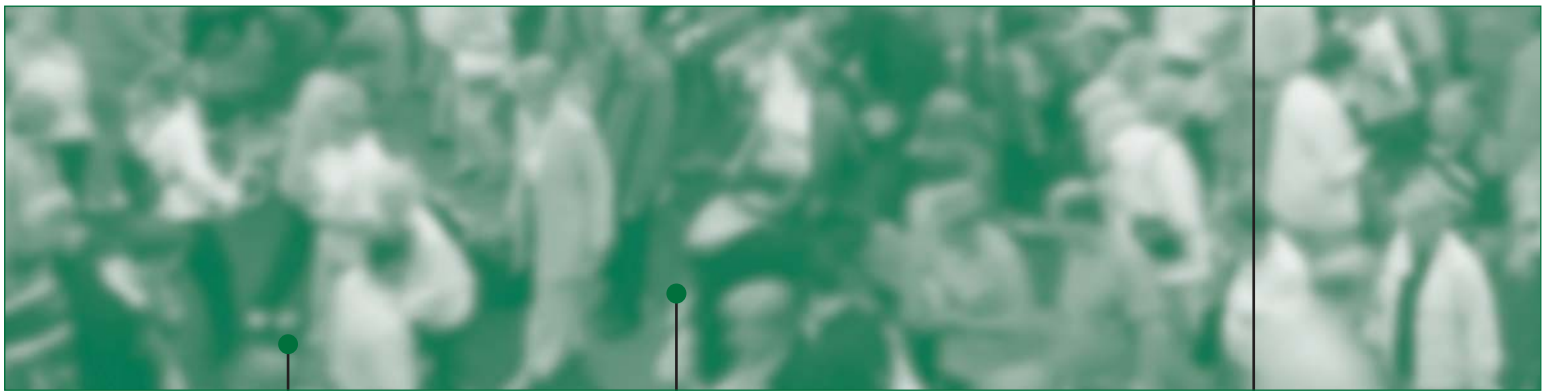


Trends in Vital Events



Vital Statistics Information Box

ON A TYPICAL DAY IN BRITISH COLUMBIA IN 2005

111 LIVE BIRTHS OCCURRED IN THE PROVINCE TO B.C. RESIDENTS:

- 57 males and 54 females were born
- 4 were born to teenage mothers
- 24 were born to mothers aged 35 years old or more
- 3 were multiple births
- 33 were cesarean deliveries
- 6 were low birth weight babies
- 9 were pre-term
- 58 live births involved maternal complications
- 39 babies had perinatal complications
- 9 stillbirths every 10 days

82 DEATHS OCCURRED IN THE PROVINCE TO B.C. RESIDENTS:

- 42 males and 40 females died
- 64 deaths were seniors aged 65 years old or more including
 - 40 deaths aged 80 years old or more
- 7 deaths every 10 days were children less than 15 years old including
 - 5 infant deaths every 10 days
- 26 deaths were due to diseases of the circulatory system including
 - 18 from cardiovascular disease
 - 6 from cerebrovascular disease
- 23 deaths were due to malignant neoplasms (cancer) including
 - 6 from malignant neoplasm of trachea and lung
 - 3 from malignant neoplasm of colon and rectum
 - 2 from malignant neoplasm of female breast
- 9 deaths were due to diseases of the respiratory system including
 - 4 from pneumonia and influenza
 - 4 from chronic pulmonary disease
- 4 deaths every 10 days were due to HIV disease
- 5 deaths were from external causes including
 - 1 suicide
 - 1 motor vehicle accident
 - 1 unintentional fall
- 5 deaths were alcohol-related:
 - 1 was directly due to alcohol and 4 were indirectly due to alcohol
- 1 death was drug-induced
- 17 deaths were attributed to smoking

62 MARRIAGES WERE SOLEMNIZED IN THE PROVINCE:

- 38 were civil ceremonies and 24 were performed by religious representatives
- 39 marriages were to couples where both parties were marrying for the first time
- 1 marriage every 10 days was to couples where both parties were teenagers

Trends Introduction

The tables and figures in this part of the Annual Report provide a long term historical review of birth, death, and marriage statistics during the past few decades. They provide a broad context for the recent vital event statistics shown in other parts of this report. Long term trends are always useful for evaluating recent events and trends, so the tables and figures are often cross referenced to related tables in subsequent parts of the report.

Overview

This section begins with a review of population, live birth, stillbirth, death, and marriage trends. This is followed by information on natural population increases, and vital events by month.

Table 1 summarizes vital events that occurred from 1950-2005 and includes the mid-year British Columbia populations. The B.C. population has shown a steady increase since 1950 so the columns, indicating the rates per 1,000 people in the B.C. population, are the most telling indicators.

The rate of live births to residents increased steadily from 1950 to 1957 (as shown in Table 1). It levelled until 1960, and then dropped quite rapidly during the next ten years after which the decline moderated but generally continued until 2005. The death rate, on the other hand, showed a slow regular decline from about ten per 1,000 population in 1950 to about seven per 1,000 in the mid 1980s and has remained at about that level until 2005.

Marriage information pertains to all marriages solemnized in the province, not only those to residents, but the rate is calculated per 1,000 population. The marriage rate was almost ten per 1,000 British Columbians in 1950 but declined to about seven per 1,000 by the mid 1960s, then rose again to almost the 1950 rate by 1970. Since then there has been a slow decline (see Table 1).

Regarding stillbirths, readers should be aware that there was a change in definition which led to the apparent 'jump' in numbers and rates in 1963 seen in Table 1. That change, and another in 1986, are explained under Stillbirth in the Glossary. Other than the increase in 1963 and irregularities due to small numbers of stillbirths, rates generally declined until the early 1990s and have fluctuated around seven per 1,000 total births since then.

Table 2 and Figure 4 show the rate of natural population increase in B.C. and Canada over the 56 year period since 1950. Natural Population Growth is explained in the Glossary. Not counting migration into or out of B.C., the population grew "naturally" by 10,620 or at the rate of 2.5 per 1,000 British Columbians in 2005.

B.C.'s rate of natural population increase has been consistently below Canada's except for the first half of the 1980s (see Table 2). Both B.C.'s and Canada's rates have gradually declined since the late 1950s. Canada's NPI rate is projected to become negative in the mid 2020s. As the NPI rate declines, the importance of immigration in maintaining population levels increases.

Table 3 and Figure 5 show the number of live births, deaths, marriages, and stillbirths to residents according to the month in which they occurred. The number of marriages each month includes residents and non-residents. The Percent columns show the monthly percent of all events to residents, except marriages which show the percent of all marriages. The table also includes the number of live births, deaths, and stillbirths to non-residents.

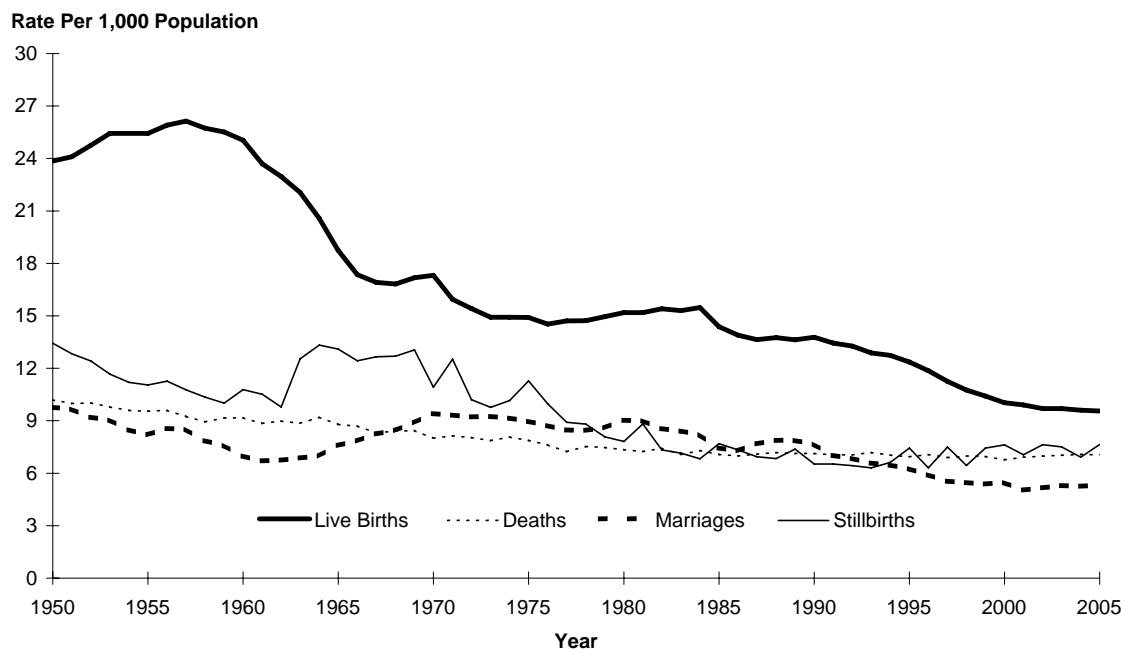
There is continual speculation and anecdotal evidence that vital events tend to occur in particular months or seasons. Well, the data presented in Table 3 and Figure 5 may not put an end to that speculation, but live births and deaths were pretty evenly distributed across the months and seasons in 2005. On the other hand, there was a clear preference to marry during the summer months. Although there were fluctuations in the number and percentage of stillbirths, due to the small number of events no trend was apparent.

