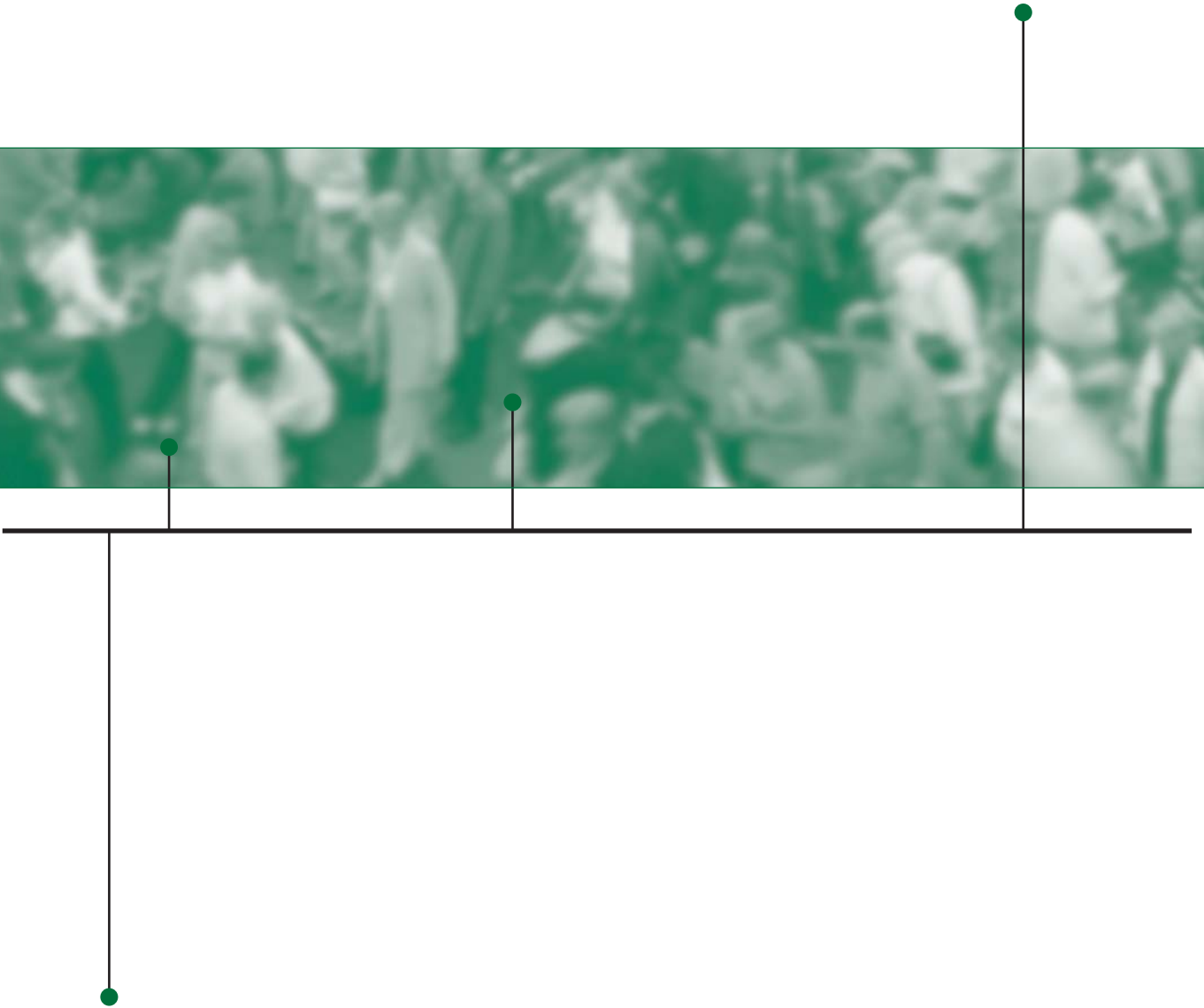
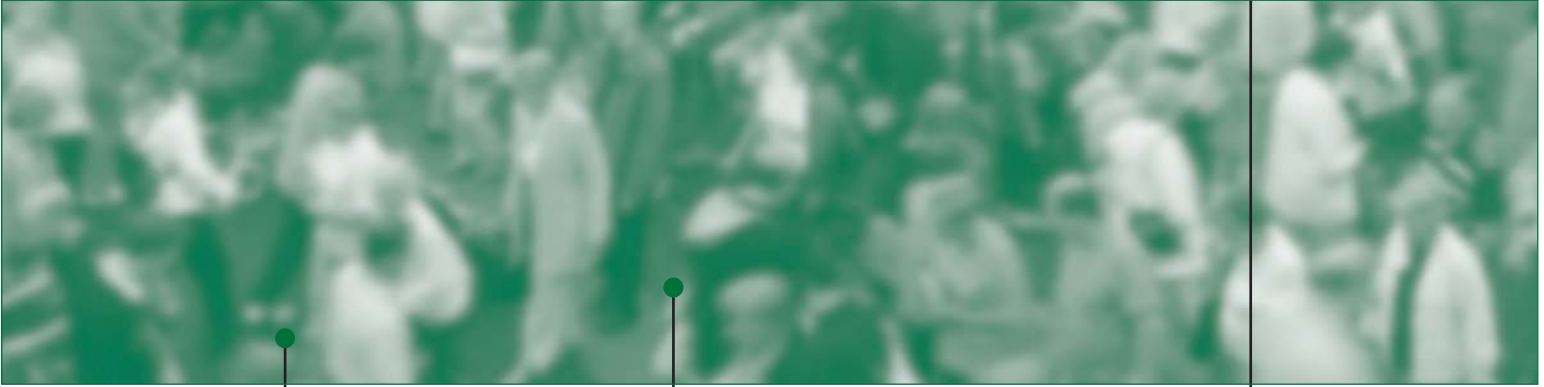


Death-related Statistics



Vital Statistics Information Box

DEATHS AGED 65+ BY GENDER AND HEALTH SERVICE DELIVERY AREA BRITISH COLUMBIA, 2005

Health Service Delivery Area	Gender	Age at Death								Total	% 65+
		65-69	70-74	75-79	80-84	85-89	90-94	95-99	100+		
11 East Kootenay	M	22	41	58	56	46	19	5	-	247	76.0
	F	11	32	33	41	52	47	17	9	242	79.9
12 Kootenay Boundary	M	32	38	53	47	52	35	6	-	263	73.5
	F	19	39	31	55	54	65	19	1	283	81.3
13 Okanagan	M	115	192	239	294	228	153	45	10	1,276	76.0
	F	74	119	194	281	319	239	87	18	1,331	86.5
14 Thompson Cariboo Shuswap	M	79	116	120	143	95	48	7	1	609	68.2
	F	61	61	114	132	135	81	35	4	623	80.7
21 Fraser East	M	98	132	164	157	143	87	14	8	803	74.8
	F	59	82	128	186	189	140	51	18	853	84.1
22 Fraser North	M	133	175	223	279	221	152	37	4	1,224	73.2
	F	97	135	204	316	294	295	93	23	1,457	83.5
23 Fraser South	M	147	199	280	321	276	139	49	7	1,418	71.0
	F	104	136	220	340	353	250	100	24	1,527	80.5
31 Richmond	M	30	50	57	72	55	47	14	4	329	75.6
	F	22	35	50	83	70	69	20	8	357	84.4
32 Vancouver	M	136	206	270	304	239	157	42	-	1,354	68.9
	F	83	119	201	295	341	295	152	32	1,518	84.2
33 North Shore/Coast Garibaldi	M	82	119	152	162	115	85	27	2	744	76.8
	F	39	68	126	158	174	174	68	17	824	85.5
41 South Vancouver Island	M	95	131	214	279	262	174	48	7	1,210	78.9
	F	68	92	182	346	352	248	126	29	1,443	86.8
42 Central Vancouver Island	M	96	150	200	218	153	89	22	2	930	75.9
	F	57	100	136	209	187	128	42	15	874	81.3
43 North Vancouver Island	M	43	40	58	74	44	25	11	1	296	64.2
	F	29	40	57	69	62	43	18	5	323	79.2
51 Northwest	M	20	34	39	29	19	7	2	-	150	66.1
	F	13	16	20	21	27	21	3	-	121	72.9
52 Northern Interior	M	55	50	56	46	24	20	6	-	257	57.4
	F	33	30	49	48	44	33	6	4	247	73.7
53 Northeast	M	14	24	25	27	16	4	2	-	112	59.3
	F	11	12	14	13	9	18	3	1	81	67.5
Provincial Total	M	1,198	1,698	2,208	2,508	1,988	1,241	337	46	11,224	72.6
	F	780	1,117	1,759	2,593	2,662	2,146	840	208	12,105	83.0

Note: %65+ is the percentage of deaths aged 65 or older out of all deaths to residents of the specified area.

Provincial Total includes residents with unknown addresses.

Vital Statistics Information Box

AGE AT DEATH OF THE OLDEST MALE AND FEMALE BRITISH COLUMBIA, 1986-2005

Gender	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Male	105	107	111	110	113	105	111	111	109	108	108	106	109	108	109	104	104	107	106	107
Female	110	107	110	110	110	113	107	110	110	108	109	111	113	108	111	113	111	107	108	110

Death Introduction

In recognition of the importance of mortality statistics for health planning and research a comprehensive array of tables is presented in this part of the report. Causes of death and/or age at death form the base of most tables because they are crucial components of health status for regional, national, and international comparisons. While other causes may have contributed to the death, the Underlying Cause of Death (see Glossary) is widely accepted as the 'main' or 'important' reason for the death and was used for these tabulations. All causes 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. The groups of codes used to define particular topics are noted in the tables.

Deaths – General Indicators

An overall view of the number of deaths by ICD-10 chapters by age group and gender is shown in Table 21. It provides a summary of the contribution of the main cause groups to total deaths in British Columbia in 2005. More detailed information for the same age groups appears in Appendix 2, which provides counts at the "3-character level" for causes responsible for at least five deaths. Although the causes shown in Appendix 2 are fairly specific, most ICD-10 codes consist of four or five characters, and are therefore even more detailed than the "roll ups" shown in Appendix 2. Neoplasms and diseases of the circulatory system accounted for most of the deaths in 2005 for both genders. Deaths in those two cause categories are further analysed in the following sections.



TABLE 21
CAUSES OF DEATH BY GENDER AND AGE
BRITISH COLUMBIA, 2005

ICD-10 Code(s)	Causes of Death	Gender	Age Group (in Years)											Total		
			<1	1-4	5-9	10-14	15-19	20-24	25-44	45-64	65-79	80+	Number	Percent	ASMR	
A00-B99	Certain infectious and parasitic diseases	M	1	-	-	-	-	1	73	122	77	75	349	2.3	1.43	
		F	2	1	1	-	-	1	24	40	45	103	217	1.5	0.69	
		T	3	1	1	-	-	2	97	162	122	178	566	1.9	1.05	
C00-D48	Neoplasms	M	-	-	1	2	5	8	86	1,113	2,021	1,369	4,605	29.8	18.67	
		F	-	2	-	2	3	6	126	969	1,513	1,344	3,965	27.2	13.24	
		T	-	2	1	4	8	14	212	2,082	3,534	2,713	8,570	28.5	15.59	
D50-D89	Diseases of blood and blood-forming organs,certain immune mechanisms	M	-	1	-	-	-	-	5	7	6	20	39	0.3	0.17	
		F	-	-	-	-	-	-	4	3	10	34	51	0.3	0.15	
		T	-	1	-	-	-	-	9	10	16	54	90	0.3	0.16	
E00-E90	Endocrine/nutritional/metabolic diseases	M	3	2	-	1	2	2	10	132	267	237	656	4.2	2.69	
		F	-	-	-	1	1	5	13	77	180	361	638	4.4	1.91	
		T	3	2	-	2	3	7	23	209	447	598	1,294	4.3	2.27	
F00-F99	Mental and behavioural disorders	M	-	-	-	-	-	-	21	58	87	198	364	2.4	1.49	
		F	-	-	-	-	-	2	11	30	49	406	498	3.4	1.25	
		T	-	-	-	-	-	2	32	88	136	604	862	2.9	1.38	
G00-G99	Diseases of the nervous system	M	4	1	2	2	1	6	11	65	163	242	497	3.2	2.05	
		F	-	-	1	2	2	1	9	66	135	385	601	4.1	1.69	
		T	4	1	3	4	3	7	20	131	298	627	1,098	3.7	1.86	
H00-H59	Diseases of the eye and adnexa	M	-	-	-	-	-	-	-	-	-	-	-	-	-	
		F	-	-	-	-	-	-	-	-	-	-	-	-	-	
		T	-	-	-	-	-	-	-	-	-	-	-	-	-	
H60-H95	Diseases of the ear and mastoid process	M	-	-	-	-	-	-	-	-	-	-	-	-	-	
		F	-	-	-	-	-	-	-	-	1	-	1	0.0	+	
		T	-	-	-	-	-	-	-	-	1	-	1	0.0	+	
I00-I99	Diseases of the circulatory system	M	1	1	-	1	1	5	80	685	1,512	2,402	4,688	30.3	19.05	
		F	1	-	-	-	-	4	34	261	968	3,671	4,939	33.9	13.00	
		T	2	1	-	1	1	9	114	946	2,480	6,073	9,627	32.1	15.78	
J00-J99	Diseases of the respiratory system	M	1	1	-	-	1	-	17	146	489	943	1,598	10.3	6.51	
		F	-	-	1	-	-	-	11	102	381	1,168	1,663	11.4	4.51	
		T	1	1	1	-	1	-	28	248	870	2,111	3,261	10.9	5.33	
K00-K93	Diseases of the digestive system	M	3	1	-	-	-	1	34	160	194	203	596	3.9	2.42	
		F	-	-	-	-	-	-	18	88	140	339	585	4.0	1.71	
		T	3	1	-	-	-	1	52	248	334	542	1,181	3.9	2.05	
L00-L99	Diseases of the skin and subcutaneous tissue	M	-	-	-	-	-	-	2	5	6	16	29	0.2	0.12	
		F	-	-	-	-	-	-	-	1	10	28	39	0.3	0.10	
		T	-	-	-	-	-	-	2	6	16	44	68	0.2	0.11	
M00-M99	Diseases of the musculoskeletal system and connective tissue	M	-	-	-	-	1	-	1	11	22	21	56	0.4	0.23	
		F	-	-	-	-	-	-	4	13	33	76	126	0.9	0.37	
		T	-	-	-	-	1	-	5	24	55	97	182	0.6	0.31	
N00-N99	Diseases of the genitourinary system	M	-	-	-	1	-	-	3	21	91	210	326	2.1	1.33	
		F	-	-	-	-	-	-	1	12	78	257	348	2.4	0.92	
		T	-	-	-	1	-	-	4	33	169	467	674	2.2	1.08	
O00-O99	Complications of pregnancy, childbirth and the puerperium	M	-	-	-	-	-	-	-	-	-	-	-	-	-	
		F	-	-	-	-	-	-	2	-	-	-	2	0.0	+	
		T	-	-	-	-	-	-	2	-	-	-	2	0.0	+	
P00-P96	Certain conditions originating in the perinatal period	M	53	-	-	-	-	-	-	-	-	-	53	0.3	0.37	
		F	37	-	1	-	-	-	-	-	-	-	38	0.3	0.28	
		T	90	-	1	-	-	-	-	-	-	-	91	0.3	0.33	
Q00-Q99	Congenital anomalies	M	21	3	1	1	-	2	6	7	2	1	44	0.3	0.25	
		F	16	2	-	2	1	1	1	8	4	4	39	0.3	0.21	
		T	37	5	1	3	1	3	7	15	6	5	83	0.3	0.23	
R00-R99	Symptoms, signs and ill-defined conditions, unknown causes	M	20	5	3	3	17	38	138	151	38	39	452	2.9	2.07	
		F	11	2	-	3	2	9	60	73	29	87	276	1.9	1.04	
		T	31	7	3	6	19	47	198	224	67	126	728	2.4	1.57	
V01-Y98	External causes	M	-	1	1	5	40	92	343	350	129	144	1,105	7.1	4.89	
		F	-	2	1	-	22	26	117	116	80	185	549	3.8	2.01	
		T	-	3	2	5	62	118	460	466	209	329	1,654	5.5	3.42	
All causes		M	107	16	8	16	68	155	830	3,033	5,104	6,120	15,457	100.0	63.75	
		F	67	9	5	10	31	55	435	1,859	3,656	8,449	14,576	100.0	43.09	
PROVINCIAL TOTAL		T	174	25	13	26	99	210	1,265	4,892	8,760	14,569	30,033	100.0	52.52	

Note: ASMR – Age Standardized Mortality Rate per 10,000 standard population (Canada 1991 Census). Total percentage may not add up to 100 due to rounding. + Denotes the number of cases is less than five. Non-residents are excluded. Total includes unknown gender. The output from ICD-10 mortality coding and underlying cause of death selection was modified in British Columbia to reflect the intent of certifiers in this jurisdiction and to provide greater continuity over time. Data using the standard ICD-10 rules for such categories as pneumonia/influenza, diabetes, or cancer should not be compared to the numbers shown above.

Leading Causes of Death

Important causes of death, that is, those that account for the greatest number of deaths, provide good measures of the health status of a population because they portray the relative risks for members of the population of dying from particular diseases ("natural causes") or external causes. Further, Age Standardized Mortality Rates permit comparisons to other jurisdictions or time periods where the same standard population was used. See Age Standardized Mortality Rate (ASMR) in the Glossary and an example of the computation method in the Methodology section.

Table 22 shows the twelve leading causes of death in B.C.. The two leftmost columns list the cause and the corresponding codes in ICD-10. For 2000-2004 and the year 2005, the following four values are shown: number of deaths, the rank by number of deaths, the ASMR, and the rank by ASMR. The numbers demonstrate the absolute impact of each cause of death by showing how many individuals died from that cause in B.C. during the time period. The rows of the table are in the order of the 2005 ASMR rank.

For 2005 the twelve leading causes of death shown in Table 22 were responsible for 85.0% of all deaths. The top three causes of death were the same for both time periods, not only in the rank by number of deaths but in the ASMR rank as well; they are (in non-clinical terms) cancer, heart disease, and stroke. For 2005 these three leading causes account for 57.6% of deaths.

Figure 35 shows visually the statistics in the Number column for 2005 in Table 22. It shows clearly the impact of cancer and heart disease on our population: causing over half (50.2%) of the deaths.

Table 23 shows the five leading causes of death in the seven different age groups. Over half of the deaths under one year were due to conditions originating in the perinatal period (the period before, during, or shortly after birth) and seven out of ten of those (72.1%) occurred less than seven days after birth (see Table 27). Except for certain infectious and parasitic diseases, a substantially greater number of males died from each of the causes in Table 23 compared to females. Infant mortality (less than 1 year) is more fully examined in the next section.

Unintentional injuries were a major cause of death, particularly for males, in each of the three age groups from 1 year to 44 years of age. Those causes include events such as motor vehicle accidents, falls, and unintentional poisonings, but examine the specific list by using ICD codes in Appendix 2. Unintentional injuries cause particular concern because they are usually preventable, the victims are young, and the death is often sudden. Premature deaths are further considered in the section on Potential Years of Life Lost.

Among children 1-14 years old, congenital malformations and chromosome abnormalities caused the same number of deaths as unintentional injuries as shown in Table 23. Counts of deaths due to unintentional injuries, suicide, and homicide in the current year underestimate the actual figures due to known delays in determining causes of death. See the Information Box Updated External Causes of Death for more details.

Between 15 and 24 years of age, suicides ranked second as the leading cause after unintentional injuries (see Table 23). There were substantially fewer female deaths due to these two causes, nevertheless the two causes accounted for half of all deaths (56.3%) in this age group. Given the large proportion of suicides in this age group, awareness and prevention are important and a number of programs have been established to address the issue.

Unintentional injuries remained the leading cause of death among residents from 25 to 44 years and again, there were substantially fewer female deaths as shown in Table 23. However, malignant neoplasms caused a substantially greater number of female deaths compared to males and the largest proportion of female deaths in this age group.

Cancers (malignant neoplasms) were the leading cause for those between 45 and 64 years and they claimed a somewhat larger number of males compared to females, although a greater proportion of females in this age group died of cancer (see Table 23). The proportions were different because the remaining leading causes in this age group; cardiovascular disease, unintentional injuries, liver disease, and diabetes; claimed a substantially greater number of males.

Between 65 and 84 years one in three male and female deaths was due to malignant neoplasms (34.3%), followed by cardiovascular disease which claimed about one in five males and females (21.6%). For those 85 years and older, the relative importance of those two cause categories was reversed with cardiovascular disease claiming about one in three male and female deaths (31.1%).

A review of the leading causes in each age group in Table 23 will confirm the importance of cancer as a cause of death for British Columbians. It was ranked within the first three leading causes in each age group except infants and children aged 1 to 14 years old, and was the leading cause of death in B.C. in 2000-2004, as well as in 2005 (see Table 22 and Figure 35). Although cancer was the leading cause, the age standardized rate for all cancers and for lung cancer declined over the last two decades (see Figures 18 and 19).

TABLE 22
TWELVE LEADING CAUSES OF DEATH
BRITISH COLUMBIA, 2000-2004 AND 2005

Cause of Death	ICD-10 Code(s)	2000-2004				2005			
		Number	Rank	ASMR	Rank	Number	Rank	ASMR	Rank
Malignant neoplasms	C00-C97	39,797	1	15.79	1	8,367	1	15.24	1
Cardiovascular disease	I00-I51	34,404	2	12.63	2	6,714	2	11.00	2
Cerebrovascular diseases	I60-I69	11,219	3	4.03	3	2,220	3	3.61	3
Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	6,536	4	2.88	4	1,206	6	2.45	4
Chronic Pulmonary Disease	J40-J44	6,073	6	2.27	5	1,285	5	2.18	5
Pneumonia/Influenza	J10-J181, J188, J189	6,177	5	2.16	6	1,342	4	2.10	6
Diabetes mellitus	E10-E14	4,311	7	1.65	7	1,021	7	1.78	7
Other diseases of digestive system	K00-K67, K80-K93	3,767	8	1.39	8	800	8	1.33	8
Other circulatory system diseases	I70-I99	3,347	9	1.26	9	693	9	1.17	9
Other diseases of the respiratory system	J00-J06,	2,453	12	0.91	12	634	11	1.05	10
Urinary system diseases	N00-N39, N990, N991, N995	2,648	11	0.96	11	656	10	1.05	11
Other disorders of the nervous system	G00-G25, G31-G99	2,934	10	1.16	10	579	12	1.05	12
Other causes ¹		19,467		7.86		4,516		8.50	
TOTAL (All causes of death)		143,133		54.95		30,033		52.52	

Note: ¹Other causes includes undetermined and pending.

ASMR – Age Standardized Mortality Rate per 10,000 standard population (Canada 1991 Census).

The ASMR in the current year determined the order in which the causes of death are presented.

Leading causes are ranked according to unrounded ASMR. As a result, causes of death with identical rounded ASMRs are not shown in this table.

Non-residents are excluded. The output from ICD-10 mortality coding and underlying cause of death selection was modified in British Columbia to reflect the intent of certifiers in this jurisdiction and to provide greater continuity over time.

Data using the standard ICD-10 rules for such categories as pneumonia/influenza, diabetes, or cancer should not be compared to the numbers shown above.

FIGURE 35
TWELVE LEADING CAUSES OF DEATH
BRITISH COLUMBIA, 2005

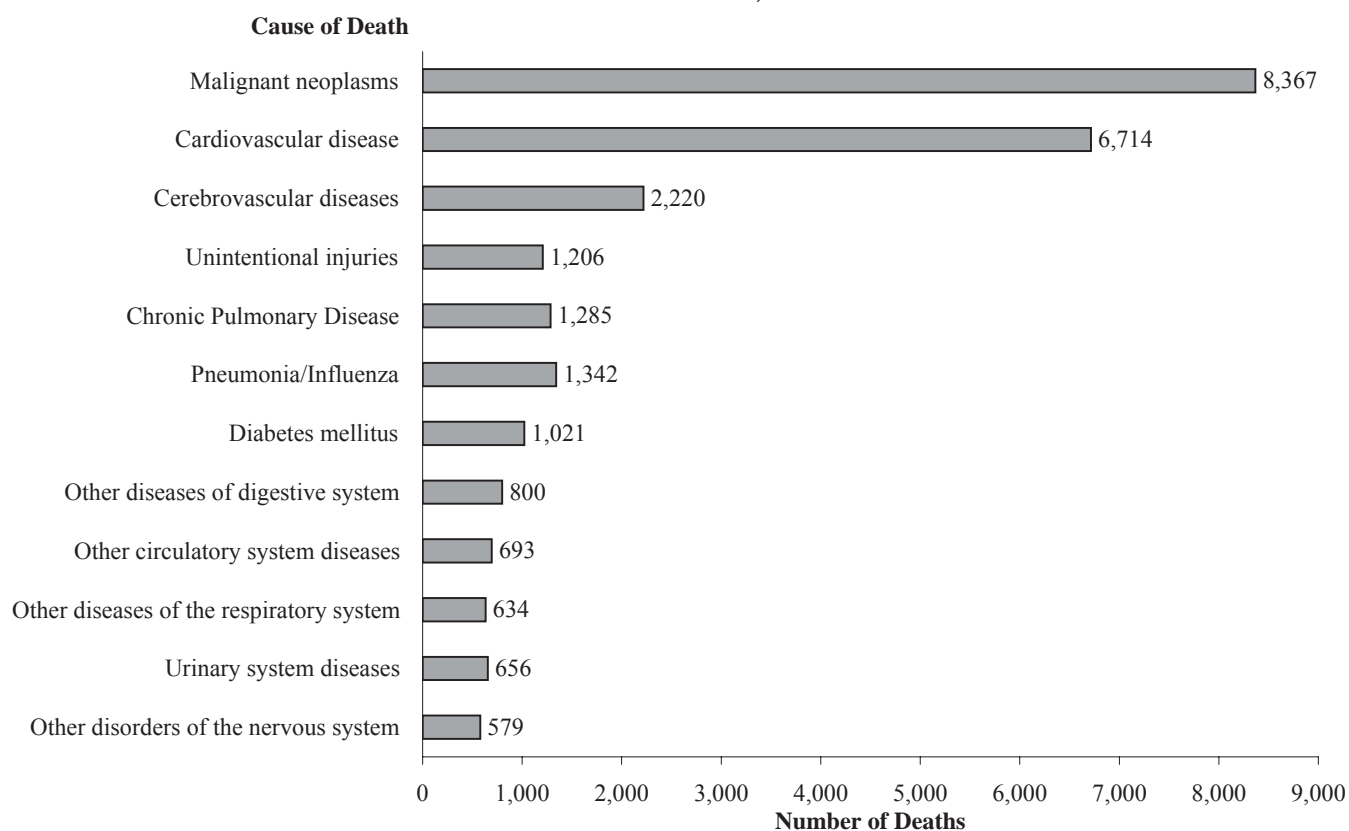


TABLE 23
LEADING CAUSES OF DEATH BY AGE AND GENDER
 BRITISH COLUMBIA, 2005

Cause of Death	ICD-10 Code(s)	Males		Females		Total	
		Number	Percent	Number	Percent	Number	Percent
Under 1 Year Old							
1. Certain conditions originating in the perinatal period	P00-P96	53	49.5	37	55.2	90	51.7
2. Congenital malformations and chromosome abnormalities	Q00-Q99	21	19.6	16	23.9	37	21.3
3. Sudden infant death syndrome (SIDS)	R95	6	5.6	4	6.0	10	5.7
4. Other disorders of the nervous system	G00-G25, G31-G99	4	3.7	-	-	4	2.3
5. Certain infectious and parasitic diseases	A00-B99	1	0.9	2	3.0	3	1.7
5. Metabolic disorders	E70-E89	3	2.8	-	-	3	1.7
5. Other diseases of digestive system	K00-K67, K80-K93	3	2.8	-	-	3	1.7
Other causes ¹		16	15.0	8	11.9	24	13.8
All causes		107	100.0	67	100.0	174	100.0
1-14 Years Old							
1. Congenital malformations and chromosome abnormalities	Q00-Q99	5	12.5	4	16.7	9	14.1
2. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	6	15.0	3	12.5	9	14.1
3. Other disorders of the nervous system	G00-G25, G31-G99	5	12.5	3	12.5	8	12.5
4. Malignant neoplasms	C00-C97	3	7.5	4	16.7	7	10.9
5. Metabolic disorders	E70-E89	3	7.5	1	4.2	4	6.3
Other causes ¹		18	45.0	9	37.5	27	42.2
All causes		40	100.0	24	100.0	64	100.0
15-24 Years Old							
1. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	92	41.3	37	43.0	129	41.7
2. Suicide	X60-X84, Y870	34	15.2	11	12.8	45	14.6
3. Malignant neoplasms	C00-C97	13	5.8	9	10.5	22	7.1
4. Other disorders of the nervous system	G00-G25, G31-G99	7	3.1	3	3.5	10	3.2
5. Cardiovascular disease	I00-I51,	4	1.8	4	4.7	8	2.6
Other causes ¹		73	32.7	22	25.6	95	30.7
All causes		223	100.0	86	100.0	309	100.0
25-44 Years Old							
1. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	230	27.7	68	15.6	298	23.6
2. Malignant neoplasms	C00-C97	83	10.0	123	28.3	206	16.3
3. Suicide	X60-X84, Y870	100	12.0	43	9.9	143	11.3
4. Certain infectious and parasitic diseases	A00-B99	73	8.8	24	5.5	97	7.7
5. Cardiovascular disease	I00-I51	64	7.7	20	4.6	84	6.6
Other causes ¹		280	33.7	157	36.1	437	34.5
All causes		830	100.0	435	100.0	1,265	100.0

(concluded on next page)

Note: Order of leading causes based on total deaths in the specified age group.

