TRENDS

In 1996, 55,187 Massachusetts residents died: 29,152 females and 26,035 males (Table 1). The number of resident deaths in 1996 decreased less than 1% from 1995 (109 deaths) but represented a 4% increase since 1990. The age-adjusted death rate in 1996 for Massachusetts was 439.6 deaths per 100,000, a 7% decline since 1990. The number of infant deaths continued to decline: there were 403 deaths to persons less than one year of age in 1996, 3.8% lower than in 1990. The number of occurrence deaths in Massachusetts was 56,027 in 1996. (Refer to the Glossary in the Appendix for a definition of Occurrence Deaths, Age-Adjusted Rates and other technical terms.)

The age-adjusted total mortality rate varied greatly by sex and race in Massachusetts in 1996. Overall, Asians and persons of other races had the lowest rate, 278.7 deaths/100,000 persons; blacks had the highest rate (556.1). The rate for whites was 436.1 and for Hispanic persons, 294.6. (The rates for Asians and Hispanics do not appear in Table 1.) The age-adjusted mortality rate for women was substantially lower than for men: 340.5 compared to 568.4. Among Hispanics, the female rate was 190.2 and the male rate was 416.9; for whites, the female rate was 337.3 and the male rate was 564.8; and among blacks, the female rate was 431.4 and the male rate was 716.7 deaths per 100,000 persons. (Data not shown). (Refer to the Glossary in the Appendix for a definition of Age-Adjusted Rates. Also, please note that the age-adjusted death rates, particularly for minority populations, may differ substantially from previously published data for the period from 1991 to 1995. This is due to the use of revised population estimates published by the Massachusetts Institute for Social and Economic Research in June 1997. The net impact of the new estimates is to increase the number of persons in many age groups for blacks, Hispanics, and Asians for the years after the 1990 Federal decennial census. Using the same number of deaths and larger estimated population figures yield substantially lower mortality rates.)

The 1996 Massachusetts age-adjusted death rate was 11% lower than the preliminary 1996 United States rate, and has been consistently lower than the US rate throughout the 1980?s and early 1990?s (Table 2). The Massachusetts age-adjusted death rates have been consistently lower than the US rates for heart disease, stroke, and unintentional injuries, and higher than the US rates for cancer and pneumonia/influenza. Since 1980, the age-adjusted heart disease and unintentional injury death rates have declined much more rapidly in Massachusetts than in the nation as a whole. In the past year in Massachusetts, the most substantial declines were in the age-adjusted rates for cancer (3% decline) and stroke (4 % decline). (Please note: 1996 cause-specific age adjusted mortality rates for the US were not available at this time.)

In 1996, life expectancy at birth in Massachusetts was 77.8 years (data not shown). For men, the life expectancy was 74.7 years and for women, 80.5 years. At age 65, men could expect to live an average of 15.9 more years while women could expect to live another 19.5 years. This varied by race as well (Figure 1). At birth, white women could expect to live 80.7 years, black women 77.8 years, white men 74.8 years, and black men 70.8 years. By age 75 there is a crossover effect in the life expectancy by race; black females can expect to live longer than white females and black males can expect to live longer than white males.

Massachusetts has a rich history of collecting and reporting vital statistics, as demonstrated by Figure 2 and Figure 3 which present historical mortality trend data for the Commonwealth from 1842 to the present. In 1842, infectious diseases were the leading cause of death in Massachusetts, accounting for 47% of all deaths; 4% of all deaths were due to intentional and unintentional injuries, 2% of all deaths were attributed to heart disease, and 1% of all deaths were due to cancer. By 1996, 30% of the deaths in Massachusetts were due to heart disease, 25% were due to cancer, 8% were due to infectious diseases, and 4% were due to intentional and unintentional injuries. The proportion of deaths due to infectious diseases decreased by 83% between 1842 and 1996. The period of decline from the mid-1800s until the early 1950s had one notable exception occurring in 1918 when 13,783 residents died in the influenza epidemic. (This is compared to only 494 influenza deaths in 1917.) From the 1950s until 1985, the proportion of deaths from infectious diseases remained fairly constant at around 5%. However, since the mid-1980s, it has risen, primarily a reflection of the rise in the number of deaths from AIDS and HIV-related causes. However, from 1995 to 1996, the number of infectious disease deaths in Massachusetts declined from 4,622 to 4,460 due to the decrease in AIDS and HIV-related mortality.

