
	Suicide	211	12.2	41	4.6	170	20.0
45-64 years	**TOTAL**	**8,753**	**482.0**	**3,348**	**357.2**	**5,405**	**615.3**
	Cancer	3,317	182.7	1,590	169.6	1,727	196.6
	Heart Disease	1,595	87.8	406	43.3	1,189	135.3
	Unintentional Injuries	559	30.8	147	15.7	412	46.9
	Chronic Liver disease	331	18.2	82	8.7	249	28.3
65+ years[4]	**TOTAL**	**40,950**	**4,536.3**	**23,124**	**4,393.7**	**17,826**	**4,735.6**
	Heart Disease	10,164	1,125.9	5,625	1,068.8	4,539	1,205.8
	Cancer	9,330	1,033.5	4,640	881.6	4,690	1,245.9
	Stroke	2,253	249.6	1,445	274.6	808	214.7
	Chronic Lower Resp. Disease[3]	2,118	234.6	1,279	243.0	839	222.9

1. Cause of Death classified using ICD-10 ranked based on number of deaths for all persons at specific age group. See Appendix for a list of ICD-10 codes. 2. Number of deaths per 100,000 residents in each age group. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 4. See Table 8 for leading causes of death for detailed age groups for persons ages 65+ years. 5. Calculations based on values 1-4 are excluded.

Table 8. Leading Underlying Causes of Death, Numbers and Age-Specific Rates (Ages 65 and older) by Gender, Massachusetts: 2010

		Total		Female		Male	
Age	**Cause of death[1]**	**Number**	**Rate[2]**	**Number**	**Rate[2]**	**Number**	**Rate[2]**
65-74 years	**Total**	**7,423**	**1,626.2**	**3,285**	**1,327.0**	**4,138**	**1,980.7**
	Cancer	2,925	640.8	1,355	547.4	1,570	751.5
	Heart Disease	1,429	313.1	518	209.3	911	436.1
	Chronic Lower Resp. Disease[3]	460	100.8	249	100.6	211	101.0
	Stroke	283	62.0	134	54.1	149	71.3
75-84 years	**Total**	**13,639**	**4,530.3**	**6,817**	**3,817.3**	**6,822**	**5,569.8**
	Cancer	3,814	1,266.8	1,860	1,041.5	1,954	1,595.3
	Heart Disease	2,982	990.5	1,386	776.1	1,596	1,303.0
	Chronic Lower Resp. Disease[3]	848	281.7	499	279.4	349	284.9
	Stroke	679	225.5	388	217.3	291	237.6
85+ years	**Total**	**19,888**	**13,697.1**	**13,022**	**12,999.4**	**6,866**	**15,249.3**
	Heart Disease	5,753	3,962.1	3,721	3,714.5	2,032	4,513.0
	Cancer	2,591	1,784.4	1,425	1,422.5	1,166	2,589.7
	Stroke	1,291	889.1	923	921.4	368	817.3
	Alzheimer's Disease	1,194	822.3	947	945.4	247	548.6

1. Cause of Death classified according to ICD-10 ranked based on number of deaths for all persons at specific age group. See Appendix for a list of-10 codes. 2. Number of deaths per 100,000 residents in each age group. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Table 9. Leading Causes of Death[1] and Age-Adjusted Death Rates by Race and Hispanic Ethnicity, Massachusetts: 2010

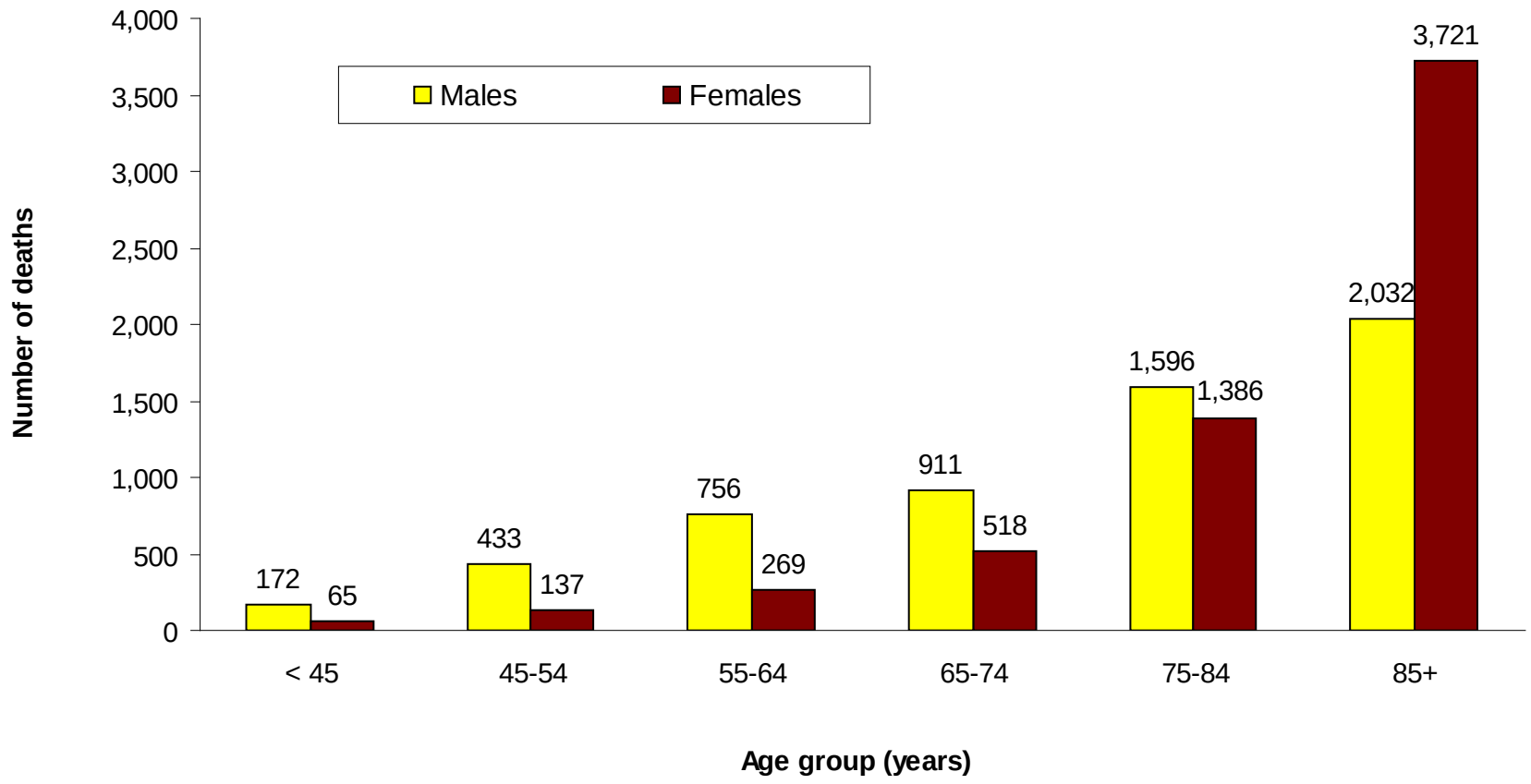
White non-Hispanic[2]			Black non-Hispanic[2]			Asian non-Hispanic[2]			Hispanic		
Cause[3]	**#**	**Rate[4]**	**Cause**	**#**	**Rate**	**Cause**	**#**	**Rate**	**Cause**	**#**	**Rate**
Total	**48,010**	**684.4**	**Total**	**2,278**	**702.6**	**Total**	**759**	**364.8**	**Total**	**1,308**	**443.9**
Cancer	11,831	174.9	Cancer	568	174.3	Cancer	258	111.8	Cancer	298	103.9
Heart Disease	11,188	152.9	Heart Disease	487	159.7	Heart Disease	109	57.1	Heart Disease	200	76.9
Chronic Lower Resp. Dis[5]	2,281	32.7	Stroke	127	42.9	Stroke	56	30.8	Unintentional Injuries[6]	95	19.7
Stroke	2,260	30.5	Unintentional Injuries[6]	102	26.2	Nephritis	34	18.7	Stroke	59	26.0
Unintentional Injuries[6]	1,809	30.1	Homicide	83	16.5	Unintentional Injuries[6]	33	14.0	Homicide	50	6.6
Alzheimer's Disease	1,686	21.8	Diabetes	72	21.8	Alzheimer's Disease	18	11.6	Diabetes	46	18.1
Nephritis	1,232	17.1	Nephritis	70	23.0	Perinatal conditions	18	4.9	Nephritis	37	17.9
Influenza & Pneumonia	1,222	16.5	Chronic Lower Resp. Dis[5]	50	16.9	Suicide	16	4.1	Perinatal conditions	37	4.1
Diabetes	892	12.9	Septicemia	44	14.6	Diabetes	14	7.3	Chronic liver disease	35	10.0
Septicemia	680	9.7	Perinatal conditions	44	9.2	Septicemia	13	7.0	Chronic Lower Resp. Dis[5]	33	15.3

Total

Cause	#	Rate
Total	**52,420**	**672.7**
Cancer	12,973	171.0
Heart Disease	11,996	149.4
Stroke	2,504	31.2
Chronic Lower Resp. Dis[5]	2,380	31.0
Unintentional Injuries[6]	2,043	28.3
Alzheimer's Disease	1,770	21.2
Nephritis	1,378	17.4
Influenza & Pneumonia	1,285	15.9
Diabetes	1,024	13.3
Septicemia	758	9.8

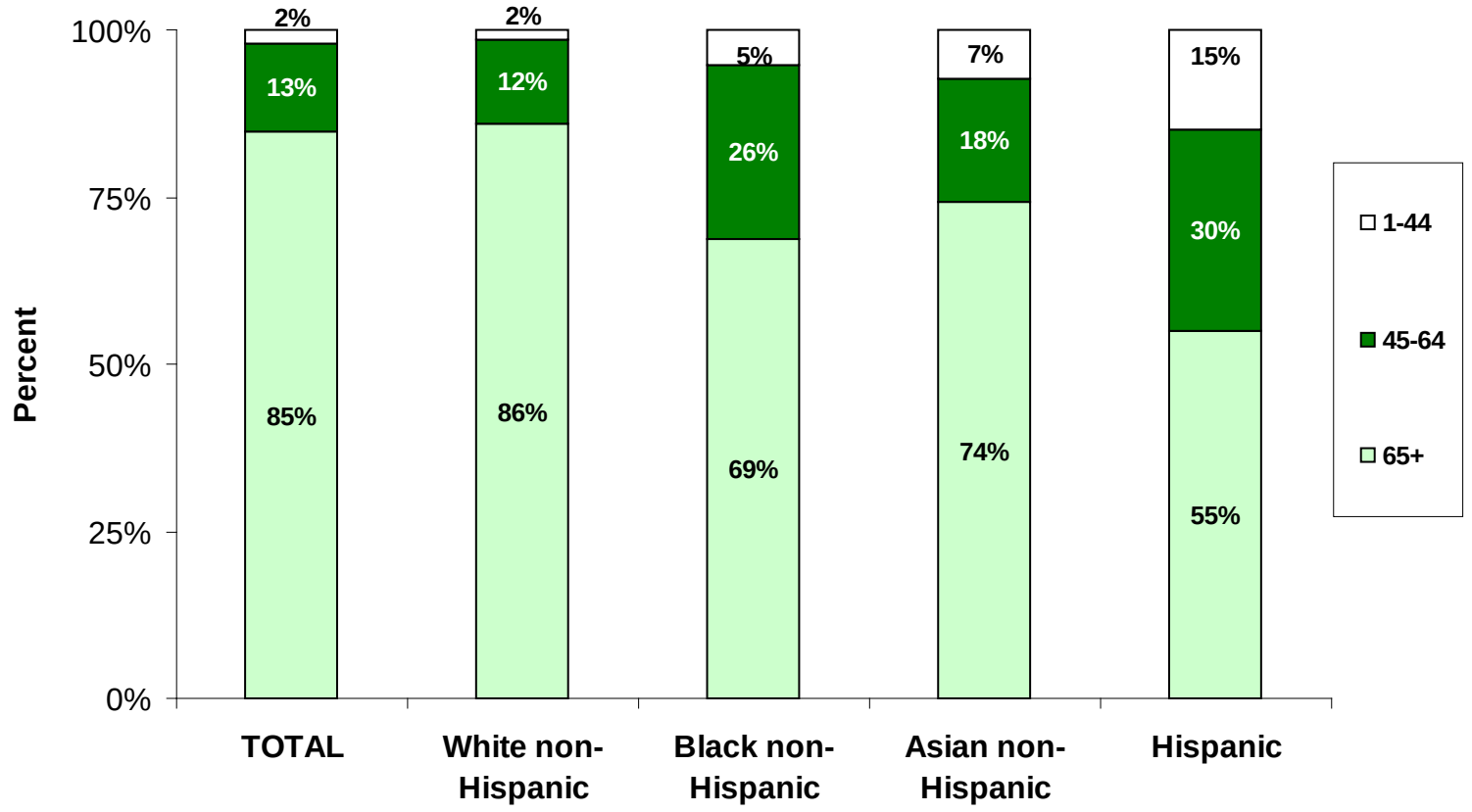
1. Ranking based on number of deaths. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 3. Underlying Cause of Death based on ICD-10 (Please see Appendix for a list of ICD-10 codes used). 4. All rates are age-adjusted per 100,000 residents using the 2000 US standard population. 5. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 6. Unintentional injuries such as motor vehicle-related and other transportation related deaths, falls, fires, and drownings that were not intended to occur.

Figure 8. Number of Heart Disease[1] Deaths by Age Group and Gender, Massachusetts: 2010



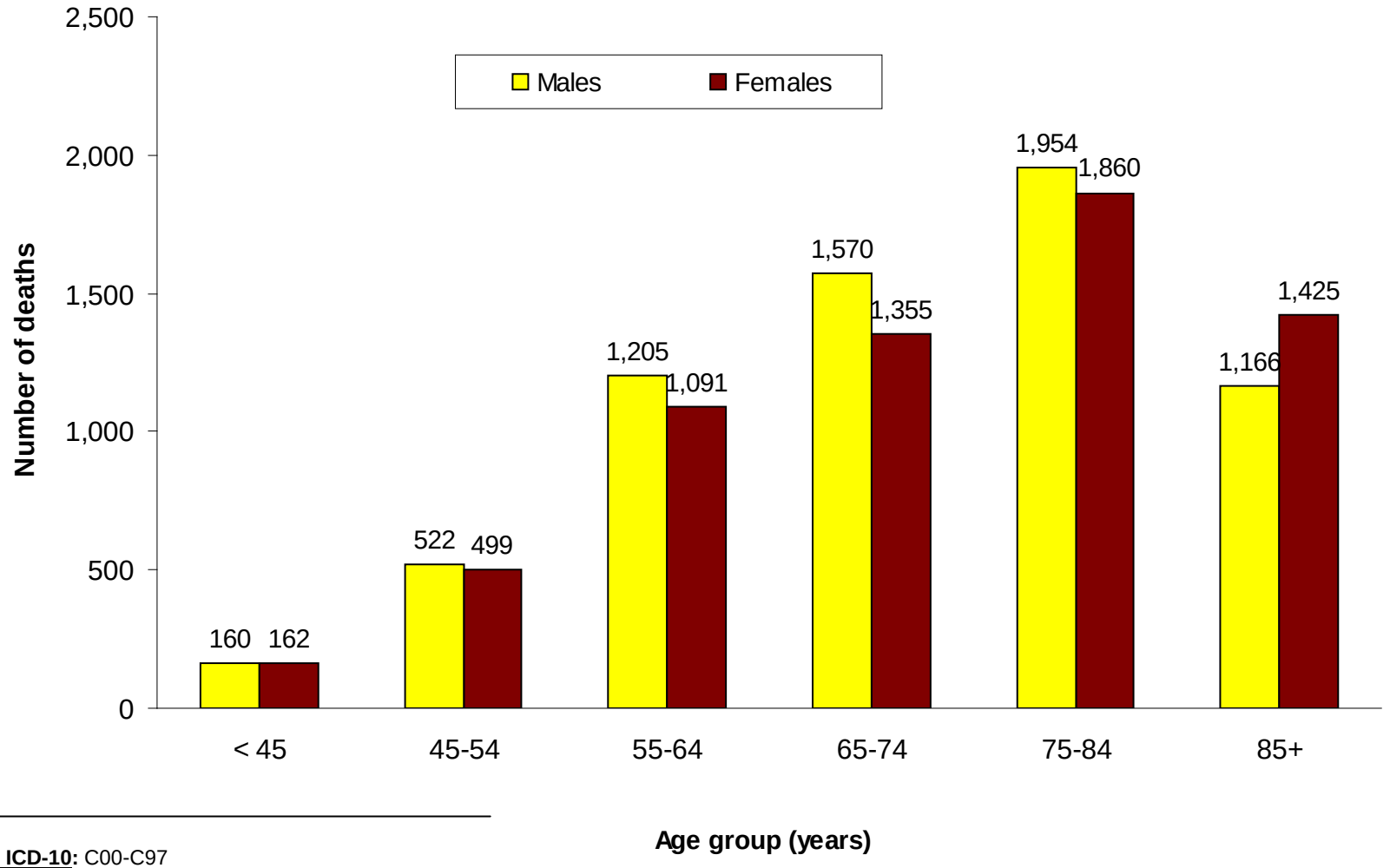
1. **ICD-10:** I00-I09, I11, I13, I20-I51

Figure 9. Age Distribution by Race and Ethnicity for Heart Disease[1] Deaths, Massachusetts: 2010



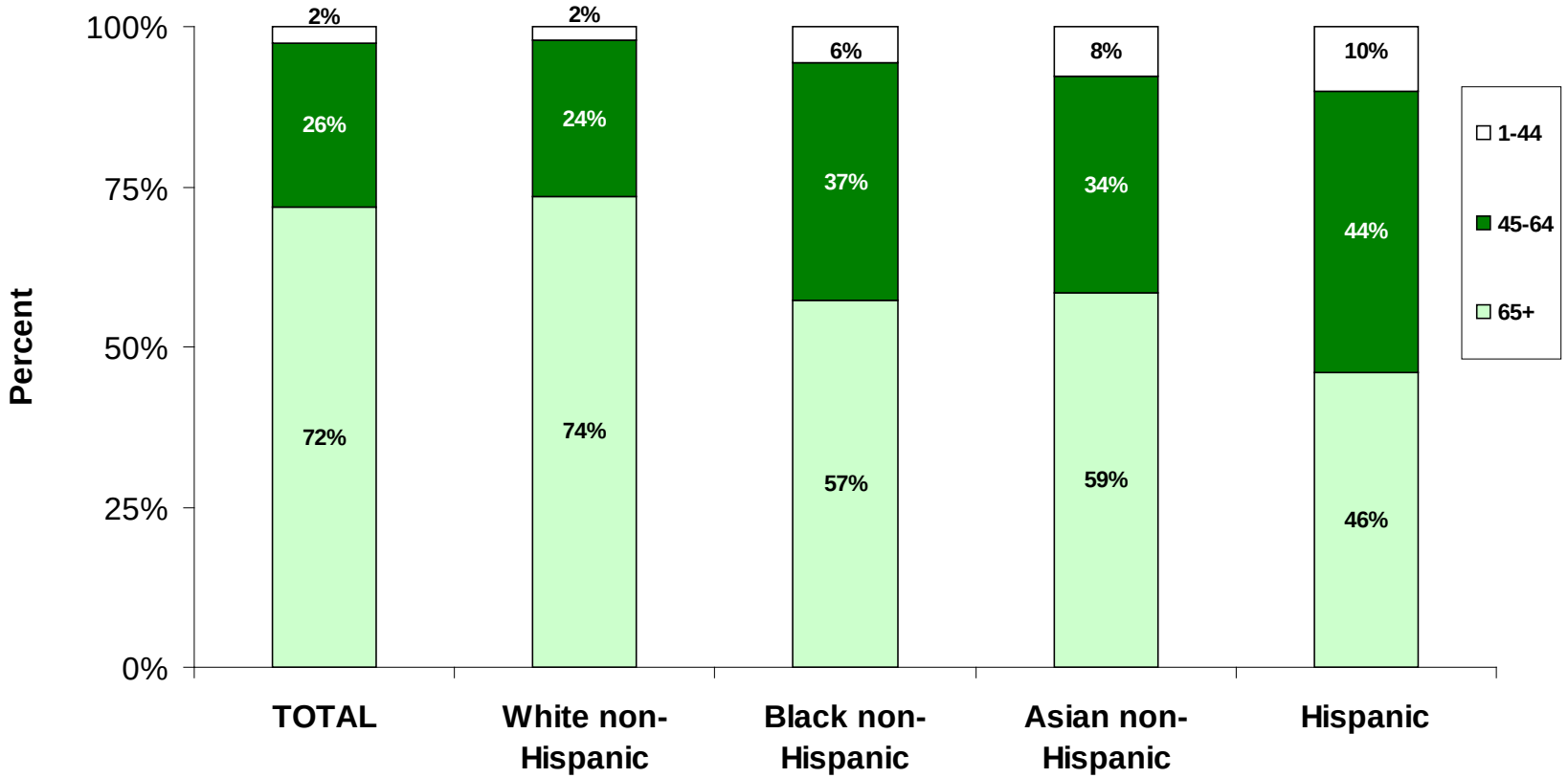
1. **ICD-10:** I00-I09, I11, I13, I20-I51

Figure 10. Number of Cancer[1] Deaths by Age Group and Gender, Massachusetts: 2010



1. **ICD-10:** C00-C97

Figure 11. Age Distribution by Race and Ethnicity for Cancer[1] Deaths, Massachusetts: 2010



1. **ICD-10:** C00-C97

Table 10. Heart Disease and Cancer Deaths by Race and Gender, Age-Adjusted Rates, Massachusetts: 1999-2010

Heart Disease[1]

Year	White non-Hispanic[2] Male	White non-Hispanic[2] Female	White non-Hispanic[2] Total	Black non-Hispanic[2] Male	Black non-Hispanic[2] Female	Black non-Hispanic[2] Total
1999	289.8	178.4	224.3	296.5	211.5	248.0
2000	282.4	174.4	219.3	235.1	203.6	221.9
2001	265.9	174.0	213.4	295.2	181.3	228.6
2002	254.7	163.5	202.3	242.2	177.6	205.9
2003	250.3	160.2	198.5	272.1	188.5	223.9
2004	233.1	150.3	185.7	268.1	148.3	198.8
2005	220.6	139.1	174.9	233.7	174.5	199.8
2006	216.5	138.8	172.2	222.3	127.6	165.3
2007	216.2	134.2	168.5	233.5	142.7	180.8
2008	217.1	133.1	167.9	226.7	151.7	181.7
2009	211.3	122.6	158.4	217.3	157.3	181.6
2010	197.5	119.6	152.9	222.3	119.4	159.7

Year	Asian non-Hispanic[2] Male	Asian non-Hispanic[2] Female	Asian non-Hispanic[2] Total	Hispanic Male	Hispanic Female	Hispanic Total
1999	119.6	73.7	94.7	143.4	83.5	108.2
2000	111.2	65.5	85.6	122.1	106.6	115.6
2001	113.5	62.6	85.1	148.7	110.0	126.9
2002	94.6	69.5	79.9	174.1	101.2	131.9
2003	115.2	65.0	87.6	124.8	96.2	109.7
2004	56.9	54.3	56.1	129.9	77.4	100.3
2005	77.5	48.2	61.3	118.5	83.7	99.2
2006	73.6	70.0	72.8	124.2	84.9	102.3
2007	83.3	52.9	67.4	124.9	61.8	88.3
2008	86.0	51.7	66.3	93.2	66.1	78.3
2009	69.6	51.3	60.1	111.6	62.7	83.8
2010	64.8	50.4	57.1	90.8	66.8	76.9

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation.

Table 10 (continued). Heart Disease and Cancer Deaths by Race and Gender, Age-Adjusted Rates, Massachusetts: 1999-2010

Cancer[1]

Year	White non-Hispanic[2] Male	White non-Hispanic[2] Female	White non-Hispanic[2] Total	Black non-Hispanic[2] Male	Black non-Hispanic[2] Female	Black non-Hispanic[2] Total
1999	263.4	174.3	207.7	337.2	195.7	251.5
2000	258.7	179.0	209.0	348.1	167.4	237.8
2001	249.2	175.8	203.5	264.7	176.4	212.1
2002	245.7	175.3	202.2	293.5	179.5	224.3
2003	237.1	169.4	195.7	304.5	199.0	238.7
2004	230.4	168.4	192.5	277.6	155.7	200.1
2005	226.1	163.2	188.1	264.2	168.1	204.1
2006	234.9	161.5	190.0	265.6	180.9	212.4
2007	226.0	156.5	183.2	270.7	159.7	201.7
2008	221.4	154.8	180.6	255.0	163.7	197.9
2009	212.7	157.0	177.7	244.7	164.7	193.1
2010	211.9	150.8	174.9	244.0	131.3	174.3

Year	Asian non-Hispanic[2] Male	Asian non-Hispanic[2] Female	Asian non-Hispanic[2] Total	Hispanic Male	Hispanic Female	Hispanic Total
1999	162.8	116.9	136.7	141.8	92.5	113.8
2000	104.7	92.1	99.0	151.9	104.5	123.8
2001	98.3	105.6	103.1	142.9	97.4	116.4
2002	145.8	90.0	114.3	144.3	103.3	120.6
2003	134.6	87.4	109.3	110.0	76.6	90.0
2004	109.5	79.7	93.1	125.6	82.5	100.4
2005	138.9	79.5	106.1	118.2	97.3	105.7
2006	126.0	91.7	107.2	119.9	74.3	93.7
2007	124.4	76.4	98.4	125.0	90.0	104.7
2008	132.1	89.3	109.0	141.2	83.1	107.8
2009	123.2	71.0	94.3	129.9	98.2	111.8
2010	128.0	98.1	111.8	129.9	87.2	103.9

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation.

Table 11. Number and Age-Adjusted Rates of Cancer Deaths by Selected Causes and Gender, Massachusetts: 2010

Cause of Death[1]	ICD-10 Code	Total		Female		Male	
		#	Rate[2,3]	#	Rate	#	Rate
Total Cancer Deaths	**C00-C97**	**12,973**	**171.0**	**6,193**	**121.3**	**6,422**	**208.9**
Bladder	C67	422	5.5	127	2.7	295	9.9
Brain and nervous system	C70-C72	288	3.8	119	2.8	169	5.0
Cervix	C53	50	1.3	50	1.3	NA	NA
Colorectal	C18-C21	1,149	14.9	603	13.0	546	17.5
Esophagus	C15	359	4.8	78	1.8	281	8.6
Female breast	C50[4]	823	19.1	823	19.1	NA	NA
Hodgkin disease	C81	32	0.5	12	0.3	20	0.6
Kidney and other urinary organs	C64, C65	219	2.8	86	1.9	133	4.1
Leukemia	C91-C95	509	6.8	223	5.0	286	9.3
Lung	C33, C34	3,546	47.3	1,743	40.9	1,803	56.6
Melanoma of the skin	C43	221	3.0	78	1.8	143	4.5
Multiple myeloma	C88, C90	238	3.1	115	2.6	123	3.9
Non-Hodgkin lymphoma	C82-C85	448	5.9	214	4.7	234	7.6
Ovary	C56	308	7.1	308	7.1	NA	NA
Pancreas	C25	847	11.2	450	10.2	397	12.3
Prostate	C61	628	21.2	NA	NA	628	21.2
Stomach	C16	253	3.3	117	2.6	136	4.3
Uterus	C54, C55	186	4.3	186	4.3	NA	NA
All other cancers	Residual	2,447	32.3	1,062	24.1	1,385	43.4

1. Common terms are used to describe the causes of cancer deaths. For detailed terminology of cancer sites, please see the ICD-10 code list in the Appendix. 2. All rates are age-adjusted by the direct method using the 2000 US standard population. Rates are per 100,000 population. 3. The total resident population is used to calculate all "Total Rates" except for ICD-10 codes C50, C53-C56, which are based on the total female population, and ICD-10 C61, which is based on the total male population. 4. Includes only female breast cancer.

Table 12. Selected Causes of Cancer Deaths by Age, Massachusetts: 2010

Age	Cause of death[1]	ICD-10 Code	Number	Age-specific rate[2]
1-14 years	**Total**		**20**	**1.8**
	Brain and nervous system	C70-C72	5	0.5
	Leukemia	C91-C95	2	--[3]
	Hodgkin's disease	C81	1	--[3]
15-24 years	**Total**		**22**	**2.3**
	Leukemia	C91-C95	3	--[3]
	Brain and nervous system	C70-C72	2	--[3]
	Esophagus	C15	1	--[3]
	Colorectal	C18-C21	1	--[3]
25-44 years	**Total**		**279**	**16.1**
	Female breast cancer	C50[4]	55	6.2
	Colorectal	C18-C21	26	1.5
	Lung	C33, C34	24	1.4
	Brain and nervous system	C70-C72	18	1.0
45- 64 years	**Total**		**3,317**	**182.7**
	Lung	C33, C34	915	50.4
	Female breast cancer	C50[4]	294	31.4
	Colorectal	C18-C21	252	13.9
	Pancreas	C25	232	12.8
65+ years	**Total**		**9,330**	**1,033.5**
	Lung	C33, C34	2,606	288.7
	Colorectal	C18-C21	870	96.4
	Pancreas	C25	605	67.0
	Prostate	C61	570	151.4
65-74 years	**Total**		**2,925**	**640.8**
	Lung	C33, C34	1,016	222.6
	Colorectal	C18-C21	201	44.0
	Pancreas	C25	201	44.0
	Female breast cancer	C50[4]	152	61.4
75-84 years	**Total**		**3,814**	**1,266.8**
	Lung	C33, C34	1,103	366.4
	Colorectal	C18-C21	338	112.3
	Pancreas	C25	256	85.0
	Prostate	C61	231	188.6
85+ years	**Total**		**2,591**	**1,784.4**
	Lung	C33, C34	487	335.4
	Colorectal	C18-C21	331	228.0
	Prostate	C61	241	535.3
	Female breast cancer	C50[4]	170	169.7

1. Common terms are used to describe causes of cancer death. For detailed terminology, please see the ICD-10 codes listed in the Appendix. 2. Number of deaths per 100,000 residents in each age group. 3. Calculations based on fewer than five events are excluded. 4. Calculation based on female population in specified age group. 5. Calculation based on male population in specified age group.

Table 13. Leading Causes of Cancer Deaths and Age-Adjusted Rates by Race and Hispanic Ethnicity, Massachusetts: 2010

White non-Hispanic[1]			Black non-Hispanic[1]			Asian non-Hispanic[1]			Hispanic		
Cause[2]	**#**	**Rate[3]**	**Cause**	**#**	**Rate**	**Cause**	**#**	**Rate**	**Cause**	**#**	**Rate**
Lung	3,316	49.7	Lung	117	35.1	Lung	62	29.4	Lung	47	17.8
Colorectal	1,035	14.9	Colorectal	64	19.3	Colorectal	20	8.6	Pancreas	30	12.2
Pancreas	762	11.3	Prostate	47	48.5	Female Breast[4]	15	12.2	Colorectal	29	10.3
Female Breast[4]	747	19.8	Pancreas	43	13.4	Stomach	12	4.7	Female Breast[4]	19	7.8
Prostate[5]	557	20.6	Female Breast[4]	40	19.8	Pancreas	12	5.8	Leukemia	18	5.7
Total Cancer	**11,831**	**174.9**	**Total Cancer**	**568**	**174.3**	**Total Cancer**	**258**	**111.8**	**Total Cancer**	**298**	**103.9**

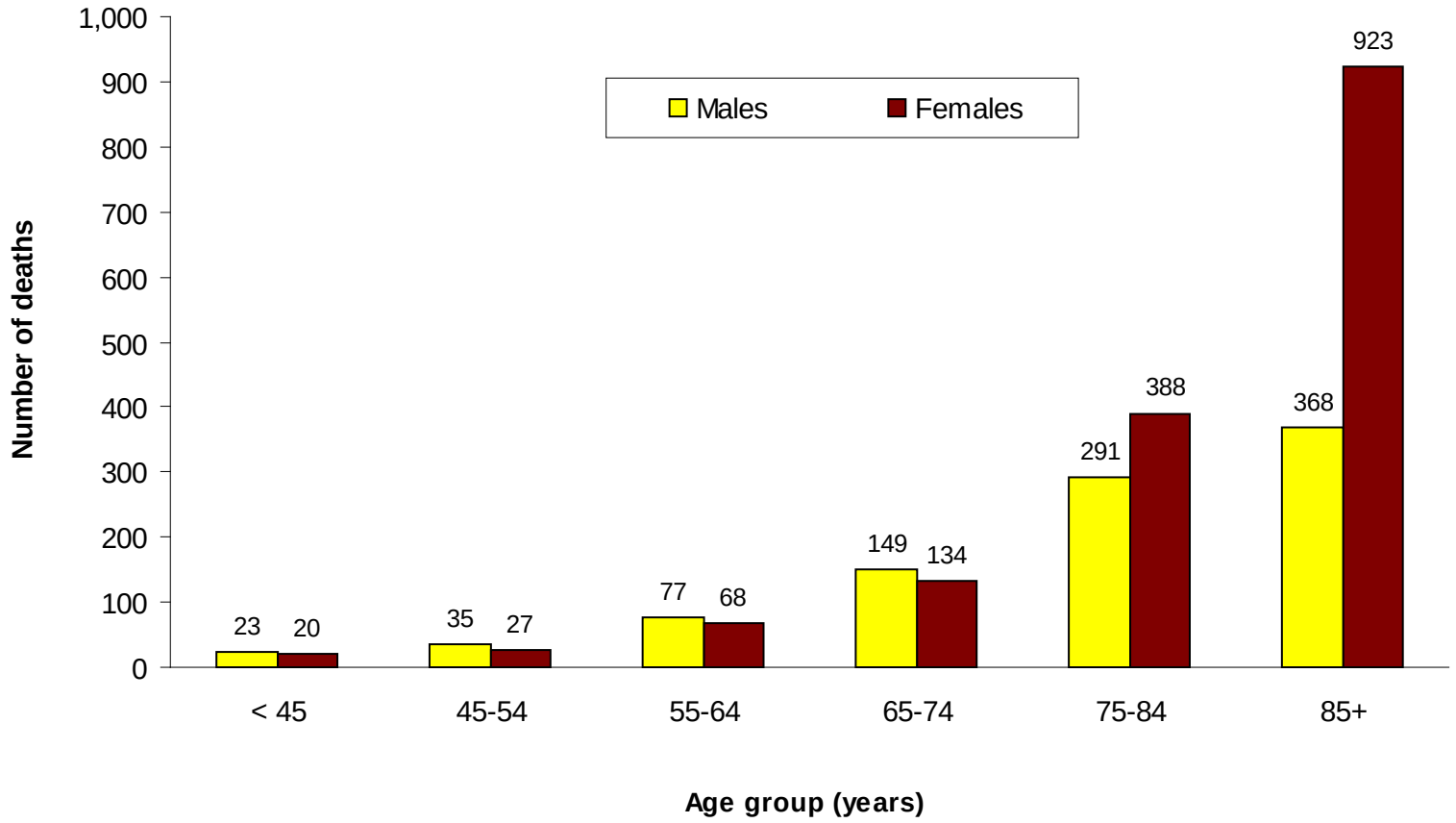
1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 2. ICD-10 codes used. Please see the ICD-10 codes listing in the Appendix for detailed terminology. 3. All rates are age-adjusted by the direct method using the 2000 US standard population. Rates are per 100,000 population. 4. Calculation based on female population. 5. Calculation based on male population.

