Death-related Statistics

Deaths by Decedent's Country of Birth

British Columbia, 2008

Area	Province/Country	Deaths
Canada	**Total**	**21,372**
	British Columbia	8,399
	Saskatchewan	3,973
	Alberta	3,057
	Manitoba	2,189
	Ontario	2,187
	Quebec	726
	Nova Scotia	410
	New Brunswick	212
	Newfoundland & Labrador	124
	Prince Edward Island	42
	Yukon	28
	Northwest Territories & Nunavut	16
	Unknown Province	9
North and Central America	**Total**	**823**
	United States	739
	Other North and Central American Countries	84
South America		**93**
Europe	**Total**	**6,470**
	England	1,980
	Other United Kingdom	863
	Germany	684
	Netherlands	455
	Italy	366
	Scandinavian Countries	346
	Poland	283
	Hungary	158
	Russia	157
	Ireland	144
	Other European Countries	1,034
Asia and the Middle East	**Total**	**2,548**
	China	1,025
	India	639
	Philippines	188
	Hong Kong	174
	Vietnam	102
	Japan	53
	Korea	66
	Iran	44
	Pakistan	41
	Other Asian and the Middle Eastern Countries	216
Africa	**Total**	**203**
	South Africa	66
	Other African Countries	137
Oceania	**Total**	**204**
	Fiji	121
	Australia	53
	New Zealand	27
	Other Oceanic Countries	3
Unknown	**Total**	**179**
Total		**31,892**

Note: Non-residents are excluded.

Death Introduction

In recognition of the importance of mortality statistics for health surveillance, 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* (UCOD) (see *Glossary*) is defined as the condition or injury that initiated the train of events leading directly to 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 for mortality coding. 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 19 diagnostic categories to total deaths in BC in 2008. More detailed information for the same age groups appears in Appendix 2, which provides counts at the "3 character level". Although the causes shown in Appendix 2 ("Detailed Cause of Death by Gender and Age") 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 2008 for both genders. Deaths in those two categories are further analysed in the following sections.

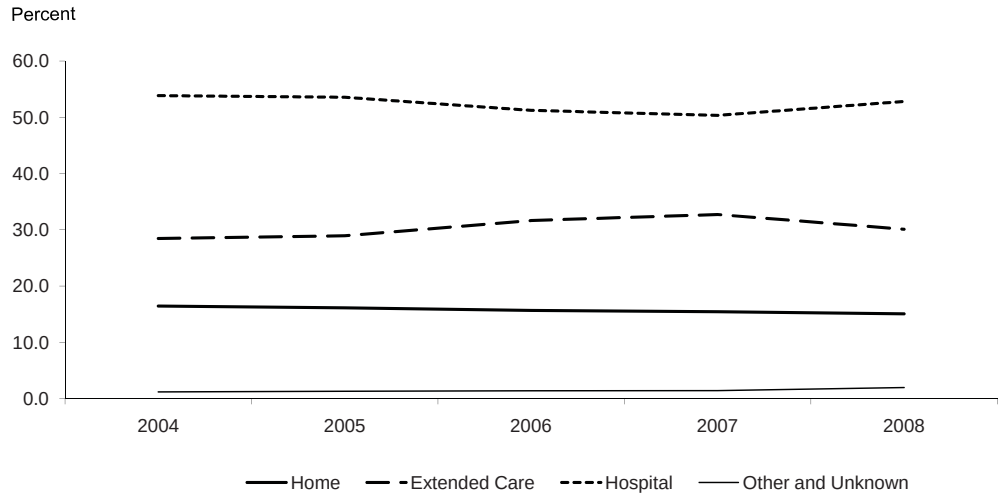
Vital Statistics Information Box

Place of Death for Deaths From Natural Causes
British Columbia, 2004 - 2008

Deaths from natural causes in 2004 to 2008 were examined to determine the place of death. The majority of these deaths to British Columbia residents occurred in hospital (52.4 % over the five year period). 15.8 percent of deaths from natural causes occurred at home and 30.4 percent occurred in extended care facilities.

	2004		2005		2006		2007		2008		2004-2008	
Place of Death	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**Total**	**%**
Home	4,574	16.5	4,535	16.1	4,500	15.7	4,540	15.5	4,579	15.1	22,728	15.8
Extended Care	7,916	28.5	8,139	29.0	9,087	31.7	9,609	32.7	9,141	30.1	43,892	30.4
Hospital	14,973	53.9	15,059	53.6	14,711	51.3	14,779	50.4	16,029	52.8	75,551	52.4
Other and Unknown	335	1.2	374	1.3	402	1.4	420	1.4	597	2.0	2,128	1.5
Total	**27,798**	**100.0**	**28,107**	**100.0**	**28,700**	**100.0**	**29,348**	**100.0**	**30,346**	**100.0**	**144,299**	**100.0**

Percent of Deaths from Natural Causes by Place of Death
British Columbia, 2004 - 2008



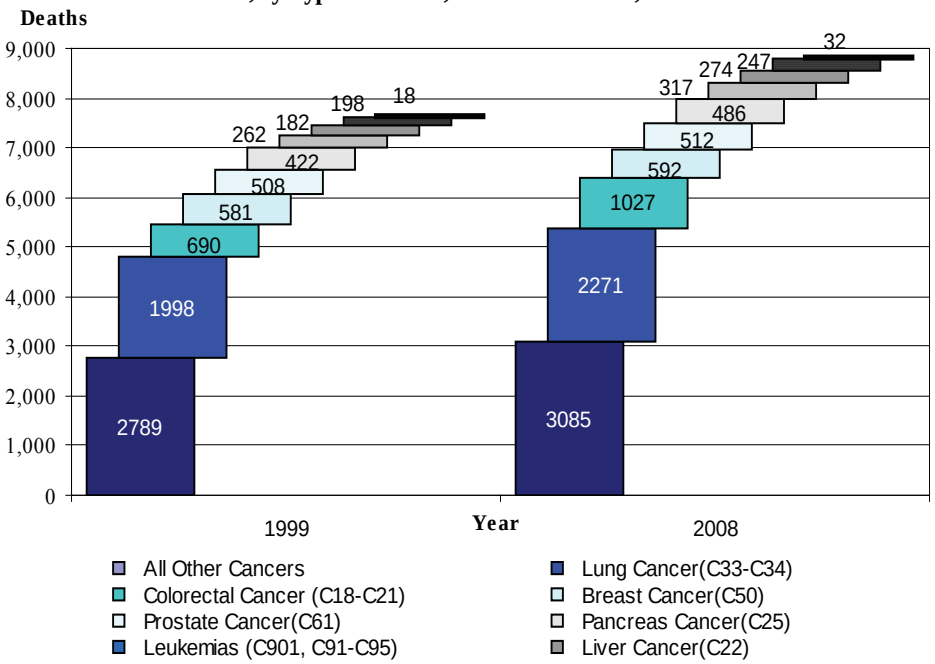
Note: The BC Vital Statistics Agency changed the way the place of death is recorded in 2008.

Vital Statistics Information Box

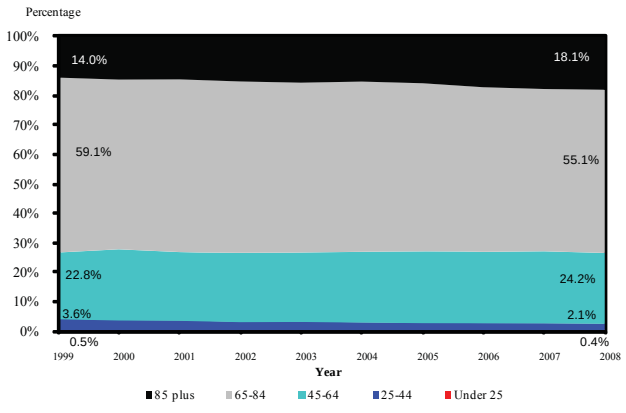
Cancer Deaths in British Columbia, 1999 to 2008

More British Columbians succumbed to Cancer or Malignant Neoplasms (ICD Codes C00-C97) than any other cause in 2008. The following charts illustrate the trends and changes in deaths caused by Cancer from 1999 to 2008. As illustrated, the proportion of deaths caused by specific types of Cancer has not changed substantially from 1999 to 2008. However, those dying of Cancer in 2008 are older than they were in 1999 and larger shares of them are female. Both the Age Standardized Mortalilty Rate (ASMR) rate and Potential Years of Life Lost (PYLLSR) have fallen.

Cancer Deaths, by Type of Cancer, British Columbia, 1999 and 2008



Share of Cancer Deaths by Age Group 1999-2008



Age Standardized Mortality Rate and PYLLSR, Cancer Deaths, British Columbia 1999 to 2008