Table 1. Trends in Mortality Characteristics[1] Massachusetts: 1980, 1985, 1990 - 1996

Year		1980	1985	1990	1991	1992	1993	1994	1995	1996
Resident deaths	Number	54,934	55,597	53,008	53,010	53,804	55,557	54,914	55,296	55,187
	Crude rate[2,3,4]	957.5	946.0	881.0	877.5	887.1	912.4	898.2	900.9	895.6
	Age-adjusted rate[5]	550.7	523.7	471.7	462.2	465.9	467.7	459.7	451.0	439.6
Race of decedent[6]										
White	Number	53,251	53,580	50,779	50,814	51,525	53,182	52,465	52,721	52,720
	Percent	96.9	96.4	95.8	95.8	95.8	95.7	95.5	95.3	95.5
	Age-adjusted rate	549.1	498.9	465.6	457.4	461.4	463.1	455.2	445.2	436.1
Black	Number	1,508	1,779	1,879	1,887	1,957	1,969	2079	2,136	2,025
	Percent	2.8	3.2	3.5	3.6	3.6	3.5	3.8	3.9	3.7
	Age-adjusted rate	932.6	761.1	628.2	593.7	607.1	592.0	593.1	602.8	556.1
Other[7]	Number	141	214	341	303	319	394	368	438	433
	Percent	0.3	0.4	0.6	0.5	0.6	0.7	.7	0.8	0.8
Unknown	Number	34	24	9	5	3	12	2	1	9
	Percent	-	-	-	-	-	-	-	-	-
Sex of decedent										
Female	Number	27,563	28,367	27,490	27,550	27,770	29,109	28,733	29,262	29,152
	Age-adjusted rate	377.9	362.0	360.0	353.9	356.0	360.5	355.4	350.9	340.5
Male	Number	27,369	27,230	25,518	25,460	26,034	26,448	26,181	26,034	26,035
	Age-adjusted rate	663.6	627.5	618.5	604.5	610.2	607.8	59,502	580.4	568.4
Age of decedent[8]										
< 1 year	Number	748	746	649	576	569	523	499	419	403
1-14 years	Number	297	246	205	207	225	239	192	204	197
15-24 years	Number	940	763	586	538	470	464	473	452	434
25-44 years	Number	2,117	2,303	2,682	2,912	3,062	3,055	3,210	3,196	2,720
45-64 years	Number	10,504	9,691	8,138	7,877	7,973	7,920	7,766	7,611	7,477
65+ years	Number	40,326	41,843	40,742	40,894	41,503	43,349	42,769	43,409	43,950

[1] Deaths presented in all tables and figures are resident deaths unless otherwise specified. [2] Deaths per 100,000 residents. [3] See Glossary for further definition of terms and rates. [4] Resident population data are interpolations of the 1980 and 1990 US Census, and the 1990 US Census and the 1995 MISER population estimates published in June 1997. 1996 populations are extrapolations of the 1995 estimates. PLEASE NOTE: death rates from 1991-1995 may differ from previous publications due to the updating of population estimates. [5] Rates are age-adjusted per 100,000 residents using the 1940 US Census standard population. [6] See other tables for recently available Hispanic data. [7] "Other races includes Asians, American Indians and person of other races. [8]Column sum may not equal total because age of some decedents was unknown.

Table 2. Five Leading Causes of Death[1] Age-Adjusted Rates[2] Massachusetts and United States: 1980, 1985, 1990-1996