¹Other causes includes undetermined and pending. Total percentage may not add up to 100 due to rounding. Non-residents are excluded. The output from ICD-10 mortality coding and underlying cause of death selection was modified in British Columbia to reflect the intent of certifiers in this jurisdiction and to provide greater continuity over time. Data using the standard ICD-10 rules for such categories as pneumonia/influenza, diabetes, or cancer should not be compared to the numbers shown above.

TABLE 23 – *concluded*
LEADING CAUSES OF DEATH BY AGE AND GENDER
 BRITISH COLUMBIA, 2005

Cause of Death	ICD-10 Code(s)	Males		Females		Total	
		Number	Percent	Number	Percent	Number	Percent
45-64 Years Old							
1. Malignant neoplasms	C00-C97	1,095	36.1	955	51.4	2,050	41.9
2. Cardiovascular disease	I00-I51	514	16.9	170	9.1	684	14.0
3. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	220	7.3	79	4.2	299	6.1
4. Diseases of liver	K70-K76	122	4.0	50	2.7	172	3.5
5. Diabetes mellitus	E10-E14	105	3.5	60	3.2	165	3.4
Other causes ¹		977	32.2	545	29.3	1,522	31.1
All causes		3,033	100.0	1,859	100.0	4,892	100.0
65-84 Years Old							
1. Malignant neoplasms	C00-C97	2,660	34.9	2,093	33.5	4,753	34.3
2. Cardiovascular disease	I00-I51	1,735	22.8	1,258	20.1	2,993	21.6
3. Cerebrovascular diseases	I60-I69	483	6.3	529	8.5	1,012	7.3
4. Chronic Pulmonary Disease	J40-J44	423	5.6	386	6.2	809	5.8
5. Diabetes mellitus	E10-E14	312	4.1	270	4.3	582	4.2
Other causes ¹		1,999	26.3	1,713	27.4	3,712	26.8
All causes		7,612	100.0	6,249	100.0	13,861	100.0
85 Years and Older							
1. Cardiovascular disease	I00-I51	1,089	30.1	1,853	31.6	2,942	31.1
2. Malignant neoplasms	C00-C97	644	17.8	685	11.7	1,329	14.0
3. Cerebrovascular diseases	I60-I69	300	8.3	719	12.3	1,019	10.8
4. Pneumonia/Influenza	J10-J181, J188, J189	267	7.4	501	8.6	768	8.1
5. Vascular/senile dementia	F01, F03	129	3.6	297	5.1	426	4.5
Other causes ¹		1,183	32.8	1,801	30.8	2,984	31.5
All causes		3,612	100.0	5,856	100.0	9,468	100.0

Notes for this table are on previous page.

Infant Mortality

Infant mortality (number of deaths less than 1 year old per 1,000 live births) is commonly used as an international indicator of a country's general standard of living and health status. A society's infant mortality rate is considered an important indicator of its health status because infant mortality is associated with socio-economic conditions, access to health care, and the health status of women of childbearing age. British Columbia had lower infant mortality rates than Canada as a whole from 1992 until 2003, the most recent year for Canadian infant mortality rates (see Table 4). There were 174 infant deaths in B.C. in 2005 or 4.28 deaths per 1,000 live births. The rate 20 years ago was around eight per 1,000 live births and that has been progressively reduced to about four per 1,000 in the last few years.

Table 24 shows the number of infants who died in 2005 by birth weight (in three bands) and the mother's age group. The first column has the mother's age groups from less than 20 years up to 40 years or older, and the infants' birth weights are grouped across the top of the table. Across the bottom and down the right side, the table shows row and column totals, percents, and rates per 1,000 live births. The difference in infant mortality rates across the three birth weight categories is quite distinct: for infants with birth weights of 2,500 grams or more about one in 650 dies in their first year. Infants in the next birth weight category down suffer nearly a seven fold increase in death rate over heavier babies with one in 95 dying and infants less than 1,500 grams have over a 150 fold increase, with one in four dying within a year. Looking more positively, three out of four of the 373 infants born in 2005 weighing less than 1500 grams (75.9% see Tables 13 and 14) survived till their first birthday.

When these infant deaths are broken out across mother's age, the effect is not so dramatic. The one thing that is consistently seen in recent decades is that the infant mortality rate to mothers below the age of 20 years is about twice the rate to older women (see Figure 14). Fortunately, during the same period, the rates for all ages (including those under 20 years) have shown a downward trend.

Table 25 repeats the birth weight categories and general format shown in Table 24 but replaces maternal age groups with gestational periods. As mentioned in connection with Table 13, birth weight for gestational age is an important predictor of the health status of newborns and their subsequent well being. Table 25 confirms that importance with regard to infant mortality. Of the 174 infant deaths in 2005 only 50 were term births (37 to 41 weeks) with weights of 2,500 grams or more. There was a dramatic increase in infant mortality as birth weight and gestational age decreased. Almost half (79 out of 174 or 45.4%) the infant deaths were extremely premature (less than 28 weeks) and low birth weight (less than 2,500 grams), but these births accounted for only 0.5% of all 2005 live births. Almost two thirds of infant deaths were low birth weight (63.2%) or premature (65.5% less than 37 weeks) and three out of five (59.8%) were both low birth weight and premature.

Table 26 shows infant mortality in each Local Health Area (LHA) for 2000-2004 and for the year 2005. The two columns on the left show the LHA number and name. The three columns for 2000-2004 show the number of infant deaths in the LHA (Observed Deaths), the ratio, and the rate of infant deaths per 1,000 live births. The ratio is the number of observed deaths divided by the number that would be expected if the LHA had the provincial rate per 1,000 live births. See Observed Deaths in the Glossary and Observed versus Expected Ratio in Methodology section for an example of the computation method. For 2005, the table indicates the number of deaths in three age ranges (0-6 days, 0-27 days, and 28-364 days), the total number of infant deaths (0-364 days), and the infant death rate per 1,000 live births. The most outstanding characteristic of this table is the small numbers in the observed deaths columns. This means a very small increase or decrease in infant deaths in a single year can result in quite large shifts in the rate per 1,000 live births.

As might be expected from the small numbers that the LHA ratio values are based on, Figure 36 does not show any obvious geographical pattern. Neither north-south, interior-coastal, or urban-rural distinctions are apparent.

Causes of infant deaths and stillbirths are shown in Table 27. The numbers are small, so the rates are per 10,000 live births for infant deaths and per 10,000 total births (live births plus stillbirths) in the case of stillbirths. Infant deaths are often sub-divided into early neonatal (less than 7 days), late neonatal (7-27 days), and post-neonatal (28-364 days) deaths but note that, in this table, the time periods are different from those in Table 26. Three out of five infant deaths (104 or 59.8%) in 2005 occurred in the early neonatal period and 91.3% of them (95) were due to congenital anomalies or perinatal conditions. Bear in mind that Table 23 indicated that perinatal conditions claimed about an equal number of male and female infants but congenital anomalies claimed twice the number of female infants.

TABLE 24
**INFANT MORTALITY BY AGE OF MOTHER
 AND BIRTH WEIGHT**
 BRITISH COLUMBIA, 2005

Age of Mother	Birth Weight (in Grams)				Total		
	<1500	1500-2499	2500+	N.S.	Number	Percent	Rate
<20	4	2	6	-	12	6.9	9.00
20-24	13	3	19	1	36	20.7	5.85
25-29	25	5	17	-	47	27.0	4.21
30-34	29	5	9	-	43	24.7	3.24
35-39	15	3	5	2	25	14.4	3.51
40+	4	2	3	-	9	5.2	5.57
N.S.	-	-	-	2	2	1.1	
TOTAL	90	20	59	5	174	100.0	4.28
Percent	51.7	11.5	33.9	2.9	100.0		
Rate	243.24	10.53	1.54		4.28		

Note: Infant Mortality – Age at death less than one year.
 Rate per 1,000 live births in the specified age or birth weight group.
 +Denotes the number of cases is less than five.
 Total percentage may not add up to 100 due to rounding.
 Non-residents are excluded.
 N.S. – Not stated.

TABLE 25
**INFANT MORTALITY BY GESTATIONAL AGE
 AND BIRTH WEIGHT**
 BRITISH COLUMBIA, 2005

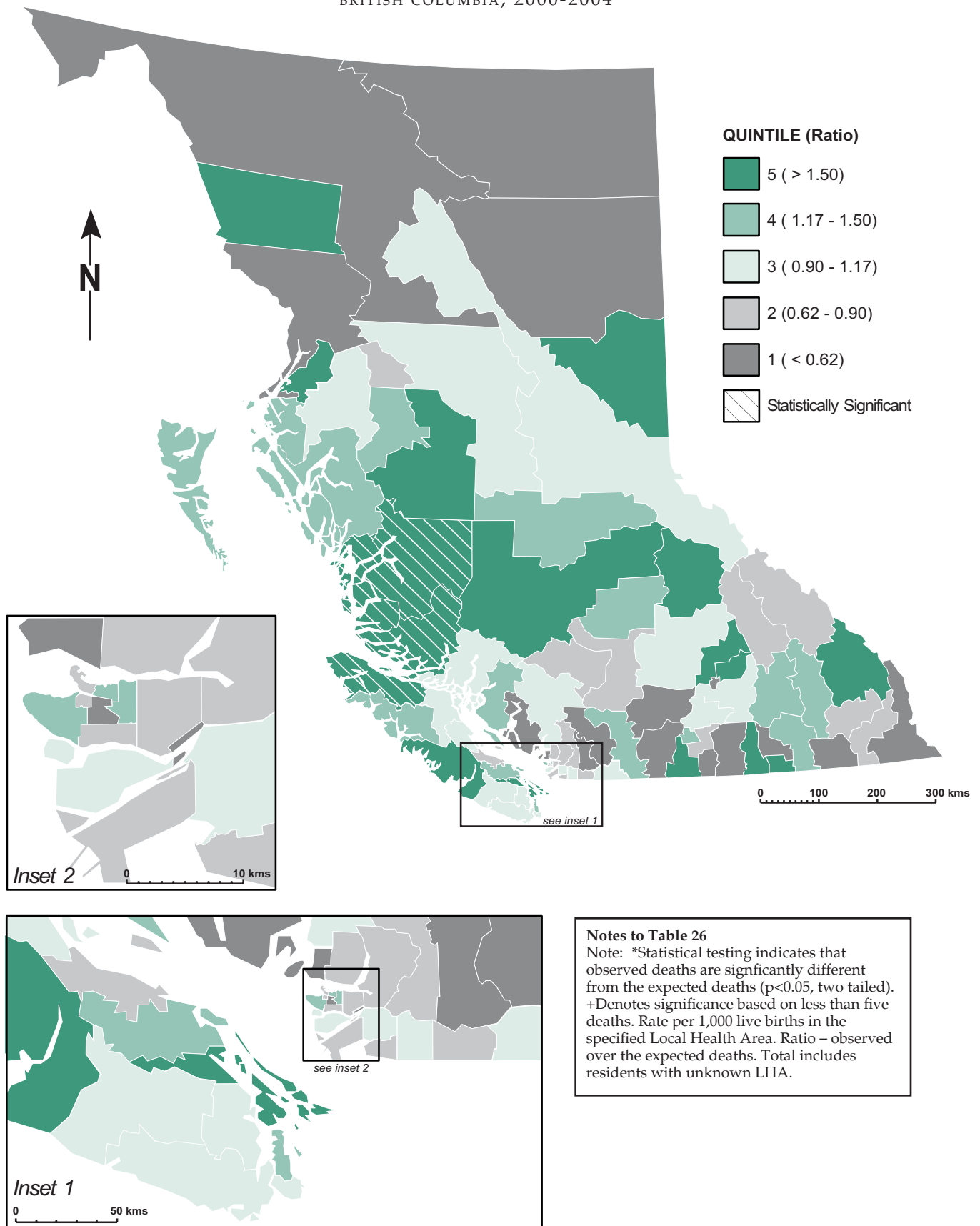
Gestational Age (In Weeks)	Birth Weight (in Grams)				Total		
	<1500	1500-2499	2500+	N.S.	Number	Percent	Rate
<20	5	-	-	-	5	2.9	833.33
20-27	73	1	-	1	75	43.1	414.36
28-36	12	13	8	1	34	19.5	11.61
37-41	-	5	50	1	56	32.2	1.51
42+	-	1	1	-	2	1.1	+
N.S.	-	-	-	2	2	1.1	
TOTAL	90	20	59	5	174	100.0	4.28
Percent	51.7	11.5	33.9	2.9	100.0		
Rate	243.24	10.53	1.54		4.28		

Note: Infant Mortality – Age at death less than one year.
 Rate per 1,000 live births in the specified age or birth weight group.
 + Denotes the number of cases is less than five.
 Total percentage may not add up to 100 due to rounding.
 Non-residents are excluded.
 N.S. – Not stated.

Local Health Area		2000–2004			2005				
		Observed Deaths	Ratio (p)	Rate	Age at Death (in Days)			Total	
					0–6	0–27	28–364	Number	Rate
001	Fernie	-	-	-	1	1	-	1	8.33
002	Cranbrook	4	0.87	3.59	-	-	-	-	-
003	Kimberley	1	0.88	3.61	-	-	-	-	-
004	Windermere	2	1.50	6.19	-	-	1	1	13.51
005	Creston	-	-	-	-	-	-	-	-
006	Kootenay Lake	1	1.35	5.56	-	-	-	-	-
007	Nelson	6	1.33	5.47	-	-	-	-	-
009	Castlegar	-	-	-	1	1	-	1	11.11
010	Arrow Lakes	1	1.28	5.26	-	-	-	-	-
011	Trail	5	1.76	7.23	-	1	-	1	6.37
012	Grand Forks	3	2.24	9.20	1	1	1	2	33.90
013	Kettle Valley	-	-	-	-	-	-	-	-
014	Southern Okanagan	-	-	-	-	-	-	-	-
015	Penticton	5	0.84	3.47	3	4	-	4	13.33
016	Keremeos	2	2.45	10.10	-	-	-	-	-
017	Princeton	-	-	-	-	-	-	-	-
018	Golden	1	0.77	3.16	1	1	-	1	12.82
019	Revelstoke	1	0.63	2.58	1	1	2	3	41.10
020	Salmon Arm	7	1.57	6.45	2	3	1	4	15.38
021	Armstrong - Spallumcheen	-	-	-	-	-	-	-	-
022	Vernon	10	0.94	3.88	2	2	-	2	3.75
023	Central Okanagan	25	0.91	3.74	4	5	1	6	4.28
024	Kamloops	21	1.15	4.74	1	1	1	2	2.29
025	100 Mile House	3	1.37	5.63	-	-	-	-	-
026	North Thompson	2	2.11	8.70	-	-	-	-	-
027	Cariboo - Chilcotin	12	1.93	7.95	1	2	-	2	7.46
028	Quesnel	7	1.50	6.16	-	-	-	-	-
029	Lillooet	1	0.86	3.52	-	-	-	-	-
030	South Cariboo	1	0.89	3.68	1	1	1	2	27.40
031	Merritt	1	0.46	1.89	-	-	-	-	-
032	Hope	2	1.29	5.32	-	-	1	1	13.33
033	Chilliwack	18	1.06	4.35	4	4	-	4	4.43
034	Abbotsford	29	0.88	3.63	4	5	-	5	3.12
035	Langley	23	0.92	3.78	2	2	1	3	2.50
037	Delta	16	0.79	3.25	2	2	1	3	3.32
038	Richmond	29	0.90	3.72	1	1	2	3	1.91
040	New Westminster	7	0.53	2.17	1	1	-	1	1.61
041	Burnaby	35	0.82	3.39	2	2	-	2	0.96
042	Maple Ridge	12	0.66	2.73	2	3	1	4	4.77
043	Coquitlam	37	0.86	3.53	7	8	3	11	5.53
044	North Vancouver	17	0.64	2.63	2	3	1	4	3.40
045	West Vancouver-Bowen Is.	3	0.48	1.99	2	2	-	2	6.69
046	Sunshine Coast	2	0.54	2.20	-	-	-	-	-
047	Powell River	4	1.29	5.33	1	1	-	1	7.35
048	Howe Sound	8	0.99	4.08	2	2	1	3	7.87
049	Bella Coola Valley	4	4.08	16.81	-	-	-	-	-
050	Queen Charlotte	2	1.46	6.02	-	-	-	-	-
051	Snow Country	-	-	-	-	-	-	-	-
052	Prince Rupert	5	1.18	4.84	-	-	-	-	-
053	Upper Skeena	1	0.65	2.70	-	-	1	1	13.51
054	Smithers	7	1.48	6.10	3	3	-	3	12.93
055	Burns Lake	3	1.61	6.62	-	-	-	-	-
056	Nechako	5	1.07	4.40	1	1	1	2	8.70
057	Prince George	21	0.97	4.00	5	5	2	7	6.52
059	Peace River South	11	1.91	7.87	-	-	-	-	-
060	Peace River North	5	0.49	2.03	1	1	-	1	1.88
061	Greater Victoria	40	1.13	4.64	4	4	3	7	3.98
062	Sooke	11	0.94	3.88	3	3	-	3	4.59
063	Saanich	12	1.46	6.01	1	1	1	2	4.84
064	Gulf Islands	5	2.75	11.34	-	-	-	-	-
065	Cowichan	11	1.10	4.55	1	2	1	3	6.49
066	Lake Cowichan	1	1.12	4.63	-	-	-	-	-
067	Ladysmith	6	2.16	8.88	-	1	-	1	6.02
068	Nanaimo	20	1.22	5.03	2	3	3	6	7.35
069	Qualicum	4	0.86	3.55	-	-	-	-	-
070	Alberni	10	1.67	6.86	2	2	-	2	5.95
071	Courtenay	11	1.17	4.80	-	-	1	1	2.14
072	Campbell River	8	1.07	4.42	1	2	1	3	9.15
075	Mission	5	0.58	2.40	2	2	2	4	8.99
076	Agassiz - Harrison	1	0.56	2.31	-	-	-	-	-
077	Summerland	2	1.37	5.62	-	-	-	-	-
078	Enderby	3	2.51	10.31	-	-	-	-	-
080	Kitimat	3	1.38	5.68	-	-	-	-	-
081	Fort Nelson	1	0.52	2.12	-	-	-	-	-
083	Central Coast	5	10.85	44.64	-	-	-	-	-
084	Vancouver Island West	1	1.44	5.92	-	-	-	-	-
085	Vancouver Island North	12	3.55	14.60	-	-	-	-	-
087	Stikine	-	-	-	-	-	-	-	-
088	Terrace	6	1.10	4.51	-	-	2	2	8.26
092	Nisga'a	3	4.86	20.00	-	-	-	-	-
094	Telegraph Creek	1	5.40	22.22	-	-	-	-	-
161	Vancouver - City Centre	10	0.63	2.59	1	1	1	2	2.31
162	Vancouver - Downtown E.side	13	1.38	5.69	-	-	1	1	2.02
163	Vancouver - North East	30	1.31	5.39	3	3	1	4	3.53
164	Vancouver - Westside	26	1.19	4.88	1	2	2	4	3.58
165	Vancouver - Midtown	12	0.57	2.36	2	3	2	5	5.05
166	Vancouver - South	16	0.62	2.55	4	6	-	6	4.63
201	Surrey	104	1.16	4.76	15	18	6	24	5.31
202	South Surrey/White Rock	8	0.79	3.25	1	1	-	1	1.83
PROVINCIAL TOTAL		829	1.00	4.12	104	124	50	174	4.28

Notes for this table follow the map.

FIGURE 36
INFANT MORTALITY BY LOCAL HEALTH AREA
 BRITISH COLUMBIA, 2000-2004



Note: Ratio - Observed over the expected. Refer to Figure 1 to clarify geographical location of Local Health Areas.

TABLE 27
SELECTED CAUSES OF INFANT DEATHS AND STILLBIRTHS
 BRITISH COLUMBIA, 2005

Cause of Death	ICD-10 Code(s)	Infant Deaths – Age Group (in Days)					Stillbirths	
		<7	7–27	28–364	Total	Rate ¹	Number	Rate ²
Congenital anomalies								
- of the nervous system	Q00-Q07	1	1	1	3	0.74	2	0.49
- of the eye, ear, face & neck	Q10-Q18	1	-	-	1	0.25	-	-
- of the heart and circulatory system	Q20-Q28	6	3	4	13	3.20	1	0.24
- of the respiratory system	Q30-Q34	-	1	1	2	0.49	-	-
- of the digestive system	Q35-Q45	1	-	-	1	0.25	1	0.24
- of the genital organs	Q50-Q56	-	-	-	-	-	-	-
- of the urinary system	Q60-Q64	2	-	-	2	0.49	2	0.49
- of the musculoskeletal system	Q65-Q79	-	-	1	1	0.25	-	-
Other and multiple system syndromes	Q80-Q89	2	1	1	4	0.98	7	1.71
Chromosomal anomalies	Q90-Q99	7	2	1	10	2.46	7	1.71
Total deaths due to congenital anomalies	Q00-Q99	20	8	9	37	9.10	20	4.88
Perinatal conditions								
Infant affected by maternal factors	P00-P04	28	-	-	28	6.89	119	29.05
Premature/postmature and fetal growth disorders	P05-P08	24	4	1	29	7.13	6	1.46
Birth trauma	P10-P15	1	-	-	1	0.25	-	-
Respiratory and cardiovascular disorders	P20-P29	3	-	3	6	1.48	5	1.22
Infections specific to the perinatal period	P35-P39	2	2	1	5	1.23	-	-
Hemorrhage and hematological disorders	P50-P61	3	1	-	4	0.98	5	1.22
Transitory endocrine and metabolic disorders	P70-P74	-	-	-	-	-	2	0.49
Digestive system disorders of fetus and newborn	P75-P78	-	1	1	2	0.49	-	-
Other disorders originating in the perinatal period	P80-P94, P96	14	1	-	15	3.69	113	27.58
Fetal death of unknown cause	P95	-	-	-	-	-	43	10.50
Total deaths due to perinatal conditions	P00-P96	75	9	6	90	22.14	293	71.52
Pneumonia/influenza	J10-J18.1, J18.8-J18.9	-	-	1	1	0.25	-	-
Sudden infant death syndrome (SIDS) ³	R95	-	-	10	10	2.46	-	-
Other causes ³		9	3	24	36	8.86	-	-
TOTAL		104	20	50	174	42.80	313	76.40

Note: ¹Rate per 10,000 live births.

²Rate per 10,000 total births (live births plus stillbirths).

³ Some of the infant deaths that were still under investigation (ICD-10 code R99) may later be identified as SIDS. Non-residents are excluded.

Deaths Due to HIV

Compared to other infectious diseases Human Immunodeficiency Virus (HIV) mortality reached unprecedented rates in recent decades. Continued monitoring of HIV mortality is an important measure of the effectiveness of our public health initiatives. Mortality peaked in 1994 but there has been a fluctuating decline since then.

Table 28 shows the number of deaths due to HIV broken out by gender and six age groups for each of the 16 years from 1989-2005. For each year the table shows the number of male, female, and total deaths due to HIV where the decedents were less than 20 years of age, in their 20s, 30s, 40s, 50s, and 60 or over. The percentage of the total deaths in each year is shown for each age group. At the bottom of the table are counts and percentages for the entire sixteen year period. The Total column on the right shows the number of females dying from HIV disease increased rapidly from low single digit levels in the early 1990s to 19 or more in recent years. The number of male deaths also rose rapidly from 1991 to 1994, then fell steeply until 1997, and since then it has fluctuated between 84 and 104 deaths per year until 2005 when there were 120 male deaths from HIV. Close inspection of the age group percentages in each year indicated that the age at death from HIV has risen over this 16 year span.

Figure 37 shows clearly that in the period from 2000-2005 most deaths due to HIV disease in B.C. occurred in individuals who were in their 30s, 40s, and 50s, with the greatest toll being taken in those between 40 and 49 years.

Although there were fluctuations in the yearly numbers of HIV deaths in Table 29, there was a clear increasing trend until 1994 after which the numbers have generally decreased each year. The high point was also apparent in each of the Health Service Delivery Areas (HSDA) where frequencies permitted trend comparisons. The Vancouver HSDA had the largest population so the highest number would be expected in that area, but the rate per 100,000 population (19.3) was also highest in Vancouver. In 2005 there were 78 deaths due to HIV disease in that area, far higher than any other HSDA. Bear in mind that death statistics are based on the usual residence of the deceased, and people who die from HIV disease are usually diagnosed with the condition long before their death, so high numbers in Vancouver might simply reflect availability of services for people with HIV disease.