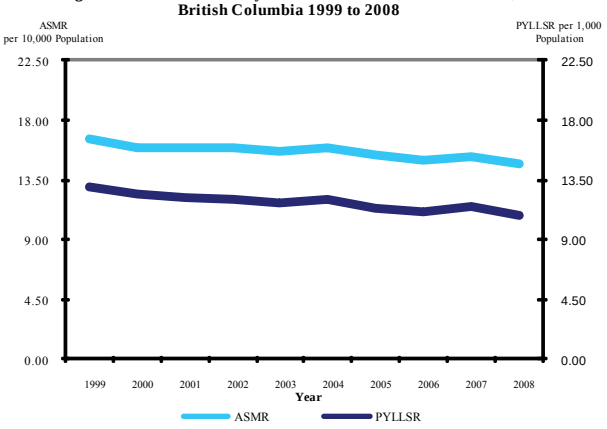


TABLE 21
CAUSES OF DEATH BY GENDER AND AGE
BRITISH COLUMBIA, 2008

ICD-10 Code(s)	Causes of Death	Gender	Age Group (in Years) <1	1–4	5–9	10–14	15–19	20–24	25–44	45–64	65–79	80+	Total Number	Percent	ASMR
A00-B99	Certain infectious and parasitic diseases	M	2	1	1	1	-	-	29	128	60	97	319	2.0	1.16
		F	-	-	-	-	2	-	11	53	61	134	261	1.7	0.74
		T	2	1	1	1	2	-	40	181	121	231	580	1.8	0.94
C00-D48	Neoplasms	M	3	2	1	5	7	5	64	1,131	2,020	1,590	4,828	29.6	17.73
		F	1	2	3	2	2	7	128	1,036	1,589	1,432	4,202	27.0	13.01
		T	4	4	4	7	9	12	192	2,167	3,609	3,022	9,030	28.3	15.02
D50-D89	Diseases of blood and blood-forming organs,certain immune mechanisms	M	1	1	-	-	-	-	1	4	12	14	33	0.2	0.13
		F	-	-	-	1	-	-	4	6	3	43	57	0.4	0.15
		T	1	1	-	1	-	-	5	10	15	57	90	0.3	0.14
E00-E90	Endocrine/nutritional/metabolic diseases	M	1	-	-	-	2	1	17	135	268	273	697	4.3	2.57
		F	3	-	-	-	3	1	5	66	173	349	600	3.8	1.63
		T	4	-	-	-	5	2	22	201	441	622	1,297	4.1	2.07
F00-F99	Mental and behavioural disorders	M	-	-	-	-	-	3	5	64	95	298	465	2.9	1.66
		F	-	-	-	-	1	2	7	22	64	613	709	4.5	1.56
		T	-	-	-	-	1	5	12	86	159	911	1,174	3.7	1.63
G00-G99	Diseases of the nervous system	M	2	3	2	-	3	6	18	65	180	291	570	3.5	2.11
		F	1	4	1	-	2	2	6	60	180	505	761	4.9	1.98
		T	3	7	3	-	5	8	24	125	360	796	1,331	4.2	2.05
H00-H59	Diseases of the eye and adnexa	M	-	-	-	-	-	-	-	-	-	-	-	-	-
		F	-	-	-	-	-	-	-	-	-	1	1	0.0	+
		T	-	-	-	-	-	-	-	-	-	1	1	0.0	+
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	69	736	1,483	2,543	4,835	29.7	17.51
		F	-	-	-	2	1	1	32	268	841	3,957	5,102	32.7	12.01
		T	-	1	-	3	2	2	101	1,004	2,324	6,500	9,937	31.2	14.62
J00-J99	Diseases of the respiratory system	M	1	1	-	-	-	2	19	162	549	1,044	1,778	10.9	6.47
		F	1	-	-	-	1	2	17	107	383	1,179	1,690	10.8	4.22
		T	2	1	-	-	1	4	36	269	932	2,223	3,468	10.9	5.17
K00-K93	Diseases of the digestive system	M	1	-	-	-	1	-	27	220	213	230	692	4.2	2.50
		F	1	-	-	-	-	1	19	105	169	377	672	4.3	1.83
		T	2	-	-	-	1	1	46	325	382	607	1,364	4.3	2.16
L00-L99	Diseases of the skin and subcutaneous tissue	M	-	-	-	-	-	-	1	3	10	15	29	0.2	0.11
		F	-	-	-	-	-	-	1	1	2	38	42	0.3	0.09
		T	-	-	-	-	-	-	2	4	12	53	71	0.2	0.10
M00-M99	Diseases of the musculoskeletal system and connective tissue	M	-	-	-	-	-	-	3	17	15	18	53	0.3	0.19
		F	-	-	-	-	-	1	2	21	40	87	151	1.0	0.40
		T	-	-	-	-	-	1	5	38	55	105	204	0.6	0.31
N00-N99	Diseases of the genitourinary system	M	-	1	-	-	-	-	2	32	89	211	335	2.1	1.21
		F	-	-	-	-	-	-	4	21	70	298	393	2.5	0.94
		T	-	1	-	-	-	-	6	53	159	509	728	2.3	1.06
O00-O99	Complications of pregnancy, childbirth and the puerperium	M	-	-	-	-	-	-	-	-	-	-	-	-	-
		F	-	-	-	-	-	1	-	-	1	-	2	0.0	+
		T	-	-	-	-	-	1	-	-	1	-	2	0.0	+
P00-P96	Certain conditions originating in the perinatal period	M	42	-	-	-	1	-	-	-	-	-	43	0.3	0.28
		F	38	-	1	-	-	1	-	-	-	-	40	0.3	0.27
		T	80	-	1	-	1	1	-	-	-	-	83	0.3	0.27
Q00-Q99	Congenital anomalies	M	17	2	-	-	1	1	6	6	5	3	41	0.3	0.22
		F	18	1	2	1	-	2	7	6	7	8	52	0.3	0.26
		T	35	3	2	1	1	3	13	12	12	11	93	0.3	0.24
R00-R99	Symptoms, signs and ill-defined conditions, unknown causes	M	24	5	7	1	26	38	146	204	53	55	559	3.4	2.40
		F	8	4	3	2	11	14	63	101	44	83	333	2.1	1.22
		T	32	9	10	3	37	52	209	305	97	138	892	2.8	1.81
V01-Y98	External causes	M	-	2	4	10	35	60	310	318	139	150	1,028	6.3	4.33
		F	-	-	-	2	18	22	78	143	72	183	518	3.3	1.70
		T	-	2	4	12	53	82	388	461	211	333	1,546	4.8	3.00
	All causes	**M**	**94**	**19**	**15**	**18**	**77**	**117**	**717**	**3,225**	**5,191**	**6,832**	**16,305**	**100.0**	**60.56**
		F	**71**	**11**	**10**	**10**	**41**	**57**	**385**	**2,016**	**3,699**	**9,287**	**15,587**	**100.0**	**42.01**
	PROVINCIAL TOTAL	**T**	**165**	**30**	**25**	**28**	**118**	**174**	**1,102**	**5,241**	**8,890**	**16,119**	**31,892**	**100.0**	**50.59**

Note: ASMR 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 BC 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

Table 22 shows the 12 leading causes of death in BC. The two leftmost columns list the cause and the corresponding codes in ICD-10. For 2003-2007 period and the year 2008, the following four values are shown: number of deaths, the rank by number of deaths, the ASMR, and the rank by ASMR. The rows of the table are in the order of the 2008 ASMR rank.

For 2008, the 12 leading causes of death shown in Table 22 were responsible for 85.0 percent 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 also in ASMR rank. They are *Malignant Neoplasms*, *Cardiovascular Diseases* and *Cerebrovascular Diseases*. For 2008, these three leading causes account for 57.3 percent of all deaths.

Figure 35 shows the number of deaths from Table 22 in 2008 graphically. It shows clearly the impact of the top three categories, causing more than half of all deaths.

Table 23 shows the five leading causes of death in the seven different age groupings. The leading cause of death among those under 1 year of age (infant mortality), were *Conditions Originating in the Perinatal Period* with 48.5 percent of the deaths attributable to this cause. The second highest cause of infant deaths was *Congenital Malformations and Chromosomal Abnormalities*. More than half of all infant deaths occurred in the first seven days after birth and 64.8 percent occurred within the first 28 days after birth (see Table 27). Males accounted for 57.0 percent of the deaths among those under 1 year of age. Infant mortality is examined in more detail in the next section.

Among children 1 to 14 years old, *Unintentional Injuries* were the most common cause of deaths for both genders combined however, most of these were male. *Malignant Neoplasms* claimed slightly more male than female lives. *Congenital Malformations and Chromosome Abnormalities* claimed more females than males whereas *Other Disorders of the Nervous System* claimed equal numbers of males and females.

By contrast, *Unintentional Injuries* were the leading cause of death, particularly for males, in the age groups 15-24 and 25-44. These causes include events such as motor vehicle accidents, falls, and unintentional poisonings. A more detailed list of the included causes by ICD codes appears in Appendix 2. Counts of death due to *Unintentional Injuries*, *Suicide*, and *Homicide* (collectively referred to as "external causes of death") in the current year tend to underestimate the actual figures due to known delays in determining final causes of deaths. As a result it can be anticipated that these numbers will be revised upwards in subsequent annual reports.

Between 15 and 24 years of age, *Suicide* ranked second as the leading cause of death after *Unintentional Injuries* (see also Table 35). There were substantially fewer female deaths in this age group as shown in Table 23. In the age group between 25 and 44, ***Malignant Neoplasms*** were second most common cause of death with female deaths outnumbering males and comprising the largest proportion of female mortality in this age group.

Malignant Neoplasms were the leading cause of death for those between 45 and 64 years, accounting for 34.7 percent of deaths for males and 50.9 percent of deaths for females in this age group.

Between 65 and 84 years of age, 34.6 percent of the deaths were due to *Malignant Neoplasms*, followed by *Cardiovascular Disease* which caused 20.8 percent of deaths. For those 85 years and older, the order of those two cause categories was reversed with *Cardiovascular Disease* causing 29.5 percent of deaths and *Malignant Neoplasms* causing 14.6 percent.

Malignant Neoplasms were ranked in the first three leading causes of death in each age group for those over 1 year of age and was the overall leading cause of death in BC in 2003 to 2007, as well as in 2008 (see Table 22 and Figure 35). Notwithstanding, the age-standardized mortality rates for total *Malignant Neoplasms* and for *Lung Cancer* have declined over the last two decades (see Figures 19 and 20).

TABLE 22
TWELVE LEADING CAUSES OF DEATH
BRITISH COLUMBIA, 2003–2007 AND 2008

Cause of Death	ICD-10 Code(s)	2003–2007 Number	Rank	ASMR	Rank	2008 Number	Rank	ASMR	Rank
Malignant neoplasms	C00-C97	42,235	1	15.40	1	8,843	1	14.73	1
Cardiovascular disease	I00-I51	33,857	2	11.21	2	7,014	2	10.36	2
Cerebrovascular diseases	I60-I69	11,323	3	3.68	3	2,409	3	3.47	3
Chronic Pulmonary Disease	J40-J44	6,339	6	2.17	5	1,489	4	2.28	4
Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	6,659	4	2.78	4	1,074	6	2.00	5
Pneumonia/Influenza	J09-J181, J188, J189	6,603	5	2.09	6	1,285	5	1.83	6
Diabetes mellitus	E10-E14	4,980	7	1.75	7	1,021	7	1.63	7
Other diseases of digestive system	K00-K67, K80-K93	4,017	8	1.35	8	900	9	1.35	8
Vascular/senile dementia	F01, F03	3,526	9	1.07	12	985	8	1.31	9
Other disorders of the nervous system	G00-G25, G31-G99	3,082	12	1.11	10	686	12	1.16	10
Other diseases of the respiratory system	J00-J06, J182, J20-J39, J45-J98	2,957	13	1.00	15	694	11	1.06	11
Urinary system diseases	N00-N39, N990, N991, N995	3,285	11	1.07	13	704	10	1.02	12
Other causes[1]		21,768		8.25		4,788		8.38	
TOTAL (All causes of death)		**150,631**		**52.93**		**31,892**		**50.59**	

Note: [1]Other causes includes undetermined and pending.
ASMR – 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 2008 ASMR.
Non-residents are excluded. The output from ICD-10 mortality coding and underlying cause of death selection was modified in BC 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, 2008