Year		Heart disease[3]		Cancer		Stroke		Pneumonia/ Influenza		Unintentional Injuries		All Causes	
		MA	US	MA	US	MA	US	MA	US	MA	US	MA	US
1980	Rate[2]	197.7	202.0	136.6	132.8	34.2	40.8	16.7	12.9	30.4	42.3	550.7	585.8
	% of Total	39.9	38.2	22.2	20.9	7.9	6.6	4.0	2.7	3.9	5.3		
1985	Rate	178.7	180.5	140.2	133.6	27.3	32.3	14.7	13.4	25.2	34.7	523.7	546.1
	% of Total	37.9	37.2	23.5	22.0	6.8	7.3	4.0	3.2	3.4	4.5		
1990	Rate	138.2	150.3	136.7	133.0	22.5	27.6	14.2	13.5	19.4	32.7	471.7	515.1
	% of Total	33.4	33.5	25.3	23.4	6.2	6.7	4.3	3.6	2.9	4.3		
1991	Rate	131.4	146.1	137.7	132.6	21.2	26.5	14.1	12.6	18.1	31.7	462.2	507.9
	% of Total	32.2	33.2	26.0	23.8	6.2	6.6	4.5	3.5	2.7	4.2		
1992	Rate	135.2	144.5	146.5	133.2	22.2	26.1	14.3	12.7	17.4	29.2	465.9	504.9
	% of Total	31.7	33.1	26.3	23.9	6.2	6.6	4.5	3.5	2.4	4.0		
1993	Rate	135.7	145.3	142.6	132.6	22.1	26.5	16.5	13.6	17.9	30.3	467.7	513.3
	% of Total	31.7	32.6	25.2	23.4	6.1	6.6	5.0	3.6	2.4	3.9		
1994	Rate	123.1	140.4	134.8	131.5	20.8	26.5	14.9	13.0	15.5	30.3	459.7	507.4
	% of Total	30.8	32.1	25.3	23.4	6.1	6.7	4.8	3.6	2.4	4.0		
1995	Rate	117.3	138.3	134.3	129.9	20.8	26.7	14.9	12.9	14.1	30.5	451.0	503.9
	% of Total	30.2	31.8	25.4	23.3	6.3	6.8	4.9	3.6	2.2	4.0		
1996	Rate	116.6	134.6	130.6	129.9	20.0	26.5	14.7	12.6	14.1	30.1	438.6	493.6[4]
	% of Total	30.4	31.6	25.2	23.4	6.1	6.9	5.1	3.6	2.3	4.0		

[1] Cause of death: the disease or injury that initiated the events leading to deaths or the circumstances of the unintentional or intentional injury that resulted in the death. [2] All rates are age-adjusted per 100,000 residents using the 1940 US Census standard population. Differences from previously published rates for Massachusetts 1991-1995 data reflect the change in population estimates used as denominators for the calculation of Massachusetts age adjusted mortality rates. [3] International Classification of Diseases, Ninth Revision (ICD-9) codes used in this publication are listed in the Appendix. [4] The preliminary 1996 US data are based on greater than 90% of 1996 deaths. Source: Births and Deaths: United States, 1996. "Monthly Vital Statistics Report, Preliminary Data from the Centers for Disease Control and Prevention/National Center for Health Statistics", US Department of Health and Human Services, Vol. 46, No. 1, Supplement 2, Sept. 11, 1997, Table C