Table 14. Number, Percent, and Age-Adjusted Rates of Stroke Deaths by Type and Gender, Massachusetts: 2010

Cause of Death	ICD-10 Code	Total			Female			Male		
		#	%	Rate[1]	#	%	Rate[1]	#	%	Rate[1]
Total Stroke Deaths	**I60-I69**	**2,504**	**100%**	**31.2**	**1,560**	**100%**	**30.4**	**944**	**100%**	**31.6**
Subarachnoid hemorrhage	I60	112	4.5%	1.5	63	4.0%	1.5	49	5.2%	1.5
Intracerebral and other intracranial hemorrhage	I61-I62	563	22.5%	7.3	309	19.8%	6.7	254	26.9%	8.3
Cerebral infarction	I63	164	6.5%	2.0	105	6.7%	2.0	59	6.3%	2.0
Stroke, not specified	I64	1,210	48.3%	14.7	798	51.2%	14.9	412	43.6%	14.0
Other	I67, I69	455	18.2%	5.6	285	18.3%	5.3	170	18.0%	5.7

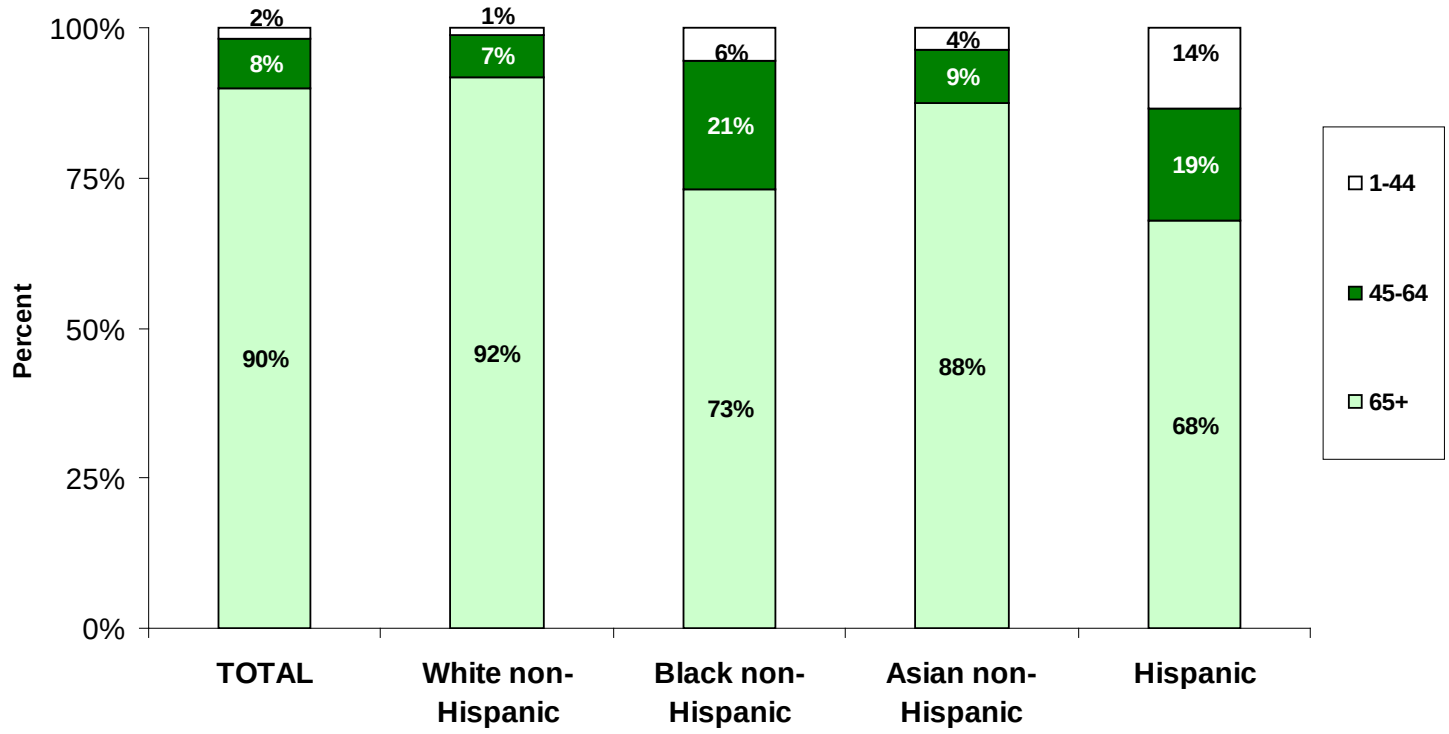
1. All rates are age-adjusted to the 2000 US Standard Population. Rates are per 100,000 population.

Figure 12. Number of Stroke[1] Deaths by Age Group and Gender, Massachusetts: 2010



1. **ICD-10:** I60-I69

Figure 13. Age Distribution by Race and Ethnicity for Stroke[1] Deaths, Massachusetts: 2010



1. **ICD-10:** I60-I69

Table 15. Stroke Deaths by Race and Gender, Age-Adjusted Rates[1], Massachusetts: 1999-2010

Year	White non-Hispanic[2]			Black non-Hispanic[2]		
	Male	Female	Total	Male	Female	Total
1999	52.1	48.5	50.2	71.5	47.5	57.5
2000	48.8	50.6	50.5	65.3	56.4	60.8
2001	51.5	46.0	48.5	50.8	61.5	59.3
2002	50.2	45.7	47.9	57.9	60.2	59.5
2003	44.7	43.9	44.7	45.9	54.9	52.7
2004	42.8	40.4	41.9	52.1	58.3	56.2
2005	37.7	37.3	37.9	50.6	44.9	47.5
2006	37.5	35.6	36.7	57.6	51.9	54.5
2007	35.4	34.0	34.8	34.4	36.4	35.6
2008	33.1	33.4	33.6	53.5	40.7	45.5
2009	31.7	31.7	32.0	51.7	36.0	42.7
2010	30.5	30.1	30.5	46.2	39.9	42.9

Year	Asian non-Hispanic[2]			Hispanic		
	Male	Female	Total	Male	Female	Total
1999	51.3	28.6	37.6	38.3	30.0	33.8
2000	50.9	49.4	50.4	40.6	47.1	45.0
2001	23.8	38.0	32.0	39.4	28.5	33.2
2002	21.2	28.7	25.6	49.6	30.2	38.3
2003	39.3	28.7	33.4	44.3	36.0	39.3
2004	35.2	32.7	34.1	39.7	32.6	35.5
2005	28.2	27.5	28.1	33.2	24.5	28.2
2006	34.5	41.9	39.2	26.5	29.6	28.8
2007	26.7	29.5	28.4	32.0	26.7	28.9
2008	23.4	27.1	25.6	23.9	18.4	21.1
2009	38.1	22.0	28.1	23.9	16.7	19.9
2010	35.2	27.0	30.8	31.1	22.1	26.0

1. Rates are per 100,000 age-adjusted to the 2000 US standard population. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation.

Figure 14. Diabetes[1] Deaths, Massachusetts: 1999-2010

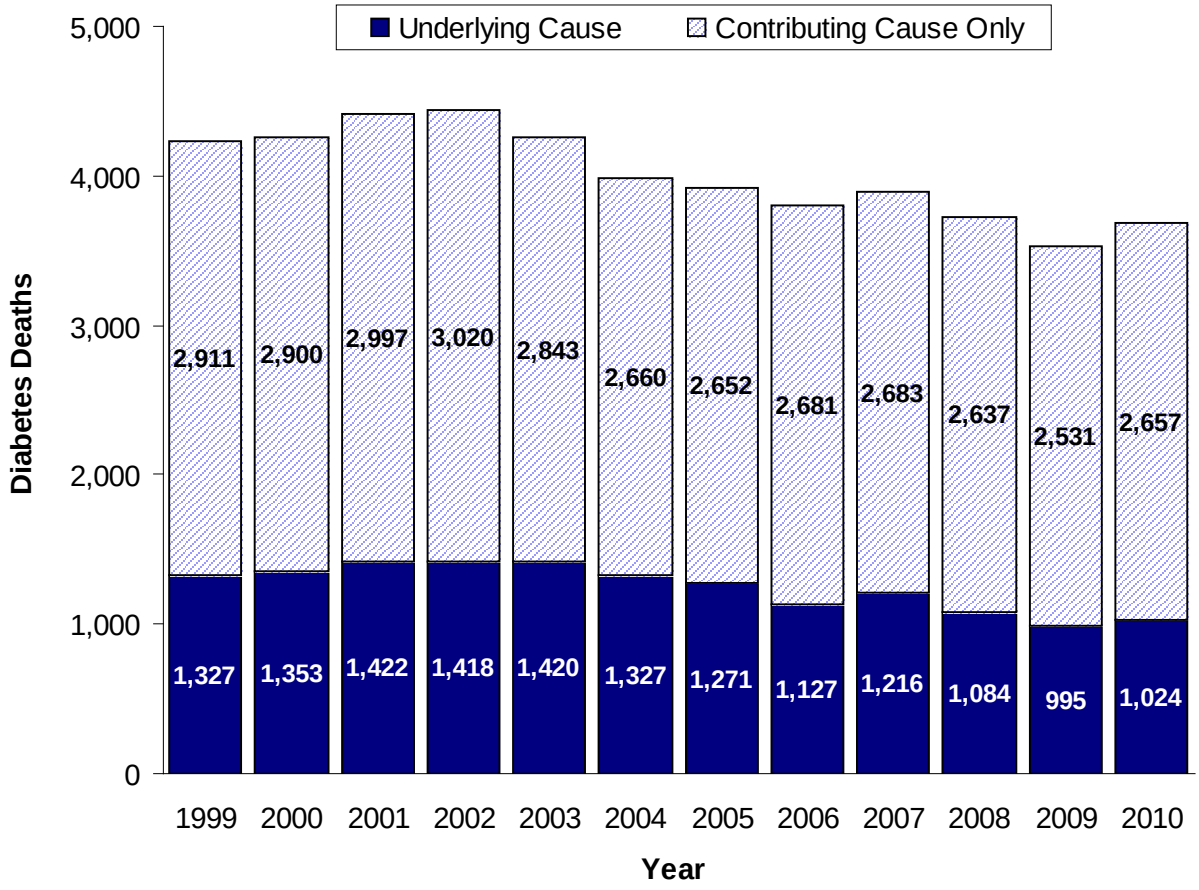


Table 16. Diabetes[1] Deaths by Gender, Massachusetts: 2010

	Proportion of all deaths (%)			Number		
Cause of death	Males	Females	Total	Males	Females	Total
Underlying	2.2%	1.8%	2.0%	543	481	1,024
Contributing/Associated	5.6%	4.6%	5.1%	1,405	1,252	2,657
Total diabetes-related	7.8%	6.3%	7.0%	1,948	1,733	3,681
Total deaths (all causes)	***100%***	***100%***	***100%***	***25,051***	***27,368***	***52,420***

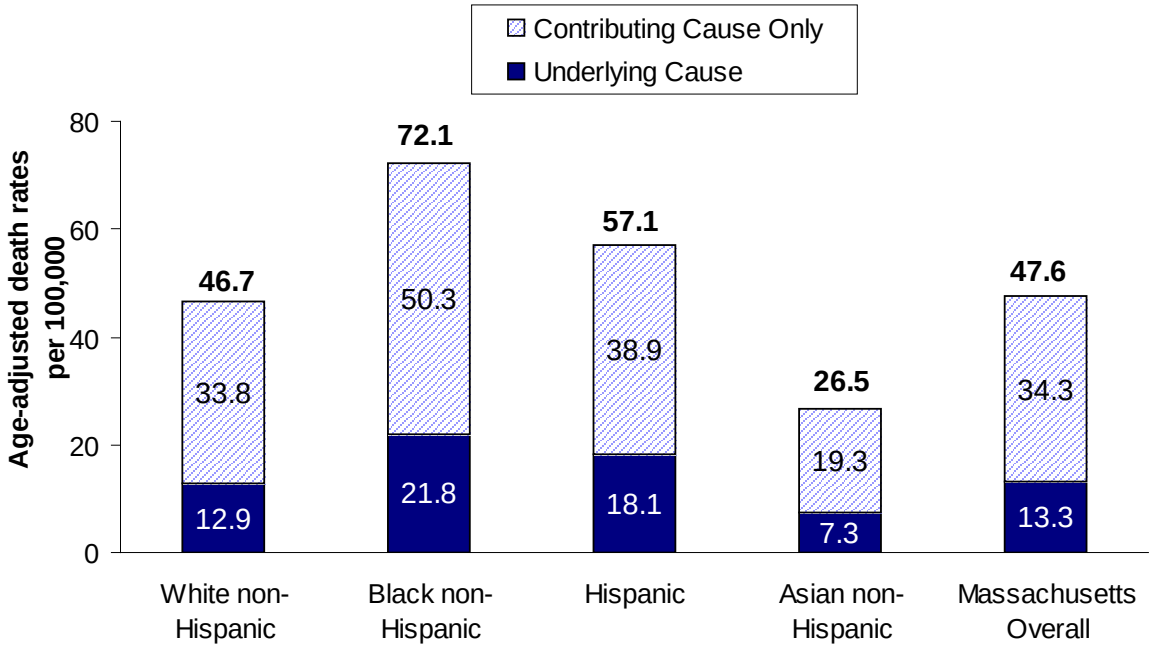
1. **ICD-10:** E10-E14

Table 17. Diabetes[1] Deaths by Race and Hispanic Ethnicity, Massachusetts: 2010

Cause of death	Race/Hispanic Ethnicity				
	White non-Hispanic	Black non-Hispanic	Hispanic	Asian non-Hispanic	Total
	Number				
Underlying	892	72	46	14	1,024
Contributing/Associated	2,369	152	98	33	2,657
Total diabetes-related	3,261	224	144	47	3,681
Total deaths (all causes)	***48,010***	***2,278***	***1,308***	***759***	***52,420***
	Proportion of all deaths (%)				
Underlying	1.9	3.2	3.5	1.8	2.0
Contributing/Associated	4.9	6.7	7.5	4.3	5.1
Total diabetes-related	***6.8***	***9.8***	***11.0***	***6.2***	***7.0***

1. **ICD-10:** E10-E14

Figure 15. Diabetes[1] Death Rates[2] by Race and Hispanic Ethnicity, Massachusetts: 2010



1. **ICD-10:** E10-E14. 2. Rates are per 100,000 age-adjusted to the 2010 U.S. standard population.

Figure 16. Age Distribution of Diabetes[1] Deaths, Massachusetts: 2010

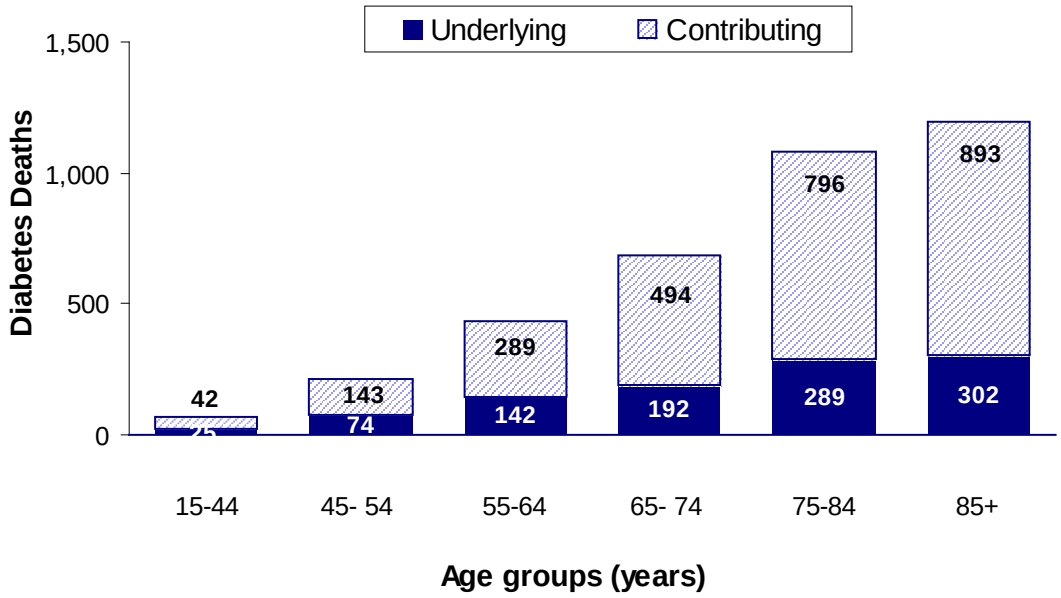
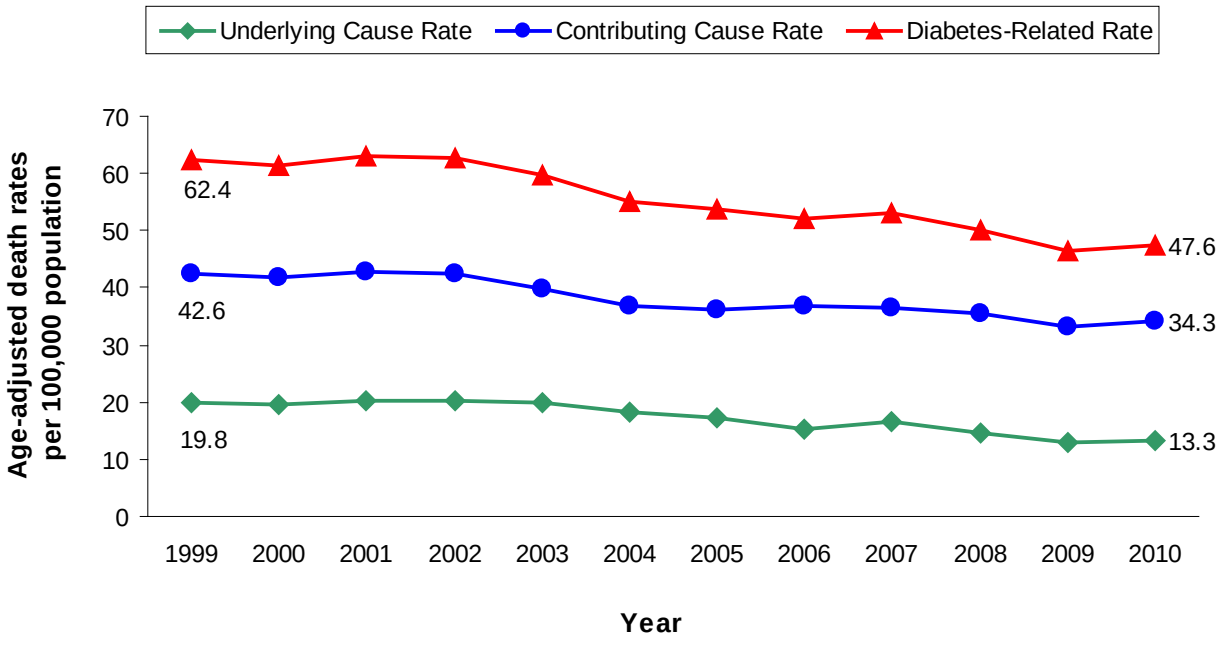


Figure 17. Diabetes[1] Death Rates[2], Massachusetts: 1999-2010



1. **ICD-10:** E10-E14. 2. Rates are per 100,000 age-adjusted to the 2010 U.S. standard population.

Table 18. Injury Deaths by Leading Causes, Gender, Age: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2010

	All Injury Deaths[1]		Poisoning[2]		Falls		Hanging, strangulation, or suffocation		Motor Vehicle-related[3]		Firearm		Other[4]	
	Number	Rate[5]	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
All Persons	**3,066**	**43.3**	**839**	**12.5**	**540**	**6.9**	**412**	**5.8**	**380**	**5.4**	**266**	**4.0**	**629**	**8.6**
<1	12	16.8	0	0.0	0	0.0	2	--[6]	1	--[6]	0	0.0	9	12.6
1-14	35	3.2	0	0.0	1	--[6]	4	--[6]	3	--[6]	4	--[6]	23	2.1
15-24	339	36.1	65	6.9	3	--[6]	57	6.1	83	8.8	76	8.1	55	5.9
25-44	792	45.7	372	21.5	31	1.8	110	6.3	90	5.2	98	5.7	91	5.3
45-64	886	48.8	352	19.4	67	3.7	127	7.0	115	6.3	55	3.0	170	9.4
65-74	205	44.9	26	5.7	56	12.3	29	6.4	28	6.1	14	3.1	52	11.4
75-84	342	113.6	16	5.3	149	49.5	26	8.6	38	12.6	16	5.3	97	32.2
85+	454	312.7	8	5.5	233	160.5	56	38.6	22	15.2	3	--[6]	132	90.9
All Females	**1,031**	**25.2**	**274**	**7.8**	**269**	**5.3**	**117**	**2.9**	**110**	**2.9**	**28**	**0.8**	**233**	**5.4**
<1	4	--[6]	0	0.0	0	0.0	1	--[6]	1	--[6]	0	0.0	2	--[6]
1-14	12	2.3	0	0.0	0	0.0	1	--[6]	2	--[6]	0	0.0	9	1.7
15-24	71	15.2	16	3.4	1	--[6]	17	3.6	18	3.9	6	1.3	13	2.8
25-44	191	21.6	111	12.6	6	0.7	23	2.6	20	2.3	14	1.6	17	1.9
45-64	234	25.0	119	12.7	17	1.8	23	2.5	27	2.9	6	0.6	42	4.5
65-74	77	31.1	13	5.3	19	7.7	9	3.6	14	5.7	2	--[6]	20	8.1
75-84	155	86.8	10	5.6	70	39.2	12	6.7	16	9.0	0	0.0	47	26.3
85+	287	286.5	5	5.0	156	155.7	31	30.9	12	12.0	0	0.0	83	82.9
All Males	**2,035**	**63.1**	**565**	**17.3**	**271**	**8.9**	**295**	**9.0**	**270**	**8.1**	**238**	**7.4**	**396**	**12.3**
<1	8	21.9	0	0.0	0	0.0	1	--[6]	0	0.0	0	0.0	7	19.1
1-14	23	4.1	0	0.0	1	--[6]	3	--[6]	1	--[6]	4	--[6]	14	2.5
15-24	268	56.9	49	10.4	2	--[6]	40	8.5	65	13.8	70	14.9	42	8.9
25-44	601	70.8	261	30.7	25	2.9	87	10.2	70	8.2	84	9.9	74	8.7
45-64	652	74.2	233	26.5	50	5.7	104	11.8	88	10.0	49	5.6	128	14.6
65-74	128	61.3	13	6.2	37	17.7	20	9.6	14	6.7	12	5.7	32	15.3
75-84	187	152.7	6	4.9	79	64.5	14	11.4	22	18.0	16	13.1	50	40.8
85+	167	370.9	3	--[6]	77	171.0	25	55.5	10	22.2	3	--[6]	49	108.8

1. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Includes drug overdoses, which account for the largest percentage (74%). 3. Motor vehicle deaths to occupants, pedestrians, motorcyclists and bicyclists. 4. All remaining injury causes. 5. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 6. Calculations based on values 1-4 are excluded.

Table 19. Injury Deaths by Leading Causes, Gender and Race and Hispanic Ethnicity: Numbers and Age Adjusted Rates, Massachusetts: 2010

	All Injury Deaths[1]		Poisoning[2]		Falls		Hanging, strangulation, or suffocation		Motor Vehicle-related[3]		Firearm		Other[4]	
	Number	Rate[5]	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
White non-Hispanic	**2,607**	**44.6**	**747**	**14.2**	**502**	**7.1**	**366**	**6.4**	**327**	**5.9**	**152**	**2.8**	**513**	**8.2**
Females	947	27.6	255	9.3	256	5.5	104	3.1	102	3.4	18	0.7	212	5.6
Males	1,660	63.3	492	19.3	246	9.1	262	9.9	225	8.6	134	5.1	301	11.3
Black non-Hispanic	**221**	**51.0**	**38**	**9.1**	**16**	**5.1**	**20**	**5.0**	**23**	**5.3**	**74**	**14.6**	**50**	**11.9**
Females	39	18.9	8	3.9	5	2.9	7	3.3	2	--[6]	6	2.5	11	5.1
Males	182	87.1	30	15.0	11	8.1	13	7.8	21	9.5	68	27.0	39	19.7
Asian non-Hispanic	**58**	**21.2**	**3**	**--[6]**	**11**	**6.6**	**9**	**2.3**	**9**	**3.2**	**2**	**--[6]**	**24**	**7.7**
Females	20	14.1	2	--[6]	4	--[6]	4	--[6]	2	--[6]	2	--[6]	6	3.6
Males	38	29.9	1	--[6]	7	9.5	5	2.5	7	4.6	0	0.0	18	12.9
Hispanic	**174**	**31.9**	**47**	**7.8**	**11**	**4.7**	**17**	**3.2**	**21**	**3.7**	**38**	**5.1**	**40**	**7.6**
Females	22	10.8	7	2.3	4	--[6]	2	--[6]	4	--[6]	2	--[6]	3	--[6]
Males	152	55.3	40	13.6	7	5.5	15	6.4	17	5.5	36	9.8	37	14.4

1. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Includes drug overdoses, which account for the largest percentage (74%). 3. Motor vehicle deaths to occupants, pedestrians, motorcyclists and bicyclists. 4. All remaining injury causes. 5. Number of deaths per 100,000 persons in each group; rates are age-adjusted to the 2000 US standard population. 6. Calculations based on values 1-4 are excluded.

Table 20. Unintentional Injury Deaths by Gender, Age: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2010

	All Unintentional[1]		Poisonings		Falls		Motor Vehicle-related	
	Number	Rate[2]	Number	Rate[2]	Number	Rate[2]	Number	Rate[2]
All Persons	**2,043**	**28.3**	**679**	**10.2**	**519**	**6.6**	**380**	**5.4**
<1	4	--[3]	0	0.0	0	0.0	1	--[3]
1-14	18	1.7	0	0.0	1	--[3]	3	--[3]
15-24	166	17.7	53	5.6	1	--[3]	83	8.8
25-44	475	27.4	327	18.9	18	1.0	90	5.2
45-64	559	30.8	271	14.9	65	3.6	115	6.3
65-74	140	30.7	15	3.3	55	12.0	28	6.1
75-84	263	87.4	8	2.7	147	48.8	38	12.6
85+	417	287.2	5	3.4	232	159.8	22	15.2
All Females	**769**	**17.9**	**193**	**5.6**	**264**	**5.2**	**110**	**2.9**
<1	2	--[3]	0	0.0	0	0.0	1	--[3]
1-14	8	1.5	0	0.0	0	0.0	2	--[3]
15-24	36	7.7	13	2.8	0	0.0	18	3.9
25-44	119	13.5	87	9.8	4	--[3]	20	2.3
45-64	147	15.7	77	8.2	17	1.8	27	2.9
65-74	54	21.8	7	2.8	18	7.3	14	5.7
75-84	129	72.2	6	3.4	69	38.6	16	9.0
85+	274	273.5	3	--[3]	156	155.7	12	12.0
All Males	**1,274**	**39.6**	**486**	**15.0**	**255**	**8.4**	**270**	**8.1**
<1	2	--[3]	0	0.0	0	0.0	0	0.0
1-14	10	1.8	0	0.0	1	--[3]	1	--[3]
15-24	130	27.6	40	8.5	1	--[3]	65	13.8
25-44	356	41.9	240	28.3	14	1.6	70	8.2
45-64	412	46.9	194	22.1	48	5.5	88	10.0
65-74	86	41.2	8	3.8	37	17.7	14	6.7
75-84	134	109.4	2	--[3]	78	63.7	22	18.0
85+	143	317.6	2	--[3]	76	168.8	10	22.2

1. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 3. Calculations based on values 1-4 are excluded.

Table 21. Unintentional Injury Deaths by Gender and Race and Hispanic Ethnicity: Numbers, and Age-Adjusted Rates, Massachusetts: 2010

	All Unintentional[1]		Poisonings		Falls		Motor Vehicle-related	
	Number	Rate[2]	Number	Rate[2]	Number	Rate[2]	Number	Rate[2]
White non-Hispanic	**1,809**	**30.1**	**595**	**11.5**	**485**	**6.8**	**327**	**5.9**
Females	718	19.7	176	6.6	251	5.3	102	3.4
Males	1,091	41.5	419	16.6	234	8.6	225	8.6
Black non-Hispanic	**102**	**26.2**	**34**	**8.3**	**15**	**4.9**	**23**	**5.3**
Females	23	11.7	8	3.9	5	2.9	2	--[3]
Males	79	44.1	26	13.4	10	7.6	21	9.5
Asian non-Hispanic	**33**	**14**	**2**	**--[3]**	**10**	**6.4**	**9**	**3.2**
Females	9	8.1	1	--[3]	4	--[3]	2	--[3]
Males	24	21.3	1	--[3]	6	8.9	7	4.6
Hispanic	**95**	**19.7**	**45**	**7.5**	**9**	**4.4**	**21**	**3.7**
Females	18	9.8	7	2.3	4	--[3]	4	--[3]
Males	77	30.6	38	13.0	5	4.9	17	5.5

1. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each group; rates are age-adjusted to the 2000 US standard population. 3. Calculations based on values 1-4 are excluded.

Table 22. Intentional Injury Deaths by Gender, Age: Numbers, Age-Adjusted, and Age-Specific Rates, Massachusetts: 2010

	All Intentional[1]		Suicide		Homicide	
	Number	Rate[2]	Number	Rate[2]	Number	Rate[2]
All Persons	**797**	**11.9**	**591**	**8.7**	**206**	**3.2**
<1	5	7.0	0	0.0	5	7.0
1-14	13	1.2	3	--[3]	10	0.9
15-24	163	17.4	78	8.3	85	9.1
25-44	291	16.8	211	12.2	80	4.6
45-64	241	13.3	221	12.2	20	1.1
65-74	41	9.0	37	8.1	4	--[3]
75-84	30	10.0	29	9.6	1	--[3]
85+	13	9.0	12	8.3	1	--[3]
All Females	**168**	**4.9**	**125**	**3.5**	**43**	**1.3**
<1	1	--[3]	0	0.0	1	--[3]
1-14	1	--[3]	0	0.0	1	--[3]
15-24	32	6.8	20	4.3	12	2.6
25-44	58	6.6	41	4.6	17	1.9
45-64	56	6.0	46	4.9	10	1.1
65-74	12	4.8	10	4.0	2	--[3]
75-84	5	2.8	5	2.8	0	0.0
85+	3	--[3]	3	--[3]	0	0.0
All Males	**629**	**19.4**	**466**	**14.3**	**163**	**5.1**
<1	4	--[3]	0	0.0	4	--[3]
1-14	12	2.2	3	--[3]	9	1.6
15-24	131	27.8	58	12.3	73	15.5
25-44	233	27.4	170	20.0	63	7.4
45-64	185	21.1	175	19.9	10	1.1
65-74	29	13.9	27	12.9	2	--[3]
75-84	25	20.4	24	19.6	1	--[3]
85+	10	22.2	9	20.0	1	--[3]

1. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each age group; rates for all rows except the age group rows are age-adjusted to the 2000 US standard population. 3. Calculations based on values 1-4 are excluded.

Table 23. Intentional Injury Deaths by Gender and Race and Hispanic Ethnicity: Numbers and Age-Adjusted Rates, Massachusetts: 2010

	All Intentional[1]		Suicide		Homicide	
	Number	Rate[2]	Number	Rate[2]	Number	Rate[2]
White non-Hispanic	**598**	**11.2**	**530**	**9.9**	**68**	**1.4**
Females	144	5.3	114	4.1	30	1.2
Males	454	17.7	416	16.1	38	1.6
Black non-Hispanic	**106**	**21.4**	**23**	**4.8**	**83**	**16.5**
Females	10	4.3	3	--[3]	7	2.9
Males	96	39.1	20	8.6	76	30.6
Asian non-Hispanic	**20**	**5.0**	**16**	**4.1**	**4**	**--[3]**
Females	8	3.9	5	2.7	3	--[3]
Males	12	6.2	11	5.6	1	--[3]
Hispanic	**71**	**9.7**	**21**	**3.2**	**50**	**6.6**
Females	4	--[3]	2	--[3]	2	--[3]
Males	67	18.9	19	6.1	48	12.8

1. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons in each group; rates are age-adjusted to the 2000 US standard population. 3. Calculations based on values 1-4 are excluded.