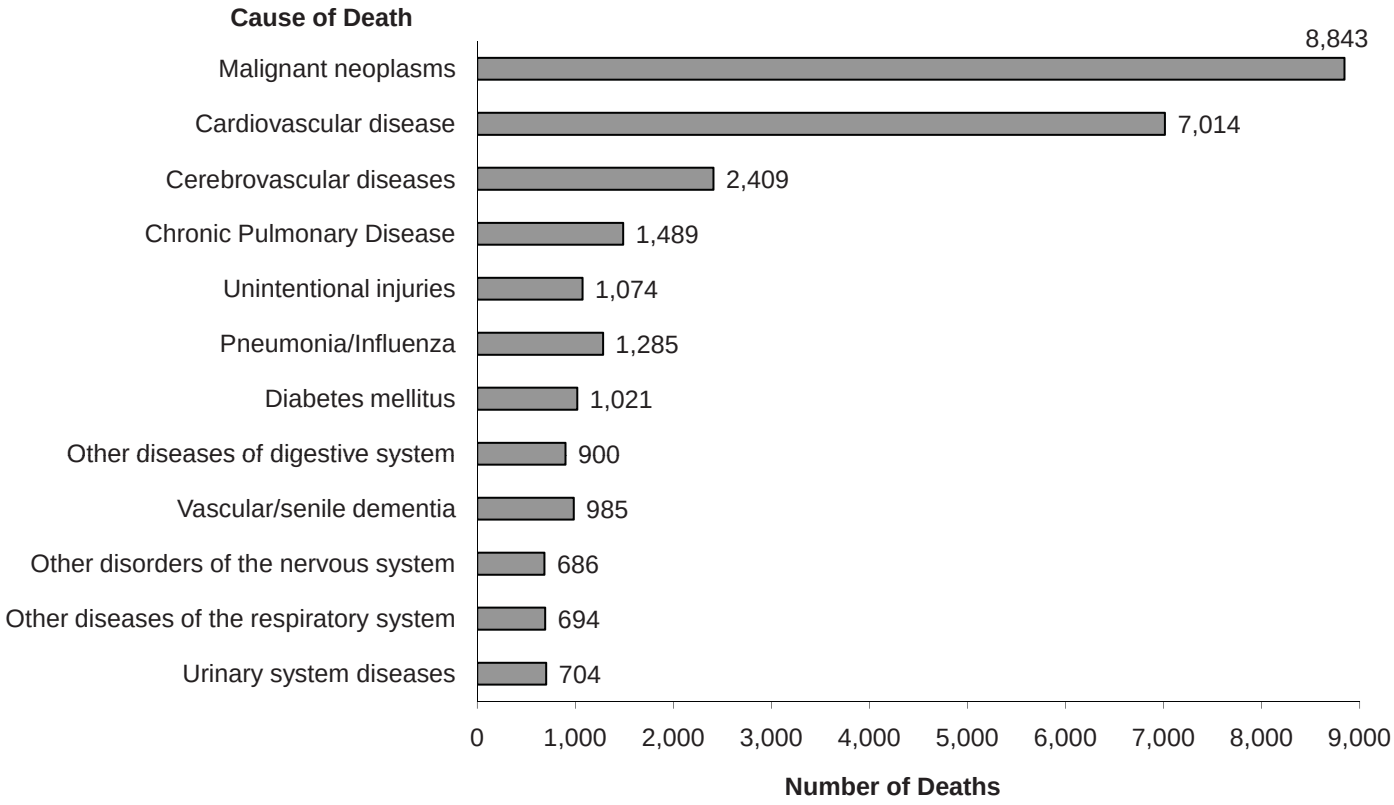


TABLE 23
LEADING CAUSES OF DEATH BY AGE AND GENDER
BRITISH COLUMBIA, 2008

Cause of Death	ICD-10 Code(s)	Male Number	Male Percent	Female Number	Female Percent	Total Number	Total Percent
Under 1 Year Old							
1. Certain conditions originating in the perinatal period	P00-P96	42	44.7	38	53.5	80	48.5
2. Congenital malformations and chromosome abnormalities	Q00-Q99	17	18.1	18	25.4	35	21.2
3. Sudden infant death syndrome	R95	11	11.7	1	1.4	12	7.3
4. Metabolic disorders	E70-E89	-	-	3	4.2	3	1.8
5. Other disorders of the nervous system	G00-G25, G31-G99	2	2.1	1	1.4	3	1.8
Other causes[1]		22	23.4	10	14.1	32	19.4
All causes		**94**	**100.0**	**71**	**100.0**	**165**	**100.0**
1-14 Years Old							
1. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	13	25.0	2	6.5	15	18.1
2. Malignant neoplasms	C00-C97	8	15.4	6	19.4	14	16.9
3. Other disorders of the nervous system	G00-G25, G31-G99	5	9.6	5	16.1	10	12.0
4. Congenital malformations and chromosome abnormalities	Q00-Q99	2	3.8	4	12.9	6	7.2
5. Certain infectious and and parasitic diseases	A00-B99	3	5.8	-	-	3	3.6
Other causes[1]		21	40.4	14	45.2	35	42.2
All causes		**52**	**100.0**	**31**	**100.0**	**83**	**100.0**
15-24 Years Old							
1. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	53	27.3	31	31.6	84	28.8
2. Suicide	X60-X84, Y870	32	16.5	7	7.1	39	13.4
3. Malignant neoplasms	C00-C97	12	6.2	9	9.2	21	7.2
4. Other disorders of the nervous system	G00-G25, G31-G99	9	4.6	4	4.3	13	4.5
5. Homicide	X85-Y09, Y871	10	5.2	2	2.0	12	4.1
Other causes[1]		78	40.2	45	45.9	123	42.1
All causes		**194**	**100.0**	**98**	**100.0**	**292**	**100.0**
25-44 Years Old							
1. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	177	24.7	46	11.9	223	20.2
2. Malignant neoplasms	C00-C97	63	8.8	127	33.0	190	17.2
3. Suicide	X60-X84, Y870	119	16.6	29	7.5	148	13.4
4. Cardiovascular disease	I00-I51	51	7.1	21	5.5	72	6.5
5. Certain infectious and parasitic diseases	A00-B99	29	4.0	11	2.9	40	3.6
Other causes[1]		278	38.8	151	39.2	429	38.9
All causes		**717**	**100.0**	**385**	**100.0**	**1,102**	**100.0**

(concluded on next page)

Note: Order of leading causes based on total deaths in the specified age group.
[1]Other 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 BC 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, 2008

Cause of Death	ICD-10 Code(s)	Male Number	Male Percent	Female Number	Female Percent	Total Number	Total Percent
45-64 Years Old							
1. Malignant neoplasms	C00-C97	1,118	34.7	1,026	50.9	2,144	40.9
2. Cardiovascular disease	I00-I51	616	19.1	174	8.6	790	15.1
3. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	211	6.5	86	4.3	297	5.7
4. Diseases of liver	K70-K76	161	5.0	84	4.2	245	4.7
5. Certain infectious and parasitic diseases	A00-B99	128	4.0	53	2.6	181	3.5
Other causes[1]		991	30.7	593	29.4	1,584	30.2
All causes		**3,225**	**100.0**	**2,016**	**100.0**	**5,241**	**100.0**
65-84 Years Old							
1. Malignant neoplasms	C00-C97	2,704	34.4	2,166	34.9	4,870	34.6
2. Cardiovascular disease	I00-I51	1,741	22.2	1,179	19.0	2,920	20.8
3. Cerebrovascular diseases	I60-I69	508	6.5	479	7.7	987	7.0
4. Chronic Pulmonary Disease	J40-J44	470	6.0	357	5.8	827	5.9
5. Diabetes mellitus	E10-E14	341	4.3	227	3.7	568	4.0
Other causes[1]		2,090	26.6	1,795	28.9	3,885	27.6
All causes		**7,854**	**100.0**	**6,203**	**100.0**	**14,057**	**100.0**
85 Years and Older							
1. Cardiovascular disease	I00-I51	1,197	28.7	2,030	29.9	3,227	29.5
2. Malignant neoplasms	C00-C97	810	19.4	792	11.7	1,602	14.6
3. Cerebrovascular diseases	I60-I69	364	8.7	898	13.2	1,262	11.5
4. Pneumonia/Influenza	J09-J181, J188, J189	295	7.1	430	6.3	725	6.6
5. Vascular/senile dementia	F01, F03	194	4.7	480	7.1	674	6.2
Other causes[1]		1,309	31.4	2,153	31.7	3,462	31.6
All causes		**4,169**	**100.0**	**6,783**	**100.0**	**10,952**	**100.0**

Notes for this table are on previous page.

Infant Mortality

BC had lower infant mortality rates than Canada as a whole from 1992 until 2005, the most recent year for which information on Canadian infant mortality rates is available (see Table 5). There were 165 infant deaths in BC in 2008 or 4 deaths per 1,000 live births. The rate 20 years ago was over 8 per 1,000 live births and that has progressively declined to the rates seen in the last few years.

Table 24 shows the number of infants who died in 2008 by birth weight and maternal age group. The first column has the mother's age groups ranging from less than 20 years up to 40 years or older. 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 3 birth weight categories is quite distinct: for infants with birth weights of 2,500 grams or more, 1.49 per 1,000 live births in the same birth weight category died in their first year. In the 1,500-2,499 gram group the rate was 10.79 per 1,000 live births, and infants who weigh less than 1,500 grams had an infant mortality rate of 202.25 per 1,000 live births.

In the past decade there has been no significantly increasing or decreasing trend in the infant mortality rate.

Table 25 repeats the birth weight categories and general format shown in Table 24 but replaces maternal age groups with gestational age. Of the 165 infant deaths in 2008, 56 were term births (37 to 41 weeks) with birth weights of 2,500 grams or more.

As expected, infant mortality tended to increase as birth weight and gestational age decrease. Of the infant deaths in the period, 37.6 percent were extremely premature (less than 28 weeks) and with low birth weight (less than 2,500 grams), 56.9 percent were low birth weight, 57.0 percent were premature (less than 37 weeks) and 53.3 percent were both low birth weight and premature.

Table 26 shows infant mortality in each LHA of the infants' usual residence, for 2003-2007 and for the year 2008. The left two columns show the LHA number and name. The three columns for 2003-2007 show the number of infant deaths in the LHA (Observed Deaths), the ratio, and the rate of infant deaths per 1,000 live births. In this period, there were only 8 LHAs with statistically significant ratios (four high and four low). For 2008, the table indicates the number of deaths in three age ranges, early neonatal (0 to 6 days), neonatal (0 to 27 days), and post-neonatal (28 to 364 days). The last two columns indicate the total number of infant deaths, and the infant death rate per 1,000 live births.

Causes of infant deaths and stillbirths are shown in Table 27. There were 165 infant deaths and 424 stillbirths in 2008. More than half (52.7 percent) of infant deaths in 2008 occurred in the early neonatal period, of those, 94.3 percent were due to congenital anomalies or perinatal conditions. In 2008 perinatal conditions were the cause of 48.5 percent of infant deaths and 94.8 percent of stillbirths.

TABLE 24
INFANT MORTALITY BY AGE OF MOTHER AND BIRTH WEIGHT
BRITISH COLUMBIA, 2008

Age of Mother	Birth Weight (in Grams)				Total		
	<1500	1500–2499	2500+	N.S.	Number	Percent	Rate
<20	-	-	9	1	10	6.1	6.76
20-24	12	3	7	-	22	13.3	3.40
25-29	6	5	17	1	29	17.6	2.37
30-34	26	10	18	2	56	33.9	4.00
35-39	27	4	5	1	37	22.4	4.50
40+	1	-	6	-	7	4.2	3.98
N.S.	-	-	-	4	4	2.4	
TOTAL	**72**	**22**	**62**	**9**	**165**	**100.0**	**3.74**
Percent	**43.6**	**13.3**	**37.6**	**5.5**	**100.0**		
Rate	**202.25**	**10.79**	**1.49**		**3.74**		

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.