Figure 1

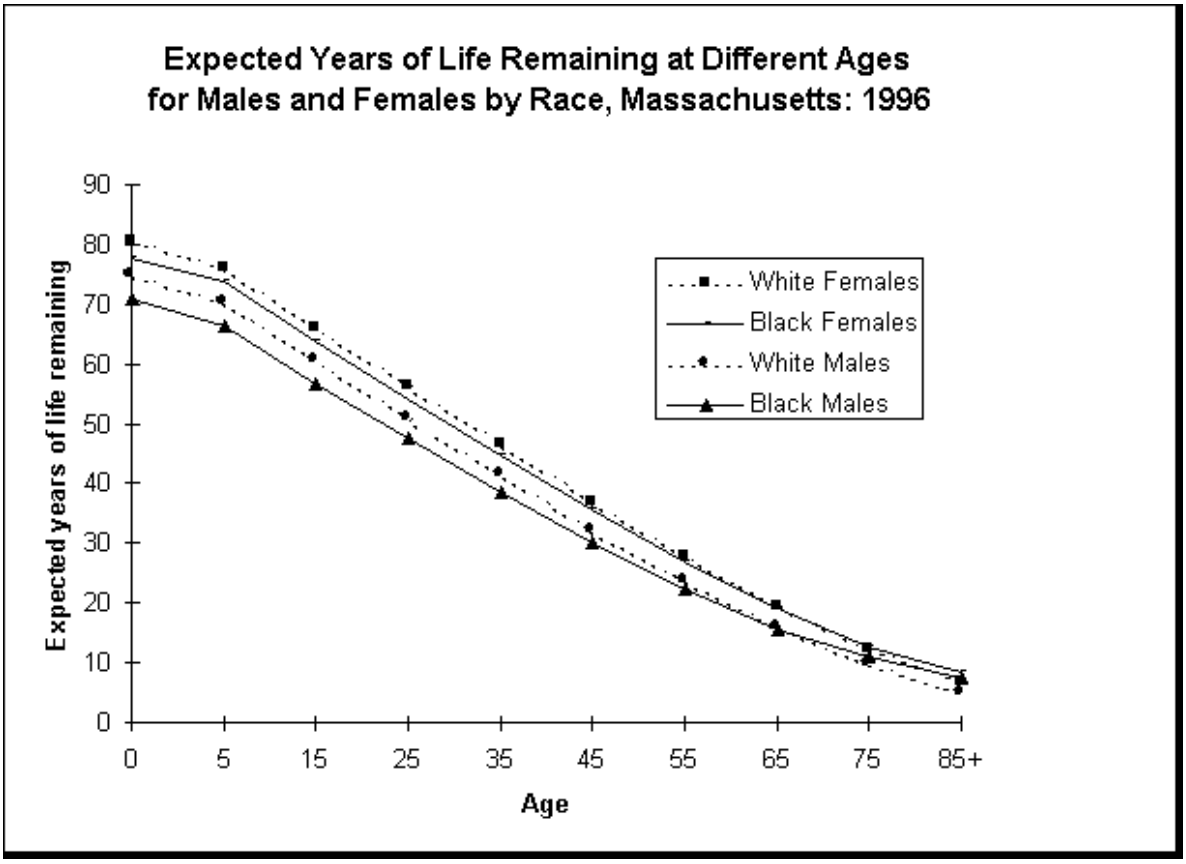

Expected Years of Life Remaining at Different Ages
for Males and Females by Race, Massachusetts: 1996
Expected years of life remaining
90
80
70
60
50
40
30
20
10
0
0
5
15
25
35
45
55
65
75
85+
Age
White Females
Black Females
White Males
Black Males