Table 24. Injury Deaths by Intent, Method and Gender: Number and Age-Adjusted Rates, Massachusetts: 2010

Type of Injury[1]	All Injury Deaths		Female		Male	
	Number	Rate[2]	Number	Rate	Number	Rate
Unintentional Injuries (Accidents)	**2,043**	**28.3**	**769**	**17.9**	**1,274**	**39.6**
Motor Vehicle-related	380	5.4	110	2.9	270	8.1
Injury to pedestrian	75	1.1	29	0.8	46	1.4
Injury to pedal cyclist	6	0.1	2	--[3]	4	--[3]
Injury to motorcyclist	64	0.9	4	--[3]	60	1.8
Injury to occupant	34	0.5	10	0.3	24	0.7
Other and unspecified	201	2.8	65	1.7	136	4.1
Poisoning	679	10	193	6	486	15
Falls	519	6.6	264	5.2	255	8.4
Hanging/suffocation	124	1.6	63	1.3	61	1.9
Drowning/submersion	56	0.8	8	0.3	48	1.5
Exposure to smoke, fire and flames/ hot subs	25	0.3	11	0.3	14	0.4
Other and unspecified	233	2.9	113	2.2	120	3.8
Suicide	**591**	**8.7**	**125**	**3.5**	**466**	**14.3**
Hanging/strangulation/suffocation	278	4.1	46	1.3	232	7.0
Firearm discharge	134	1.9	10	0.3	124	3.8
Poisoning	109	1.6	55	1.5	54	1.6
Other and unspecified	70	1.1	14	0.4	56	1.8
Homicide	**206**	**3.2**	**43**	**1.3**	**163**	**5.1**
Firearm	126	2.0	16	0.5	110	3.5
Cut or pierce	42	0.6	9	0.3	33	1.0
Other and unspecified	38	0.6	18	0.6	20	0.7
Injury Deaths of Undetermined Intent	**96**	**1.4**	**39**	**1.1**	**57**	**1.6**
Poisoning	51	0.7	26	0.7	25	0.7
Other and unspecified	45	0.7	13	0.4	32	0.9
Legal Intervention	**3**	**--[3]**	**2**	**--[3]**	**1**	**--[3]**
Firearm	3	--[3]	2	--[3]	1	--[3]
Other and unspecified	0	0.0	0	0.0	0	0.0
Adverse Effects	**127**	**1.7**	**53**	**1.3**	**74**	**2.4**
Medical Care	97	1.3	41	1.0	56	1.8
Drugs	30	0.4	12	0.3	18	0.6
ALL INJURIES	**3,066**	**43.3**	**1,031**	**25.2**	**2,035**	**63.1**

1. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Number of deaths per 100,000 persons; rates are adjusted to the 2000 US standard population. 3. Calculations based on values 1-4 are excluded.

Table 25. Type of Injury Deaths by Method and Intent Categories: Number and Age-Adjusted Rates, Massachusetts: 2010

Method	All Injury Deaths[1]		Intent									
			Unintentional		Intentional				Undetermined		Other[3]	
	Total		"Accidents"		Suicide		Homicide				Legal Intervention	
	Total Number	Rate[2]	Total Number	Rate	Total Number	Rate	Total Number	Rate	Total Number	Rate	Total Number	Rate
Poisoning	839	12.5	679	10.2	109	1.6	0	0.0	51	0.7	0	0.0
Falls	540	6.9	519	6.6	19	0.3	1	--[4]	1	--[4]	0	0.0
Hanging, strangulation or suffocation	412	5.8	124	1.6	278	4.1	6	0.1	4	--[4]	0	0.0
Transport Injuries	407	5.8	406	5.8	1	--[4]	0	0.0	0	0.0	0	0.0
Motor vehicle-related	380	5.4	380	5.4	0	0.0	0	0.0	0	0.0	0	0.0
Injury to pedestrian	75	1.1	75	1.1	0	0.0	0	0.0	0	0.0	0	0.0
Injury to pedal cyclist	6	0.1	6	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Injury to motorcyclist	64	0.9	64	0.9	0	0.0	0	0.0	0	0.0	0	0.0
Injury to occupant	34	0.5	34	0.5	0	0.0	0	0.0	0	0.0	0	0.0
Other and unspecified	201	2.8	201	2.8	0	0.0	0	0.0	0	0.0	0	0.0
Other transport	27	0.4	26	0.4	1	0.0	0	0.0	0	0.0	0	0.0
Firearm	266	4.0	1	--[4]	134	1.9	126	2.0	2	--[4]	3	--[4]
Drowning and submersion	78	1.2	56	0.8	11	0.2	0	0.0	11	0.2	0	0.0
Cut or pierce	60	0.9	0	0.0	18	0.2	42	0.6	0	0.0	0	0.0
Smoke, fire and flames	32	0.5	25	0.3	4	--[4]	1	--[4]	2	--[4]	0	0.0
Other and unspecified	305	4.1	233	2.9	17	0.3	30	0.5	25	0.4	0	0.0
Adverse Effects	127	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALL INJURIES	**3,066**	**43.3**	**2,043**	**28.3**	**591**	**8.7**	**206**	**3.2**	**96**	**1.4**	**3**	**--[4]**

1. Data presented in this table are classified according to ICD-10. Please refer to Appendix for list of ICD-10 codes used in this table. 2. Number of deaths per 100,000; rates are adjusted to the 2010 US standard population. 3. Includes legal intervention and operations of war. 4. Calculations based on values 1-4 are excluded.

Table 26. Poisoning Deaths by Intent and Leading Agents, Massachusetts: 2000 and 2010

Poisoning Deaths – All Intents	2000 (N=586)		2010 (N= 839)	
	Deaths Associated by Agent/Class of Agent[2]			
Leading Agent / Class of Agents[1]	Number[2]	%[3]	Number[2]	%[3]
Opioids	363	61.9%	555	66.2%
Alcohols	18	3.1%	187	22.3%
Cocaine	171	29.2%	168	20.0%
Other and unspecified drugs, medicaments and biological substances	63	10.8%	141	16.8%
All other agents combined	45	7.7%	128	15.3%
Benzodiazepines	17	2.9%	85	10.1%
Antipsychotics & Neuroleptics	6	1.0%	30	3.6%
Antiepileptics	7	1.2%	20	2.4%
Carbon Monoxide	28	4.8%	18	2.1%
Antidepressants	46	7.8%	118	14.1%
Total Deaths All Intents	**586**	**100.0%**	**839**	**100.0%**

Unintentional/Undetermined Intent Poisoning Deaths[4]	2000 (N=485)		2010 (N=730)	
	Deaths Associated by Agent/Class of Agent[2]			
Leading Agent / Class of Agents	Number[2]	%[3]	Number[2]	%[3]
Opioids	338	69.7%	526	72.1%
Alcohols	17	3.5%	175	24.0%
Cocaine	167	34.4%	166	22.7%
Other and unspecified drugs, medicaments and biological substances	40	8.2%	94	12.9%
All other agents combined	30	6.2%	85	11.6%
Antidepressants	19	3.9%	85	11.6%
Antipsychotics & Neuroleptics	1	--[5]	18	2.5%
Antiepileptics	2	--[5]	10	1.4%
Carbon Monoxide	6	1.2%	4	--[5]
Benzodiazepines	11	2.3%	70	9.6%
Total Deaths	485	100.0%	730	100.0%

Table 26 (continued). Poisoning Deaths by Intent and Leading Agents, Massachusetts: 2000 and 2010

Suicide Poisoning Deaths	2000 (N=101)		2010 (N=109)	
	Deaths Associated by Agent/Class of Agent[2]			
Leading Agent / Class of Agents[1]	Number[2]	%[3]	Number[2]	%[3]
Other and unspecified drugs, medicaments and biological substances	23	22.8%	47	43.1%
Antidepressants	27	26.7%	33	30.3%
Opioids	25	24.8%	29	26.6%
Benzodiazepines	6	5.9%	15	13.8%
Carbon Monoxide	22	21.8%	14	12.8%
Alcohols	1	--[5]	12	11.0%
Antipsychotics & Neuroleptics	5	5.0%	12	11.0%
Antiepileptics	5	5.0%	10	9.2%
Cocaine	4	--[5]	2	--[5]
All other agents combined	15	14.9%	43	39.4%
Total Deaths	**101**	**100.0%**	**109**	**100.0%**

1. Leading Agents/Class of Agents is sorted in descending order by their count in 2010. See the Appendix for a list of specific ICD10 codes used. 2. The sum of the number of deaths associated with agents or class of agents is greater than the number of deaths because some deaths involve multiple agents or classes of agents. 3. The sum of the percentage of deaths associated with agents or class of agents is greater than the number of deaths because some deaths involve multiple agents or classes of agents. 4. There was a policy change at the MA Office of the Chief Medical Examiner in 2005, which affected the classification of poisoning deaths. In order to allow consistent comparisons and interpretation of historical trends, unintentional poisoning deaths and poisoning deaths of undetermined intent have been combined into one category, which is comparable to the sum of the categories from previous years. Suicide-associated poisoning deaths were not affected by the policy change. 5. Calculations based on values 1-4 are excluded.

Table 27. HIV/AIDS[1] Deaths by Place of Occurrence, Massachusetts: 1998-2010

		Total		Place of Occurrence							
				At Home		Hospital		Out of State		Hospice/Nursing Home/Other	
		Comparability Unmodified	Comparability Modified[2]	Comparability Unmodified	Comparability Modified[2]	Comparability Unmodified	Comparability Modified[2]	Comparability Unmodified	Comparability Modified[2]	Comparability Unmodified	Comparability Modified[2]
Year											
1998	#	213	244[4]	46	53	130	149	2	2	35	40
	%	100.0		21.6	21.7	61.0	61.1	-[5]	-[5]	16.4	16.4
1999	#	242		55		142		2		43	
	%	100.0		22.7		58.7		-[5]		17.8	
2000	#	226		48		145		0		33	
	%	100.0		21.2		64.2		-[5]		14.6	
2001	#	249		47		164		4		34	
	%	100.0		18.9		65.9		-[5]		13.7	
2002	#	229		33		156		4		36	
	%	100.0		14.4		68.1		-[5]		15.7	
2003	#	226		55		134		5		32	
	%	100.0		24.3		59.3		2.2		14.2	
2004	#	211		45		134		1		31	
	%	100.0		21.3		63.5		-[5]		14.7	
2005	#	180		28		122		1		30	
	%	100.0		15.6		67.8		-[5]		16.7	
2006	#	179		22		122		2		33	
	%	100.0		12.3		68.2		-[5]		18.4	
2007	#	143		15		98		2		28	
	%	100.0		10.5		68.5		-[5]		19.6	
2008	#	143		27		92		1		23	
	%	100.0		18.9		64.3		-[5]		16.1	
2009	#	124		25		76		1		22	
	%	100.0		20.2		61.3		-[5]		17.7	
2010	#	119		22		68		1		28	
	%	100.0		18.5		57.1		-[5]		23.5	

**PLEASE NOTE: this table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1992-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999-2008 were coded according to the ICD-10 (codes B20-B24). 2. Comparability Modified (CM): this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (revised June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 3. NA: Comparability ratio is not applicable for years prior to 1994. 4. When comparing data after 1994, please use the comparability modified number for years 1994-1998. Please see Appendix for a detailed explanation. 5. Calculations based on values 1-4 are excluded.

Table 28. HIV/AIDS[1] Deaths by Age, Massachusetts: 1998-2010

Year		Age (in years) <15		15-24		25-34		35-44		45+	
		Comparability Unmodified	Comparability Modified[2]	Comparability Unmodified	Comparability Modified[2]	Comparability Unmodified	Comparability Modified[2]	Comparability Unmodified	Comparability Modified[2]	Comparability Unmodified	Comparability Modified[2]
1998	#	0	0[4]	0	0[4]	47	54[4]	106	121[4]	60	69[4]
	%	0.0	0.0	0.0	0.0	22.1	22.1	49.8	50.0	28.2	28.3
1999	#		2		9		34		112		85
	%		-[5]		3.7		14.0		46.3		35.1
2000	#		4		0		26		104		92
	%		-[5]		0.0		11.5		46.0		40.7
2001	#		1		2		25		111		110
	%		-[5]		-[5]		10.0		44.6		44.2
2002	#		1		1		10		91		126
	%		-[5]		-[5]		4.4		39.7		55.0
2003	#		1		3		14		94		114
	%		-[5]		-[5]		6.2		41.6		50.4
2004	#		0		2		9		79		121
	%		0.0		-[5]		4.3		37.4		57.4
2005	#		0		1		6		64		109
	%		0.0		-[5]		3.3		35.6		60.6
2006	#		0		1		6		71		101
	%		0.0		-[5]		3.4		39.7		56.4
2007	#		0		0		5		34		104
	%		0.0		0.0		3.5		32.7		72.7
2008	#		0		1		6		32		104
	%		0.0		-[5]		4.2		22.4		72.7
2009	#		0		0		6		25		93
	%		0.0		0.0		4.8		20.2		75.0
2010	#		0		1		4		24		90
	%		0.0		-[5]		-[5]		20.2		75.6

**PLEASE NOTE: this table has been updated June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1.AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1992-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999-2008 were coded according to the ICD-10 (codes B20-B24). 2. Comparability Modified (CM): this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (revised June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR. 3. NA: Comparability ratio is not applicable for years prior to 1994. 4. When comparing data over time after 1994, please use the comparability modified number for years 1994-1998. Please see Appendix for a detailed explanation. 5. Calculations based on values 1-4 are excluded.

Table 29. HIV/AIDS[1] Deaths by Gender, Race and Hispanic Ethnicity, Massachusetts: 1998-2010

		Gender				Race and Ethnicity							
		Male		Female		White non-Hispanic[2]		Black non-Hispanic[2]		Other[3]		Hispanic[2]	
		Comparability Unmodified	Comparability Modified[4]	Comparability Unmodified	Comparability Modified[4]	Comparability Unmodified	Comparability Modified[4]	Comparability Unmodified	Comparability Modified[4]	Comparability Unmodified	Comparability Modified[4]	Comparability Unmodified	Comparability Modified[4]
Year													
1998	#	169	193[6]	44	50[6]	104	119[6]	51	58[6]	0	0	58	66[6]
	%	79.3	79.1	20.7	20.5	48.8	48.8	23.9	23.8	-[5]	-[5]	27.2	27.0
1999	#	177		65		126		51		2		63	
	%	73.1		26.9		52.1		21.1		-[5]		26.0	
2000	#	161		65		104		61		2		59	
	%	71.2		28.8		46.0		27.0		-[5]		26.1	
2001	#	182		67		125		73		0		51	
	%	73.1		26.9		50.2		29.3		-[5]		20.5	
2002	#	163		66		108		68		1		52	
	%	71.2		28.8		47.1		29.7		-[5]		22.7	
2003	#	150		76		113		58		2		53	
	%	66.4		33.6		50.0		25.7		-[5]		23.5	
2004	#	151		60		97[6]		55		4		55	
	%	71.6		28.4		46.0		26.1		-[5]		26.1	
2005	#	122		58		75		56		4		45	
	%	67.8		32.2		41.7		31.1		-[5]		25.0	
2006	#	122		57		91		49		2		37	
	%	68.2		31.8		50.8		27.4		-[5]		20.7	
2007	#	96		47		58		48		0		37	
	%	67.4		32.9		40.6		33.6		0.0		25.9	
2008	#	101		42		69		37		5		31	
	%	70.6		29.4		48.6		26.1		3.5		21.8	
2009	#	89		35		48		37		6		33	
	%	71.8		28.2		38.7		29.8		4.8		26.6	
2010	#	80		39		58		34		1		26	
	%	67.2		32.8		48.7		28.6		-[5]		21.8	

**PLEASE NOTE: this table was updated in June 2001 to reflect the revised comparability ratio of HIV Disease Deaths, issued by the National Center for Health Statistics. 1. AIDS: Acquired Immune Deficiency Syndrome, HIV: Human Immunodeficiency Virus. The deaths reported are cases for which AIDS or HIV-related disease was the underlying cause of death. Deaths for 1992-1998 were coded according to the ICD-9 classification schedule, which began with 1987 death data (codes 042-044). Deaths for 1999-2008 were coded according to the ICD-10 (codes B20-B24). 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 3. The "Other" category represents Asian non-Hispanics, American Indian non-Hispanics, and other non-Hispanics. 4. Comparability Modified: this number has been adjusted using the preliminary comparability ratio (CR) from NCHS (June 2001). CM data for 1994-1996 use 1996 based CR; CM data for 1997-1998 use revised 1998 based CR.
5. Calculations based on values 1-4 are excluded. 6. When comparing data over time after 1994, please use the comparability modified number for years 1994-1998. Please see Appendix for a detailed explanation.

Table 30. HIV/AIDS[1] Deaths by Gender, Race and Hispanic Ethnicity: Numbers, Percent and Age-adjusted Rates, Massachusetts: 2000-2010

TOTAL	White non-Hispanic[2]			Black non-Hispanic[2]			Hispanic		
Year	#	Percent	Rate[3]	#	Percent	Rate[3]	#	Percent	Rate[3]
2000	104	46%	1.9	61	27%	18.3	59	26%	17.4
2001	125	50%	2.2	73	29%	21.1	51	20%	13.5
2002	108	47%	1.9	68	30%	20.3	52	23%	13.5
2003	113	50%	2.0	58	26%	17.2	53	23%	14.9
2004	97	46%	1.7	55	26%	15.8	55	26%	13.9
2005	75	42%	1.3	56	31%	16.0	45	25%	11.5
2006	91	51%	1.6	49	27%	13.7	37	21%	8.4
2007	58	41%	1.0	48	34%	13.0	37	26%	8.9
2008	69	50%	1.2	37	27%	10.6	31	23%	8.3
2009	48	41%	0.5	37	31%	15.2	33	28%	11.6
2010	58	49%	0.5	34	29%	15.2	26	22%	11.6
MALE									
2000	77	48%	2.8	40	25%	26.0	42	26%	27.7
2001	92	51%	3.3	50	27%	31.4	40	22%	22.5
2002	86	53%	3.1	43	26%	27.9	34	21%	18.7
2003	74	49%	2.7	36	24%	23.4	39	26%	23.8
2004	74	49%	2.7	39	26%	24.0	34	23%	18.4
2005	52	43%	1.9	34	28%	20.9	33	27%	18.4
2006	67	55%	2.4	33	27%	20.0	21	17%	9.8
2007	48	50%	1.7	23	24%	13.4	25	26%	13.3
2008	55	56%	1.9	25	26%	16.0	18	18%	11.0
2009	32	38%	1.1	29	34%	15.6	24	28%	12.4
2010	40	51%	1.1	20	25%	15.6	19	24%	12.4
FEMALE									
2000	27	42%	1.0	21	32%	11.4	17	26%	8.6
2001	33	49%	1.2	23	34%	12.1	11	16%	5.4
2002	22	33%	0.8	25	38%	13.8	18	27%	8.7
2003	39	51%	1.4	22	29%	12.0	14	18%	7.1
2004	23	38%	0.8	16	27%	8.7	21	35%	10.0
2005	23	40%	0.8	22	38%	11.8	12	21%	5.4
2006	24	42%	0.9	16	28%	8.3	16	28%	7.1
2007	10	21%	0.3	25	53%	12.8	12	26%	5.2
2008	14	36%	0.5	12	31%	6.4	13	33%	6.4
2009	16	48%	0.5	8	24%	3.8	9	27%	3.8
2010	18	46%	0.5	14	36%	3.8	7	18%	3.8

1. AIDS and HIV disease deaths coded using ICD-10: B20-B24. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 3. Number of deaths per 100,000 persons; rates are age-adjusted to the 2000 US standard population.

Table 31. Trends in Infant, Neonatal, and Post Neonatal Mortality, by Race and Hispanic Ethnicity, Massachusetts: 2000-2010

INFANT MORTALITY (less than one year of age)

	State Total[1]		White non-Hispanic		Black non-Hispanic		Hispanic		Asian non-Hispanic		Other[2]	
Year	#	Rate[3]	#	Rate[3]	#	Rate[3]	#	Rate[3]	#	Rate[3]	#	Rate[3]
2000	377	4.6	232	3.8	74	12.8	48	5.2	19	4.1	4	--[4]
2001	407	5.0	245	4.1	71	12.1	69	7.3	15	3.1	7	4.1
2002	397	4.9	239	4.1	69	11.6	67	7.0	16	3.0	6	3.8
2003	383	4.8	235	4.1	75	12.7	55	5.6	14	2.7	4	--[4]
2004	376	4.8	210	3.8	70	11.5	75	7.6	15	2.7	6	3.5
2005	391	5.1	230	4.3	57	9.4	77	7.7	18	3.4	8	4.3
2006	369	4.8	220	4.1	72	11.1	63	5.9	10	1.8	3	--[4]
2007	380	4.9	206	3.9	66	10.2	81	7.4	18	3.1	4	--[4]
2008	381	5.0	192	3.7	79	11.9	86	7.9	16	2.7	8	5.1
2009	366	4.9	205	4.1	54	7.8	78	7.1	20	3.4	9	7.8
2010	319	4.4	163	3.4	56	8.2	65	6.1	25	4.3	7	4.4

NEONATAL MORTALITY (birth to 27 days)

	State Total[1]		White non-Hispanic		Black non-Hispanic		Hispanic		Asian, non-Hispanic		Other[2]	
Year	#	Rate[3]	#	Rate[3]	#	Rate[3]	#	Rate[3]	#	Rate[3]	#	Rate[3]
2000	288	3.5	177	2.9	57	9.9	37	4.0	14	3.0	3	--[4]
2001	308	3.8	190	3.2	56	9.5	49	5.2	10	2.1	3	--[4]
2002	299	3.7	185	3.2	49	8.2	50	5.2	13	2.4	2	--[4]
2003	285	3.6	179	3.1	56	9.5	38	3.9	10	1.9	2	--[4]
2004	291	3.7	167	3.0	51	8.4	57	5.8	12	2.2	4	--[4]
2005	282	3.7	168	3.1	40	6.6	57	5.8	11	2.1	5	2.7
2006	279	3.6	173	3.3	53	8.2	42	3.9	7	1.3	3	--[4]
2007	263	3.4	141	2.7	48	7.4	53	4.9	15	2.6	4	--[4]
2008	290	3.8	152	2.9	57	8.6	65	6.0	10	1.7	6	3.8
2009	276	3.7	162	3.2	36	5.2	54	4.9	17	2.9	7	6.0
2010	238	3.3	121	2.5	43	6.3	47	4.4	20	3.4	5	4.6

POST NEONATAL MORTALITY (28-365 days)

	State Total[1]		White non-Hispanic		Black non-Hispanic		Hispanic		Asian non-Hispanic		Other[2]	
Year	#	Rate[3]	#	Rate[3]	#	Rate[3]	#	Rate[3]	#	Rate[3]	#	Rate[3]
2000	89	1.1	55	0.9	17	2.9	11	1.2	5	1.1	1	--[4]
2001	99	1.2	55	0.9	15	2.6	20	2.1	5	1.0	4	--[4]
2002	98	1.2	54	0.9	20	3.4	17	1.8	3	--[4]	4	--[4]
2003	98	1.2	56	1.0	19	3.2	17	1.7	4	--[4]	2	--[4]
2004	85	1.1	43	0.8	19	3.1	18	1.8	3	--[4]	2	--[4]
2005	109	1.4	62	1.2	17	2.8	20	2.0	7	1.3	3	--[4]
2006	90	1.2	47	0.9	19	2.9	21	2.0	3	--[4]	0	0.0
2007	117	1.5	65	1.2	18	2.8	28	2.6	3	--[4]	0	0.0
2008	91	1.2	40	0.8	22	3.3	21	1.9	6	1.0	2	--[4]
2009	90	1.2	43	0.9	18	2.6	24	2.2	3	--[4]	2	--[4]
2010	81	1.1	42	0.9	13	1.9	18	1.7	5	0.9	2	--[4]

1. Deaths of infants of unknown race are included in the total calculation. For rate computations, births of infants of unknown race are allocated into the race categories according to the distribution of births of known race. 2. Other: American Indian and Other races. 3. Rates are expressed per 1,000 live births. 4. Calculations based on values 1-4 are excluded.

Table 32. Infant, Neonatal, and Post Neonatal Deaths by Cause, Massachusetts: 2010

Cause of Death[1]	ICD-10 Code	Infant (<1 year) #	Infant (<1 year) %[2]	Neonatal (<28 days) #	Neonatal (<28 days) %[2]	Post Neonatal (28-365 days) #	Post Neonatal (28-365 days) %[2]
TOTAL		**319**	**100.0**	**238**	**100.0**	**81**	**100.0**
Infectious and parasitic diseases	**A00-B99**	**3**	**--[3]**	**0**	**0.0**	**3**	**--[3]**
Cancer	**C00-C97**	**1**	**--[3]**	**1**	**--[3]**	**0**	**0.0**
Diseases of the blood and blood forming organs (anemia)	**D50-D89**	**2**	**--[3]**	**2**	**--[3]**	**0**	**0.0**
Diseases of nervous system and ear	**G00-G98, H60-H93**	**5**	**1.6**	**1**	**--[3]**	**4**	**--[3]**
Diseases of the respiratory system	**J00-J98**	**1**	**--[3]**	**0**	**0.0**	**1**	**--[3]**
Diseases of digestive system	**K00-K92**	**0**	**0.0**	**0**	**0.0**	**0**	**0.0**
Congenital malformations	**Q00-Q99**	**50**	**15.7**	**38**	**16.0**	**12**	**14.8**
Congenital malformations of nervous system	Q00-Q07	4	--[3]	3	--[3]	1	--[3]
Anencephalus and similar malformations	Q00	1	--[3]	1	--[3]	0	0.0
Congenital malformations of eye, ear, face, and neck	Q10-Q18	0	0.0	0	0.0	0	0.0
Congenital malformations of heart	Q20-Q24	10	3.1	8	3.4	2	--[3]
Other congenital malformations of circulatory system	Q25-Q28	1	--[3]	0	0.0	1	--[3]
Congenital malformations of respiratory system	Q30-Q34	6	1.9	4	--[3]	2	--[3]
Cleft palate and other digestive tract malformations	Q35-Q45	1	--[3]	0	0.0	1	--[3]
Congenital malformations of genitourinary system	Q50-Q64	5	1.6	4	--[3]	1	--[3]
Congenital malformations of musculoskeletal system	Q65-Q85	2	--[3]	2	--[3]	0	0.0
Chromosomal abnormalities	Q90-Q99	12	3.8	9	3.8	3	--[3]
Certain conditions originating in the perinatal period	**P00-P96**	**191**	**59.9**	**184**	**77.3**	**7**	**8.6**
Newborn affected by maternal conditions which may be unrelated to present pregnancy	P00	4	--[3]	4	--[3]	0	0.0
Newborn affected by maternal complications of pregnancy	P01	32	10.0	32	13.4	0	0.0
Newborn affected by complications of placenta, cord and membrane	P02	27	8.5	26	10.9	1	--[3]
Newborn affected by other complications of labor and delivery	P03	2	--[3]	2	--[3]	0	0.0
Disorders relating to short gestation and low birthweight	P07	68	21.3	66	27.7	2	--[3]
Birth trauma	P10-P15	0	0.0	0	0.0	0	0.0
Intrauterine hypoxia and birth asphyxia	P20-P21	5	1.6	5	2.1	0	0.0
Respiratory distress of newborn	P22	8	2.5	7	2.9	1	--[3]
Other respiratory conditions of newborn	P23-P28	10	3.1	8	3.4	2	--[3]
Infections specific to the perinatal period	P35-P39	9	2.8	9	3.8	0	0.0
Neonatal hemorrhage	P50-P52, P54	5	1.6	5	2.1	0	0.0
Other and ill-defined conditions originating in the perinatal period	P90-P96	2	--[3]	2	--[3]	0	0.0
Symptoms, signs, and ill-defined conditions	**R00-R99**	**42**	**13.2**	**7**	**2.9**	**35**	**43.2**
Sudden Infant Death Syndrome (SIDS)	R95	34	10.7	5	2.1	29	35.8
Unintentional Injuries	**V01-X59**	**4**	**--[3]**	**1**	**--[3]**	**3**	**--[3]**
Homicide	**X85-Y09**	**5**	**1.6**	**0**	**0.0**	**5**	**6.2**
All other causes	**Residual**	**15**	**4.7**	**4**	**--[3]**	**11**	**13.6**

1. Please see the Technical Notes in the Appendix for an explanation of ICD-10 codes. 2. Calculations based on values 1-4 are excluded.

Table 33. Infant Deaths by Major Causes, Race and Hispanic Ethnicity, Massachusetts: 2010

Cause of Death[2]	ICD-10 Code	White non-Hispanic		Black non-Hispanic		Asian non-Hispanic		Hispanic	
		#	%	#	%	#	%	#	%
TOTAL		**163**	**100.0%**	**56**	**100.0%**	**25**	**100.0%**	**65**	**100.0%**
Certain conditions originating in the perinatal period	P00- P96	91	55.8%	39	69.6%	18	72.0%	37	56.9%
Congenital malformations	Q00-Q99	29	17.8%	4	--[3]	2	--[3]	14	21.5%
Symptoms, signs, and ill-defined conditions	R00-R99	25	15.3%	6	10.7%	2	--[3]	8	12.3%
SIDS	R95	20	12.3%	4	--[3]	2	--[3]	8	12.3%
Unintentional Injuries	V01-X59	2	--[3]	2	--[3]	0	0.0%	0	0.0%
Homicide	X85-Y09	2	--[3]	1	--[3]	0	0.0%	2	--[3]
All other causes	Residual	14	8.6%	4	--[3]	3	--[3]	4	--[3]

1. Race and ethnicity data in this table are presented as mutually exclusive categories and Cape Verdeans are not included with Blacks. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 2. Deaths are coded according to ICD-10. Please see Appendix for comparability ratios. 3. Calculations based on values 1-4 are excluded.

Table 34. Target Status for Selected Healthy People 2020 Mortality Objectives (underlying cause of death only)

HEALTHY PEOPLE 2020 OBJECTIVE	TARGET 2020[1]	MA 2009	MA 2010	TARGET STATUS
Overall Cancer death rate	160.6	174.0	171.0	**O**
Lung Cancer	45.5	48.4	47.3	**O**
Female Breast Cancer (per 100,000 females)	20.6	22.2	19.1	√
Uterine Cervix (per 100,000 females)	2.2	1.7	1.3	√
Colorectal Cancer	14.5	15.1	14.9	**O**
Oropharyngeal Cancer	2.3	2.5	3.0	**O**
Prostate Cancer (per 100,000 males)	21.2	21.7	21.2	√
Malignant Melanoma	2.4	3.6	3.1	**O**
COPD, ages 45+	98.5	90.9	84.4	√
Coronary Heart Disease	100.8	102.4	96.5	√
Stroke	33.8	32.2	31.2	√
Cirrhosis	8.2	5.5	5.4	√
Drug-induced deaths	11.3	13.8	12.5	**O**
HIV/AIDS	3.3	1.7	1.6	√
Injury Deaths	53.3	41.4	43.3	√
Residential fire deaths	0.9	0.3	0.2	√
Falls	7.0	6.6	6.9	√
Falls, ages 65+	45.3	45.6	48.1	**O**
Firearm- related	9.2	3.1	4.0	√
Poisonings	13.1	13.5	12.2	√
Poisonings, ages 35-54	25.5	25.4	22.8	√
Unintentional or Undetermined Intent injuries	11.1	12.1	10.9	√
Unintentional or Undetermined Intent injuries, ages 35-54	21.6	22.6	20.0	√
Unintentional Injuries	36.0	28.5	28.3	√
Motor vehicle crashes	12.4	5.5	5.4	√
Drowning	1.1	1.0	1.2	**O**
Hanging, strangulation or suffocation	1.7	5.4	5.8	**O**
Suffocation, persons 65+	7.2	10.6	12.3	**O**
Homicide	5.5	2.8	3.2	√
Suicide	10.2	7.7	8.7	√
Infant and Child Heatlh				
Infant deaths (per 1,000 live births)	6.0	4.9	4.4	√
Neonatal deaths (per 1,000 live births)	4.1	3.7	3.3	√
Postneonatal deaths (per 1,000 live births)	2.0	1.2	1.1	√
Birth defects (per 1,000 live births)	1.3	0.8	0.7	√
Congenital heart defects (per 1,000 live births)	0.34	0.1	0.1	√
Sudden infant death syndrome (SIDS) (per 1,000 live births)	0.50	0.5	0.5	√
Child/Adolescent/Young Adults Death Rates				
1-4 years old	25.7	13.9	13.6	√
5-9 years old	12.3	7.9	7.3	√
10-14 years old	15.2	11.0	8.6	√
15-19 years old	55.7	30.7	30.9	√
20-24 years old	88.5	64.6	65.2	√
Asthma deaths (per million)				
Ages 35-64 years	6.0	6.3	6.3	**O**
Ages 65+ years	22.9	27.8	29.9	**O**

✓ = YES, met target O = NO, but within 25% of target ● = NO, > 25% from target

Note: Death rates are per 100,000 and age adjusted to the 2010 US Population except when noted. 1. Data 2020 the Healthy People 2020 Database. CDC Wonder website. 2. Calculations based on values 1-4 are excluded.

Table 35. Rank of Premature Mortality Rates for the Largest 30 Communities[1], Massachusetts: 2010 (Sorted by PMR)

City/Town	Number of Premature Deaths	PMR[2] (per 100,000)
Springfield	615	445.3*
Brockton	398	426.6*
Fall River	384	422.6*
Lowell	391	412.3*
New Bedford	378	397.2*
Lynn	320	374.5*
Pittsfield	184	366.5*
Worcester	577	358.0*
Chicopee	212	351.9*
Attleboro	151	340.4*
Taunton	195	326.7*
Somerville	189	326.7*
Haverhill	199	325.4*
Boston	1,678	320.3*
Quincy	306	309.6
Revere	165	308.1
Plymouth	193	294.1
Lawrence	186	292.0
Weymouth	180	289.7
Medford	162	286.2
Methuen	134	272.8
Peabody	162	271.1
Barnstable	155	264.0
Waltham	148	257.1
Malden	146	250.5
Framingham	155	227.0*
Arlington	105	224.1*
Cambridge	178	216.9*
Newton	156	164.9*
Brookline	64	114.3*
State Total	**18,884**	**273.6**

1. These communities had the largest populations in Massachusetts, based on 2010 Census. 2. Rates are age-adjusted to the 2000 US Standard Population for person ages 0-74 years.