TABLE 25
INFANT MORTALITY BY GESTATIONAL AGE AND BIRTH WEIGHT
BRITISH COLUMBIA, 2008

Gestational Age (In Weeks)	Birth Weight (in Grams)				Total		
	<1500	1500–2499	2500+	N.S.	Number	Percent	Rate
<20	4	-	-	-	4	2.4	+
20-27	58	-	-	-	58	35.2	384.11
28-36	10	16	6	-	32	19.4	9.90
37-41	-	6	56	4	66	40.0	1.63
42+	-	-	-	-	-	-	-
N.S.	-	-	-	5	5	3.0	
TOTAL	**72**	**22**	**62**	**9**	**165**	**100.0**	**3.74**
Percent	**43.6**	**13.3**	**37.6**	**5.5**	**100.0**		
Rate	**202.25**	**10.79**	**1.49**		**3.74**		

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 26

INFANT MORTALITY BY LOCAL HEALTH AREA, BRITISH COLUMBIA, 2003–2007 AND 2008

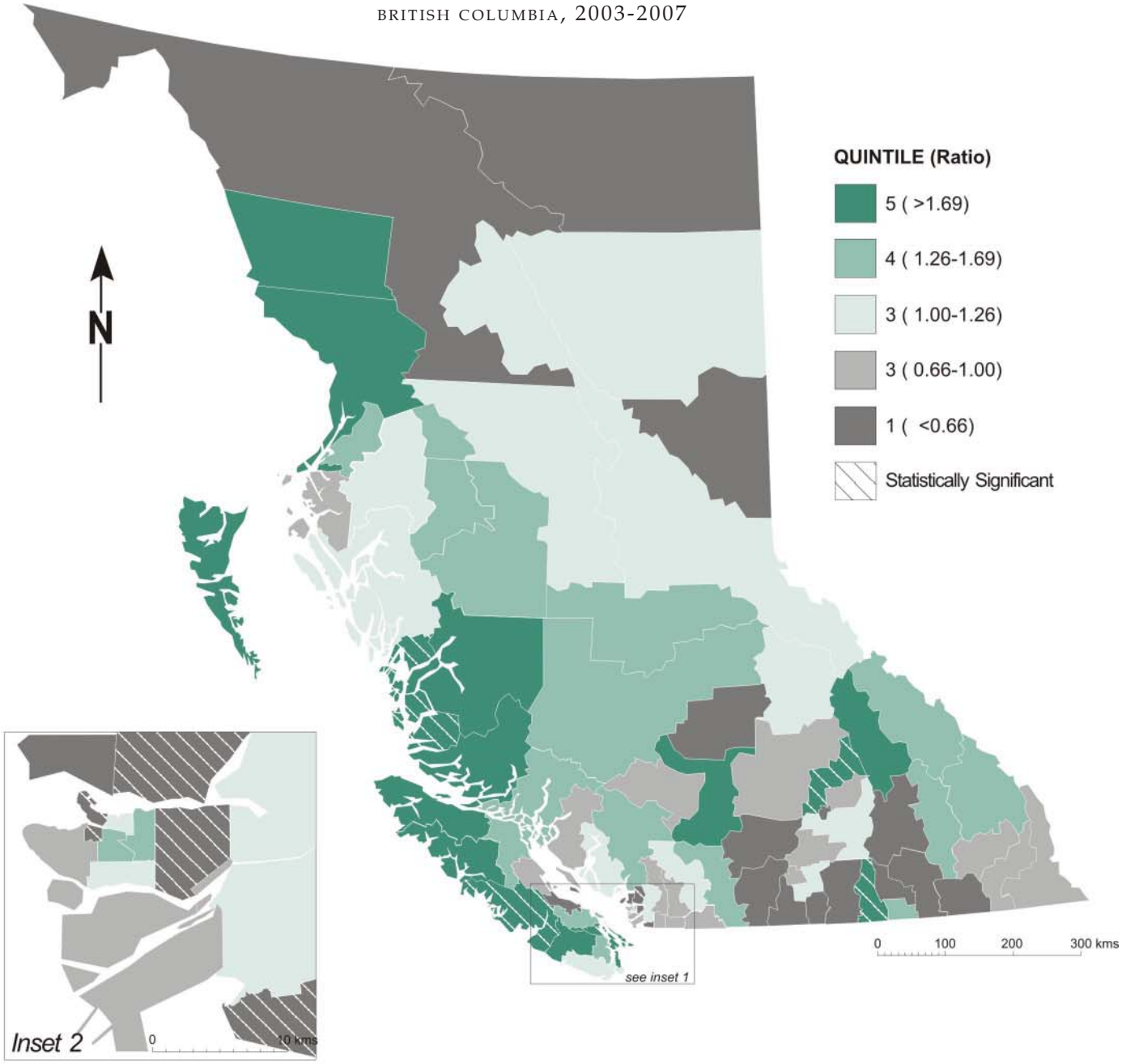
Local Health Area		2003–2007 Observed Deaths	Ratio	(p)	Rate	2008 Age at Death (in Days) 0–6	0–27	28–364	Total Number	Total Rate
001	Fernie	2	0.76		3.14	1	1	-	1	6.80
002	Cranbrook	4	0.85		3.51	-	-	2	2	7.49
003	Kimberley	1	0.77		3.19	-	-	1	1	12.20
004	Windermere	2	1.30		5.36	-	-	-	-	-
005	Creston	-	-		-	-	-	-	-	-
006	Kootenay Lake	1	1.45		5.99	-	-	-	-	-
007	Nelson	3	0.65		2.69	-	-	-	-	-
009	Castlegar	1	0.53		2.20	-	-	-	-	-
010	Arrow Lakes	-	-		-	-	-	-	-	-
011	Trail	4	1.37		5.67	-	-	-	-	-
012	Grand Forks	5	3.61	*	14.88	-	-	-	-	-
013	Kettle Valley	-	-		-	-	-	-	-	-
014	Southern Okanagan	1	0.40		1.64	-	-	-	-	-
015	Penticton	7	1.14		4.70	3	3	-	3	8.57
016	Keremeos	-	-		-	-	-	-	-	-
017	Princeton	-	-		-	-	-	-	-	-
018	Golden	2	1.50		6.17	-	-	-	-	-
019	Revelstoke	4	2.60		10.72	-	-	1	1	14.49
020	Salmon Arm	11	2.19	*	9.04	-	-	-	-	-
021	Armstrong - Spallumcheen	-	-		-	-	-	-	-	-
022	Vernon	13	1.21		5.01	1	2	1	3	5.37
023	Central Okanagan	29	0.99		4.09	2	3	-	3	1.86
024	Kamloops	15	0.78		3.23	4	6	1	7	6.71
025	100 Mile House	1	0.50		2.04	-	-	1	1	8.40
026	North Thompson	1	1.10		4.55	-	-	-	-	-
027	Cariboo - Chilcotin	10	1.69		6.96	1	1	1	2	6.62
028	Quesnel	8	1.64		6.77	-	-	1	1	3.85
029	Lillooet	1	0.95		3.94	-	-	-	-	-
030	South Cariboo	3	2.43		10.03	-	-	-	-	-
031	Merritt	-	-		-	-	-	-	-	-
032	Hope	2	1.34		5.54	-	-	-	-	-
033	Chilliwack	18	0.93		3.84	2	2	2	4	4.05
034	Abbotsford	32	0.94		3.87	2	2	2	4	2.33
035	Langley	20	0.77		3.18	3	4	4	8	5.71
037	Delta	13	0.67		2.78	1	2	-	2	2.34
038	Richmond	25	0.76		3.15	4	4	1	5	2.93
040	New Westminster	10	0.75		3.08	-	-	-	-	-
041	Burnaby	26	0.59	*	2.44	4	5	1	6	2.66
042	Maple Ridge	13	0.69		2.86	-	1	-	1	1.01
043	Coquitlam	42	0.99		4.09	6	6	2	8	3.84
044	North Vancouver	15	0.58	*	2.41	2	2	-	2	1.65
045	West Vancouver-Bowen Is.	4	0.64		2.65	-	-	-	-	-
046	Sunshine Coast	4	1.04		4.31	2	2	-	2	8.16
047	Powell River	2	0.73		3.00	-	-	2	2	14.49
048	Howe Sound	14	1.65		6.80	-	-	1	1	2.08
049	Bella Coola Valley	3	2.99		12.35	-	-	-	-	-
050	Queen Charlotte	2	1.83		7.55	1	1	1	2	39.22
051	Snow Country	1	8.35		34.48	-	-	-	-	-
052	Prince Rupert	3	0.82		3.37	-	-	-	-	-
053	Upper Skeena	2	1.44		5.93	-	-	-	-	-
054	Smithers	6	1.32		5.43	-	-	-	-	-
055	Burns Lake	3	1.64		6.77	-	-	-	-	-
056	Nechako	5	1.12		4.61	-	-	2	2	9.30
057	Prince George	24	1.09		4.52	1	2	-	2	1.74
059	Peace River South	3	0.49		2.04	4	4	-	4	11.63
060	Peace River North	14	1.26		5.19	-	-	-	-	-
061	Greater Victoria	37	1.01		4.17	7	8	3	11	6.09
062	Sooke	14	1.12		4.63	-	-	1	1	1.30
063	Saanich	14	1.70		7.01	-	1	2	3	7.75
064	Gulf Islands	3	1.72		7.09	-	-	-	-	-
065	Cowichan	16	1.54		6.35	-	-	-	-	-
066	Lake Cowichan	2	2.33		9.62	-	-	-	-	-
067	Ladysmith	7	2.27		9.36	-	-	-	-	-
068	Nanaimo	22	1.27		5.22	-	1	1	2	2.16
069	Qualicum	2	0.41		1.67	-	-	2	2	7.38
070	Alberni	14	2.18	*	8.98	3	3	3	6	17.80
071	Courtenay	8	0.82		3.40	-	-	-	-	-
072	Campbell River	12	1.61		6.64	-	-	2	2	4.78
075	Mission	7	0.78		3.21	-	-	1	1	1.96
076	Agassiz - Harrison	2	1.02		4.21	-	-	-	-	-
077	Summerland	1	0.67		2.75	-	-	-	-	-
078	Enderby	1	0.73		3.03	-	-	-	-	-
080	Kitimat	2	1.10		4.56	-	-	-	-	-
081	Fort Nelson	-	-		-	-	-	1	1	9.71
083	Central Coast	3	5.01	+	20.69	1	1	-	1	31.25
084	Vancouver Island West	1	2.18		9.01	-	-	1	1	27.78
085	Vancouver Island North	6	1.89		7.79	-	-	-	-	-
087	Stikine	-	-		-	-	-	-	-	-
088	Terrace	6	1.19		4.91	-	-	1	1	3.86
092	Nisga'a	1	1.63		6.71	-	-	-	-	-
094	Telegraph Creek	1	5.38		22.22	-	-	-	-	-
161	Vancouver - City Centre	9	0.51	*	2.12	3	4	-	4	4.12
162	Vancouver - Downtown E.side	12	1.26		5.19	1	1	-	1	2.22
163	Vancouver - North East	29	1.28		5.28	2	2	1	3	2.70
164	Vancouver - Westside	23	0.99		4.08	1	2	1	3	2.63
165	Vancouver - Midtown	28	1.35		5.59	3	3	3	6	5.71
166	Vancouver - South	30	1.11		4.60	5	6	1	7	5.26
201	Surrey	101	1.07		4.40	16	21	6	27	5.18
202	South Surrey/White Rock	3	0.28	+	1.14	1	1	1	2	3.67
	PROVINCIAL TOTAL	**852**	**1.00**		**4.13**	**87**	**107**	**58**	**165**	**3.74**

Notes for this table follow the map.