TABLE 1
LIVE BIRTHS, DEATHS, MARRIAGES AND STILLBIRTHS
 BRITISH COLUMBIA, 1950–2005

Year	Mid-year Population	Live Births		Deaths		Marriages		Stillbirths	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate
1950	1,137,000	27,116	23.85	11,581	10.19	11,110	9.77	369	13.43
1951	1,165,210	28,077	24.10	11,638	9.99	11,272	9.67	365	12.83
1952	1,205,000	29,827	24.75	12,080	10.02	11,081	9.20	375	12.42
1953	1,248,000	31,746	25.44	12,218	9.79	11,298	9.05	375	11.67
1954	1,295,000	32,946	25.44	12,414	9.59	10,991	8.49	373	11.19
1955	1,342,000	34,138	25.44	12,816	9.55	11,011	8.20	381	11.04
1956	1,398,464	36,241	25.91	13,415	9.59	11,950	8.55	413	11.27
1957	1,482,000	38,744	26.14	13,711	9.25	12,620	8.52	422	10.77
1958	1,538,000	39,577	25.73	13,741	8.93	12,094	7.86	414	10.35
1959	1,567,000	39,971	25.51	14,336	9.15	11,910	7.60	404	10.01
1960	1,602,000	40,116	25.04	14,696	9.17	11,203	6.99	437	10.78
1961	1,629,100	38,591	23.69	14,403	8.84	10,935	6.71	410	10.51
1962	1,660,000	38,128	22.97	14,912	8.98	11,196	6.74	377	9.79
1963	1,699,000	37,478	22.06	15,029	8.85	11,677	6.87	476	12.54
1964	1,745,000	35,897	20.57	16,051	9.20	12,158	6.97	485	13.33
1965	1,797,000	33,669	18.74	15,784	8.78	13,639	7.59	447	13.10
1966	1,873,674	32,502	17.35	16,290	8.69	14,682	7.84	409	12.43
1967	1,945,000	32,899	16.91	16,170	8.31	16,026	8.24	422	12.66
1968	2,003,000	33,687	16.82	16,828	8.40	16,914	8.44	433	12.69
1969	2,060,000	35,383	17.18	17,377	8.44	18,284	8.88	468	13.05
1970	2,128,000	36,861	17.32	17,020	8.00	20,020	9.41	407	10.92
1971	2,184,620	34,852	15.95	17,783	8.14	20,389	9.33	442	12.52
1972	2,241,400	34,563	15.42	18,021	8.04	20,659	9.22	356	10.20
1973	2,302,400	34,352	14.92	18,095	7.86	21,303	9.25	339	9.77
1974	2,375,700	35,450	14.92	19,177	8.07	21,734	9.15	364	10.16
1975	2,433,200	36,281	14.91	19,151	7.87	21,824	8.97	414	11.28
1976	2,466,610	35,848	14.53	18,788	7.62	21,536	8.73	361	9.97
1977	2,493,800	36,691	14.71	18,021	7.23	21,156	8.48	330	8.91
1978	2,530,100	37,231	14.72	19,057	7.53	21,388	8.45	331	8.81
1979	2,571,200	38,432	14.95	19,204	7.47	22,087	8.59	313	8.08
1980	2,640,100	40,104	15.19	19,371	7.34	23,830	9.03	316	7.82
1981	2,744,470	41,679	15.19	19,857	7.24	24,694	9.00	371	8.82
1982	2,787,700	42,942	15.40	20,704	7.43	23,831	8.55	317	7.33
1983	2,813,800	43,047	15.30	19,895	7.07	23,692	8.42	310	7.15
1984	2,847,700	44,040	15.47	20,781	7.30	23,394	8.22	303	6.83
1985	2,990,000	42,989	14.38	21,131	7.07	22,270	7.45	333	7.69
1986	3,004,104	41,714	13.89	21,008	6.99	21,843	7.27	308	7.33
1987	3,050,160	41,611	13.64	21,618	7.09	23,417	7.68	291	6.94
1988	3,115,357	42,860	13.76	22,357	7.18	24,514	7.87	295	6.84
1989	3,197,880	43,589	13.63	22,786	7.13	25,177	7.87	324	7.38
1990	3,290,814	45,347	13.78	23,415	7.12	25,226	7.67	298	6.53
1991	3,373,464	45,346	13.44	23,819	7.06	23,665	7.02	298	6.53
1992	3,468,445	46,030	13.27	24,463	7.05	23,762	6.85	297	6.41
1993	3,567,406	45,956	12.88	25,603	7.18	23,478	6.58	292	6.31
1994	3,675,699	46,837	12.74	25,830	7.03	23,772	6.47	312	6.62
1995	3,777,004	46,701	12.36	26,225	6.94	23,632	6.26	350	7.44
1996	3,874,276	45,960	11.86	27,390	7.07	22,882	5.91	292	6.31
1997	3,948,544	44,402	11.25	27,260	6.90	21,883	5.54	335	7.49
1998	3,983,077	42,871	10.76	27,807	6.98	21,778	5.47	278	6.44
1999	4,011,342	41,748	10.41	27,882	6.95	21,628	5.39	313	7.44
2000	4,039,198	40,497	10.03	27,327	6.77	22,096	5.47	311	7.62
2001	4,078,447	40,393	9.90	28,235	6.92	20,573	5.04	287	7.06
2002	4,115,413	39,905	9.70	28,710	6.98	21,261	5.17	307	7.63
2003	4,154,591	40,305	9.70	29,151	7.02	21,985	5.29	305	7.51
2004	4,201,867	40,339	9.60	29,710	7.07	22,081	5.26	281	6.92
2005	4,254,522	40,653	9.56	30,033	7.06	22,631	5.32	313	7.64

Note: Rates shown for live births, deaths and marriages are crude rates per 1,000 population. Stillbirth rate is per 1,000 total births (live births plus stillbirths). The definition of a stillbirth was revised in 1963 and 1986 (see Glossary). Population information from BC Stats, Ministry of Labour and Citizens' Services. Above information includes late registrations and amendments. Gender unknown included. Non-residents are excluded from all data except marriages.

FIGURE 3
**CRUDE RATES OF LIVE BIRTHS, DEATHS,
 MARRIAGES AND STILLBIRTHS**
 BRITISH COLUMBIA, 1950–2005



Note: Stillbirth rate per 1,000 total births

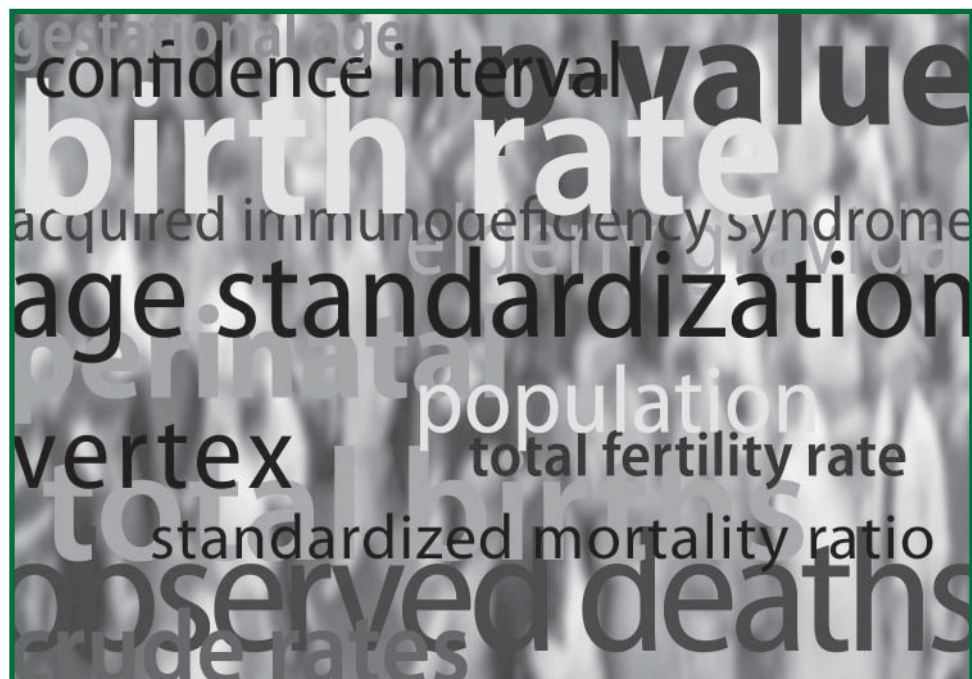


TABLE 2
NATURAL POPULATION INCREASES
 BRITISH COLUMBIA AND CANADA, 1950–2005

Rate			Rate		
Year	B.C.	Canada	Year	B.C.	Canada
1950	13.7	18.0	1978	7.2	8.1
1951	14.1	18.2	1979	7.5	8.4
1952	14.7	19.2	1980	7.9	8.3
1953	15.6	19.5	1981	8.0	8.0
1954	15.9	20.3	1982	8.0	7.9
1955	15.9	20.0	1983	8.2	7.8
1956	16.3	19.8	1984	8.2	7.8
1957	16.9	20.0	1985	7.3	7.5
1958	16.8	19.6	1986	6.9	7.2
1959	16.4	19.4	1987	6.6	7.0
1960	15.9	19.0	1988	6.6	7.0
1961	14.8	18.4	1989	6.5	7.4
1962	14.0	17.6	1990	6.7	7.7
1963	13.2	16.8	1991	6.4	7.4
1964	11.4	15.9	1992	6.2	7.1
1965	10.0	13.7	1993	5.7	6.4
1966	8.7	11.9	1994	5.7	6.1
1967	8.6	10.8	1995	5.4	5.7
1968	8.4	10.2	1996	4.8	5.2
1969	8.7	10.3	1997	4.3	4.4
1970	9.3	10.1	1998	3.8	4.1
1971	7.8	9.5	1999	3.5	3.8
1972	7.4	8.5	2000	3.3	3.7
1973	7.1	8.1	2001	3.0	3.6
1974	6.8	8.0	2002	2.7	3.4
1975	7.0	8.5	2003	2.7	3.4
1976	6.9	8.4	2004	2.5	3.3
1977	7.5	8.4	2005	2.5	3.2

Note: Rates shown are rates of natural population increase per 1,000 population. Canadian rates from Statistics Canada. Non-residents are excluded.

FIGURE 4
NATURAL POPULATION INCREASES
 BRITISH COLUMBIA AND CANADA, 1950–2005

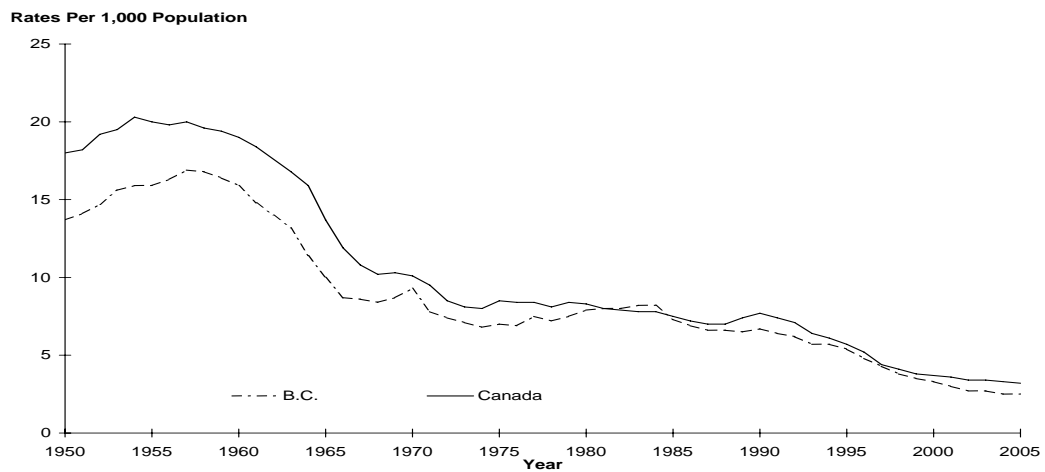


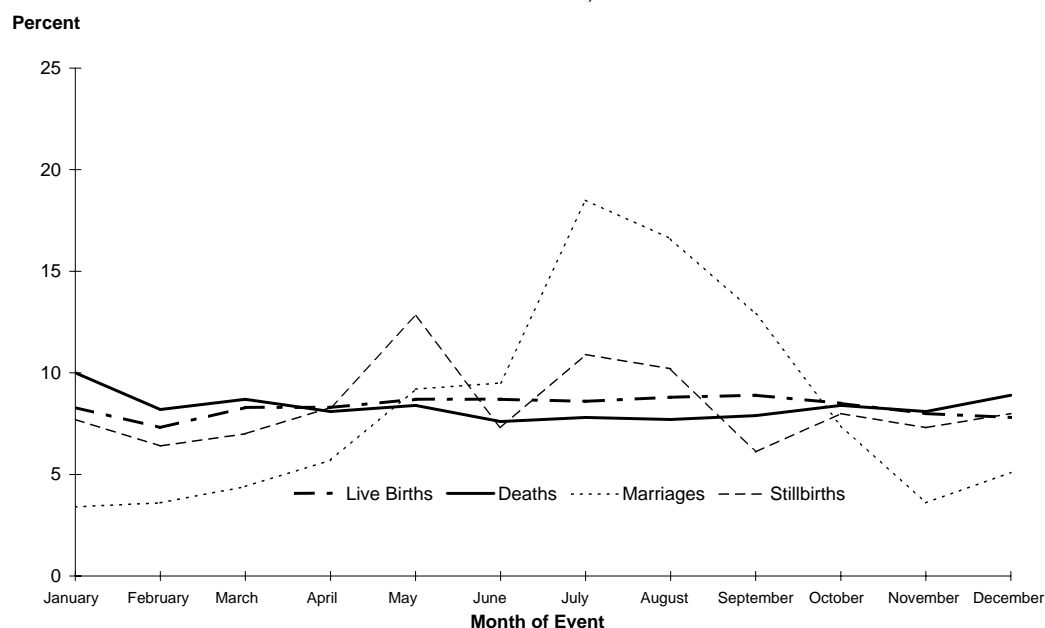
TABLE 3
LIVE BIRTHS, DEATHS, MARRIAGES AND STILLBIRTHS BY MONTH
 BRITISH COLUMBIA, 2005

