# Massachusetts Deaths 2010

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# 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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## 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 |

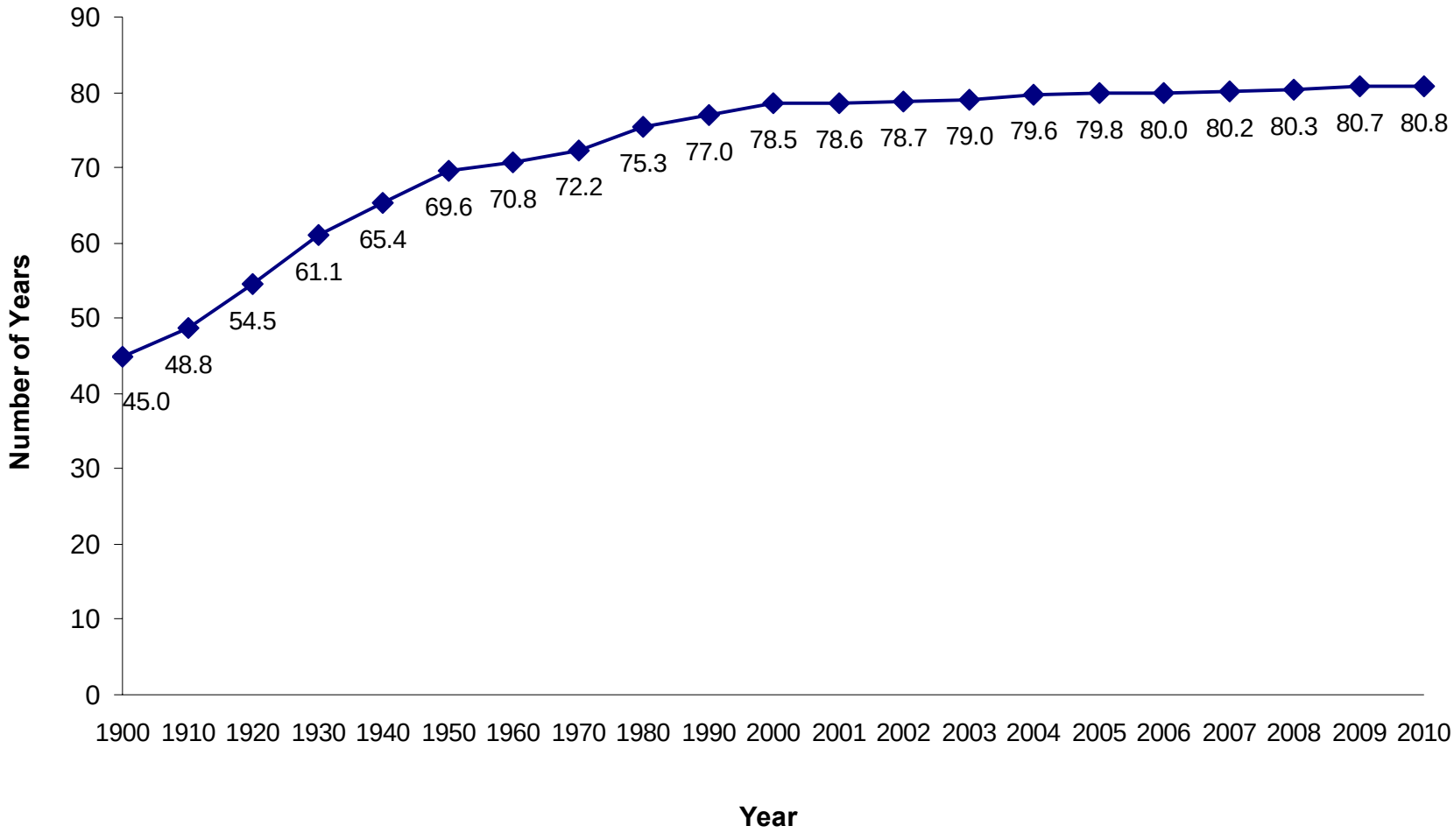
1. Cause of death: the disease or injury that initiated the events leading to death; or the circumstances of the unintentional or intentional injury that resulted in the death. 2. Data coded according to ICD-10. ICD-9 and ICD-10 codes used in this publication are listed in the Appendix. 3. US data for 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**

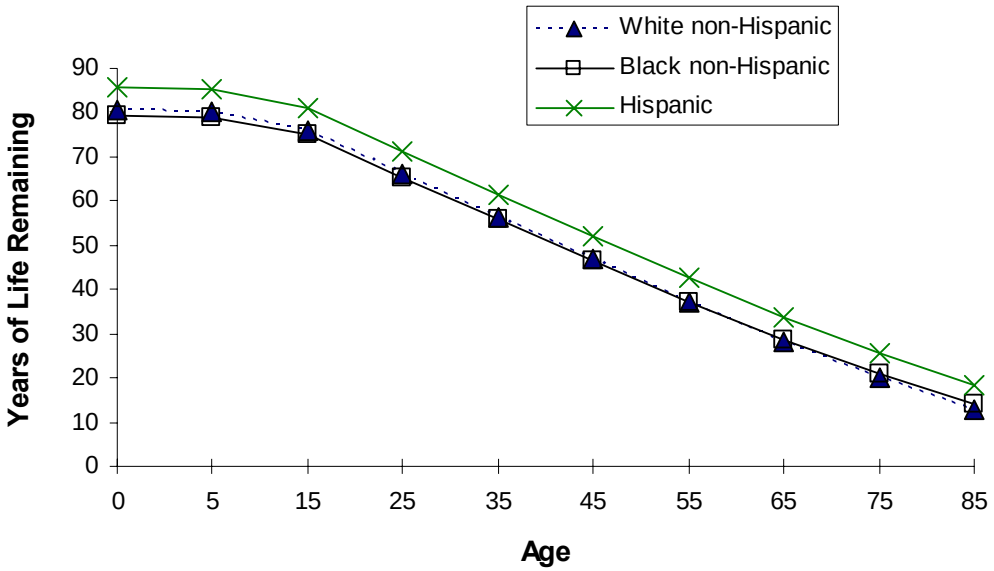
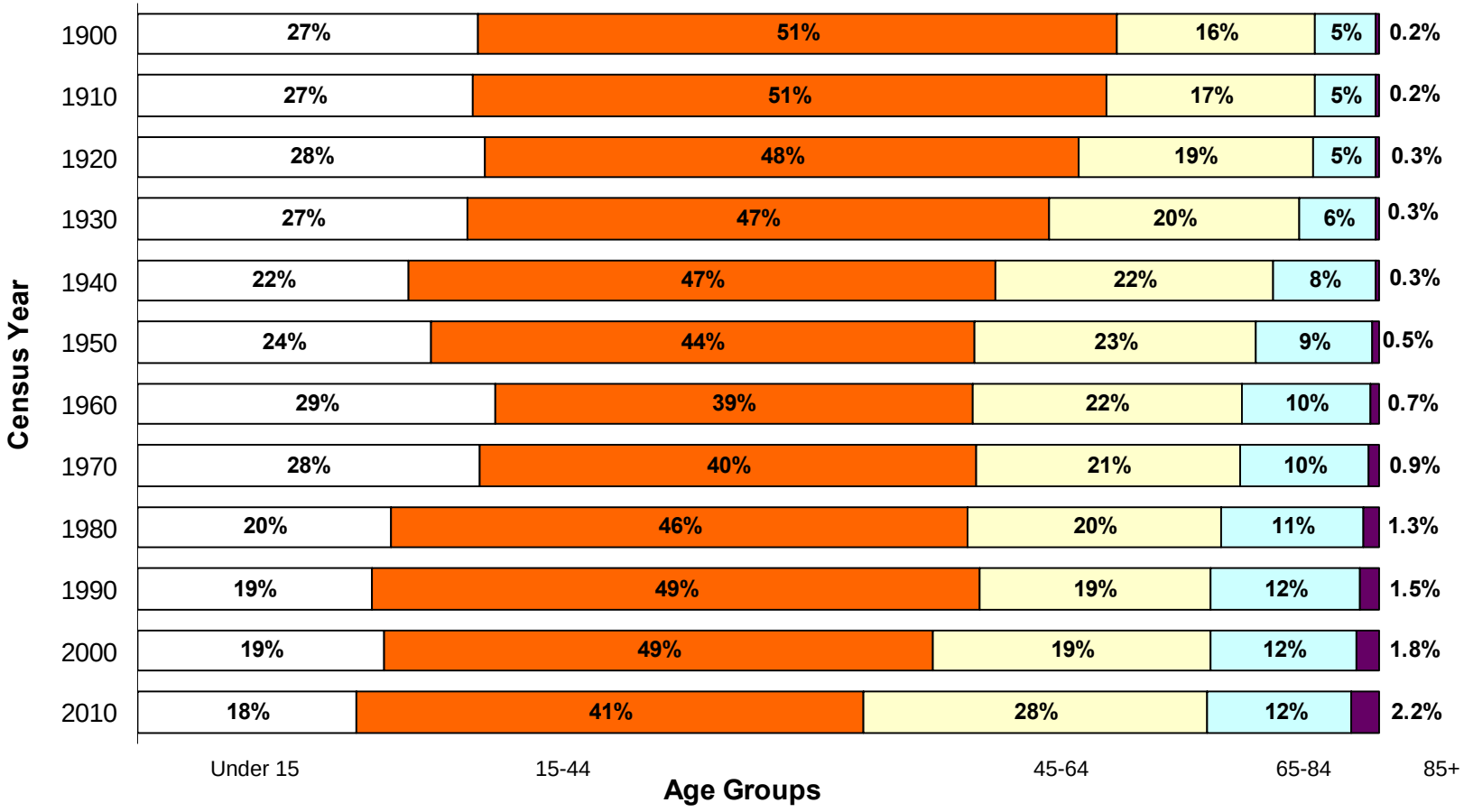



**Table 3. Years of Life Remaining[1] by Race and Hispanic Ethnicity and Gender, Massachusetts: 2010**

| 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 | 47.5 | 83.1 |
| 1 year old | 80.2 | 82.5 | 82.3 | 82.9 | 90.2 | 77.7 | 77.6 | 47.9 | 82.7 |
| 5 years old | 76.2 | 78.6 | 78.3 | 79.1 | 86.3 | 73.7 | 73.7 | 44.1 | 78.8 |
| 15 years old | 66.3 | 68.6 | 68.3 | 69.2 | 76.4 | 63.8 | 63.7 | 34.4 | 68.8 |
| 25 years old | 56.6 | 58.7 | 58.4 | 59.3 | 66.5 | 54.2 | 54.1 | 25.9 | 59.3 |
| 35 years old | 47.0 | 49.0 | 48.7 | 49.6 | 56.7 | 44.8 | 44.6 | 18.3 | 50.0 |
| 45 years old | 37.6 | 39.4 | 39.1 | 40.1 | 47.1 | 35.5 | 35.3 | 11.0 | 40.9 |
| 55 years old | 28.6 | 30.1 | 29.9 | 31.1 | 37.8 | 26.7 | 26.5 | 5.6 | 32.3 |
| 65 years old | 20.2 | 21.4 | 21.2 | 23.1 | 29.0 | 18.7 | 18.5 | 2.3 | 24.4 |
| 75 years old | 12.8 | 13.7 | 13.5 | 15.8 | 21.5 | 11.6 | 11.4 | 0.4 | 17.4 |
| 85 years old | 7.3 | 7.7 | 7.5 | 9.7 | 16.2 | 6.6 | 6.4 | 0.2 | 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**