FIGURE 36

INFANT MORTALITY BY LOCAL HEALTH AREA

BRITISH COLUMBIA, 2003-2007



Notes to Table 26
Note: *Statistical testing indicates that observed deaths are signficantly different from the expected deaths (p<0.05, two tailed). +Denotes significance based on less than five deaths. Rate per 1,000 live births in the specified LHA. Ratio – observed over the expected deaths. Non- residents are excluded. Total includes residents with unknown LHA.

Note: Ratio - Observed over the expected. Refer to Figure 1 to clarify geographical location of L HAs.

TABLE 27

SELECTED CAUSES OF INFANT DEATHS AND STILLBIRTHS

BRITISH COLUMBIA, 2008

Cause of Death	ICD-10 Code(s)	Infant Deaths – Age Group (in Days) <7	7–27	28–364	Total	Rate [1]	Stillbirths Number	Rate [2]
Congenital anomalies								
- of the nervous system	Q00-Q07	2	1	-	3	0.68	2	0.45
- of the eye, ear, face & neck	Q10-Q18	-	-	-	-	-	-	-
- of the heart and circulatory system	Q20-Q28	2	3	6	11	2.49	1	0.22
- of the respiratory system	Q30-Q34	4	-	-	4	0.91	-	-
- of the digestive system	Q35-Q45	-	-	-	-	-	-	-
- of the genital organs	Q50-Q56	-	-	-	-	-	-	-
- of the urinary system	Q60-Q64	-	-	-	-	-	1	0.22
- of the musculoskeletal system	Q65-Q79	1	1	-	2	0.45	2	0.45
Other and multiple system syndromes	Q80-Q89	2	-	1	3	0.68	2	0.45
Chromosomal anomalies	Q90-Q99	6	2	4	12	2.72	7	1.57
Total deaths due to congenital anomalies	**Q00-Q99**	**17**	**7**	**11**	**35**	**7.93**	**15**	**3.36**
Perinatal conditions								
Infant affected by maternal factors	P00-P04	28	2	-	30	6.79	120	26.92
Premature/postmature and fetal growth disorders	P05-P08	20	2	1	23	5.21	13	2.92
Birth trauma	P10-P15	-	-	-	-	-	-	-
Respiratory and cardiovascular disorders	P20-P29	4	1	-	5	1.13	9	2.02
Infections specific to the perinatal period	P35-P39	1	3	-	4	0.91	-	-
Hemorrhage and hematological disorders	P50-P61	1	-	-	1	0.23	4	0.90
Transitory endocrine and metabolic disorders	P70-P74	-	-	-	-	-	1	0.22
Digestive system disorders of fetus and newborn	P75-P78	-	2	1	3	0.68	-	-
Other disorders originating in the perinatal period	P80-P94, P96	11	1	2	14	3.17	187	41.95
Fetal death of unknown cause	P95	-	-	-	-	-	68	15.25
Total deaths due to perinatal conditions	**P00-P96**	**65**	**11**	**4**	**80**	**18.12**	**402**	**90.17**
Pneumonia/influenza	J09-J18.1, J18.8-J18.9	-	-	-	-	-	-	-
Sudden infant death syndrome (SIDS)[3]	R95	1	-	11	12	2.72	-	-
Other causes[3]		4	2	32	38	8.61	7	1.57
TOTAL		**87**	**20**	**58**	**165**	**37.37**	**424**	**95.11**
PERCENT		**52.7**	**12.1**	**35.2**	**100.0**			

Note: [1]Rate per 10,000 live births.
[2]Rate 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

Mortality due to Human Immunodeficiency Virus (HIV) peaked in 1994 and has seen a general downward trend since then.

Table 28 shows the number of deaths due to HIV broken out by gender and six age groups from 1993 to 2008. 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 time period. Figure 37 shows that in the period from 2003-2008 most deaths due to HIV disease in BC occurred in individuals who were between 40 and 49 years of age.

The yearly numbers of HIV deaths in Table 29 over the past ten years have fluctuated with no significantly increasing or decreasing trend. The HSDA 32-Vancouver had the highest mortality rate (15.72 deaths per 100,000 population), from 1993 to 2008. In 2008, there were 27 deaths due to HIV in that area, far higher than any other HSDA.

FIGURE 37

DEATHS DUE TO HIV DISEASE BY AGE GROUP

BRITISH COLUMBIA, 2003–2008

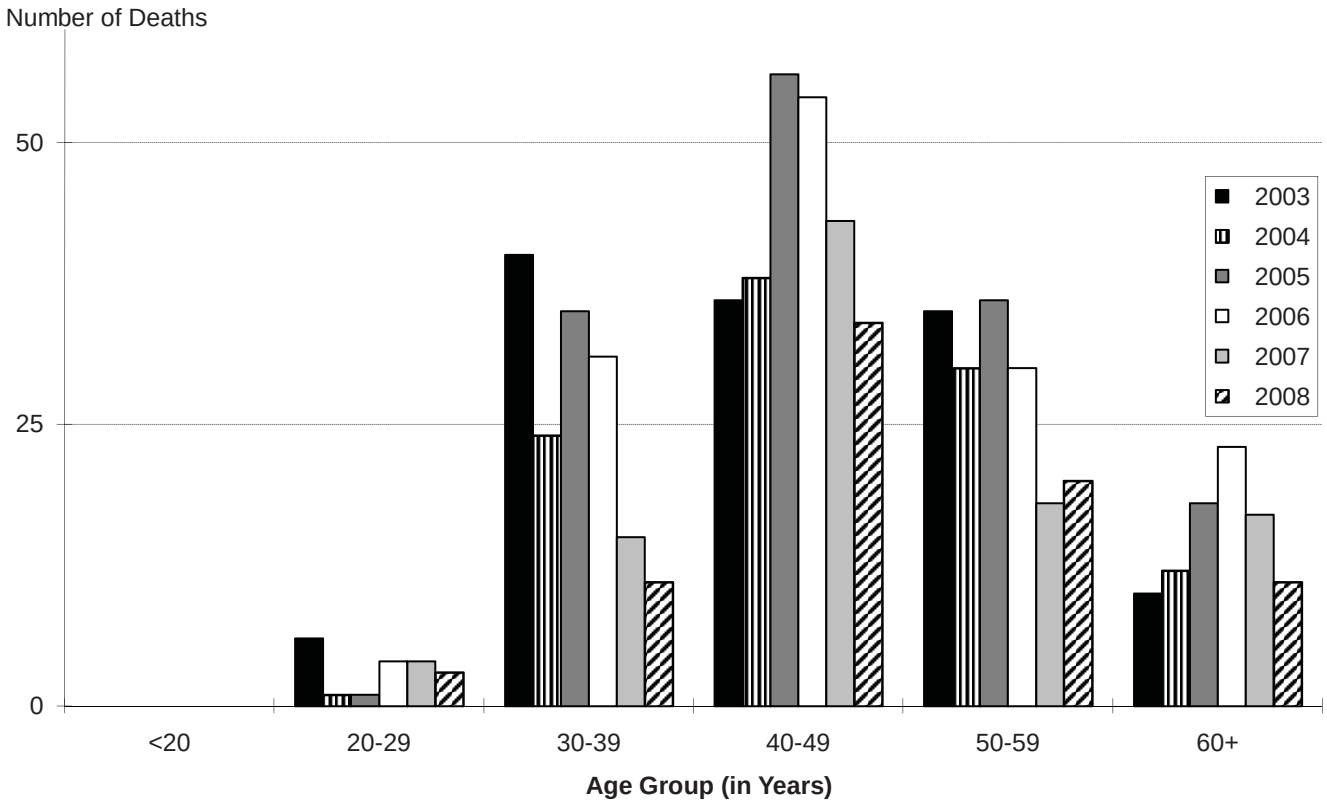


TABLE 28
DEATHS DUE TO HIV DISEASE BY GENDER AND AGE GROUP
BRITISH COLUMBIA, 1993–2008

Year of Death	Gender	Age at Death (in Years) <20	20–29	30–39	40–49	50–59	60+	Total
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	13	5	-	26
	T	-	1	35	56	36	18	146
	Percent	-	0.7	24.0	38.4	24.7	12.3	100.0
2006	M	-	2	22	43	27	20	114
	F	-	2	9	11	3	3	28
	T	-	4	31	54	30	23	142
	Percent	-	2.8	21.8	38.0	21.1	16.2	100.0
2007	M	-	1	14	33	15	14	77
	F	-	3	1	10	3	3	20
	T	-	4	15	43	18	17	97
	Percent	-	4.1	15.5	44.3	18.6	17.5	100.0
2008	M	-	1	7	28	14	10	60
	F	-	2	4	6	6	1	19
	T	-	3	11	34	20	11	79
	Percent	-	3.8	13.9	43.0	25.3	13.9	100.0
1993 - 2008	**M**	**4**	**109**	**794**	**785**	**364**	**167**	**2,223**
	F	**2**	**45**	**105**	**111**	**38**	**20**	**321**
	T	**6**	**154**	**899**	**896**	**402**	**187**	**2,544**
	Percent	**0.2**	**6.1**	**35.3**	**35.2**	**15.8**	**7.4**	**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, 1993–2008

	Health Service Delivery Area	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1993–2008 Number	Percent	Rate
11	East Kootenay	-	-	1	-	2	-	-	-	1	-	1	-	1	-	-	-	6	0.2	0.49
12	Kootenay Boundary	1	1	3	2	-	1	1	-	-	2	-	1	-	2	-	2	16	0.6	1.28
13	Okanagan	9	6	9	7	2	4	2	3	3	3	6	2	5	11	1	2	75	2.9	1.53
14	Thompson Cariboo Shuswap	4	3	-	3	2	2	2	2	6	2	4	6	2	4	3	1	46	1.8	1.36
21	Fraser East	6	7	6	7	1	5	3	3	2	4	1	5	6	4	1	3	64	2.5	1.63
22	Fraser North	22	25	21	15	8	6	7	11	8	10	10	8	8	10	7	6	182	7.2	2.16
23	Fraser South	12	18	17	23	6	4	11	7	11	10	8	5	12	9	13	5	171	6.7	1.80
31	Richmond	1	6	4	4	5	2	2	1	1	-	1	2	3	1	1	2	36	1.4	1.33
32	Vancouver	197	203	182	145	66	65	53	73	60	62	74	50	78	67	42	27	1,444	56.8	15.72
33	North Shore/ Coast Garibaldi	16	15	12	11	7	5	5	3	3	2	6	3	7	5	5	7	112	4.4	2.68
41	South Vancouver Island	21	28	17	21	10	10	13	7	9	3	8	9	9	17	11	11	204	8.0	3.74
42	Central Vancouver Island	6	13	14	6	4	3	4	8	4	4	4	5	6	3	6	4	94	3.7	2.47
43	North Vancouver Island	3	3	2	1	1	-	-	4	2	-	1	2	3	2	-	2	26	1.0	1.43
51	Northwest	1	-	2	1	-	-	-	-	-	-	-	1	2	-	2	3	12	0.5	0.91
52	Northern Interior	2	2	4	5	2	2	-	-	1	3	3	5	4	7	5	2	47	1.8	1.99
53	Northeast	-	1	1	-	-	1	-	-	-	1	-	1	-	-	-	1	6	0.2	0.59
	N.S.	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	3	0.1	
	PROVINCIAL TOTAL	**301**	**331**	**295**	**252**	**117**	**110**	**103**	**122**	**111**	**106**	**127**	**105**	**146**	**142**	**97**	**79**	**2,544**	**100.0**	**3.95**

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

Table 30 shows the number of deaths for males and females from "external causes" which include unintentional deaths as well as deaths due to suicide, homicide and those where intent was undetermined. Also shown are ASMRs. These rates of death per 10,000 standard population are used to compare statistics from other time periods and other jurisdictions. The *Glossary* explains ASMR and the *Methodology* section gives an example of the calculation method.