Month	Live Births		Deaths		Marriages		Stillbirths	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
January	3,360	8.3	2,996	10.0	772	3.4	24	7.7
February	2,956	7.3	2,467	8.2	813	3.6	20	6.4
March	3,390	8.3	2,616	8.7	1,002	4.4	22	7.0
April	3,368	8.3	2,443	8.1	1,281	5.7	26	8.3
May	3,533	8.7	2,525	8.4	2,091	9.2	40	12.8
June	3,519	8.7	2,284	7.6	2,161	9.5	23	7.3
July	3,484	8.6	2,354	7.8	4,183	18.5	34	10.9
August	3,579	8.8	2,318	7.7	3,746	16.6	32	10.2
September	3,634	8.9	2,379	7.9	2,929	12.9	19	6.1
October	3,438	8.5	2,531	8.4	1,680	7.4	25	8.0
November	3,241	8.0	2,439	8.1	826	3.6	23	7.3
December	3,151	7.8	2,681	8.9	1,147	5.1	25	8.0
Residents*	40,653	100.0	30,033	100.0	22,631	100.0	313	100.0
Non-residents	168		280		*		2	
TOTAL	40,821		30,313		22,631		315	

Note: Total percentage may not add up to 100 due to rounding.

*Marriage counts are based on event place and include non-residents.

FIGURE 5
LIVE BIRTHS, DEATHS, MARRIAGES AND STILLBIRTHS BY MONTH
 BRITISH COLUMBIA, 2005



Fertility and Live Birth Trends

The Total Fertility Rate (TFR) is the number of births 1,000 women can expect during their child bearing years, that is, from 15 to 44 years of age. It is described more fully in the Glossary and an example of the calculation method is shown in the Methodology section.

Fertility in British Columbia has more than halved since 1950 (see Table 4). However, shortly after World War II, fertility began to increase, commonly referred to as the post war baby boom. As shown in Table 4, fertility rates increased from 1950 to 1960 after which there was a sharp decline until the late 1970s. Since then the declining trend has continued more slowly, with periodic fluctuations, until 2005. Figure 6 shows that slow decline over the last two decades. Fertility by Local Health Areas and among teenagers is analysed in Table 10 and Figure 29 respectively.

In addition to trends in Total Fertility Rates, this section discusses trends in maternal age, multiple births, low birth weight, and Cesarean section deliveries.

Figure 7 shows annual percentages of live births to women in three age groups for the years 1986-2005. The oldest group (aged 35 years or more) is gradually increasing its percentage at the expense of the two younger groups (less than 20 and 20-34 years old). The average age at which women are bearing children is increasing, but still three quarters of live births are to women in the 20-34 years age group. The long term trend for a higher percentage of elderly gravida (mothers aged 35 years old or more) and a lower percentage for teen mothers were both statistically significant at the 95% level. Maternal age is related to other important birth characteristics and is a component of several tables in Birth-related Statistics section.

Multiple birth infants have a higher risk of preterm birth, low birth weight, perinatal death, and illness than singletons¹. Although there were fluctuations in multiple births as a percentage of live births, Figure 8 clearly indicates the increasing trend over the last two decades. The reader should be aware that multiple births are not counted as instances of multiple birth deliveries but rather as the number of live born babies delivered. Those babies accounted for 1.9% of all live births in 1986 and 3.1% in 2005 which was a statistically significant increase at the 95% level.

Figures 9 and 10 both illustrate the occurrence of Low Birth Weight (less than 2,500 grams) live births over the period 1986-2005. Figure 9 shows both the counts of such births and the rates per 1,000 live births for all mothers. Figure 10 shows the rate per 1,000 live births for mothers 35 years and older. While LBW rates increased gradually (about nine per 1,000 live births over 20 years), the rate in older mothers has increased more sharply (about twenty-one per 1,000). The trends in each of these graphs is statistically significant at the 95% level.

Low birth weight is further analysed in the Births – Birth Weight section of Birth-Related Statistics.

Cesarean sections have become a focus of medical practice and the administration of health care recently and three relevant indicators are presented in Figures 11 through 13. The upward trend in C-section rates since 1986 (Figure 11) is statistically significant at the 95% level, and the increase appears greater in the last few years. C-sections by Health Service Delivery Area (HSDA) varied considerably in 2005 (Figure 12) from a low of 22.1% of live births to residents of Kootenay Boundary to a high of 35.1% of live births to South Vancouver Island residents. An important consideration regarding C-sections is the age of the mother, and there were clear differences between age groups (Figure 13). Cesarean rates were highest for mothers aged 35 or older and lowest for teen mothers, and all age groups showed upward trends that were statistically significant at the 95% level.

Cesarean deliveries are shown in relation to the other modes of delivery in Table 11 and by Local Health Area in Table 12 and Figure 30.

¹http://www.multiplebirthscanada.org/english/documents/low_birth_bro_final2005.pdf.

TABLE 4
TOTAL FERTILITY RATES
 BRITISH COLUMBIA, 1950–2005

Year	Total Fertility Rate	Live Births	Year	Total Fertility Rate	Live Births
1950	3,074	27,116	1978	1,620	37,231
1951	3,201	28,077	1979	1,721	38,432
1952	3,327	29,827	1980	1,716	40,104
1953	3,542	31,746	1981	1,718	41,679
1954	3,656	32,946	1982	1,749	42,942
1955	3,748	34,138	1983	1,751	43,047
1956	3,875	36,241	1984	1,781	44,040
1957	3,921	38,744	1985	1,642	42,989
1958	3,900	39,577	1986	1,603	41,714
1959	3,958	39,971	1987	1,608	41,611
1960	3,949	40,116	1988	1,640	42,860
1961	3,785	38,591	1989	1,645	43,589
1962	3,709	38,128	1990	1,682	45,347
1963	3,564	37,478	1991	1,665	45,346
1964	3,284	35,897	1992	1,661	46,030
1965	2,710	33,669	1993	1,638	45,956
1966	2,442	32,502	1994	1,642	46,837
1967	2,307	32,899	1995	1,609	46,701
1968	2,228	33,687	1996	1,545	45,960
1969	2,223	35,383	1997	1,480	44,402
1970	2,185	36,861	1998	1,447	42,871
1971	1,994	34,852	1999	1,421	41,748
1972	1,890	34,563	2000	1,389	40,497
1973	1,751	34,352	2001	1,386	40,393
1974	1,735	35,450	2002	1,368	39,905
1975	1,682	36,281	2003	1,384	40,305
1976	1,618	35,848	2004	1,380	40,339
1977	1,636	36,691	2005	1,383	40,653

Note: Total Fertility Rate – Sum of age-specific fertility rates multiplied by the number of years in each age group (see Glossary for definition). Rates per 1,000 women age 15 to 44. Non-residents are excluded.