FIGURE 37
DEATHS DUE TO HIV DISEASE BY AGE GROUP
BRITISH COLUMBIA, 2000-2005

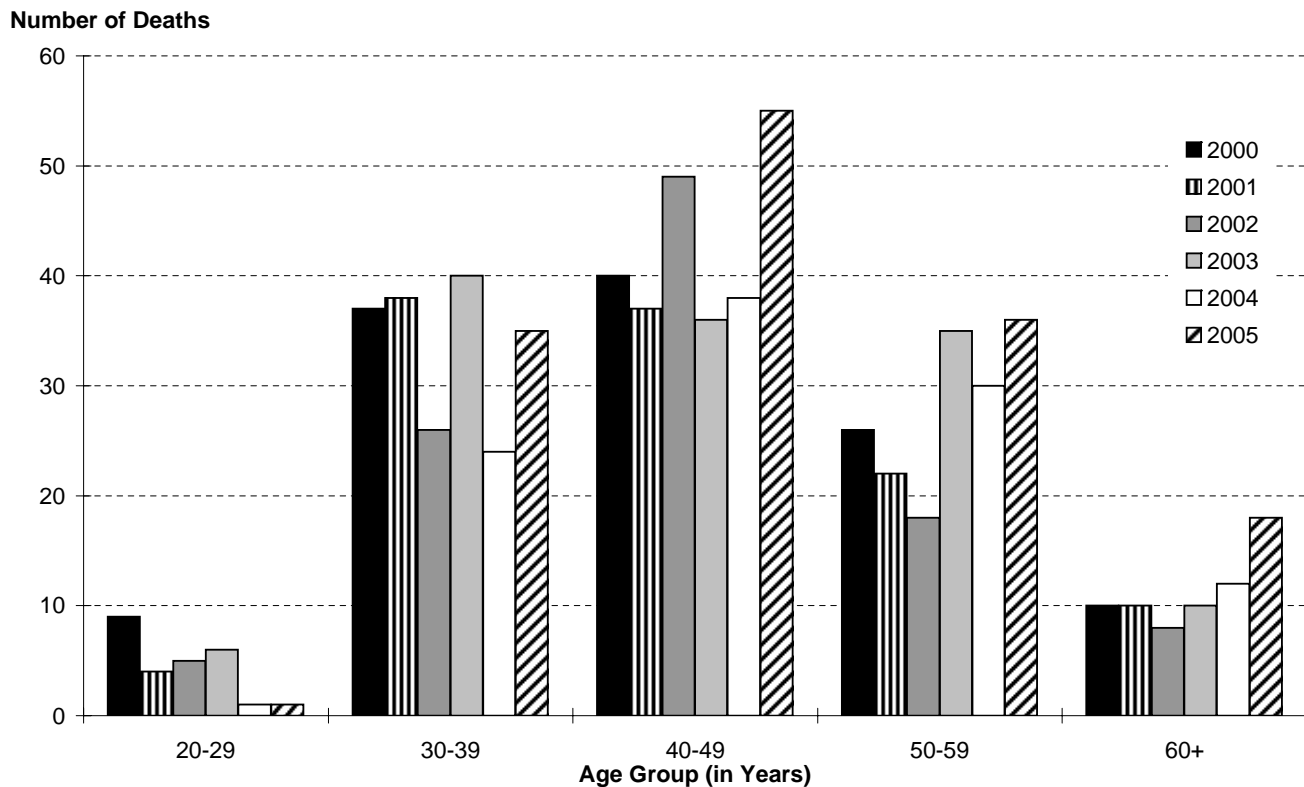


TABLE 28
DEATHS DUE TO HIV DISEASE BY
GENDER AND AGE GROUP
BRITISH COLUMBIA, 1990–2005

Year of Death	Gender	Age at Death (in Years)						Total
		<20	20–29	30–39	40–49	50–59	60+	
1990	M	-	17	71	73	18	6	185
	F	-	1	-	1	1	-	3
	T	-	18	71	74	19	6	188
	Percent	-	9.6	37.8	39.4	10.1	3.2	100.0
1991	M	-	14	79	54	23	6	176
	F	-	-	1	-	-	1	2
	T	-	14	80	54	23	7	178
	Percent	-	7.9	44.9	30.3	12.9	3.9	100.0
1992	M	-	28	101	89	22	5	245
	F	-	1	3	2	-	-	6
	T	-	29	104	91	22	5	251
	Percent	-	11.6	41.4	36.3	8.8	2.0	100.0
1993	M	-	28	114	95	34	15	286
	F	-	3	8	2	1	1	15
	T	-	31	122	97	35	16	301
	Percent	-	10.3	40.5	32.2	11.6	5.3	100.0
1994	M	-	19	147	101	29	12	308
	F	2	5	10	2	2	2	23
	T	2	24	157	103	31	14	331
	Percent	0.6	7.3	47.4	31.1	9.4	4.2	100.0
1995	M	-	17	116	103	31	9	276
	F	-	6	7	4	1	1	19
	T	-	23	123	107	32	10	295
	Percent	-	7.8	41.7	36.3	10.8	3.4	100.0
1996	M	3	9	106	73	34	10	235
	F	-	4	6	6	-	1	17
	T	3	13	112	79	34	11	252
	Percent	1.2	5.2	44.4	31.3	13.5	4.4	100.0
1997	M	-	11	40	33	11	6	101
	F	-	2	7	4	1	2	16
	T	-	13	47	37	12	8	117
	Percent	-	11.1	40.2	31.6	10.3	6.8	100.0
1998	M	-	6	32	44	7	4	93
	F	-	4	8	3	1	1	17
	T	-	10	40	47	8	5	110
	Percent	-	9.1	36.4	42.7	7.3	4.5	100.0
1999	M	1	3	37	32	13	4	90
	F	-	-	4	7	2	-	13
	T	1	3	41	39	15	4	103
	Percent	1.0	2.9	39.8	37.9	14.6	3.9	100.0
2000	M	-	5	31	31	23	8	98
	F	-	4	6	9	3	2	24
	T	-	9	37	40	26	10	122
	Percent	-	7.4	30.3	32.8	21.3	8.2	100.0
2001	M	-	-	30	33	19	9	91
	F	-	4	8	4	3	1	20
	T	-	4	38	37	22	10	111
	Percent	-	3.6	34.2	33.3	19.8	9.0	100.0
2002	M	-	4	20	37	15	8	84
	F	-	1	6	12	3	-	22
	T	-	5	26	49	18	8	106
	Percent	-	4.7	24.5	46.2	17.0	7.5	100.0
2003	M	-	2	34	26	32	10	104
	F	-	4	6	10	3	-	23
	T	-	6	40	36	35	10	127
	Percent	-	4.7	31.5	28.3	27.6	7.9	100.0
2004	M	-	-	17	30	29	10	86
	F	-	1	7	8	1	2	19
	T	-	1	24	38	30	12	105
	Percent	-	1.0	22.9	36.2	28.6	11.4	100.0
2005	M	-	1	27	43	31	18	120
	F	-	-	8	12	5	-	25
	T	-	1	35	55	36	18	145
	Percent	-	0.7	24.1	37.9	24.8	12.4	100.0
1990 - 2005	M	4	164	1,002	897	371	140	2,578
	F	2	40	95	86	27	14	264
	T	6	204	1,097	983	398	154	2,842
	Percent	0.2	7.2	38.6	34.6	14.0	5.4	100.0

Note: HIV Disease – ICD-10 codes B20–B24.

Total percentage may not add up to 100 due to rounding. Non-residents are excluded.

TABLE 29
DEATHS DUE TO HIV DISEASE BY HEALTH SERVICE DELIVERY AREA
 BRITISH COLUMBIA, 1990–2005

Health Service Delivery Area	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	1990–2005		
																	Number	Percent	Rate
11 East Kootenay	-	1	-	-	-	1	-	2	-	-	-	1	-	1	-	1	7	0.2	0.56
12 Kootenay Boundary	2	-	-	1	1	3	2	-	1	1	-	-	2	-	1	-	14	0.5	1.11
13 Okanagan	1	1	9	9	6	9	7	2	4	2	3	3	3	6	2	5	72	2.5	1.53
14 Thompson Cariboo Shuswap	3	3	3	4	3	-	3	2	2	2	2	6	2	4	6	2	47	1.7	1.41
21 Fraser East	2	1	4	6	7	6	7	1	5	3	3	2	4	1	5	6	63	2.2	1.71
22 Fraser North	16	14	15	22	25	21	15	8	6	7	11	8	10	10	8	7	203	7.1	2.56
23 Fraser South	6	10	14	12	18	17	23	6	4	11	7	11	10	8	5	12	174	6.1	1.98
31 Richmond	6	6	5	1	6	4	4	5	2	2	1	1	-	1	2	3	49	1.7	1.96
32 Vancouver	124	109	149	197	203	182	145	66	65	53	73	60	62	74	50	78	1,690	59.5	19.30
33 North Shore/ Coast Garibaldi	11	9	14	16	15	12	11	7	5	5	3	3	2	6	3	7	129	4.5	3.17
41 South Vancouver Island	12	16	20	21	28	17	21	10	10	13	7	9	3	8	9	9	213	7.5	4.02
42 Central Vancouver Island	1	4	16	6	13	14	6	4	3	4	8	4	4	4	5	6	102	3.6	2.78
43 North Vancouver Island	2	1	1	3	3	2	1	1	-	-	4	2	-	1	2	3	26	0.9	1.45
51 Northwest	1	-	1	1	-	2	1	-	-	-	-	-	-	-	1	2	9	0.3	0.65
52 Northern Interior	1	1	-	2	2	4	5	2	2	-	-	1	3	3	5	4	35	1.2	1.46
53 Northeast	-	2	-	-	1	1	-	-	1	-	-	-	1	-	1	-	7	0.2	0.69
N.S.	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	2	0.1	
PROVINCIAL TOTAL	188	178	251	301	331	295	252	117	110	103	122	111	106	127	105	145	2,842	100.0	4.60

Note: Health Service Delivery Area based on usual residence.
 Rate per 100,000 population in specified area.
 Total percentage may not add up to 100 due to rounding.
 Non-residents are excluded. N.S. – Not stated.

External Causes of Death

As the name implies, these causes of death arise from sources external to the individual (as opposed to endogenous or natural physiological processes), and include events such as motor vehicle accidents, poisonings, falls, suicide, and fire. With the exception of unintentional falls, where most of the deaths are elderly females, males are far more susceptible to these causes than females and gender differences are most apparent in the younger age groups.

All causes of death are coded according to the World Health Organization's *International Classification of Diseases and Related Health Problems, Tenth Revision* (ICD-10); the codes for external causes begin with V, W, X, or Y. Note that unintentional deaths are called accidents in ICD-10. See Appendix 2 for a gender- and age-specific listing of these deaths according to individual ICD-10 codes.

Counts of deaths due to unintentional injuries, suicide, and homicide in the current year underestimate the actual figures due to known delays in determining causes of death. See the Information Box Updated External Causes of Death for more details.

Table 30 shows the number of deaths for males and females from external causes. Also shown are ASMRs (Age Standardized Mortality Rates). These rates of death per 10,000 standard population are used to compare statistics from other time periods and other jurisdictions. The Glossary explains Age Standardized Mortality Rates and the Methodology section gives an example of the calculation method.

Although not age standardized, during 2005 there were 55 deaths due to external causes for each 1,000 deaths in B.C. (see Table 30). Approximately;

- 13 were suicides (403)
- 12 were motor vehicle accidents (369)
- 11 were unintentional falls (339)
- 8 were unintentional poisonings (243)
- 1 was a victim of homicide (31)
- 1 was an unintentional drowning (29)
- 1 was from exposure to smoke, fire, and flames (22)
- 7 were due to other external causes (218)

More than two thirds of deaths by external causes were males as shown in Table 30. The leading four causes of external deaths in males were (in rank order): suicide, motor vehicle accidents, poisoning, and falls. For females the leading four were falls, motor vehicle accidents, suicide, and poisoning – the same four but in different order.

Table 31 shows the allocation of external death causes according to the Local Health Area where the deceased lived, not where the incident occurred. Each of the major external causes are listed across the top of the table along with the total number and the Age Standardized Mortality Rate (ASMR) for each LHA. The provincial totals and the percent of all external cause deaths are shown along the bottom of the table. Deaths due motor vehicle accidents, falls, and suicides were the major external causes of death, with suicides leading the list for the province as a whole. However, the LHAs varied as to which of these cases was the most important in 2005.

External causes occur mostly in younger age groups (see Appendix 2) so the ASMR column in Table 31 is particularly useful because it accounts for the different age distributions in the LHAs by adjusting the mortality rates to a standard age distribution. See Age Standardized Mortality Rate in the Glossary and the calculation method in the Methodology section

Table 32 shows numbers of deaths from suicide classified by month of occurrence and by gender. Percentages across months are also given. The data for 2005 supports the hypothesis that November and December are the low suicide months.

In 2005 males died from suicide at a rate of three to one compared to females (see Table 32). The incidence numbers, especially for females, are quite small and therefore any conclusions based on them should be approached with caution.

TABLE 30
EXTERNAL CAUSES OF DEATH BY GENDER
BRITISH COLUMBIA, 2005

Cause of Death	ICD-10 Code	Male		Female		Total	
		Number	ASMR	Number	ASMR	Number	ASMR
Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	244	1.14	125	0.53	369	0.84
Other transport accidents	V01, V05-V06, V10-V11, V15-V18, V198-V199, V800-V802, V806-V809, V812-V819, V822-V829, V891, V893, V91, V93-V99, Y859	22	0.11	3	0.01	25	0.06
Accidental falls	W00-W19	173	0.72	166	0.43	339	0.56
Accident caused by machinery	W24, W28-W31	10	0.04	-	-	10	0.02
Accidental firearm discharge	W32-W34	1	0.01	-	-	1	0.00
Exposure to smoke, fire and flames	X00-X09	15	0.06	7	0.03	22	0.04
Accidental drowning (including water transport)	V90, V92, W65-W74	23	0.10	6	0.03	29	0.06
Accidental poisoning	X40-X49	177	0.81	66	0.29	243	0.55
All other accidents	W20-W23, W25-W27, W35-W64, W75-W99, X10-X39, X50-X59, Y35-Y36, Y40-Y84, Y88	97	0.41	51	0.15	148	0.28
Suicide	X60-X84, Y870	302	1.31	101	0.44	403	0.87
Homicide	X85-Y09, Y871	21	0.10	10	0.04	31	0.07
External events of undetermined intent	Y10-Y34, Y872	5	0.02	8	0.03	13	0.03
Sequelae of other external causes	Y86, Y89	15	0.06	6	0.02	21	0.04
TOTAL		1,105	4.89	549	2.01	1,654	3.42

Note: ASMR – Age Standardized Mortality Rate per 10,000 standard population (Canada 1991 Census).
Non-residents are excluded.

Local Health Area	Motor Vehicle Accidents	Other Transport Accidents	Unintentional		Fire/Flames	Unintentional Drowning	Suicide	Homicide	Other	Total	
			Poisoning	Falls						Deaths	ASMR
001 Fernie	1	1	-	-	-	-	1	-	1	4	1.46
002 Cranbrook	1	-	2	4	-	-	2	-	-	9	3.47
003 Kimberley	2	-	-	2	-	-	2	-	1	7	5.70
004 Windermere	1	-	-	-	-	-	-	-	1	2	1.38
005 Creston	-	1	-	2	-	-	3	-	2	8	5.49
006 Kootenay Lake	1	-	-	1	-	-	2	-	-	4	6.63
007 Nelson	2	-	1	-	-	-	-	1	1	5	2.41
009 Castlegar	2	-	-	2	-	1	-	1	1	7	5.03
010 Arrow Lakes	-	-	-	-	1	-	1	-	2	4	7.65
011 Trail	3	-	-	1	-	-	2	-	2	8	4.52
012 Grand Forks	3	-	-	1	1	-	1	1	-	7	5.14
013 Kettle Valley	-	-	-	-	-	-	1	-	-	1	1.42
014 Southern Okanagan	4	-	-	2	-	-	3	1	1	11	5.22
015 Penticton	8	-	1	6	-	-	6	1	5	27	4.72
016 Keremeos	7	-	-	1	-	-	-	-	-	8	15.10
017 Princeton	4	-	1	-	-	-	-	-	-	5	11.86
018 Golden	2	-	-	1	-	-	-	-	-	3	4.42
019 Revelstoke	-	-	-	-	1	-	-	-	1	2	1.79
020 Salmon Arm	5	-	3	3	-	1	4	-	1	17	4.58
021 Armstrong - Spallumcheen	4	-	-	1	-	-	2	-	-	7	5.03
022 Vernon	6	-	2	6	-	1	5	-	2	22	3.11
023 Central Okanagan	9	1	13	14	1	2	17	1	10	68	3.73
024 Kamloops	20	-	3	13	-	1	15	2	5	59	5.02
025 100 Mile House	4	-	2	-	1	-	4	-	2	13	6.77
026 North Thompson	-	-	-	-	-	-	-	-	1	1	3.52
027 Cariboo - Chilcotin	3	-	1	1	3	1	2	-	1	12	3.79
028 Quesnel	1	-	2	1	-	1	3	-	4	12	4.59
029 Lillooet	-	-	-	-	-	-	-	-	2	2	4.13
030 South Cariboo	-	-	-	1	-	-	-	-	1	2	1.99
031 Merritt	2	-	-	1	-	-	1	-	-	4	2.89
032 Hope	2	-	-	3	-	-	2	-	1	8	8.66
033 Chilliwack	3	1	5	6	-	-	11	1	-	27	3.26
034 Abbotsford	7	-	10	8	-	1	11	-	6	43	3.00
035 Langley	2	1	8	5	1	-	7	2	7	33	2.52
037 Delta	3	-	3	3	-	1	4	-	2	16	1.48
038 Richmond	5	-	5	6	-	1	9	1	3	30	1.36
040 New Westminster	5	-	11	4	-	-	7	-	2	29	4.45
041 Burnaby	12	1	6	19	-	-	10	1	8	57	2.21
042 Maple Ridge	8	2	4	6	-	-	5	-	2	27	3.08
043 Coquitlam	13	1	9	7	1	4	18	1	4	58	2.71
044 North Vancouver	6	1	6	8	-	1	6	1	3	32	2.31
045 West Vancouver-Bowen Is.	4	-	1	6	-	1	3	-	3	18	1.93
046 Sunshine Coast	5	-	2	2	-	-	3	-	1	13	4.00
047 Powell River	4	-	2	-	-	1	1	-	1	9	4.16
048 Howe Sound	8	-	-	1	-	1	2	-	1	13	4.54
049 Bella Coola Valley	-	-	-	-	3	-	1	-	-	4	17.45
050 Queen Charlotte	-	-	-	-	-	-	1	-	-	1	3.36
051 Snow Country	1	-	-	-	-	-	-	-	-	1	13.98
052 Prince Rupert	-	-	1	-	-	-	3	-	1	5	2.73
053 Upper Skeena	-	-	-	-	-	-	1	-	-	1	1.74
054 Smithers	5	-	-	1	-	1	2	-	4	13	7.25
055 Burns Lake	3	1	-	1	-	-	-	-	-	5	7.43
056 Nechako	3	-	1	2	-	1	2	-	2	11	6.43
057 Prince George	22	1	4	3	-	-	13	-	6	49	5.03
059 Peace River South	9	-	1	3	1	-	-	-	3	17	6.26
060 Peace River North	7	-	1	-	-	-	3	-	1	12	3.45
061 Greater Victoria	8	-	18	33	-	-	28	1	12	100	3.36
062 Sooke	7	1	5	5	-	-	4	1	1	24	4.14
063 Saanich	5	1	1	10	-	-	3	-	4	24	2.70
064 Gulf Islands	-	-	-	2	-	-	1	-	-	3	1.33
065 Cowichan	7	2	3	5	1	1	6	-	3	28	4.01
066 Lake Cowichan	-	-	1	-	-	-	3	1	-	5	8.12
067 Ladysmith	-	-	1	2	-	-	1	-	2	6	2.56
068 Nanaimo	8	1	3	7	3	1	17	-	7	47	4.11
069 Qualicum	4	-	2	6	-	1	5	-	6	24	4.50
070 Alberni	7	1	2	6	-	-	10	-	4	30	8.57
071 Courtenay	6	-	1	9	1	1	6	-	3	27	4.04
072 Campbell River	7	1	2	4	-	1	10	-	3	28	5.73
075 Mission	6	1	5	2	-	-	3	-	1	18	4.37
076 Agassiz - Harrison	-	-	1	-	-	-	2	-	1	4	4.35
077 Summerland	3	-	-	2	-	-	2	-	-	7	3.82
078 Enderby	2	-	-	2	-	-	2	-	1	7	5.98
080 Kitimat	1	-	1	1	-	-	-	-	-	3	2.29
081 Fort Nelson	3	-	-	-	-	-	-	-	-	3	3.53
083 Central Coast	-	-	-	-	-	-	1	-	-	1	4.28
084 Vancouver Island West	-	-	-	-	-	-	1	-	-	1	4.28
085 Vancouver Island North	4	1	-	-	-	-	3	-	-	8	5.71
087 Stikine	-	-	-	-	-	-	1	-	-	1	4.45
088 Terrace	4	-	1	1	1	1	1	-	-	9	4.53
092 Nisga'a	-	-	-	-	-	-	-	-	-	-	-
094 Telegraph Creek	1	-	-	1	-	-	1	-	-	3	35.00
161 Vancouver - City Centre	2	1	11	7	-	-	10	-	6	37	2.76
162 Vancouver - Downtown E.side	3	-	34	6	-	-	9	-	3	55	9.27
163 Vancouver - North East	2	-	7	10	-	-	5	-	8	32	2.73
164 Vancouver - Westside	5	3	-	14	-	1	4	-	7	34	2.01
165 Vancouver - Midtown	2	-	3	6	-	-	8	-	1	20	1.89
166 Vancouver - South	9	-	5	10	-	-	8	1	2	35	2.16
201 Surrey	23	-	22	18	2	1	34	12	6	118	3.65
202 South Surrey/White Rock	8	-	2	12	-	-	12	-	2	36	4.25
PROVINCIAL TOTAL	369	25	243	339	22	29	403	31	193	1,654	3.42
PERCENT	22.3	1.5	14.7	20.5	1.3	1.8	24.4	1.9	11.7	100.0	

Notes for table follow table 32.

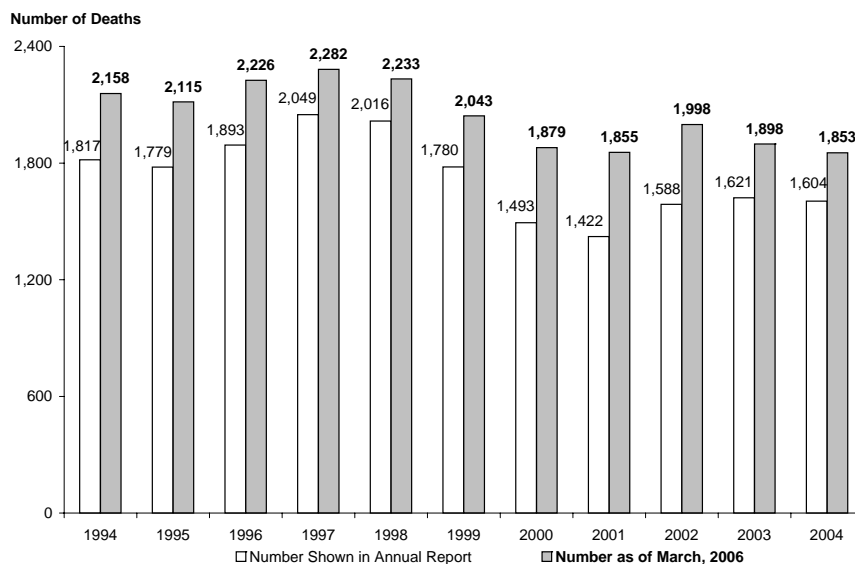
Vital Statistics Information Box

UPDATED EXTERNAL CAUSES OF DEATH

Vital Statistics Annual Reports for specific years are based on data from the spring of the following calendar year. Current year counts and rates for deaths due to external causes underestimate the actual figures due to known delays in determining causes of death. Analysis of external causes of death will be incomplete unless the analysis is based on updated data for previous years. The graphs that follow show numbers of deaths and Age Standardized Mortality Rates (ASMRs) for 1994-2004 as of March 2006.

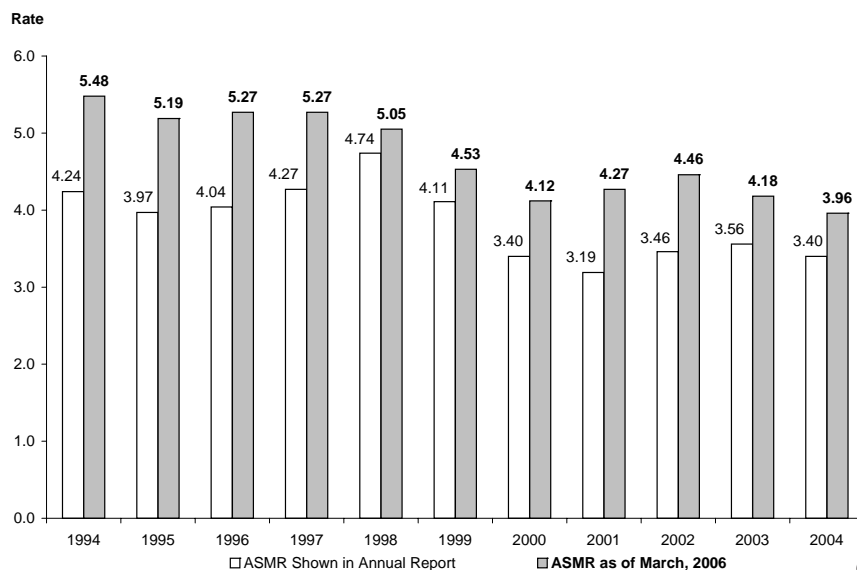
DEATHS DUE TO ALL EXTERNAL CAUSES

BRITISH COLUMBIA, 1994-2004



ASMRS FOR EXTERNAL CAUSES OF DEATH

BRITISH COLUMBIA, 1994-2004



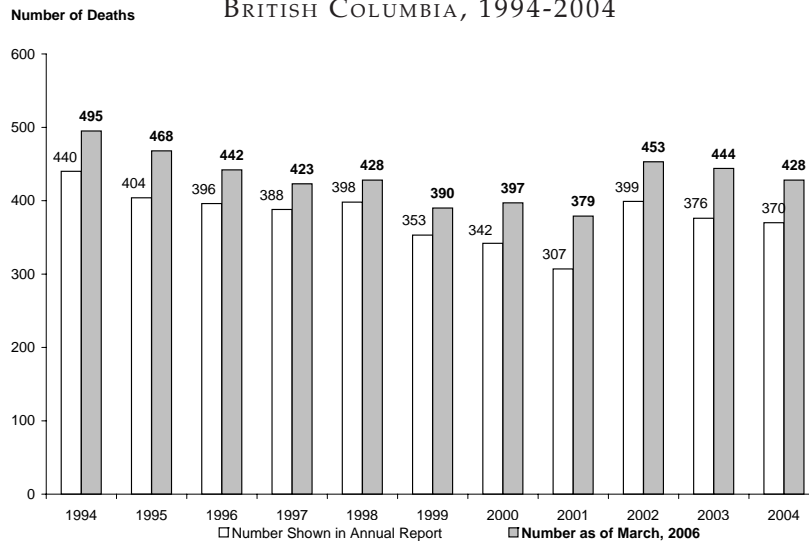
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Vital Statistics Information Box

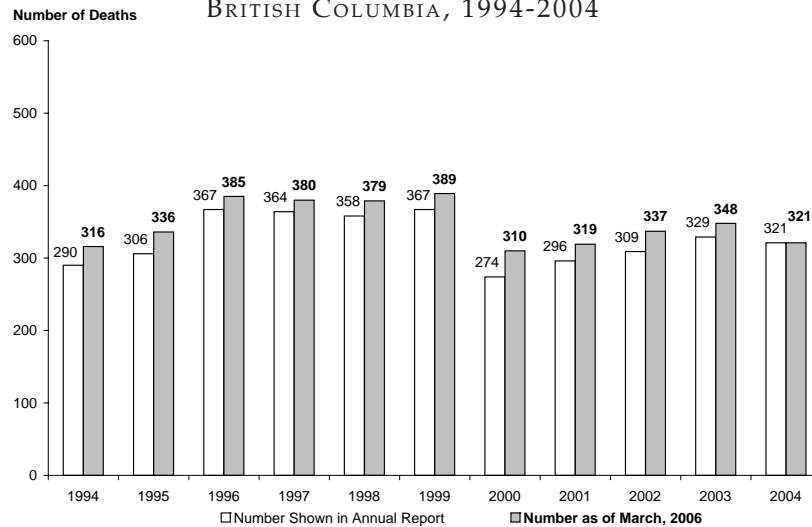
DEATHS DUE TO MOTOR VEHICLE ACCIDENTS

BRITISH COLUMBIA, 1994-2004



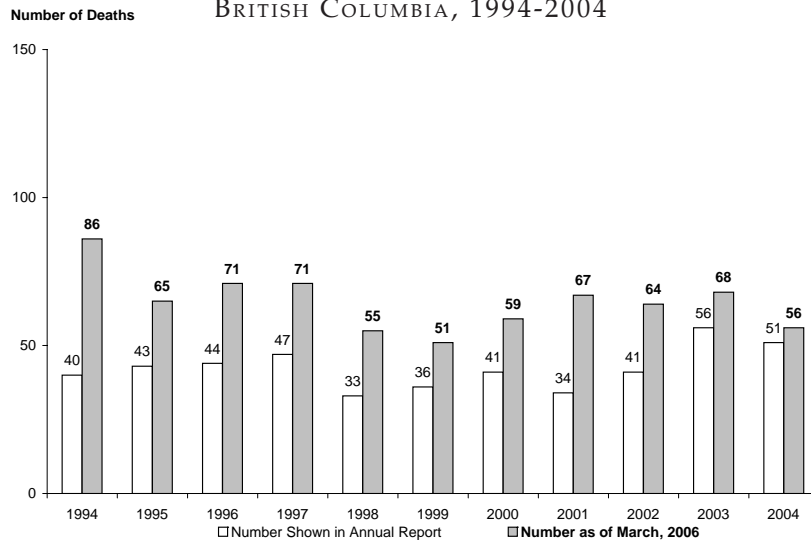
DEATHS DUE TO UNINTENTIONAL FALLS

BRITISH COLUMBIA, 1994-2004



DEATHS DUE TO DROWNING

BRITISH COLUMBIA, 1994-2004

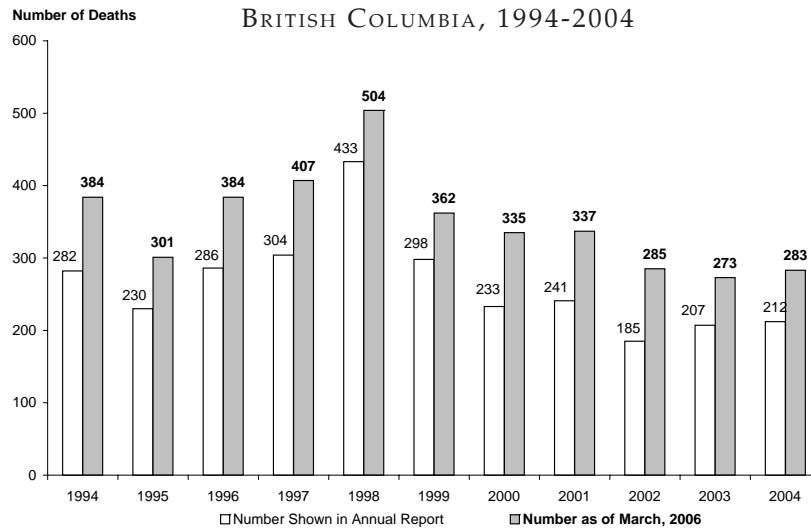


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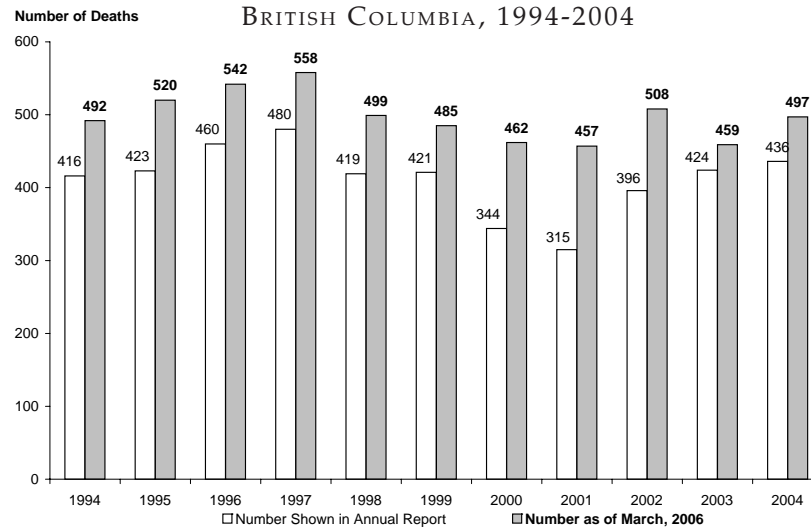
Vital Statistics Information Box

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DEATHS DUE TO POISONING BRITISH COLUMBIA, 1994-2004



DEATHS DUE TO SUICIDE BRITISH COLUMBIA, 1994-2004



DEATHS DUE TO ASSAULT (HOMICIDE) BRITISH COLUMBIA, 1994-2004



TABLE 32
SUICIDE DEATHS BY MONTH AND GENDER
 BRITISH COLUMBIA, 2005

Month	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
January	21	7.0	5	5.0	26	6.5
February	26	8.6	7	6.9	33	8.2
March	33	10.9	9	8.9	42	10.4
April	24	7.9	14	13.9	38	9.4
May	35	11.6	11	10.9	46	11.4
June	37	12.3	8	7.9	45	11.2
July	26	8.6	9	8.9	35	8.7
August	30	9.9	14	13.9	44	10.9
September	19	6.3	9	8.9	28	6.9
October	22	7.3	5	5.0	27	6.7
November	14	4.6	5	5.0	19	4.7
December	15	5.0	5	5.0	20	5.0
TOTAL	302	100.0	101	100.0	403	100.0

Note: Suicide Deaths – ICD-10 codes X60–X84, Y87.0.
 Total percentage may not add up to 100 due to rounding.
 Non-residents are excluded.