* significantly differently from State PMR.

Table 36. Premature Mortality Rates by Community, Massachusetts: 2010

City/Town	Premature Deaths (#)	PMR[1] (per 100,000 population)
STATE	**18,884**	**273.6**
Abington	52	305.1
Acton	39	170.2
Acushnet	26	216.1
Adams	34	359.8
Agawam	95	298.4
Alford	1	--[2]
Amesbury	47	291.7
Amherst	29	130.7
Andover	36	107.9
Aquinnah	0	0.0
Arlington	105	224.1
Ashburnham	21	350.6
Ashby	11	398.6
Ashfield	5	323.9
Ashland	32	174.0
Athol	57	460.9
Attleboro	151	340.4
Auburn	59	293.6
Avon	16	301.8
Ayer	27	372.6
Barnstable	155	264.0
Barre	15	263.0
Becket	6	385.8
Bedford	23	135.3
Belchertown	35	203.7
Bellingham	54	309.4
Belmont	39	136.7
Berkley	13	193.2
Berlin	7	201.9
Bernardston	3	--[2]
Beverly	125	296.0
Billerica	116	257.6
Blackstone	28	312.4
Blandford	5	249.3
Bolton	11	205.7
Boston	1678	320.3
Bourne	64	279.3
Boxborough	5	108.0
Boxford	15	168.5
Boylston	5	92.3
Braintree	108	280.2
Brewster	37	284.7
Bridgewater	70	272.0
Brimfield	9	259.4
Brockton	398	426.6
Brookfield	9	204.0
Brookline	64	114.3

Table 36. Premature Mortality Rates by Community, Massachusetts: 2010

City/Town	Premature Deaths (#)	PMR[1] (per 100,000 population)
Buckland	6	259.5
Burlington	58	204.4
Cambridge	178	216.9
Canton	51	216.6
Carlisle	4	--[2]
Carver	52	362.9
Charlemont	2	--[2]
Charlton	33	254.8
Chatham	27	351.5
Chelmsford	89	220.0
Chelsea	118	427.7
Cheshire	8	162.8
Chester	5	283.0
Chesterfield	4	--[2]
Chicopee	212	351.9
Chilmark	2	--[2]
Clarksburg	5	245.2
Clinton	49	340.0
Cohasset	17	191.9
Colrain	7	374.2
Concord	28	135.1
Conway	6	217.6
Cummington	3	--[2]
Dalton	23	257.1
Danvers	98	309.8
Dartmouth	81	223.8
Dedham	64	232.6
Deerfield	7	95.6
Dennis	61	255.0
Dighton	19	243.9
Douglas	23	285.5
Dover	12	195.1
Dracut	96	313.1
Dudley	42	376.6
Dunstable	3	--[2]
Duxbury	27	145.4
East Bridgewater	49	319.8
East Brookfield	5	202.7
East Longmeadow	36	201.3
Eastham	16	233.6
Easthampton	58	310.0
Easton	45	175.4
Edgartown	14	264.6
Egremont	1	--[2]
Erving	4	--[2]
Essex	8	193.0
Everett	116	301.8
Fairhaven	52	264.5
Fall River	384	422.6
Falmouth	111	249.2

Table 36. Premature Mortality Rates by Community, Massachusetts: 2010

City/Town	Premature Deaths (#)	PMR[1] (per 100,000 population)
Fitchburg	133	351.9
Florida	4	--[2]
Foxborough	58	316.1
Framingham	155	227.0
Franklin	57	204.4
Freetown	17	164.9
Gardner	76	374.2
Georgetown	29	329.7
Gill	5	225.2
Gloucester	89	248.3
Goshen	0	0.0
Gosnold	0	0.0
Grafton	50	283.5
Granby	23	336.3
Granville	7	493.4
Great Barrington	18	210.0
Greenfield	66	348.3
Groton	15	140.0
Groveland	21	273.1
Hadley	16	236.8
Halifax	33	367.3
Hamilton	10	126.7
Hampden	18	328.7
Hancock	0	0.0
Hanover	36	240.9
Hanson	26	232.3
Hardwick	7	210.6
Harvard	27	354.0
Harwich	48	302.3
Hatfield	13	269.2
Haverhill	199	325.4
Hawley	1	--[2]
Heath	1	--[2]
Hingham	26	99.2
Hinsdale	7	248.0
Holbrook	39	322.6
Holden	40	197.1
Holland	8	288.4
Holliston	33	197.7
Holyoke	146	382.8
Hopedale	17	293.2
Hopkinton	23	172.1
Hubbardston	11	283.5
Hudson	50	236.4
Hull	19	146.6
Huntington	9	292.3
Ipswich	38	215.6
Kingston	44	326.9
Lakeville	39	314.0
Lancaster	14	187.5

Table 36. Premature Mortality Rates by Community, Massachusetts: 2010

City/Town	Premature Deaths (#)	PMR[1] (per 100,000 population)
Lanesborough	5	102.3
Lawrence	186	292.0
Lee	19	247.1
Leicester	37	312.4
Lenox	13	201.5
Leominster	122	282.1
Leverett	2	--[2]
Lexington	52	135.8
Leyden	11	793.2
Lincoln	9	113.6
Littleton	12	131.5
Longmeadow	34	181.6
Lowell	391	412.3
Ludlow	54	219.9
Lunenburg	33	275.0
Lynn	320	374.5
Lynnfield	31	259.5
Malden	146	250.5
Manchester	8	116.2
Mansfield	51	247.5
Marblehead	50	173.1
Marion	10	162.0
Marlborough	92	244.7
Marshfield	77	252.2
Mashpee	51	269.9
Mattapoisett	24	301.8
Maynard	28	259.9
Medfield	21	177.7
Medford	162	286.2
Medway	27	239.6
Melrose	73	236.4
Mendon	10	160.7
Merrimac	14	170.2
Methuen	134	272.8
Middleborough	79	293.7
Middlefield	1	--[2]
Middleton	13	152.5
Milford	69	237.6
Millbury	48	311.9
Millis	16	191.2
Millville	9	339.8
Milton	69	232.2
Monroe	1	--
Monson	28	262.4
Montague	28	285.1
Monterey	2	--
Montgomery	2	--
Mount Washington	2	--
Nahant	6	137.6
Nantucket	28	245.6

Table 36. Premature Mortality Rates by Community, Massachusetts: 2010

City/Town	Premature Deaths (#)	PMR[1] (per 100,000 population)
Natick	76	213.2
Needham	50	156.5
New Ashford	0	0.0
New Bedford	378	397.2
New Braintree	1	--[2]
New Marlborough	3	--[2]
New Salem	0	0.0
Newbury	12	133.6
Newburyport	63	295.3
Newton	156	164.9
Norfolk	19	171.8
North Adams	53	366.8
North Andover	61	226.8
North Attleboro	79	283.3
North Brookfield	18	356.3
North Reading	37	213.2
Northampton	101	331.2
Northborough	27	188.0
Northbridge	38	241.9
Northfield	10	282.4
Norton	50	252.4
Norwell	26	238.8
Norwood	77	258.7
Oak Bluffs	11	198.3
Oakham	2	--[2]
Orange	25	278.5
Orleans	24	226.4
Otis	2	--[2]
Oxford	52	334.9
Palmer	61	464.9
Paxton	9	192.9
Peabody	162	271.1
Pelham	0	0.0
Pembroke	56	292.9
Pepperell	34	309.3
Peru	1	--[2]
Petersham	5	313.7
Phillipston	0	--
Pittsfield	184	366.5
Plainfield	0	0.0
Plainville	25	268.7
Plymouth	193	294.1
Plympton	8	187.9
Princeton	8	208.9
Provincetown	22	456.0
Quincy	306	309.6
Randolph	103	298.5
Raynham	38	257.4
Reading	49	179.7
Rehoboth	27	231.4

Table 36. Premature Mortality Rates by Community, Massachusetts: 2010

City/Town	Premature Deaths (#)	PMR[1] (per 100,000 population)
Revere	165	308.1
Richmond	1	--[2]
Rochester	6	99.7
Rockland	62	345.7
Rockport	19	184.9
Rowe	1	--[2]
Rowley	10	163.6
Royalston	8	533.3
Russell	5	267.6
Rutland	12	148.3
Salem	99	232.6
Salisbury	39	387.5
Sandisfield	10	644.1
Sandwich	63	247.4
Saugus	103	312.8
Savoy	2	--[2]
Scituate	55	237.0
Seekonk	27	164.0
Sharon	34	197.0
Sheffield	10	226.6
Shelburne	8	336.2
Sherborn	3	--[2]
Shirley	39	566.8
Shrewsbury	83	240.9
Shutesbury	9	449.9
Somerset	57	248.1
Somerville	189	326.7
South Hadley	53	280.1
Southampton	13	171.9
Southborough	18	174.3
Southbridge	52	320.9
Southwick	25	244.7
Spencer	31	237.9
Springfield	615	445.3
Sterling	11	116.9
Stockbridge	7	375.6
Stoneham	74	284.7
Stoughton	96	305.0
Stow	12	175.8
Sturbridge	26	258.2
Sudbury	27	137.7
Sunderland	1	--[2]
Sutton	24	246.6
Swampscott	32	189.6
Swansea	43	236.4
Taunton	195	326.7
Templeton	24	280.1
Tewksbury	83	254.9
Tisbury	10	214.3
Tolland	3	--[2]

Table 36. Premature Mortality Rates by Community, Massachusetts: 2010

City/Town	Premature Deaths (#)	PMR[1] (per 100,000 population)
Topsfield	7	82.8
Townsend	22	232.2
Truro	10	279.8
Tyngsborough	37	366.3
Tyringham	0	0.0
Upton	12	156.1
Uxbridge	44	285.1
Wakefield	64	237.5
Wales	5	225.0
Walpole	52	201.9
Waltham	148	257.1
Ware	45	408.2
Wareham	126	442.2
Warren	21	390.6
Warwick	6	537.2
Washington	0	0.0
Watertown	79	235.6
Wayland	21	122.2
Webster	64	339.8
Wellesley	30	107.9
Wellfleet	12	263.1
Wendell	1	--[2]
Wenham	9	173.0
West Boylston	13	145.9
West Bridgewater	22	277.5
West Brookfield	13	265.0
West Newbury	10	205.1
West Springfield	124	408.7
West Stockbridge	4	--[2]
West Tisbury	7	209.9
Westborough	33	180.7
Westfield	131	308.9
Westford	44	195.8
Westhampton	3	--[2]
Westminster	22	258.6
Weston	23	164.1
Westport	57	286.8
Westwood	34	223.5
Weymouth	180	289.7
Whately	0	0.0
Whitman	55	400.5
Wilbraham	39	211.9
Williamsburg	14	467.1
Williamstown	13	145.1
Wilmington	62	280.6
Winchendon	30	310.8
Winchester	31	130.2
Windsor	1	--[2]
Winthrop	53	245.7
Woburn	110	272.9

Table 36. Premature Mortality Rates by Community, Massachusetts: 2010

City/Town	Premature Deaths (#)	PMR[1] (per 100,000 population)
Worcester	577	358.0
Worthington	3	--[2]
Wrentham	42	393.8
Yarmouth	93	290.3

1. PMR are age-adjusted to the 2000 US Standard Population for persons ages 0-74 years. 2. Age-adjusted rates based on values 1-4 are excluded.

Figure 18. Premature Mortality Rates adjusted by poverty level, Massachusetts: 2010

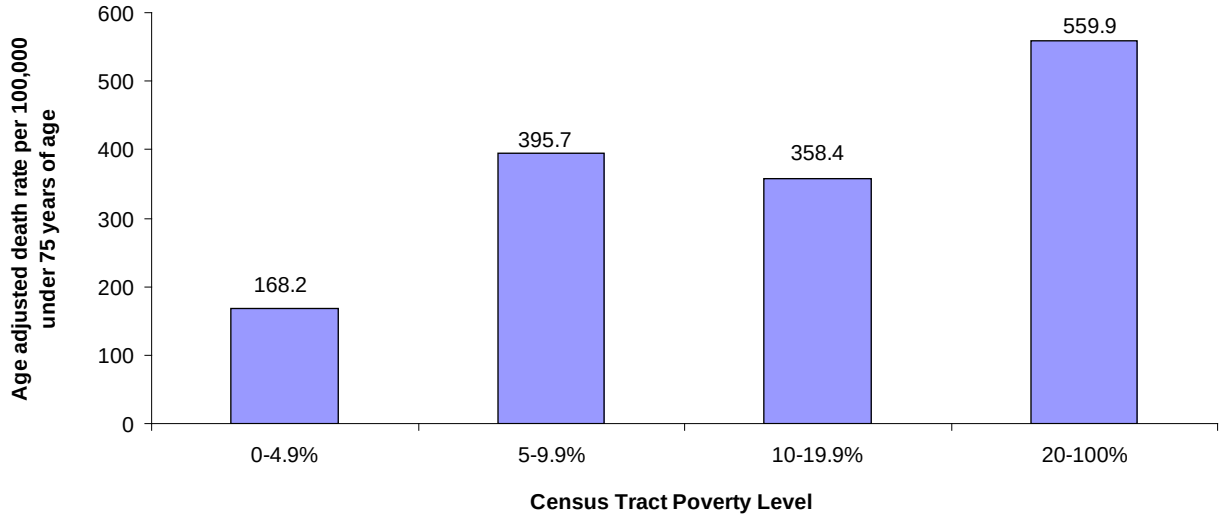


Figure 19. Infant Mortality rates adjusted by poverty level, Massachusetts: 2010

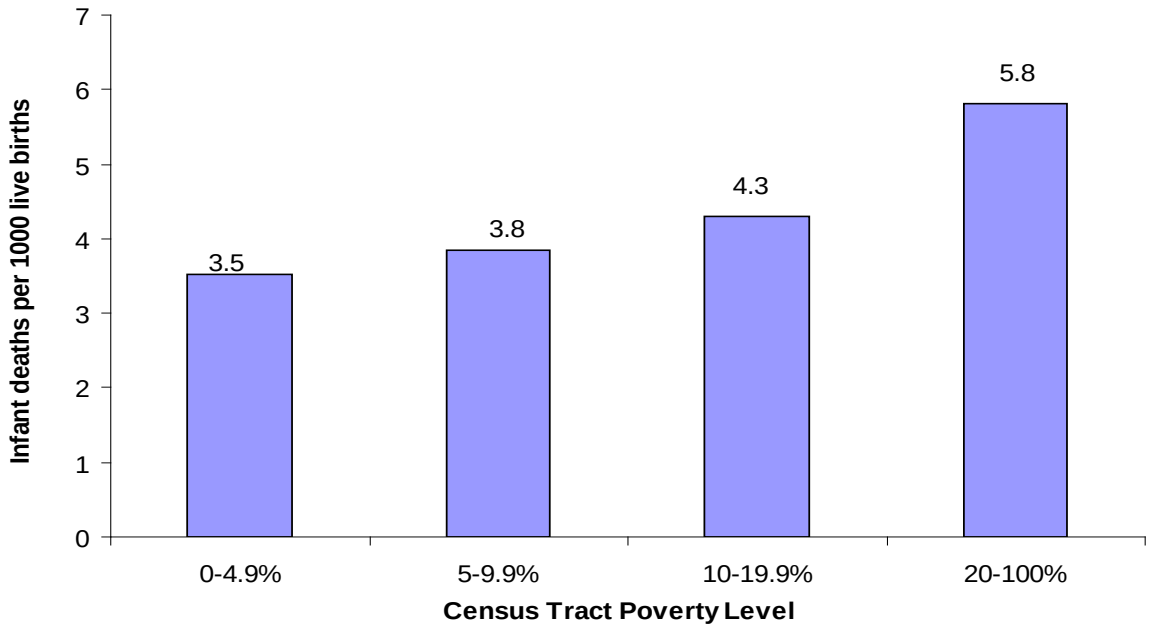


Figure 20. Percent of Deaths Amenable to Health Care, Massachusetts: 2010

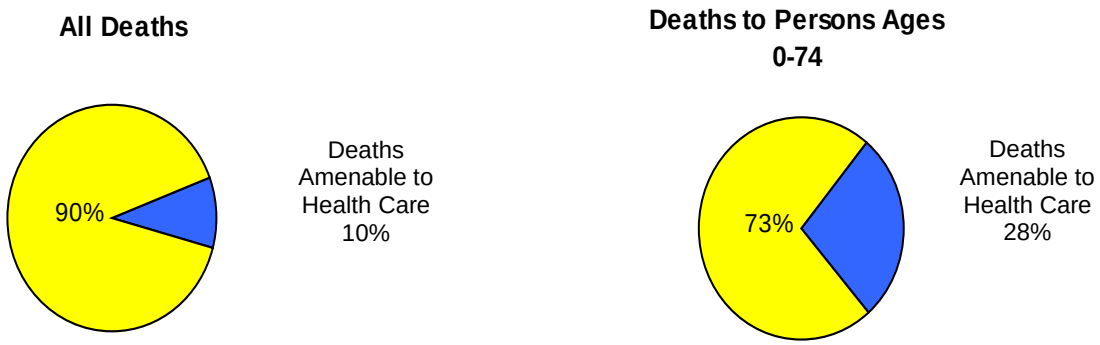


Figure 21. Amenable Mortality by race and Hispanic ethnicity, Massachusetts: 2000 and 2010

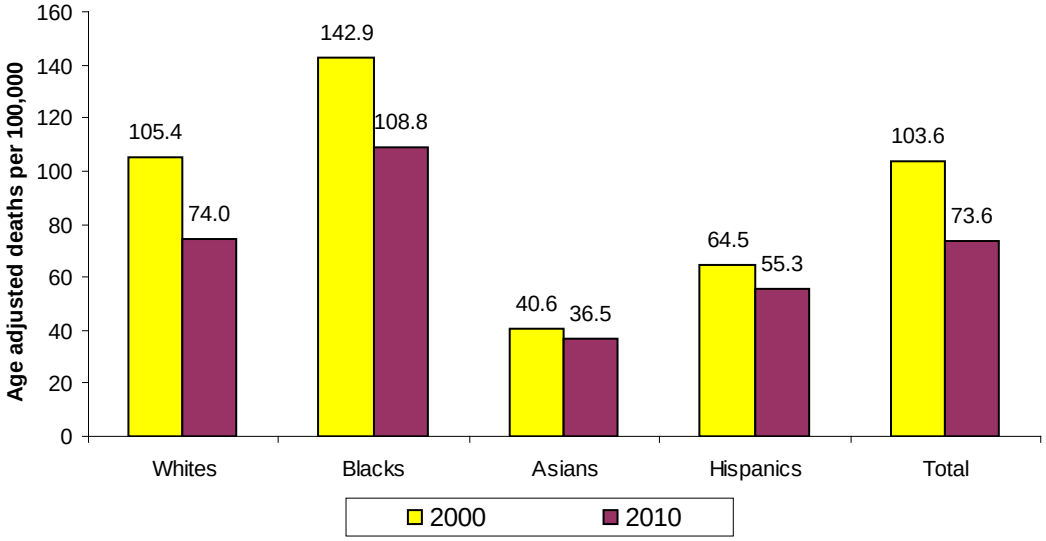
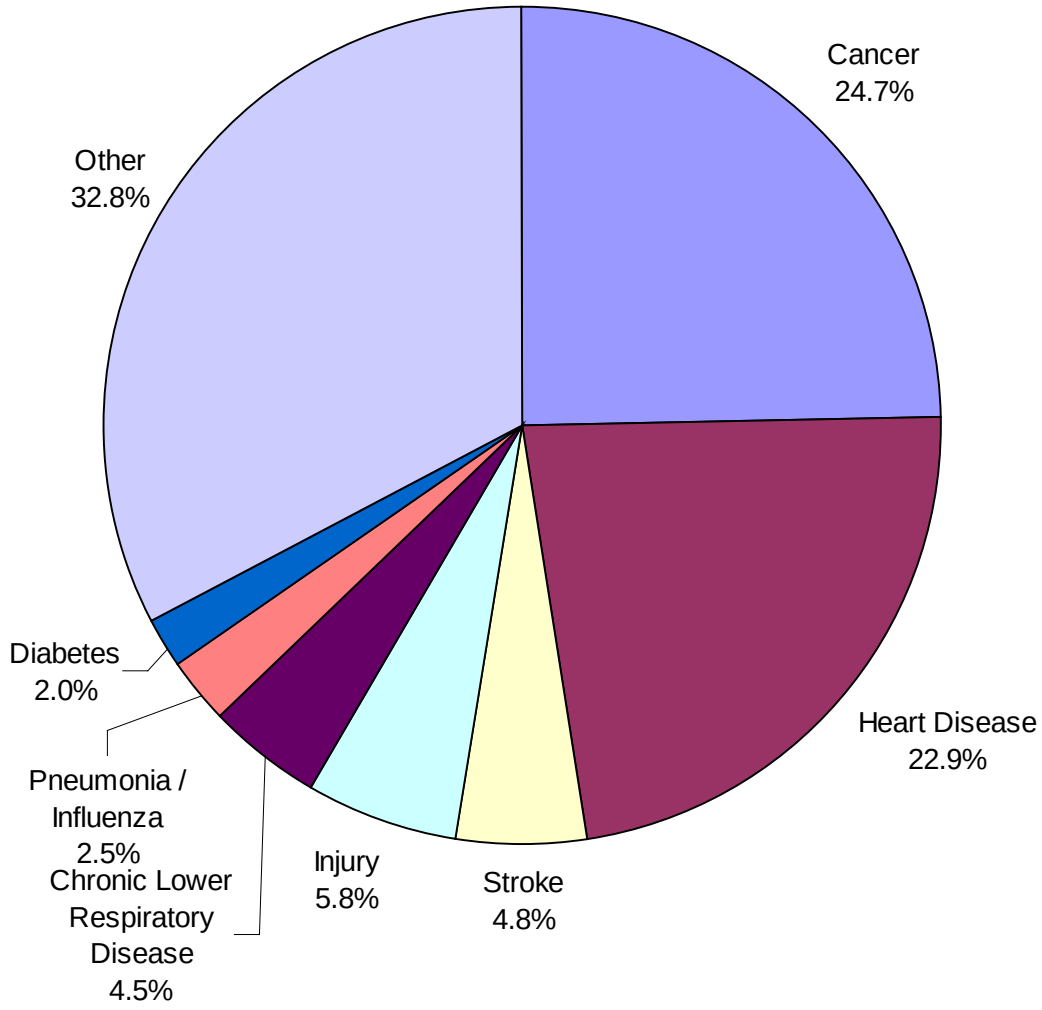


Table 37. Rank by Potential Years of Life Lost (PYLL), Massachusetts: 2010

Cause	Total PYLL	Rank on PYLL	Average PYLL	# of Deaths before 75 years	Rank on Number of Deaths
All Causes	***336,173***		***17.8***	***18,884***	
Cancer	90,880	1	13.8	6,564	1
Heart Disease	47,753	2	14.6	3,261	2
Unintentional injuries	42,597	3	31.3	1,362	5
Suicide	16,407	4	31.4	523	12
Perinatal Conditions	14,541	5	74.2	196	22
Homicide	9,616	6	47.1	204	21
Stroke	7,276	7	13.7	533	3
Diabetes	6,122	8	14.1	433	9
HIV/AIDS	2,899	9	24.6	118	28
Alzheimer's Disease	893	10	8.4	106	6

Figure 22. Percent Distribution of Leading Underlying Causes of Death[1, 2], Massachusetts: 2010



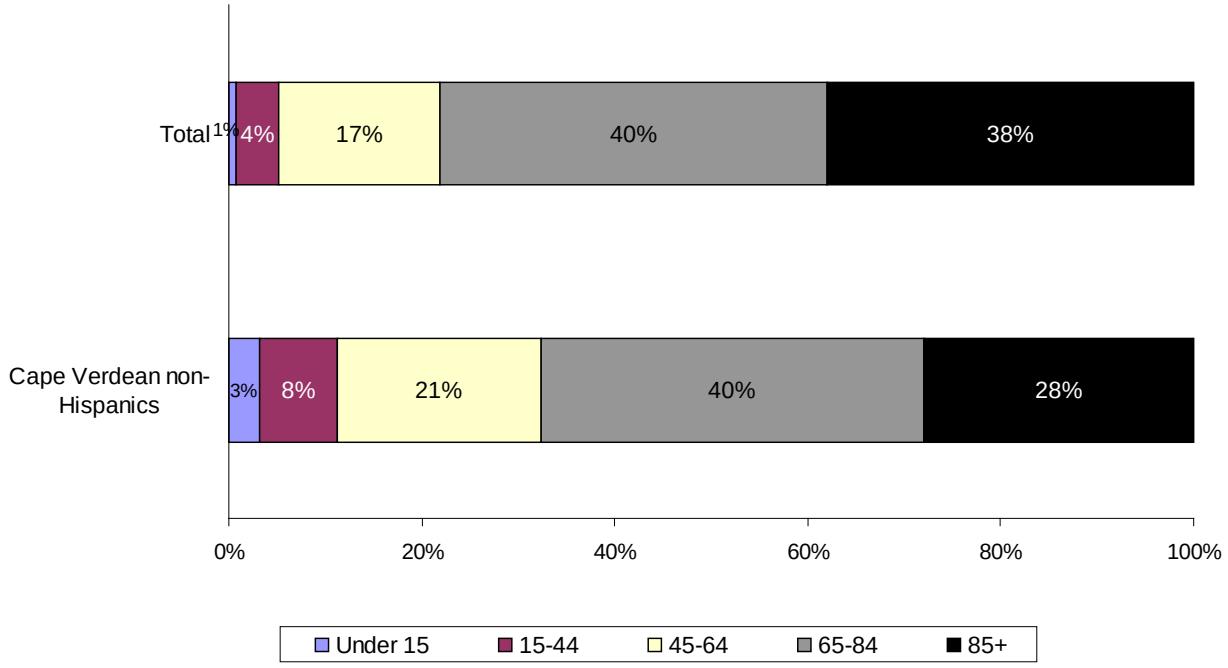
1. Total Number of Deaths =52,420. 2. Causes of Death are classified according to ICD-10

Table 38. Leading Causes of Death[1] for Cape Verdean non-Hispanics[2], Massachusetts: 2010

	Number	Percent
Cancer	53	23.9
Heart Disease	53	23.9
Unintentional Injuries	13	5.9
Stroke	12	5.4
Alzheimer's Disease	8	3.6
Chronic Lower Respiratory Disease	8	3.6
Homicide	6	2.7
Diabetes	5	2.3
Nephritis	5	2.3
All other deaths	59	26.6
All Deaths	**222**	**100.0%**

1. Deaths are coded according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table.
2. Historically, MA DPH has followed federal definitions of race and ethnicity and has reported death rates for White, Black, Asian races including persons of Hispanic origin; and Hispanic ethnicity. Furthermore, Cape Verdeans have been included with Blacks, to be consistent with the National Center for Health Statistics. Starting with Deaths 1999, in all tables where data were classified by race and ethnicity, we presented mutually exclusive categories of White; Black; Asian; and Hispanic. Here, we separate Cape Verdeans from the Black non-Hispanic group. 3 Calculations bases on 1-4 events are excluded.

Figure 23. Age Distribution of Deaths for Cape Verdean non-Hispanics* and State Total, Massachusetts: 2010



* Historically, MA DPH has followed federal definitions of race and ethnicity and has reported death rates for White, Black, Asian races including persons of Hispanic origin; and Hispanic ethnicity. Furthermore, Cape Verdeans have been included with Blacks, to be consistent with the National Center for Health Statistics. Starting with Deaths 1999, in all tables where data were classified by race and ethnicity, we presented mutually exclusive categories of White; Black; Asian; and Hispanic. Here, we separate Cape Verdeans from the Black non-Hispanic group.

Table 39. Number and Age-Specific Rates for Selected Causes of Death by Race and Hispanic Ethnicity, Massachusetts: 2010

Selected Causes[2]	Total		White non-Hispanic[1]		Black non-Hispanic[1]		Asian non-Hispanic[1]		Hispanic	
	#	Rate[3]	#	Rate	#	Rate	#	Rate	#	Rate
Age: 1-14, TOTAL	**113**	**10.4**	**69**	**9.1**	**23**	**24.5**	**5**	**7.3**	**15**	**9.2**
Cancer	20	1.8	16	2.1	1	--[5]	2	--[5]	1	--[5]
Unintentional Injuries	18	1.7	10	1.3	5	5.3	1	--[5]	2	--[5]
Homicide	10	0.9	5	0.7	4	--[5]	0	0.0	1	--[5]
Congenital malformations	9	0.8	6	0.8	0	0.0	0	0.0	3	--[5]
Age: 15-24, TOTAL	**453**	**48.3**	**309**	**46.1**	**72**	**89.2**	**15**	**24.2**	**57**	**46.2**
Unintentional Injuries	166	17.7	141	21.1	11	13.6	5	8.1	9	7.3
Homicide	85	9.1	21	3.1	39	48.3	0	0.0	25	20.2
Suicide	78	8.3	57	8.5	9	11.2	7	11.3	5	4.0
Cancer	22	2.3	16	2.4	3	--[5]	1	--[5]	2	--[5]
Age: 25-44, TOTAL	**1,823**	**105.2**	**1,367**	**107.7**	**182**	**143.2**	**54**	**39.9**	**212**	**107.5**
Unintentional Injuries	475	27.4	391	30.8	24	18.9	5	3.7	53	26.9
Cancer	279	16.1	206	16.2	28	22.0	17	12.6	27	13.7
Heart Disease	214	12.4	159	12.5	21	16.5	8	5.9	25	12.7
Suicide	211	12.2	185	14.6	9	7.1	4	--[5]	12	6.1
Age: 45-64, TOTAL	**8,753**	**482.0**	**7,559**	**493.3**	**642**	**638.7**	**153**	**206.0**	**388**	**371.3**
Cancer	3,317	182.7	2,886	188.3	211	209.9	87	117.1	131	125.4
Heart Disease	1,595	87.8	1,384	90.3	127	126.4	20	26.9	60	57.4
Unintentional Injuries	559	30.8	496	32.4	34	33.8	5	6.7	22	21.1
Chronic liver disease	331	18.2	294	19.2	15	14.9	3	--[5]	19	18.2
Age: 65+, TOTAL	**40,950**	**4,536.3**	**38,534**	**4,737.1**	**1,297**	**3,660.2**	**507**	**2,000.8**	**571**	**2,104.2**
Heart Disease	10,164	1,125.9	9,631	1,184.0	335	945.4	81	319.7	110	405.4
Cancer	9,330	1,033.5	8,702	1,069.8	325	917.2	151	595.9	137	504.9
Stroke	2,253	249.6	2,070	254.5	93	262.5	49	193.4	40	147.4
Chronic lower respiratory disease	2,118	234.6	2,040	250.8	38	107.2	11	43.4	25	92.1

1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 2. Deaths are coded according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 3. Number of deaths per 100,000 persons in each age group. 4. Unintentional injuries include injuries such as motor vehicle-related and other transportation related deaths, falls, fires, and drownings that were not intended to occur. 5. Calculations based on values 1-4 are excluded. 6. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Table 39 (continued). Number and Age-Specific Rates for Selected Causes of Death by Race and Hispanic Ethnicity, Massachusetts: 2010

	Total		White non-Hispanic[1]		Black non-Hispanic[1]		Asian non-Hispanic[1]		Hispanic	
Selected Causes[2]	**#**	**Rate[3]**	**#**	**Rate**	**#**	**Rate**	**#**	**Rate**	**#**	**Rate**
Age: 65-74, TOTAL	**7,423**	**1,626.2**	**6,666**	**1,657.2**	**399**	**1,940.9**	**138**	**888.1**	**206**	**1,189.0**
Cancer	2,925	640.8	2,657	660.5	137	666.4	64	411.9	62	357.8
Heart Disease	1,429	313.1	1,273	316.5	98	476.7	16	103.0	40	230.9
Chronic Lower Respiratory Disease	460	100.8	432	107.4	12	58.4	4	25.7	9	51.9
Stroke	283	62.0	233	57.9	25	121.6	13	83.7	12	69.3
Age: 75-84, TOTAL	**13,639**	**4,530.3**	**12,751**	**4,643.8**	**450**	**4,137.9**	**214**	**2805.1**	**210**	**2,773.7**
Cancer	3,814	1,266.8	3,559	1,296.2	131	1,204.6	66	865.1	51	673.6
Heart Disease	2,982	990.5	2,799	1,019.4	106	974.7	31	406.3	45	594.4
Chronic Lower Respiratory Disease	848	281.7	817	297.5	17	156.3	4	--[5]	9	118.9
Stroke	679	225.5	609	221.8	36	331.0	19	249.0	15	198.1
Age: 85+, TOTAL	**19,888**	**13,697.1**	**19,117**	**13,992.3**	**448**	**11,191.6**	**155**	**7,133.0**	**155**	**6,922.7**
Heart Disease	5,753	3,962.1	5,559	4,068.8	131	3,272.5	34	1,564.7	25	1,116.6
Cancer	2,591	1,784.4	2,486	1,819.6	57	1,423.9	21	966.4	24	1,071.9
Stroke	1,291	889.1	1,228	898.8	32	799.4	17	782.3	13	580.6
Alzheimer's Disease	1,194	822.3	1,136	831.5	33	824.4	12	552.2	13	580.6

1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 2. Deaths are coded according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 3. Number of deaths per 100,000 persons in each age group. 4. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 5. Calculations based on values 1-4 are excluded.