FIGURE 6
TOTAL FERTILITY RATES AND NUMBER OF LIVE BIRTHS
 BRITISH COLUMBIA, 1986–2005

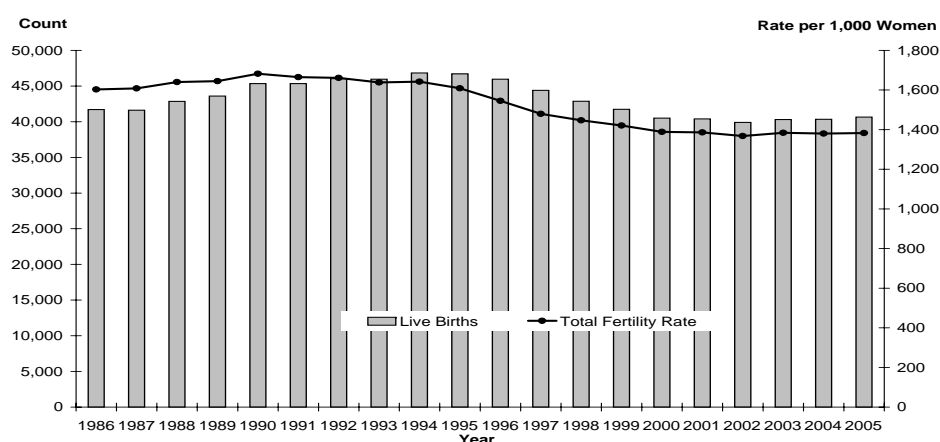


FIGURE 7
LIVE BIRTHS BY AGE OF MOTHER
 BRITISH COLUMBIA, 1986–2005

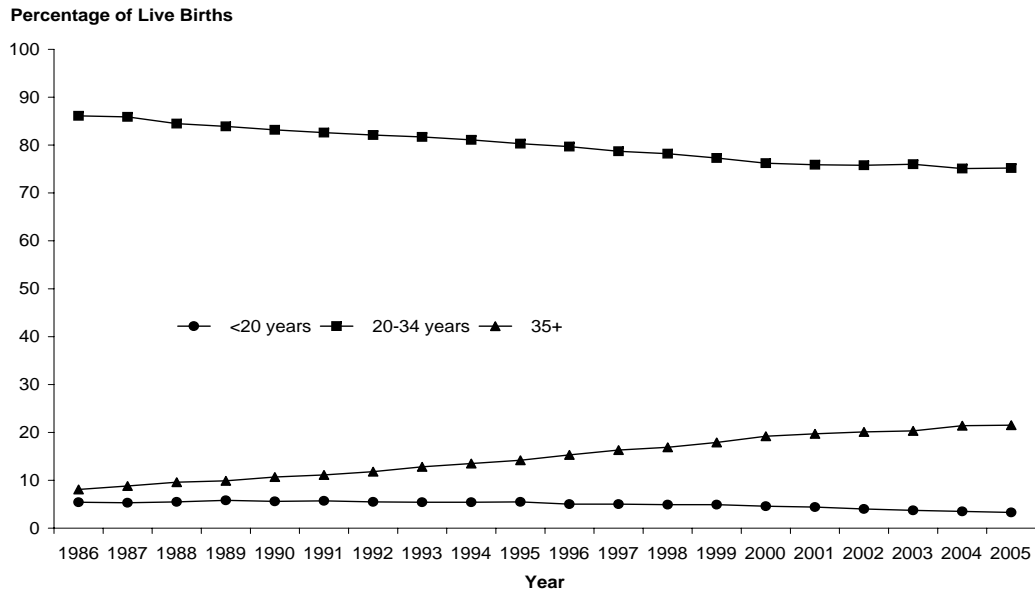


FIGURE 8
MULTIPLE BIRTHS AS A PERCENTAGE OF LIVE BIRTHS
 BRITISH COLUMBIA, 1986–2005

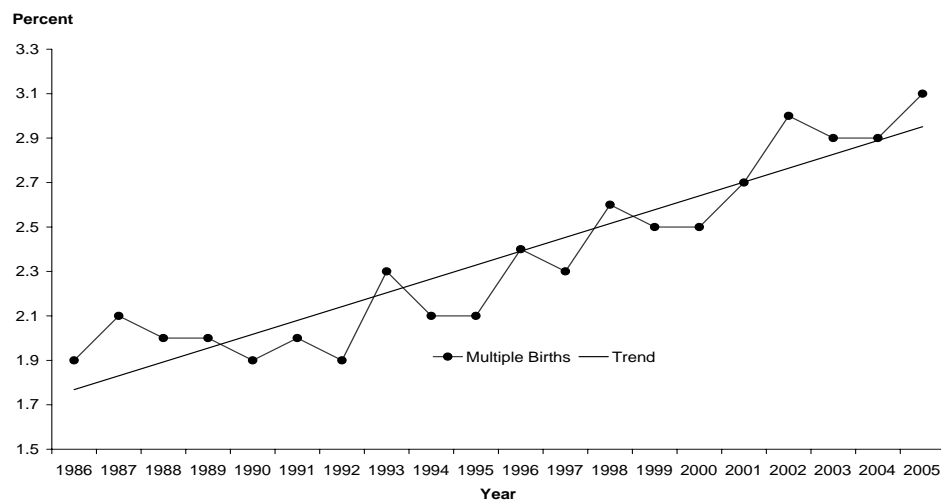


FIGURE 9
LOW BIRTH WEIGHT LIVE BIRTHS
 BRITISH COLUMBIA, 1986–2005

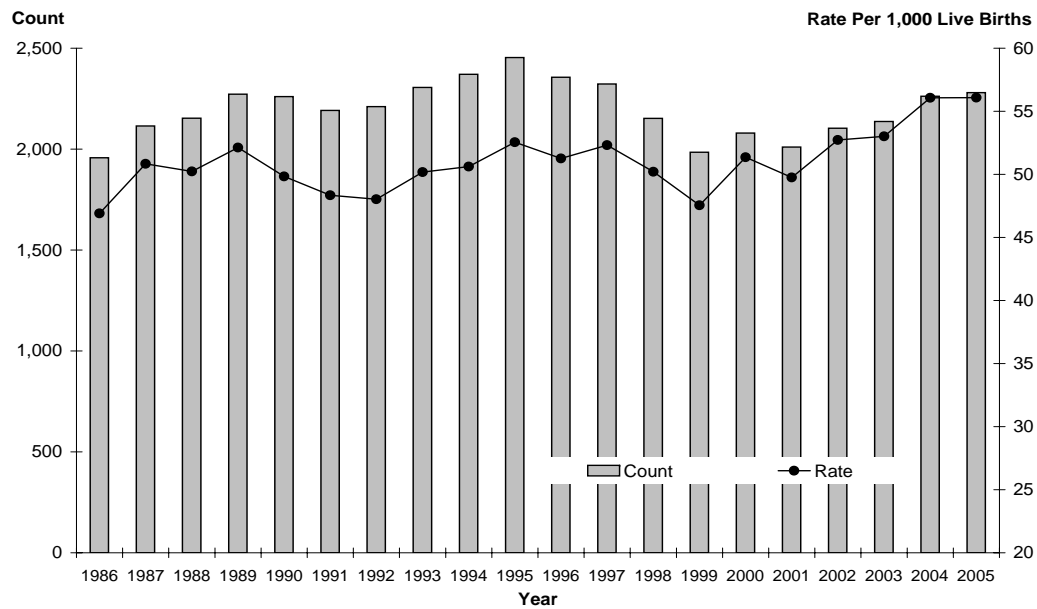


FIGURE 10
LOW BIRTH WEIGHT LIVE BIRTHS FOR MOTHERS AGED 35+
 BRITISH COLUMBIA, 1986–2005

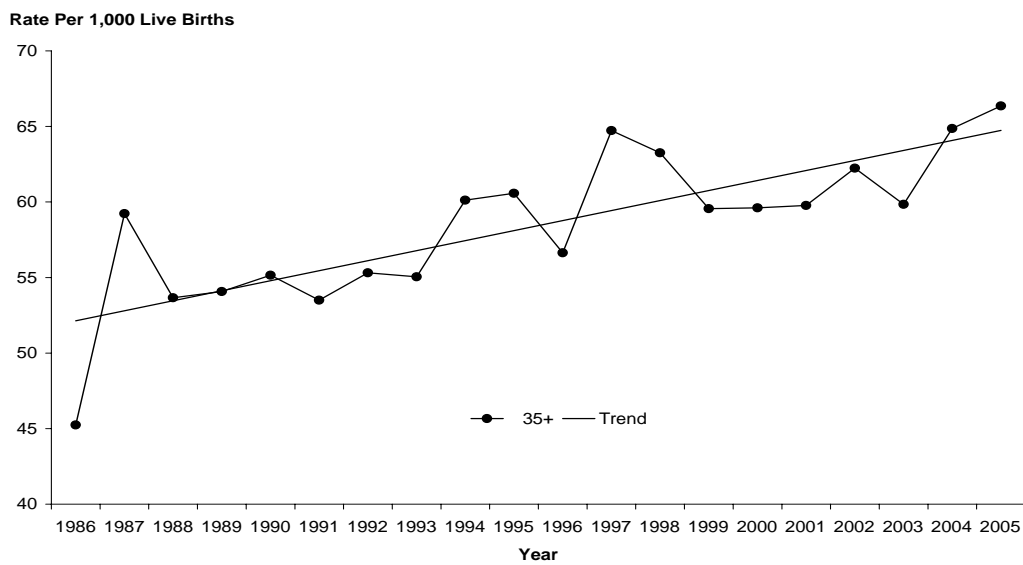


FIGURE 11
CESAREAN SECTIONS
 BRITISH COLUMBIA, 1986–2005

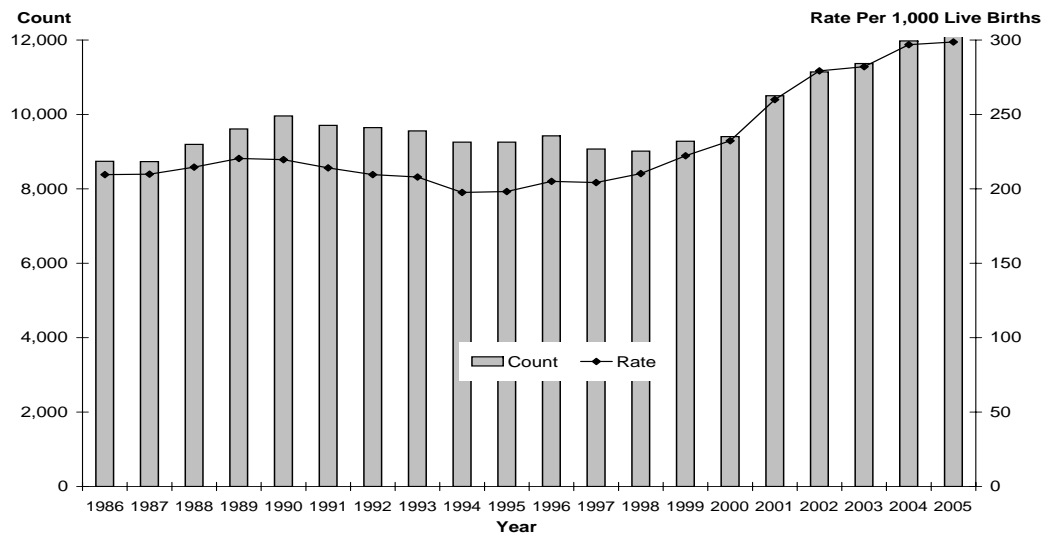


FIGURE 12
CESAREAN SECTIONS BY HEALTH SERVICE DELIVERY AREA
 BRITISH COLUMBIA, 2005

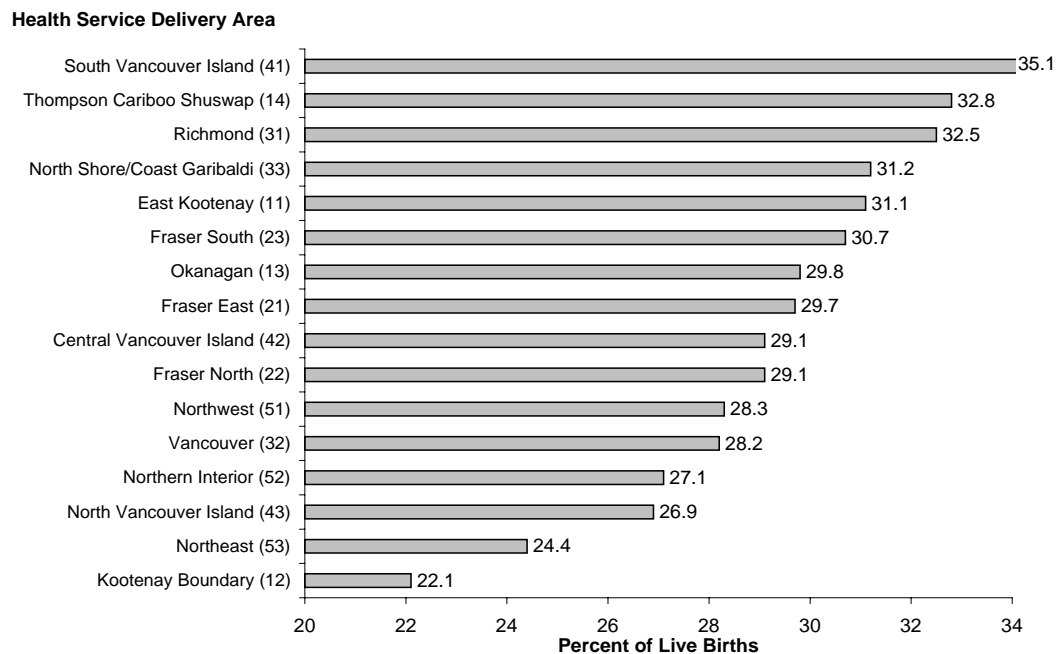
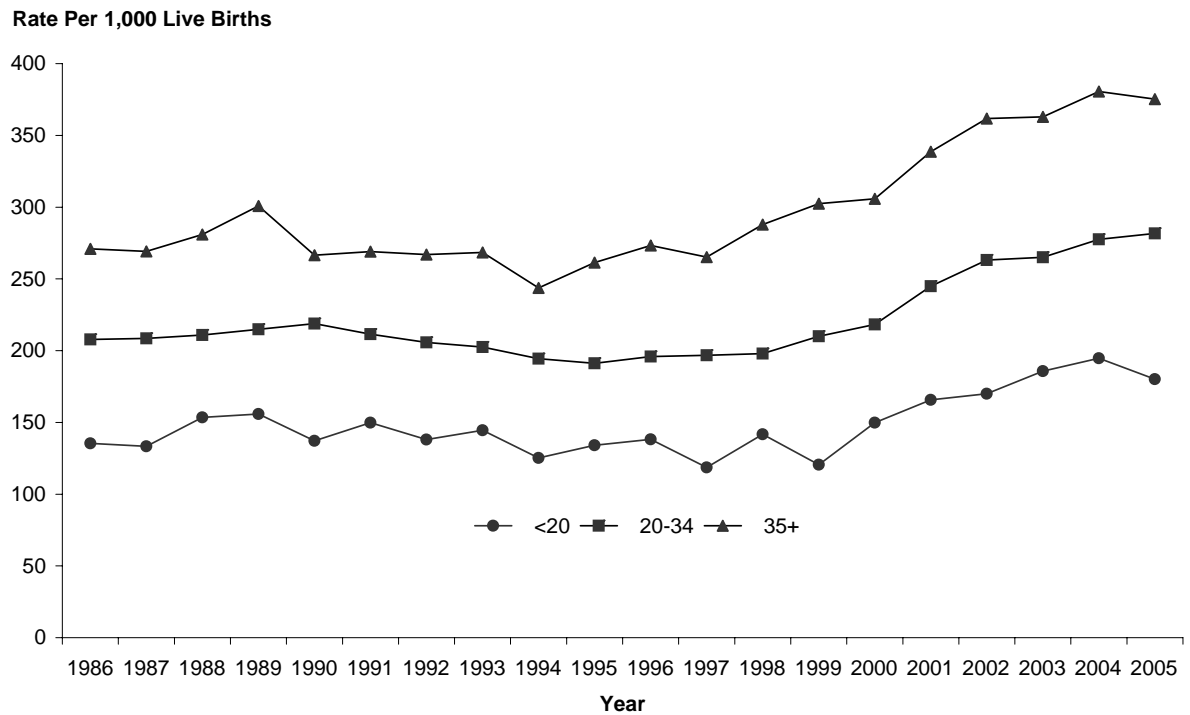


FIGURE 13
CESAREAN SECTIONS BY AGE OF MOTHER
BRITISH COLUMBIA, 1986-2005



Infant Mortality Trends

Table 5 shows the number of B.C. infants who died before their first birthday in the years 1965-2005. Also shown are the rates at which these deaths occurred per 1,000 live births and similar rates for Canada. The infant death rate in Canada and B.C. decreased to around one fifth of the 1965 level by 2005. When these deaths are broken into three ranges according to the infant's age when the death occurred, it is clear that well over half died in the first six days of life. The Glossary defines the various divisions of Infant Deaths according to the infant's age.

There are 39 years where Table 5 has a rate for Canada with which to compare B.C. Until 1991 the two jurisdictions traded places fairly regularly as regards which had the higher rate. But from 1992 onward, B.C.'s rate of infant mortality has always been lower than Canada's.

Figure 14 clearly illustrates downward trends over the past 20 years in both incidence and rate of infant deaths. Both of these trends are statistically significant at the 95% level.

Figures 15 and 16 show that infant mortality rates have been relatively high in teenage mothers, although only a small proportion (6.9%) of total infant deaths were babies born to these young women. The downward trend in infant mortality rates seen in Figure 14 is seen also in Figure 14; rates in all three age groups have diminished over the last 20 years. Each of these trends is statistically significant at the 95% level.

More information about infant mortality can be seen in the Infant Mortality section of Death Related Statistics.