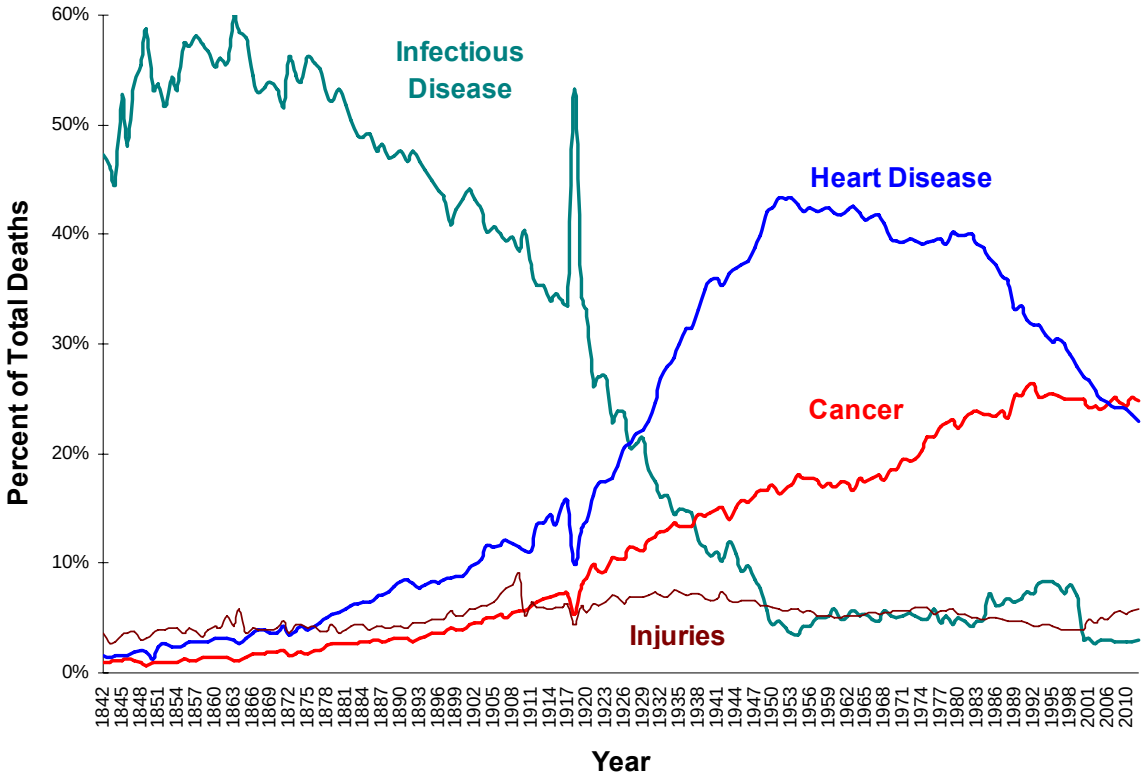
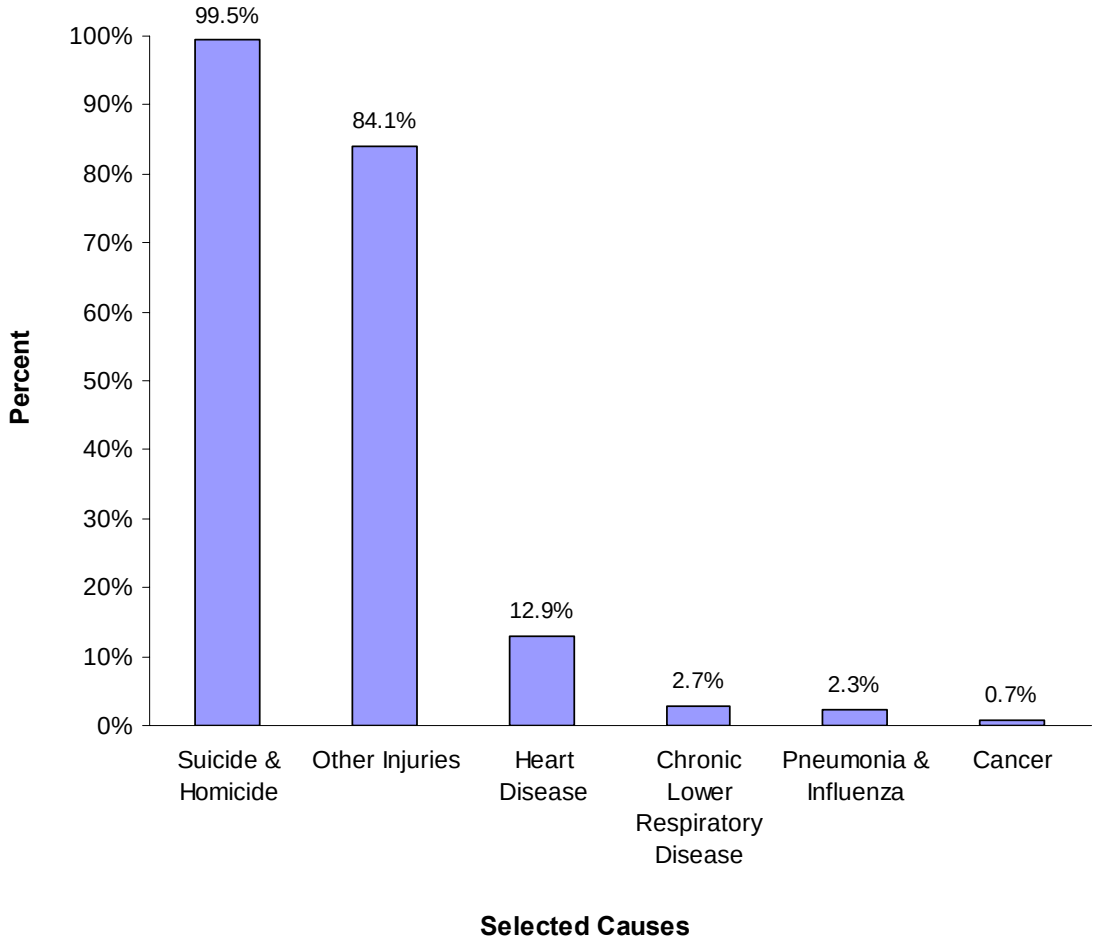


**Table 4. Distribution of Deaths by Place of Occurrence, Massachusetts: 2006-2010**

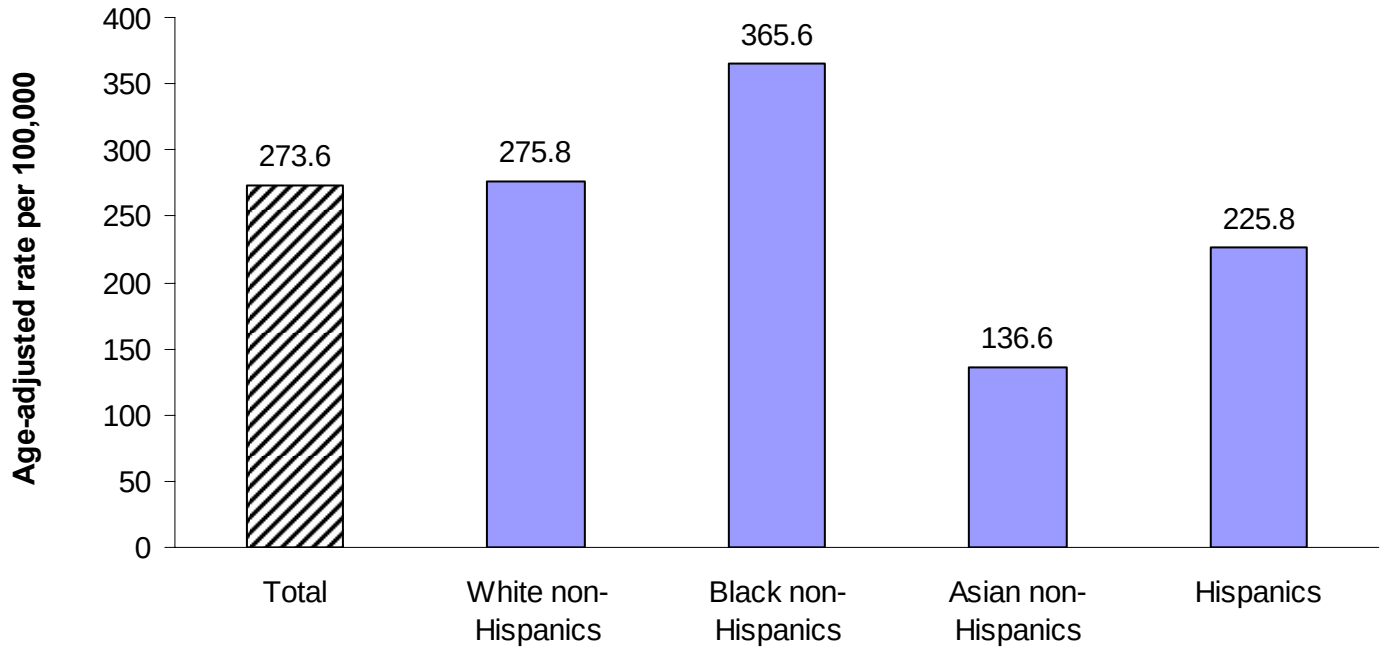
| Type of Place where Death Occurred | 2006 | | 2007 | | 2008 | | 2009 | | 2010 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Hospital (inpatient/outpatient) | 22,512 | 42% | 22,097 | 42% | 22,301 | 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.

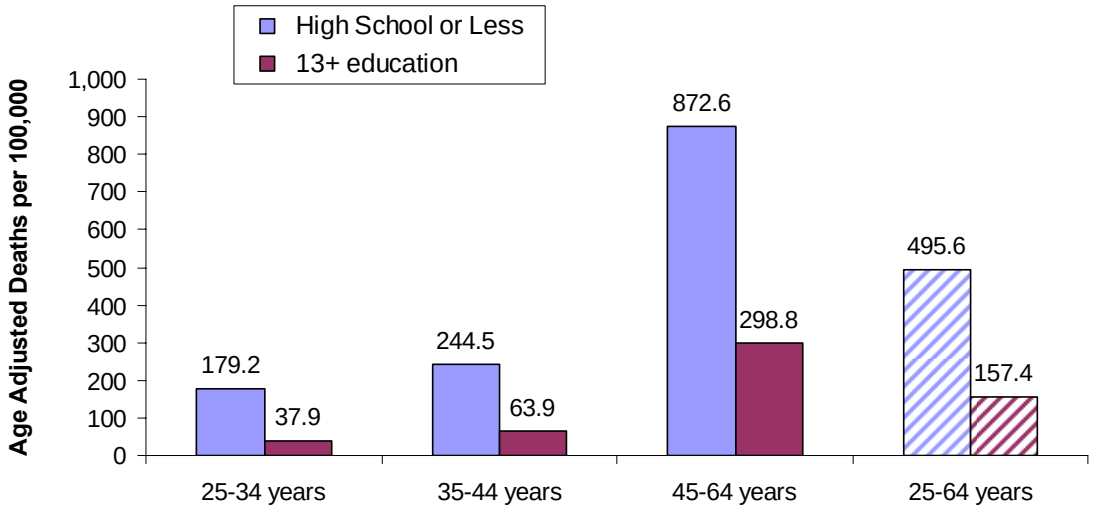
**Figure 6. Premature Mortality Rate[1] (PMR) by Race and Hispanic Ethnicity, Massachusetts: 2010**




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**

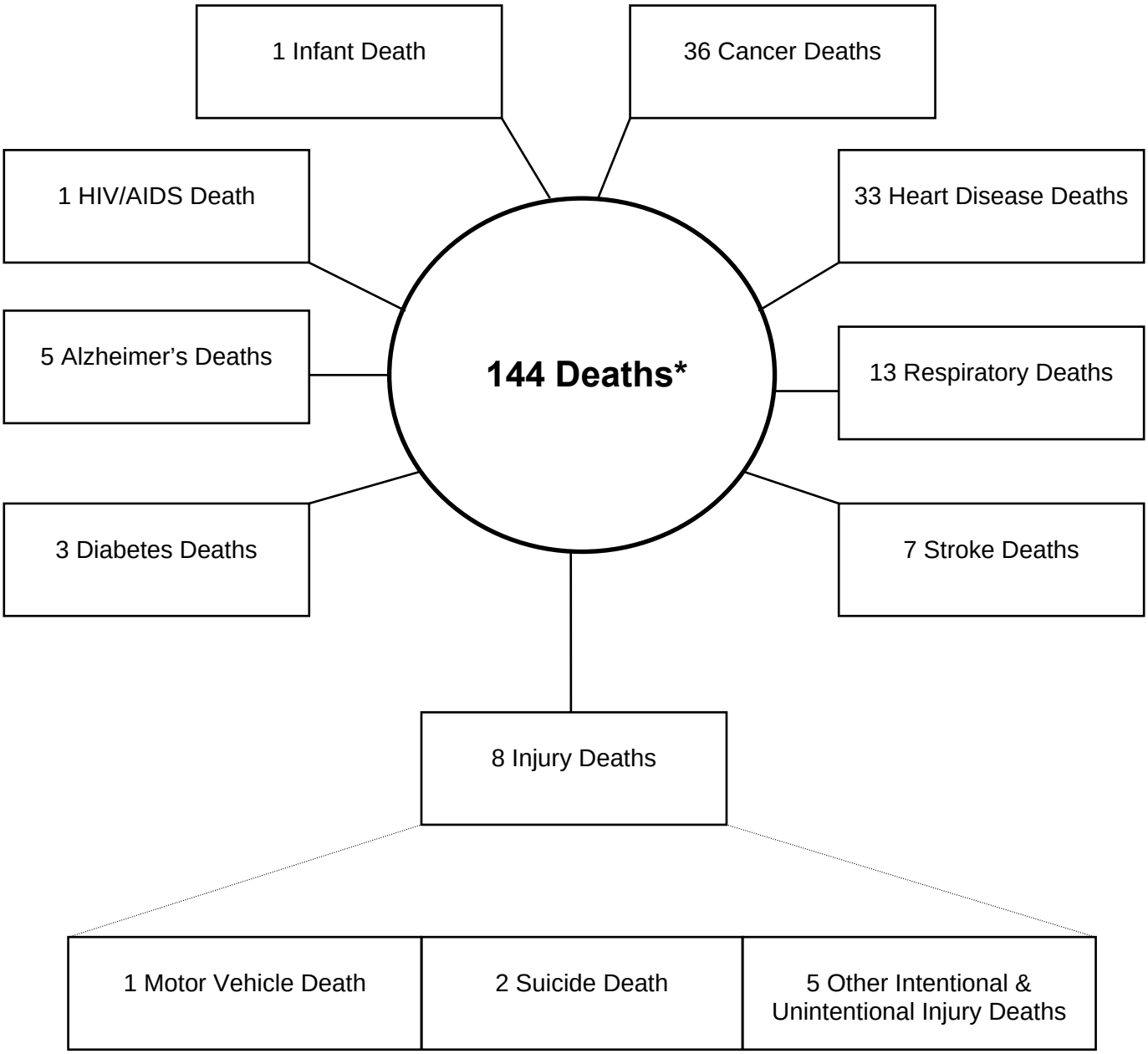
| | Age-Specific Rates | | | Age-Adjusted Rates |
|---|---|---|---|---|
| | 25-34 years | 35-44 years | 45-64 years | 25-64 years |
| **Years of school completed** | | | | |
| High school or less | 179.2 | 244.5 | 872.6 | **495.6** |
| 13+ Education | 37.9 | 63.9 | 298.8 | **157.4** |