Notes to Table 31

Note: Based on usual residence. ASMR – Age standardized mortality rate per 10,000 standard population (Canada 1991 Census). PERCENT – Provincial total for each cause as a percent of the Provincial total for all deaths from external causes. Other is comprised of accident caused by machinery, accidental firearm discharge, all other accidents, external event of undetermined intent, and sequelae of other external causes. Total includes residents with unknown LHA.

Geographic Mortality

The geographic distribution of deaths is an important indicator for the administration of health care in the province because it provides one of several measures of the health status of residents.

Table 33 shows the number of deaths from all causes in each Local Health Area not only for 2005, but also for the previous five years. The SMR columns are particularly useful because they compare the actual number of deaths in the LHA (observed) with the number that would be expected if the LHA had the same age-specific death rates as the whole province. The (p) columns indicate those LHAs where the observed number of deaths was statistically different from the expected number. See Standardized Mortality Ratio in the Glossary for a further explanation and the Methodology section for the calculation method and a reference to the statistical test.

Table 33 also shows confidence intervals, which provide a measure of the variability of the statistic. (The statistics in Table 33 are SMRs.) A wide confidence interval indicates that the statistic is likely to fall within a wide range of values, while a narrow confidence interval indicates the statistic is likely to fall within a narrow range of values. In general, statistical confidence intervals will be wider for areas with small populations or rare events than for areas with larger populations or more common events.

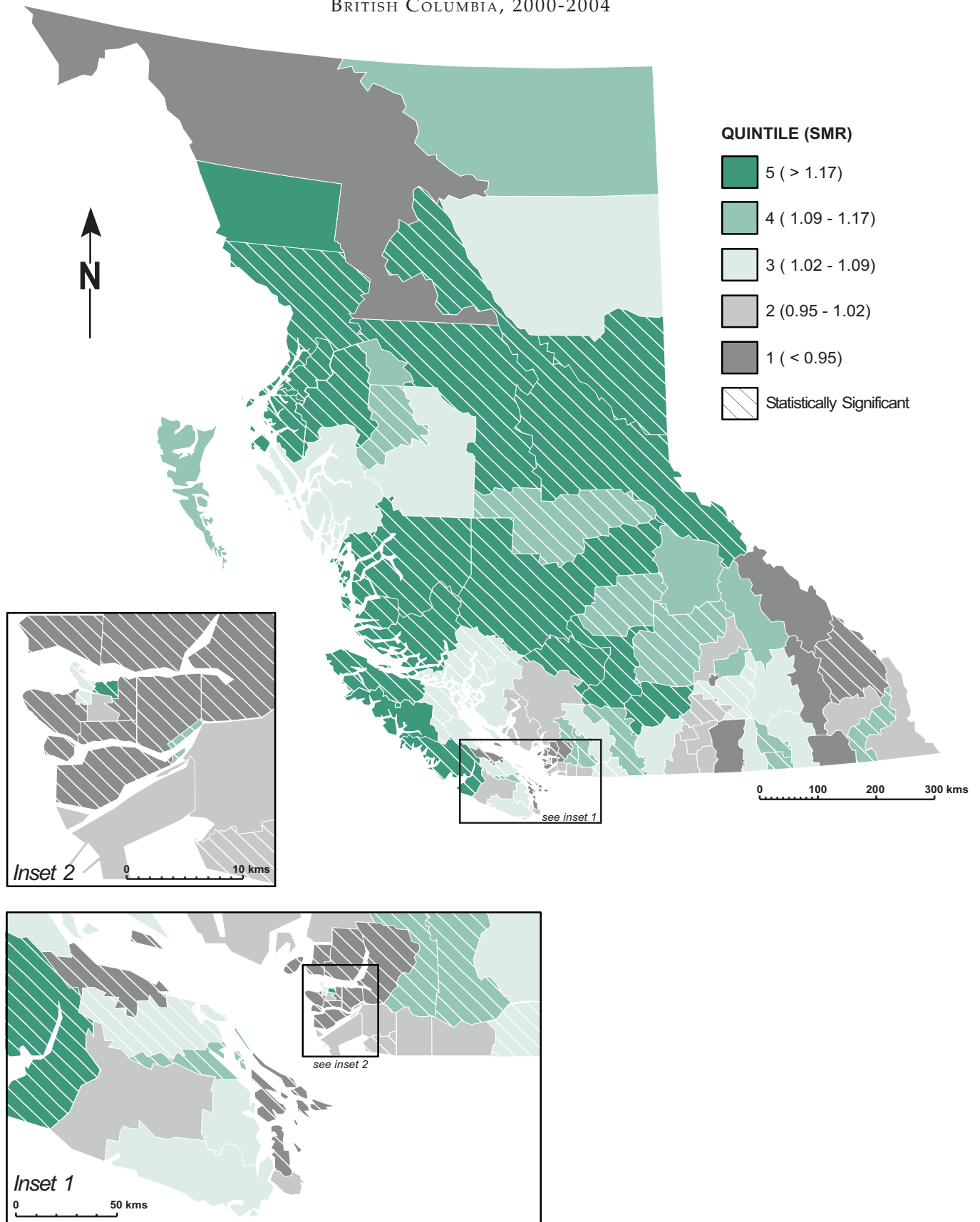
Several LHAs had statistically significant and high ratios in 2005 and the previous five years: Cranbrook, Vernon, Kamloops, Merritt, Hope, Chilliwack, New Westminster, Maple Ridge, Nechako, Peace River South, Ladysmith, Campbell River, Mission, Central Coast, Vancouver Island North, and Vancouver - Downtown Eastside. The LHAs with statistically significant and low ratios in 2005 and the previous five years were: Central Okanagan, Richmond, Burnaby, Coquitlam, North Vancouver, West Vancouver - Bowen Island, Saanich, Gulf Islands, Vancouver - North East, Vancouver - Westside, and Vancouver - South.

Figure 38 shows the SMRs grouped into colour coded quintiles. The map provides an immediately apparent view of the provincial variation of SMRs but there was no pattern although low ratios were concentrated in the southeast and southwest.

		2000-2004			2005				
Local Health Area		Observed Deaths	SMR	(p)	Observed Deaths	Expected Deaths	SMR	(p)	95% Confidence Interval
									Lower Upper
001	Fernie	384	0.98		87	81.51	1.07		0.85 - 1.32
002	Cranbrook	915	1.11	*	219	174.46	1.26	*	1.09 - 1.43
003	Kimberley	397	0.98		92	81.57	1.13		0.91 - 1.38
004	Windermere	219	0.79	*	51	61.29	0.83		0.62 - 1.09
005	Creston	638	0.93		145	134.57	1.08		0.91 - 1.27
006	Kootenay Lake	135	0.86		32	32.59	0.98		0.67 - 1.39
007	Nelson	938	1.05		181	181.40	1.00		0.86 - 1.15
009	Castlegar	565	1.12	*	118	105.74	1.12		0.92 - 1.34
010	Arrow Lakes	236	1.03		52	45.90	1.13		0.85 - 1.49
011	Trail	1,085	1.17	*	196	185.79	1.05		0.91 - 1.21
012	Grand Forks	468	1.07		98	89.36	1.10		0.89 - 1.34
013	Kettle Valley	123	0.86		29	30.98	0.94		0.63 - 1.34
014	Southern Okanagan	1,186	0.97		254	249.10	1.02		0.90 - 1.15
015	Penticton	2,384	0.99		556	492.94	1.13	*	1.04 - 1.23
016	Keremeos	283	0.99		75	58.81	1.28	*	1.00 - 1.60
017	Princeton	248	1.09		56	47.20	1.19		0.90 - 1.54
018	Golden	173	0.95		34	39.55	0.86		0.60 - 1.20
019	Revelstoke	274	1.10		49	52.75	0.93		0.69 - 1.23
020	Salmon Arm	1,476	1.01		317	306.82	1.03		0.92 - 1.15
021	Armstrong - Spallumcheen	358	0.93		91	83.05	1.10		0.88 - 1.35
022	Vernon	2,727	1.05		612	549.64	1.11	*	1.03 - 1.21
023	Central Okanagan	6,564	0.95	*	1,375	1,459.41	0.94	*	0.89 - 0.99
024	Kamloops	3,816	1.17	*	795	700.39	1.14	*	1.06 - 1.22
025	100 Mile House	552	1.14	*	116	106.00	1.09		0.90 - 1.31
026	North Thompson	140	1.12		25	28.58	0.87		0.57 - 1.29
027	Cariboo - Chilcotin	778	1.18	*	161	142.52	1.13		0.96 - 1.32
028	Quesnel	796	1.17	*	145	144.56	1.00		0.85 - 1.18
029	Lillooet	181	1.33	*	38	28.93	1.31		0.93 - 1.80
030	South Cariboo	356	1.30	*	65	57.16	1.14		0.88 - 1.45
031	Merritt	502	1.44	*	99	73.70	1.34	*	1.09 - 1.64
032	Hope	407	1.16	*	101	75.67	1.33	*	1.09 - 1.62
033	Chilliwack	2,980	1.06	*	670	594.86	1.13	*	1.04 - 1.21
034	Abbotsford	4,302	1.00		950	900.13	1.06		0.99 - 1.12
035	Langley	3,751	1.02		803	780.28	1.03		0.96 - 1.10
037	Delta	2,877	1.00		604	573.29	1.05		0.97 - 1.14
038	Richmond	4,173	0.75	*	858	1,231.45	0.70	*	0.65 - 0.74
040	New Westminster	2,469	1.11	*	509	444.42	1.15	*	1.05 - 1.25
041	Burnaby	6,755	0.95	*	1,376	1,487.80	0.92	*	0.88 - 0.98
042	Maple Ridge	2,539	1.14	*	586	483.16	1.21	*	1.12 - 1.32
043	Coquitlam	4,490	0.94	*	947	1,056.50	0.90	*	0.84 - 0.96
044	North Vancouver	3,987	0.92	*	814	921.68	0.88	*	0.82 - 0.95
045	West Vancouver-Bowen Is.	2,296	0.82	*	502	570.91	0.88	*	0.80 - 0.96
046	Sunshine Coast	1,202	1.01		248	254.26	0.98		0.86 - 1.10
047	Powell River	892	1.05		222	175.76	1.26	*	1.10 - 1.44
048	Howe Sound	530	1.00		115	116.64	0.99		0.81 - 1.18
049	Bella Coola Valley	96	1.29	*	19	15.93	1.19		0.72 - 1.86
050	Queen Charlotte	126	1.12		29	25.58	1.13		0.76 - 1.63
051	Snow Country	26	1.83	*	3	2.75	1.09		0.22 - 3.19
052	Prince Rupert	468	1.31	*	83	73.50	1.13		0.90 - 1.40
053	Upper Skeena	127	1.14	*	31	24.18	1.28		0.87 - 1.82
054	Smithers	397	1.12	*	76	77.05	0.99		0.78 - 1.23
055	Burns Lake	216	1.05		63	45.51	1.38	*	1.06 - 1.77
056	Nechako	476	1.26	*	103	81.88	1.26	*	1.03 - 1.53
057	Prince George	2,495	1.26	*	472	432.03	1.09		1.00 - 1.20
059	Peace River South	806	1.25	*	168	136.70	1.23	*	1.05 - 1.43
060	Peace River North	599	1.06		123	123.84	0.99		0.83 - 1.19
061	Greater Victoria	10,921	1.02		2,108	2,136.27	0.99		0.95 - 1.03
062	Sooke	1,524	1.03		333	319.30	1.04		0.93 - 1.16
063	Saanich	2,920	0.84	*	627	739.66	0.85	*	0.78 - 0.92
064	Gulf Islands	661	0.82	*	129	171.23	0.75	*	0.63 - 0.90
065	Cowichan	2,128	1.03		441	438.44	1.01		0.91 - 1.10
066	Lake Cowichan	220	1.00		45	46.97	0.96		0.70 - 1.28
067	Ladysmith	859	1.11	*	212	164.03	1.29	*	1.12 - 1.48
068	Nanaimo	4,013	1.08	*	860	809.04	1.06		0.99 - 1.14
069	Qualicum	2,170	0.94	*	485	500.54	0.97		0.88 - 1.06
070	Alberni	1,340	1.23	*	257	230.26	1.12		0.98 - 1.26
071	Courtenay	2,288	1.04		492	475.36	1.04		0.95 - 1.13
072	Campbell River	1,244	1.09	*	289	250.05	1.16	*	1.03 - 1.30
075	Mission	1,208	1.15	*	307	226.35	1.36	*	1.21 - 1.52
076	Agassiz - Harrison	301	1.07		59	61.53	0.96		0.73 - 1.24
077	Summerland	738	1.02		124	147.68	0.84		0.70 - 1.00
078	Enderby	337	1.11		75	66.21	1.13		0.89 - 1.42
080	Kitimat	245	1.08		47	48.94	0.96		0.71 - 1.28
081	Fort Nelson	72	1.10		18	14.86	1.21		0.72 - 1.91
083	Central Coast	70	2.30	*	13	6.55	1.98	*	1.06 - 3.39
084	Vancouver Island West	46	1.22		12	7.54	1.59		0.82 - 2.78
085	Vancouver Island North	318	1.30	*	76	53.85	1.41	*	1.11 - 1.77
087	Stikine	22	0.83		1	5.86	0.17	+	0.00 - 0.95
088	Terrace	551	1.24	*	108	93.01	1.16		0.95 - 1.40
092	Nisga'a	54	1.46	*	11	8.42	1.31		0.65 - 2.34
094	Telegraph Creek	18	1.41		4	2.87	1.39		0.37 - 3.57
161	Vancouver - City Centre	3,237	1.08	*	608	611.16	0.99		0.92 - 1.08
162	Vancouver - Downtown E.side	2,650	1.40	*	515	385.99	1.33	*	1.22 - 1.45
163	Vancouver - North East	2,908	0.91	*	604	680.65	0.89	*	0.82 - 0.96
164	Vancouver - Westside	3,756	0.81	*	752	924.41	0.81	*	0.76 - 0.87
165	Vancouver - Midtown	2,528	0.98		443	531.71	0.83	*	0.76 - 0.91
166	Vancouver - South	4,022	0.85	*	841	994.99	0.85	*	0.79 - 0.90
201	Surrey	7,242	1.01		1,659	1,503.49	1.10	*	1.05 - 1.16
202	South Surrey/White Rock	4,117	0.96	*	828	843.71	0.98		0.92 - 1.05
PROVINCIAL TOTAL		143,133	1.00		30,033	30,033.00	1.00		0.99 - 1.01

Note: SMR – Standardized Mortality Ratio. *Statistical testing indicates that observed deaths are significantly different from the expected deaths (p<0.05, two tailed). Total includes residents with unknown LHA. Observed deaths include unknown gender.

FIGURE 38
ALL CAUSES OF DEATH BY LOCAL HEALTH AREA
 BRITISH COLUMBIA, 2000-2004



Note: SMR - Standardized Mortality Ratio. Refer to Figure 1 to clarify geographical location of Local Health Areas.

Potential Years of Life Lost

Potential Years of Life Lost (PYLL) gives an indication of “premature” death by totalling the number of years British Columbians “lost” prior to age 75 years. For example, an infant death (under one year old) would have lost 74.5 years of life. The upper limit of 75 is used for both genders. PYLL indicates the importance of the various causes of premature death by giving more weight to deaths that occurred at younger ages than those that occurred later in life. Bear in mind that the total potential years of life lost (total PYLL) includes all ages or age groups up to 75 years old, so many deaths at an older age can have the same total PYLL as one death at a younger age.

The tables and figures in this section are comprehensive and, at times, may seem complex but they are particularly useful because they portray the impact of premature mortality. The Glossary further defines Potential Years of Life Lost (PYLL). The precise calculation methods for the various indicators derived from PYLL are referenced in the tables in this section and are shown in Methodology section.

Table 34 shows several PYLL based indicators for deaths of those under 75 years old as well as deaths of all ages for various causes of death. The No. (number) of Deaths column shows the number of persons under 75 years of age who died due to each cause group. Total PYLL counts the number of years all decedents would have lived if they reached the age of 75. Percent of PYLL shows each disease category’s proportion of the Total PYLL for all causes. Average PYLL is the disease category’s Total PYLL divided by its No. of Deaths. PYLLSR is the rate of PYLL per 1,000 population, standardized to Canada’s 1991 age group population numbers. See PYLL Standardized Rate in the Glossary and the Methodology section for computation details.

The three rightmost columns in Table 34 relate to deaths at all ages for comparison. No. of Deaths is the total number of deaths due to each disease category. Percent of Deaths shows the number of deaths that occurred due to the Cause of Death out of one hundred total deaths. ASMR shows the death rate due to each cause standardized per 1,000 standard population. See Age Standardized Mortality Rate in the Glossary and Methodology section for an example of the calculation method.

Because PYLL focuses on premature mortality rather than on the simple fact of death, it is useful in assessing causes of death in terms of the extent to which each contributes to reduction in lifespan. In Table 34 the column labelled Average PYLL is helpful in exploring this effect. The larger the value in this column, the more premature are the deaths due to this category. The extreme case is certain conditions originating in the perinatal period. Most of the deaths from this cause are less than one year old (see Table 21) and the PYLL for deaths under one year old is 74.5 years. Motor vehicle accidents, which claim many young lives, have a high value for average PYLL at 37.0 years. Malignant neoplasms, on the other hand, although claiming many lives (4,378 under 75) have a relatively low average PYLL at 12.6 years.

The PYLLSR and ASMR columns give standardized statistics which allow the comparison of PYLL and death rates between jurisdictions in Canada and between this year and other years. Such comparisons permit one to put B.C. in a larger context and to see change over time.

Figure 39, by directly and visually contrasting PYLLSR and ASMR for several major causes of death, allows one to see, by comparing the profiles of the two sides of the graph, where there are significant differences in the impact of the various causes of death on PYLL and death rate. The clearest contrast is for external causes of death: a relatively moderate ASMR but very high PYLLSR. External causes are responsible for relatively few deaths but ‘waste’ much potential life.

In Table 35 causes of death in 2005 have been ranked according to the importance of Total PYLL in four age groups which correspond to what most people consider childhood and the young, middle, and later adult years. The central portion of the table indicates the number of deaths and number of years lost for males, females, and both genders. The PYLL column shows all the years lost in the age group due to each cause category. PYLL % indicates the percent of all PYLL in the age group due to each cause. As explained previously, PYLLSR is the ‘standardized’ rate adjusted to the Canada 1991 census, permitting comparisons among places and times where the rates have been standardized to the same Canadian population.

Most of the PYLL under 15 years was due to conditions originating in the period around birth (see Table 35). Most of those deaths occurred less than seven days after birth (see Table 27) and caused more male than female deaths (see Table 21).

The PYLL due to motor vehicle accidents (MVA) between 15 and 24 years remains a major concern because they are largely preventable. Males accounted for the most of the deaths and most of the PYLL by far as shown in Table 35.

Males and females differed in their contributions to total PYLL between 25 and 44 years. Among females, malignant neoplasms were responsible for almost the same number of PYLL as all the other major causes combined. Among males, suicides accounted for the largest number of PYLL, although PYLL due to MVA and malignant neoplasms were important as well. Note that male deaths due to MVA were responsible for a greater number of deaths than in the 15 to 24 year age group but fewer PYLL.

Malignant neoplasms accounted for more PYLL than all other major causes combined for both genders in the 45-74 year age group (see Table 35).

Figure 40 presents the PYLLSR values from Table 35 so the gender differences are immediately apparent. Males in the four age groups consistently 'lost' more years than females, although the standardized PYLL rates due to malignant neoplasms were similar in the two adult age groups.

External causes have been covered in a previous section but Table 36 presents their geographic distribution in terms of PYLL, because of their impact on the relatively young. These causes, often seen to be more avoidable than the contrasting 'natural' causes of death, attract attention because of the greater potential for their reduction. PYLL Index is a way of displaying PYLL for a jurisdiction but adjusting it for population size, age distribution, and gender makeup so that areas can compare themselves with the province or each other. The table shows potential years of life lost (PYLL) due to external causes of death by Local Health Area (LHA) for the period 2000 through 2004 and for the year 2005. It also displays the observed number of lost years in each LHA for both periods and, for 2005, the expected PYLL based on the age distribution in the LHA adjusted to the provincial age and gender specific rate. The PYLL Index is the ratio of observed to expected deaths with (p), a test of statistical significance and the 95% Confidence Interval of the ratio. See Expected Potential Years of Life Lost and PYLL Index in the Glossary and the Methodology section for a computational example.

In the five year period, almost half of the LHAs (43) had statistically significant observed versus expected deaths and 29 of those were high. Only one of the populated areas in the lower mainland (Vancouver – Downtown Eastside) was statistically significant and high.

Figure 41 displays B.C.'s 89 local health areas, coloured according to their level of PYLL Index (PYLLI) for the years 2000-2004. They are grouped into quintiles, five groups from those with the lowest (dark grey) to those with the highest PYLLI values (dark green). Looking at this map, the pattern is one of an urban/rural distinction. The more urban areas, in general, are in the quintiles with lower PYLLI values.

TABLE 34
POTENTIAL YEARS OF LIFE LOST AND AGE STANDARDIZED
MORTALITY RATES BY SELECTED CAUSES OF DEATH

BRITISH COLUMBIA, 2005

Cause of Death	ICD-10 Code(s)	PYLL (Age Under 75 Years)					Mortality (All Ages)		
		No. of Deaths	Total PYLL	Percent of PYLL	Average PYLL	PYLLSR	No. of Deaths	Percent of Deaths	ASMR
Certain infectious and parasitic diseases	A00-B99	348	7,571	3.9	21.8	1.73	566	1.9	1.05
- HIV disease	B20-B24	144	3,975	2.1	27.6	0.94	145	0.5	0.31
Malignant neoplasms	C00-C97	4,378	55,234	28.5	12.6	11.27	8,367	27.9	15.24
- Malignant neoplasm of trachea and lung	C33-C34	1,253	13,438	6.9	10.7	2.66	2,193	7.3	4.09
- Malignant neoplasm of female breast	C500-C509	344	5,635	2.9	16.4	2.24	570	1.9	1.93
- Malignant neoplasm of colon and rectum	C18-C21	432	4,960	2.6	11.5	1.01	927	3.1	1.66
Endocrine nutritional and metabolic diseases	E00-E89	488	6,710	3.5	13.8	1.48	1,294	4.3	2.27
- Diabetes mellitus	E10-E14	375	4,503	2.3	12.0	0.94	1,021	3.4	1.78
Diseases of the circulatory system	I00-I99	2,333	27,151	14.0	11.6	5.63	9,627	32.1	15.78
- Ischemic heart diseases	I20-I25	1,134	12,585	6.5	11.1	2.55	4,361	14.5	7.20
- Cerebrovascular diseases	I60-I69	471	5,135	2.7	10.9	1.08	2,220	7.4	3.61
Diseases of the respiratory system	J00-J98	702	7,282	3.8	10.4	1.56	3,261	10.9	5.33
- Pneumonia/Influenza (excluding hypostatic)	J10-J181, J188, J189	196	2,697	1.4	13.8	0.61	1,342	4.5	2.10
- Chronic Pulmonary Disease	J40-J44	326	2,270	1.2	7.0	0.48	1,285	4.3	2.18
Diseases of the digestive system	K00-K92	490	7,786	4.0	15.9	1.69	1,181	3.9	2.05
- Chronic liver disease/cirrhosis	K70, K73-74, K760-K761	248	4,040	2.1	16.3	0.82	300	1.0	0.57
Congenital malformations and chromosome abnormalities	Q00-Q99	75	4,174	2.2	55.7	1.42	83	0.3	0.23
Certain conditions originating in the perinatal period	P00-P96	91	6,773	3.5	74.4	2.54	91	0.3	0.33
External causes of death	V01-Y98	1,236	38,954	20.1	31.5	9.89	1,654	5.5	3.42
- Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	326	12,075	6.2	37.0	3.18	369	1.2	0.84
- Suicide	X60-X84, Y870	367	11,293	5.8	30.8	2.80	403	1.3	0.87
Other causes ¹		1,356	32,061	16.6	23.6	8.14	3,909	13.0	6.82
All causes		11,497	193,693	100.0	16.8	45.34	30,033	100.0	52.52

Note: PYLL – Potential Years of Life Lost, denotes the total number of years of life lost from an established life expectancy (75 years).

PYLLSR – PYLL Standardized Rate per 1,000 standard population (Canada 1991 Census).