FIGURE 14
INFANT MORTALITY
BRITISH COLUMBIA, 1986-2005

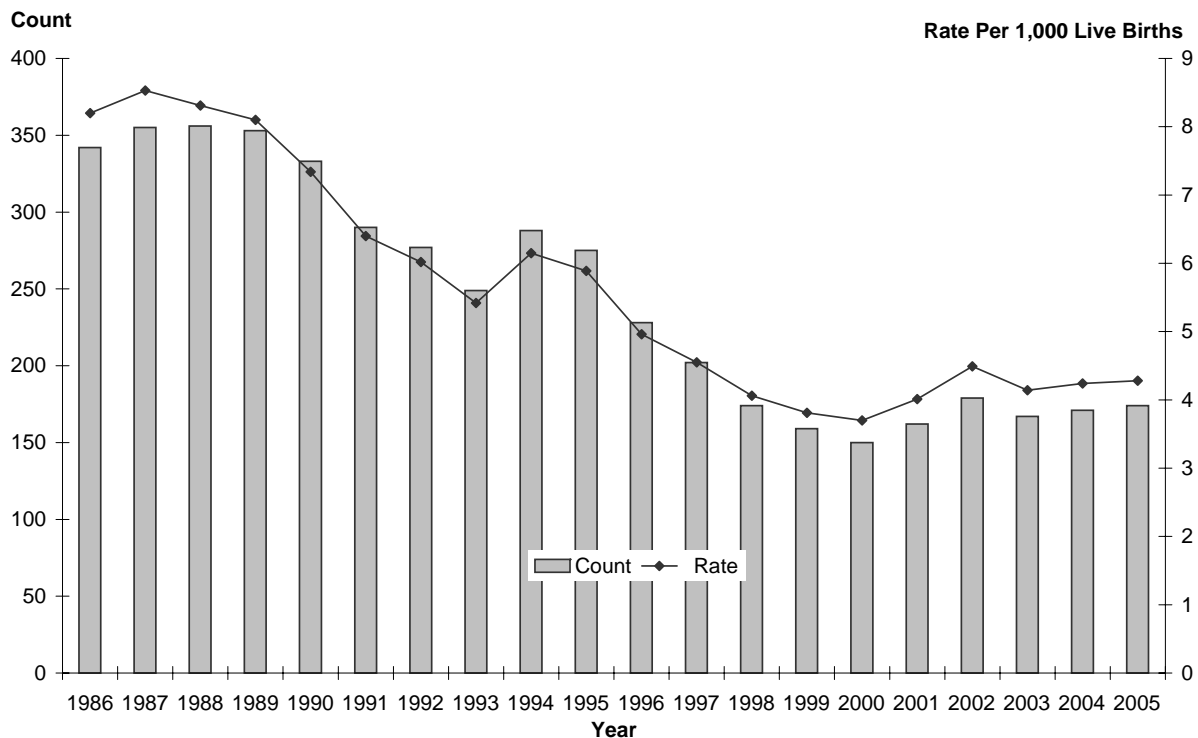


TABLE 5
INFANT MORTALITY
 BRITISH COLUMBIA AND CANADA, 1965–2005

Year	British Columbia Age at Death (in Days)									Canada
	0-6 Days		0-27 Days		28-364 Days		N.S.	Total		
	Number	Rate	Number	Rate	Number	Rate		Number	Rate	
1965	415	12.33	453	13.45	227	6.74	3	683	20.29	24.0
1966	435	13.38	494	15.20	263	8.09	4	761	23.41	23.1
1967	429	13.04	470	14.29	218	6.63	1	689	20.94	22.0
1968	375	11.13	438	13.00	214	6.35	4	656	19.47	21.0
1969	329	9.30	374	10.57	199	5.62	-	573	16.19	19.0
1970	369	10.01	416	11.29	193	5.24	2	611	16.58	19.0
1971	409	11.74	450	12.91	185	5.31	-	635	18.22	17.5
1972	322	9.32	373	10.79	195	5.64	1	569	16.46	17.0
1973	317	9.23	363	10.57	185	5.39	3	551	16.04	16.0
1974	310	8.74	348	9.82	196	5.53	2	546	15.40	15.0
1975	278	7.66	321	8.85	169	4.66	1	491	13.53	14.3
1976	292	8.15	324	9.04	152	4.24	2	478	13.33	13.5
1977	246	6.70	276	7.52	200	5.45	-	476	12.97	12.4
1978	245	6.58	286	7.68	178	4.78	-	464	12.46	12.0
1979	196	5.10	239	6.22	167	4.35	-	406	10.56	10.9
1980	188	4.69	235	5.86	186	4.64	-	421	10.50	10.4
1981	232	5.57	259	6.21	140	3.36	3	402	9.65	9.6
1982	217	5.05	251	5.85	150	3.49	-	401	9.34	9.1
1983	193	4.48	212	4.92	145	3.37	2	359	8.34	8.5
1984	184	4.18	205	4.65	150	3.41	1	356	8.08	8.1
1985	180	4.19	198	4.61	133	3.09	-	331	7.70	8.0
1986	164	3.93	195	4.67	147	3.52	-	342	8.20	7.9
1987	159	3.82	195	4.69	160	3.85	-	355	8.53	7.3
1988	191	4.46	220	5.13	136	3.17	-	356	8.31	7.2
1989	186	4.27	215	4.93	138	3.17	-	353	8.10	7.3
1990	183	4.04	221	4.87	112	2.47	-	333	7.34	6.8
1991	140	3.09	164	3.62	126	2.78	-	290	6.40	6.4
1992	153	3.32	173	3.76	104	2.26	-	277	6.02	6.1
1993	121	2.63	139	3.02	110	2.39	-	249	5.42	6.3
1994	175	3.74	198	4.23	90	1.92	-	288	6.15	6.3
1995	158	3.38	181	3.88	94	2.01	-	275	5.89	6.1
1996	133	2.89	160	3.48	68	1.48	-	228	4.96	5.6
1997	125	2.82	146	3.29	56	1.26	-	202	4.55	5.5
1998	94	2.19	114	2.66	60	1.40	-	174	4.06	5.3
1999	87	2.08	108	2.59	51	1.22	-	159	3.81	5.3
2000	84	2.07	105	2.59	45	1.11	-	150	3.70	5.3
2001	103	2.55	126	3.12	36	0.89	-	162	4.01	5.2
2002	98	2.46	125	3.13	54	1.35	-	179	4.49	5.4
2003	104	2.58	120	2.98	47	1.17	-	167	4.14	5.3
2004	108	2.68	122	3.02	49	1.21	-	171	4.24	*
2005	104	2.56	124	3.05	50	1.23	-	174	4.28	*

Note: Rates per 1,000 live births in the specified year.

N.S. – Not stated.

Above information includes late registrations and amendments.

Canadian rates from Statistics Canada.

*Rates were not available.

Non-residents are excluded.