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

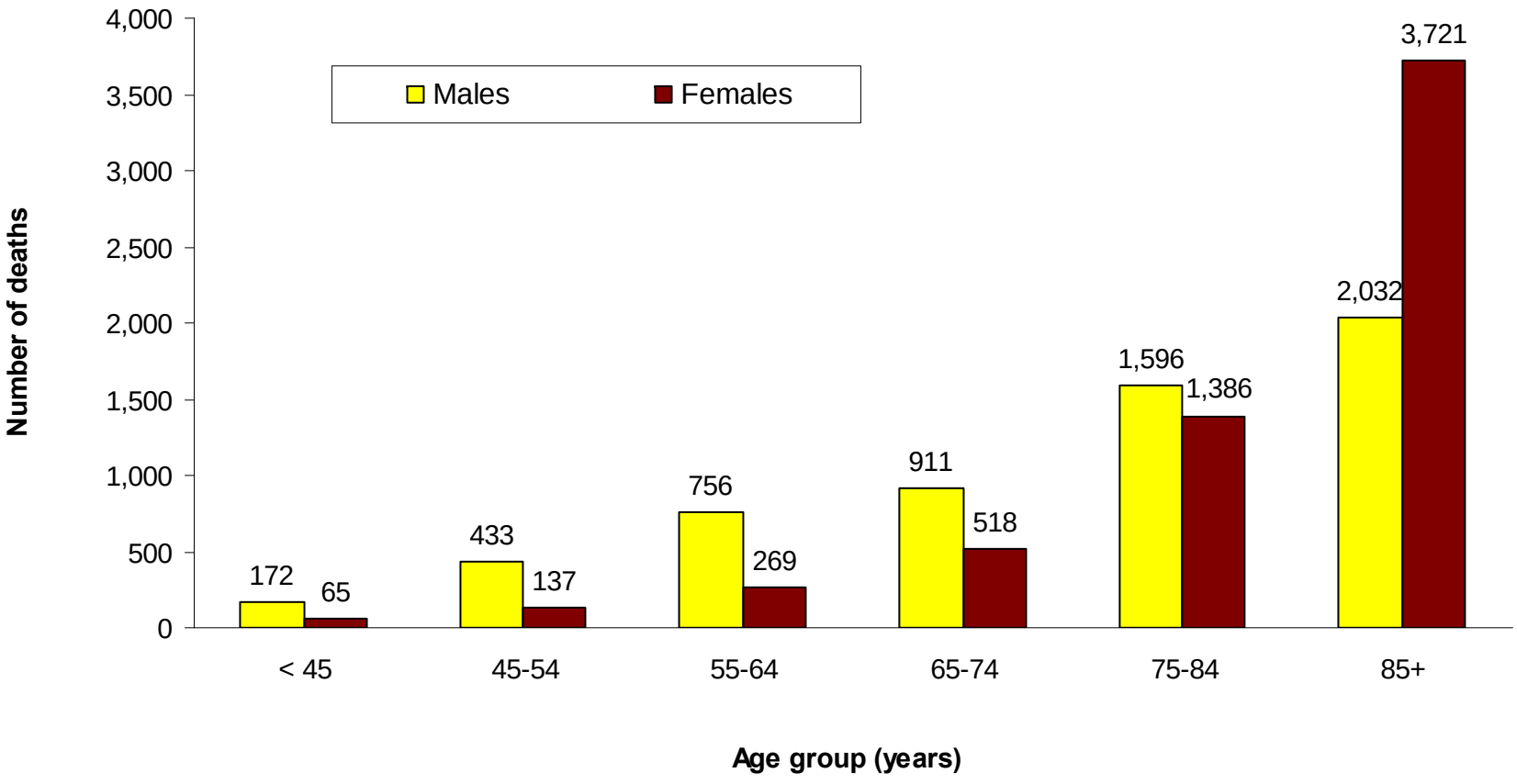
| White non-Hispanic[2] | | | Black non-Hispanic[2] | | | Asian non-Hispanic[2] | | | Hispanic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cause[3]** | **#** | **Rate[4]** | **Cause** | **#** | **Rate** | **Cause** | **#** | **Rate** | **Cause** | **#** | **Rate** |
| **Total** | **48,010** | **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 |

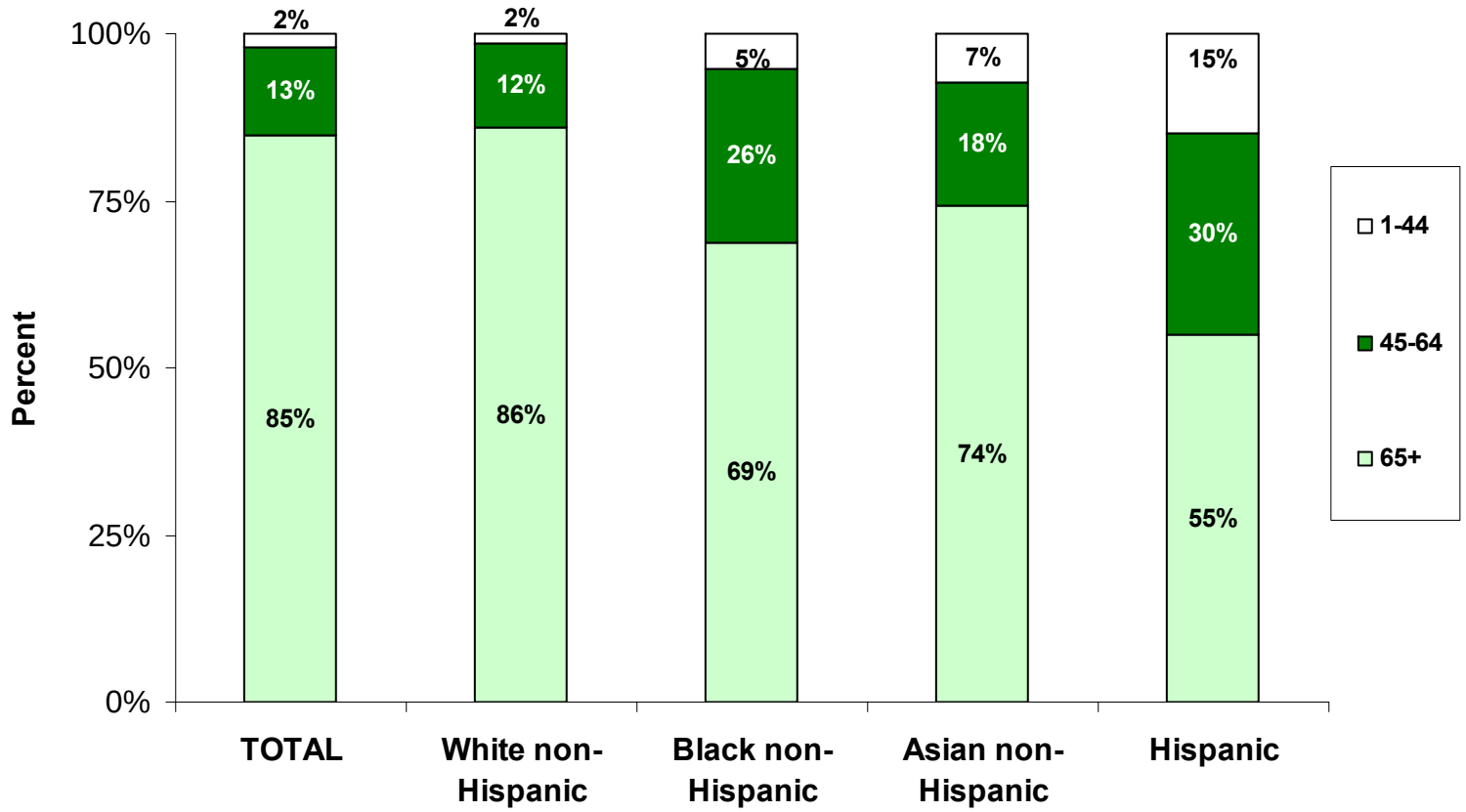
1. Ranking based on number of deaths. 2. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include 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**