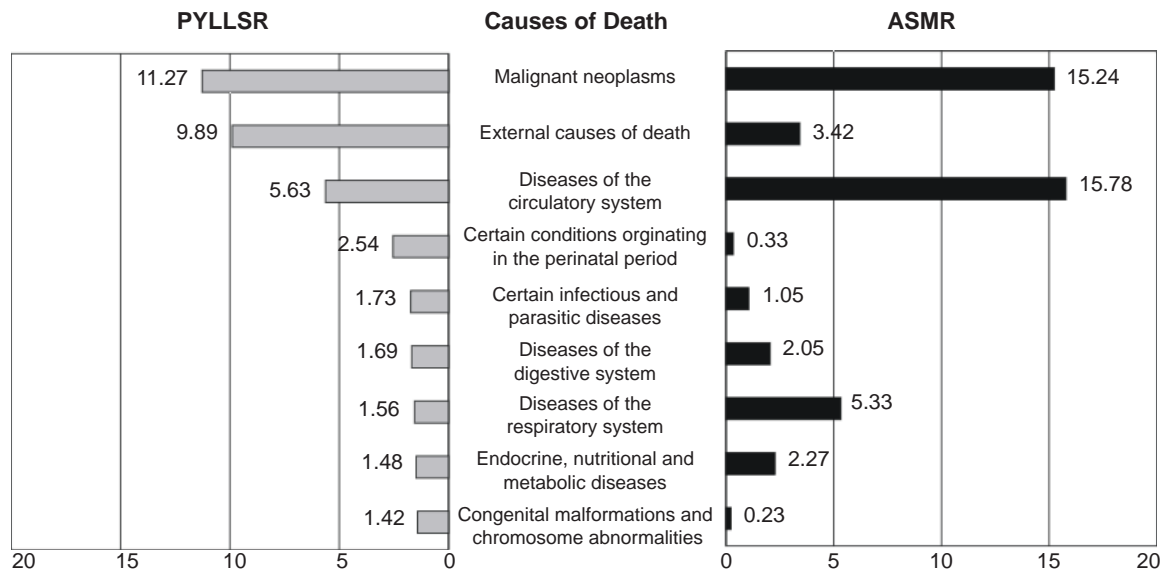
ASMR – Age Standardized Mortality Rate per 10,000 standard population (Canada 1991 Census).

¹Other causes includes undetermined and pending.

Total percentage may not add up to 100 due to rounding. Non-residents are excluded.

The output from ICD-10 mortality coding and underlying cause of death selection was modified in British Columbia to reflect the intent of certifiers in this jurisdiction and to provide greater continuity over time. Data using the standard ICD-10 rules for such categories as pneumonia/influenza, diabetes, or cancer should not be compared to the numbers shown above.

FIGURE 39
**POTENTIAL YEARS OF LIFE LOST AND AGE STANDARDIZED
 MORTALITY RATES BY SELECTED CAUSES OF DEATH**
 BRITISH COLUMBIA, 2005



Note: PYLLSR - Potential Years of Life Lost Standardized Rate (age under 75 years) per 1,000 standard population.
 ASMR - Age Standardized Mortality Rate per 10,000 standard population.

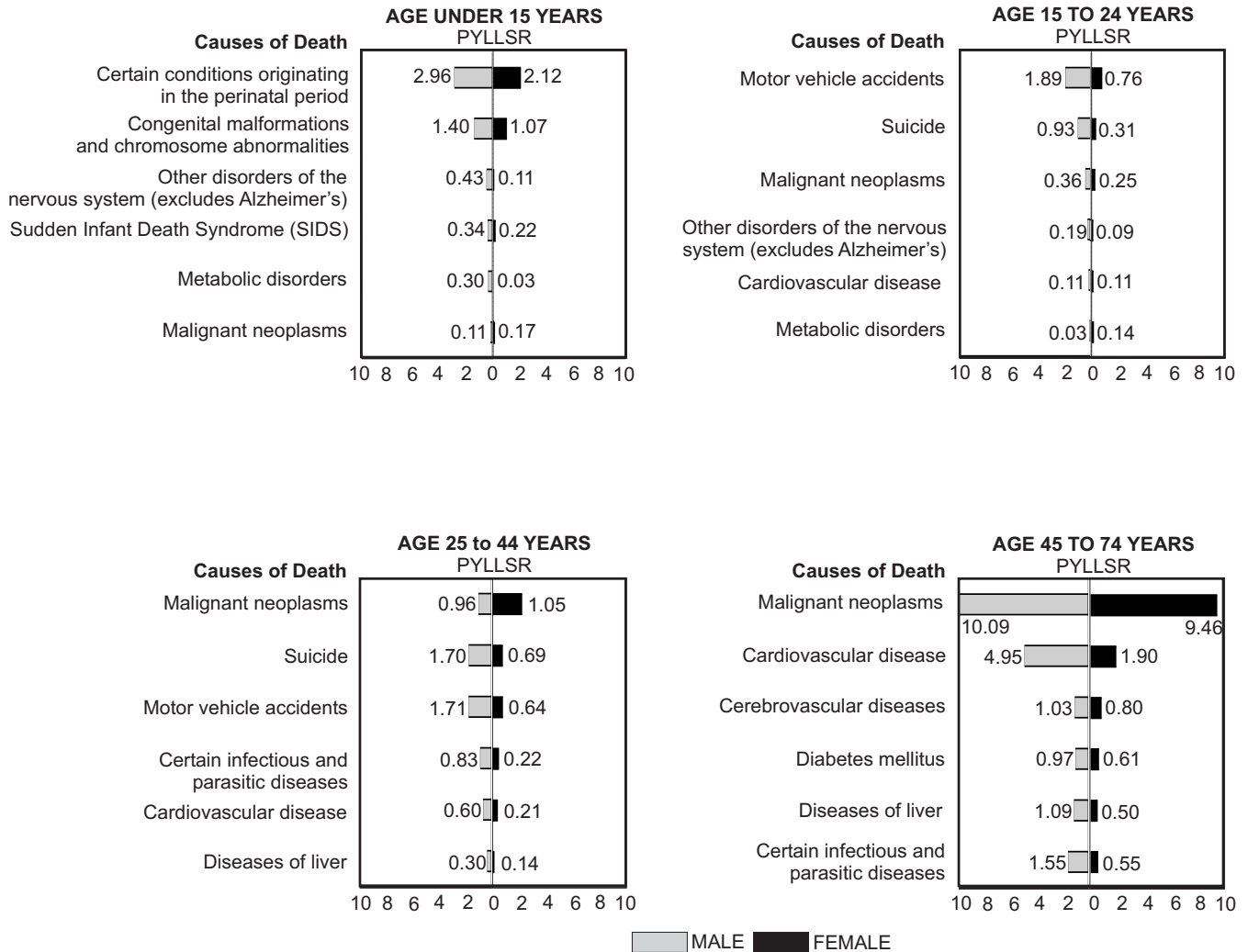


TABLE 35
**POTENTIAL YEARS OF LIFE LOST BY AGE GROUP AND
 MAJOR CAUSES OF DEATH (AGE UNDER 75 YEARS)**
 BRITISH COLUMBIA, 2005

Cause of Death	ICD-10 Code(s)	Male				Female				Total			
		Deaths	PYLL	PYLL %	PYLLSR	Deaths	PYLL	PYLL %	PYLLSR	Deaths	PYLL	PYLL %	PYLLSR
Under 15 Years Old													
Certain conditions originating in the perinatal period	P00-P96	53	3,949	37.0	2.96	38	2,824	42.8	2.12	91	6,773	39.2	2.54
Congenital malformations chromosome abnormalities	Q00-Q99	26	1,911	17.9	1.40	20	1,461	22.1	1.07	46	3,372	19.51	2.4 and
Other disorders of the nervous system (excl. Alzheimer's)	G00-G25, G31-G99	9	630	5.9	0.43	3	193	2.9	0.11	12	823	4.8	0.27
Sudden Infant Death Syndrome (SIDS)	R95	6	447	4.2	0.34	4	298	4.5	0.22	10	745	4.3	0.28
Metabolic disorders	E70-E89	6	430	4.0	0.30	1	63	0.9	0.03	7	493	2.9	0.17
Malignant neoplasms	C00-C97	3	193	1.8	0.11	4	269	4.1	0.17	7	462	2.7	0.14
Other causes ¹		44	3,105	29.1	2.13	21	1,495	22.6	1.05	65	4,600	26.6	1.59
All causes		147	10,664	100.0	7.67	91	6,602	100.0	4.78	238	17,266	100.0	6.23
15-24 Years Old													
Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	68	3,695	30.7	1.89	27	1,473	31.5	0.76	95	5,168	30.9	1.33
Suicide	X60-X84, Y870	34	1,820	15.1	0.93	11	608	13.0	0.31	45	2,428	14.5	0.63
Malignant neoplasms	C00-C97	13	708	5.9	0.36	9	488	10.4	0.25	22	1,195	7.1	0.31
Other disorders of the nervous system (excl. Alzheimer's)	G00-G25, G31-G99	7	373	3.1	0.19	3	168	3.6	0.09	10	540	3.2	0.14
Cardiovascular disease	I00-I51	4	215	1.8	0.11	4	210	4.5	0.11	8	425	2.5	0.11
Metabolic disorders	E70-E89	1	58	0.5	0.03	5	268	5.7	0.14	6	325	1.9	0.08
Other causes ¹		96	5,180	43.0	2.65	27	1,458	31.2	0.76	123	6,638	39.7	1.71
All causes		223	12,048	100.0	6.16	86	4,670	100.0	2.42	309	16,718	100.0	4.31
25-44 Years Old													
Malignant neoplasms	C00-C97	83	3,008	9.5	0.96	123	4,343	26.8	1.05	206	7,350	15.3	1.01
Suicide	X60-X84, Y870	100	3,840	12.1	1.70	43	1,628	10.1	0.69	143	5,468	11.4	1.19
Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	78	3,225	10.2	1.71	32	1,285	7.9	0.64	110	4,510	9.4	1.17
Certain infectious and parasitic diseases	A00-B99	73	2,623	8.3	0.83	24	845	5.2	0.22	97	3,468	7.2	0.52
Cardiovascular disease	I00-I51	64	2,285	7.2	0.60	20	720	4.4	0.21	84	3,005	6.3	0.40
Diseases of liver	K70-K76	23	858	2.7	0.30	11	398	2.5	0.14	34	1,255	2.6	0.22
Other causes ¹		409	15,878	50.1	7.39	182	6,975	43.1	2.97	591	22,853	47.7	5.17
All causes		830	31,715	100.0	13.49	435	16,193	100.0	5.92	1,265	47,908	100.0	9.68
45-74 Years Old													
Malignant neoplasms	C00-C97	2,307	25,038	36.2	10.09	1,836	21,190	49.7	9.46	4,143	46,228	41.3	9.81
Cardiovascular disease	I00-I51	1,095	11,548	16.7	4.95	446	4,270	10.0	1.90	1,541	15,818	14.1	3.46
Cerebrovascular diseases	I60-I69	266	2,470	3.6	1.03	178	1,665	3.9	0.80	444	4,135	3.7	0.92
Diabetes mellitus	E10-E14	224	2,420	3.5	0.97	134	1,395	3.3	0.61	358	3,815	3.4	0.80
Diseases of liver	K70-K76	181	2,543	3.7	1.09	83	1,128	2.6	0.50	264	3,670	3.3	0.80
Certain infectious and parasitic diseases	A00-B99	174	2,720	3.9	1.55	70	915	2.1	0.55	244	3,635	3.3	1.05
Other causes ¹		1,682	22,455	32.5	10.12	1,009	12,048	28.3	5.60	2,691	34,503	30.9	7.87
All causes		5,929	69,193	100.0	30.47	3,756	42,610	100.0	19.62	9,685	111,803	100.0	25.12

Note: PYLL – Potential Years of Life Lost, denotes the total number of years of life lost from an established life expectancy (75 years). PYLLSR – PYLL Standardized Rate per 1,000 standard population (Canada 1991 Census). ¹Other causes includes undetermined and pending. Causes of death are ordered by total PYLL in the age group. Total percentage may not add up to 100 due to rounding. Non-residents are excluded. The output from ICD-10 mortality coding and underlying cause of death selection was modified in British Columbia to reflect the intent of certifiers in this jurisdiction and to provide greater continuity over time. Data using the standard ICD-10 rules for such categories as pneumonia/influenza, diabetes, or cancer should not be compared to the numbers shown above.

FIGURE 40
POTENTIAL YEARS OF LIFE LOST
STANDARDIZED RATES BY AGE GROUP AND GENDER
MAJOR CAUSES OF DEATH (AGE UNDER 75 YEARS)
 BRITISH COLUMBIA, 2005

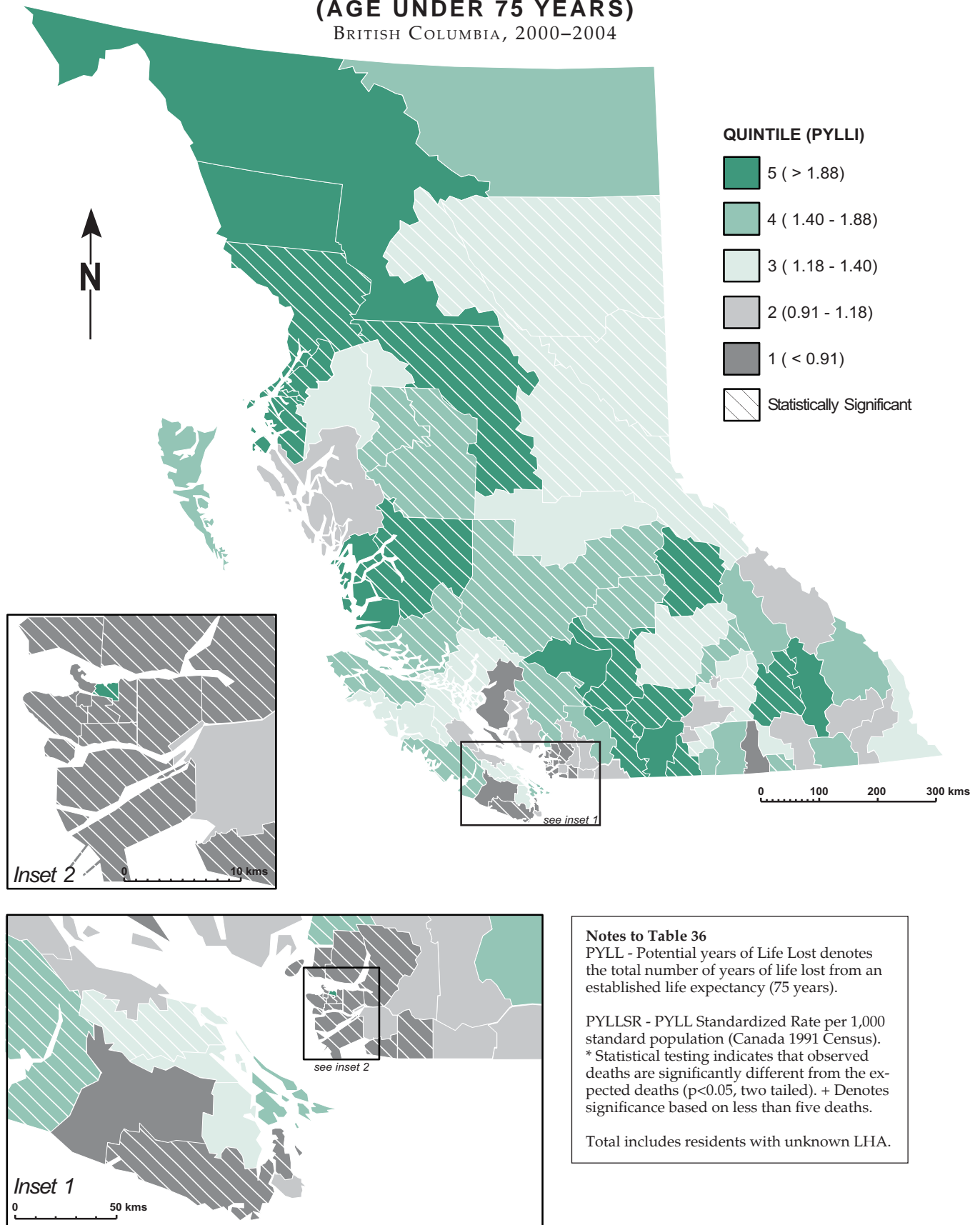


Note: Causes of death are ordered by total PYLL in the age group (Table 35).
 PYLLSR-PYLL Standardized Rate per 1,000 population.

Local Health Area		2000-2004			2005						
		Observed	Observed	PYLL	Observed	Observed	Expected	PYLL	95% Confidence Limit		
		Deaths	PYLL	Index (p)	Deaths	PYLL	PYLL	Index (p)	Lower	Upper	
001	Fernie	33	1,213	1.22	4	85	157.29	0.54	0.00	-	1.08
002	Cranbrook	49	1,525	0.99	8	220	238.35	0.92	0.12	-	1.73
003	Kimberley	14	485	0.98	4	115	78.77	1.46	0.00	-	3.16
004	Windermere	26	950	1.63	2	30	100.31	0.30	0.00	-	0.72
005	Creston	29	962	1.47	7	188	102.37	1.84	0.39	-	3.29
006	Kootenay Lake	15	428	2.17	3	53	29.38	1.80	0.00	-	4.04
007	Nelson	55	1,712	1.15	5	143	229.49	0.62	0.03	-	1.22
009	Castlegar	26	965	1.20	6	225	122.74	1.83	0.28	-	3.38
010	Arrow Lakes	18	725	2.54 *	3	118	43.78	2.70	0.00	-	5.88
011	Trail	49	1,772	1.54 *	6	185	175.95	1.05	0.09	-	2.02
012	Grand Forks	15	383	0.76	6	145	78.33	1.85	0.13	-	3.57
013	Kettle Valley	11	318	1.55	1	18	30.96	0.58	0.00	-	1.69
014	Southern Okanagan	40	1,255	1.42	7	268	143.61	1.87	0.28	-	3.45
015	Penticton	89	2,939	1.39 *	15	553	331.82	1.67	0.77	-	2.56
016	Keremeos	25	888	3.76 *	7	263	38.13	6.90 *	1.30	-	12.49
017	Princeton	13	528	2.15	5	178	37.51	4.75	0.44	-	9.05
018	Golden	16	560	1.16	2	100	77.60	1.29	0.00	-	3.08
019	Revelstoke	20	730	1.40	1	28	79.94	0.35	0.00	-	1.02
020	Salmon Arm	83	2,663	1.52 *	13	373	283.09	1.32	0.48	-	2.16
021	Armstrong - Spallumcheen	19	623	1.09	6	205	89.34	2.29	0.20	-	4.39
022	Vernon	144	4,420	1.31 *	16	525	534.75	0.98	0.48	-	1.49
023	Central Okanagan	278	8,967	1.01	51	1,607	1,454.48	1.10	0.77	-	1.44
024	Kamloops	258	8,677	1.39 *	48	1,315	965.25	1.36	0.92	-	1.81
025	100 Mile House	50	1,560	1.88 *	12	385	129.32	2.98 *	1.06	-	4.89
026	North Thompson	19	740	2.32 *	1	43	50.30	0.85	0.00	-	2.51
027	Cariboo - Chilcotin	78	2,572	1.42 *	11	268	278.58	0.96	0.31	-	1.61
028	Quesnel	70	2,125	1.36	12	225	240.52	0.94	0.23	-	1.64
029	Lillooet	21	553	1.93	1	13	43.22	0.30	0.00	-	0.87
030	South Cariboo	34	835	1.89 *	2	75	69.55	1.08	0.00	-	2.69
031	Merritt	48	1,735	2.56 *	3	88	105.37	0.84	0.00	-	1.92
032	Hope	36	1,047	2.18 *	5	188	74.50	2.52	0.11	-	4.94
033	Chilliwack	139	4,667	1.10	23	793	677.36	1.17	0.65	-	1.69
034	Abbotsford	230	8,245	1.12	32	960	1,149.76	0.83	0.51	-	1.16
035	Langley	153	5,148	0.73 *	20	565	1,137.14	0.50 *	0.24	-	0.75
037	Delta	114	3,936	0.63 *	12	345	950.34	0.36 *	0.14	-	0.59
038	Richmond	138	4,639	0.44 *	21	628	1,597.34	0.39 *	0.21	-	0.58
040	New Westminster	123	3,693	1.02	22	770	533.65	1.44	0.80	-	2.09
041	Burnaby	249	8,442	0.67 *	35	963	1,904.69	0.51 *	0.31	-	0.70
042	Maple Ridge	153	5,312	1.03	18	680	850.25	0.80	0.40	-	1.20
043	Coquitlam	226	7,784	0.61 *	49	1,543	2,016.55	0.77	0.52	-	1.01
044	North Vancouver	128	4,102	0.50 *	23	938	1,227.27	0.76	0.44	-	1.09
045	West Vancouver-Bowen Is.	51	1,513	0.57 *	7	233	416.77	0.56	0.11	-	1.01
046	Sunshine Coast	50	1,630	1.12	12	340	239.26	1.42	0.50	-	2.35
047	Powell River	33	953	0.84	8	250	171.66	1.46	0.33	-	2.59
048	Howe Sound	82	3,175	1.47 *	11	368	346.61	1.06	0.37	-	1.75
049	Bella Coola Valley	19	708	3.38 *	4	160	30.71	5.21	0.00	-	10.58
050	Queen Charlotte	22	605	1.78	1	48	51.85	0.93	0.00	-	2.72
051	Snow Country	9	353	7.07 *	1	48	7.37	6.51	0.00	-	19.15
052	Prince Rupert	55	1,998	1.89 *	5	178	160.79	1.11	0.10	-	2.11
053	Upper Skeena	15	503	1.37	1	53	54.08	0.98	0.00	-	2.88
054	Smithers	43	1,720	1.49 *	12	425	173.60	2.45	0.90	-	4.00
055	Burns Lake	25	848	1.81 *	4	150	72.25	2.08	0.00	-	4.19
056	Nechako	62	2,356	2.16 *	8	225	167.84	1.34	0.35	-	2.33
057	Prince George	248	8,124	1.24 *	42	1,400	996.35	1.41	0.93	-	1.88
059	Peace River South	70	2,320	1.38 *	13	438	268.53	1.63	0.65	-	2.61
060	Peace River North	73	2,806	1.37 *	12	465	329.11	1.41	0.55	-	2.28
061	Greater Victoria	390	12,631	1.02	57	1,723	1,907.18	0.90	0.64	-	1.17
062	Sooke	82	2,729	0.80 *	19	558	554.14	1.01	0.48	-	1.54
063	Saanich	64	2,085	0.65 *	13	338	506.86	0.67	0.24	-	1.09
064	Gulf Islands	33	1,113	1.60	1	33	114.00	0.29	0.00	-	0.85
065	Cowichan	106	3,751	1.25	22	655	471.60	1.39	0.74	-	2.04
066	Lake Cowichan	8	255	0.71	5	188	56.89	3.30	0.22	-	6.39
067	Ladysmith	33	1,113	1.27	3	113	140.47	0.80	0.00	-	1.76
068	Nanaimo	196	6,615	1.20 *	35	1,153	878.07	1.31	0.83	-	1.80
069	Qualicum	60	1,760	0.91	13	428	309.72	1.38	0.56	-	2.20
070	Alberni	84	3,004	1.60 *	23	688	292.62	2.35 *	1.23	-	3.47
071	Courtenay	111	3,543	1.07	19	598	531.17	1.13	0.56	-	1.70
072	Campbell River	105	3,393	1.40 *	24	780	376.37	2.07 *	1.16	-	2.98
075	Mission	79	2,563	1.11	17	458	367.55	1.25	0.57	-	1.92
076	Agassiz - Harrison	24	810	1.57	4	140	84.22	1.66	0.00	-	3.39
077	Summerland	18	675	1.14	4	135	93.32	1.45	0.00	-	3.08
078	Enderby	14	490	1.20	3	128	65.81	1.94	0.00	-	4.26
080	Kitimat	20	685	0.92	3	53	111.35	0.48	0.00	-	1.05
081	Fort Nelson	16	705	1.59	3	88	71.78	1.23	0.00	-	2.64
083	Central Coast	7	233	2.13	1	18	16.03	1.12	0.00	-	3.26
084	Vancouver Island West	6	215	1.29	1	53	23.47	2.26	0.00	-	6.64
085	Vancouver Island North	43	1,512	1.67 *	8	295	136.86	2.16	0.59	-	3.72
087	Stikine	4	145	1.93	1	18	11.55	1.56	0.00	-	4.53
088	Terrace	52	1,727	1.22	8	160	212.35	0.75	0.10	-	1.41
092	Nisga'a	13	423	3.38 *	-	-	18.23	-	-	-	-
094	Telegraph Creek	5	158	4.09	3	148	5.89	25.11	0.00	-	54.23
161	Vancouver - City Centre	215	6,433	0.88	27	838	1,235.72	0.68 *	0.40	-	0.96
162	Vancouver - Downtown E.side	328	10,155	2.92 *	53	1,608	522.07	3.08 *	2.17	-	3.99
163	Vancouver - North East	133	4,148	0.68 *	17	623	902.67	0.69	0.35	-	1.03
164	Vancouver - Westside	108	3,425	0.43 *	18	510	1,240.25	0.41 *	0.19	-	0.63
165	Vancouver - Midtown	120	4,165	0.74 *	16	420	814.26	0.52 *	0.24	-	0.79
166	Vancouver - South	154	5,202	0.67 *	21	678	1,169.98	0.58 *	0.31	-	0.85
201	Surrey	562	20,659	1.04	102	3,315	3,130.54	1.06	0.83	-	1.29
202	South Surrey/White Rock	79	2,538	0.65 *	20	750	634.74	1.18	0.63	-	1.74
PROVINCIAL TOTAL		7,474	249,887	1.00	1,236	38,954	38,953.50	1.00	0.94	-	1.06

Notes for this table follow the map.

FIGURE 41
**EXTERNAL CAUSES OF DEATH BY LOCAL HEALTH AREA
 (AGE UNDER 75 YEARS)**
 BRITISH COLUMBIA, 2000–2004



Note: PYLLI - Potential Years of Life Lost Index. Refer to Figure 1 to clarify geographical location of Local Health Areas.

Medically Treatable Diseases

A list of causes have been identified where death could potentially have been avoided through appropriate medical intervention and treatment. The incidence of deaths from medically treatable diseases can be used by public health professionals as a way of monitoring the effect of health promotion programs. It should be noted that the causes are considered to have been medically treatable only if the death occurred to persons within specific age ranges. See Table 37 for a list of the causes and ages included in this category.

There were only 163 deaths due to these causes in 2005 which represents half of one percent (0.54 %) of all deaths in the province.

Table 37 indicates the number and percent of all medically treatable diseases by cause of death for 2005 and the five-year period 2000-2004. Bacterial infections accounted for most of the male and female deaths due to medically treatable diseases in 2005 and the previous five years (41.2% of male and 29.5% of female deaths due to medically treatable diseases in 2005 and 29.4% in 2000-2004). Two cause categories, hypertension and hypertensive diseases and pneumonia and unqualified bronchitis, accounted for almost half the male (49.4%) and a third of the female (33.4%) deaths in 2005 due to medically treatable diseases.

Two time periods are detailed in Table 38 showing the incidence of deaths due to medically treatable diseases classified by the Local Health Area in which the decedent lived and provincial totals. For the current year, 2005, the table shows the actual number of deaths observed in the LHA and the expected deaths based on the age adjusted provincial death rate. The SMR is the ratio of observed to expected deaths. The upper and lower limits of the 95% Confidence Interval are an indication of the amount of variation in the SMR. A narrow confidence interval generally indicates a larger population or a more common event than a wider confidence interval. The column headed (p) indicates those LHAs where observed deaths were significantly different from expected deaths. The observed deaths, SMR, and (p) are also shown for the five years 2000-2004. See the Glossary for an explanation of Standardized Mortality Ratio (SMR) and the Methodology section for the precise calculation method. More information on Confidence Intervals and Statistical Tests of Significance for Ratios are also available in the Methodology section.

This analysis of deaths which were attributed to diseases considered treatable, and which therefore should not be fatal, is useful in assessing the use and availability of medical treatment. There were nine LHAs that had no deaths due to these conditions in 2000-2004 and 37 in 2005 as shown in Table 38. Further, there were only four LHAs in 2000-2004 that showed statistically significant differences between observed and expected deaths and only one LHA with five or more deaths that was statistically significant in 2005.

Figure 42 shows the province divided up into its 89 Local Health Areas, with each area indicated as to whether its SMR for deaths due to medically treatable diseases was high or low on a five category scale: dark green indicates the highest SMRs and dark grey indicates the lowest. As might be expected from a table containing such low incidence numbers, this map shows no obvious geographic pattern of location of the quintiles.