Figure 2

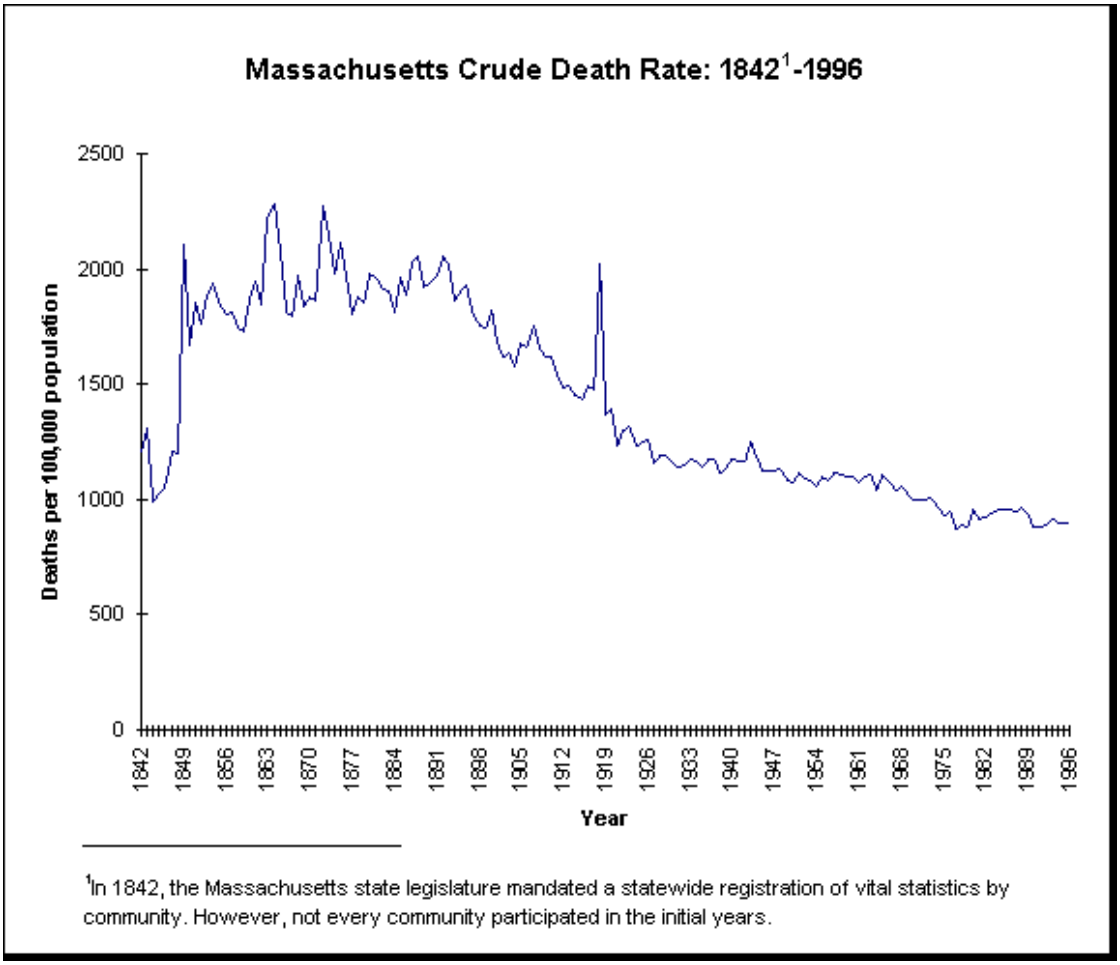
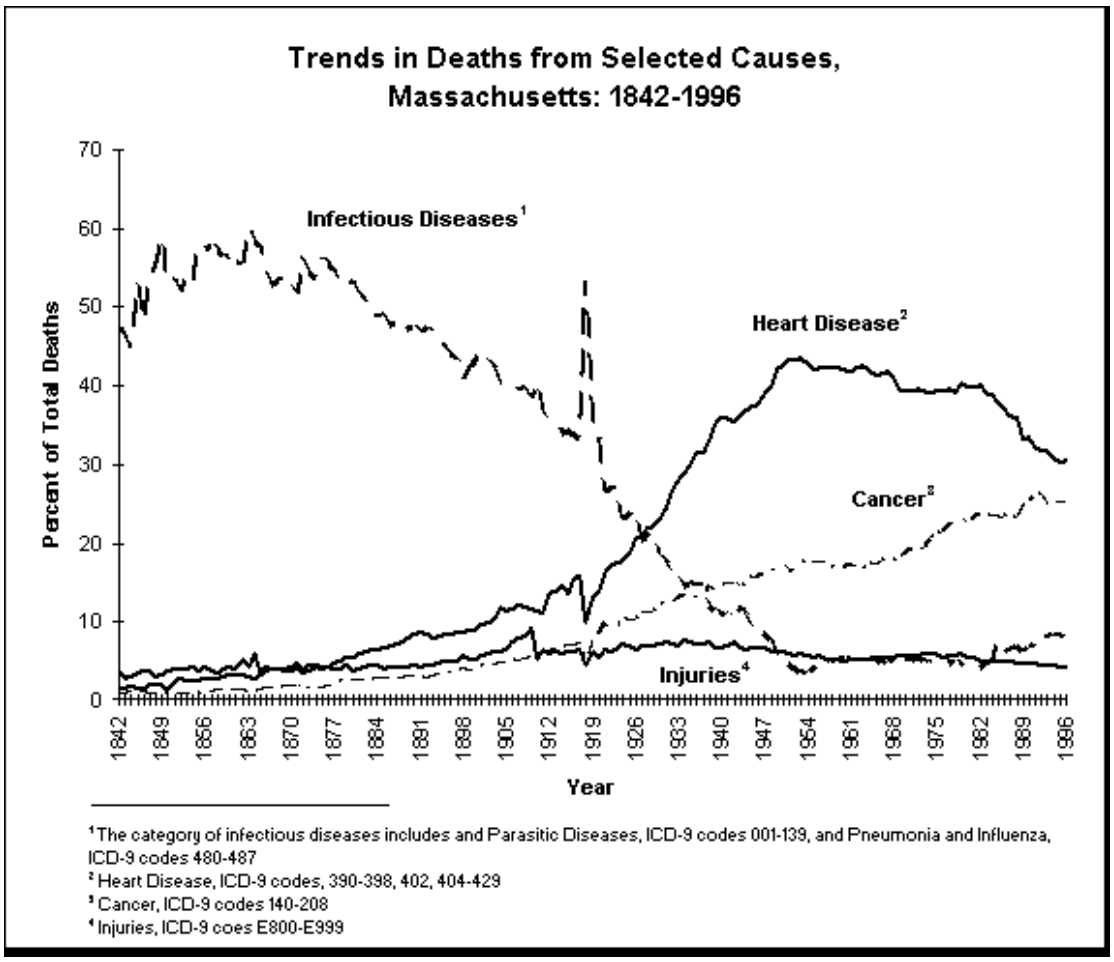

Massachusetts Crude Death Rate: 1842[1]-1996
Deaths per 100,000 population
2500
2000
1500
1000
500
0
1842
1849
1856
1863
1870
1877
1884
1891
1898
1905
1912
1919
1926
1933
1940
1947
1954
1961
1968
1975
1982
1989
1996
Year
[1]In 1842, the Massachusetts state legislature mandated a statewide registration of vital statistics by community. However, not every community participated in the initial years.

Figure 3



Trends	Leading Causes	HeartDisease/Cancer	Injuries
Aids	Infant Death	Causes by Geography	Appendix

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