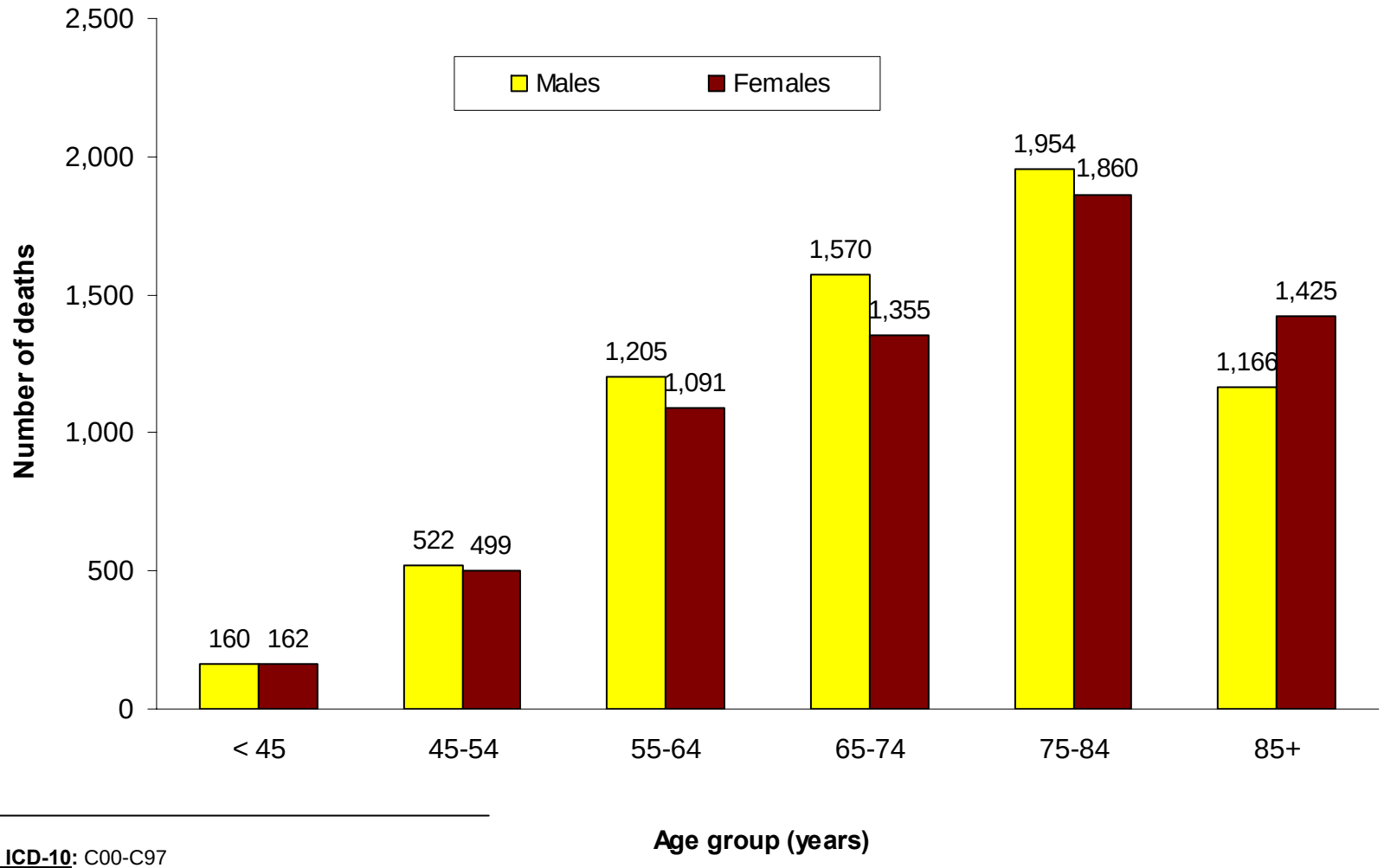

1. **ICD-10:** I00-I09, I11, I13, I20-I51

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



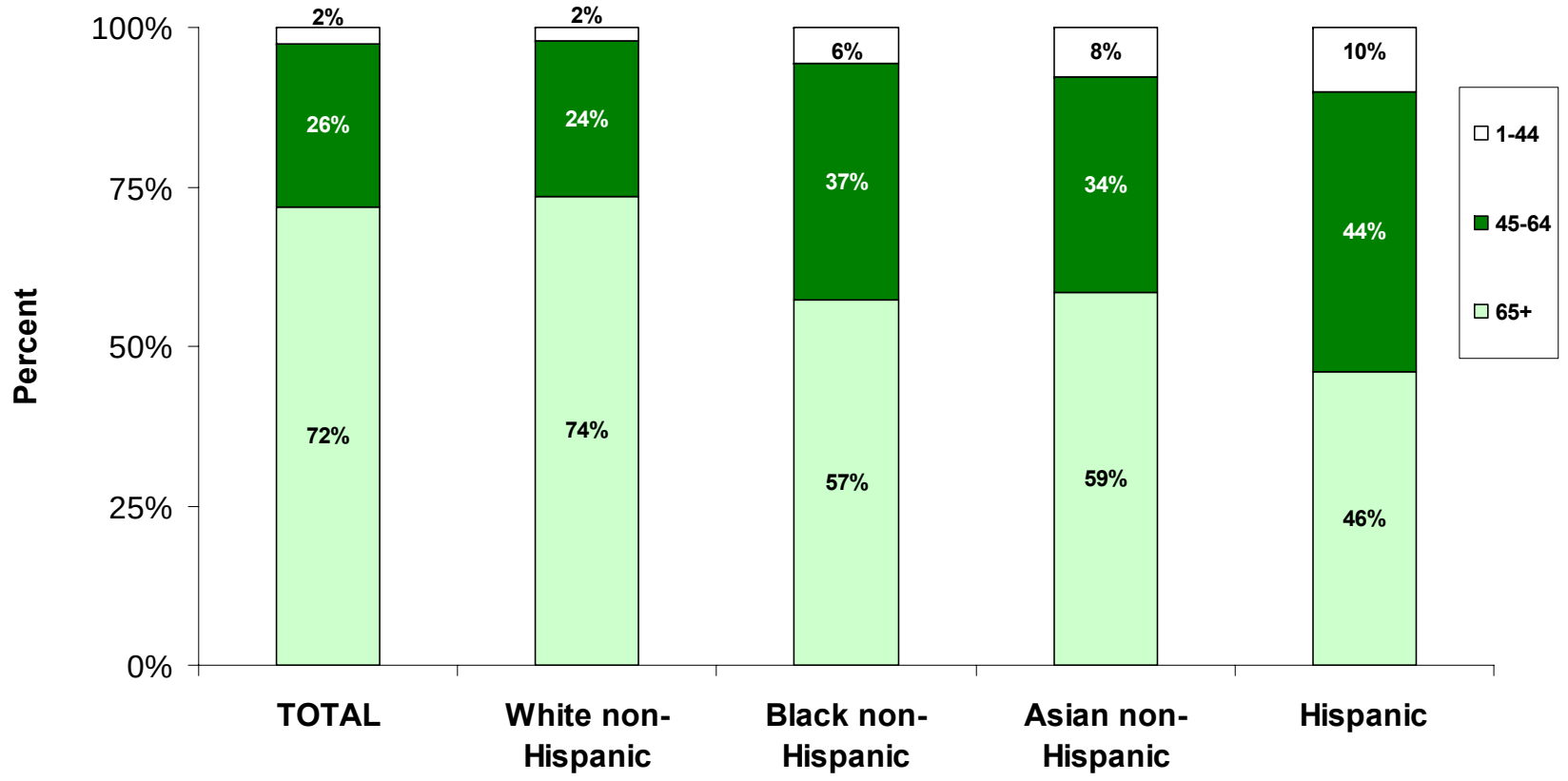

1. **ICD-10:** I00-I09, I11, I13, I20-I51

**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]

| | White non-Hispanic[2] | | | Black non-Hispanic[2] | | |
|---|---|---|---|---|---|---|
| Year | Male | Female | Total | Male | Female | 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 |

| | Asian non-Hispanic[2] | | | Hispanic | | |
|---|---|---|---|---|---|---|
| Year | Male | Female | Total | Male | Female | 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]

| | White non-Hispanic[2] | | | Black non-Hispanic[2] | | |
|---|---|---|---|---|---|---|
| Year | Male | Female | Total | Male | Female | 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 |

| | Asian non-Hispanic[2] | | | Hispanic | | |
|---|---|---|---|---|---|---|
| Year | Male | Female | Total | Male | Female | 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** |

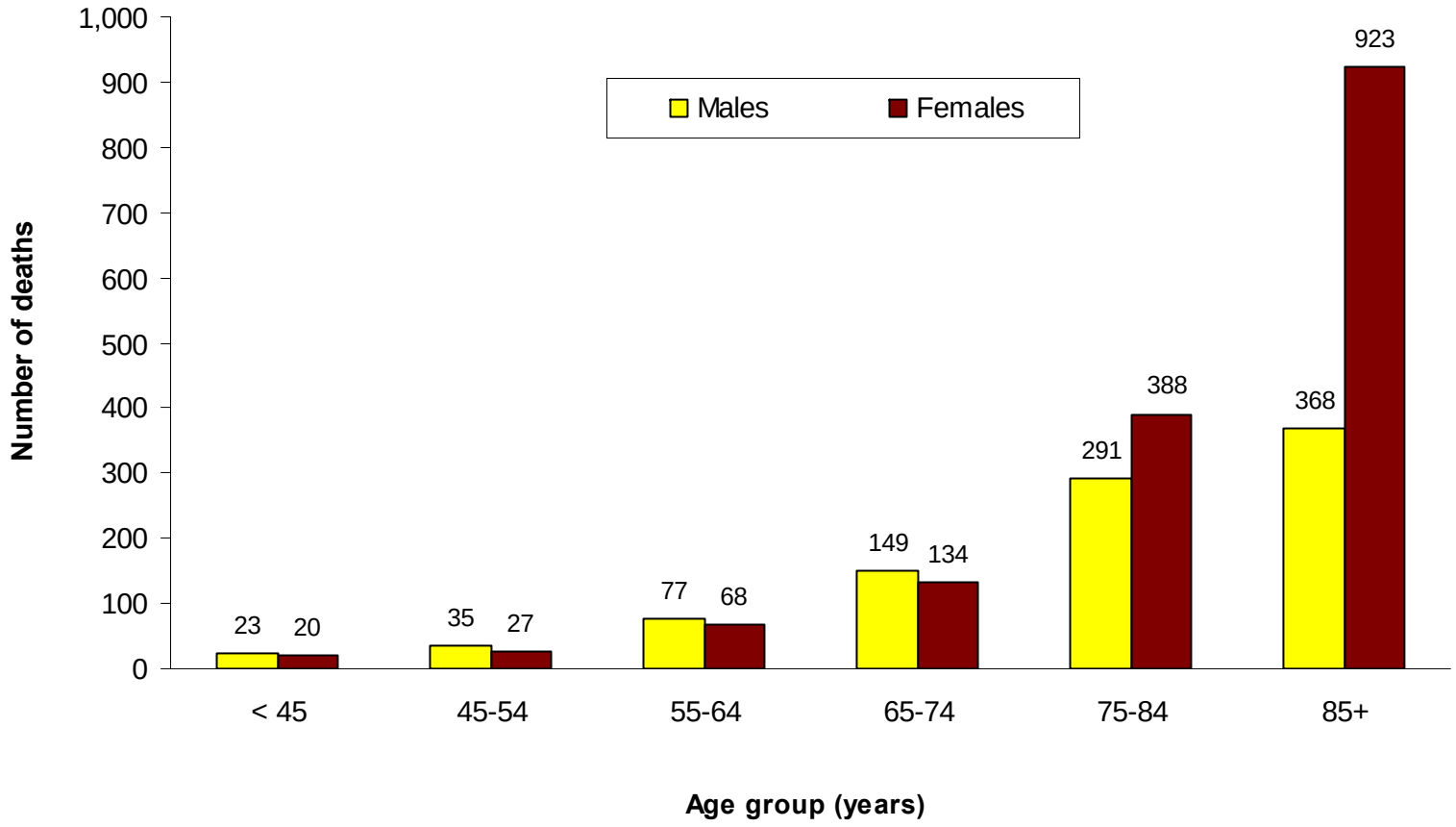
1. Race and ethnicity data in this table are presented as mutually exclusive categories. Persons of Hispanic ethnicity are not included in a race category. Please see Table A1 in the Appendix for death data by race according to Federal definitions, which include persons of Hispanic ethnicity in a race 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 |

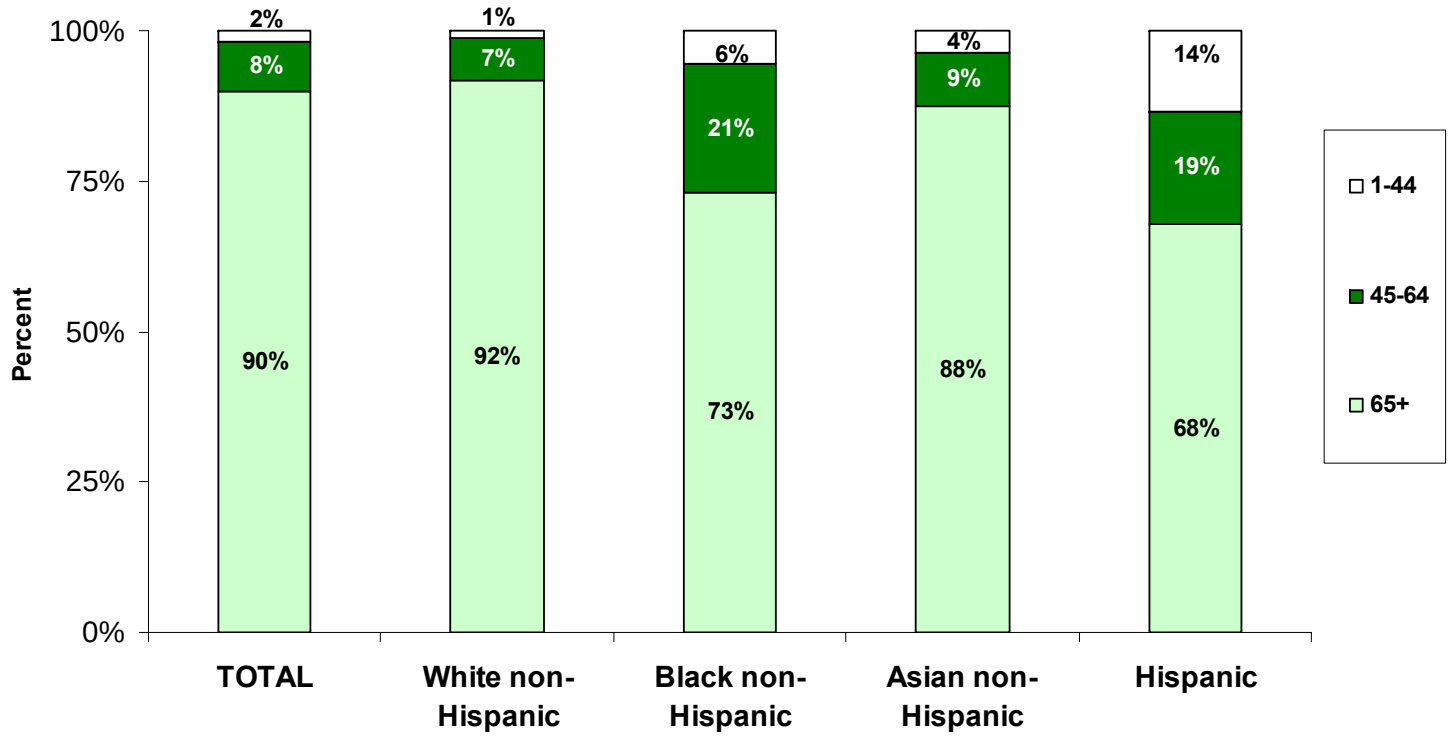
1. All rates are age-adjusted to the 2000 US Standard Population. Rates are per 100,000 population.