TABLE 37
DEATHS DUE TO MEDICALLY TREATABLE DISEASES BY
SELECTED CAUSES AND GENDER

BRITISH COLUMBIA, 2000–2004 AND 2005

Cause of Death	ICD-10 Code(s)	2000–2004		2005					
		Number	Percent	Male		Female		Total	
				Number	Percent	Number	Percent	Number	Percent
Hypertension and hypertensive diseases	I10-I15	133	18.8	22	25.9	13	16.7	35	21.5
Pneumonia and unqualified bronchitis	J12-J181, J188, J189, J40	112	15.8	20	23.5	13	16.7	33	20.2
Malignant neoplasm of cervix	C53	151	21.3	-	-	22	28.2	22	13.5
Tuberculosis	A15-A19, B90	14	2.0	2	2.4	2	0.0	4	2.5
Asthma	J45-J46	31	4.4	6	7.1	1	0.0	7	4.3
Chronic rheumatic heart disease	I05-I09	8	1.1	-	-	-	-	-	-
Acute respiratory infections and influenza	J00-J06, J10-J11, J20-22	4	0.6	-	-	-	-	-	-
Bacterial Infections*	A00-A05, ..., M871	208	29.4	35	41.2	23	29.5	58	35.6
Hodgkin's disease	C81	14	2.0	-	-	1	0.0	1	0.6
Abdominal hernias, cholecystitis and cholelithiasis, appendicitis	K35-K37, K40-K46, K80, K81	32	4.5	-	-	2	2.6	2	1.2
Nutritional anemias	D50-D53	1	0.1	-	-	1	0.0	1	0.0
TOTAL		708	100.0	85	100.0	78	100.0	163	100.0

Note: Medically Treatable Diseases based on Charlton's definition (see Glossary).

*ICD-10 codes A00–A05, A20–A49, B95–B96, G00, H66, H70, H95.0–H95.1, I00–I01, I02.0, I02.9, L01–L08, M00, M02.8–M02.9, M46.2, M86, M87.1.

Deaths due to medically treatable diseases exclude all deaths less than age 5 years old.

Deaths due to medically treatable diseases also exclude

- deaths aged 65 or more from hypertensive disease.
- deaths aged 50 or more from pneumonia and unqualified bronchitis.
- deaths aged 65 or more from cervical cancer.
- deaths aged 65 or more from tuberculosis.
- deaths aged 50 or more from asthma.
- deaths aged 45 or more from chronic rheumatic heart disease.
- deaths aged 50 or more from acute respiratory infections and influenza.
- deaths aged 65 or more from bacterial infections.
- deaths aged 35 or more from Hodgkin's disease.
- deaths aged 65 or more from abdominal hernias, cholecystitis and cholelithiasis, appendicitis.
- deaths aged 65 or more from deficiency nutritional anemias.

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

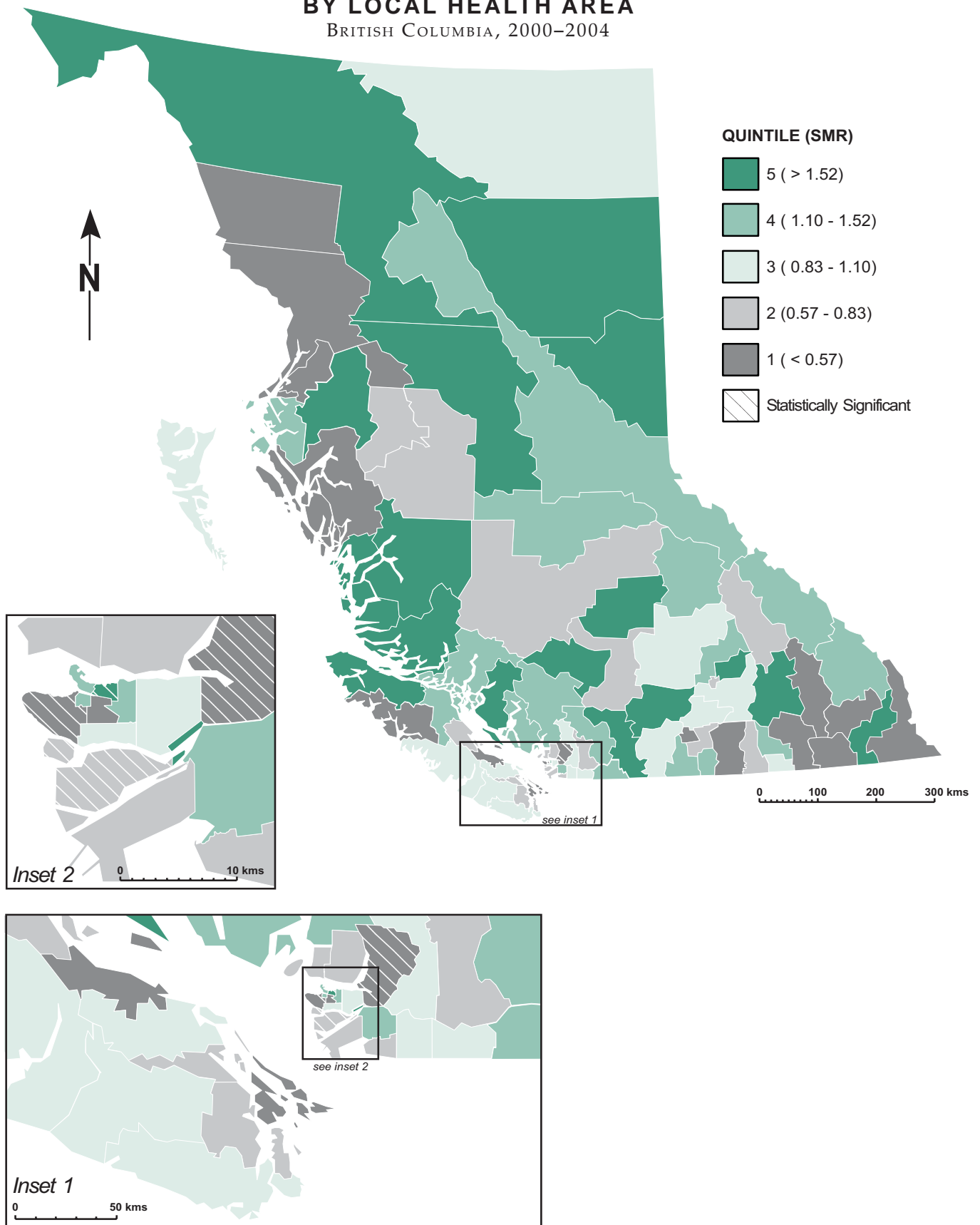
The output from ICD-10 mortality coding and underlying cause of death selection was modified in British Columbia to reflect the intent of certifiers in this jurisdiction and to provide greater continuity over time. Data using the standard ICD-10 rules for such categories as pneumonia/influenza, diabetes, or cancer should not be compared to the numbers shown above.

STANDARDIZED MORTALITY RATIO BY LOCAL HEALTH AREA DEATHS DUE TO MEDICALLY TREATABLE DISEASES, BRITISH COLUMBIA, 2000-2004 AND 2005

Local Health Area			2000-2004		2005				
			Observed Deaths	SMR (p)	Observed Deaths	Expected Deaths	SMR (p)	95% Confidence Interval	
								Lower	Upper
001	Fernie	1	0.35	1	0.66	1.53	0.02	-	8.49
002	Cranbrook	7	1.57	-	1.01	-	-	-	-
003	Kimberley	-	-	2	0.39	5.17	0.58	-	18.66
004	Windermere	2	1.16	-	0.43	-	-	-	-
005	Creston	1	0.48	2	0.46	4.32	0.49	-	15.60
006	Kootenay Lake	-	-	-	0.15	-	-	-	-
007	Nelson	-	-	1	1.00	1.00	0.01	-	5.54
009	Castlegar	3	1.24	1	0.54	1.86	0.02	-	10.36
010	Arrow Lakes	2	2.13	-	0.21	-	-	-	-
011	Trail	3	0.84	1	0.79	1.27	0.02	-	7.07
012	Grand Forks	1	0.62	-	0.37	-	-	-	-
013	Kettle Valley	-	-	-	0.15	-	-	-	-
014	Southern Okanagan	4	1.29	1	0.76	1.32	0.02	-	7.37
015	Penticton	4	0.62	2	1.47	1.36	0.15	-	4.90
016	Keremeos	1	1.16	-	0.21	-	-	-	-
017	Princeton	1	1.08	-	0.22	-	-	-	-
018	Golden	2	1.52	2	0.31	6.50	0.73	-	23.47
019	Revelstoke	1	0.67	-	0.33	-	-	-	-
020	Salmon Arm	7	1.24	2	1.32	1.51	0.17	-	5.46
021	Armstrong - Spallumcheen	1	0.58	-	0.39	-	-	-	-
022	Vernon	9	0.89	4	2.33	1.72	0.46	-	4.40
023	Central Okanagan	23	0.88	6	6.18	0.97	0.35	-	2.11
024	Kamloops	19	1.04	6	4.12	1.46	0.53	-	3.17
025	100 Mile House	5	1.86	-	0.61	-	-	-	-
026	North Thompson	1	1.12	-	0.21	-	-	-	-
027	Cariboo - Chilcotin	4	0.81	3	1.11	2.70	0.54	-	7.88
028	Quesnel	5	1.13	-	0.99	-	-	-	-
029	Lillooet	2	2.62	2	0.17	11.99 +	1.35	-	43.30
030	South Cariboo	1	0.74	2	0.31	6.43	0.72	-	23.23
031	Merritt	4	2.12	1	0.42	2.40	0.03	-	13.33
032	Hope	3	2.01	-	0.35	-	-	-	-
033	Chilliwack	13	1.13	2	2.71	0.74	0.08	-	2.67
034	Abbotsford	20	1.06	1	4.39	0.23	0.00	-	1.27
035	Langley	19	0.95	5	4.84	1.03	0.33	-	2.41
037	Delta	14	0.77	8	4.16	1.92	0.83	-	3.79
038	Richmond	18	0.57 *	5	7.04	0.71	0.23	-	1.66
040	New Westminster	17	1.65	1	2.38	0.42	0.01	-	2.33
041	Burnaby	34	0.97	5	7.88	0.63	0.20	-	1.48
042	Maple Ridge	14	1.00	5	3.41	1.47	0.47	-	3.42
043	Coquitlam	19	0.53 *	4	8.44	0.47	0.13	-	1.21
044	North Vancouver	20	0.81	3	5.65	0.53	0.11	-	1.55
045	West Vancouver-Bowen Is.	7	0.74	1	2.20	0.45	0.01	-	2.53
046	Sunshine Coast	7	1.47	-	1.12	-	-	-	-
047	Powell River	8	2.18	1	0.85	1.17	0.02	-	6.52
048	Howe Sound	6	1.16	-	1.22	-	-	-	-
049	Bella Coola Valley	2	3.68	-	0.12	-	-	-	-
050	Queen Charlotte	1	1.07	-	0.22	-	-	-	-
051	Snow Country	-	-	-	0.03	-	-	-	-
052	Prince Rupert	3	1.16	2	0.58	3.44	0.39	-	12.40
053	Upper Skeena	-	-	-	0.19	-	-	-	-
054	Smithers	2	0.68	2	0.65	3.08	0.35	-	11.11
055	Burns Lake	1	0.78	1	0.29	3.43	0.04	-	19.06
056	Nechako	5	1.84	-	0.61	-	-	-	-
057	Prince George	25	1.46	5	3.81	1.31	0.42	-	3.06
059	Peace River South	8	1.86	2	1.02	1.97	0.22	-	7.10
060	Peace River North	8	1.63	1	1.18	0.85	0.01	-	4.71
061	Greater Victoria	32	0.90	6	8.16	0.74	0.27	-	1.60
062	Sooke	10	1.01	4	2.42	1.65	0.44	-	4.23
063	Saanich	8	0.72	2	2.60	0.77	0.09	-	2.78
064	Gulf Islands	1	0.37	-	0.65	-	-	-	-
065	Cowichan	7	0.77	1	2.09	0.48	0.01	-	2.66
066	Lake Cowichan	1	0.92	1	0.24	4.08	0.05	-	22.72
067	Ladysmith	2	0.70	-	0.68	-	-	-	-
068	Nanaimo	16	0.99	6	3.75	1.60	0.58	-	3.48
069	Qualicum	3	0.44	-	1.60	-	-	-	-
070	Alberni	6	1.07	-	1.27	-	-	-	-
071	Courtenay	8	0.77	2	2.41	0.83	0.09	-	2.99
072	Campbell River	9	1.25	1	1.65	0.61	0.01	-	3.38
075	Mission	5	0.79	-	1.49	-	-	-	-
076	Agassiz - Harrison	2	1.45	-	0.33	-	-	-	-
077	Summerland	1	0.52	-	0.44	-	-	-	-
078	Enderby	2	1.60	-	0.29	-	-	-	-
080	Kitimat	1	0.50	-	0.44	-	-	-	-
081	Fort Nelson	1	1.06	-	0.22	-	-	-	-
083	Central Coast	1	3.68	-	0.06	-	-	-	-
084	Vancouver Island West	-	-	-	0.07	-	-	-	-
085	Vancouver Island North	6	2.46	-	0.54	-	-	-	-
087	Stikine	1	4.21	-	0.06	-	-	-	-
088	Terrace	6	1.69	2	0.79	2.53	0.28	-	9.15
092	Nisga'a	-	-	-	0.06	-	-	-	-
094	Telegraph Creek	-	-	-	0.02	-	-	-	-
161	Vancouver - City Centre	26	1.51	6	3.92	1.53	0.56	-	3.33
162	Van. - Downtown E.side	33	3.57 *	14	2.11	6.63 *	3.62	-	11.13
163	Vancouver - North East	20	1.23	4	3.59	1.11	0.30	-	2.85
164	Vancouver - Westside	8	0.39 *	4	4.45	0.90	0.24	-	2.30
165	Vancouver - Midtown	8	0.53	1	3.40	0.29	0.00	-	1.64
166	Vancouver - South	21	0.98	1	4.75	0.21	0.00	-	1.17
201	Surrey	63	1.22	12	12.22	0.98	0.51	-	1.72
202	South Surrey/White Rock	11	0.81	3	3.29	0.91	0.18	-	2.67
PROVINCIAL TOTAL		708	1.00	163	163.00	1.00	0.85	-	1.17

Note: Medically Treatable Diseases based on Charlton's definition (see glossary - Medically Treatable Diseases). *Statistical testing indicates that observed deaths are significantly different from the expected deaths ($p < 0.05$, two tailed). +Denotes significance based on less than five deaths. SMR - Standardized Mortality Ratio. Total includes residents with unknown LHA.

FIGURE 42
**DEATHS DUE TO MEDICALLY TREATABLE DISEASES
 BY LOCAL HEALTH AREA**
 BRITISH COLUMBIA, 2000–2004



Note: SMR - Standardized Mortality Ratio. Refer to Figure 1 to clarify geographical location of Local Health Areas.

Alcohol-Related Deaths

Alcohol-related deaths provide information on deaths due to alcohol (directly related) as well as those where alcohol was a contributing factor (indirectly related). Alcohol-related and drug overdose deaths are the only cause of death categories that are not based entirely upon the underlying causes of death. See the Glossary for a further explanation of alcohol-related deaths and Table 39 for the list of causes used for deaths directly due to alcohol.

Table 39 shows the number and percent of deaths that were directly and indirectly related to alcohol in 2005 and in the five preceding years. One in five (19.3%) of the 1,878 deaths related to alcohol in 2005 were directly attributable to alcohol (362 deaths). Alcohol was a contributing factor in the remaining 80.7% of these deaths. The table indicates that most of the deaths directly attributable to alcohol were caused by liver disease. The percents attributed to each cause in 2005 were quite consistent with those in the previous five years.

The 1,878 alcohol-related deaths represented 6.3% of all deaths in British Columbia in 2005, a decrease from 6.6% in the previous five years (see Table 39). On the other hand, 362 of those deaths (1.2% of all deaths) were directly related to alcohol which was the same percentage as in the previous five years. Figure 43 graphically shows the pattern of alcohol-related deaths by cause.

Table 40 shows numbers and percentages of alcohol-related deaths by age group for males, females, and the total population. All alcohol-related deaths, whether directly or indirectly related to alcohol (see Table 39), are included in this table. Details of the causes of these deaths are shown in the Glossary under Alcohol-Related Deaths.

Alcohol-related deaths constitute 6.3% of all deaths in 2005 and 9.3% of all male deaths (see Table 40). Males died of such causes three times more frequently as women in 2005.

Approaching half (44.3%) of all alcohol deaths were of seniors (65 or older); 38.9% were people between the ages of 45 and 64 as shown in Table 40.

The number of deaths directly and indirectly related to alcohol are shown for each of the Local Health Areas in Table 41 as well as the number that would be expected according to the age- and gender-specific death rates in the whole province. The SMR is the ratio of the observed to the expected deaths and indicates the degree to which the number of deaths in the LHA is above or below the expected number. The (p) columns indicate those LHAs where the observed number of deaths was statistically different from the expected numbers. See Standardized Mortality Ratio in the Glossary for a further explanation and the Methodology section for the precise calculation method. The 95% Confidence Interval columns provide an indication of the variability of the SMR. A wide confidence interval indicates that the statistic is likely to fall within a wide range of values, while a narrow confidence interval indicates the statistic is likely to fall within a narrow range of values. In general, statistical confidence intervals will be wider for areas with small populations or rare events than for areas with larger populations or more common events.

There were 12 LHAs with at least five deaths where the observed values were statistically significant and above the expected values in both 2000-2004 and 2005 as shown in Table 41. There were 11 LHAs with SMRs that were statistically significant and low in both time periods. The map in Figure 44 shows the SMR quintiles and statistical significance patterns in each LHA during 2000-2004.

TABLE 39
ALCOHOL-RELATED DEATHS BY CAUSE
 BRITISH COLUMBIA, 2000–2004 AND 2005

Cause of Death	ICD-10 Code(s)	Year of Death			
		2000–2004		2005	
		Number	Percent	Number	Percent
Directly Related to Alcohol					
Alcohol intoxication	F100	228	2.4	39	2.1
Alcoholic psychoses and dependence	F101-F109	428	4.5	108	5.8
Alcoholic neurological disorders	G312, G621, G721	-	-	-	-
Alcoholic cardiomyopathy	I426	86	0.9	17	0.9
Alcoholic gastritis	K292	5	0.1	3	0.2
Alcoholic liver disease	K70	858	9.0	180	9.6
Alcohol induced chronic pancreatitis	K860	16	0.2	3	0.2
Alcohol poisoning	X45, X65	82	0.9	12	0.6
Other alcohol causes	E244, O354, O993, P043, Q860, R780 T510-T512, T519	-	-	-	-
SUBTOTAL		1,703	17.9	362	19.3
Indirectly Related to Alcohol ¹					
Certain infectious and parasitic diseases	A00-B99	234	2.5	67	3.6
Neoplasms	C00-D48	1,207	12.7	235	12.5
Endocrine/Nutritional/Metabolic	E00-E243, E248-E89	266	2.8	60	3.2
Mental disorders	F00-F09, F11-F99	105	1.1	28	1.5
Neurological diseases	G00-G311, G318-G620, G622-G720, G722-G99	124	1.3	18	1.0
Circulatory	I00-I425, I427-I99	2,214	23.3	407	21.7
Diseases of the respiratory system	J00-J98	665	7.0	107	5.7
Digestive system diseases	K00-K291, K293-K69, K71-K85, K861-K92	637	6.7	124	6.6
Urinary system diseases	N00-N39, N990, N991, N995	105	1.1	12	0.6
Unintentional injury	V01-X44, X46-X59, Y40-Y86, Y88	1,377	14.5	248	13.2
Suicide	X60-X64, X66-X84, Y87	586	6.2	101	5.4
Homicide	X85-Y09, Y871	59	0.6	4	0.2
All other causes		214	2.3	105	5.6
SUBTOTAL		7,793	82.1	1,516	80.7
TOTAL		9,496	100.0	1,878	100.0

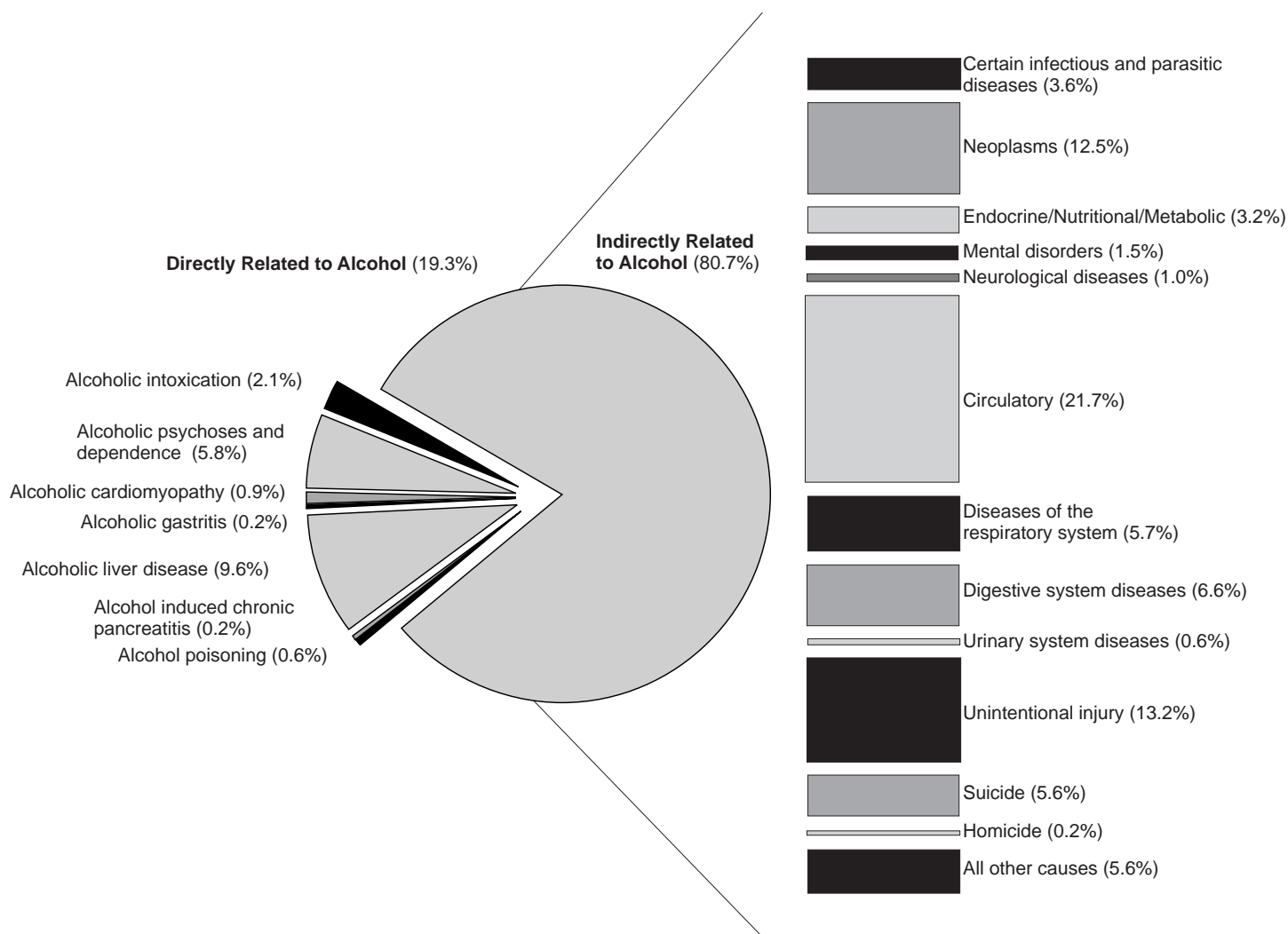
Note: ¹ICD-10 codes for indirectly related to alcohol exclude the codes for directly related to alcohol and will not match the list of codes used for these categories in other tables.

Total percentage may not add up to 100 due to rounding. Non-residents are excluded.

Coding practices from 1995 to 1999 may have produced over-counting of alcohol-related mortality. With the introduction of ICD-10 in 2000, more specific codes are available. Currently produced data should not be used in combination with data produced prior to 2000.

The output from ICD-10 mortality coding and underlying cause of death selection was modified in British Columbia to reflect the intent of certifiers in this jurisdiction and to provide greater continuity over time. Data using the standard ICD-10 rules for such categories as pneumonia/influenza, diabetes, or cancer should not be compared to the numbers shown above.

FIGURE 43
ALCOHOL-RELATED DEATHS BY CAUSE
 BRITISH COLUMBIA, 2005



See Table 39 for ICD-10 codes for each category.

TABLE 40
ALCOHOL-RELATED DEATHS BY AGE AND GENDER
 BRITISH COLUMBIA, 2005

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
<15	-	-	-	-	-	-
15-19	15	1.0	4	0.9	19	1.0
20-24	29	2.0	10	2.2	39	2.1
25-44	197	13.8	61	13.7	258	13.7
45-64	560	39.1	170	38.1	730	38.9
65-84	551	38.5	164	36.8	715	38.1
85+	80	5.6	37	8.3	117	6.2
TOTAL	1,432	100.0	446	100.0	1,878	100.0

Note: Alcohol-related deaths – see Table 39 for ICD-10 codes and Glossary for more details.

Total percentage may not add up to 100 due to rounding. Non-residents are excluded.

Coding practices from 1995 to 1999 may have produced over-counting of alcohol-related mortality.

With the introduction of ICD-10 in 2000, more specific codes are available.

Currently produced data should not be used in combination with data produced prior to 2000.