During 2008, there were 1,546 deaths due to external causes or approximately 48 external cause deaths for each 1,000 deaths in BC (see Table 30).

The break out by cause was:

- 421 were suicides
- 225 were motor vehicle accidents
- 360 were unintentional falls
- 237 were unintentional poisonings
- 41 were unintentional drownings
- 34 were homicides
- 128 were due to other external causes

Males accounted for 66.5 percent of deaths by external causes as shown in Table 30. The leading four causes of external deaths in males in 2008 (in ASMR rank order) were **Suicide** (1.38), **Unintentional Poisoning** (0.69), **Motor Vehicle Accidents** (0.69), and **Unintentional Falls** (0.63). For females, the leading four (in ASMR rank order) were: **Unintentional Falls** (0.46), **Suicide** (0.39), **Motor Vehicle Accidents** (0.30), and **Unintentional Poisoning** (0.29).

Table 31 shows the allocation of external death causes according to the Local Health Area of the deceased's usual residence. The highest ASMRs in 2008 are found in the following LHAs (with 5 or more deaths): North Thompson (15.22), Grand Forks (13.51), Fernie (12.83), Lillooet (10.65), and Burns Lake (9.67).

Table 32 shows number of deaths from suicide classified by month of occurrence and by gender. Percentages across months are also given. In 2008, there was three times the number of male suicides compared to female suicides. The data for 2008 shows that November was the month with the fewest number of suicides (28) while September was the month with the highest number of suicides (47).

TABLE 30
EXTERNAL CAUSES OF DEATH BY GENDER
BRITISH COLUMBIA, 2008

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	151	0.69	74	0.30	225	0.49
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	18	0.08	1	0.01	19	0.04
Accidental drowning (inc water transport)	V90, V92, W65-W74	34	0.15	7	0.03	41	0.09
Accidental falls	W00-W19	173	0.63	187	0.46	360	0.54
Accident caused by machinery	W24, W28-W31	1	-	-	-	1	-
Accidental firearm discharge	W32-W34	4	0.02	-	-	4	0.01
Exposure to smoke, fire and flames	X00-X09	24	0.09	16	0.06	40	0.08
Accidental poisoning	X40-X49	160	0.69	77	0.29	237	0.49
All other accidents	W20-W23, W25-W27, W35-W64, W75-W99, X10-X39, X50-X59, Y35-Y36, Y40-Y84, Y88	92	0.37	36	0.09	128	0.23
Suicide	X60-X84, Y870	319	1.38	102	0.39	421	0.88
Homicide	X85-Y09, Y871	27	0.14	7	0.03	34	0.09
External events of undetermined intent	Y10-Y34, Y872	9	0.03	8	0.03	17	0.03
Sequelae of other external causes	Y86, Y89	16	0.06	3	0.01	19	0.03
TOTAL		**1,028**	**4.33**	**518**	**1.70**	**1,546**	**3.00**

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 Drowing	Suicide	Homicide	Other	Total	
				Poisoning	Falls						Deaths	ASMR
001	Fernie	2	-	1	2	-	-	2	-	10	17	12.83
002	Cranbrook	2	3	1	2	-	-	4	-	-	12	4.60
003	Kimberley	1	-	-	3	-	-	5	-	-	9	6.88
004	Windermere	2	-	1	2	1	-	1	-	-	7	6.28
005	Creston	3	-	-	1	5	-	1	-	3	13	7.42
006	Kootenay Lake	-	-	-	-	-	-	1	-	-	1	3.25
007	Nelson	2	-	1	2	1	-	3	-	1	10	3.65
009	Castlegar	1	-	-	3	-	1	-	-	-	5	3.45
010	Arrow Lakes	-	-	-	2	-	-	-	-	2	4	5.31
011	Trail	3	-	2	4	-	1	1	-	-	11	4.57
012	Grand Forks	3	-	-	5	1	-	1	-	3	13	13.51
013	Kettle Valley	-	-	-	-	-	-	1	-	-	1	4.34
014	Southern Okanagan	2	1	1	7	-	-	2	-	2	15	6.82
015	Penticton	1	-	-	7	-	2	5	-	1	16	2.77
016	Keremeos	-	-	-	2	-	-	1	-	-	3	2.73
017	Princeton	-	-	1	1	-	-	-	-	-	2	2.61
018	Golden	-	1	-	-	-	1	-	-	1	3	3.95
019	Revelstoke	-	1	-	-	-	-	-	-	-	1	1.20
020	Salmon Arm	3	-	3	11	-	-	3	-	2	22	4.12
021	Armstrong - Spallumcheen	1	-	-	1	-	1	2	-	-	5	3.60
022	Vernon	5	1	2	4	-	-	4	1	4	21	2.97
023	Central Okanagan	8	-	4	17	1	1	17	-	6	54	2.20
024	Kamloops	14	2	11	7	1	6	7	-	7	55	4.31
025	100 Mile House	2	-	2	1	-	-	-	-	-	5	3.74
026	North Thompson	1	-	-	-	-	1	3	-	-	5	15.22
027	Cariboo - Chilcotin	8	-	4	4	-	-	3	-	3	22	7.42
028	Quesnel	4	-	-	1	1	-	3	-	3	12	5.13
029	Lillooet	-	-	1	2	-	-	-	1	1	5	10.65
030	South Cariboo	1	-	1	-	-	-	1	-	1	4	5.53
031	Merritt	-	-	1	4	1	2	2	-	1	11	7.26
032	Hope	-	-	2	-	-	-	2	-	3	7	6.84
033	Chilliwack	3	-	10	4	-	2	8	2	3	32	3.68
034	Abbotsford	7	-	7	13	-	-	8	3	4	42	2.59
035	Langley	10	-	5	10	-	-	11	1	2	39	2.61
037	Delta	2	-	2	5	3	-	5	2	1	20	1.93
038	Richmond	5	-	3	8	1	1	14	2	4	38	1.85
040	New Westminster	4	-	6	6	-	-	9	-	3	28	3.71
041	Burnaby	6	2	7	14	1	-	15	3	10	58	2.12
042	Maple Ridge	3	-	3	6	-	-	11	-	2	25	2.83
043	Coquitlam	5	-	6	4	1	-	15	1	5	37	1.62
044	North Vancouver	1	-	6	8	5	1	5	-	1	27	1.67
045	West Vancouver-Bowen Is.	1	-	1	5	-	-	8	1	1	17	2.71
046	Sunshine Coast	-	-	1	5	1	-	2	-	3	12	2.42
047	Powell River	1	-	4	1	-	-	3	-	1	10	4.02
048	Howe Sound	1	-	1	3	-	-	4	-	2	11	2.93
049	Bella Coola Valley	-	-	-	-	-	1	1	-	-	2	8.12
050	Queen Charlotte	-	-	1	1	1	1	1	-	-	5	9.66
051	Snow Country	-	-	-	-	-	-	-	-	-	-	-
052	Prince Rupert	1	-	-	-	-	-	1	-	2	4	2.36
053	Upper Skeena	-	-	1	-	-	-	-	1	-	2	4.56
054	Smithers	-	-	2	4	-	-	2	-	2	10	6.33
055	Burns Lake	3	-	-	2	-	-	3	-	-	8	9.67
056	Nechako	2	1	3	-	1	-	3	1	2	13	8.84
057	Prince George	5	-	6	11	3	1	13	-	-	39	3.98
059	Peace River South	4	-	-	-	-	-	5	-	-	9	2.92
060	Peace River North	10	1	-	3	-	-	4	-	2	20	6.31
061	Greater Victoria	5	-	20	36	3	5	22	1	7	99	3.15
062	Sooke	1	-	2	7	-	2	8	-	4	24	3.60
063	Saanich	3	1	1	13	2	-	6	-	2	28	3.29
064	Gulf Islands	1	-	3	2	-	-	1	-	1	8	3.50
065	Cowichan	6	1	1	3	-	-	8	2	2	23	4.05
066	Lake Cowichan	1	-	-	1	-	-	-	-	-	2	2.13
067	Ladysmith	2	-	1	2	1	-	2	-	4	12	6.23
068	Nanaimo	5	-	2	9	-	1	6	-	5	28	1.91
069	Qualicum	5	-	-	9	-	-	5	-	-	19	3.08
070	Alberni	1	-	-	1	-	-	2	-	2	6	1.65
071	Courtenay	2	-	1	3	3	1	12	-	4	26	3.60
072	Campbell River	7	-	5	3	-	2	8	-	3	28	6.39
075	Mission	2	-	4	2	-	1	3	1	1	14	3.28
076	Agassiz - Harrison	-	-	-	1	-	1	-	-	-	2	1.96
077	Summerland	-	-	1	1	-	1	5	1	-	9	8.39
078	Enderby	1	-	-	1	-	1	3	-	-	6	8.49
080	Kitimat	1	-	1	-	-	-	-	-	-	2	1.65
081	Fort Nelson	3	-	-	-	-	-	-	-	1	4	5.46
083	Central Coast	-	-	-	-	-	-	-	-	-	-	-
084	Vancouver Island West	2	-	-	-	-	-	1	-	1	4	12.15
085	Vancouver Island North	1	1	5	2	-	-	3	-	-	12	7.74
087	Stikine	-	-	-	-	1	-	-	-	1	2	14.63
088	Terrace	2	2	3	-	-	-	4	-	-	11	6.38
092	Nisga'a	-	-	-	-	-	-	3	-	1	4	22.36
094	Telegraph Creek	-	-	1	-	-	-	-	-	-	1	9.79
161	Vancouver - City Centre	1	-	9	4	-	-	17	1	2	34	2.43
162	Vancouver - Downtown E.side	3	-	21	7	-	-	13	-	2	46	5.98
163	Vancouver - North East	3	-	2	4	-	-	8	-	3	20	1.57
164	Vancouver - Westside	-	-	3	5	1	-	7	-	4	20	1.15
165	Vancouver - Midtown	1	-	4	8	-	1	5	-	1	20	1.87
166	Vancouver - South	-	-	7	8	-	-	11	-	4	30	1.74
201	Surrey	20	1	23	14	-	1	29	9	8	105	2.76
202	South Surrey/White Rock	2	-	2	6	-	-	2	-	2	14	1.15
	PROVINCIAL TOTAL	**225**	**19**	**237**	**360**	**40**	**41**	**421**	**34**	**169**	**1,546**	**3.00**
	PERCENT	**14.6**	**1.2**	**15.3**	**23.3**	**2.6**	**2.7**	**27.2**	**2.2**	**10.9**	**100.0**	

Notes for table follow table 32.