**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

| | White non-Hispanic[2] | | | Black non-Hispanic[2] | | |
|---|---|---|---|---|---|---|
| Year | 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 |

| | Asian non-Hispanic[2] | | | Hispanic | | |
|---|---|---|---|---|---|---|
| Year | 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**

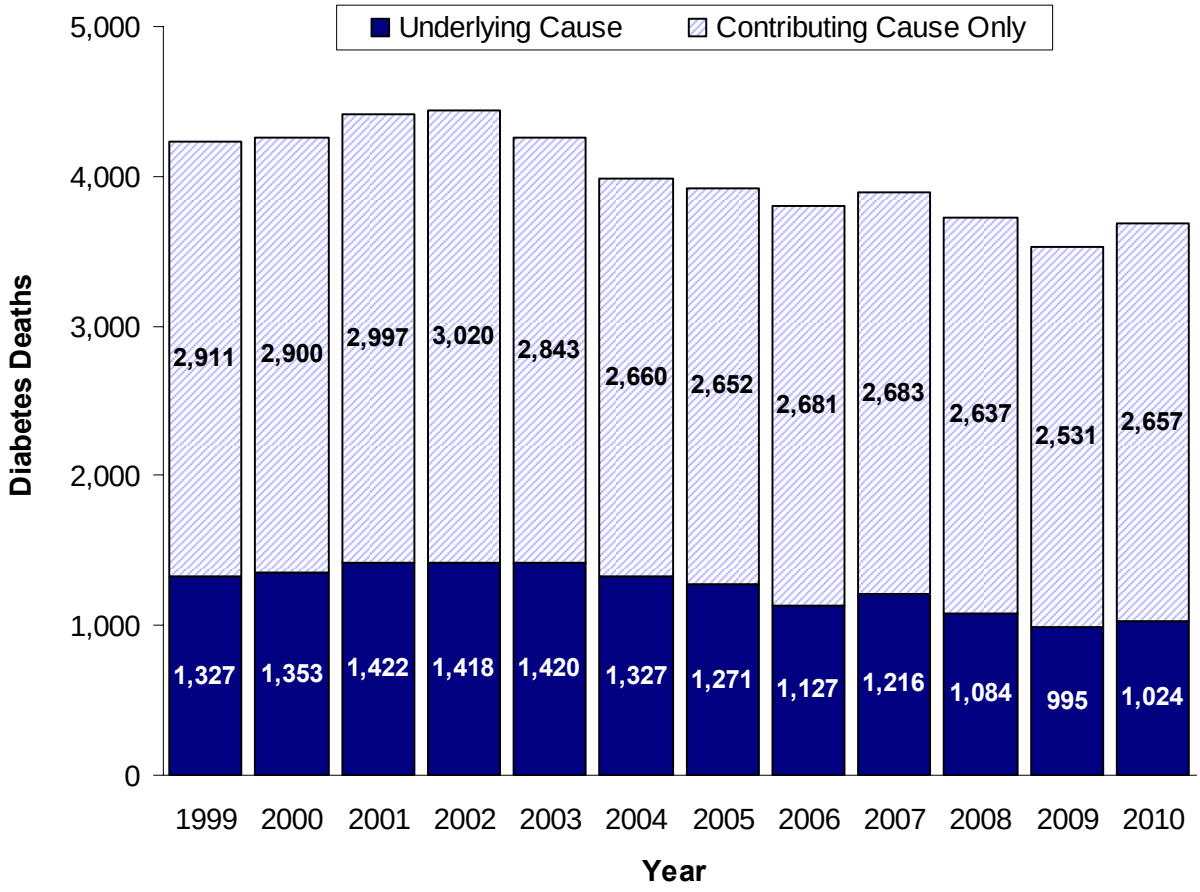



**Table 16. Diabetes[1] Deaths by Gender, Massachusetts: 2010**

| | 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*** |

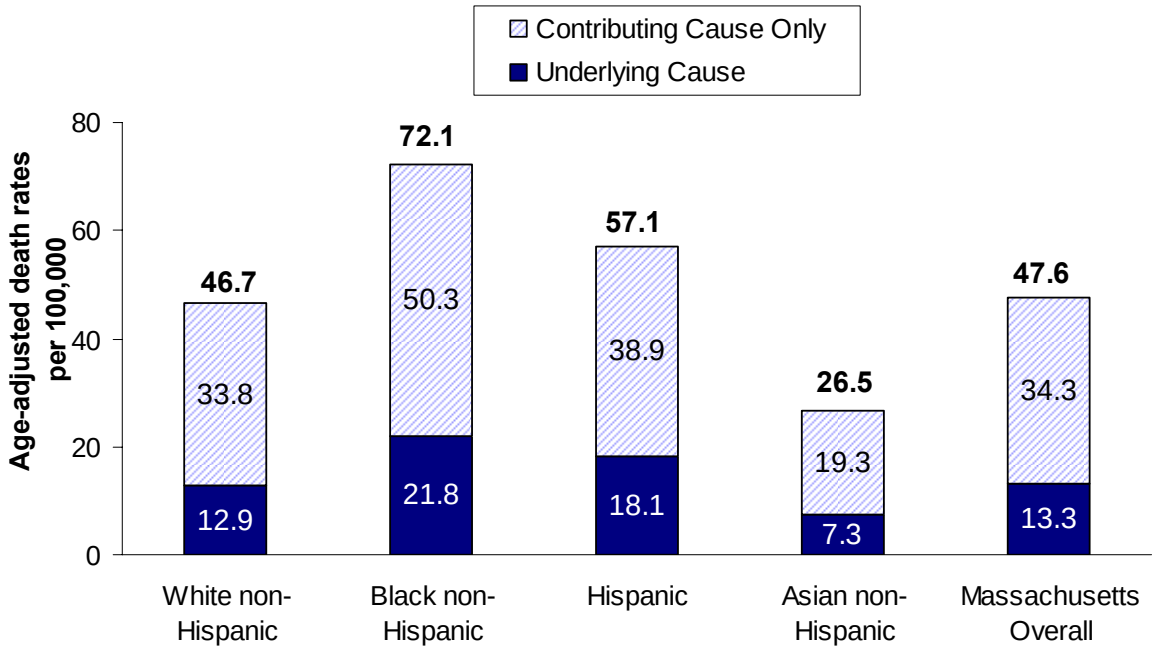
1. **ICD-10:** E10-E14

**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**

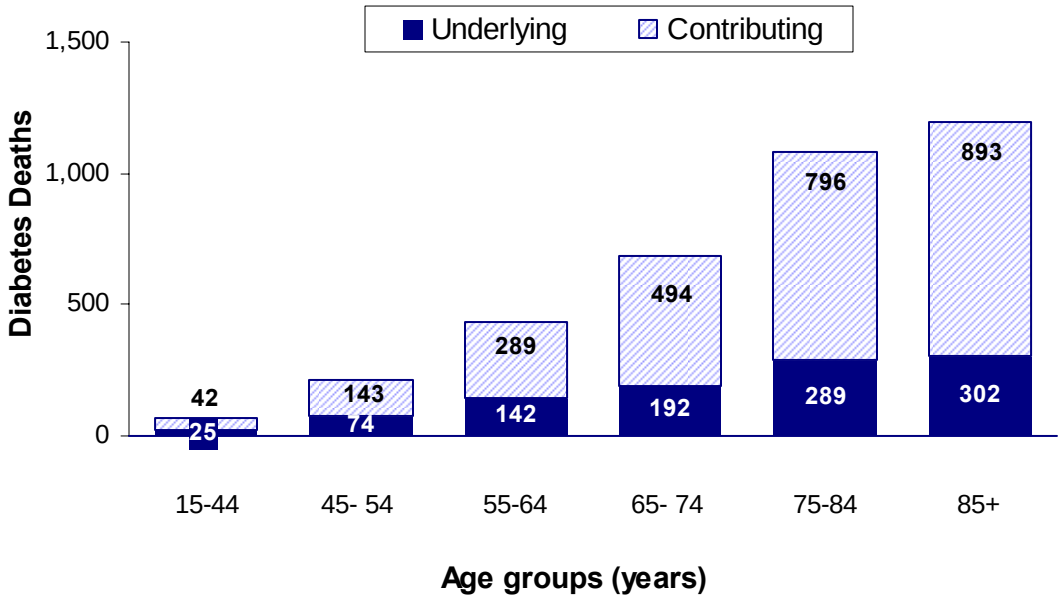
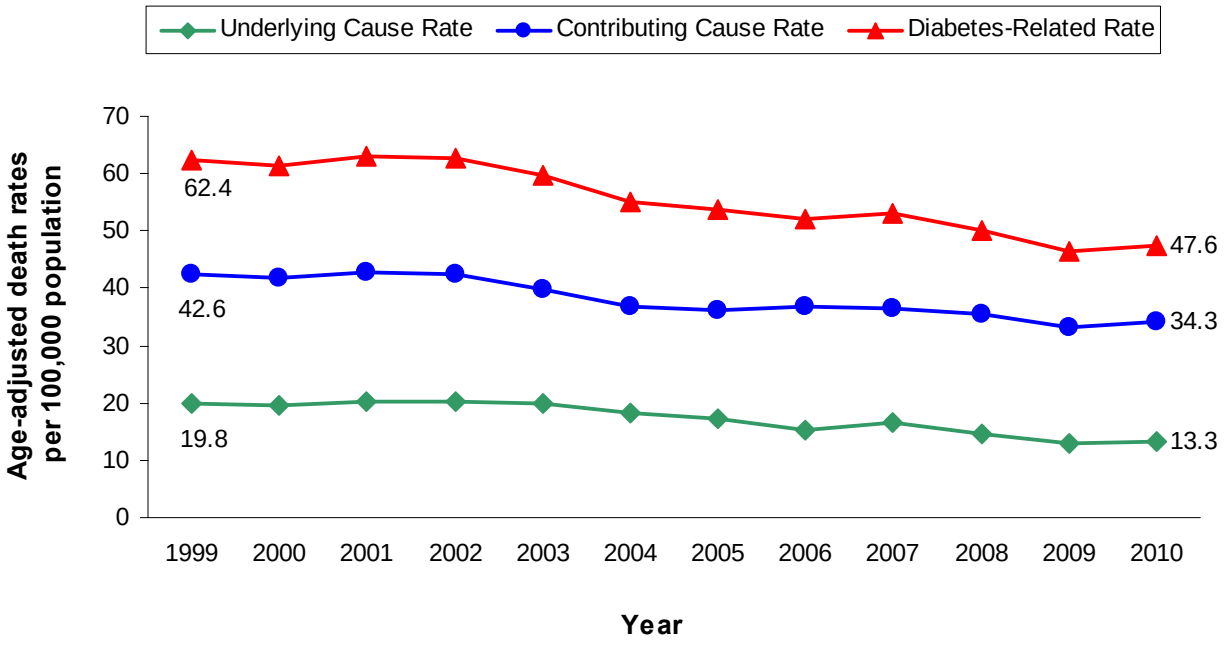



**Figure 17. Diabetes[1] Death Rates[2], Massachusetts: 1999-2010**




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

| | All Injury Deaths[1] | | Intent | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Unintentional | | Intentional | | | | Undetermined | | Other[3] | |
| | Total | | "Accidents" | | Suicide | | Homicide | | | | Legal Intervention | |
| **Method** | **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

| Year | | 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] |
| 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 Comparability Unmodified | <15 Comparability Modified[2] | 15-24 Comparability Unmodified | 15-24 Comparability Modified[2] | 25-34 Comparability Unmodified | 25-34 Comparability Modified[2] | 35-44 Comparability Unmodified | 35-44 Comparability Modified[2] | 45+ Comparability Unmodified | 45+ 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 # | White non-Hispanic % | Black non-Hispanic # | Black non-Hispanic % | Asian non-Hispanic # | Asian non-Hispanic % | 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**