FIGURE 15
INFANT MORTALITY BY AGE OF MOTHER
 BRITISH COLUMBIA, 1986–2005

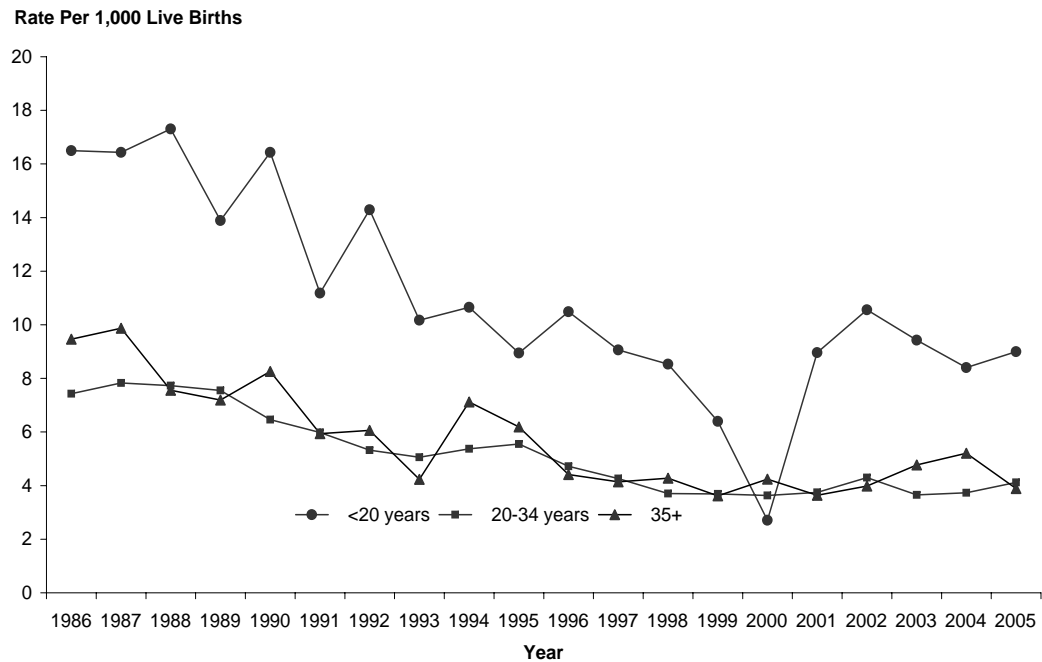
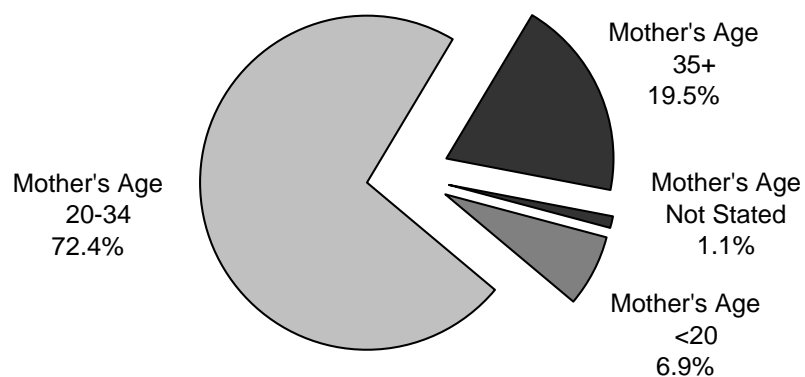


FIGURE 16
PERCENTAGE OF INFANT MORTALITY BY AGE OF MOTHER
 BRITISH COLUMBIA, 2005



Death Trends

This section begins with an examination of counts and rates for all causes of death since 1986. This is followed by information on the average age at death, and cause of death trends for malignant neoplasms (cancer), endocrine, nutritional, and metabolic diseases, nervous system diseases, cardiovascular diseases, cerebrovascular diseases, and motor vehicle accidents.

While Figure 17 shows an increase in the absolute number of deaths from 1986-2005, the standardized rate steadily declined. The provincial ASMR has been on a downward trend since 1986 and the trend is not only statistically significant (95% level) but reached an historic low in 2005. A comparison of the age standardized rates in this figure and the crude rates in Table 1 is a good example of the effect of standardization. An aging but growing population in B.C. allowed the ASMR to fall in the interim years.

Although Figure 18 shows the average age at death among British Columbians in 2005 was the same as in 2003 and marginally less than in 2004, the trend indicates a clear increase from 1986 to 2005. Average age at death increased from 69.6 years in 1986 to 73.6 years in 2005, and the trend was statistically significant at the 95% level. This is the arithmetic average of the ages at which people died and is not equivalent to Life Expectancy which is explained in the Glossary.

Figures 19 through 27 refer to certain categories or groups of death causes. All cause groups are identified according to the World Health Organization's *International Statistical Classification of Diseases and Related Health Problems*, Tenth Revision (ICD-10) which is a statistical coding system and the accepted international standard. Groups of codes are used in the following figures to define particular cause groups and the ICD-10 codes are noted in the comments accompanying the figures. Although causes of death in 1986-1999 were originally coded using an earlier ICD version (ICD-9), all ICD-9 codes were recoded to ICD-10 using translation tables and extensive manual reviews (as described under Medical Coding). This approach, which is unique to the Agency's publications, enables production of trends data.

Note that all causes are based on the Underlying Cause of Death which is explained in the Glossary. While other causes may have contributed, the underlying cause is the 'primary' or 'main' reason for the death.

The rates are quoted per 10,000 population and have been age standardized to permit yearly rate comparisons because they are adjusted to account for the changing age structure during the years covered. See the Glossary for an explanation of the Age Standardized Mortality Rate (ASMR) and the Methodology section for an example of the calculation method.

Figures 19, 20, and 21 illustrate trends in cancer death incidence and rates. The death rates are expressed as Age Standardized Mortality Rates, which are standardized to the age structure of the Canadian population in 1991. Figure 19 shows that in the years 1986-2005, while the number of deaths due to all types of cancer (malignant neoplasms, ICD-10 codes C00-C97) steadily climbed, the standardized death rates per 10,000 population have fallen. While the cancer death incidence climbed, the deaths occurred at the same time as the B.C. population size climbed even faster. Figure 20 is a similar graph showing incidence and rates of deaths due to lung cancer (malignant neoplasms of trachea and lung, ICD-10 codes C33-C34). Again, as in Figure 19, while the numbers of cancer deaths in B.C. have increased over the 19 years, this increase has been exceeded by the rise in B.C. population numbers, resulting in falling rates of lung cancer deaths.

Figure 21 provides some detail for the lung cancer information in Figure 20. Shown here are lung cancer death rates (per 10,000 standard population) for males and females separately. The falling trend in overall lung cancer death rates, discussed above in Figure 20, is composed of a more steeply declining trend for males and a less steeply increasing trend for females. Both of these trends are statistically significant at the 95% level. Deaths due to cancer are shown in the context of other causes in tables 21, 22, and 23 in Death-Related Statistics.

Deaths due to endocrine, nutritional, and metabolic diseases in Figure 22 (ICD-10 codes E00-E89) include diseases such as diabetes and obesity but a more comprehensive list is shown in Appendix 2. Again, the rates are age standardized to permit comparisons despite the changing age structure during the intervening years.

While the overall death rate and the rates due to other causes may have declined, the number and rate of deaths due to endocrine, nutritional, and metabolic diseases have increased, most notably in the last few years. The upward trend in rates is statistically significant at the 95% level. Diabetes mellitus accounted for the major portion of these deaths and is shown in Figure 23. The number of deaths due to diabetes in 2005 is almost three times that in 1986. The upward trend in the rate of death due to diabetes is statistically significant at the 95% level.

Deaths due to diseases of the nervous system are shown in Figure 24 and include causes such as Alzheimer's disease, Parkinson's disease, and multiple sclerosis but a comprehensive list appears in Appendix 2 under ICD-10 codes G00-G99. The number and rate of these deaths increased from 1986-2000 after which the number levelled off then decreased in 2005, but the standardized rate has decreased from the high point in 2001. Although there was a statistically significant increasing trend from 1986-2005, it will take a few more years to determine if the recent decline is a genuine reversal of the previous trend.

Figure 25 shows numbers of cardiovascular disease deaths (ICD-10 codes I00-I51) and death rates per 10,000 standard population from 1986-2005. A review of the specific causes in this category in Appendix 2 indicated slightly more male deaths than female deaths in 2005. While the incidence numbers rose from 1986-1996 and then generally declined, the death rate has quite consistently fallen over the 20 years (downward trend statistically significant at the 95% level). See Tables 22-23 to compare deaths due to cardiovascular disease with other causes.

Cerebrovascular diseases shown in Figure 26 include ICD-10 codes I60-I69. A review of Appendix 2 indicated that females died from cerebrovascular diseases one and a half times as often as males in 2005. In spite of increases in the number of people dying from these diseases from 1986 until the late 1990s, the standardized rate decreased gradually from 1986-2005 and the downward trend was statistically significant at the 95% level.

Figure 27 provides a visual display of incidence and death rates for motor vehicle accidents (ICD-10 codes V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850) over the period 1986-2004. The incidence numbers are irregular but declining and the declining trend in the standardized death rate was statistically significant at the 95% level. Although the rates are declining and motor vehicle accidents claimed only 1.2% of all deaths in 2005, they are mostly young British Columbians so they remain a concern. See Potential Years of Life Lost due to motor vehicle accidents in Tables 34 and 35.