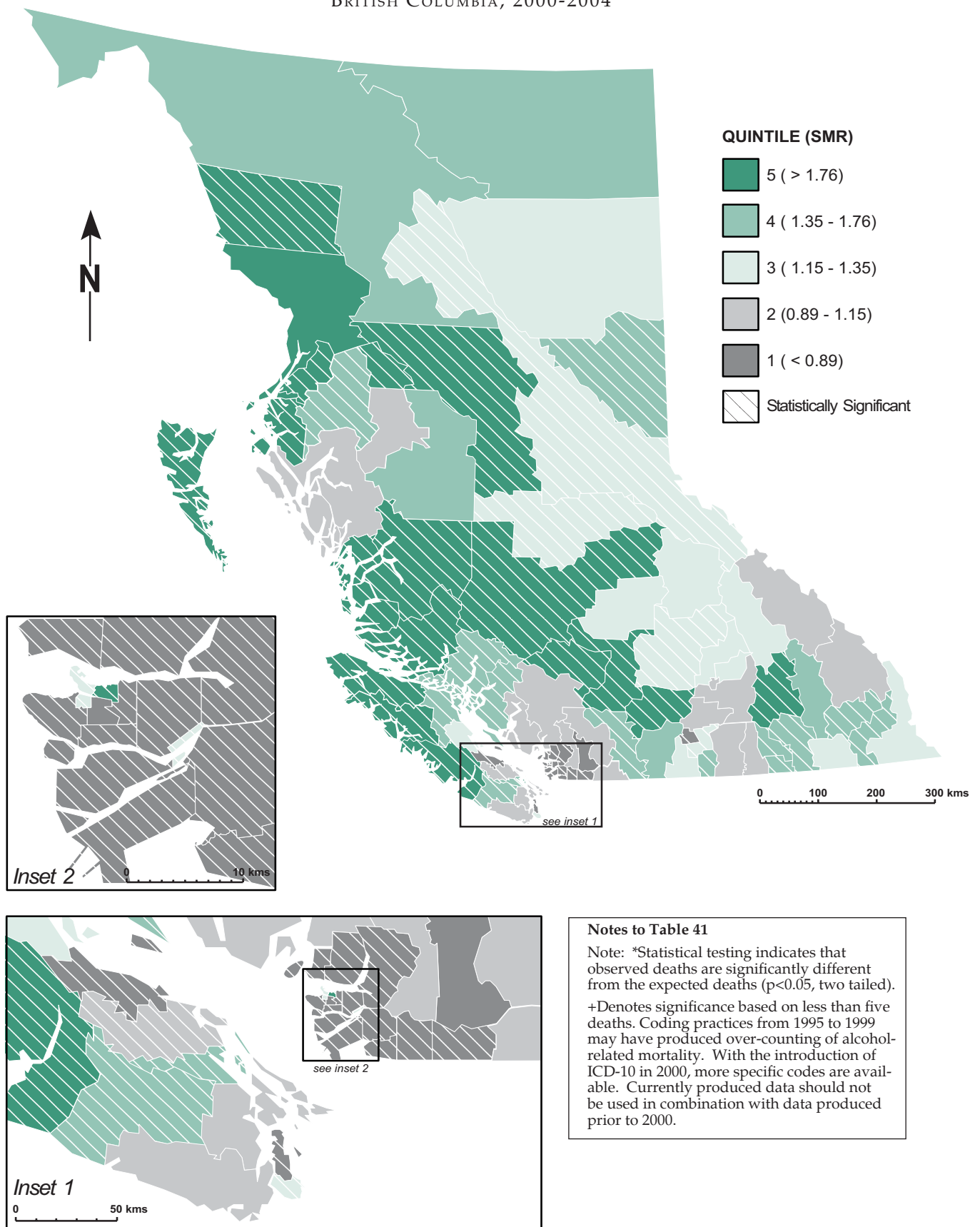


STANDARDIZED MORTALITY RATIO BY LOCAL HEALTH AREA ALCOHOL-RELATED DEATHS,
BRITISH COLUMBIA, 2000-2004 AND 2005

Local Health Area		2000-2004		2005					
		Observed Deaths	SMR (p)	Observed Deaths	Expected Deaths	SMR	(p)	95% Confidence Interval	
								Lower	Upper
001	Fernie	41	1.24	7	6.62	1.06		0.42	2.18
002	Cranbrook	82	1.39 *	19	11.67	1.63		0.98	2.54
003	Kimberley	39	1.56 *	7	4.85	1.44		0.58	2.98
004	Windermere	21	0.94	5	4.65	1.07		0.35	2.51
005	Creston	50	1.28	10	7.27	1.38		0.66	2.53
006	Kootenay Lake	16	1.60	3	1.94	1.55		0.31	4.52
007	Nelson	84	1.40 *	17	11.61	1.46		0.85	2.34
009	Castlegar	48	1.43 *	6	6.50	0.92		0.34	2.01
010	Arrow Lakes	26	1.81 *	4	2.77	1.45		0.39	3.70
011	Trail	91	1.67 *	18	10.29	1.75	*	1.04	2.76
012	Grand Forks	28	1.02	8	5.22	1.53		0.66	3.02
013	Kettle Valley	11	1.04	2	2.04	0.98		0.11	3.53
014	Southern Okanagan	92	1.36 *	31	13.00	2.38	*	1.62	3.38
015	Penticton	151	1.23 *	27	23.37	1.16		0.76	1.68
016	Keremeos	20	1.15	5	3.41	1.46		0.47	3.42
017	Princeton	23	1.48	3	3.08	0.97		0.20	2.85
018	Golden	16	1.04	6	3.09	1.94		0.71	4.23
019	Revelstoke	23	1.22	2	3.70	0.54		0.06	1.95
020	Salmon Arm	111	1.21	18	18.02	1.00		0.59	1.58
021	Armstrong - Spallumcheen	22	0.89	6	4.98	1.21		0.44	2.62
022	Vernon	181	1.15	37	30.91	1.20		0.84	1.65
023	Central Okanagan	411	1.00	88	81.75	1.08		0.86	1.33
024	Kamloops	299	1.24 *	65	47.76	1.36	*	1.05	1.73
025	100 Mile House	52	1.33	11	7.71	1.43		0.71	2.55
026	North Thompson	14	1.28	2	2.26	0.88		0.10	3.19
027	Cariboo - Chilcotin	111	1.95 *	19	11.53	1.65		0.99	2.57
028	Quesnel	73	1.33 *	7	10.87	0.64		0.26	1.33
029	Lillooet	36	3.56 *	4	2.00	2.00		0.54	5.11
030	South Cariboo	55	2.69 *	6	4.03	1.49		0.54	3.24
031	Merritt	48	1.89 *	9	5.01	1.80		0.82	3.41
032	Hope	38	1.61 *	7	4.69	1.49		0.60	3.08
033	Chilliwack	164	0.94	30	34.62	0.87		0.58	1.24
034	Abbotsford	175	0.66 *	32	52.11	0.61	*	0.42	0.87
035	Langley	164	0.64 *	41	52.54	0.78		0.56	1.06
037	Delta	138	0.63 *	29	43.01	0.67	*	0.45	0.97
038	Richmond	178	0.46 *	29	78.04	0.37	*	0.25	0.53
040	New Westminster	166	1.24 *	35	25.59	1.37		0.95	1.90
041	Burnaby	348	0.76 *	62	90.22	0.69	*	0.53	0.88
042	Maple Ridge	162	0.97	41	34.33	1.19		0.86	1.62
043	Coquitlam	268	0.69 *	53	80.73	0.66	*	0.49	0.86
044	North Vancouver	220	0.73 *	27	59.63	0.45	*	0.30	0.66
045	West Vancouver-Bowen Is.	84	0.55 *	21	29.24	0.72		0.44	1.10
046	Sunshine Coast	73	0.97	16	15.00	1.07		0.61	1.73
047	Powell River	82	1.49 *	20	10.76	1.86	*	1.14	2.87
048	Howe Sound	59	1.12	9	10.97	0.82		0.37	1.56
049	Bella Coola Valley	18	2.78 *	6	1.28	4.68	*	1.71	10.18
050	Queen Charlotte	23	2.26 *	3	2.08	1.44		0.29	4.21
051	Snow Country	4	2.43	-	0.33	-		-	-
052	Prince Rupert	71	2.38 *	13	5.85	2.22	*	1.18	3.80
053	Upper Skeena	29	2.92 *	5	2.02	2.48		0.80	5.79
054	Smithers	34	1.07	3	6.37	0.47		0.09	1.38
055	Burns Lake	25	1.52	8	3.27	2.44	*	1.05	4.81
056	Nechako	58	1.80 *	12	6.51	1.84		0.95	3.22
057	Prince George	243	1.30 *	38	37.28	1.02		0.72	1.40
059	Peace River South	84	1.61 *	21	10.63	1.98	*	1.22	3.02
060	Peace River North	61	1.16	21	10.95	1.92	*	1.19	2.93
061	Greater Victoria	631	1.16 *	126	103.10	1.22	*	1.02	1.46
062	Sooke	122	1.05	30	23.85	1.26		0.85	1.80
063	Saanich	119	0.62 *	19	37.28	0.51	*	0.31	0.80
064	Gulf Islands	47	0.98	6	9.32	0.64		0.24	1.40
065	Cowichan	141	1.05	31	26.56	1.17		0.79	1.66
066	Lake Cowichan	28	1.76 *	4	3.15	1.27		0.34	3.25
067	Ladysmith	71	1.50 *	12	9.34	1.29		0.66	2.25
068	Nanaimo	272	1.15 *	55	47.32	1.16		0.88	1.51
069	Qualicum	95	0.70 *	24	26.68	0.90		0.58	1.34
070	Alberni	138	1.78 *	31	15.28	2.03	*	1.38	2.88
071	Courtenay	174	1.17	53	29.87	1.77	*	1.33	2.32
072	Campbell River	148	1.66 *	27	18.02	1.50		0.99	2.18
075	Mission	65	0.83	21	15.89	1.32		0.82	2.02
076	Agassiz - Harrison	23	1.12	2	4.24	0.47		0.05	1.70
077	Summerland	23	0.61 *	4	7.12	0.56		0.15	1.44
078	Enderby	24	1.24	4	3.86	1.04		0.28	2.65
080	Kitimat	24	1.06	5	4.46	1.12		0.36	2.61
081	Fort Nelson	13	1.54	1	1.80	0.56		0.01	3.09
083	Central Coast	18	5.65 *	5	0.63	7.97	*	2.57	18.60
084	Vancouver Island West	11	2.65 *	1	0.75	1.32		0.02	7.37
085	Vancouver Island North	54	2.08 *	14	5.18	2.70	*	1.48	4.53
087	Stikine	4	1.51	1	0.54	1.86		0.02	10.33
088	Terrace	58	1.43 *	14	8.06	1.74		0.95	2.91
092	Nisga'a	15	4.71 *	1	0.64	1.57		0.02	8.75
094	Telegraph Creek	10	9.40 *	2	0.21	9.31	+	1.05	33.62
161	Vancouver - City Centre	268	1.31 *	37	40.90	0.90		0.64	1.25
162	Vancouver - Downtown E.side	417	3.18 *	79	25.05	3.15	*	2.50	3.93
163	Vancouver - North East	170	0.78 *	23	42.81	0.54	*	0.34	0.81
164	Vancouver - Westside	126	0.47 *	21	51.51	0.41	*	0.25	0.62
165	Vancouver - Midtown	159	0.87	25	35.21	0.71		0.46	1.05
166	Vancouver - South	173	0.60 *	26	57.12	0.46	*	0.30	0.67
201	Surrey	481	0.82 *	110	118.41	0.93		0.76	1.12
202	South Surrey/White Rock	126	0.56 *	27	43.87	0.62	*	0.41	0.90
PROVINCIAL TOTAL		9,496	1.00	1,878	1,878.00	1.00		0.96	1.05

Notes for this table follow the map.

FIGURE 44
ALCOHOL-RELATED DEATHS BY LOCAL HEALTH AREA
 BRITISH COLUMBIA, 2000-2004



Note: SMR - Standardized Mortality Ratio. Refer to Figure 1 to clarify geographical location of Local Health Areas.

Smoking-Attributable Deaths

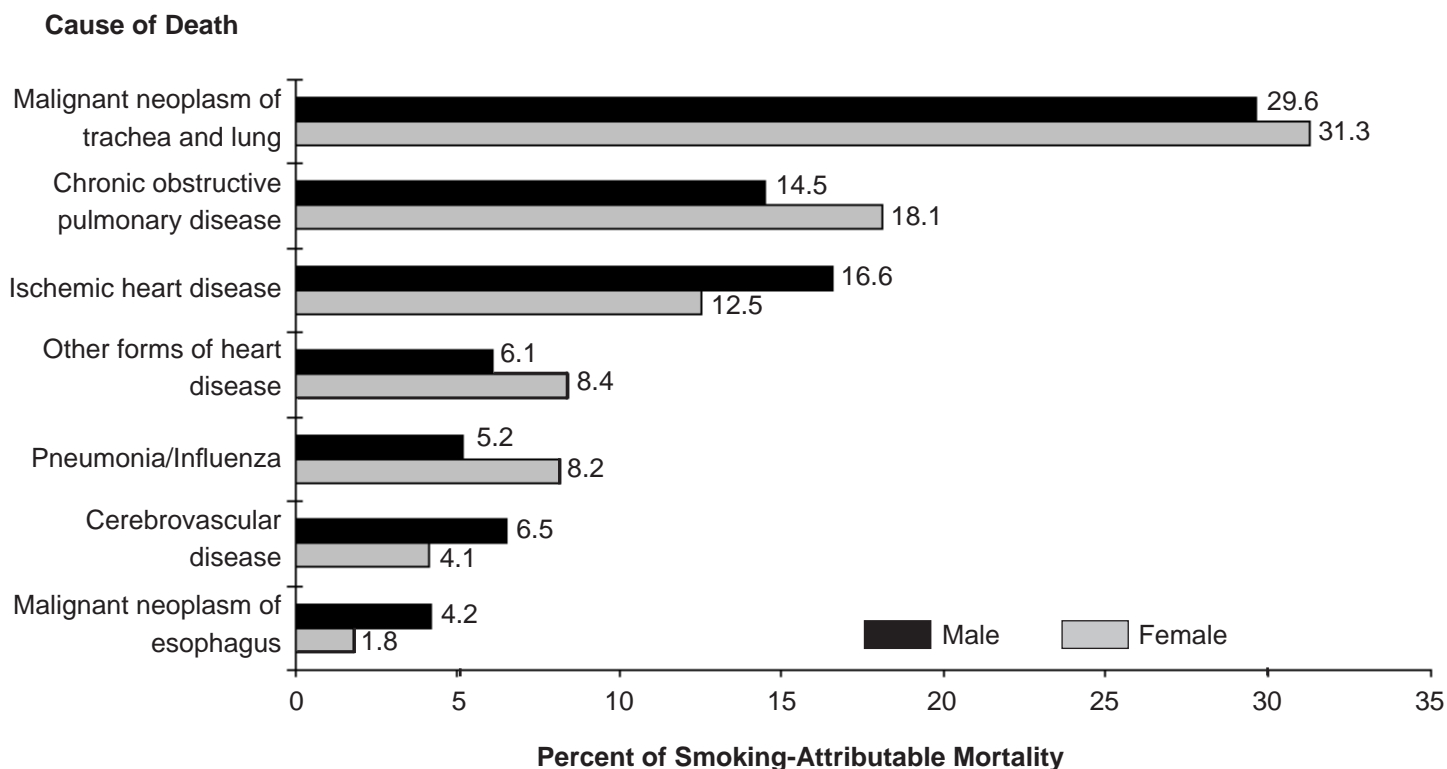
These tabulations portray the number and percent of deaths in 2005 that were attributable to smoking for those 35 years old and older. Because the decedent's smoking history is not available on the death record, the link between smoking and mortality is estimated indirectly. Research has indicated the fraction of deaths from certain diseases, like lung cancer, that are due to smoking and that fraction is then used to estimate the number of smoking attributable deaths due to those diseases. See the Glossary entry on Smoking-Attributable Mortality (SAM) for details and the Methodology section for the calculation formulae for these indicators.

Figure 45 shows visually the effect of seven of the causes with the highest incidence levels from Table 42. This display emphasizes the organ systems that contribute the most in calculating smoking attributable deaths.

Table 42 is designed to show the extent to which tobacco smoking contributes to individuals' premature death. As the health-destructive effects of smoking take some years to show up, this table is based on deaths of persons 35 years of age or older. For each of several causes listed on the left with the corresponding ICD-10 codes, the table shows the number of deaths and the SAM (%) (Smoking Attributable Mortality) value, an estimation calculated using the formula shown in the Methodology section. Also shown is the SAM Number, the number of deaths deemed to be attributable to the effects of smoking and SAM Percent, the percentage of all deaths attributable to the causes shown in this table.

In 2005, 6,044 deaths were considered attributable to the decedents' smoking as shown in Table 42. By far the largest contributory cause was malignant neoplasms of the trachea and lung (30.3%) followed by chronic obstructive pulmonary disease (15.9%) and ischemic heart disease (14.9%) with each having about half of the impact of lung cancer.

FIGURE 45
**SMOKING-ATTRIBUTABLE MORTALITY
BY SELECTED CAUSES AND GENDER**
BRITISH COLUMBIA, 2005



Note: Causes of death selected based on Total SAM Percent. Ischemic heart disease includes 35-64 years and 65+ years. Cerebrovascular disease includes 35-64 years and 65+ years.

TABLE 42
SMOKING-ATTRIBUTABLE MORTALITY
 BRITISH COLUMBIA, 2005

Cause of Death	ICD-10 Code(s)	Male				Female				Total		
		Deaths	SAM (%)	SAM		Deaths	SAM (%)	SAM		Deaths	SAM	
				Number	Percent			Number	Percent		Number	Percent
Malignant Neoplasms												
Malignant neoplasms of lip, oral cavity and pharynx	C00-C14	113	91.2	104	2.9	52	59.9	30	1.2	165	134	2.2
Malignant neoplasm of esophagus	C15	192	78.2	151	4.2	65	71.0	45	1.8	257	196	3.2
Malignant neoplasm of pancreas	C25	236	22.7	52	1.4	228	33.9	77	3.2	464	129	2.1
Malignant neoplasm of larynx	C32	38	79.7	31	0.9	11	87.2	10	0.4	49	41	0.7
Malignant neoplasm of trachea and lung	C33-C34	1,193	89.3	1,066	29.6	1,000	76.5	766	31.3	2,193	1,832	30.3
Malignant neoplasms of cervix, uterus	C53-C55	-	-	-	-	118	33.9	39	1.6	118	39	0.6
Malignant neoplasm of bladder	C67	166	44.8	73	2.0	65	37.6	24	1.0	231	97	1.6
Malignant neoplasm of kidney and other unspecified urinary organs	C64-C66, C68	123	46.8	55	1.5	52	12.4	7	0.3	175	62	1.0
SUBTOTAL		2,061		1,532	42.6	1,591		998	40.8	3,652	2,530	41.9
Circulatory System Diseases												
Hypertension	I10-I13	133	24.6	32	0.9	237	16.4	38	1.6	370	70	1.2
Ischemic heart diseases :	I20-I25											
35-64 years		411	43.2	177	4.9	102	36.5	37	1.5	513	214	3.5
65+ years		1,990	21.1	421	11.7	1,851	14.6	270	11.0	3,841	691	11.4
Other forms of heart disease	I01-I09, I27, I30-I52	824	26.5	218	6.1	1,056	19.4	205	8.4	1,880	423	7.0
Cerebrovascular diseases :	I60-I69											
35-64 years		110	44.8	50	1.4	76	49.3	38	1.6	186	88	1.5
65+ years		783	23.4	183	5.1	1,248	4.8	60	2.5	2,031	243	4.0
Atherosclerosis	I70	176	55.5	98	2.7	138	31.7	45	1.8	314	143	2.4
Aortic aneurysm	I71	135	55.5	75	2.1	78	31.7	24	1.0	213	99	1.6
Other arterial diseases	I26, I28, I72-I78	86	55.5	48	1.3	116	31.7	37	1.5	202	85	1.4
SUBTOTAL		4,648		1,302	36.2	4,902		754	30.9	9,550	2,056	34.0
Respiratory System Diseases												
Pneumonia/Influenza	J10-J181, J188, J189	576	32.7	187	5.2	760	26.3	201	8.2	1,336	388	6.4
Bronchitis, emphysema	J40-J43	62	84.7	53	1.5	51	79.2	41	1.7	113	94	1.6
Chronic obstructive pulmonary disease	J44	615	84.7	521	14.5	557	79.2	442	18.1	1,172	963	15.9
Other respiratory diseases	A15-A19, J45-J46	20	32.7	5	0.1	28	26.3	8	0.3	48	13	0.2
SUBTOTAL		1,273		766	21.3	1,396		692	28.3	2,669	1,458	24.1
TOTAL		7,982		3,600	100.0	7,889		2,444	100.0	15,871	6,044	100.0

Note: Deaths are the total number of deaths aged 35+ years or as specified in the diagnostic category.

SAM – Smoking-Attributable Mortality, derived by multiplying the SAM(%) by the number of deaths in each category.

See glossary under Smoking-Attributable Mortality Percent for a definition of the formula for SAM(%).

Total SAM Number may not add up to the sum of Male SAM Number and Female SAM Number due to rounding.

Non-residents are excluded.

The output from ICD-10 mortality coding and underlying cause of death selection was modified in British Columbia to reflect the intent of certifiers in this jurisdiction and to provide greater continuity over time. Data using the standard ICD-10 rules for such categories as pneumonia/influenza, diabetes, or cancer should not be compared to the numbers shown above.

Drug-Induced Deaths

Drug-induced deaths are all deaths directly due to drug use, and include illicit and prescribed drugs. This category excludes causes indirectly related to drug use. See Table 44 for a list of the causes associated with these deaths but they do not include those due to alcohol or smoking.

It is immediately apparent in Table 43 that males (229 deaths) were twice as susceptible to drug-induced causes compared to females (113 deaths). Also, they were centred among residents aged 25-44 (46.5%) and those aged 45-64 (40.1%), although drug-induced deaths appeared in every age group. Note that, compared to the two age groups with the highest fatalities, the percentages of progressively decreased in younger and older age groups not only overall but for males and females as well.

Table 44 shows the incidence, for 2000-2004 and 2005, of drug-induced deaths by cause. Two thirds (66.7%) of those deaths in 2005 and in 2000-2004 (66.0%) were the result of unintentional poisoning (called accidental poisoning in ICD-10). Of the 403 suicide deaths in B.C. in 2005 (see Table 30), about one in five (19.4%) were drug-induced.

Figure 46 makes the results in Table 44 more dramatic by visual display. Clearly, drug-induced deaths are almost all due to poisoning, suicide, and non-medical use of drugs.

Table 45 shows the number of observed and expected drug-induced deaths and the ratio of observed to expected deaths (SMR) in each Local Health Area in 2005 and in the previous five years. The calculation method for Standardized Mortality Ratio (SMR) appears in the Methodology section, supplemented by the definition in the Glossary. Notice that 32 LHAs had no deaths due to drugs in 2005 and nine had no drug-induced deaths in 2000-2004. New Westminster and Vancouver - Downtown Eastside were the only LHAs where the observed number was statistically significant and higher than the expected number (SMR ratio) in 2005 and the previous five years.

Figure 47 provides an immediately visible pattern of the variation of SMRs in the LHAs divided into quintiles. The map shows SMR quintiles for 2000-2004 because the low 2005 frequencies in the LHAs would be susceptible to variation.

TABLE 43
DRUG-INDUCED DEATHS BY AGE AND GENDER
BRITISH COLUMBIA, 2005

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
<15	1	0.4	-	-	1	0.3
15-19	2	0.9	2	1.8	4	1.2
20-24	8	3.5	6	5.3	14	4.1
25-44	114	49.8	45	39.8	159	46.5
45-64	90	39.3	47	41.6	137	40.1
65-84	13	5.7	12	10.6	25	7.3
85+	1	0.4	1	0.9	2	0.6
TOTAL	229	100.0	113	100.0	342	100.0

Note: Excludes tobacco and alcohol.

Drug-induced deaths – see Table 44 for ICD-10 codes and Glossary for more details.

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

Non-residents are excluded.

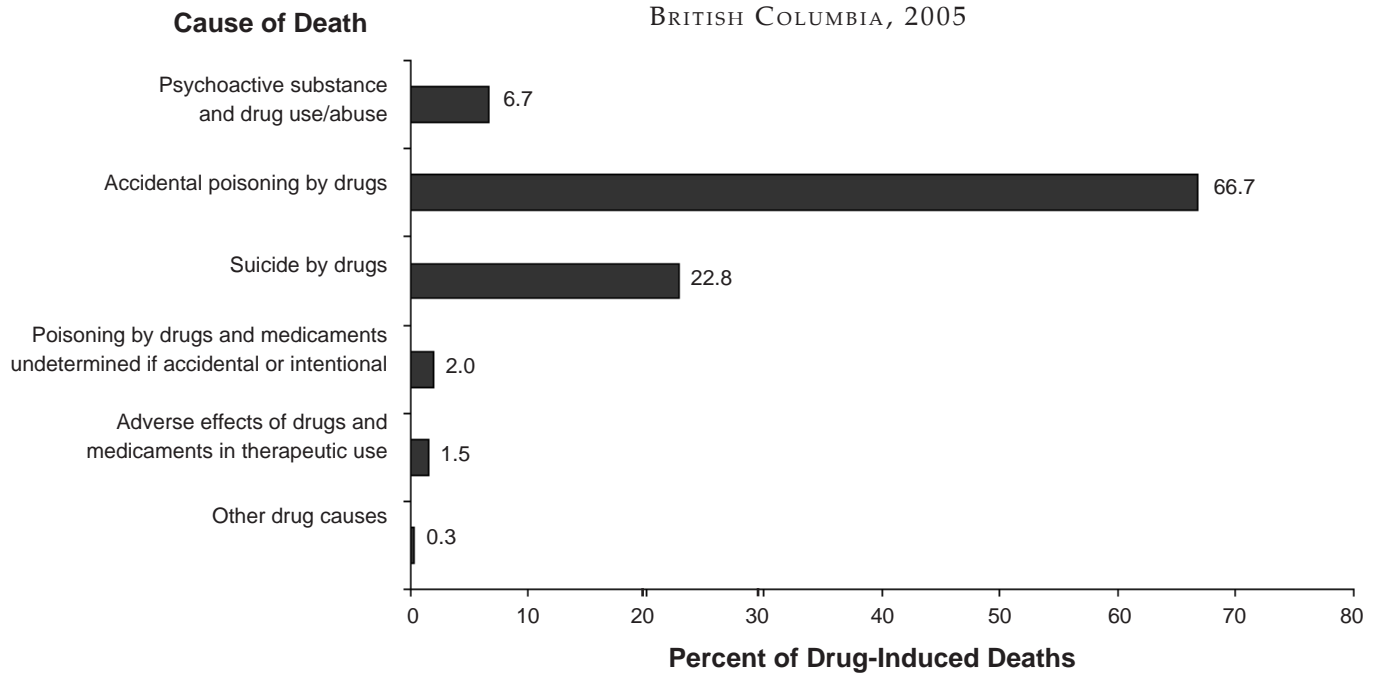
TABLE 44
DRUG-INDUCED DEATHS BY CAUSE
 BRITISH COLUMBIA, 2000–2004 AND 2005

Cause of Death	ICD-10 Code(s)	Year of Death			
		2000–2004		2005	
		Number	Percent	Number	Percent
Psychoactive substance and drug use/abuse	F11-F16, F19	106	5.1	23	6.7
Accidental poisoning by drugs	X40-X44	1,383	66.0	228	66.7
Suicide by drugs	X60-X64	525	25.0	78	22.8
Assault by drugs and medicaments	X85	2	0.1	-	-
Poisoning by drugs and medicaments undetermined if accidental or intentional	Y10-Y14	65	3.1	7	2.0
Adverse effects of drugs and medicaments in therapeutic use	Y40-Y574, Y577-Y579, Y598, Y880	15	0.7	5	1.5
Other drug causes*		-	-	1	0.3
TOTAL		2,096	100.0	342	100.0

Note: Excludes tobacco and alcohol. Total percentage may not add to 100 due to rounding. Non-residents are excluded.

*ICD-10 codes D521, D590, D592, D611, D642, E032, E064, E231, E242, E273, F55, F551, G210, G211, G240, G251, G254, G256, G444, G620, G720, H263, I427, I952, J702, J703, J704, L105, L233, L244, L251, L270, L271, L432, L560, L561, L640, M022, M102, M320, M804, M814, M835, M871, N140, N141, N142, O355, P040, P041, P044, P584, P961, P962, R781, R782, R783, R784, R785, R786, R825.