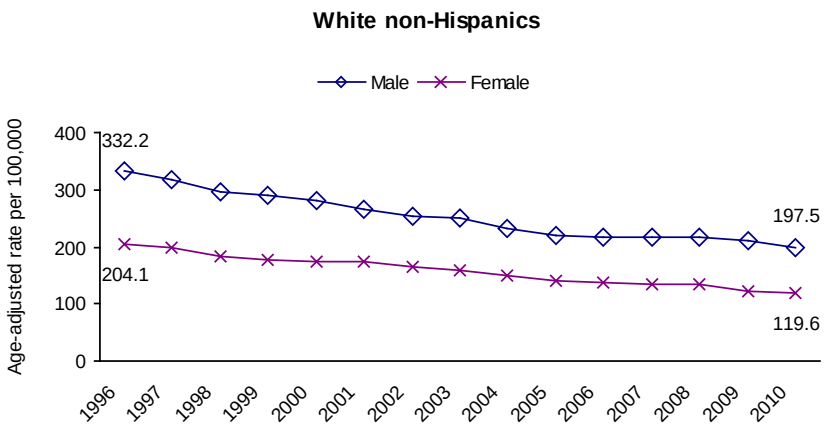
Table 40. Number of Deaths for Leading Causes of Death[1] by Hispanic Ethnicity, Massachusetts: 2010

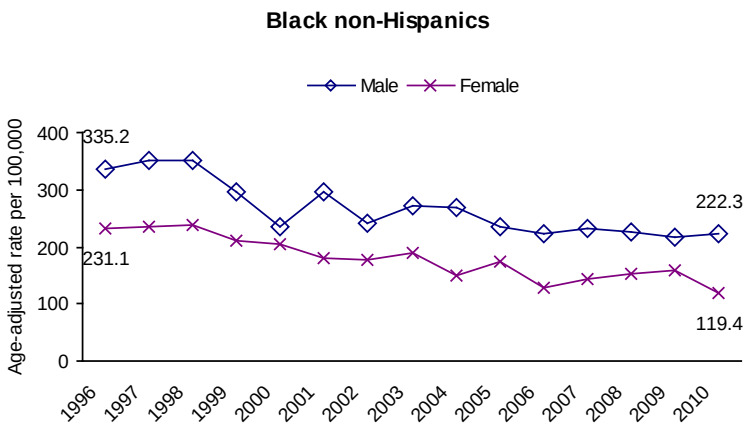
Ethnicity	Cancer	Heart Disease	Unintentional Injuries	Stroke	Homicide	Diabetes	Nephritis	Perinatal	Chronic lower respiratory disease	HIV/AIDS	ALL DEATHS
Puerto Rican	175	139	54	36	30	34	29	23	23	20	**836**
Dominican	54	27	15	9	12	9	4	5	3	2	**196**
Central American	27	12	12	3	6	2	0	5	2	2	**104**
South American	13	9	8	7	0	0	4	1	3	0	**74**
Cuban	17	7	3	3	1	1	0	1	2	2	**59**
Mexican	11	5	3	0	1	0	0	1	0	0	**30**
Other/Unknown	1	1	0	1	0	0	0	1	0	0	**8**
All Hispanics	**298**	**200**	**95**	**59**	**50**	**46**	**37**	**37**	**33**	**26**	**1,308**

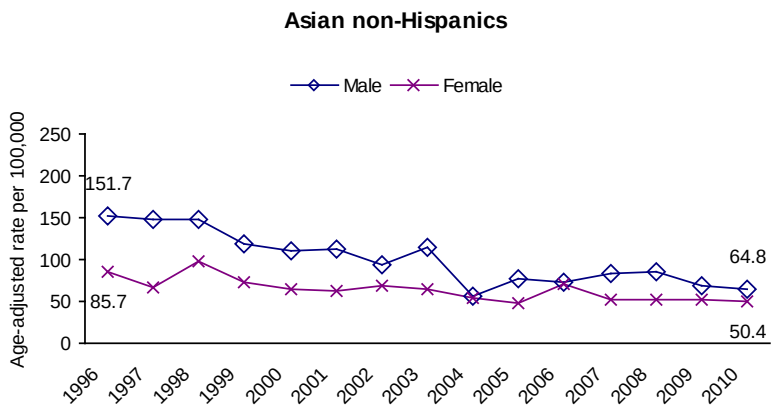
1. Ranking based on number of deaths. Underlying Cause of Death based on ICD-10 (Please see Appendix for a list of ICD-10 codes used).

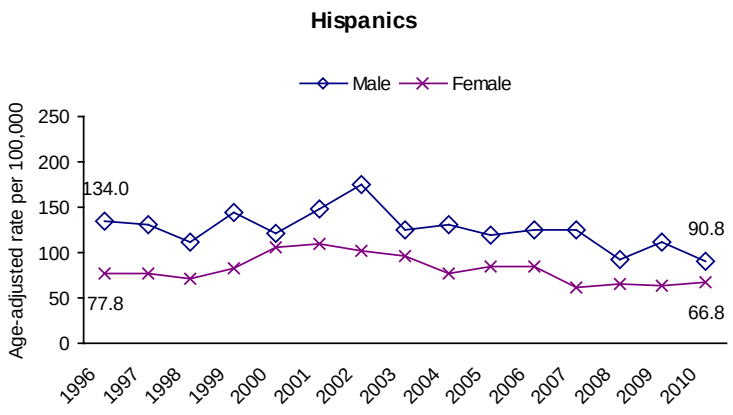
Figure 24. Heart Disease Death Rates[1] by Race/Ethnicity and Gender, Massachusetts: 1996-2010

(For 1996-1998 the comparability modified rates were used)





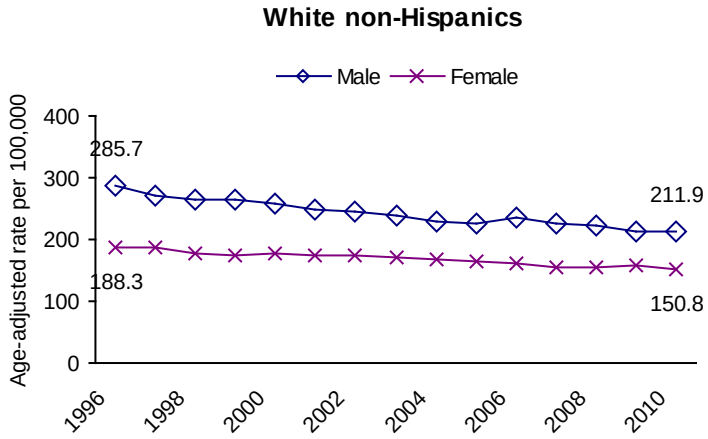


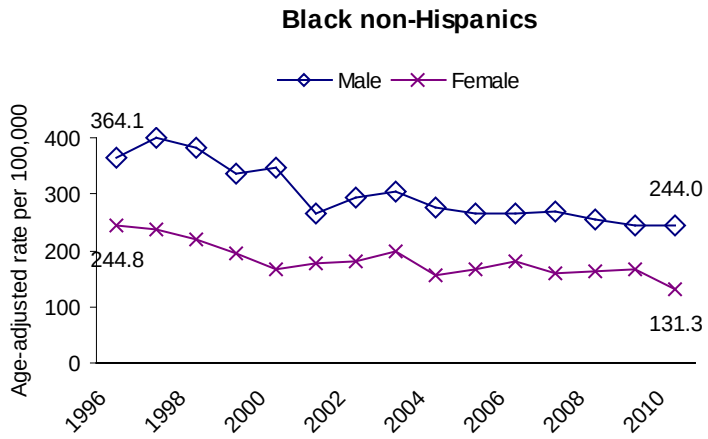


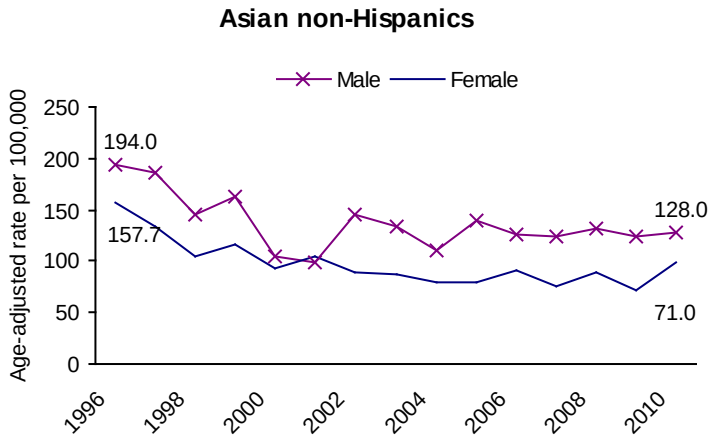
1 Rates are per 100,000 population, age-adjusted to the 2010 U.S. Standard Population.

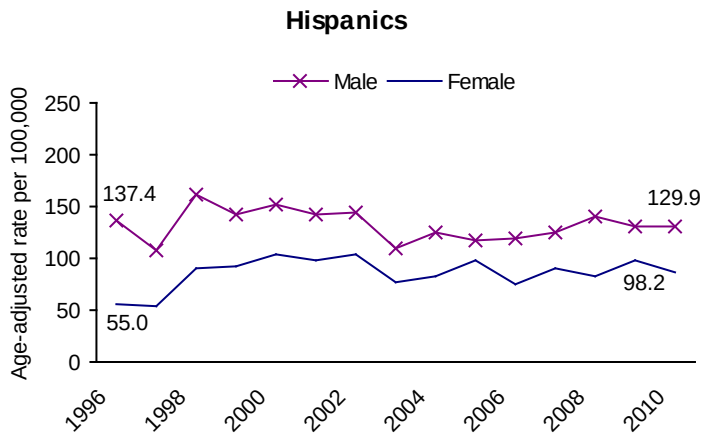
Figure 25. Cancer Death Rates[1] by Race/Ethnicity and Gender, Massachusetts: 1996-2010

(For 1996-1998 the comparability modified rates were used)









1 Rates are per 100,000 population, age-adjusted to the 2010 U.S. Standard Population.

Table 41. Underlying Cause of Death where Diabetes[1] is a Contributing Cause, Massachusetts: 2010

Underlying Cause of Death	Number	Proportion (%)
Cardiovascular Diseases	1,195	45.0
Heart Disease	983	37.0
Stroke	147	5.5
Cancer	481	18.1
Diseases of the respiratory system	246	9.3
Chronic lower respiratory disease[2]	138	5.2
Influenza and pneumonia	50	1.9
Diseases of the digestive system	94	3.5
Diseases of the genito-urinary system	82	3.1
Nephritis	66	2.5
Diseases of the nervous system and sense organs	135	5.1
Alzheimer's Disease	84	3.2
Parkinson's Disease	18	0.7
Infectious and parasitic diseases	72	2.7
HIV/AIDS	1	--[3]
Injury and poisoning	105	4.0
Endocrine, nutritional and metabolic diseases and immunity disorders	32	1.2
Diseases of the musculoskeletal systems and connective tissue	23	0.9
Other	192	7.2
Total deaths where diabetes is ONLY a contributing cause	**2,657**	**100%**

[1] ICD-10: E10-E14. [2] The title of this cause has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). [3] Calculations based on values 1-4 are excluded.

Table 42. Associated Causes of Death where Diabetes[1] is the Underlying Cause of Death, Massachusetts: 2010

Associated Causes of Death	Number	Proportion (%)
Cardiovascular Disease alone	536	52.3%
Cardiovascular Disease and Diseases of the Genitourinary System	158	15.4%
No Associated Causes	85	8.3%
Cardiovascular Disease and Diseases of the Respiratory System	64	6.3%
Other Associated Cause Combinations less than 10	59	5.8%
Diseases of the Genitourinary System alone	53	5.2%
Cardiovascular Disease and Diseases of the Nervous System	22	2.1%
Cardiovascular Disease, Diseases of the Respiratory System and Diseases of the Genitourinary System	21	2.1%
Diseases of the Respiratory System alone	15	1.5%
Cancer & Cardiovascular Disease	11	1.1%
Total deaths where diabetes is the underlying cause of death	**1,024**	**100.0%**

[1] **ICD-10:** E10-E14

Figure 26. Distribution of Injury Deaths by Intent, Massachusetts: 2010

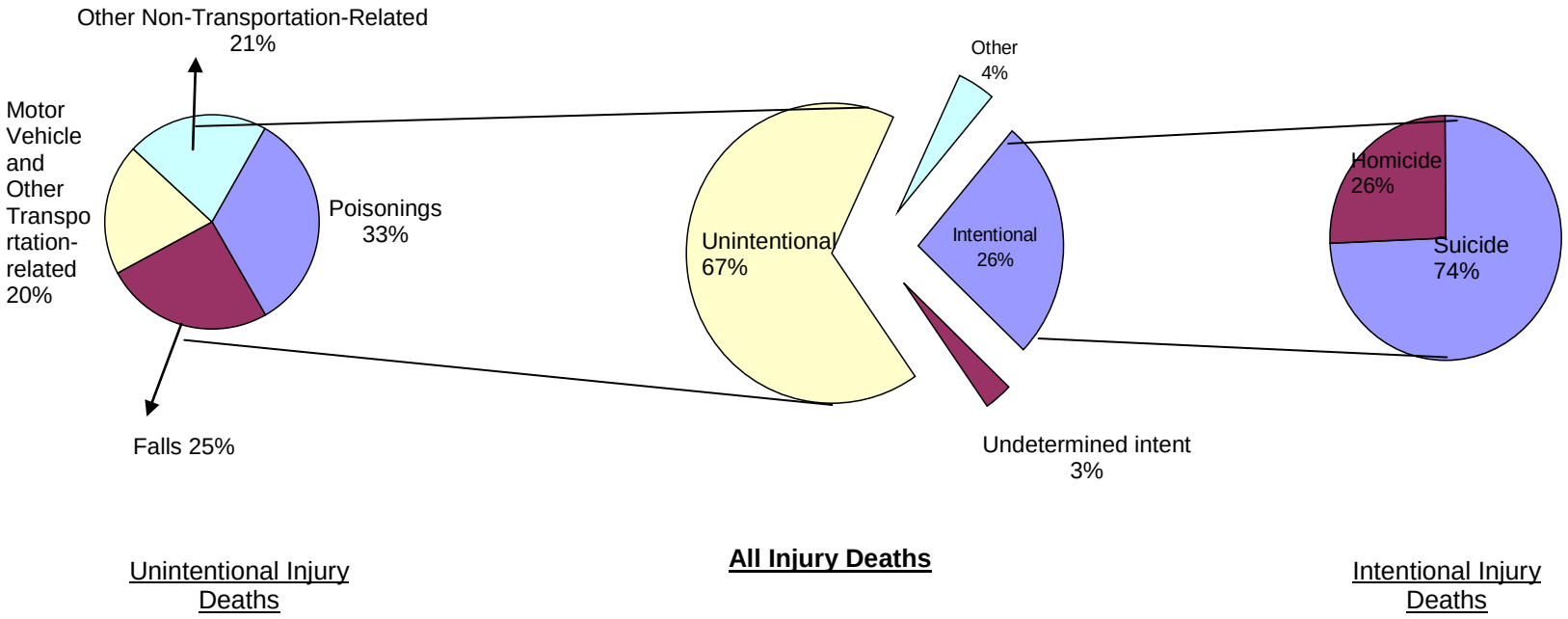


Table 43. HIV/AIDS[1] Deaths by Race, Hispanic Ethnicity, and Gender of Persons Ages 25-44, Massachusetts: 1999-2010

TOTAL	White non-Hispanic[2]		Black non-Hispanic[2]		Hispanic	
Year	#	Rate[3]	#	Rate[3]	#	Rate[3]
1999	74	4.4	32	31.2	40	30.5
2000	60	3.7	28	23.8	40	27.6
2001	70	4.4	35	29.3	31	20.3
2002	42	2.7	24	20.1	35	22.1
2003	63	4.1	19	15.8	25	15.1
2004	38	2.6	17	14.0	31	18.0
2005	29	2.0	22	18.2	19	10.7
2006	35	2.5	17	14.2	23	12.9
2007	16	1.2	11	9.1	12	6.6
2008	19	1.4	9	7.4	8	4.3
2009	11	0.8	7	5.7	12	6.3
2010	9	0.7	6	4.7	12	6.1
MALE						
1999	54	6.5	20	39.9	30	46.2
2000	39	4.9	17	30.1	27	37.9
2001	46	5.8	19	33.3	23	30.6
2002	29	3.8	15	26.3	21	26.8
2003	42	5.6	10	17.3	19	23.1
2004	30	4.1	11	18.9	19	22.1
2005	21	2.9	12	20.4	11	12.3
2006	22	3.2	12	20.5	12	13.3
2007	16	2.4	5	8.5	9	9.7
2008	13	2.0	3	--[4]	6	6.2
2009	8	1.2	4	--[4]	5	5.5
2010	3	--[4]	3	--[4]	3	--[4]
FEMALE						
1999	20	2.3	12	22.9	10	15.1
2000	21	2.5	11	17.9	13	17.6
2001	24	2.9	16	25.7	8	10.3
2002	13	1.6	9	14.4	14	17.4
2003	21	2.7	9	14.4	6	7.2
2004	8	1.1	6	9.6	12	13.9
2005	8	1.1	10	16.0	8	9.0
2006	13	1.8	5	8.2	11	12.5
2007	0	0.0	6	9.8	3	--[4]
2008	6	0.9	6	9.8	2	--[4]
2009	3	--[4]	3	--[4]	7	7.0
2010	6	0.9	3	--[4]	9	9.3

1. AIDS and HIV disease deaths coded using ICD-10: B20-B24. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race category. Please see the Technical Notes in the Appendix for a more detailed explanation. 3. Number of deaths per 100,000 residents in the specified population group. 4. Calculations based on values 1-4 are excluded.

Table 44. Premature Mortality Rates by Community Health Network Area (CHNA), Massachusetts: 2010

CHNA (Name and Number)	Number of Deaths	PMR* (per 100,000 population)
Massachusetts	**18,884**	**273.6**
Community Health Network of Berkshire (1)	439	277.8
Upper Valley Health Web (Franklin County) (2)	286	278.1
Partnership for Health in Hampshire County (Northampton) (3)	414	264.5
The Community Health Connection (Springfield) (4)	1,097	365.0
Community Health Network of Southern Worcester County (5)	388	299.2
Community Partners for Health (Milford) (6)	412	246.0
Community Health Network of Greater Metro West (Framingham) (7)	863	212.0
Common Pathways (Worcester) (8)	921	306.0
Community Health Network of North Central Massachusetts (9)	784	289.7
Greater Lowell Community Health Network (10)	859	305.6
Greater Lawrence Community Health Network (11)	430	233.1
Greater Haverhill Community Health Network (12)	459	282.4
Community Health Network North (Beverly/Gloucester) (13)	313	225.4
North Shore Community Health Network (14)	901	290.6
Northwest Suburban Health Alliance (15)	433	179.9
North Suburban Health Alliance (Medford/Malden/Melrose) (16)	721	255.7
Greater Cambridge/Somerville Community Health Network (17)	590	233.2
West Suburban Health Network (Newton/Waltham) (18)	517	187.0
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop) (19)	2,078	303.9
Blue Hills Community Health Alliance (Greater Quincy) (20)	1,071	256.0
Community Health Network of Chicopee, Holyoke, Ludlow, Westfield (21)	557	326.2
Greater Brockton Community Health Network (22)	842	340.3
South Shore Community Health Network (23)	614	281.1
Greater Attleboro-Taunton Health & Education Response (24)	768	283.3
Partners for Healthier Communities (Fall River) (25)	541	355.1
Greater New Bedford Community Health Network (26)	720	321.6
Cape Cod and Islands Health Network (27)	866	265.7

* Rates are per 100,000 population age-adjusted to the 2000 US Standard Population for persons ages 0-74 years.

Table 45. Premature Mortality Rates by County, Massachusetts: 2010

County	Number of Deaths	PMR* (per 100,000 population)
Massachusetts	**18,884**	**273.6**
Barnstable	794	271.0
Berkshire	439	277.8
Bristol	1,790	305.6
Dukes	44	220.4
Essex	2,103	263.7
Franklin	216	252.5
Hampden	1,667	349.3
Hampshire	423	264.9
Middlesex	3,630	234.3
Nantucket	28	245.6
Norfolk	1,721	239.5
Plymouth	1,670	301.3
Suffolk	2,014	321.2
Worcester	2,345	287.8

* Rates are per 100,000 population age-adjusted to the 2000 US Standard Population for persons ages 0-74 years.

Table 46. Selected Causes of Death by Community, Massachusetts: 2010

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
Massachusetts	**52,411**	**672.7**	**11,996**	**12,969**	**3,546**	**823**	**2,503**	**2,380**	**1,024**	**1,285**	**380**	**206**	**591**	**483**
Abington	127	802.8	37	28	7	3	5	4	5	4	0	1	2	1
Acton	102	505.7	28	30	9	5	4	4	1	2	1	1	1	2
Acushnet	80	608.7	22	20	7	2	5	3	3	4	0	0	0	0
Adams	107	788.4	32	25	6	0	7	1	1	5	2	0	1	2
Agawam	332	701.9	62	72	14	4	25	12	4	8	1	0	6	2
Alford	2	--[4]	0	1	0	0	0	0	0	1	0	0	0	0
Amesbury	131	738.7	34	31	11	1	4	3	3	6	1	0	2	0
Amherst	129	494.1	28	23	4	2	7	7	3	8	1	0	2	0
Andover	182	469.6	41	36	5	5	6	8	1	5	0	0	3	1
Aquinnah	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
Arlington	379	628.2	86	106	27	9	18	16	4	5	3	0	3	3
Ashburnham	42	855.6	7	14	3	1	1	4	0	1	0	0	1	1
Ashby	21	828.7	2	3	1	1	1	2	0	2	0	0	3	0
Ashfield	16	847.2	3	1	0	0	3	2	0	0	1	0	0	1
Ashland	86	570.1	24	20	10	0	3	2	1	3	0	0	3	2
Athol	137	853.1	21	44	18	0	6	15	3	7	0	1	2	1
Attleboro	356	731.0	78	88	33	8	12	23	5	13	3	4	2	2
Auburn	200	768.0	46	56	10	3	10	10	3	5	0	0	1	1
Avon	36	601.9	10	12	3	0	2	1	0	1	1	0	0	0
Ayer	71	976.4	11	19	5	3	6	3	3	2	0	0	1	0
Barnstable	503	671.1	116	120	28	6	32	28	6	4	4	0	6	2
Barre	42	672.8	15	11	3	0	1	5	1	0	0	0	0	0
Becket	10	727.4	1	2	0	0	1	1	0	0	0	0	0	0
Bedford	136	572.0	24	32	13	2	10	8	3	2	0	0	0	0
Belchertown	86	642.8	25	19	6	1	3	4	1	0	1	1	2	2
Bellingham	110	710.6	27	38	5	3	2	8	1	2	0	0	0	2
Belmont	177	501.5	43	38	9	5	9	4	1	0	0	0	0	1
Berkley	21	424.2	6	6	0	1	2	2	0	0	0	0	0	1
Berlin	14	388.2	3	5	2	0	1	1	0	0	0	0	0	1
Bernardston	20	643.3	5	5	1	0	1	1	0	1	0	0	0	0
Beverly	364	703.3	68	102	30	5	12	20	1	10	1	0	4	1
Billerica	267	729.0	56	67	20	2	7	16	5	5	1	0	6	3
Blackstone	64	710.9	24	19	4	3	2	1	0	1	0	0	2	0
Blandford	7	399.1	3	2	1	1	0	0	0	1	0	0	0	0
Bolton	25	695.8	3	10	1	2	1	1	0	0	0	0	0	0

Table 46. Selected Causes of Death by Community, Massachusetts: 2010

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
Boston	3,649	679.7	749	950	223	63	182	148	69	80	19	71	49	42
Bourne	225	764.7	58	56	21	1	10	10	5	3	3	0	5	1
Boxborough	16	502.4	2	6	3	2	0	0	1	0	0	0	0	0
Boxford	42	534.9	11	14	3	1	1	3	1	1	0	0	0	0
Boylston	21	430.6	6	7	4	1	2	0	0	0	0	0	0	0
Braintree	353	690.3	89	86	23	2	14	11	4	13	1	0	3	2
Brewster	164	703.4	38	36	7	3	10	9	3	0	0	0	0	1
Bridgewater	168	730.1	42	45	13	3	6	9	2	8	1	1	3	2
Brimfield	26	734.6	7	7	2	0	1	3	1	0	0	0	0	0
Brockton	745	782.1	185	184	56	10	28	36	25	18	9	7	9	10
Brookfield	23	603.9	6	5	0	0	1	2	1	0	1	0	0	0
Brookline	226	352.6	51	70	14	9	13	10	5	3	1	0	1	0
Buckland	15	649.5	4	3	0	0	0	1	0	1	0	0	0	0
Burlington	228	722.2	51	58	18	4	13	10	4	8	0	0	0	2
Cambridge	479	573.4	92	122	28	13	27	14	17	16	0	0	7	2
Canton	200	593.1	37	42	11	6	9	7	5	9	2	0	1	1
Carlisle	10	328.9	2	1	0	0	0	0	0	0	0	0	0	0
Carver	112	791.1	25	30	8	1	3	5	4	3	1	0	2	1
Charlemont	5	265.5	2	3	0	0	0	0	0	0	0	0	0	0
Charlton	95	634.3	23	23	7	0	6	6	0	2	1	0	0	0
Chatham	115	708.9	36	28	7	4	3	3	1	5	2	0	1	1
Chelmsford	283	631.4	58	72	18	7	15	6	4	10	0	0	3	0
Chelsea	263	930.3	62	51	16	2	8	9	6	5	3	9	0	6
Cheshire	26	622.2	8	7	3	0	0	2	0	0	0	0	0	0
Chester	16	1,099.1	4	3	0	1	0	1	0	1	0	0	0	0
Chesterfield	10	762.7	2	4	3	0	1	0	0	0	0	0	0	0
Chicopee	572	768.1	136	144	46	6	18	29	16	17	7	2	9	7
Chilmark	12	779.8	3	5	0	0	1	0	0	1	0	0	0	0
Clarksburg	12	571.1	0	2	2	0	0	2	2	0	1	0	1	0
Clinton	124	795.4	24	27	8	1	5	7	7	6	4	0	2	1
Cohasset	67	606.1	13	16	6	0	3	4	0	5	1	0	0	1
Colrain	15	778.8	1	6	1	1	1	0	1	0	0	0	0	0
Concord	162	480.9	34	39	9	4	10	7	5	3	1	0	2	0
Conway	8	363.6	0	4	1	0	0	0	1	0	0	0	0	0
Cummington	5	396.7	2	1	0	1	0	0	0	0	0	0	0	0
Dalton	68	599.9	14	15	3	2	5	8	1	1	0	0	0	0

Table 46. Selected Causes of Death by Community, Massachusetts: 2010

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
Danvers	327	787.1	62	71	30	3	27	16	1	7	1	0	3	2
Dartmouth	310	659.0	83	65	18	3	12	7	6	16	5	0	1	2
Dedham	297	678.7	71	57	11	3	11	14	5	7	0	1	2	1
Deerfield	40	633.1	5	6	0	1	7	0	1	1	0	0	0	0
Dennis	215	631.2	47	51	10	3	15	11	3	3	0	0	1	3
Dighton	56	732.9	13	10	3	0	6	1	1	1	2	0	1	0
Douglas	41	670.9	10	10	3	1	2	2	0	0	0	0	1	0
Dover	29	579.2	5	13	2	2	1	0	1	0	1	0	0	0
Dracut	222	725.8	43	63	17	3	16	10	4	7	4	0	4	3
Dudley	97	826.6	20	22	8	0	5	6	1	0	0	0	0	2
Dunstable	12	659.2	2	4	1	1	0	0	1	0	0	0	0	1
Duxbury	123	574.3	29	26	7	3	8	5	0	6	0	0	1	0
East Bridgewater	107	761.1	30	26	6	3	4	7	3	3	2	0	1	1
East Brookfield	16	666.2	4	6	0	0	0	1	0	1	0	0	0	0
East Longmeadow	192	618.1	52	45	9	2	13	5	4	1	1	0	1	0
Eastham	57	525.8	15	19	5	2	3	3	1	0	1	0	1	1
Easthampton	163	756.8	56	32	11	1	9	9	2	2	1	0	3	2
Easton	148	680.5	30	41	11	4	4	7	3	3	0	1	1	0
Edgartown	35	763.1	3	10	2	0	5	2	0	3	1	0	0	0
Egremont	14	808.2	2	2	1	1	1	1	0	2	0	0	0	0
Erving	13	609.8	1	1	0	0	3	0	1	0	0	0	1	1
Essex	22	516.2	6	6	2	1	0	1	1	0	0	0	0	1
Everett	303	725.7	72	85	34	3	9	12	2	9	1	3	2	2
Fairhaven	208	714.9	48	40	12	2	7	6	4	17	1	0	1	4
Fall River	994	857.3	249	209	54	13	41	42	23	29	6	3	8	14
Falmouth	398	637.8	103	77	22	6	23	22	10	3	2	0	8	0
Fitchburg	353	792.6	73	64	22	7	31	23	12	12	1	1	1	3
Florida	5	620.5	0	1	1	0	1	1	0	0	0	0	0	1
Foxborough	144	811.5	39	37	11	1	4	7	0	3	0	0	1	1
Framingham	507	588.6	120	113	30	5	17	8	13	12	5	1	5	4
Franklin	150	577.2	25	51	12	4	4	6	5	2	1	0	1	0
Freetown	41	523.3	7	8	3	0	2	0	0	2	0	1	0	0
Gardner	203	759.7	52	57	17	1	9	11	4	7	3	0	3	1
Georgetown	51	696.8	8	10	3	0	2	4	0	1	1	0	1	2
Gill	10	562.9	2	5	3	0	0	1	0	1	0	0	0	0
Gloucester	258	624.5	65	58	13	5	7	11	4	5	0	1	5	1

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CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
Goshen	1	--[4]	0	0	0	0	0	0	0	0	0	0	0	0
Gosnold	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
Grafton	127	775.9	22	32	6	2	7	10	2	4	7	0	0	2
Granby	49	753.0	10	14	7	1	3	0	1	1	0	1	0	1
Granville	10	685.1	4	4	1	0	1	0	0	0	0	0	0	0
Great Barrington	77	663.9	25	18	1	2	2	4	3	0	0	0	0	0
Greenfield	196	745.2	38	40	11	1	11	9	3	13	1	1	6	1
Groton	58	653.3	12	18	6	1	4	0	3	1	0	1	2	0
Groveland	47	589.8	10	16	6	1	2	1	0	0	1	0	0	1
Hadley	67	640.9	25	13	5	0	4	3	2	0	0	0	1	0
Halifax	88	1,047.1	19	18	5	3	4	5	3	3	0	0	1	0
Hamilton	43	561.0	10	12	0	1	1	1	1	1	0	0	0	1
Hampden	62	916.0	8	15	2	1	5	3	2	0	2	1	0	1
Hancock	5	557.2	0	1	0	1	1	0	0	1	0	0	0	0
Hanover	87	619.0	15	29	6	2	3	7	2	5	0	1	2	0
Hanson	60	692.2	15	20	5	1	1	3	0	0	1	0	0	3
Hardwick	18	563.0	2	6	2	0	1	2	0	0	0	0	0	0
Harvard	42	753.8	14	6	0	0	1	0	1	2	0	0	0	0
Harwich	183	689.4	37	38	11	3	10	9	2	3	2	0	3	0
Hatfield	34	677.5	12	6	3	1	2	0	0	3	0	0	0	0
Haverhill	501	738.9	134	113	34	6	29	26	6	6	3	3	6	2
Hawley	2	--[4]	0	0	0	0	1	0	0	0	0	0	0	0
Heath	3	--[4]	0	2	0	0	0	0	0	0	0	0	0	0
Hingham	224	520.3	61	53	8	1	14	7	1	7	0	0	1	0
Hinsdale	21	825.9	4	5	3	0	0	3	0	0	0	0	1	0
Holbrook	107	818.7	33	29	10	1	2	7	2	2	0	0	0	2
Holden	123	570.3	29	40	12	3	5	3	5	3	0	0	2	2
Holland	12	535.4	0	7	1	0	0	2	0	0	0	0	0	0
Holliston	87	661.2	17	29	9	1	8	3	2	1	0	0	0	0
Holyoke	434	833.0	111	107	22	8	21	18	5	12	1	1	1	8
Hopedale	42	556.5	10	11	5	1	1	1	1	0	0	0	1	1
Hopkinton	48	455.9	11	15	3	3	2	0	0	1	0	0	0	1
Hubbardston	22	697.9	2	7	2	2	1	5	0	0	0	0	0	0
Hudson	118	563.3	22	34	11	3	4	8	5	2	0	2	1	0
Hull	56	499.7	16	13	3	1	4	4	0	0	0	0	0	0
Huntington	15	596.4	2	2	0	0	1	1	0	0	0	0	1	1