FIGURE 17
DEATHS AND DEATH RATES, ALL CAUSES OF DEATH
BRITISH COLUMBIA, 1986-2005

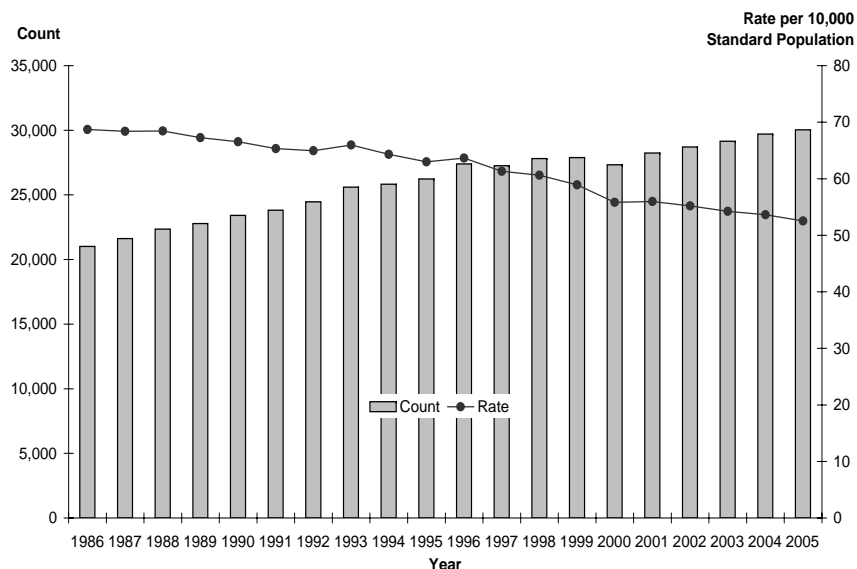


FIGURE 18
AVERAGE AGE AT DEATH
 BRITISH COLUMBIA, 1986–2005

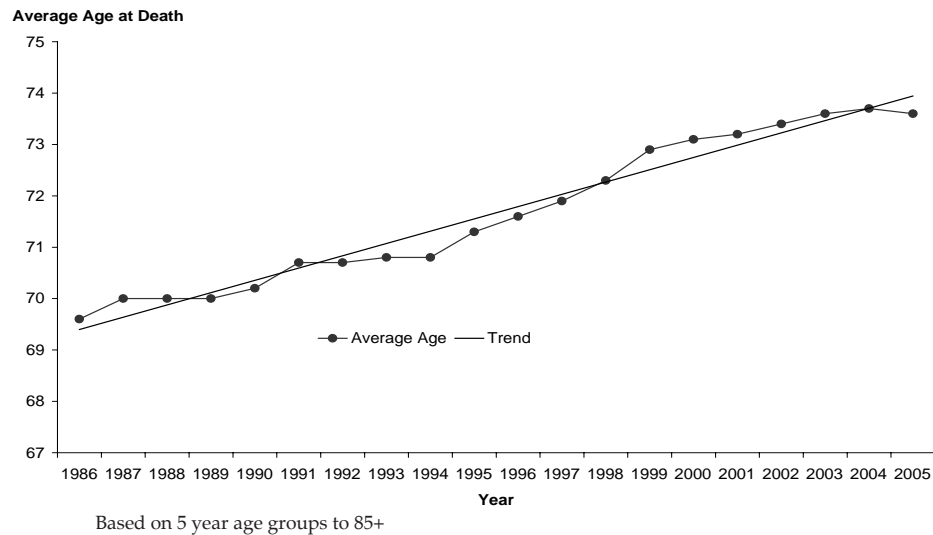


FIGURE 19
DEATHS AND DEATH RATES, MALIGNANT NEOPLASMS (CANCER)
 BRITISH COLUMBIA, 1986–2005

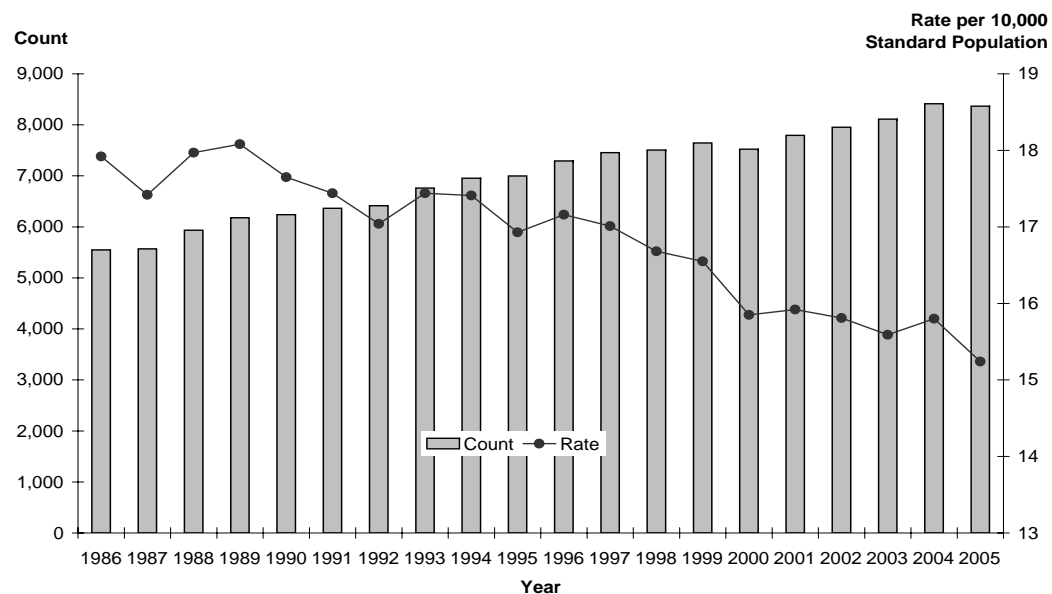


FIGURE 20
DEATHS AND DEATH RATES, MALIGNANT NEOPLASM OF LUNG
 BRITISH COLUMBIA, 1986-2005

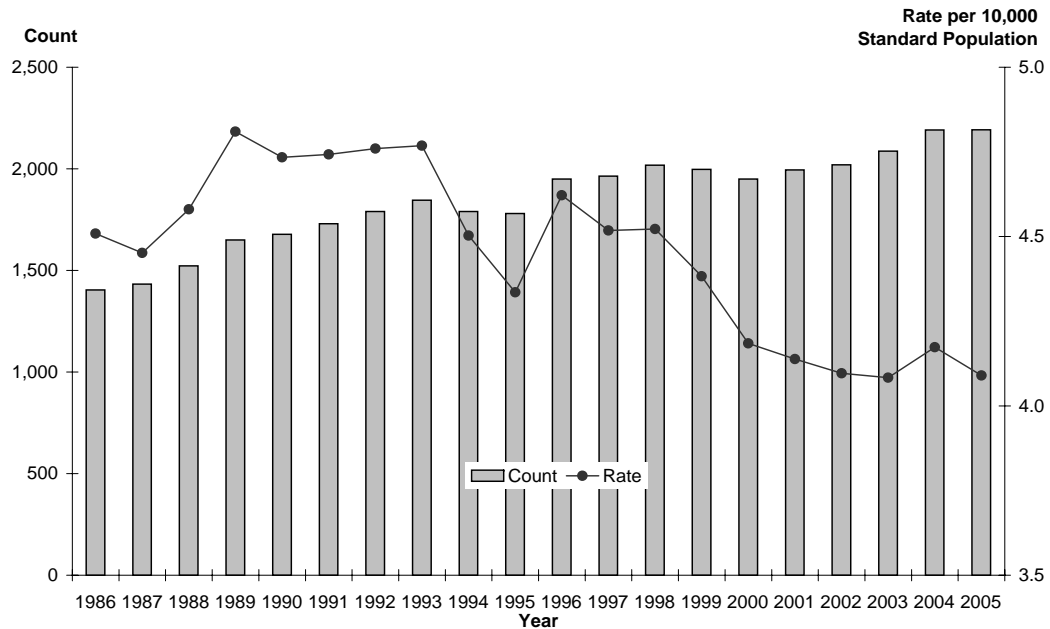


FIGURE 21
DEATH RATES BY GENDER, MALIGNANT NEOPLASM OF LUNG
 BRITISH COLUMBIA, 1986-2005

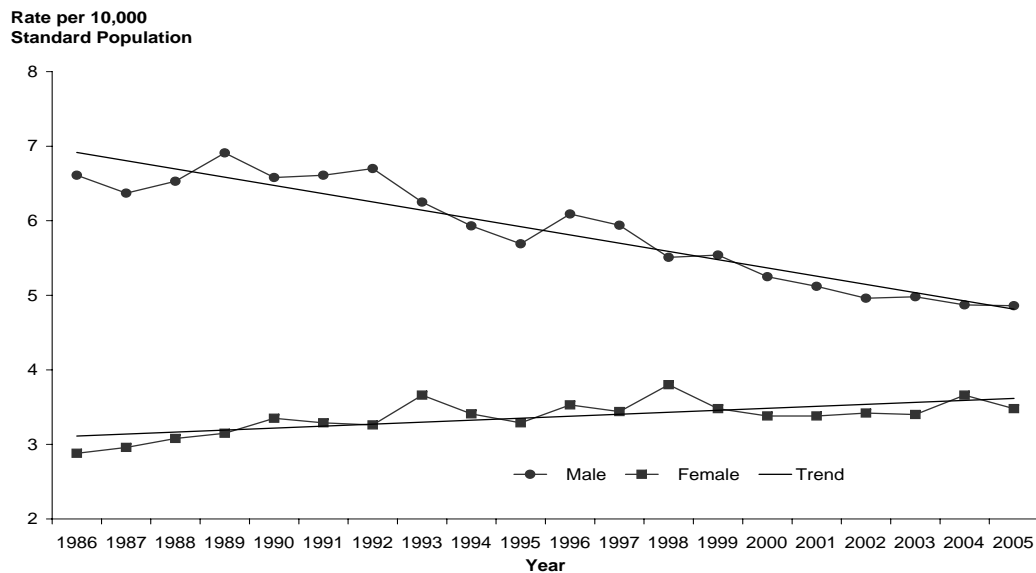


FIGURE 22
**DEATHS AND DEATH RATES, ENDOCRINE,
 NUTRITIONAL AND METABOLIC DISEASES**
 BRITISH COLUMBIA, 1986-2005

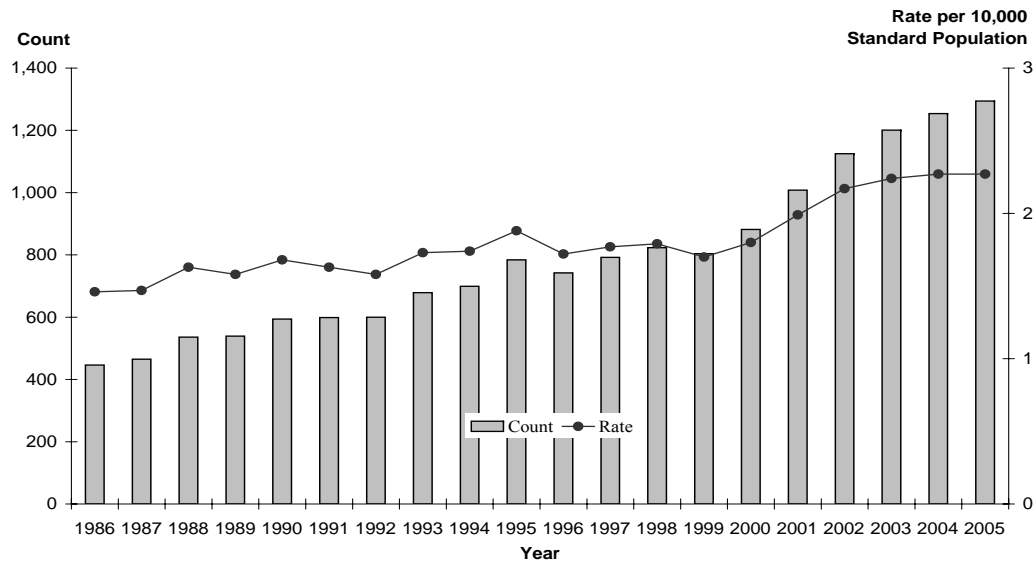


FIGURE 23
DEATHS AND DEATH RATES, DIABETES MELLITUS
 BRITISH COLUMBIA, 1986-2005

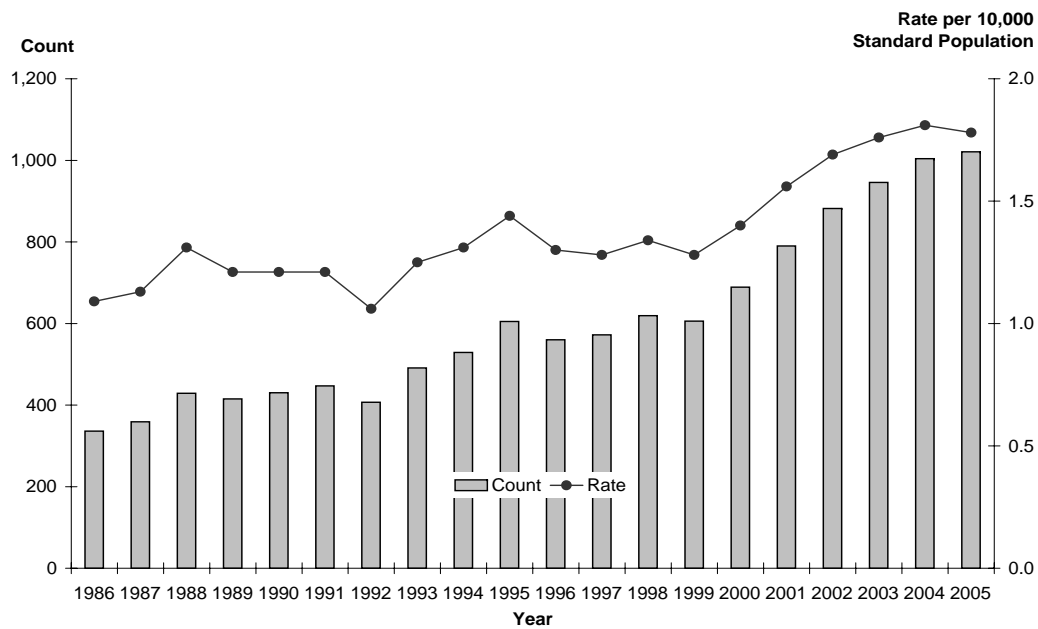


FIGURE 24
DEATHS AND DEATH RATES, NERVOUS SYSTEM DISEASES
 BRITISH COLUMBIA, 1986-2005

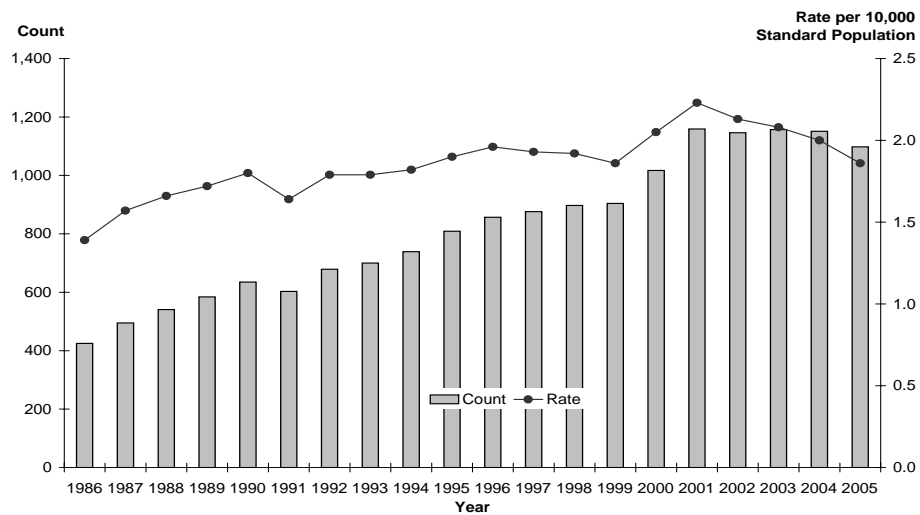


FIGURE 25
DEATHS AND DEATH RATES, CARDIOVASCULAR DISEASE
 BRITISH COLUMBIA, 1986-2005

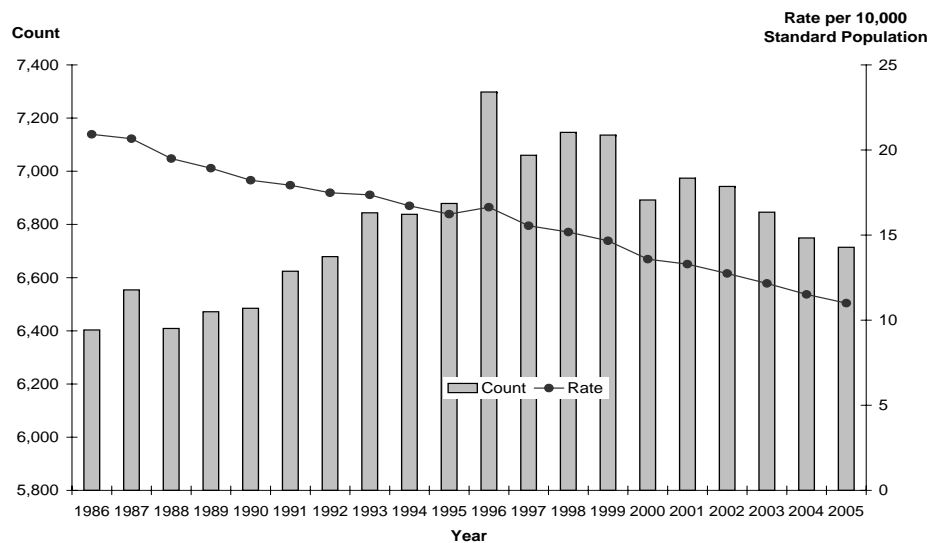


FIGURE 26
DEATHS AND DEATH RATES, CEREBROVASCULAR DISEASES
 BRITISH COLUMBIA, 1986-2005

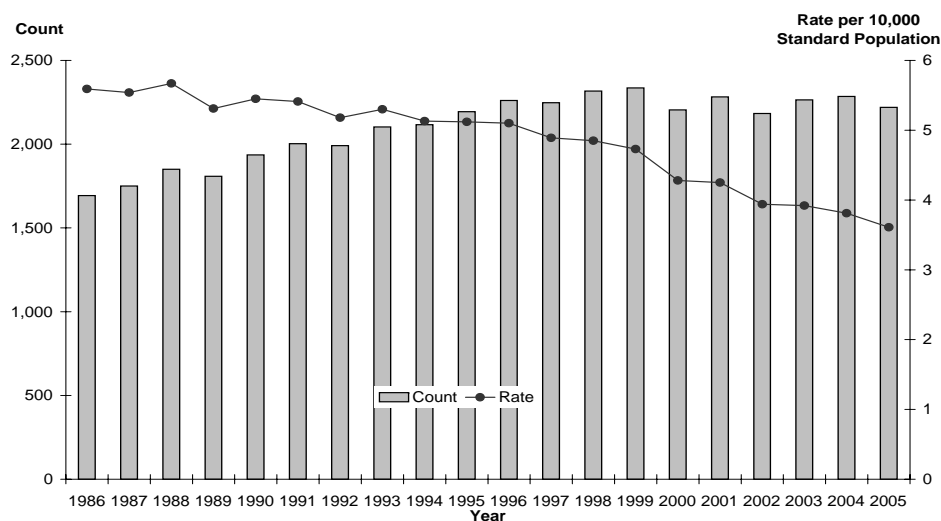
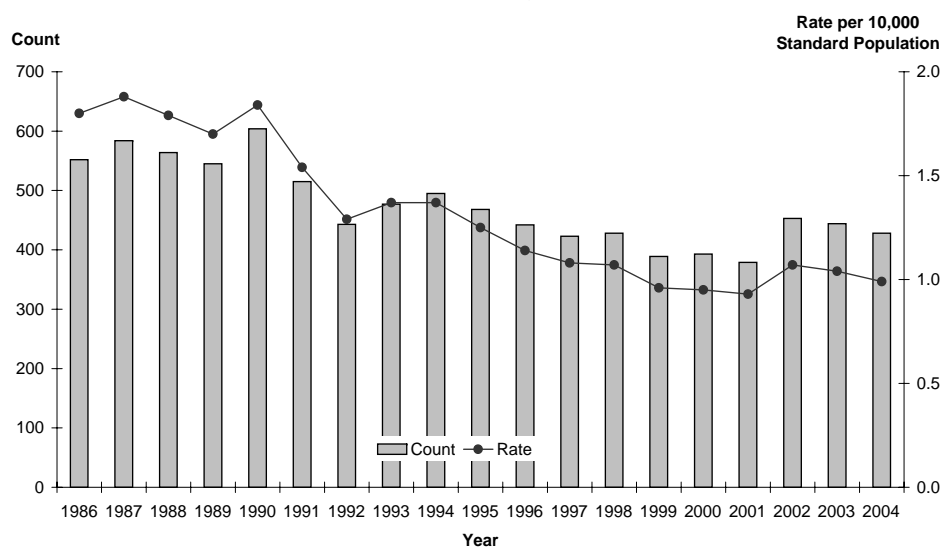


FIGURE 27
DEATHS AND DEATH RATES, MOTOR VEHICLE ACCIDENTS
 BRITISH COLUMBIA, 1986-2004*



Note: *Data for 2005 is not presented because of known delays in determining causes of death. This means that counts and rates for external causes of death calculated from current year data are known to be severe underestimates of the actual figures.

Marriage Trends