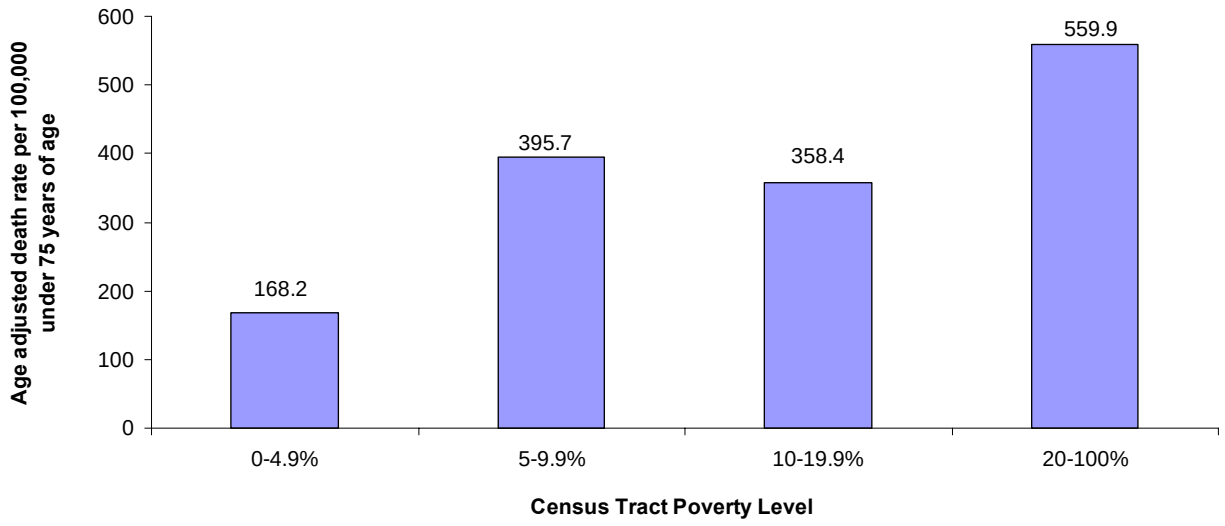



**Figure 19. Infant Mortality rates adjusted by poverty level, Massachusetts: 2010**

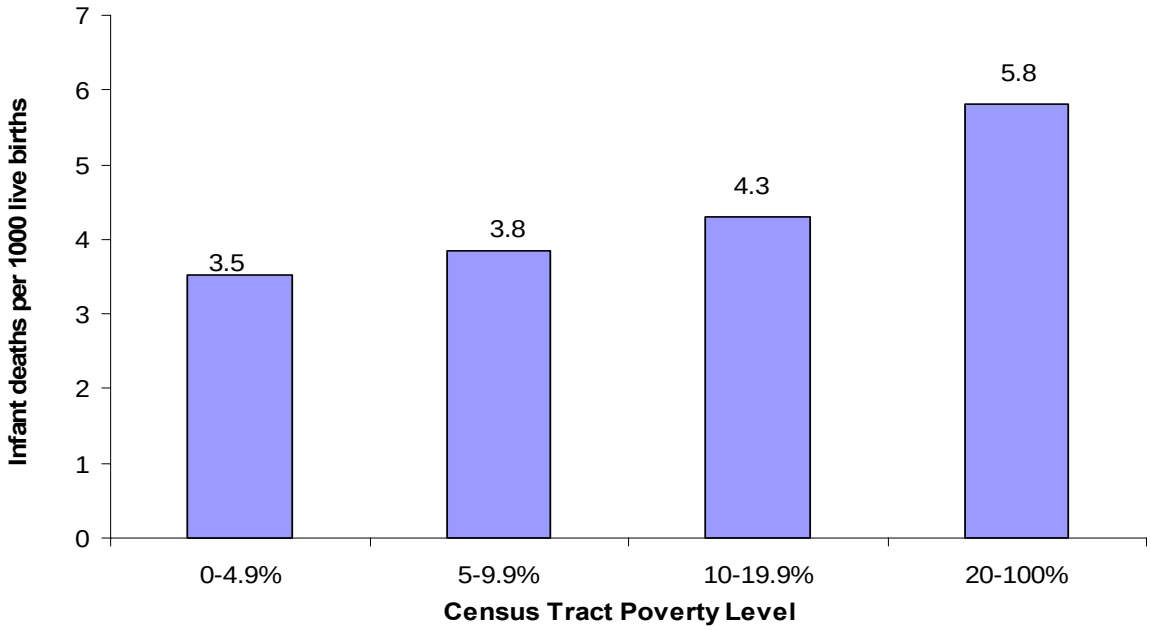


**Figure 20. Percent of Deaths Amenable to Health Care, Massachusetts: 2010**

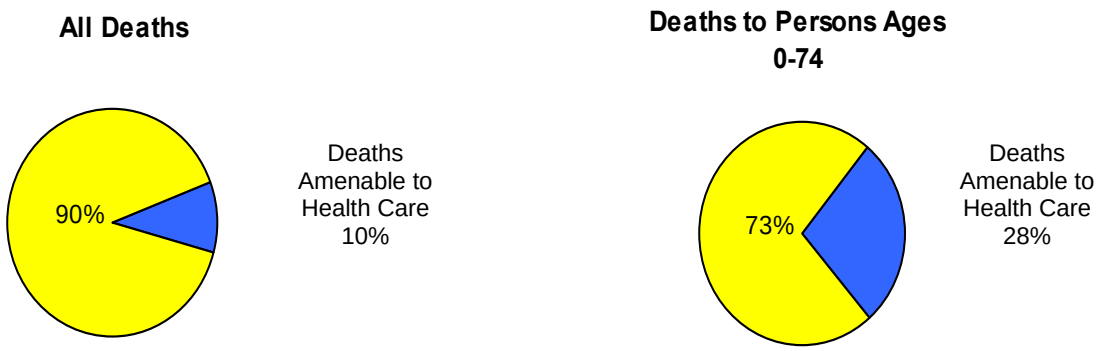



**Figure 21. Amenable Mortality by race and Hispanic ethnicity, Massachusetts: 2000 and 2010**

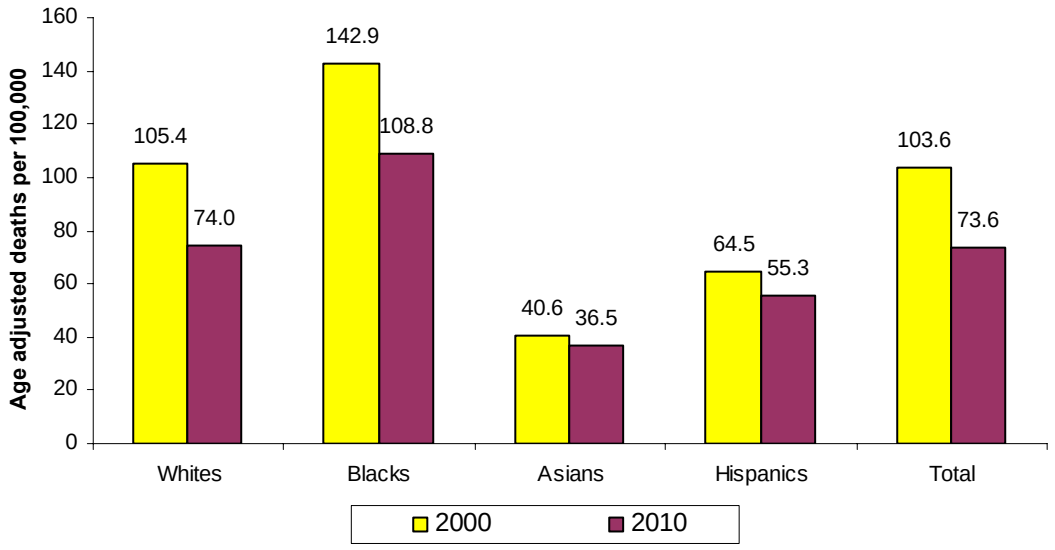
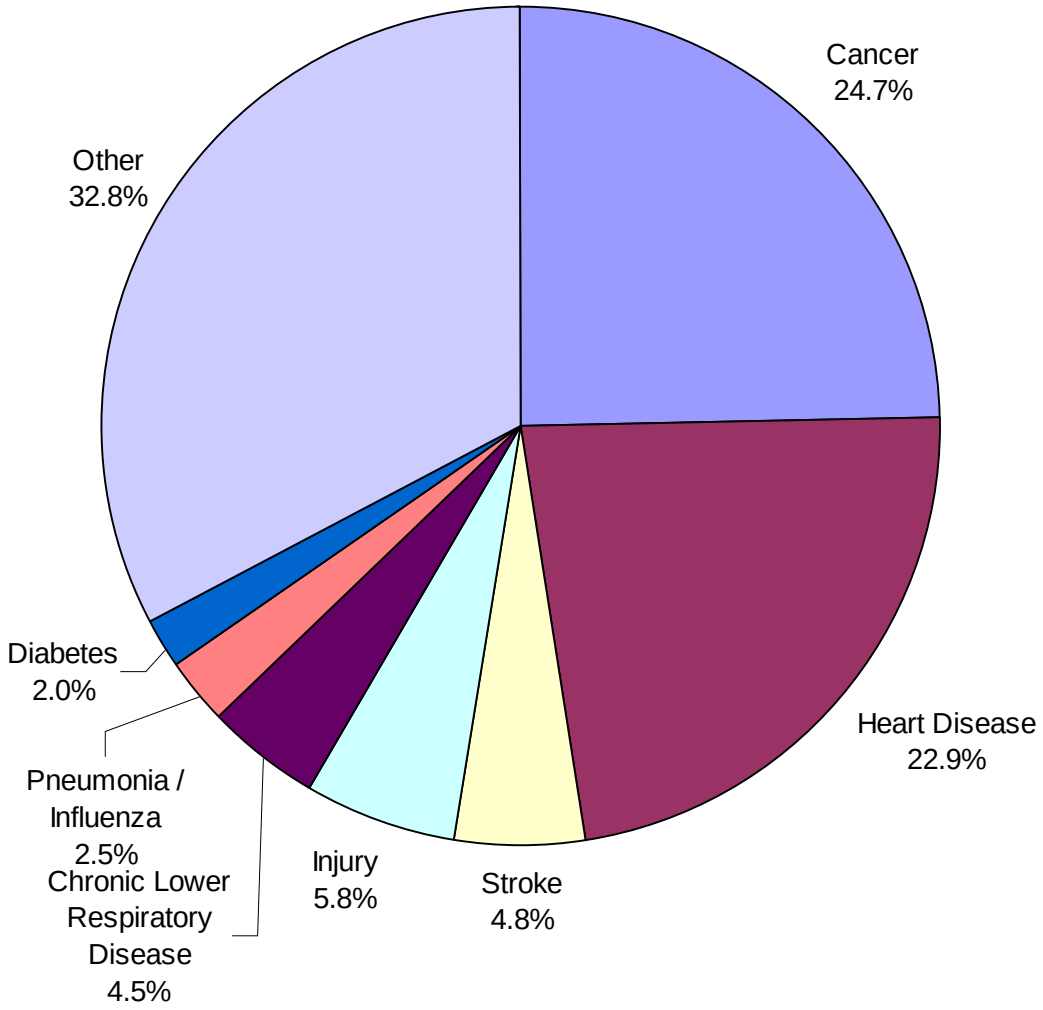