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CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
Ipswich	124	609.1	26	37	10	2	4	7	3	5	0	0	2	1
Kingston	138	818.9	27	35	9	0	7	9	2	6	0	0	0	1
Lakeville	82	741.9	14	30	8	2	2	3	2	3	0	0	1	0
Lancaster	57	745.3	8	11	1	0	5	3	2	2	1	0	0	1
Lanesborough	16	396.7	5	3	1	1	1	1	0	1	0	0	1	0
Lawrence	406	666.3	103	79	20	5	26	12	19	13	3	8	4	5
Lee	61	613.2	17	11	4	1	5	6	1	3	1	0	0	0
Leicester	79	656.5	27	17	4	0	1	2	1	0	1	0	0	1
Lenox	99	680.5	27	19	3	3	10	6	1	1	0	0	0	0
Leominster	353	691.0	64	86	29	6	35	13	8	4	2	1	2	3
Leverett	7	386.3	1	4	1	0	0	0	0	0	0	0	0	0
Lexington	235	445.1	49	54	11	3	14	4	4	4	3	0	3	1
Leyden	18	2,900.4	3	4	1	0	3	0	0	0	1	0	0	0
Lincoln	31	360.4	4	14	3	0	1	2	0	1	0	0	0	0
Littleton	42	415.9	9	10	3	1	3	3	1	4	0	0	1	1
Longmeadow	156	540.4	27	40	11	2	8	12	0	3	0	0	2	0
Lowell	853	892.9	190	200	60	8	36	31	17	24	9	5	10	9
Ludlow	161	543.6	43	45	9	1	6	6	6	0	0	0	1	2
Lunenburg	81	740.5	13	27	7	2	9	1	1	3	2	0	0	0
Lynn	669	744.0	143	171	51	7	21	32	9	17	5	3	11	8
Lynnfield	113	683.2	28	35	9	2	6	1	2	3	0	2	1	1
Malden	381	634.7	82	95	32	1	21	32	6	2	3	2	0	8
Manchester	35	476.8	5	12	5	0	0	3	0	0	1	0	0	0
Mansfield	120	658.6	29	33	5	7	2	9	1	0	0	0	3	0
Marblehead	172	604.8	46	46	9	1	14	8	1	2	0	0	1	0
Marion	49	512.2	14	7	1	0	5	3	0	0	1	0	0	0
Marlborough	310	723.9	65	79	21	6	11	13	2	7	1	0	6	0
Marshfield	196	798.1	55	35	9	2	6	9	5	3	3	0	5	3
Mashpee	143	613.2	30	46	14	4	5	7	0	4	0	0	2	2
Mattapoisett	64	716.9	18	19	2	1	1	4	1	1	1	0	1	0
Maynard	75	703.6	14	25	6	1	3	7	1	1	1	0	1	2
Medfield	62	539.4	9	19	2	1	0	5	2	0	1	0	0	1
Medford	497	652.4	101	127	45	9	26	19	2	11	1	1	2	7
Medway	68	583.5	14	18	5	0	2	3	0	1	0	0	2	2
Melrose	228	616.3	56	58	9	4	8	7	4	9	2	0	0	1
Mendon	26	563.4	8	7	1	0	3	1	0	0	0	0	0	0

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CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
Merrimac	41	625.5	16	9	3	1	1	0	2	0	0	0	0	0
Methuen	410	689.9	113	109	36	8	15	16	7	3	2	2	5	0
Middleborough	198	743.2	40	56	13	7	6	13	3	3	1	0	3	2
Middlefield	3	--[4]	0	2	1	0	1	0	0	0	0	0	0	0
Middleton	44	493.8	5	8	2	0	3	2	2	2	0	0	0	0
Milford	207	642.7	52	40	11	4	10	9	7	6	4	0	4	2
Millbury	129	764.3	20	28	8	0	5	9	4	5	1	0	1	2
Millis	37	512.4	9	12	3	2	1	1	1	2	0	0	1	0
Millville	19	821.4	3	5	2	0	0	2	0	1	0	0	0	0
Milton	233	596.7	53	65	16	7	16	8	4	7	0	0	3	1
Monroe	1	--[4]	0	1	0	0	0	0	0	0	0	0	0	0
Monson	73	827.9	13	20	7	0	4	3	1	2	1	0	2	0
Montague	86	740.6	16	16	3	2	7	4	6	5	0	0	0	1
Monterey	4	--[4]	0	2	0	0	0	0	0	0	0	0	0	0
Montgomery	4	--[4]	3	1	0	0	0	0	0	0	0	0	0	0
Mount Washington	2	--[4]	0	1	0	0	0	0	0	0	0	0	0	0
Nahant	30	465.6	8	7	3	0	2	0	0	1	1	0	1	0
Nantucket	67	633.5	13	18	6	3	5	0	2	2	1	0	1	1
Natick	232	579.7	67	53	15	3	12	8	2	4	4	0	3	0
Needham	243	508.8	61	49	11	3	16	15	5	6	0	0	0	0
New Ashford	1	--[4]	0	0	0	0	0	0	1	0	0	0	0	0
New Bedford	971	795.3	244	207	57	15	45	35	19	27	13	2	13	23
New Braintree	3	--[4]	1	1	0	1	0	0	0	0	0	0	0	0
New Marlborough	9	421.5	4	1	0	0	0	0	0	0	0	0	0	0
New Salem	4	--[4]	1	0	0	0	0	0	0	0	0	0	0	0
Newbury	39	570.6	16	9	4	1	3	1	1	1	1	0	0	0
Newburyport	185	758.0	39	36	7	4	5	23	5	1	1	0	3	2
Newton	553	455.9	132	159	45	7	28	15	9	10	2	1	4	3
Norfolk	49	736.0	13	11	5	0	3	1	0	1	0	0	2	0
North Adams	160	824.6	46	39	17	1	9	5	3	3	1	0	0	0
North Andover	236	635.3	50	55	9	1	13	14	4	5	0	0	4	3
North Attleboro	203	791.8	40	49	15	4	13	17	3	7	1	1	6	3
North Brookfield	37	692.9	10	10	1	0	2	2	2	0	0	0	0	1
North Reading	89	575.4	17	24	5	1	4	2	2	1	0	0	3	0
Northampton	295	817.2	64	72	20	8	11	12	6	9	2	0	6	3
Northborough	99	637.1	19	20	3	1	3	9	4	3	0	0	2	1

Table 46. Selected Causes of Death by Community, Massachusetts: 2010

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
Northbridge	133	650.2	30	26	8	1	5	11	3	4	1	1	2	0
Northfield	22	574.3	4	6	1	0	0	1	0	1	0	0	3	0
Norton	126	756.8	31	30	5	0	3	10	1	2	1	0	2	1
Norwell	89	667.3	21	25	2	2	2	6	0	5	1	0	1	0
Norwood	257	596.0	67	70	24	7	15	6	8	5	1	0	0	2
Oak Bluffs	38	541.0	10	11	4	1	2	0	1	2	1	0	1	0
Oakham	3	--[4]	1	1	0	0	1	0	0	0	0	0	0	0
Orange	68	737.7	15	15	4	1	5	5	4	1	0	0	1	0
Orleans	118	628.7	38	20	5	1	10	4	2	1	1	0	0	0
Otis	4	--[4]	1	2	1	0	0	0	1	0	0	0	0	0
Oxford	101	733.9	20	31	13	4	6	6	3	3	2	0	3	0
Palmer	149	935.5	33	25	6	2	3	7	6	6	2	0	5	4
Paxton	28	543.4	3	11	1	1	1	2	0	1	1	0	0	0
Peabody	598	645.0	137	160	56	11	29	26	11	15	1	2	5	4
Pelham	3	--[4]	1	2	1	0	0	0	0	0	0	0	0	0
Pembroke	114	755.7	24	36	11	2	2	7	1	1	0	0	3	3
Pepperell	76	823.1	18	22	9	1	3	5	1	2	2	0	2	0
Peru	4	--[4]	0	0	0	0	0	2	1	0	0	0	0	0
Petersham	12	836.6	3	2	1	0	0	0	0	0	0	0	0	1
Phillipston	8	1,018.4	1	1	0	0	1	1	1	0	0	0	0	0
Pittsfield	479	731.1	106	116	37	7	18	29	16	9	6	2	4	2
Plainfield	3	--[4]	1	1	1	0	0	0	0	0	0	0	0	0
Plainville	69	812.2	10	23	7	1	4	2	1	3	0	0	0	0
Plymouth	474	719.1	109	115	28	9	16	24	9	23	4	0	5	4
Plympton	17	638.9	2	2	1	0	2	5	0	0	0	0	0	0
Princeton	15	483.6	2	8	2	1	1	0	1	0	0	0	0	0
Provincetown	43	861.8	6	12	4	0	2	1	1	0	0	0	2	0
Quincy	865	713.2	196	206	65	15	56	38	17	29	5	1	12	9
Randolph	222	592.9	53	65	22	4	9	11	5	4	3	1	3	5
Raynham	119	765.0	22	35	9	2	3	3	4	5	1	0	0	1
Reading	172	541.9	41	42	7	3	9	10	4	2	1	0	2	1
Rehoboth	55	517.1	14	14	5	3	2	0	0	2	0	2	2	1
Revere	459	697.0	113	125	38	7	18	20	11	10	4	0	3	8
Richmond	6	269.2	2	2	0	0	0	0	0	0	0	0	0	0
Rochester	21	475.1	7	5	1	0	0	0	2	0	1	0	0	0

Table 46. Selected Causes of Death by Community, Massachusetts: 2010

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
Rockland	181	892.9	41	36	15	1	5	12	1	4	3	0	2	2
Rockport	73	580.9	17	18	3	2	2	5	1	4	1	0	2	0
Rowe	2	--[4]	0	1	0	0	0	0	0	1	0	0	0	0
Rowley	42	759.8	11	7	0	1	2	1	1	0	1	0	0	0
Royalston	12	978.3	2	3	1	0	0	0	0	1	0	0	1	0
Russell	7	380.7	3	1	1	0	0	0	0	0	0	0	1	0
Rutland	38	683.5	9	14	4	2	1	0	0	3	0	0	0	0
Salem	320	676.6	97	56	16	7	16	19	2	8	3	0	3	2
Salisbury	74	802.7	18	23	9	2	3	3	2	2	1	0	1	1
Sandisfield	13	878.3	0	4	0	0	0	1	0	1	0	0	1	0
Sandwich	163	624.0	34	47	12	4	6	9	2	4	4	0	2	2
Saugus	287	761.8	73	73	24	2	7	12	6	7	3	0	4	2
Savoy	6	908.5	2	0	0	0	1	0	0	0	0	0	0	0
Scituate	173	686.7	52	44	14	3	11	8	1	10	3	0	3	1
Seekonk	86	532.7	14	24	4	1	3	2	3	1	2	0	0	1
Sharon	94	525.3	19	28	6	1	4	3	1	3	3	0	1	1
Sheffield	20	412.5	6	6	1	1	0	0	0	0	1	0	0	0
Shelburne	23	774.5	5	4	1	1	0	1	0	1	0	0	0	1
Sherborn	12	272.4	4	2	0	0	1	0	1	2	0	0	0	0
Shirley	64	999.7	13	21	11	1	1	2	3	2	1	0	2	1
Shrewsbury	252	603.8	61	57	14	4	9	12	10	8	4	1	3	2
Shutesbury	10	534.9	0	5	1	1	0	0	0	0	0	1	0	0
Somerset	232	670.9	63	51	12	2	14	11	4	11	1	0	2	4
Somerville	463	756.3	88	127	38	4	19	28	11	7	1	1	4	4
South Hadley	162	631.7	40	37	13	2	8	7	2	2	3	0	2	1
Southampton	39	706.6	12	9	4	1	5	4	1	1	0	0	0	0
Southborough	40	471.2	8	19	6	1	2	1	0	0	0	0	1	0
Southbridge	165	775.7	39	42	10	1	8	9	2	6	2	0	4	1
Southwick	72	608.6	15	19	4	3	5	5	1	1	3	0	0	0
Spencer	77	583.0	15	18	8	0	1	5	0	1	0	1	3	2
Springfield	1,201	818.5	278	300	76	23	58	44	21	25	14	17	5	13
Sterling	53	552.0	17	11	1	1	2	1	4	0	0	0	0	0
Stockbridge	20	670.2	4	6	2	0	0	0	0	1	0	0	2	0
Stoneham	218	637.8	44	51	14	2	19	9	6	3	2	0	2	1
Stoughton	249	692.0	67	62	17	2	10	7	3	4	2	2	1	7
Stow	29	460.8	6	6	1	0	2	2	0	0	0	0	4	0

Table 46. Selected Causes of Death by Community, Massachusetts: 2010

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
Sturbridge	62	598.4	15	14	2	1	1	2	1	1	1	0	1	2
Sudbury	107	589.8	26	20	2	1	7	5	0	2	2	0	1	1
Sunderland	16	420.0	6	4	2	0	3	0	0	0	0	0	0	0
Sutton	58	825.0	13	15	6	1	0	0	1	2	2	0	0	1
Swampscott	135	547.0	34	32	10	2	7	8	1	1	0	0	2	0
Swansea	155	681.1	34	39	10	0	3	6	4	4	1	0	1	2
Taunton	463	712.1	128	131	39	4	17	20	10	12	5	3	2	8
Templeton	74	841.2	18	16	3	2	9	4	4	2	2	0	1	1
Tewksbury	232	690.8	45	63	20	6	7	16	2	9	1	0	3	0
Tisbury	35	676.7	6	11	2	1	4	4	1	0	0	0	0	0
Tolland	5	817.9	2	1	0	0	0	0	0	0	0	0	0	0
Topsfield	51	488.2	16	9	3	0	1	3	1	0	0	0	0	0
Townsend	49	719.5	8	20	5	2	2	2	0	2	0	0	1	0
Truro	17	491.3	5	2	0	0	1	0	0	0	0	0	0	1
Tyngsborough	71	844.6	8	25	8	0	2	4	1	2	1	0	1	0
Tyringham	2	--[4]	1	0	0	0	0	0	0	0	0	0	0	0
Upton	36	590.1	5	13	4	3	0	2	0	0	1	0	0	0
Uxbridge	100	696.9	20	29	9	0	8	6	2	0	0	0	1	1
Wakefield	202	648.3	46	41	10	4	9	7	4	5	1	0	4	1
Wales	15	997.1	4	3	1	0	1	2	0	1	0	0	0	0
Walpole	203	635.7	47	58	11	7	10	13	6	4	1	0	2	1
Waltham	435	667.5	90	126	36	6	21	16	7	10	7	3	4	2
Ware	114	906.7	21	26	6	0	5	4	5	3	0	0	5	2
Wareham	253	850.8	63	57	20	2	12	18	4	9	1	0	4	1
Warren	40	765.5	10	10	2	1	1	1	2	0	0	0	0	0
Warwick	12	1,376.1	2	3	1	0	1	0	0	0	1	0	0	0
Washington	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
Watertown	263	638.1	60	73	16	5	17	8	6	5	1	0	8	3
Wayland	86	456.5	24	23	5	4	6	2	3	3	0	0	1	0
Webster	192	796.9	40	41	10	4	9	8	7	6	0	0	1	2
Wellesley	150	444.0	32	45	13	1	1	3	3	4	0	0	1	0
Wellfleet	33	634.8	11	9	2	0	1	3	0	0	0	0	0	1
Wendell	2	--[4]	1	0	0	0	1	0	0	0	0	0	0	0
Wenham	29	472.1	6	9	2	0	4	3	0	0	0	0	0	0
West Boylston	81	565.1	19	13	4	1	8	1	1	1	0	0	0	1
West Bridgewater	80	739.8	30	15	3	1	3	4	1	0	0	0	0	0

Table 46. Selected Causes of Death by Community, Massachusetts: 2010

CITY/TOWN	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[5]
West Brookfield	51	780.0	10	15	5	0	2	3	1	0	0	0	0	0
West Newbury	20	520.0	3	4	0	0	0	1	1	0	1	0	1	0
West Springfield	282	783.4	58	82	32	3	13	15	6	4	1	0	4	4
West Stockbridge	11	659.9	3	1	0	0	0	0	0	0	0	0	0	1
West Tisbury	18	640.2	2	10	4	1	0	1	0	0	0	0	0	0
Westborough	127	560.3	26	24	6	0	12	6	3	1	0	1	1	0
Westfield	350	716.5	80	91	26	7	19	17	5	7	3	2	9	5
Westford	111	703.1	24	34	9	1	9	3	0	0	1	2	1	0
Westhampton	7	375.3	4	2	0	0	0	0	0	0	0	0	0	1
Westminster	53	723.5	13	17	3	4	2	1	0	1	1	0	0	0
Weston	97	517.6	23	21	5	2	6	0	4	2	0	0	1	0
Westport	134	624.7	33	25	4	1	7	8	3	3	5	1	3	2
Westwood	142	547.5	39	41	9	3	4	5	1	5	3	0	1	1
Weymouth	493	719.1	131	117	34	6	16	19	6	16	0	1	7	6
Whately	12	587.0	3	1	0	0	1	1	1	0	0	0	0	0
Whitman	110	888.9	22	31	9	1	7	8	0	1	2	0	3	0
Wilbraham	153	615.4	31	38	6	1	9	7	3	3	0	0	3	1
Williamsburg	23	707.0	4	8	2	1	0	1	0	0	0	0	0	0
Williamstown	76	463.0	15	14	4	0	3	6	4	0	0	0	0	0
Wilmington	158	654.9	41	34	13	2	4	11	3	2	3	1	3	2
Winchendon	68	738.0	18	17	8	0	2	5	0	2	2	0	2	1
Winchester	166	489.0	49	31	6	0	26	3	9	3	0	4	0	1
Windsor	4	--[4]	1	1	0	0	0	1	1	0	0	0	0	0
Winthrop	156	656.9	39	41	11	5	1	6	3	5	1	0	2	0
Woburn	342	656.3	69	97	24	4	22	13	5	11	1	0	4	2
Worcester	1,565	808.4	315	359	103	23	59	78	45	43	13	7	11	24
Worthington	8	642.9	2	2	0	0	0	0	0	0	0	0	0	0
Wrentham	119	902.5	32	15	4	0	4	6	1	3	1	0	4	3
Yarmouth	380	680.0	79	97	27	9	17	16	11	6	1	0	3	3

1. Rates are per 100,000 population age-adjusted to the 2000 US Standard Population. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Includes only female breast cancer. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 4. Rates based on 1 to 4 deaths are not calculated. 5. Deaths due to narcotics and hallucinogens including cannabis, cocaine, codeine, heroin, lysergic acid diethylamide (LSD), mescaline, methadone, morphine, and opium (alkaloids).

Table 47. Selected Causes of Death by Community Health Network Area (CHNA), Massachusetts: 2010

CHNA Name	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[4]
Massachusetts	**52,411**	**672.7**	**11,996**	**12,969**	**3,546**	**823**	**2,503**	**2,380**	**1,024**	**1,285**	**380**	**206**	**591**	**483**
Community Health Network of Berkshire	1,344	654.5	326	307	90	20	65	80	36	29	12	2	11	6
Upper Valley Health Web (Franklin County)	795	695.0	145	190	52	8	55	42	22	34	4	3	14	7
Partnership for Health in Hampshire County (Northampton)	1,201	681.5	309	273	87	19	59	51	23	29	8	2	21	12
The Community Health Connection (Springfield)	2,705	755.8	592	665	170	42	144	113	48	54	25	18	29	25
Community Health Network of Southern Worcester County	1,009	718.6	223	254	70	11	44	58	21	21	7	1	12	10
Community Partners for Health (Milford)	1,054	642.6	241	282	75	21	39	52	20	19	9	1	14	9
Community Health Network of Greater Metro West (Framingham)	2,646	614.3	612	657	171	41	119	109	48	58	16	4	39	17
Common Pathways (Worcester)	2,605	737.2	548	620	166	38	107	127	71	70	27	8	18	35
Community Health Network of North Central Massachusetts	2,022	729.2	423	519	155	42	136	101	55	56	21	3	23	14
Greater Lowell Community Health Network	2,051	760.2	426	528	153	28	92	86	34	57	17	7	28	16
Greater Lawrence Community Health Network	1,278	623.1	312	287	72	19	63	52	33	28	5	10	16	9
Greater Haverhill Community Health Network	1,173	700.5	300	272	80	18	52	66	22	18	11	3	14	8
Community Health Network North (Beverly/Gloucester)	999	614.4	219	263	68	16	31	54	12	25	3	1	13	5
North Shore Community Health Network	2,651	693.9	628	651	208	35	129	122	33	61	14	7	31	19
Northwest Suburban Health Alliance	1,628	547.9	362	406	112	27	107	65	36	40	9	6	14	11
North Suburban Health Alliance (Medford/Malden/Melrose)	2,090	636.6	459	523	156	27	105	98	30	42	11	6	15	21
Greater Cambridge/Somerville Community Health Network	1,761	624.4	369	466	118	36	90	70	39	33	5	1	22	13
West Suburban Health Network (Newton/Waltham)	1,946	538.5	453	511	132	27	88	68	35	44	13	5	13	7
Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	4,753	661.4	1,014	1,237	302	86	222	193	94	103	28	80	55	56
Blue Hills Community Health Alliance (Greater Quincy)	3,326	646.5	808	830	234	55	173	132	52	113	20	3	35	29
Community Health Network of Chicopee, Holyoke, Ludlow, Westfield	1,548	737.5	376	392	103	23	65	72	32	37	11	5	21	23
Greater Brockton Community Health Network	1,877	752.9	486	473	135	28	71	90	44	44	17	12	20	23
South Shore Community Health Network	1,590	750.1	361	382	104	24	57	91	27	54	12	1	21	17
Greater Attleboro-Taunton Health & Education Response	1,885	700.8	429	506	139	39	71	103	33	49	16	10	22	20
Partners for Healthier Communities	1,515	777.9	379	324	80	16	65	67	34	47	13	4	14	22
Greater New Bedford Community Health Network	1,997	728.6	506	428	121	25	89	76	39	76	23	3	20	30
Cape Cod and Islands Health Network	2,962	658.6	690	723	193	52	165	142	51	44	23	0	36	19

1. Rates are per 100,000 population age-adjusted to the 2000 US Standard Population. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Includes only female breast cancer. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 4. Deaths due to narcotics and hallucinogens including cannabis, cocaine, codeine, heroin, lysergic acid diethylamide (LSD), mescaline, methadone, morphine, and opium (alkaloids).

Table 48. Selected Causes of Death by County, Massachusetts: 2010

County	Total Deaths	Age-Adjusted Death Rate[1]	Heart Disease	Total Cancer	Lung Cancer	Female Breast Cancer[2]	Stroke	CLRD[3]	Diabetes	Influenza & Pneumonia	Motor Vehicle	Homicide	Suicide	Narcotics[4]
Massachusetts	**52,411**	**672.7**	**11,996**	**12,969**	**3,546**	**823**	**2,503**	**2,380**	**1,024**	**1,285**	**380**	**206**	**591**	**483**
Barnstable	2,757	663	653	658	175	46	148	135	47	36	20	0	34	18
Berkshire	1,344	655	326	307	90	20	65	80	36	29	12	2	11	6
Bristol	4,878	725	1,188	1,125	306	72	203	212	97	159	47	18	48	69
Dukes	138	642	24	47	12	3	12	7	2	6	2	0	1	0
Essex	6,101	664	1,459	1,473	428	88	275	294	100	132	33	21	74	41
Franklin	626	669	118	140	32	8	48	26	18	26	4	2	11	5
Hampden	4,291	749	977	1,072	277	65	210	191	81	92	36	23	49	47
Hampshire	1,216	681	311	275	87	19	60	52	23	29	8	2	22	13
Middlesex	10,651	623	2,325	2,751	775	169	542	422	199	243	67	28	124	77
Nantucket	67	634	13	18	6	3	5	0	2	2	1	0	1	1
Norfolk	5,274	620	1,252	1,355	362	91	236	221	92	144	28	6	49	49
Plymouth	4,136	733	1,013	1,020	270	64	167	225	77	126	35	10	53	35
Suffolk	4,527	692	963	1,167	288	77	209	183	89	100	27	80	54	56
Worcester	6,405	711	1,374	1,561	438	98	323	332	161	161	60	14	60	66

1. Rates are per 100,000 population age-adjusted to the 2000 US Standard Population. Data presented in this table are classified according to ICD-10. Please see Appendix for a list of ICD-10 codes used in this table. 2. Includes only female breast cancer. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title). 4. Deaths due to narcotics and hallucinogens including cannabis, cocaine, codeine, heroin, lysergic acid diethylamide (LSD), mescaline, methadone, morphine, and opium (alkaloids).

Table A1. Age-Adjusted Death Rates[1] for Selected Causes of Death by Race and Gender, Massachusetts: 2010

		White[2]			Black[2]		
Cause	**ICD-10 Code**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
All Deaths		**823.1**	**577.2**	**683.3**	**830.0**	**493.3**	**631.4**
Heart Disease	I00-I09, I11, I13, I20-I51	196.0	119.3	152.0	198.8	108.7	143.9
Cancer	C00-C97	210.8	149.4	173.7	218.1	118.4	156.7
Stroke	I60-I69	30.9	30.1	30.7	42.0	36.5	39.2
Chronic Lower Respiratory Disease[3]	J40-J47	33.4	31.9	32.4	22.3	11.4	15.2
Influenza and Pneumonia	J10-J18	21.2	13.7	16.4	10.8	6.5	8.2
Diabetes	E10-E14	17.3	10.1	13.1	23.3	16.8	19.6
Alzheimer's Disease	G30	17.4	23.7	21.7	6.8	20.1	15.9
Nephritis	N00-N07, N17-N19, N25-N27	23.0	13.5	17.1	28.9	15.2	20.8
Septicemia	A40-A41	12.3	7.9	9.7	17.4	12.4	13.9
HIV/AIDS	B20-B24	1.9	0.8	1.3	8.4	5.2	6.7
Perinatal Conditions	P00-P96	3.9	2.4	3.2	6.9	7.6	7.3
All Injuries	V01-Y98	64.3	26.5	44.6	74.3	16.0	43.2
Motor Vehicle-Related Injuries	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	8.5	3.3	5.8	8.0	1.1	4.5
Suicide	X60-X84, Y87.0	15.4	3.8	9.4	7.8	1.1	4.3
Homicide	X85-Y09, Y87.1	3.2	1.2	2.2	24.9	2.4	13.4

1. Age-adjusted death rates are calculated using the NCHS population estimates for 2009 by age, sex, race, and Hispanic origin. Age-adjusted to the 2000 US standard population, per 100,000. 2. Race categories presented in this table are consistent with Federal definitions of race and ethnicity. Persons of Hispanic ethnicity are included in any race category. Please use data in this table to compare to national data by race. 3. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

TECHNICAL NOTES

Since our 1999 publication, the *Advance Data: Deaths* series has been renamed *Massachusetts Deaths*.

NOTE

Please note that death statistics are presented as both *numbers* (or percentages, proportions) and *rates. Numbers* are, of course, the basic, raw counts of deaths, while *rates* are population-based statistics, for example, *the number of deaths per 100,000*.

DATA SOURCES

Data for this document are derived from Massachusetts death certificates, Massachusetts birth certificates, the US Census, the Massachusetts Institute for Social and Economic Research (MISER) (population data pre-2000), and the National Center for Health Statistics (NCHS).

CHANGES TO MORTALITY DATA, EFFECTIVE 1999

Beginning with data year 1999, two major changes in Federal classification and tabulation procedures occurred that affects the tabulation and analyses of mortality data over time. First, a new revision for classifying causes of death was implemented: The International Classification of Diseases, Tenth Revision (ICD-10) replaced the International Classification of Diseases, Ninth Revision (ICD-9) for coding all mortality data. Second, a new standard population for the tabulation of age-adjusted mortality rates was also implemented.

CHANGES TO THE PRESENTATION OF RACE AND ETHNICITY DATA

In response to readers' feedback, the presentation of race and ethnicity data has been changed. Previously, race and ethnicity data were presented according to Federal definitions of race and ethnicity; that is, persons of Hispanic ethnicity can be of any race group. Beginning with the 1999 report, race and ethnicity data are presented as mutually exclusive categories, that is, persons of Hispanic ethnicity are not included in a race group. All race and ethnicity data presented in trend tables have been updated to reflect this change. Thus, race and ethnicity data tables include the categories White non-Hispanic; Black non-Hispanic; Asian; and Hispanic. In addition, Table A1 in the Appendix contains data according to the Federal definitions so data can be compared with the nation and other states. Race data presented in Table A1 are for Whites (including persons of Hispanic ethnicity) and Blacks (including persons of Hispanic ethnicity). Furthermore, starting with the 2001 publication, there has been a nomenclature change in the way data for Asians are presented: the Asian/Pacific Islander non-Hispanics category was renamed Asians, which includes Pacific Islanders.

CAPE VERDEANS

The US Federal Census and the National Center for Health Statistics (NCHS) places persons who are Cape Verdean in the race category "Black". Historically, we have followed this federal definition in order to be consistent with NCHS. Beginning with 1999 data, we have separated the concept of "Race" from "Ethnic Group" for reporting death statistics. This enables us to place Cape Verdeans where they self-identify: Cape Verdeans are classified as "Cape Verdeans" in ethnicity tables. With respect to race, 70% of Cape Verdeans classified their race as "Other" while only 24% classified themselves as Black and 6% as White in 1999. We have no Cape Verdean population counts or estimates with which to calculate rates at the state or lower geographic levels. Although we can identify Cape Verdeans in the count of deaths (numerator), because we have no count or estimate of the number of Cape Verdeans in the

Massachusetts population (denominator), we are unable to calculate death rates. Beginning with the 2000 report, we have included a detailed table and figure summarizing age and cause of deaths among Cape Verdeans.

POPULATION ESTIMATES

Since the year 2010 is one in which the Census Bureau conducted a decennial count of the population, we were able to use the Census Bureau counts for 2010 as the denominators for state rates, e.g., birth rate, teen birth rate, age-specific birth rates, and the crude birth rate.

The Massachusetts Department of Public Health Race Allocated Census 2010 Estimates (MRACE 2010), which are population estimates based upon the Census 2010 Summary File 1, was used to calculate city and town rates. In this estimates file, the Census 2010 race categories, "Two or more races" and "Some other race" are redistributed to the MDPH standard race categories: Non-Hispanic White, Non-Hispanic Black, Non-Hispanic Asian and Pacific Islander, and Non-Hispanic American Indian and Alaska Native. All persons in the Census 2010 Hispanic ethnicity category are counted as "Hispanic" race in the MDPH estimates. This kind of file is often referred to as a "bridged" file, that is, one that bridges the new race and ethnicity collections to the conventionally used categories. These population estimates are available from MassCHIP (http://masschip.state.ma.us).

When state rates were calculated by race and Hispanic ethnicity, e.g., age adjusted death rates, we used the 2010 bridged population file, MARS (Modified Age, Race/Ethnicity, and Sex) file, which is produced by the National Center for Health Statistics (NCHS) and the Census Bureau Population Estimates Program. This file has data by single year or age, sex, race and Hispanic ethnicity in the five mutually exclusive categories used by the Department: White Non-Hispanic, Black Non-Hispanic, Asian Non-Hispanic, American Indian/Alaska Native Non-Hispanic.

LIMITATIONS OF SMALL NUMBERS

Cells in some tables contain small numbers. Rates and proportions based on fewer than five observations are suppressed, and trends based upon small numbers should be interpreted cautiously.

APPLYING COMPARABILITY RATIOS TO EXAMINE TRENDS IN MORTALITY

Beginning with 1999, mortality data are coded according to the International Classification of Diseases-10th revision (ICD-10). Due to the changes in coding rules, comparison of mortality trends over time using different revisions of ICD is challenging. A method was devised to assess if changes in causes of death are "real" changes, or due to the new classification system. Using this method, death data for 1996 were coded twice; once according to ICD-9 and again according to ICD-10. A comparability ratio (CR) was then calculated by dividing the number of deaths coded according to ICD-10 by the number of deaths coded according to the most similar codes in ICD-9 (please refer to Table A7. Preliminary Comparability Ratios for a list of codes and CR used in this publication).

A CR of 1.00 indicates that the same number of deaths was assigned to a cause of death whether ICD-9 or ICD-10 was used. A CR of less then 1.00 results from 1) a decrease in the number of deaths assigned to a cause in ICD-10 compared with ICD-9 or 2) the cause described in ICD-10 is only a part of the ICD-9 title to which it is being compared. A CR of more than 1.00 results from 1) an increase in the assignments of deaths to a cause in ICD-10 compared with ICD-9 or 2) the ICD-10 title is broader than the ICD-9 title to which it is being compared.

EXAMPLE: **Influenza and Pneumonia[1] Deaths: Massachusetts, 1996-2000**

Year	Age-adjusted rate[2]	Comparability Ratio	Comparability Modified Rate (=age-adjusted rate* Comparability Ratio)
1996	41.5	0.6982	29.0
1997	39.1	0.6982	27.3
1998	40.2	0.6982	28.1
1999	30.3		
2000	29.3		

1. Influenza and pneumonia defined as ICD-9: 480[-4]87 for years 1996-1998 and ICD-10: J10-J18 for year 1999 and 2000.
2. age-adjusted to the 2000 US standard population, per 100,000.

If you look only at the age-adjusted rate over time, not taking the ICD coding changes into account, it appears that deaths from influenza and pneumonia have decreased between 1996-1999. However, because the coding rules changed between ICD-9 and ICD-10 revisions, we need to apply the comparability ratio to the rates for 1996-1998. (This is done by multiplying the age-adjusted rate by the comparability ratio). Now we can make a fairer comparison and examine the changes between the comparability modified rate and the 1999 or 2000 rate, we see that deaths to influenza and pneumonia have remained constant between 1996-2000, and have actually increased between 1998 and 1999 (28.1 to 30.3 per 100,000, respectively) after taking the changes in the classification system into account.

PLEASE NOTE: the comparability ratios used in this report are based on the Preliminary Comparability Study conducted by the National Center for Health Statistics (NCHS), February 2001, and are subject to change once the Final Comparability Study is completed.

TESTS OF STATISTICAL SIGNIFICANCE

Beginning with *Massachusetts Deaths 2004,* statistics presented in the text section have been tested to determine whether they differ significantly from a target statistic. For example, the number of deaths in 2008 was compared with the number of deaths in 2007 to determine whether their difference was unlikely to have occurred by chance. When a difference is unlikely to have occurred by chance, it is referred to as "significant."

Note that with respect to statistical difference, the language of this year's report differs from the language of reports prior to 2004, and caution must be used when comparing the text of previous reports with this year's report.

In testing for statistical significance, we have used the testing methods from the National Center for Health Statistics (NCHS). These methods are presented in the following document:

> National Vital Statistics Reports, Volume 52, Number 10
> Births: Final Data for 2002
> by Joyce A. Martin, M.P.H.; Brady E. Hamilton, Ph.D.; Paul D. Sutton, Ph.D.; Stephanie J. Ventura, M.A.; Fay Menacker, Dr. P.H.; and Martha L. Munson, M.S.;
> From the Division of Vital Statistics, NCHS. (Technical Notes, "Significance testing" section begins on page 110).