The topic of Table 6 and Figure 28 is the age at which men and women get married. For the 29 years from 1977-2005 the average marriage age is shown for each gender when marrying for the first time. The table also shows the average age for all marriages, whether they were first or subsequent, in each of the years. The clear and obvious trend is that, with the passage of years, people are waiting until later and later to get married. The average age at marriage rose steadily from 29.3 years in 1977 to 35.7 years in 2005 for men, and from 26.2 years to 33.2 for women over the same period. Similarly, the average age at first marriage has risen by almost six years for men and by six and a half years for women over the same period.

The average age of men who married in 1977-2005 was two or three years older than the average age of women (see Table 6). This difference was slightly less for first marriages compared to all marriages. This indicates that on average, men marry at older ages than women marry.

TABLE 6
AGE OF FIRST AND ALL MARRIAGES
BRITISH COLUMBIA, 1977-2005

Year of Marriage	Average Age (in Years)				Year of Marriage	Average Age (in Years)			
	First Marriage		All Marriages			First Marriage		All Marriages	
	Males	Females	Males	Females		Males	Females	Males	Females
1977	25.2	22.5	29.3	26.2	1992	28.6	26.4	33.0	30.1
1978	25.2	22.7	29.3	26.3	1993	28.7	26.5	33.1	30.3
1979	25.5	22.9	29.6	26.6	1994	28.8	26.6	33.2	30.3
1980	25.5	23.1	29.6	26.6	1995	28.9	26.8	33.4	30.7
1981	25.7	23.2	29.7	26.7	1996	29.2	27.1	34.0	31.2
1982	26.0	23.6	30.0	26.9	1997	29.4	27.3	34.1	31.3
1983	26.3	23.9	30.3	27.3	1998	29.6	27.5	34.4	31.6
1984	26.6	24.2	30.8	27.7	1999	29.8	27.7	34.7	31.8
1985	26.8	24.5	31.1	28.0	2000	30.0	27.9	34.8	32.1
1986	27.1	24.7	31.6	28.5	2001	30.1	27.9	35.0	32.2
1987	27.6	25.1	32.3	29.3	2002	30.2	28.1	35.3	32.5
1988	27.6	25.3	32.2	29.2	2003	30.9	28.7	35.6	32.9
1989	27.8	25.6	32.5	29.5	2004	31.0	29.0	35.7	33.2
1990	28.0	25.7	32.6	29.6	2005	31.0	29.0	35.7	33.2
1991	28.2	26.1	32.8	29.9					

FIGURE 28
AGE OF FIRST AND ALL MARRIAGES
BRITISH COLUMBIA, 1977-2005