TABLE 32

SUICIDE DEATHS BY MONTH AND GENDER

BRITISH COLUMBIA, 2008

Month	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
January	23	7.2	6	5.9	29	6.9
February	21	6.6	12	11.8	33	7.8
March	31	9.7	11	10.8	42	10.0
April	25	7.8	11	10.8	36	8.6
May	29	9.1	7	6.9	36	8.6
June	31	9.7	11	10.8	42	10.0
July	22	6.9	11	10.8	33	7.8
August	26	8.2	7	6.9	33	7.8
September	41	12.9	6	5.9	47	11.2
October	23	7.2	7	6.9	30	7.1
November	21	6.6	7	6.9	28	6.7
December	26	8.2	6	5.9	32	7.6
TOTAL	**319**	**100.0**	**102**	**100.0**	**421**	**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.

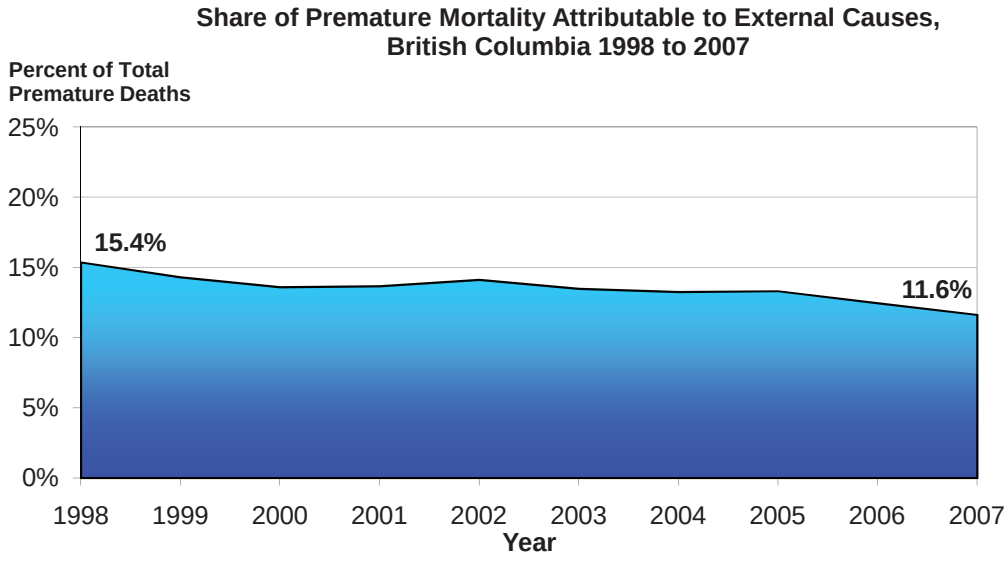
Notes to Table 31

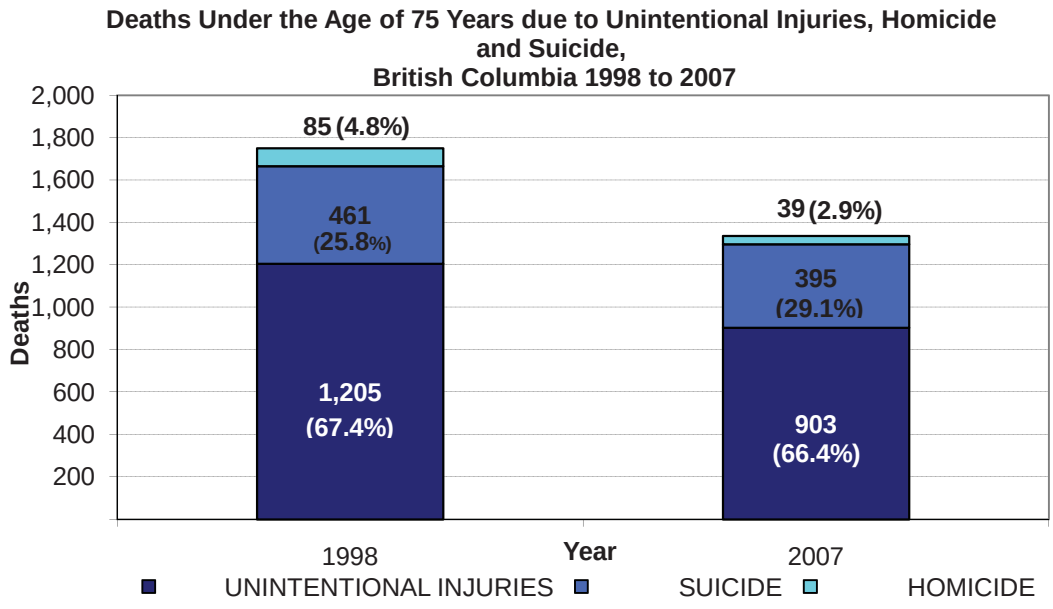
Note: Based on usual residence. ASMR – per 10,000 standard population (Canada 1991 Census). PERCENT – Provincial total for each cause as a percent of the Provincial total for all deaths from external causes. Other is comprised of accident caused by machinery, accidental firearm discharge, all other accidents,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

Vital Statistics Information Box

PREMATURE (<75 YEARS) EXTERNAL CAUSES OF DEATH IN BRITISH COLUMBIA, 1998 TO 2007

From 1998 to 2007, deaths among those under the age of 75 have accounted for just 38.9 percent; however, 78.6 percent of deaths from external causes were in this age group. The total number of deaths attributable to external causes has fallen from 2,237 in 1998 to 1,766 in 2007, and among those under the age of 75 the number of deaths has fallen from 1,789 to 1,359. The share of premature deaths attributable to external causes has fallen from 15.4 percent in 1998 to 11.6 percent in 2007. Unintentional injuries account for the vast majority (66.4 percent in 2007) of deaths from external causes among those under the age of 75.





Mortality Due to All Causes of Death

Table 33 shows the number of deaths from all causes in each LHA for 2008 and the previous five-year period. The Standardized Mortality Ratio (SMR) columns 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.

Table 33 also shows 95 percent confidence intervals for the SMR, which provides a measure of its variability. Forty LHAs had statistically significant ratios in 2008 (28 high and 12 low), fifty-eight LHAs had statistically significant ratios (41 high and 17 low) in the period of 2003 to 2007, and thirty-seven LHAs had statistically significant ratios (24 high and 13 low) in both 2008 and the previous five-year period.

In 2008, the LHAs with the five highest statistically significant SMRs were: North Thompson (2.09), Merritt (1.73), Bella Coola Valley (1.59), Fort Nelson (1.59), and Prince Rupert (1.55).

Figure 38 shows the SMRs grouped into colour-coded quintiles. The map provides an immediately apparent view of the provincial variation of SMRs. Lower ratios were more frequently observed in the south and higher ratios in central and northern BC.

Vital Statistics Information Box

DEATHS AGED 65+ BY GENDER AND HEALTH SERVICE DELIVERY AREA

BRITISH COLUMBIA, 2008

Health Service Delivery Area	Gender	Age at Death 65-69	70-74	75-79	80-84	85-89	90-94	95-99	100+	Total	% 65+
11 East Kootenay	M	40	38	46	54	38	29	6	0	339	74.0%
	F	17	30	23	45	60	39	22	3	291	82.1%
12 Kootenay Boundary	M	27	41	43	62	51	33	6	0	359	73.3%
	F	25	22	55	64	67	38	22	8	347	86.7%
13 Okanagan	M	130	196	265	329	288	159	48	9	1,785	79.8%
	F	88	146	187	260	367	248	107	20	1,629	87.4%
14 Thompson Cariboo Shuswap	M	90	125	148	166	108	51	19	0	1,021	69.2%
	F	66	84	103	146	139	95	50	10	878	78.9%
21 Fraser East	M	97	116	175	184	156	88	24	6	1,126	75.1%
	F	68	90	111	155	201	171	70	21	1,044	85.0%
22 Fraser North	M	136	177	220	275	264	155	46	8	1,744	73.5%
	F	95	121	192	296	351	236	122	29	1,741	82.8%
23 Fraser South	M	179	195	285	332	323	174	53	9	2,150	72.1%
	F	119	155	212	336	446	326	139	25	2,150	81.8%
31 Richmond	M	32	52	67	68	81	38	15	0	467	75.6%
	F	23	28	67	76	97	70	34	6	464	86.4%
32 Vancouver	M	136	182	277	296	225	146	55	10	1,840	72.1%
	F	78	108	178	285	352	329	155	37	1,820	83.6%
33 North Shore/Coast Garibaldi	M	76	78	137	165	156	85	17	3	920	77.9%
	F	47	77	115	158	219	157	76	13	999	86.3%
41 South Vancouver Island	M	96	122	196	302	330	187	51	5	1,666	77.4%
	F	74	98	200	294	403	317	159	24	1,810	86.7%
42 Central Vancouver Island	M	112	126	181	234	222	105	24	3	1,343	75.0%
	F	62	94	120	219	248	184	84	9	1,232	82.8%
43 North Vancouver Island	M	53	59	65	65	59	34	11	2	502	69.3%
	F	28	40	43	59	84	60	23	6	430	79.8%
51 Northwest	M	33	34	46	35	24	13	5	0	297	64.0%
	F	21	22	18	38	35	12	10	2	220	71.8%
52 Northern Interior	M	54	66	73	77	48	30	7	1	544	65.4%
	F	25	31	59	54	53	43	15	2	397	71.0%
53 Northeast	M	14	31	23	19	13	10	2	1	190	59.5%
	F	11	13	10	19	17	11	4	1	133	64.7%
Provincial Total	**M**	**1,305**	**1,639**	**2,247**	**2,663**	**2,386**	**1,337**	**389**	**57**	**16,305**	**73.7%**
	F	**847**	**1,159**	**1,693**	**2,504**	**3,139**	**2,336**	**1,092**	**216**	**15,587**	**83.3%**

Note: %65+ is the percentage of deaths aged 65 or older out of all deaths to residents of the specified area by gender.
Provincial Total includes residents with unknown addresses.