**Table 37. Rank by Potential Years of Life Lost (PYLL), Massachusetts: 2010**

| 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**



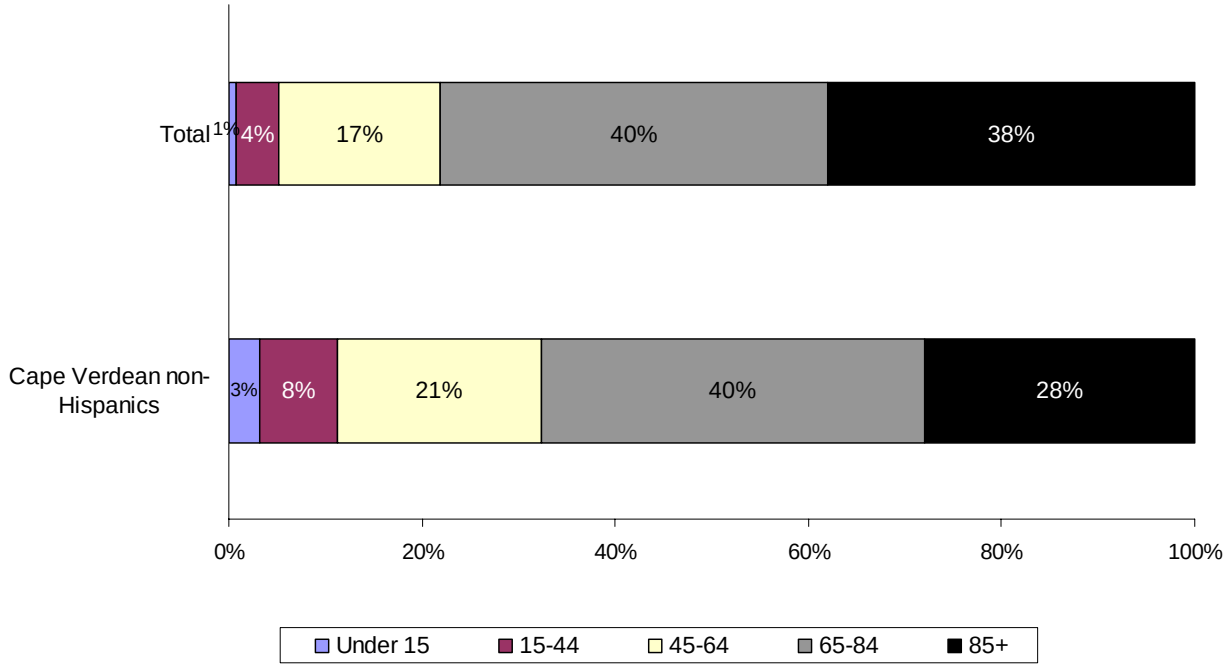

1. Total Number of Deaths =52,420. 2. Causes of Death are classified according to ICD-10

## 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 # | Total Rate[3] | White non-Hispanic[1] # | White non-Hispanic[1] Rate | Black non-Hispanic[1] # | Black non-Hispanic[1] Rate | Asian non-Hispanic[1] # | Asian non-Hispanic[1] Rate | Hispanic # | Hispanic 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.

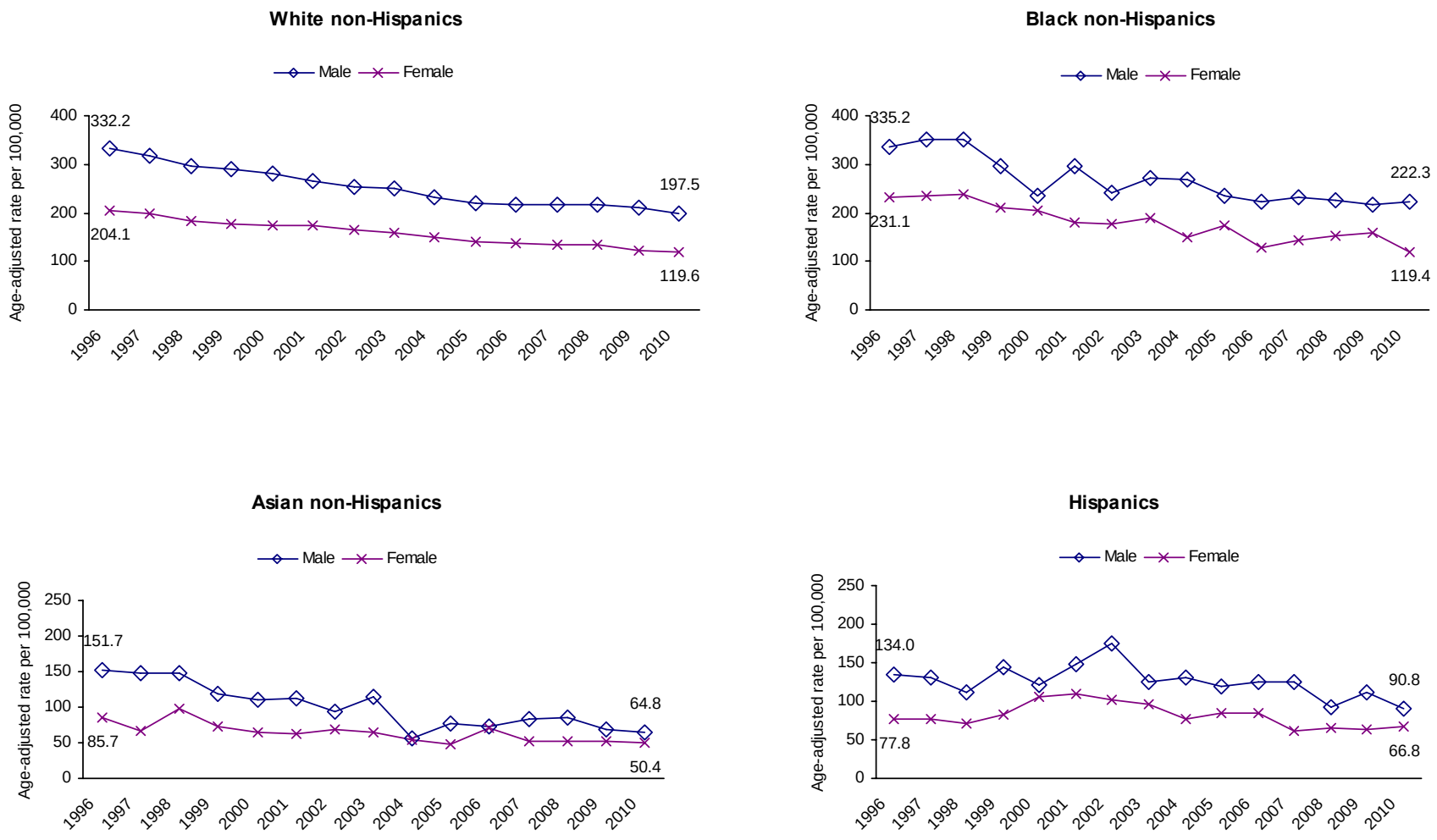
## Table 40. Number of Deaths for Leading Causes of Death[1] by Hispanic Ethnicity, Massachusetts: 2010

| **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

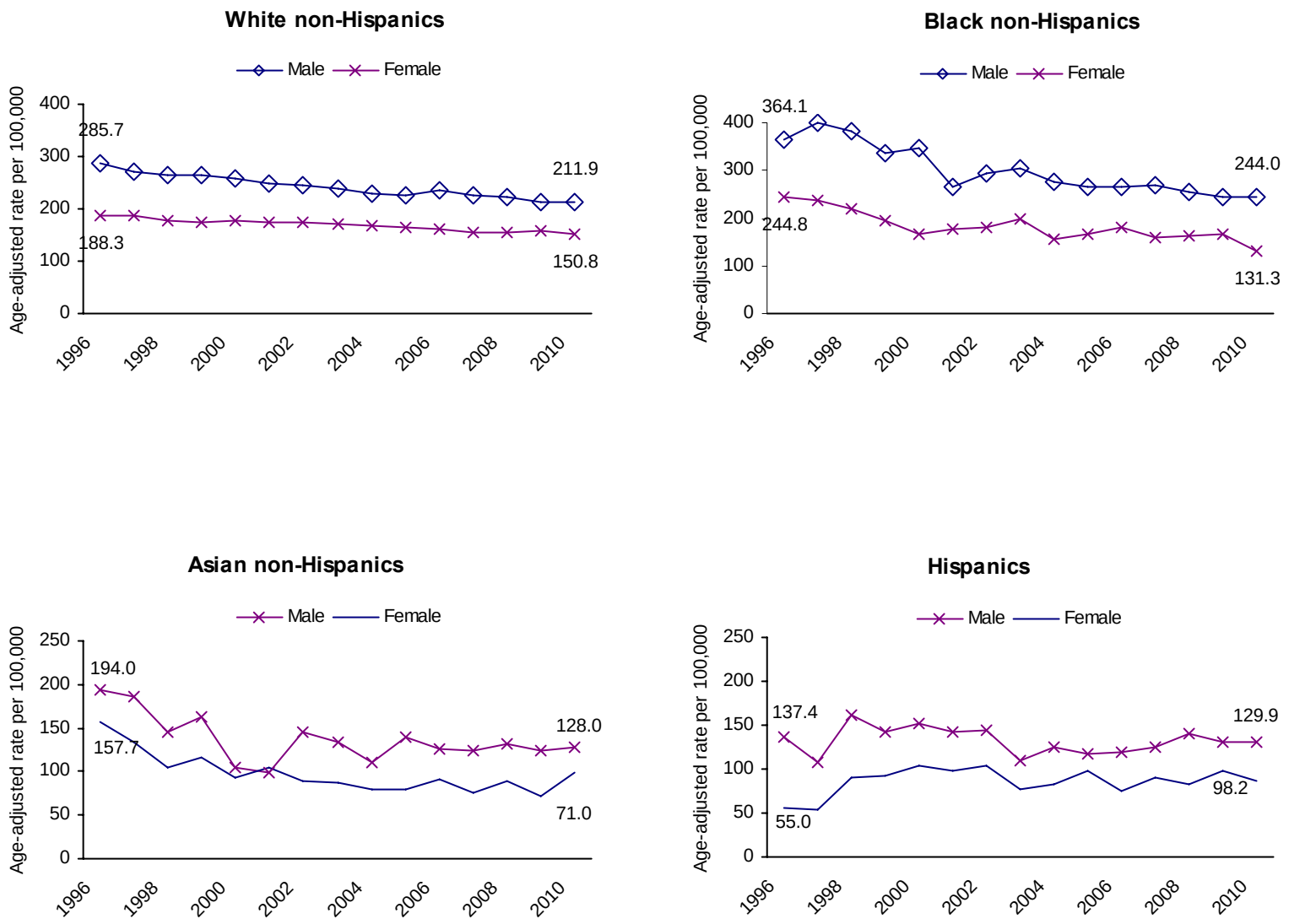
(For 1996-1998 the comparability modified rates were used)




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**

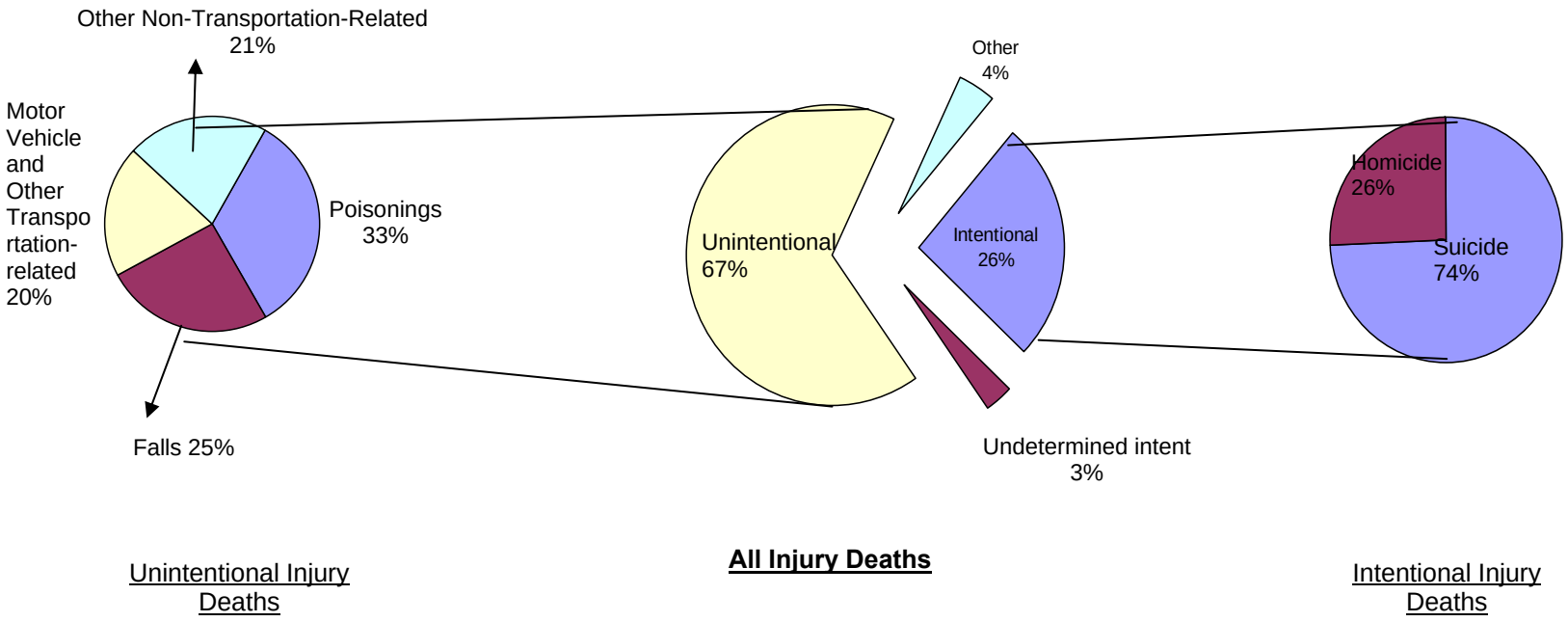


**Table 43. HIV/AIDS[1] Deaths by Race, Hispanic Ethnicity, and Gender of Persons Ages 25-44, Massachusetts: 1999-2010**

| 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 |

## 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] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

## 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] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

## 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] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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: 480-487 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.