This document is available from the following website:
http://www.cdc.gov/nchs/products/pubs/pubd/nvsr/52/52-23.htm
For comparisons of more than 100 events, whether they are rates, proportions, or numbers, the binomial distribution is assumed, and confidence intervals are examined to see whether they overlap (Refer to the “Confidence Intervals” section in the next page for an explanation of using confidence intervals to determine statistical significance). When the number of events is less than 100, a Poisson distribution is assumed, and confidence intervals are constructed based upon the Poisson distribution. For more details and exact formulas for calculating confidence intervals or other tests of statistical significance, refer to the publication listed above.

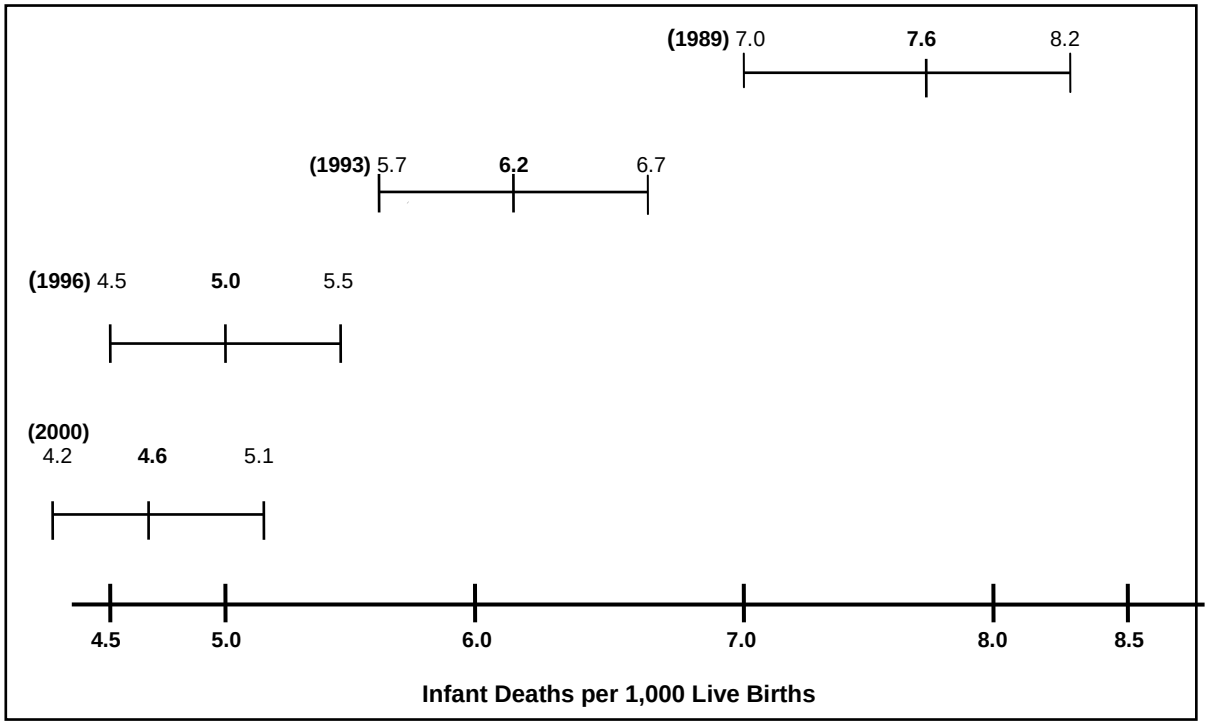
When two statistics are determined to differ significantly, they are referred to in the text with language expressing differences, such as, “higher” and “lower”, or “increased” and “decreased”. Otherwise, differences that are not significant are reported as having “no change” or “no statistical difference.”

CONFIDENCE INTERVALS AND INFANT MORTALITY RATES

The confidence interval (CI) provides a measure of stability of the infant mortality rates (IMR) and a basis for comparing rates to determine if they are statistically different. Rates can be compared for the same group in different years or for different groups in the same year. The width of the CI reflects the stability of the IMR. For example, a narrow CI reflects high stability, and a wide CI reflects low stability. If the CIs around two IMRs being compared do not overlap, the difference between the two rates is statistically significant. The following table and chart illustrate the concept of statistically significant differences using actual data from 1989, 1993, 1996, and 2000.

Comparison of Infant Mortality Rates and Confidence Intervals for Selected Years

Year	IMR (per 1,000 births)	95% Confidence Interval
1989	7.6	(7.0-8.2)
1993	6.2	(5.7-6.7)
1996	5.0	(4.5-5.5)
2000	4.6	(4.2-5.1)



The difference between the 1993 IMR and 1996 IMR is statistically significant – the confidence intervals do not overlap. The same is true for the differences between the 1989 IMR and each annual IMR for 1993, 1996, and 2000. However, the difference between the 1996 and 2000 IMRs is not statistically significant, since their confidence intervals overlap.

GLOSSARY

Age-Adjusted Rate
A summary rate designed to minimize the distortions created by differences in age distribution when comparing rates for populations with different age compositions. Age-adjusted rates are useful when comparing death rates from different populations or in the same population over time. For example, if one wished to compare the 1998 death rates between Barnstable County (Cape Cod) and Hampshire County, the age-adjusted formula would account for the fact that 24% of the Barnstable County residents were 65 years of age or older, whereas only 11% of the Hampshire County residents were in this age group.

Age-adjusted rates are calculated by weighting the age-specific rates for a given year by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (Please see example below).

The 2000 US projected population is used as the standard population in this document for consistency with data published by the National Center for Health Statistics (NCHS). **ONLY RATES USING THE SAME STANDARD POPULATION CAN BE COMPARED**. All age-adjusted rates published in this report have been re-calculated using the 2000 US standard population. These rates should NOT be compared with age-adjusted rates previously published that used the 1940 US standard population.

Example: Calculation of 1999 Age-Adjusted Mortality Rate
Massachusetts: All Causes of Death

A	B	C	D	E	F	G
Age group (in years)	# of deaths (1999)	Population (1998)	1940 US standard	2000 US standard	Age-adjusted rate (using1940 standard) =[((B/C)*D)*100,000]	Age-adjusted rate (using 2000 standard) =[((B/C)*E)*100,000]
< 1	418	79,860	0.015343	0.013818	8.0	7.2
1-4	65	320,000	0.064718	0.055317	1.3	1.1
5-14	100	806,670	0.170355	0.145565	2.1	1.8
15-24	407	883,830	0.181677	0.138646	8.4	6.4
25-34	701	1,005,337	0.162066	0.135573	11.3	9.5
35-44	1,696	1,019,365	0.139237	0.162613	23.2	27.1
45-54	2,870	818,660	0.117811	0.134834	41.3	47.3
55-64	4,561	495,555	0.080294	0.087247	73.9	80.3
65-74	9,782	442,003	0.048426	0.066037	107.2	146.1
75-84	17,397	299,482	0.017303	0.044842	100.5	260.5
85+	17,765	120,501	0.002770	0.015508	40.8	228.6
Total					**418.0**	**815.9**

Age-Specific Rate
A rate for a specified age group. Age-specific death rates are calculated by dividing the number of deaths for a specific age group by its population for that year. The numerator and denominator refer to the same age group.

$$\text{Age-specific death rate (ages 25-34)} = \frac{\text{Number of deaths among residents ages 25-34 in a given year}}{\text{population ages 25-34 in that year}} \times 100{,}000$$

Community Health Network Areas (CHNA)
The Department of Public Health, in collaboration with health service providers, coalition members, and interested citizens, has designated 27 areas for community health planning. It is the Department's intention to foster in each of these areas the development of Community Health Networks – consortia of health care providers, human service agencies, schools, churches, youth, parents, elders, advocacy groups, and individual consumers -- to address the health needs of the community. The Community Health Network Area (CHNA) mobilize around key health issues impacting the community, promote prevention efforts, enhance access to care, provide opportunities for more collaboration among agencies, and create a client-centered, outcome-oriented health service delivery system. CHNAs also promote efficiency in service delivery by working to reduce duplication and overlap, and by identifying gaps in service. These community coalitions participate in monitoring outcomes and progress of strategies and responses to those health needs. To determine which cities and towns make up a particular CHNA, please see Table A10, which provides the CHNA code for each city and town based on the geographic definitions established in 1997.

Comparability Modified Rate
A rate designed to assist in the analysis of mortality trends between revisions of the International Classification of Diseases (ICD). A comparability modified rate is calculated by multiplying the cause-specific comparability ratio by the cause-specific rate for years 1994-1998. Comparability modified rates should be used to compare trends between causes of death in 1994-1998 with causes of death in 1999 forward.

Comparability Ratio (CR)
A factor used to adjust mortality statistics for causes of death classified in ICD-9 to be comparable with mortality statistics classified in ICD-10. It is calculated by dividing the number of deaths for a selected cause of death classified by the new revision (i.e. ICD-10) by the number of deaths for a selected cause of death classified by the old revision (i.e. ICD-9).

More specifically, the CRs used in this report were calculated by the National Center for Health Statistics (NCHS) based on a national sample of death records. Death records for 1996 were double coded, once according to ICD-9 and again according to ICD-10. Secondly, the leading causes of death were grouped according to ICD-10 titles, using the ICD-10 codes for data coded in ICD-10, and the most similar ICD-9 titles for data coded in ICD-9. Finally, the number of deaths coded in ICD-10 were divided by the number of deaths in ICD-9 to produce a CR for the cause of death.

A CR of 1.00 indicates that the same number of deaths was assigned to a cause of death whether ICD-9 or ICD-10 was used.
A CR of less then 1.00 results from 1) a decrease in the number of deaths assigned to a cause in ICD-10 compared with ICD-9 or 2) the cause described in ICD-10 is only a part of the ICD-9 title to which it is being compared.

A CR of more than 1.00 results from 1) an increase in the assignments of deaths to a cause in ICD-10 compared with ICD-9 or 2) the ICD-10 title is broader than the ICD-9 title to which it is being compared.

Preliminary comparability ratios supplied by the National Center for Health Statistics (NCHS) in February 2001 are used in this report (see Table A7 and A8).

See also, comparability modified rate.

Crude Death Rate
An estimate of the proportion of a population that died during the year. The numerator is the number of persons who died during the year and the denominator is the size of the population. The death rate in a population is calculated by the formula:

$$\text{Crude death rate} = \frac{\text{Number of resident deaths in a year}}{\text{Number of residents}} \times 100{,}000$$

Death Certificate
A vital record signed by a licensed physician that includes cause of death, decedent's name, gender, birth date, place of residence, and place of occurrence. (A copy of the Massachusetts death certificate used in 2008 is in the Appendix). In a properly completed death certificate, the immediate cause of death is recorded on line 29a. The other mentioned causes are written on lines 29 b-d. The underlying cause of death is the disease or injury that initiated the events leading to the death. All causes of death are data entered and processed by a software program supplied by NCHS. This software assigns the appropriate ICD-10 codes. Trained nosologists review the ICD-10 codes assigned.

International Classification of Diseases, Ninth Revision (ICD-9)
The International Classification of Diseases (ICD) classifies mortality information for statistical purposes. The ICD was first used in 1900 and has since been revised about every 10 years, with the exception of the ICD-9, which was in use between 1979-1998. ICD-9 codes used in this publication are listed on Tables A2-Table A6.

Because of coding changes between the Ninth and Tenth revision, caution should be used when comparing data coded under ICD-9 and ICD-10.

International Classification of Diseases, Tenth Revision (ICD-10)
The tenth revision of the International Classification of Diseases was used to code mortality data beginning in 1999. For a list of ICD-10 codes used in the publication, please see Tables A2-A6.

Because of coding changes between the Ninth and Tenth revision, caution should be used when comparing data coded under ICD-9 and ICD-10.

Life expectancy at birth
Life expectancy at birth is based on the expected age at death for a newborn infant, based upon the actual experience of mortality of the population in Massachusetts.

NCHS
National Center for Health Statistics (US Department of Health and Human Services, Centers for Disease Control and Prevention).

Occurrence Death
Occurrence deaths include all deaths that occur within the state, including deaths of nonresidents. An interstate exchange agreement among the 50 states and Canada provides for exchanges of copies of birth and death records. These out-of-state records are used for statistical purposes only and allow each state or province to track the births and deaths of residents.

Potential Years of Life Lost (PYLL)
Total potential years of life lost (PYLL) is calculated by multiplying the number of deaths for each group by the years of life lost (the difference between life expectancy and the midpoint of the age group, then adding the figures for all age groups).

A measure of the impact of death from various diseases on society, highlighting the total loss to society, especially the loss contributed by early deaths. For the purpose of calculating PYLL, since *Massachusetts Deaths 2002*, we have adjusted the maximum age to be 75 years so that we do not include deaths beyond average life expectancy. Data after 2002 are not comparable with previous publications because we used a different maximum age cutoff.

Premature Mortality Rate
Premature mortality rate (PMR) measures the rate of premature death, that is, death before the age of 75 years, and it is given as a rate per 100,000 and it is adjusted to the 2000 US population. PMR is considered the best single measure to reflect the health status of a population.

Race and Hispanic Ethnicity
For death records, race and Hispanic ethnicity are specified by the death record informant (for example, spouse or next of kin). Prior to 1989, death certificates included a question on race, but a separate question on Hispanic origin was added to the death record beginning on January 1, 1989.

Beginning with the 1999 report, race and ethnicity categories are presented as mutually exclusive categories, except for Table A1 which provides race and ethnicity data consistent with federal guidelines so that national comparisons can be made. All trend data from 1989-2003 presented in this report have been re-tabulated to reflect this modification. Data presented by race in this report are not directly comparable to previously published data by race.

Resident Death
The death of a person whose usual place of residence or permanent address (as reported by the informant) is in one of the 351 cities or towns of Massachusetts, regardless of where the death took place. Unless otherwise noted, all data in this publication are resident data. An interstate exchange agreement among the 50 states ,Washington, DC, Canada, the US Virgin Islands, and Guam provides for exchange of copies of birth and death records. These records are used for statistical purposes only and allow each state or province to track the births and deaths of residents.

Total Rate of Change
The total rate of change is calculated as follows:

$$\frac{P_n - P_o}{P_o}$$

where P_n is the rate during the later time period and P_o is the rate during the earlier time period.

Underlying Cause of Death
The disease or injury that initiated the series of events leading to death, or the circumstances of the unintentional or intentional injury that resulted in the death. The underlying cause of death is used for all analyses published in this report except for diabetes mortality.

Table A2. ICD-10 and ICD-9 Codes Used in this Publication

(Sorted by ICD-10 Codes)

Cause of Death	ICD-10 Code	ICD-9 Code
Infectious and parasitic diseases	A00-B99	001-139
Septicemia	A40-A41	038
Human Immunodeficiency Virus (HIV) disease	B20-B24	042-044
Cancer (Malignant Neoplasms)	C00-C97	140-208
of esophagus	C15	150
of stomach	C16	151
of colon, rectum, rectum and anus	C18-C21	153-154, 159.9
of pancreas	C25	157
of trachea, bronchus and lung	C33-C34	162
of female breast	C50	174
of cervix uteri	C53	180
of corpus uteri and uterus, part unspecified	C54-C55	179,182
of ovary	C56	183.0
of prostate	C61	185
of kidney and renal pelvis	C64-C65	189.0-189.1
of bladder	C67	188
of meninges, brain & other parts of central nervous system	C70-C72	191-192
Hodgkin Disease	C81	201
Non-Hodgkin lymphoma	C82-C85	200, 202 (except 202.4)
Leukemia	C91-C95	202.4, 204-208
Multiple myeloma and immunoproliferative neoplasms	C88, C90	203
Diabetes Mellitus	E10-E14	250
Alzheimer's disease	G30	331.0
Heart Disease	I00-I09, I11, I13, I20-I51	390-398, 402, 404^{-4}29
Stroke (Cerebrovascular disease)	I60-I69	430^{-4}38
Influenza and pneumonia	J10-J18	480^{-4}87
Chronic lower respiratory diseases[1]	J40-J47	490^{-4}96
Chronic liver disease and cirrhosis	K70, K73-K74	571
Nephritis	N00-N07, N17-N19, N25-N27	580-589
Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	740-759
Certain conditions originating in the perinatal period (Perinatal Conditions)	P00-P96	760-779
Ill defined conditions	R00-R99	780-797, 798.1-798.9, 799
Sudden infant death syndrome (SIDS)	R95	798.0
External causes of injuries and poisonings (intentional, unintentional and of undetermined intent)	V01-Y89	E800-E999
Accidents (Unintentional Injuries)	V01-X59, Y85-Y86	E800-E949
Motor Vehicle-related injuries	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	E810-E825
Unintentional non-transport injuries	W00-X59, Y86	E850-E869, E880-E928, E929.2-E929.9
Suicide	X60-X84, Y87.0	E950-E959
Homicide	X85-Y09, Y87.1	E960-E969
Injuries of undetermined intent	Y10-Y34,Y87.2,Y89.9	E980-E989

1. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Table A3. ICD-10 and ICD-9 Codes Used in this Publication

(Sorted by Cause of Death)

Cause of Death	ICD-10 Code	ICD-9 Code
Alzheimer's Disease	G30	331.0
Cancer (Malignant Neoplasms)	C00-C97	140-208
of bladder	C67	188
of cervix uteri	C53	180
of colon, rectum, rectum and anus	C18-C21	153-154, 159.9
of corpus uteri and uterus, part unspecified	C54-C55	179,182
of esophagus	C15	150
of female breast	C50	174
Hodgkin Disease	C81	201
of kidney and renal pelvis	C64-C65	189.0-189.1
Leukemia	C91-C95	202.4, 204-208
of meninges, brain & other parts of central nervous system	C70-C72	191-192
Multiple myeloma and immunoproliferative neoplasms	C88, C90	203
Non-Hodgkin lymphoma	C82-C85	200, 202 (except 202.4)
of ovary	C56	183.0
of prostate	C61	185
of stomach	C16	151
of pancreas	C25	157
of trachea, bronchus and lung	C33-C34	162
Certain conditions originating in the perinatal period (Perinatal Conditions)	P00-P96	760-779
Chronic liver disease and cirrhosis	K70, K73-K74	571
Chronic lower respiratory diseases[1]	J40-J47	490--496
Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	740-759
Diabetes Mellitus	E10-E14	250
External causes of injuries and poisonings (intentional, unintentional and of undetermined intent)	V01-Y98	E800-E999
Homicide	X85-Y09, Y87.1	E960-E969
Injuries of undetermined intent	Y10-Y34,Y87.2,Y89.9	E980-E989
Suicide	X60-X84, Y87.0	E950-E959
Accidents (Unintentional Injuries)	V01-X59	E800-E949
Motor Vehicle-related injuries	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	E810-E825 E850-E869, E880-
Unintentional non-transport injuries	W00-X59, Y86	E928, E929.2-E929.9
Heart Disease	I00-I09, I11, I13, I20-I51	390-398, 402, 404--429
Infectious and parasitic diseases	A00-B99	001-139
Human Immunodeficiency Virus (HIV) disease (AIDS)	B20-B24	042-044
Septicemia	A40-A41	038
Influenza and pneumonia	J10-J18	480--487
Nephritis	N00-N07, N17-N19, N25-N27	580-589
Stroke (Cerebrovascular disease)	I60-I69	430--438
Ill defined conditions	R00-R99	780-797, 798.1-798.9, 799
Sudden infant death syndrome (SIDS)	R95	798.0

1. The title of this cause of death has changed between ICD-10 and ICD-9. Chronic Lower Respiratory Disease (ICD-10 title) corresponds to Chronic Obstructive Pulmonary Disease (COPD) (ICD-9 title).

Table A4. ICD-10 Injury Codes Used in this Publication

Cause of Death	ICD-10 Code
Suicide	X60-X84, Y87.0
Poisoning	X60-X69
Hanging, strangulation or suffocation	X70
Firearm	X72-X74
Other and unspecified	Residual
Homicide	X85-Y09, Y87.1
Firearm	X93-X95
Cut or pierce	X99
Other and unspecified	Residual
Unintentional Injuries (Accidents)	V01-X59, Y85-Y86
Falls	W00-W19
Hanging, strangulation or suffocation	W75-W84
Drowning or submersion	W65-W74
Smoke, fire and flames and contact with heat and hot substances	X00-X19
Poisoning	X40-X49
Firearm	W32-W34
Motor Vehicle-related	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Injury to pedestrian	V02-V04, V09.0, V09
Injury to pedal cyclist	V12-V14, V19.0, V19.2, V19.4, V19.5, V19.6
Injury to motorcyclist	V20-V29
Injury to occupant	V30-V79, V80.3, V80.4, V80.5, V81.0,V81.1, V82.0, V82.1, V83-V86
Other and unspecified	Residual
Other and unspecified	Residual
Events of Undetermined Intent	Y10-Y34, Y87.2, Y89.9
Poisoning	Y10-Y19
Drowning or submersion	Y21
Other and unspecified	Residual
Legal Intervention	Y35-Y36, Y89.0, Y89.1
Firearm	Y35.0
Adverse Effects	Y40-Y59, Y60-Y84, Y88
Drugs	Y40-Y59, Y88.0
Medical Care	Y60-Y84, Y88.1, Y88.2, Y88.3

Table A5. ICD-10 Poisoning Agent Codes Used in Table 26

Opioids

T40.0 Opium
T40.1 Heroin
T40.2 Other opioids
T40.3 Methadone
T40.4 Other synthetic narcotics
T40.6 Other and unspecified narcotics

Cocaine

T40.5 Cocaine

Benzodiazepines

T42.4 Benzodiazepines

Poisoning by antiepileptic, sedative-hypnotic and antiparkinsonism drugs

T42.0 Hydantoin derivatives
T42.1 Iminostilbenes
T42.2 Succinimides and oxazolidinedione
T42.3 Barbiturates
T42.5 Mixed antiepileptics, not elsewhere classified
T42.6 Other antiepileptic and sedative-hypnotic drugs
T42.7 Antiepileptic and sedative-hypnotic drugs, unspecified

Tricyclic and tetracyclic antidepressants, & Monoamine-oxidase-inhibitor antidepressants, & Other and unspecified antidepressants

T43.0 Tricyclic and tetracyclic antidepressants
T43.1 Monoamine-oxidase-inhibitor antidepressants
T43.2 Other and unspecified antidepressants

Phenothiazine antipsychotics & neuroleptics, Butyrophenone & thioxanthene neuroleptics, Other & unspecified antipsychotics & neuroleptics

T43.3 Phenothiazine antipsychotics and neuroleptics
T43.4 Butyrophenone and thioxanthene neuroleptics
T43.5 Other and unspecified antipsychotics and neuroleptics
T43.8 Other psychotropic drugs, not elsewhere classified

Toxic effect of alcohol

T51.0 Ethanol
T51.1 Methanol
T51.2 2-Propanol
T51.3 Fusel oil
T51.8 Other alcohols
T51.9 Alcohol, unspecified

Other and unspecified drugs, medicaments and biological substances

T50.9 Other and unspecified drugs, medicaments and biological substances

All other agents combined

T36-T50 Poisoning by drugs, medicaments and biological substances - excluding the specific agent classes and agents listed above

Table A6. ICD-10 Codes for Selected Healthy People 2010 Mortality Objectives Used in this Publication
(Sorted by Objective Number)

Cause of Death*	ICD-10 Identifying Codes
Cancer (all sites)	C00-C97
Lung cancer	C33-C34
Female breast cancer	C50
Uterine Cervix cancer	C53
Colorectal cancer	C18-C21
Oropharyngeal cancer	C00-C14
Prostate cancer	C61
Malignant melanoma	C43
Coronary heart disease	I11, I20-I25
COPD	J40-J44
Stroke	I60-I69
HIV infection	B20-B24
Firearm-related deaths	W32-W34, X72-X74, Y22-Y24, Y35.0, X93-X95
Poisoning	X40-X49, X60-X69, X85-X90, Y10-Y19, Y35.2
Hanging, strangulation or suffocation	W75-W84, X70, X91, Y20
Unintentional injuries (Accidents)	V01-X59, Y85-Y86
Motor vehicle-related	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Residential fire deaths	X00, X02
Falls	W00-W19, X80, Y01, Y30
Drownings	W65-W74, X71, X92, Y21
Homicides	X85-Y09, Y87.1
Birth defects	Q00-Q99
Congenital heart and vascular defects	Q20-Q24
Sudden infant death syndrome (SIDS)	R95
Suicide	X60-X84, Y87.0
Asthma	J45-J46
Motor-vehicle crash deaths	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Cirrhosis	K74
Drug induced deaths	F11.0-F11.5, F11.7-F11.9, F12.0-F12.5, F12.7-F12.9, F13.0-F13.5, F13.7-F13.9, F14.0-F14.5, F14.7-F14.9, F15.0-F15.5, F15.7-F15.9, F16.0-F16.5, F16.7-F16.9, F17.0, F17.3-F17.5, F17.7-F17.9, F18.0-F18.5, F18.7-F18.9, F19.0-F19.5, F19.7-F19.9,X40-X44,X60-64, X85,Y10-Y14

These Healthy People 2010 objectives use underlying cause of death data.

Table A7. Preliminary Comparability Ratios

Cause of Death	ICD-10 Code	ICD-9 Code (most similar title)	Comparability Ratio
Infectious and parasitic diseases	**A00-B99**		**NA**
Septicemia	A40-A41	038	1.1949
Human Immunodeficiency Virus (HIV) disease	B20-B24	042-044	1.0637[1] and 1.1448[2]
Cancer (Malignant Neoplasms)	C00-C97	140-208	1.0068
of esophagus	C15	150	0.9965
of stomach	C16	151	1.0063
of colon, rectum, rectum and anus	C18-C21	153-154	0.9993
of pancreas	C25	157	0.9980
of trachea, bronchus and lung	C33-C34	162	0.9837
of breast	C50	174-175	1.0056
of cervix uteri	C53	180	0.9871
of corpus uteri and uterus, part unspecified	C54-C55	179,182	1.0260
of ovary	C56	183.0	0.9954
of prostate	C61	185	1.0134
of kidney and renal pelvis	C64-C65	189.0-189.1	1.0000
of bladder	C67	188	0.9968
of meninges, brain & other parts of central nervous system	C70-C72	191-192	0.9691
Hodgkin Disease	C81	201	0.9855
Non-Hodgkin lymphoma	C82-C85	200, 202	0.9781
Leukemia	C91-C95	204-208	1.0119
Multiple myeloma and immunoproliferative neoplasms	C88, C90	203	1.0383
Diabetes Mellitus	E10-E14	250	1.0082
Alzheimer's Disease	G30	331.0	1.5536
Heart Disease	I00-I09, I11, I13, I20-I51	390-398, 402, 404, 410--429	0.9858
Stroke (Cerebrovascular disease)	I60-I69	430--434, 436--438	1.0588
Influenza and pneumonia	J10-J18	480--487	0.6982
Chronic lower respiratory diseases	J40-J47	490--494,496	1.0478
Chronic liver disease and cirrhosis	K70, K73-K74	571	1.0367
Nephritis	N00-N07, N17-N19, N25-N27	580-589	1.2320
Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	740-759	0.8470
Certain conditions originating in the perinatal period (Perinatal Conditions)	P00-P96	760-771.2, 771.4-779	1.0658
External causes of injuries and poisonings (intentional, unintentional and of undetermined intent)	V01-Y89	E800-E999	NA
Accidents (Unintentional Injuries)	V01-X59, Y85-Y86	E800-E869, E880-E929	1.0305
Motor Vehicle-related injuries	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	E810-E825	0.9754[3]
Non-transport injuries	W00-X59, Y86	E850-E869, E880-E928, E929.2-E929.9	1.0763
Suicide	X60-X84, Y87.0	E950-E959	0.9962
Homicide	X85-Y09, Y87.1	E960-E969	0.9983
Injuries of undetermined intent	Y10-Y34,Y87.2,Y89.9	E980-E989	*

Source: National Center for Health Statistics, Preliminary Comparability Study. February 2001. NA: not available *: not reliable

Please refer to the Appendix for an example of how to apply comparability ratios. 1. Comparability Modified number and rate based on preliminary comparability ratios (CR) from NCHS based on 1996 data (February 2001). 2. Comparability Modified number and rate based on preliminary comparability ratios (CR) from NCHS based on 1998 data (revised June 2001). 3. This is the revised comparability ratio for motor vehicle-related injuries, effective May 2001.

Table A8. Preliminary Comparability Ratios: Causes of Infant Death

Cause of Death	ICD-10 Code	ICD-9 Code (most similar title)	Comparability Ratio
Certain infectious and parasitic diseases	A00-B99	001-033, 034.1-134, 136-139, 771.3	0.7339
Septicemia	A40-A41	038	1.3802
Human Immunodeficiency Virus (HIV) disease	B20-B24	042-044	1.0455
Cancer (Malignant Neoplasms)	C00-C97	140-208	1.0435
Influenza and pneumonia	J10-J18	480-487	0.7624
Certain conditions originating in the perinatal period (Perinatal Conditions)	P00-P96	760-771.2, 771.4-779	1.0581
Newborn affected by maternal complications of pregnancy	P01	761	1.0295
Newborn affected by complications of placenta, cord and membranes	P02	762	1.0470
Disorders relating to short gestation and low birthweight	P07	765	1.1060
Intrauterine hypoxia and birth asphyxia	P20-P21	768	1.4477
Respiratory distress of newborn	P22	769	1.0257
Other respiratory conditions originating in perinatal period	P23-P28	770	0.8455
Infections specific to the perinatal period	P35-P39	771.0-771.2, 771.4-771.8	1.0199
Neonatal hemorrhage	P50-P52, P54	772	1.4369
Congenital malformations, deformations, and chromosomal abnormalities	Q00-Q99	740-759	0.9064
Anencephaly and similar malformations	Q00	740	1.0000
Congenital malformations of heart	Q20-Q24	745-746	0.9951
Congenital malformations of respiratory system	Q30-Q34	748	0.6322
Congenital malformations of digestive system	Q35-Q45	749-751	*
Congenital malformations of genitourinary system	Q50-Q64	752-753	0.9432
Congenital malformations of musculoskeletal system	Q65-Q85	754-757	0.8650
Sudden Infant Death Syndrome (SIDS)	R95	798.0	1.0362
External causes of injuries and poisonings (intentional, unintentional and of undetermined intent)	V01-Y89	E800-E999	NA
Accidents (Unintentional Injuries)	V01-X59	E800-E869, E880-E929	1.0246
Motor Vehicle-related injuries	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2	E810-E825	0.9167
Homicide	X85-Y09	E960-E969	0.9481
Injuries of undetermined intent	Y10-Y34,Y87.2,Y89.9	E980-E989	*

Source: National Center for Health Statistics, Preliminary Comparability Study. February 2001. NA: not available *: not reliable
Please refer to the Appendix for an example of how to apply comparability ratios.

Table A9. Population Estimates for Massachusetts Community Health Network Areas (CHNA) and Counties, 2010[1]

CHNA	POPULATION[1]	COUNTY	POPULATION[1]
1. Community Health Network of Berkshire County	131,219	Barnstable	215,888
2. Upper Valley Health Web (Franklin County)	87,130	Berkshire	131,219
3. Partnership for Health in Hampshire County (Northampton)	155,900	Bristol	548,285
4. The Community Health Connection (Springfield)	296,850	Dukes	16,535
5. Community Health Network of Southern Worcester County	119,539	Essex	743,159
6. Community Partners for Health (Milford)	166,824	Franklin	71,372
7. Community Health Network of Greater Metro West (Framingham)	388,909	Hampden	463,490
8 .Community Wellness Coalition (Worcester)	309,013	Hampshire	158,080
9. Fitchburg/Gardner Community Health Network	262,652	Middlesex	1,503,085
10. Greater Lowell Community Health Network	275,404	Nantucket	10,172
11. Greater Lawrence Community Health Network	194,172	Norfolk	670,850
12. Greater Haverhill Community Health Network	148,563	Plymouth	494,919
13. Community Health Network North (Beverly/Gloucester)	115,782	Suffolk	722,023
14. North Shore Community Health Network	284,642	Worcester	798,552
15. Greater Woburn/Concord/Littleton Community Health Network	215,757		
16. North Suburban Health Alliance (Medford/Malden/Melrose)	270,281	**STATE**	**6,547,629**
17. Greater Cambridge/Somerville Community Health Network	280,404		
18. West Suburban Health Network (Newton/Waltham)	258,843		
19. Alliance for Community Health (Boston/Chelsea/Revere/Winthrop)	780,755		
20. Blue Hills Community Health Alliance (Greater Quincy)	377,279		
21. Four (For) Communities (Holyoke, Chicopee, Ludlow, Westfield)	160,892		
22. Greater Brockton Community Health Network	236,778		
23. South Shore Community Partners in Prevention (Plymouth)	190,549		
24. Greater Attleboro-Taunton Health & Education Response	256,322		
25. Partners for a Healthier Community (Fall River)	138,419		
26. Greater New Bedford Health & Human Services Coalition	202,156		
27. Cape and Islands Community Health Network	242,595		

1. The Massachusetts Department of Public Health Race Allocated Census 2010 Estimates (MRACE 2010), which are population estimates based upon the Census 2010 Summary File 1, was used to calculate city and town rates.