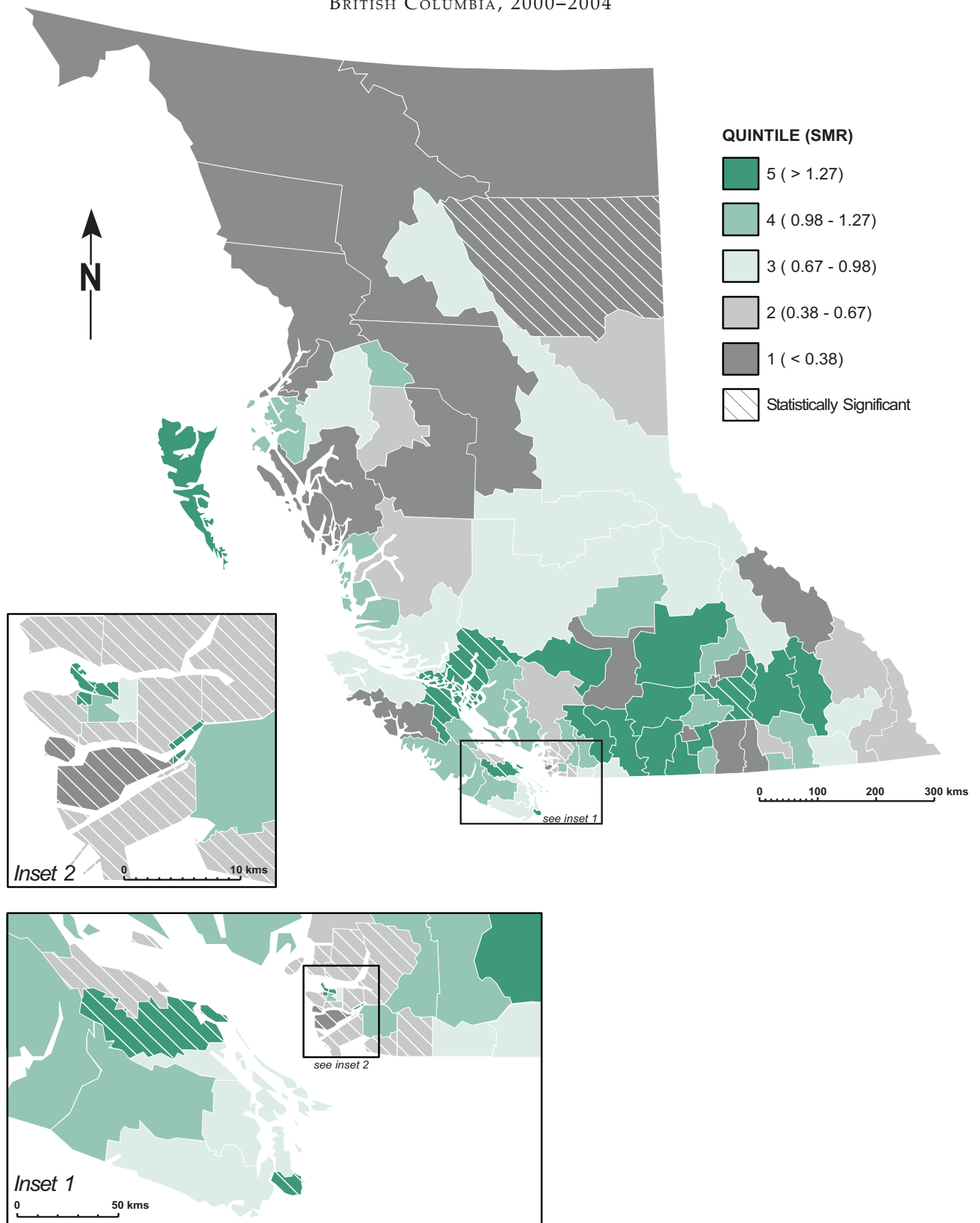
FIGURE 46
DRUG-INDUCED DEATHS BY CAUSE
 BRITISH COLUMBIA, 2005



Local Health Area		2000–2004		2005				
		Observed Deaths	SMR (p)	Observed Deaths	Expected Deaths	SMR (p)	95% Confidence Interval	
							Lower	Upper
001	Fernie	5	0.62	-	1.31	-	-	-
002	Cranbrook	8	0.64	2	2.02	0.99	0.11	3.58
003	Kimberley	3	0.68	-	0.74	-	-	-
004	Windermere	3	0.62	-	0.87	-	-	-
005	Creston	4	0.71	-	0.90	-	-	-
006	Kootenay Lake	4	2.28	-	0.27	-	-	-
007	Nelson	14	1.12	1	1.99	0.50	0.01	2.79
009	Castlegar	4	0.59	1	1.07	0.93	0.01	5.19
010	Arrow Lakes	5	2.01	-	0.39	-	-	-
011	Trail	10	0.99	-	1.59	-	-	-
012	Grand Forks	1	0.23	-	0.70	-	-	-
013	Kettle Valley	-	-	-	0.28	-	-	-
014	Southern Okanagan	9	1.08	-	1.41	-	-	-
015	Penticton	25	1.32	2	3.09	0.65	0.07	2.33
016	Keremeos	3	1.32	-	0.39	-	-	-
017	Princeton	3	1.29	1	0.38	2.65	0.03	14.76
018	Golden	-	-	-	0.66	-	-	-
019	Revelstoke	3	0.69	-	0.69	-	-	-
020	Salmon Arm	17	1.12	4	2.54	1.57	0.42	4.03
021	Armstrong - Spallumcheen	1	0.21	1	0.78	1.28	0.02	7.14
022	Vernon	52	1.82 *	5	4.72	1.06	0.34	2.47
023	Central Okanagan	93	1.22	13	12.97	1.00	0.53	1.71
024	Kamloops	66	1.28	5	8.31	0.60	0.19	1.40
025	100 Mile House	9	1.27	1	1.13	0.88	0.01	4.90
026	North Thompson	2	0.78	-	0.43	-	-	-
027	Cariboo - Chilcotin	11	0.77	2	2.31	0.87	0.10	3.12
028	Quesnel	12	0.96	4	2.02	1.98	0.53	5.08
029	Lillooet	3	1.33	-	0.36	-	-	-
030	South Cariboo	-	-	-	0.60	-	-	-
031	Merritt	10	1.84	-	0.88	-	-	-
032	Hope	6	1.47	-	0.67	-	-	-
033	Chilliwack	30	0.87	10	5.81	1.72	0.82	3.16
034	Abbotsford	57	0.97	12	9.63	1.25	0.64	2.18
035	Langley	29	0.49 *	13	9.80	1.33	0.71	2.27
037	Delta	34	0.67 *	4	8.05	0.50	0.13	1.27
038	Richmond	24	0.27 *	8	14.20	0.56	0.24	1.11
040	New Westminster	60	1.84 *	14	5.12	2.73 *	1.49	4.58
041	Burnaby	70	0.65 *	9	17.12	0.53 *	0.24	1.00
042	Maple Ridge	44	1.04	5	7.33	0.68	0.22	1.59
043	Coquitlam	65	0.61 *	16	17.52	0.91	0.52	1.48
044	North Vancouver	37	0.52 *	6	11.21	0.54	0.20	1.16
045	West Vancouver-Bowen Is.	9	0.38 *	3	3.83	0.78	0.16	2.29
046	Sunshine Coast	16	1.23	3	2.17	1.38	0.28	4.04
047	Powell River	11	1.10	4	1.61	2.49	0.67	6.38
048	Howe Sound	9	0.53	1	2.85	0.35	0.00	1.95
049	Bella Coola Valley	1	0.61	-	0.26	-	-	-
050	Queen Charlotte	4	1.40	1	0.46	2.18	0.03	12.12
051	Snow Country	-	-	-	0.06	-	-	-
052	Prince Rupert	10	1.21	3	1.32	2.27	0.46	6.62
053	Upper Skeena	3	1.08	-	0.44	-	-	-
054	Smithers	4	0.45	-	1.43	-	-	-
055	Burns Lake	-	-	-	0.59	-	-	-
056	Nechako	3	0.36	1	1.36	0.73	0.01	4.09
057	Prince George	46	0.90	5	8.17	0.61	0.20	1.43
059	Peace River South	8	0.60	1	2.22	0.45	0.01	2.50
060	Peace River North	5	0.33 *	1	2.62	0.38	0.00	2.12
061	Greater Victoria	189	1.75 *	24	17.24	1.39	0.89	2.07
062	Sooke	21	0.74	6	4.84	1.24	0.45	2.70
063	Saanich	23	0.78	3	4.84	0.62	0.12	1.81
064	Gulf Islands	6	0.90	-	1.11	-	-	-
065	Cowichan	20	0.79	3	4.15	0.72	0.15	2.11
066	Lake Cowichan	3	0.99	2	0.50	4.03	0.45	14.55
067	Ladysmith	6	0.77	2	1.31	1.53	0.17	5.52
068	Nanaimo	64	1.37 *	6	7.74	0.77	0.28	1.69
069	Qualicum	9	0.49 *	2	3.07	0.65	0.07	2.35
070	Alberni	20	1.27	3	2.53	1.19	0.24	3.47
071	Courtenay	28	0.98	1	4.76	0.21	0.00	1.17
072	Campbell River	30	1.49 *	1	3.24	0.31	0.00	1.72
075	Mission	22	1.18	6	3.12	1.92	0.70	4.19
076	Agassiz - Harrison	6	1.41	1	0.73	1.37	0.02	7.63
077	Summerland	1	0.19	-	0.87	-	-	-
078	Enderby	1	0.29	1	0.58	1.73	0.02	9.63
080	Kitimat	2	0.34	2	0.90	2.21	0.25	7.98
081	Fort Nelson	1	0.31	-	0.56	-	-	-
083	Central Coast	1	1.18	-	0.13	-	-	-
084	Vancouver Island West	-	-	-	0.19	-	-	-
085	Vancouver Island North	7	0.98	-	1.12	-	-	-
087	Stikine	-	-	-	0.10	-	-	-
088	Terrace	9	0.83	1	1.71	0.58	0.01	3.24
092	Nisga'a	-	-	-	0.14	-	-	-
094	Telegraph Creek	-	-	-	0.05	-	-	-
161	Vancouver - City Centre	104	1.64 *	14	10.62	1.32	0.72	2.21
162	Vancouver - Downtown E.side	199	6.33 *	37	5.03	7.36 *	5.18	10.14
163	Vancouver - North East	47	0.92	8	8.17	0.98	0.42	1.93
164	Vancouver - Westside	33	0.51 *	4	10.42	0.38 +	0.10	0.98
165	Vancouver - Midtown	50	1.03	7	7.61	0.92	0.37	1.90
166	Vancouver - South	39	0.61 *	7	10.28	0.68	0.27	1.40
201	Surrey	168	1.06	32	26.61	1.20	0.82	1.70
202	South Surrey/White Rock	19	0.53 *	5	6.06	0.83	0.27	1.93
PROVINCIAL TOTAL		2,096	1.00	342	342.00	1.00	0.90	1.11

Note: *Statistical testing indicates that observed deaths are significantly different from the expected deaths ($p < 0.05$, two tailed).
+Denotes significance based on less than five deaths. SMR - Standardized Mortality Ratio. Total includes residents with unknown LHA.

FIGURE 47
DRUG-INDUCED DEATHS BY LOCAL HEALTH AREA
 BRITISH COLUMBIA, 2000–2004



Note: SMR - Standardized Mortality Ratio. Refer to Figure 1 to clarify geographical location of Local Health Areas.

Drug Overdose Deaths

This section provides information on deaths due to unintentional poisoning by illicit/illegal drugs. These deaths are a small portion of deaths due to unintentional poisoning by drugs, and excludes accidental poisoning by drugs in therapeutic use.

The tables and figures update the Information Box entitled “Accidental Illicit Drug Deaths” found in last year’s Annual Report.

Data on unintentional illicit/illegal drug deaths are retrieved from the Coroners’ Medical Certificate of Death and only include deaths where an overdose occurred and was determined to be the underlying cause of death. Deaths due to conditions that may arise from substance abuse, such as Hepatitis ‘B’ and ‘C’ and HIV, are excluded. Inclusion of these events would increase the numbers significantly.

Among the substances implicated in these overdoses there are those generally referred to as “illicit drugs” – heroin, cocaine, and “psychostimulants with abuse potential” including “crystal meth” (methamphetamine hydrochloride) and “ecstasy” (methylenedioxymethamphetamine). A more precise term for these chemicals might be “illegal” drugs as there is no medically recognized, legal use for either “ecstasy” or “crystal meth”. Although both heroin and cocaine have very limited therapeutic uses, in circumstances where a fatal overdose has occurred it is almost certain that these drugs would have been obtained via illegal means. On the other hand, where morphine is implicated, it is possible that some of the deaths involved legally obtained drugs because morphine is prescribed for chronic and/or severe pain (such as that associated with advanced cancer) and if taken improperly could result in an unintentional overdose. Unfortunately it is not always possible to differentiate whether an opiate overdose was caused by heroin or morphine, as the information received on the Coroners’ final reports does not consistently specify this, rather recording “morphine type” overdose, (hence the label “heroin / morphine type”). Of continuing note is the fact that deaths are occurring as the result of unintentional methadone overdoses. The legal use of this drug is most often in the treatment of opiate addiction, but it would appear that it is being used in unsanctioned ways that are resulting in death.

It is important to note that the data presented in Table 46 and Figure 48 for 2005 (and to some extent earlier years) will be revised upwards as final reports from the investigating Coroners are submitted to the Vital Statistics Agency for processing and coding. For example, last year’s Information Box showed 51 heroin / morphine and 72 cocaine overdose fatalities in 2004. A year later, the 2004 counts have risen to 64 and 94 fatal overdoses attributable to the drugs respectively. Cocaine use appears to be eclipsing heroin as the most common cause of fatal overdoses. Psychostimulant overdoses as a cause of death appear to be remaining fairly low in number.

Age standardized mortality rates (ASMR) provide a means of comparing death rates across different populations and geographic areas. Table 47 shows deaths due to unintentional overdoses are not confined to any one area in the province. Both the Vancouver Island Health Authority and the Interior Health Authority have ASMRs due to unintentional illicit / illegal drug overdose similar to or greater than those of the Vancouver Coastal Health Authority. In fact, from 2001 to 2004, the Vancouver Island Health Authority had the highest ASMRs due to unintentional drug overdoses in the province. ASMRs for 2005 at the time of reporting appear to have declined in all areas except the Fraser Health Authority. However, these results should be viewed with caution for the reasons cited above regarding delayed reporting.

As evidenced by Table 48 and Figure 49, although drug overdose fatalities appear to be declining generally, males consistently succumb to unintentional overdoses at a greater rate than females. Why this happens is open to debate, but it does show a need to particularly target this group in treatment and prevention strategies.

TABLE 46
UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS BY
TYPE OF DRUG

BRITISH COLUMBIA, 2000–2005

Drug	ICD-10 Code	2000	2001	2002	2003	2004	2005
Heroin/Morphine type	X42	120	127	75	89	64	65
Methadone	X42	20	25	26	23	27	18
Cocaine	X42	76	69	63	71	94	79
Psychostimulants*	X41	-	2	2	7	4	2
Other Mixed Drugs	X44	28	18	22	15	7	15
TOTAL		244	241	188	205	196	179
Heroin + cocaine deaths included above**		63	53	36	30	12	27

Note:

Deaths that were still under investigation may later be identified as unintentional illicit/illegal overdose deaths.

*ICD-10 codes for psychostimulants include "crystal meth" and "ecstasy".

**Heroin + cocaine deaths are already counted in either Heroin/morphine type or Cocaine.

Drug overdose deaths must also include these specified drug (nature of injury) codes:

- T40.0, T40.1, or T40.2 for heroin/morphine type.

- T40.3 for methadone.

- T40.5 for cocaine.

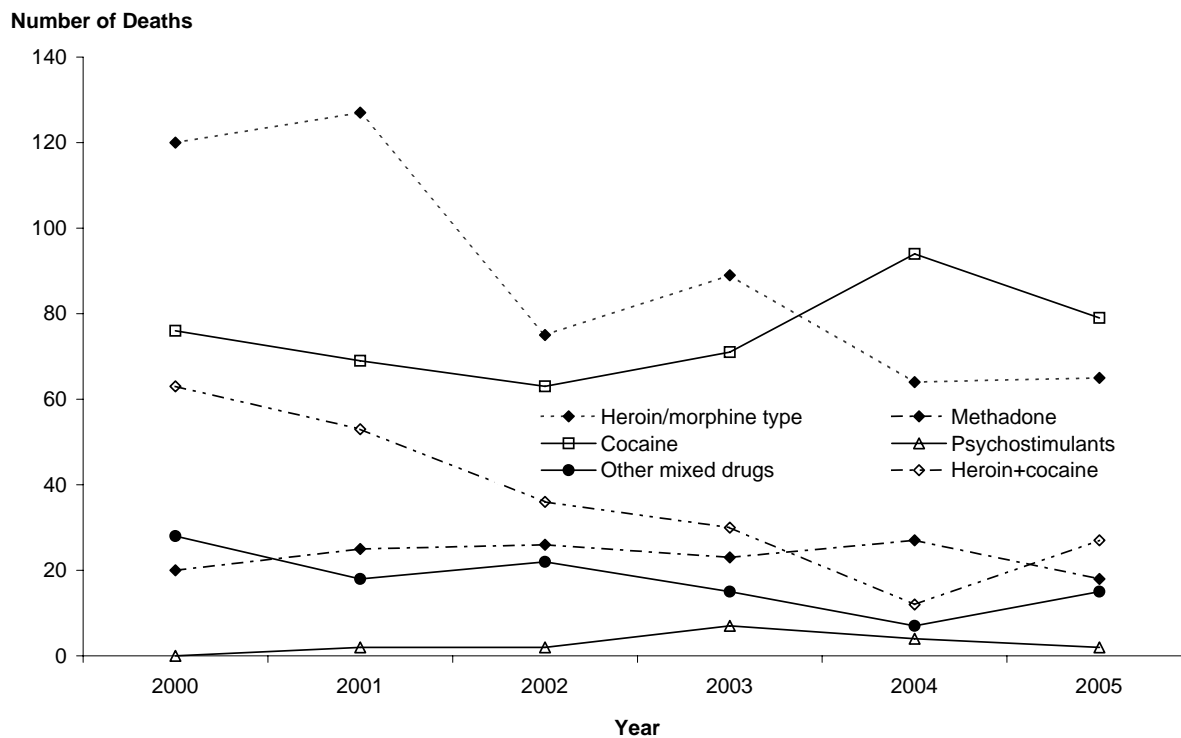
- T43.6 for psychostimulants.

- T40 or T43.6 for other mixed drugs.

Non-residents are excluded.

FIGURE 48
UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS
BY CAUSE

BRITISH COLUMBIA, 2000–2005



See Table 46 for notes.

TABLE 47
**ASMR FOR UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS
 BY HEALTH AUTHORITY**
 BRITISH COLUMBIA, 2000–2005

Health Authority	2000	2001	2002	2003	2004	2005
01 Interior	0.49	0.60	0.56	0.59	0.58	0.38
02 Fraser	0.62	0.56	0.35	0.42	0.34	0.43
03 Vancouver Coastal	0.71	0.65	0.49	0.47	0.53	0.47
04 Vancouver Island	0.56	0.65	0.71	0.64	0.63	0.40
05 Northern	0.40	0.46	0.19	0.36	0.29	0.28
PROVINCIAL TOTAL	0.60	0.60	0.46	0.49	0.47	0.42

Note: Deaths that were still under investigation may later be identified as unintentional illicit/illegal overdose deaths.
 ASMR - Age Standardized Mortality Rate per 10,000 standard population (Canada 1991 Census).
 Non-residents are excluded.

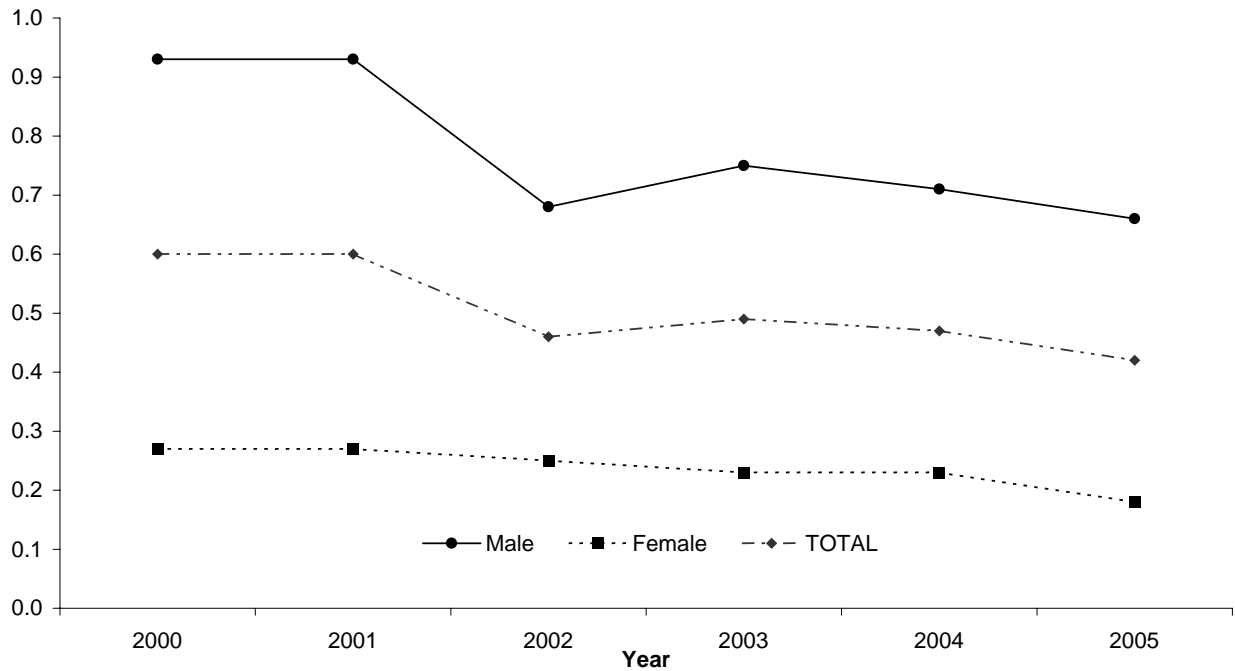
TABLE 48
**ASMR FOR UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS
 BY GENDER**
 BRITISH COLUMBIA, 2000–2005

Gender	2000	2001	2002	2003	2004	2005
Male	0.93	0.93	0.68	0.75	0.71	0.66
Female	0.27	0.27	0.25	0.23	0.23	0.18
TOTAL	0.60	0.60	0.46	0.49	0.47	0.42

Note: Deaths that were still under investigation may later be identified as unintentional illicit/illegal overdose deaths.
 ASMR - Age Standardized Mortality Rate per 10,000 standard population (Canada 1991 Census).
 Non-residents are excluded.

FIGURE 49
**ASMR FOR UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS
BY GENDER**
BRITISH COLUMBIA, 2000-2005

Rate per 10,000
Standard Population



See Table 48 for notes.

Burials and Cremations

Table 49 shows the method used to dispose of decedents' remains. This table, which covers the years from 1986 through 2005, primarily shows the declining popularity of burial and increasing preference for cremation. At the beginning of this time span the ratio of cremations to burials was three to two, in 2005 it was almost four to one.

TABLE 49
METHOD OF DISPOSITION OF DECEDENT
BRITISH COLUMBIA, 1986–2005

Year	Burial		Cremation		Other	N.S.	Total
	Number	Percent	Number	Percent			
1986	8,204	39.1	12,686	60.4	98	20	21,008
1987	8,211	38.0	13,279	61.4	104	24	21,618
1988	8,319	37.2	13,926	62.3	96	16	22,357
1989	8,061	35.4	14,616	64.1	81	28	22,786
1990	8,208	35.1	15,088	64.4	91	28	23,415
1991	8,035	33.7	15,675	65.8	75	34	23,819
1992	7,818	32.0	16,512	67.5	97	36	24,463
1993	7,987	31.2	17,214	67.2	151	251	25,603
1994	7,710	29.8	17,888	69.3	177	55	25,830
1995	7,616	29.0	18,361	70.0	185	63	26,225
1996	7,639	27.9	19,546	71.4	193	12	27,390
1997	7,359	27.0	19,649	72.1	206	46	27,260
1998	7,197	25.9	20,376	73.3	225	9	27,807
1999	7,060	25.3	20,625	74.0	197	-	27,882
2000	6,465	23.7	20,675	75.7	186	1	27,327
2001	6,684	23.7	21,327	75.5	223	1	28,235
2002	6,540	22.8	21,978	76.6	189	3	28,710
2003	6,606	22.7	22,359	76.7	186	-	29,151
2004	6,373	21.5	23,155	77.9	182	-	29,710
2005	6,264	20.9	23,595	78.6	174	-	30,033

Note: Percent is based on total deaths in the specified year.
Other includes remains not recovered and donations as per will of deceased.
N.S. – Not stated.
Non-residents are excluded.

Vital Statistics Information Box

METHOD OF DISPOSITION BY DECEDENT'S LOCAL HEALTH AREA OF RESIDENCE BRITISH COLUMBIA, 2005

Local Health Area		Burial		Cremation		Other	Total
		Number	Percent	Number	Percent		
001	Fernie	19	21.8	68	78.2	-	87
002	Cranbrook	42	19.2	177	80.8	-	219
003	Kimberley	7	7.6	85	92.4	-	92
004	Windermere	9	17.6	42	82.4	-	51
005	Creston	41	28.3	104	71.7	-	145
006	Kootenay Lake	6	18.8	25	78.1	1	32
007	Nelson	40	22.1	140	77.3	1	181
009	Castlegar	47	39.8	71	60.2	-	118
010	Arrow Lakes	5	9.6	47	90.4	-	52
011	Trail	21	10.7	169	86.2	6	196
012	Grand Forks	36	36.7	62	63.3	-	98
013	Kettle Valley	6	20.7	23	79.3	-	29
014	Southern Okanagan	48	18.9	206	81.1	-	254
015	Penticton	79	14.2	477	85.8	-	556
016	Keremeos	15	20.0	60	80.0	-	75
017	Princeton	4	7.1	52	92.9	-	56
018	Golden	8	23.5	26	76.5	-	34
019	Revelstoke	13	26.5	36	73.5	-	49
020	Salmon Arm	66	20.8	250	78.9	1	317
021	Armstrong-Spallumcheen	15	16.5	76	83.5	-	91
022	Vernon	122	19.9	489	79.9	1	612
023	Central Okanagan	247	18.0	1,122	81.6	6	1,375
024	Kamloops	133	16.7	653	82.1	9	795
025	100 Mile House	17	14.7	99	85.3	-	116
026	North Thompson	2	8.0	23	92.0	-	25
027	Cariboo-Chilcotin	36	22.4	125	77.6	-	161
028	Quesnel	27	18.6	118	81.4	-	145
029	Lillooet	16	42.1	22	57.9	-	38
030	South Cariboo	13	20.0	51	78.5	1	65
031	Merritt	21	21.2	78	78.8	-	99
032	Hope	23	22.8	77	76.2	1	101
033	Chilliwack	152	22.7	517	77.2	1	670
034	Abbotsford	316	33.3	632	66.5	2	950
035	Langley	141	17.6	656	81.7	6	803
037	Delta	110	18.2	492	81.5	2	604
038	Richmond	191	22.3	660	76.9	7	858
040	New Westminster	98	19.3	404	79.4	7	509
041	Burnaby	384	27.9	965	70.1	27	1,376
042	Maple Ridge	79	13.5	506	86.3	1	586
043	Coquitlam	186	19.6	753	79.5	8	947
044	North Vancouver	135	16.6	676	83.0	3	814
045	West Vancouver-Bowen Is.	77	15.3	424	84.5	1	502
046	Sunshine Coast	21	8.5	226	91.1	1	248
047	Powell River	32	14.4	189	85.1	1	222
048	Howe Sound	20	17.4	95	82.6	-	115
049	Bella Coola Valley	13	68.4	6	31.6	-	19
050	Queen Charlotte	11	37.9	18	62.1	-	29
051	Snow Country	-	-	3	100.0	-	3
052	Prince Rupert	28	33.7	55	66.3	-	83
053	Upper Skeena	14	45.2	17	54.8	-	31
054	Smithers	22	28.9	54	71.1	-	76
055	Burns Lake/Eutsuk	30	47.6	33	52.4	-	63
056	Nechako	45	43.7	58	56.3	-	103
057	Prince George	116	24.6	355	75.2	1	472
059	Peace River South	56	33.3	112	66.7	-	168
060	Peace River North	41	33.3	82	66.7	-	123
061	Greater Victoria	298	14.1	1,803	85.5	7	2,108
062	Sooke	48	14.4	285	85.6	-	333
063	Saanich	57	9.1	569	90.7	1	627
064	Gulf Islands	14	10.9	115	89.1	-	129
065	Cowichan	68	15.4	373	84.6	-	441
066	Lake Cowichan	4	8.9	41	91.1	-	45
067	Ladysmith	30	14.2	182	85.8	-	212
068	Nanaimo	105	12.2	755	87.8	-	860
069	Qualicum	34	7.0	450	92.8	1	485
070	Alberni	52	20.2	205	79.8	-	257
071	Courtenay	46	9.3	446	90.7	-	492
072	Campbell River	35	12.1	254	87.9	-	289
075	Mission	53	17.3	253	82.4	1	307
076	Agassiz-Harrison	15	25.4	44	74.6	-	59
077	Summerland	18	14.5	106	85.5	-	124
078	Enderby	19	25.3	56	74.7	-	75
080	Kitimat	26	55.3	21	44.7	-	47
081	Fort Nelson	7	38.9	11	61.1	-	18
083	Central Coast	11	84.6	2	15.4	-	13
084	Vancouver Island West	2	16.7	10	83.3	-	12
085	Vancouver Island North	26	34.2	50	65.8	-	76
087	Stikine	-	-	1	100.0	-	1
088	Terrace	39	36.1	69	63.9	-	108
092	Nisga'a	11	100.0	-	-	-	11
094	Telegraph Creek	4	100.0	-	-	-	4
161	Vancouver - City Centre	102	16.8	502	82.6	4	608
162	Vancouver - Downtown E. side	166	32.2	342	66.4	7	515
163	Vancouver - North East	270	44.7	301	49.8	33	604
164	Vancouver - Westside	214	28.5	536	71.3	2	752
165	Vancouver - Midtown	168	37.9	269	60.7	6	443
166	Vancouver - South	321	38.2	511	60.8	9	841
201	Surrey	371	22.4	1,280	77.2	8	1,659
202	South Surrey/White Rock	125	15.1	703	84.9	-	828
PROVINCIAL TOTAL		6,264	20.9	23,595	78.6	174	30,033

Vital Statistics Information Box

PLACE OF DEATH FOR DEATHS FROM NATURAL CAUSES

BRITISH COLUMBIA, 2001-2005

Deaths from natural causes in 2001 to 2005 were examined to determine the place of death. The majority of these deaths to British Columbia residents occurred in hospital (57.7% over the five year period). About one in six deaths from natural causes (16.2%) occurred at home and almost a quarter (24.7%) occurred in extended care facilities.

Place of Death	2001		2002		2003		2004		2005		2001-2005	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Home	4,233	16.0	4,268	16.0	4,441	16.3	4,588	16.5	4,604	16.2	22,134	16.2
Extended Care	5,189	19.7	5,213	19.5	7,342	26.9	7,915	28.4	8,128	28.6	33,787	24.7
Hospital	16,710	63.3	16,907	63.3	15,109	55.4	14,991	53.8	15,118	53.3	78,835	57.7
Other and Unknown	248	0.9	324	1.2	361	1.3	363	1.3	528	1.9	1,824	1.3
Total Deaths from Natural Causes	26,380	100.0	26,712	100.0	27,253	100.0	27,857	100.0	28,378	100.0	136,580	100.0

Note: Natural Causes includes deaths that are still under investigation (ICD-10 code R99).

PERCENT OF DEATHS FROM NATURAL CAUSES BY PLACE OF DEATH

BRITISH COLUMBIA, 2001-2005

Percent