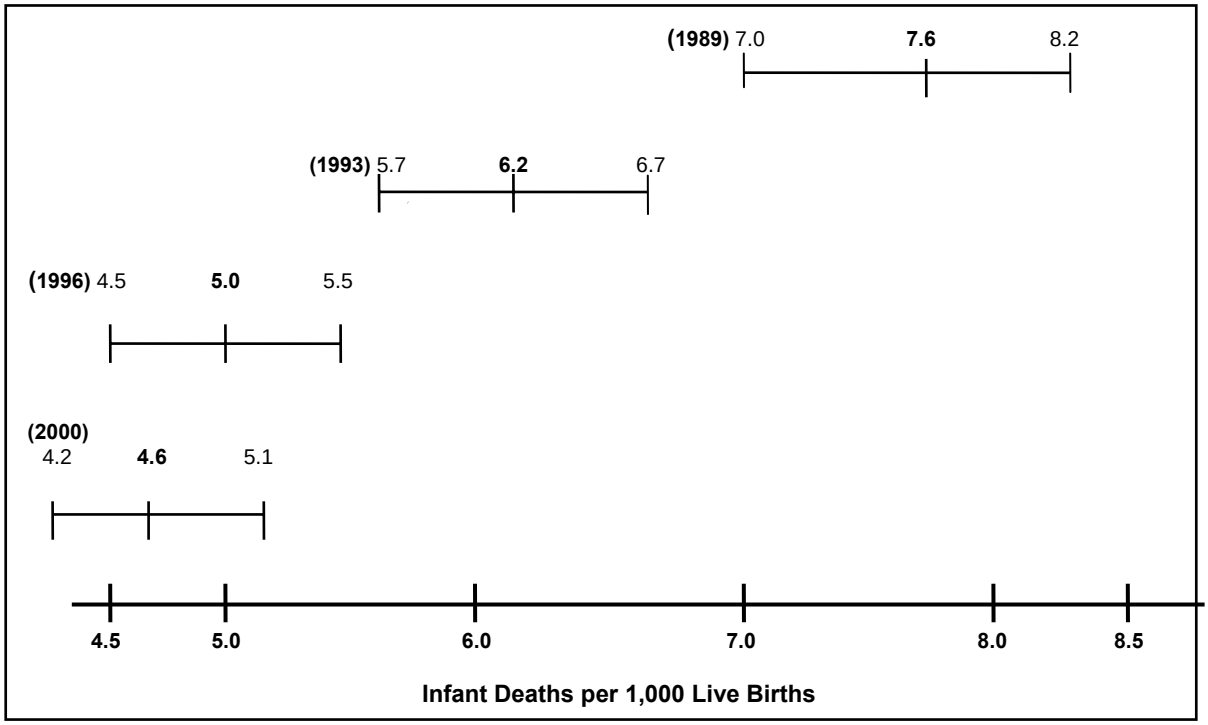
When two statistics are determined to differ significantly, they are referred to in the text with language expressing differences, such as, “higher” and “lower”, or “increased” and “decreased”. Otherwise, differences that are not significant are reported as having “no change” or “no statistical difference.”

## 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--429 |
| **Stroke (Cerebrovascular disease)** | I60-I69 | 430--438 |
| **Influenza and pneumonia** | J10-J18 | 480--487 |
| **Chronic lower respiratory diseases**[1] | J40-J47 | 490--496 |
| **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 |
| Unintentional non-transport injuries | W00-X59, Y86 | E850-E869, E880-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 |
|---|---|---|---|
| Abington | Plymouth | 22 | 15,985 |
| Acton | Middlesex | 15 | 21,924 |
| Acushnet | Bristol | 26 | 10,303 |
| Adams | Berkshire | 1 | 8,485 |
| Agawam | Hampden | 4 | 28,438 |
| Alford | Berkshire | 1 | 494 |
| Amesbury | Essex | 12 | 16,283 |
| Amherst | Hampshire | 3 | 37,819 |
| Andover | Essex | 11 | 33,201 |
| Aquinnah (Gay Head) | Dukes | 27 | 311 |
| Arlington | Middlesex | 17 | 42,844 |
| Ashburnham | Worcester | 9 | 6,081 |
| Ashby | Middlesex | 9 | 3,074 |
| Ashfield | Franklin | 2 | 1,737 |
| Ashland | Middlesex | 7 | 16,593 |
| Athol | Worcester | 2 | 11,584 |
| Attleboro | Bristol | 24 | 43,593 |
| Auburn | Worcester | 8 | 16,188 |
| Avon | Norfolk | 22 | 4,356 |
| Ayer | Middlesex | 9 | 7,427 |
| Barnstable | Barnstable | 27 | 45,193 |
| Barre | Worcester | 9 | 5,398 |
| Becket | Berkshire | 1 | 1,779 |
| Bedford | Middlesex | 15 | 13,320 |
| Belchertown | Hampshire | 3 | 14,649 |
| Bellingham | Norfolk | 6 | 16,332 |
| Belmont | Middlesex | 17 | 24,729 |
| Berkley | Bristol | 24 | 6,411 |
| Berlin | Worcester | 9 | 2,866 |
| Bernardston | Franklin | 2 | 2,129 |
| Beverly | Essex | 13 | 39,502 |
| Billerica | Middlesex | 10 | 40,243 |
| Blackstone | Worcester | 6 | 9,026 |
| Blandford | Hampden | 4 | 1,233 |
| Bolton | Worcester | 9 | 4,897 |
| Boston | Suffolk | 19 | 617,594 |
| Bourne | Barnstable | 27 | 19,754 |
| Boxborough | Middlesex | 15 | 4,996 |
| Boxford | Essex | 12 | 7,965 |
| Boylston | Worcester | 8 | 4,355 |
| Braintree | Norfolk | 20 | 35,744 |
| Brewster | Barnstable | 27 | 9,820 |
| Bridgewater | Plymouth | 22 | 26,563 |
| Brimfield | Hampden | 5 | 3,609 |
| Brockton | Plymouth | 22 | 93,810 |
| Brookfield | Worcester | 5 | 3,390 |
| Brookline | Norfolk | 19 | 58,732 |
| Buckland | Franklin | 2 | 1,902 |
| Burlington | Middlesex | 15 | 24,498 |
| Cambridge | Middlesex | 17 | 105,162 |
| Canton | Norfolk | 20 | 21,561 |
| Carlisle | Middlesex | 15 | 4,852 |
| Carver | Plymouth | 23 | 11,509 |
| Charlemont | Franklin | 2 | 1,266 |
| Charlton | Worcester | 5 | 12,981 |
| Chatham | Barnstable | 27 | 6,125 |
| Chelmsford | Middlesex | 10 | 33,802 |
| Chelsea | Suffolk | 19 | 35,177 |
| Cheshire | Berkshire | 1 | 3,235 |
| Chester | Hampden | 21 | 1,337 |
| Chesterfield | Hampshire | 3 | 1,222 |
| Chicopee | Hampden | 21 | 55,298 |
| Chilmark | Dukes | 27 | 866 |
| Clarksburg | Berkshire | 1 | 1,702 |
| Clinton | Worcester | 9 | 13,606 |
| Cohasset | Norfolk | 20 | 7,542 |
| Colrain | Franklin | 2 | 1,671 |
| Concord | Middlesex | 15 | 17,668 |
| Conway | Franklin | 2 | 1,897 |
| Cummington | Hampshire | 3 | 872 |
| Dalton | Berkshire | 1 | 6,756 |
| Danvers | Essex | 14 | 26,493 |
| Dartmouth | Bristol | 26 | 34,032 |
| Dedham | Norfolk | 18 | 24,729 |
| Deerfield | Franklin | 2 | 5,125 |
| Dennis | Barnstable | 27 | 14,207 |
| Dighton | Bristol | 24 | 7,086 |
| Douglas | Worcester | 6 | 8,471 |
| Dover | Norfolk | 18 | 5,589 |
| Dracut | Middlesex | 10 | 29,457 |
| Dudley | Worcester | 5 | 11,390 |
| Dunstable | Middlesex | 10 | 3,179 |
| Duxbury | Plymouth | 23 | 15,059 |
| East Bridgewater | Plymouth | 22 | 13,794 |
| East Brookfield | Worcester | 5 | 2,183 |
| East Longmeadow | Hampden | 4 | 15,720 |
| Eastham | Barnstable | 27 | 4,956 |
| Easthampton | Hampshire | 3 | 16,053 |
| Easton | Bristol | 22 | 23,112 |
| Edgartown | Dukes | 27 | 4,067 |
| Egremont | Berkshire | 1 | 1,225 |
| Erving | Franklin | 2 | 1,800 |
| Essex | Essex | 13 | 3,504 |
| Everett | Middlesex | 16 | 41,667 |
| Fairhaven | Bristol | 26 | 15,873 |
| Fall River | Bristol | 25 | 88,857 |
| Falmouth | Barnstable | 27 | 31,531 |
| Fitchburg | Worcester | 9 | 40,318 |
| Florida | Berkshire | 1 | 752 |
| Foxborough | Norfolk | 7 | 16,865 |
| Framingham | Middlesex | 7 | 68,318 |
| Franklin | Norfolk | 6 | 31,635 |
| Freetown | Bristol | 26 | 8,870 |
| Gardner | Worcester | 9 | 20,228 |
| Georgetown | Essex | 12 | 8,183 |
| Gill | Franklin | 2 | 1,500 |
| Gloucester | Essex | 13 | 28,789 |
| Goshen | Hampshire | 3 | 1,054 |
| Gosnold | Dukes | 27 | 75 |
| Grafton | Worcester | 8 | 17,765 |
| Granby | Hampshire | 3 | 6,240 |
| Granville | Hampden | 4 | 1,566 |
| Great Barrington | Berkshire | 1 | 7,104 |
| Greenfield | Franklin | 2 | 17,456 |
| Groton | Middlesex | 9 | 10,646 |
| Groveland | Essex | 12 | 6,459 |
| Hadley | Hampshire | 3 | 5,250 |
| Halifax | Plymouth | 23 | 7,518 |
| Hamilton | Essex | 13 | 7,764 |
| Hampden | Hampden | 4 | 5,139 |
| Hancock | Berkshire | 1 | 717 |
| Hanover | Plymouth | 23 | 13,879 |
| Hanson | Plymouth | 23 | 10,209 |
| Hardwick | Worcester | 9 | 2,990 |
| Harvard | Worcester | 9 | 6,520 |
| Harwich | Barnstable | 27 | 12,243 |
| Hatfield | Hampshire | 3 | 3,279 |
| Haverhill | Essex | 12 | 60,879 |
| Hawley | Franklin | 2 | 337 |
| Heath | Franklin | 2 | 706 |
| Hingham | Plymouth | 20 | 22,157 |
| Hinsdale | Berkshire | 1 | 2,032 |
| Holbrook | Norfolk | 22 | 10,791 |
| 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

OR USE BY
IEDICAL EXAMINERS
NLY

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

OCME CASE NUMBER | REGISTERED NUMBER | STATE USE ONLY

ATE USE
NLY

0 HOSP

TYPE

HISP/RACE

0 AGE

5 RES

15 OOS

23 DISP

31/32 AUT

34 MANR

35c WORK

35f PLACE

36-37 CERT

40a PRON

**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 IFUS 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

38 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

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

**PERMANENT BLACK INK ONLY**

PRONOUNCEMENT FORM ON FILE ☐

**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?** |
| **What tables and charts do you find least useful?** |
| **Are there other tables and charts that you would like added to this publication? If yes, please describe them in detail.** |
| **Do you have other comments or suggestions?** |
| **Name (optional):**<br>**Address:**<br><br>**(For those who received the publication by mail)** Is the mailing label address correct? If not, please correct the address. Thank you. |

**Please return your comments to:**

Division of Research and Epidemiology
Bureau of Health Information, Statistics, Research & Evaluation
Massachusetts Department of Public Health
250 Washington Street, 6th floor
Boston, MA 02108

FAX: (617) 624-5631