Table A10. Population Estimates for Massachusetts Communities, 2010

TOWN NAME	COUNTY	CHNA	POPULATION	TOWN NAME	COUNTY	CHNA	POPULATION
Abington	Plymouth	22	15,985	Concord	Middlesex	15	17,668
Acton	Middlesex	15	21,924	Conway	Franklin	2	1,897
Acushnet	Bristol	26	10,303	Cummington	Hampshire	3	872
Adams	Berkshire	1	8,485	Dalton	Berkshire	1	6,756
Agawam	Hampden	4	28,438	Danvers	Essex	14	26,493
Alford	Berkshire	1	494	Dartmouth	Bristol	26	34,032
Amesbury	Essex	12	16,283	Dedham	Norfolk	18	24,729
Amherst	Hampshire	3	37,819	Deerfield	Franklin	2	5,125
Andover	Essex	11	33,201	Dennis	Barnstable	27	14,207
Aquinnah (Gay Head)	Dukes	27	311	Dighton	Bristol	24	7,086
Arlington	Middlesex	17	42,844	Douglas	Worcester	6	8,471
Ashburnham	Worcester	9	6,081	Dover	Norfolk	18	5,589
Ashby	Middlesex	9	3,074	Dracut	Middlesex	10	29,457
Ashfield	Franklin	2	1,737	Dudley	Worcester	5	11,390
Ashland	Middlesex	7	16,593	Dunstable	Middlesex	10	3,179
Athol	Worcester	2	11,584	Duxbury	Plymouth	23	15,059
Attleboro	Bristol	24	43,593	East Bridgewater	Plymouth	22	13,794
Auburn	Worcester	8	16,188	East Brookfield	Worcester	5	2,183
Avon	Norfolk	22	4,356	East Longmeadow	Hampden	4	15,720
Ayer	Middlesex	9	7,427	Eastham	Barnstable	27	4,956
Barnstable	Barnstable	27	45,193	Easthampton	Hampshire	3	16,053
Barre	Worcester	9	5,398	Easton	Bristol	22	23,112
Becket	Berkshire	1	1,779	Edgartown	Dukes	27	4,067
Bedford	Middlesex	15	13,320	Egremont	Berkshire	1	1,225
Belchertown	Hampshire	3	14,649	Erving	Franklin	2	1,800
Bellingham	Norfolk	6	16,332	Essex	Essex	13	3,504
Belmont	Middlesex	17	24,729	Everett	Middlesex	16	41,667
Berkley	Bristol	24	6,411	Fairhaven	Bristol	26	15,873
Berlin	Worcester	9	2,866	Fall River	Bristol	25	88,857
Bernardston	Franklin	2	2,129	Falmouth	Barnstable	27	31,531
Beverly	Essex	13	39,502	Fitchburg	Worcester	9	40,318
Billerica	Middlesex	10	40,243	Florida	Berkshire	1	752
Blackstone	Worcester	6	9,026	Foxborough	Norfolk	7	16,865
Blandford	Hampden	4	1,233	Framingham	Middlesex	7	68,318
Bolton	Worcester	9	4,897	Franklin	Norfolk	6	31,635
Boston	Suffolk	19	617,594	Freetown	Bristol	26	8,870
Bourne	Barnstable	27	19,754	Gardner	Worcester	9	20,228
Boxborough	Middlesex	15	4,996	Georgetown	Essex	12	8,183
Boxford	Essex	12	7,965	Gill	Franklin	2	1,500
Boylston	Worcester	8	4,355	Gloucester	Essex	13	28,789
Braintree	Norfolk	20	35,744	Goshen	Hampshire	3	1,054
Brewster	Barnstable	27	9,820	Gosnold	Dukes	27	75
Bridgewater	Plymouth	22	26,563	Grafton	Worcester	8	17,765
Brimfield	Hampden	5	3,609	Granby	Hampshire	3	6,240
Brockton	Plymouth	22	93,810	Granville	Hampden	4	1,566
Brookfield	Worcester	5	3,390	Great Barrington	Berkshire	1	7,104
Brookline	Norfolk	19	58,732	Greenfield	Franklin	2	17,456
Buckland	Franklin	2	1,902	Groton	Middlesex	9	10,646
Burlington	Middlesex	15	24,498	Groveland	Essex	12	6,459
Cambridge	Middlesex	17	105,162	Hadley	Hampshire	3	5,250
Canton	Norfolk	20	21,561	Halifax	Plymouth	23	7,518
Carlisle	Middlesex	15	4,852	Hamilton	Essex	13	7,764
Carver	Plymouth	23	11,509	Hampden	Hampden	4	5,139
Charlemont	Franklin	2	1,266	Hancock	Berkshire	1	717
Charlton	Worcester	5	12,981	Hanover	Plymouth	23	13,879
Chatham	Barnstable	27	6,125	Hanson	Plymouth	23	10,209
Chelmsford	Middlesex	10	33,802	Hardwick	Worcester	9	2,990
Chelsea	Suffolk	19	35,177	Harvard	Worcester	9	6,520
Cheshire	Berkshire	1	3,235	Harwich	Barnstable	27	12,243
Chester	Hampden	21	1,337	Hatfield	Hampshire	3	3,279
Chesterfield	Hampshire	3	1,222	Haverhill	Essex	12	60,879
Chicopee	Hampden	21	55,298	Hawley	Franklin	2	337
Chilmark	Dukes	27	866	Heath	Franklin	2	706
Clarksburg	Berkshire	1	1,702	Hingham	Plymouth	20	22,157
Clinton	Worcester	9	13,606	Hinsdale	Berkshire	1	2,032
Cohasset	Norfolk	20	7,542	Holbrook	Norfolk	22	10,791
Colrain	Franklin	2	1,671	Holden	Worcester	8	17,346

Table A10. Population Estimates for Massachusetts Communities, 2010, continued

TOWN NAME	COUNTY	CHNA	POPULATION	TOWN NAME	COUNTY	CHNA	POPULATION
Holland	Hampden	5	2,481	New Marlborough	Berkshire	1	1,509
Holliston	Middlesex	7	13,547	New Salem	Franklin	2	990
Holyoke	Hampden	21	39,880	Newbury	Essex	12	6,666
Hopedale	Worcester	6	5,911	Newburyport	Essex	12	17,416
Hopkinton	Middlesex	7	14,925	Newton	Middlesex	18	85,146
Hubbardston	Worcester	9	4,382	Norfolk	Norfolk	7	11,227
Hudson	Middlesex	7	19,063	North Adams	Berkshire	1	13,708
Hull	Plymouth	20	10,293	North Andover	Essex	11	28,352
Huntington	Hampshire	21	2,180	North Attleboro	Bristol	24	28,712
Ipswich	Essex	13	13,175	North Brookfield	Worcester	5	4,680
Kingston	Plymouth	23	12,629	North Reading	Middlesex	16	14,892
Lakeville	Plymouth	24	10,602	Northampton	Hampshire	3	28,549
Lancaster	Worcester	9	8,055	Northborough	Worcester	7	14,155
Lanesborough	Berkshire	1	3,091	Northbridge	Worcester	6	15,707
Lawrence	Essex	11	76,377	Northfield	Franklin	2	3,032
Lee	Berkshire	1	5,943	Norton	Bristol	24	19,031
Leicester	Worcester	8	10,970	Norwell	Plymouth	20	10,506
Lenox	Berkshire	1	5,025	Norwood	Norfolk	20	28,602
Leominster	Worcester	9	40,759	Oak Bluffs	Dukes	27	4,527
Leverett	Franklin	2	1,851	Oakham	Worcester	9	1,902
Lexington	Middlesex	15	31,394	Orange	Franklin	2	7,839
Leyden	Franklin	2	711	Orleans	Barnstable	27	5,890
Lincoln	Middlesex	15	6,362	Otis	Berkshire	1	1,612
Littleton	Middlesex	15	8,924	Oxford	Worcester	5	13,709
Longmeadow	Hampden	4	15,784	Palmer	Hampden	4	12,140
Lowell	Middlesex	10	106,519	Paxton	Worcester	8	4,806
Ludlow	Hampden	21	21,103	Peabody	Essex	14	51,251
Lunenburg	Worcester	9	10,086	Pelham	Hampshire	3	1,321
Lynn	Essex	14	90,329	Pembroke	Plymouth	23	17,837
Lynnfield	Essex	14	11,596	Pepperell	Middlesex	9	11,497
Malden	Middlesex	16	59,450	Peru	Berkshire	1	847
Manchester	Essex	13	5,136	Petersham	Worcester	2	1,234
Mansfield	Bristol	24	23,184	Phillipston	Worcester	2	1,682
Marblehead	Essex	14	19,808	Pittsfield	Berkshire	1	44,737
Marion	Plymouth	26	4,907	Plainfield	Hampshire	3	648
Marlborough	Middlesex	7	38,499	Plainville	Norfolk	7	8,264
Marshfield	Plymouth	23	25,132	Plymouth	Plymouth	23	56,468
Mashpee	Barnstable	27	14,006	Plympton	Plymouth	23	2,820
Mattapoisett	Plymouth	26	6,045	Princeton	Worcester	9	3,413
Maynard	Middlesex	7	10,106	Provincetown	Barnstable	27	2,942
Medfield	Norfolk	7	12,024	Quincy	Norfolk	20	92,271
Medford	Middlesex	16	56,173	Randolph	Norfolk	20	32,112
Medway	Norfolk	6	12,752	Raynham	Bristol	24	13,383
Melrose	Middlesex	16	26,983	Reading	Middlesex	16	24,747
Mendon	Worcester	6	5,839	Rehoboth	Bristol	24	11,608
Merrimac	Essex	12	6,338	Revere	Suffolk	19	51,755
Methuen	Essex	11	47,255	Richmond	Berkshire	1	1,475
Middleborough	Plymouth	24	23,116	Rochester	Plymouth	26	5,232
Middlefield	Hampshire	3	521	Rockland	Plymouth	23	17,489
Middleton	Essex	11	8,987	Rockport	Essex	13	6,952
Milford	Worcester	6	27,999	Rowe	Franklin	2	393
Millbury	Worcester	8	13,261	Rowley	Essex	12	5,856
Millis	Norfolk	7	7,891	Royalston	Worcester	2	1,258
Millville	Worcester	6	3,190	Russell	Hampden	4	1,775
Milton	Norfolk	20	27,003	Rutland	Worcester	9	7,973
Monroe	Franklin	2	121	Salem	Essex	14	41,340
Monson	Hampden	4	8,560	Salisbury	Essex	12	8,283
Montague	Franklin	2	8,437	Sandisfield	Berkshire	1	915
Monterey	Berkshire	1	961	Sandwich	Barnstable	27	20,675
Montgomery	Hampden	4	838	Saugus	Essex	14	26,628
Mt. Washington	Berkshire	1	167	Savoy	Berkshire	1	692
Nahant	Essex	14	3,410	Scituate	Plymouth	20	18,133
Nantucket	Nantucket	27	10,172	Seekonk	Bristol	24	13,722
Natick	Middlesex	7	33,006	Sharon	Norfolk	20	17,612
Needham	Norfolk	18	28,886	Sheffield	Berkshire	1	3,257
New Ashford	Berkshire	1	228	Shelburne	Franklin	2	1,893
New Bedford	Bristol	26	95,072	Sherborn	Middlesex	7	4,119
New Braintree	Worcester	9	999	Shirley	Middlesex	9	7,211

Table A10. Population Estimates for Massachusetts Communities, 2010, continued

TOWN NAME	COUNTY	CHNA	POPULATION
Shrewsbury	Worcester	8	35,608
Shutesbury	Franklin	2	1,771
Somerset	Bristol	25	18,165
Somerville	Middlesex	17	75,754
South Hadley	Hampshire	3	17,514
Southampton	Hampshire	3	5,792
Southborough	Worcester	7	9,767
Southbridge	Worcester	5	16,719
Southwick	Hampden	4	9,502
Spencer	Worcester	5	11,688
Springfield	Hampden	4	153,060
Sterling	Worcester	9	7,808
Stockbridge	Berkshire	1	1,947
Stoneham	Middlesex	16	21,437
Stoughton	Norfolk	22	26,962
Stow	Middlesex	7	6,590
Sturbridge	Worcester	5	9,268
Sudbury	Middlesex	7	17,659
Sunderland	Franklin	2	3,684
Sutton	Worcester	6	8,963
Swampscott	Essex	14	13,787
Swansea	Bristol	25	15,865
Taunton	Bristol	24	55,874
Templeton	Worcester	9	8,013
Tewksbury	Middlesex	10	28,961
Tisbury	Dukes	27	3,949
Tolland	Hampden	4	485
Topsfield	Essex	13	6,085
Townsend	Middlesex	9	8,926
Truro	Barnstable	27	2,003
Tyngsborough	Middlesex	10	11,292
Tyringham	Berkshire	1	327
Upton	Worcester	6	7,542
Uxbridge	Worcester	6	13,457
Wakefield	Middlesex	16	24,932
Wales	Hampden	5	1,838
Walpole	Norfolk	7	24,070
Waltham	Middlesex	18	60,632
Ware	Hampshire	3	9,872
Wareham	Plymouth	26	21,822
Warren	Worcester	5	5,135
Warwick	Franklin	2	780
Washington	Berkshire	1	538
Watertown	Middlesex	17	31,915
Wayland	Middlesex	7	12,994
Webster	Worcester	5	16,767
Wellesley	Norfolk	18	27,982
Wellfleet	Barnstable	27	2,750
Wendell	Franklin	2	848
Wenham	Essex	13	4,875
West Boylston	Worcester	8	7,669
West Bridgewater	Plymouth	22	6,916
West Brookfield	Worcester	5	3,701
West Newbury	Essex	12	4,235
West Springfield	Hampden	4	28,391
West Stockbridge	Berkshire	1	1,306
West Tisbury	Dukes	27	2,740
Westborough	Worcester	7	18,272
Westfield	Hampden	21	41,094
Westford	Middlesex	10	21,951
Westhampton	Hampshire	3	1,607
Westminster	Worcester	9	7,277
Weston	Middlesex	18	11,261
Westport	Bristol	25	15,532
Westwood	Norfolk	18	14,618
Weymouth	Norfolk	20	53,743
Whately	Franklin	2	1,496
Whitman	Plymouth	22	14,489
Wilbraham	Hampden	4	14,219
Williamsburg	Hampshire	3	2,482
Williamstown	Berkshire	1	7,754
Wilmington	Middlesex	15	22,325
Winchendon	Worcester	9	10,300
Winchester	Middlesex	15	21,374
Windsor	Berkshire	1	899
Winthrop	Suffolk	19	17,497
Woburn	Middlesex	15	38,120
Worcester	Worcester	8	181,045
Worthington	Hampshire	3	1,156
Wrentham	Norfolk	7	10,955
Yarmouth	Barnstable	27	23,793

1. The Massachusetts Department of Public Health Race Allocated Census 2010 Estimates (MRACE 2010), which are population estimates based upon the Census 2010 Summary File 1, was used to calculate city and town rates.

Table A11. 2010 Massachusetts Population Estimates[1] By Age Group,Gender, Race and Hispanic Ethnicity[2] (mutually exclusive)

AGE	GENDER	TOTAL	WHITE Non-Hispanic	BLACK Non-Hispanic	ASIAN Non-Hispanic	HISPANIC
UNDER 1	MALE	36,587	24,016	3,373	2,649	6,449
	FEMALE	34,847	22,917	3,213	2,476	6,140
	TOTAL	71,434	46,933	6,586	5,125	12,589
1 TO 4	MALE	151,018	100,416	13,897	10,634	25,689
	FEMALE	144,635	95,824	13,352	10,335	24,772
	TOTAL	295,653	196,240	27,249	20,969	50,461
5 TO 14	MALE	403,966	288,309	34,031	23,418	57,173
	FEMALE	387,334	274,381	32,543	24,242	55,158
	TOTAL	791,300	562,690	66,574	47,660	112,331
15 TO 24	MALE	471,136	336,640	40,675	29,589	62,949
	FEMALE	467,288	333,023	40,031	32,477	60,558
	TOTAL	938,424	669,663	80,706	62,066	123,507
25 TO 34	MALE	416,593	296,665	31,132	34,010	53,877
	FEMALE	428,548	300,987	33,520	38,629	54,474
	TOTAL	845,141	597,652	64,652	72,639	108,351
35 TO 44	MALE	432,409	329,001	29,674	30,123	42,641
	FEMALE	454,740	342,427	32,748	32,418	46,145
	TOTAL	887,149	671,428	62,422	62,541	88,786
45 TO 54	MALE	493,605	409,691	29,422	21,800	31,487
	FEMALE	518,830	427,344	31,479	23,296	35,446
	TOTAL	1,012,435	837,035	60,901	45,096	66,933
55 TO 64	MALE	384,889	335,054	18,409	13,701	16,918
	FEMALE	418,480	360,313	21,204	15,480	20,642
	TOTAL	803,369	695,367	39,613	29,181	37,560
65 TO 74	MALE	208,918	185,295	8,641	7,304	7,290
	FEMALE	247,542	216,958	11,916	8,234	10,036
	TOTAL	456,460	402,253	20,557	15,538	17,326
75 TO 84	MALE	122,482	112,049	3,993	3,387	2,859
	FEMALE	178,583	162,532	6,882	4,242	4,712
	TOTAL	301,065	274,581	10,875	7,629	7,571
85 +	MALE	45,025	42,166	1,186	855	763
	FEMALE	100,174	94,459	2817	1,318	1,476
	TOTAL	145,199	136,625	4,003	2,173	2,239
ALL AGES	MALE	3,166,628	2,459,302	214,433	177,470	308,095
	FEMALE	3,381,001	2,631,165	229,705	193,147	319,559
	TOTAL	6,547,629	5,090,467	444,138	370,617	627,654

1. National Center for Health Statistics. Estimates of the April 1, 2010 resident population of the United States, by county, single-year of age (0, 1, 2, …, 85 years and over), bridged race, Hispanic origin, and sex. Prepared under a collaborative arrangement with the U.S. Census Bureau; released November 3, 2011. Available from: http://www.cdc.gov/nchs/nvss/bridged_race.htm as of November 17, 2011. 2. Persons of Hispanic ethnicity are NOT included in the race categories. These estimates are used to calculate ***statewide population based rates*** published in this report.

2. Persons of Hispanic ethnicity are NOT included in the race categories. These estimates are used to calculate population based rates published in this report, except for Table A1.

Table A12. 2010 Massachusetts Population Estimates[1] By Age Group, Gender, Race and Hispanic Ethnicity[2]

AGE	GENDER	TOTAL	WHITE	BLACK	ASIAN	HISPANIC
UNDER 1	MALE	36,587	29,120	4,395	2,770	6,449
	FEMALE	34,847	27,801	4,162	2,576	6,140
	TOTAL	71,434	56,921	8,557	5,346	12,589
1 TO 4	MALE	151,018	120,711	17,919	11,159	25,689
	FEMALE	144,635	115,359	17,294	10,824	24,772
	TOTAL	295,653	236,070	35,213	21,983	50,461
5 TO 14	MALE	403,966	333,371	43,325	24,432	57,173
	FEMALE	387,334	317,777	41,554	25,233	55,158
	TOTAL	791,300	651,148	84,879	49,665	112,331
15 TO 24	MALE	471,136	386,434	50,545	30,640	62,949
	FEMALE	467,288	380,817	49,744	33,596	60,558
	TOTAL	938,424	767,251	100,289	64,236	123,507
25 TO 34	MALE	416,593	340,811	37,982	34,892	53,877
	FEMALE	428,548	344,347	41,998	39,516	54,474
	TOTAL	845,141	685,158	79,980	74,408	108,351
35 TO 44	MALE	432,409	363,989	35,210	30,746	42,641
	FEMALE	454,740	379,547	39,620	33,123	46,145
	TOTAL	887,149	743,536	74,830	63,869	88,786
45 TO 54	MALE	493,605	435,304	33,847	22,246	31,487
	FEMALE	518,830	455,562	37,034	23,830	35,446
	TOTAL	1,012,435	890,866	70,881	46,076	66,933
55 TO 64	MALE	384,889	348,708	20,996	13,912	16,918
	FEMALE	418,480	376,815	24,445	15,797	20,642
	TOTAL	803,369	725,523	45,441	29,709	37,560
65 TO 74	MALE	208,918	191,168	9,738	7,423	7,290
	FEMALE	247,542	225,000	13,490	8,371	10,036
	TOTAL	456,460	416,168	23,228	15,794	17,326
75 TO 84	MALE	122,482	114,332	4,448	3,433	2,859
	FEMALE	178,583	166,347	7,604	4,303	4,712
	TOTAL	301,065	280,679	12,052	7,736	7,571
85 +	MALE	45,025	42,790	1,295	862	763
	FEMALE	100,174	95,688	3019	1,339	1,476
	TOTAL	145,199	138,478	4,314	2,201	2,239
ALL AGES	MALE	3,166,628	2,706,738	259,700	182,515	308,095
	FEMALE	3,381,001	2,885,060	279,964	198,508	319,559
	TOTAL	6,547,629	5,591,798	539,664	381,023	627,654

1. The bridged-race April 1, 2010 population estimates were produced by the Population Estimates Program of the U.S. Census Bureau in collaboration with the National Center for Health Statistics (NCHS). These estimates were released by the Census Bureau on November 3, 2011 and by NCHS on November 17, 2011.

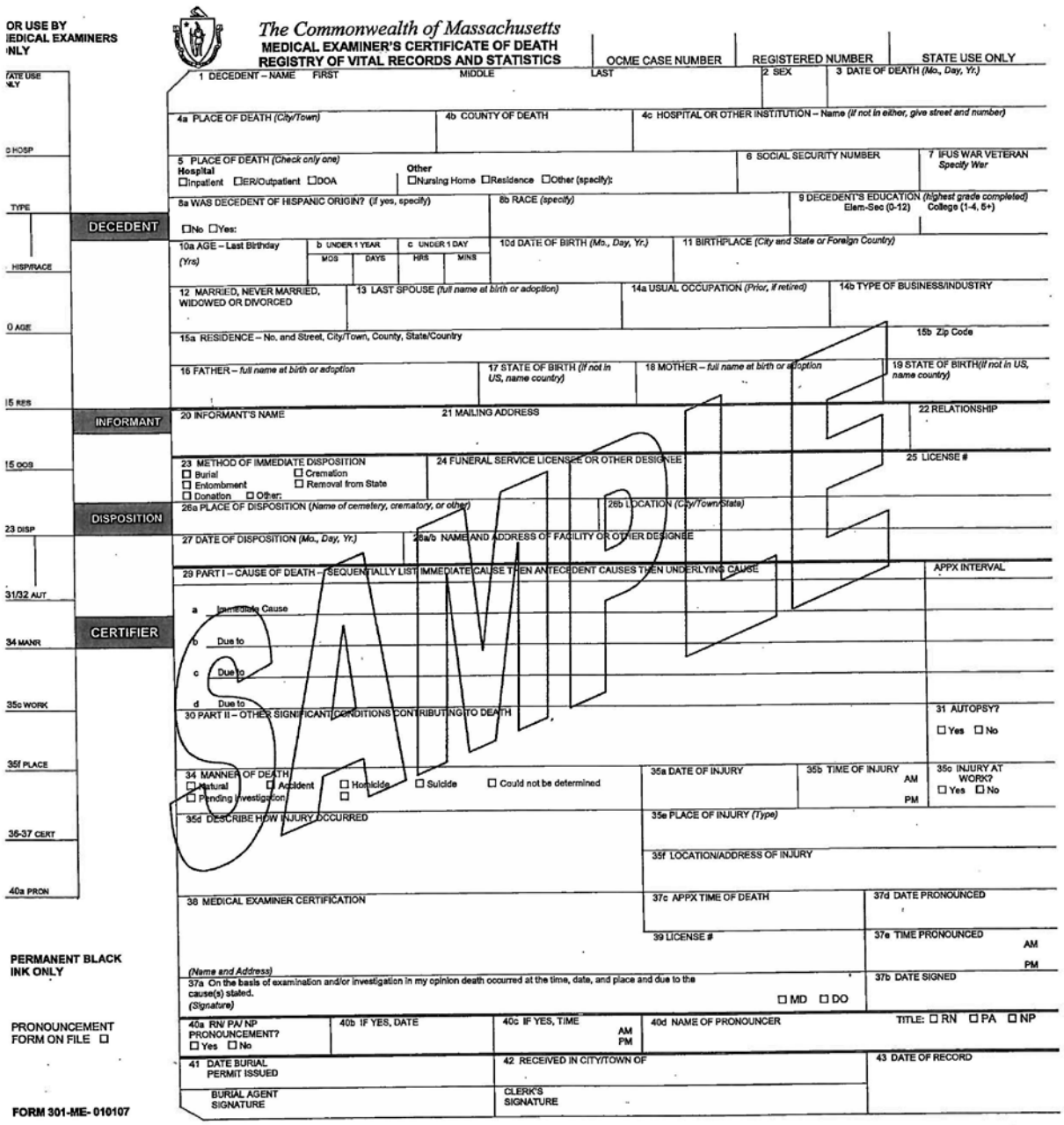
2. Persons of Hispanic ethnicity are included in the race categories. These estimates are used to calculate population based rates published in Table A1.

Table A13. Causes of Death Considered Amenable to Health Care

Cause of Death Considered Amenable to Health Care	Age	ICD-10 Codes
Intestinal infections	0-14	A00-A09
Tuberculosis	0-74	A15-A19, B90
Other infectious (Diphtheria, Tetanus, Poliomyelitis)	0-74	A36, A35,A80, A40-A41
Whooping cough	0-14	A37
Measles	1 to 14	B05
Malignant neoplasm of colon and rectum	0-74	C18-C21
Malignant neoplasm of skin,	0-74	C44
Malignant neoplasm of breast,	0-74	C50
Malignant neoplasm of cervix uteri	0-74	C53
Malignant neoplasm of cervix uteri and body of the uterus	0-44	C54, C55
Malignant neoplasm of testis	0-74	C62
Hodgkin's disease	0-74	C81
Leukemia	0-44	C91-C95
Diseases of the thyroid	0-74	E00-E07
Diabetes mellitus	0-49	E10-E14
Epilepsy	0-74	G40-G41
Chronic rheumatic heart disease	0-74	I05-I09
Hypertensive disease	0-74	I10-I13, I15
Ischemic heart disease	0-74	I20-I25
Cerebrovascular disease	0-74	I60-I69
All respiratory diseases (excl. pneumonia/influenza)	1 to 14	J00-J09, J20-J99
Influenza	0-74	J10-J11
Pneumonia	0-74	J12-J18
Peptic ulcer	0-74	K25-K27
Appendicitis	0-74	K35-K38
Abdominal hernia	0-74	K40-K46
Cholelithiasis & cholecystitis	0-74	K80-K81
Nephritis and nephrosis	0-74	N00-N07, N17-N19, N25-N27
Benign prostatic hyperplasia	0-74	N40
Misadventures to patients during surgical and medical care	All	Y60-Y69, Y83-Y84
Maternal deaths	All	O00-O99
Congenital cardiovascular anomalies	0-74	Q20-Q28
Perinatal deaths, all causes excluding stillbirths	All	P00-P96

Note: Amenable Causes are from E. Nolte and M. McKee, *Does Healthcare Save Lives*? *Avoidable Mortality Revisited* (London: Nuffield Trust, 2004). Available at http://content.healthaffairs.org/cgi/data/27/1/58/DC1/1. Accessed 7/15/2010

Massachusetts Death Certificate: 2010



The Commonwealth of Massachusetts
MEDICAL EXAMINER'S CERTIFICATE OF DEATH
REGISTRY OF VITAL RECORDS AND STATISTICS

OCME CASE NUMBER | REGISTERED NUMBER | STATE USE ONLY

FOR USE BY MEDICAL EXAMINERS ONLY

DECEDENT

1 DECEDENT – NAME FIRST MIDDLE LAST | 2 SEX | 3 DATE OF DEATH (Mo., Day, Yr.)

4a PLACE OF DEATH (City/Town) | 4b COUNTY OF DEATH | 4c HOSPITAL OR OTHER INSTITUTION – Name (if not in either, give street and number)

5 PLACE OF DEATH (Check only one)
Hospital ☐Inpatient ☐ER/Outpatient ☐DOA
Other ☐Nursing Home ☐Residence ☐Other (specify):

6 SOCIAL SECURITY NUMBER | 7 IF US WAR VETERAN Specify War

8a WAS DECEDENT OF HISPANIC ORIGIN? (if yes, specify) ☐No ☐Yes:

8b RACE (specify)

9 DECEDENT'S EDUCATION (highest grade completed) Elem-Sec (0-12) College (1-4, 5+)

10a AGE – Last Birthday (Yrs) | b UNDER 1 YEAR MOS DAYS | c UNDER 1 DAY HRS MINS

10d DATE OF BIRTH (Mo., Day, Yr.)

11 BIRTHPLACE (City and State or Foreign Country)

12 MARRIED, NEVER MARRIED, WIDOWED OR DIVORCED

13 LAST SPOUSE (full name at birth or adoption)

14a USUAL OCCUPATION (Prior, if retired) | 14b TYPE OF BUSINESS/INDUSTRY

15a RESIDENCE – No. and Street, City/Town, County, State/Country | 15b Zip Code

16 FATHER – full name at birth or adoption

17 STATE OF BIRTH (If not in US, name country)

18 MOTHER – full name at birth or adoption

19 STATE OF BIRTH (If not in US, name country)

INFORMANT

20 INFORMANT'S NAME | 21 MAILING ADDRESS | 22 RELATIONSHIP

DISPOSITION

23 METHOD OF IMMEDIATE DISPOSITION
☐ Burial ☐ Cremation
☐ Entombment ☐ Removal from State
☐ Donation ☐ Other:

24 FUNERAL SERVICE LICENSEE OR OTHER DESIGNEE | 25 LICENSE #

26a PLACE OF DISPOSITION (Name of cemetery, crematory, or other) | 26b LOCATION (City/Town/State)

27 DATE OF DISPOSITION (Mo., Day, Yr.) | 28a/b NAME AND ADDRESS OF FACILITY OR OTHER DESIGNEE

CERTIFIER

29 PART I – CAUSE OF DEATH – SEQUENTIALLY LIST IMMEDIATE CAUSE THEN ANTECEDENT CAUSES THEN UNDERLYING CAUSE | APPX INTERVAL

a Immediate Cause
b Due to
c Due to
d Due to

30 PART II – OTHER SIGNIFICANT CONDITIONS CONTRIBUTING TO DEATH | 31 AUTOPSY? ☐Yes ☐No

34 MANNER OF DEATH
☐ Natural ☐ Accident ☐ Homicide ☐ Suicide ☐ Could not be determined
☐ Pending Investigation

35a DATE OF INJURY | 35b TIME OF INJURY AM PM | 35c INJURY AT WORK? ☐Yes ☐No

35d DESCRIBE HOW INJURY OCCURRED | 35e PLACE OF INJURY (Type) | 35f LOCATION/ADDRESS OF INJURY

36 MEDICAL EXAMINER CERTIFICATION | 37c APPX TIME OF DEATH | 37d DATE PRONOUNCED

39 LICENSE # | 37e TIME PRONOUNCED AM PM

(Name and Address)

37a On the basis of examination and/or investigation in my opinion death occurred at the time, date, and place and due to the cause(s) stated.
(Signature) ☐MD ☐DO | 37b DATE SIGNED

PERMANENT BLACK INK ONLY

PRONOUNCEMENT FORM ON FILE ☐

40a RN/ PA/ NP PRONOUNCEMENT? ☐Yes ☐No | 40b IF YES, DATE | 40c IF YES, TIME AM PM | 40d NAME OF PRONOUNCER | TITLE: ☐RN ☐PA ☐NP

41 DATE BURIAL PERMIT ISSUED | 42 RECEIVED IN CITY/TOWN OF | 43 DATE OF RECORD

BURIAL AGENT SIGNATURE | CLERK'S SIGNATURE

FORM 301-ME- 010107

SAMPLE

Circumstance for Referral to the Office of the Chief Medical Examiner (OCME)

http://www.mass.gov/legis/laws/mgl/38-3.htm

CHAPTER 38. MEDICAL EXAMINERS AND INQUESTS

Chapter 38: Section 3. Duty to report deaths; failure to report

Section 3. It shall be the duty of any person having knowledge of a death which occurs under the circumstances enumerated in this paragraph immediately to notify the office of the chief medical examiner, or the medical examiner designated to the location where the death has occurred, of the known facts concerning the time, place, manner, circumstances and cause of such death:

(1) death where criminal violence appears to have taken place, regardless of the time interval between the incident and death, and regardless of whether such violence appears to have been the immediate cause of death, or a contributory factor thereto;

(2) death by accident or unintentional injury, regardless of time interval between the incident and death, and regardless of whether such injury appears to have been the immediate cause of death, or a contributory factor thereto;

(3) suicide, regardless of the time interval between the incident and death;

(4) death under suspicious or unusual circumstances;

(5) death following an unlawful abortion;

(6) death related to occupational illness or injury;

(7) death in custody, in any jail or correctional facility, or in any mental health or mental retardation institution;

(8) death where suspicion of abuse of a child, family or household member, elder person or disabled person exists;

(9) death due to poison or acute or chronic use of drugs or alcohol;

(10) skeletal remains;

(11) death associated with diagnostic or therapeutic procedures;

(12) sudden death when the decedent was in apparent good health;

(13) death within twenty-four hours of admission to a hospital or nursing home;

(14) death in any public or private conveyance;

(15) fetal death, as defined by section two hundred and two of chapter one hundred and eleven, where the period of gestation has been twenty weeks or more, or where fetal weight is three hundred and fifty grams or more;

(16) death of children under the age of 18 years from any cause;

(17) any person found dead;

(18) death in any emergency treatment facility, medical walk-in center, day care center, or under foster care; or

(19) deaths occurring under such other circumstances as the chief medical examiner shall prescribe in regulations promulgated pursuant to the provisions of chapter thirty A.

A physician, police officer, hospital administrator, licensed nurse, department of social services social worker, or licensed funeral director, within the commonwealth, who, having knowledge of such an unreported death, fails to notify the office of the chief medical examiner of such death shall be punished by a fine of not more than five hundred dollars. Such failure shall also be reported to the appropriate board of registration, where applicable.

Massachusetts Deaths: 2010 Evaluation Form

TO OUR READERS:
In an attempt to better serve our users, we are enclosing this evaluation form. Please take the time to complete this questionnaire and return it to the address at the bottom of the page. Thank you.

What tables and charts do you find most useful?
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Are there other tables and charts that you would like added to this publication? If yes, please describe them in detail.
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Bureau of Health Information, Statistics, Research & Evaluation
Massachusetts Department of Public Health
250 Washington Street, 6th floor
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