Table 33

STANDARDIZED MORTALITY RATIO - ALL CAUSES OF DEATH BY LOCAL HEALTH AREA, BRITISH COLUMBIA, 2003–2007 AND 2008

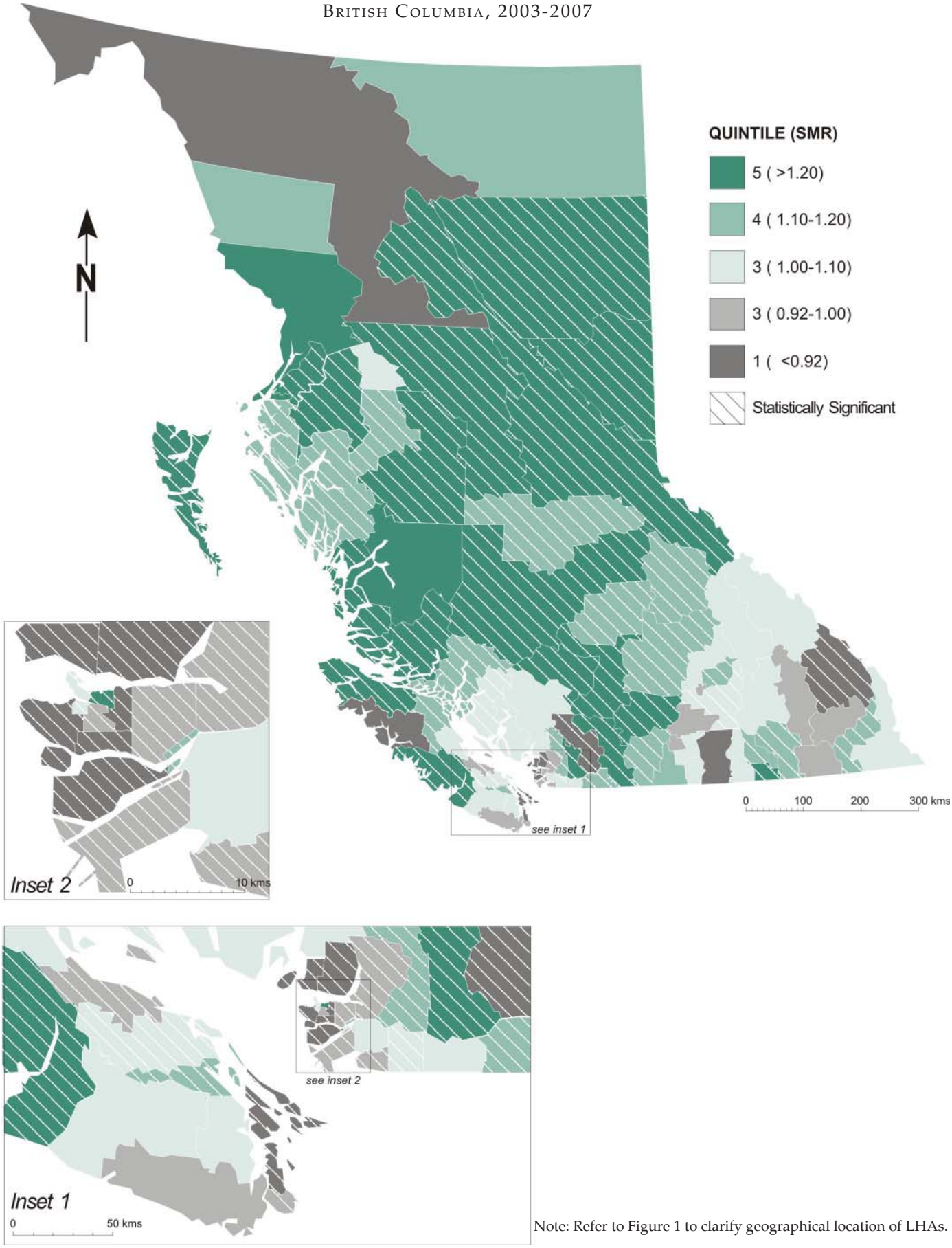
Local Health Area		2003–2007 Observed Deaths	SMR	(p)	2008 Observed Deaths	Expected Deaths	SMR	(p)	95% Confidence Interval Lower		Upper
001	Fernie	403	1.01		97	81.01	1.20		0.97	-	1.46
002	Cranbrook	1,027	1.16	*	183	188.13	0.97		0.84	-	1.12
003	Kimberley	378	0.99		85	77.34	1.10		0.88	-	1.36
004	Windermere	235	0.74	*	61	69.92	0.87		0.67	-	1.12
005	Creston	666	0.98		162	141.89	1.14		0.97	-	1.33
006	Kootenay Lake	157	1.00		29	32.66	0.89		0.59	-	1.28
007	Nelson	981	1.11	*	169	179.09	0.94		0.81	-	1.10
009	Castlegar	617	1.19	*	124	104.39	1.19		0.99	-	1.42
010	Arrow Lakes	240	1.07		51	45.32	1.13		0.84	-	1.48
011	Trail	1,100	1.21	*	207	189.23	1.09		0.95	-	1.25
012	Grand Forks	493	1.09		101	93.89	1.08		0.88	-	1.31
013	Kettle Valley	118	0.84		25	32.30	0.77		0.50	-	1.14
014	Southern Okanagan	1,274	1.03		270	254.54	1.06		0.94	-	1.20
015	Penticton	2,563	1.03		540	509.11	1.06		0.97	-	1.15
016	Keremeos	333	1.11		69	65.25	1.06		0.82	-	1.34
017	Princeton	272	1.15	*	65	51.54	1.26		0.97	-	1.61
018	Golden	184	1.01		42	39.62	1.06		0.76	-	1.43
019	Revelstoke	268	1.08		44	52.31	0.84		0.61	-	1.13
020	Salmon Arm	1,598	1.03		329	333.78	0.99		0.88	-	1.10
021	Armstrong - Spallumcheen	378	0.99		80	86.40	0.93		0.73	-	1.15
022	Vernon	3,034	1.08	*	601	588.04	1.02		0.94	-	1.11
023	Central Okanagan	7,177	0.98		1,538	1,564.00	0.98		0.93	-	1.03
024	Kamloops	4,019	1.14	*	870	765.27	1.14	*	1.06	-	1.21
025	100 Mile House	601	1.13	*	142	114.76	1.24	*	1.04	-	1.46
026	North Thompson	158	1.18	*	60	28.69	2.09	*	1.60	-	2.69
027	Cariboo - Chilcotin	856	1.22	*	197	152.88	1.29	*	1.11	-	1.48
028	Quesnel	831	1.19	*	203	153.20	1.33	*	1.15	-	1.52
029	Lillooet	195	1.41	*	45	29.90	1.50	*	1.10	-	2.01
030	South Cariboo	360	1.32	*	70	59.59	1.17		0.92	-	1.48
031	Merritt	504	1.27	*	142	81.94	1.73	*	1.46	-	2.04
032	Hope	500	1.41	*	103	76.10	1.35	*	1.10	-	1.64
033	Chilliwack	3,311	1.11	*	728	641.11	1.14	*	1.05	-	1.22
034	Abbotsford	4,513	1.00		970	933.97	1.04		0.97	-	1.11
035	Langley	4,202	1.04	*	955	849.89	1.12	*	1.05	-	1.20
037	Delta	3,027	0.95	*	666	650.50	1.02		0.95	-	1.10
038	Richmond	4,394	0.76	*	931	1,327.92	0.70	*	0.66	-	0.75
040	New Westminster	2,484	1.12	*	546	453.26	1.20	*	1.11	-	1.31
041	Burnaby	6,873	0.94	*	1,408	1,535.44	0.92	*	0.87	-	0.97
042	Maple Ridge	2,720	1.13	*	587	517.90	1.13	*	1.04	-	1.23
043	Coquitlam	4,718	0.94	*	944	1,108.26	0.85	*	0.80	-	0.91
044	North Vancouver	4,087	0.92	*	836	950.14	0.88	*	0.82	-	0.94
045	West Vancouver-Bowen Is.	2,342	0.84	*	479	585.04	0.82	*	0.75	-	0.90
046	Sunshine Coast	1,337	1.01		258	284.74	0.91		0.80	-	1.02
047	Powell River	966	1.10	*	188	188.60	1.00		0.86	-	1.15
048	Howe Sound	578	1.02		124	122.03	1.02		0.85	-	1.21
049	Bella Coola Valley	97	1.21		28	17.60	1.59	*	1.06	-	2.30
050	Queen Charlotte	142	1.23	*	34	24.49	1.39		0.96	-	1.94
051	Snow Country	17	1.23		2	2.47	0.81		0.09	-	2.92
052	Prince Rupert	427	1.17	*	116	74.73	1.55	*	1.28	-	1.86
053	Upper Skeena	124	1.07		25	25.05	1.00		0.65	-	1.47
054	Smithers	432	1.17	*	98	80.38	1.22		0.99	-	1.49
055	Burns Lake	271	1.20	*	45	45.24	0.99		0.73	-	1.33
056	Nechako	509	1.39	*	111	79.82	1.39	*	1.14	-	1.67
057	Prince George	2,664	1.25	*	582	466.36	1.25	*	1.15	-	1.35
059	Peace River South	827	1.25	*	148	141.74	1.04		0.88	-	1.23
060	Peace River North	727	1.22	*	152	124.63	1.22	*	1.03	-	1.43
061	Greater Victoria	10,644	0.98	*	2,275	2,156.09	1.06	*	1.01	-	1.10
062	Sooke	1,603	1.00		382	354.18	1.08		0.97	-	1.19
063	Saanich	3,142	0.84	*	683	789.39	0.87	*	0.80	-	0.93
064	Gulf Islands	675	0.80	*	136	183.92	0.74	*	0.62	-	0.87
065	Cowichan	2,259	1.04		504	471.67	1.07		0.98	-	1.17
066	Lake Cowichan	221	1.06		46	45.14	1.02		0.75	-	1.36
067	Ladysmith	971	1.10	*	249	183.80	1.35	*	1.19	-	1.53
068	Nanaimo	4,379	1.07	*	927	880.38	1.05		0.99	-	1.12
069	Qualicum	2,387	0.93	*	548	573.05	0.96		0.88	-	1.04
070	Alberni	1,399	1.23	*	301	243.31	1.24	*	1.10	-	1.39
071	Courtenay	2,475	1.02		526	540.76	0.97		0.89	-	1.06
072	Campbell River	1,428	1.15	*	304	276.65	1.10		0.98	-	1.23
075	Mission	1,357	1.21	*	299	236.04	1.27	*	1.13	-	1.42
076	Agassiz - Harrison	297	0.84	*	70	72.39	0.97		0.75	-	1.22
077	Summerland	685	0.95		160	151.01	1.06		0.90	-	1.24
078	Enderby	375	1.18	*	91	66.08	1.38	*	1.11	-	1.69
080	Kitimat	273	1.13	*	67	51.43	1.30	*	1.01	-	1.65
081	Fort Nelson	84	1.20		23	14.46	1.59	*	1.01	-	2.39
083	Central Coast	68	2.35	*	6	6.01	1.00		0.36	-	2.17
084	Vancouver Island West	48	0.77		18	11.59	1.55		0.92	-	2.45
085	Vancouver Island North	387	1.55	*	84	54.04	1.55	*	1.24	-	1.92
087	Stikine	22	0.87		5	5.52	0.91		0.29	-	2.11
088	Terrace	593	1.25	*	151	102.17	1.48	*	1.25	-	1.73
092	Nisga'a	70	1.85	*	14	8.63	1.62		0.89	-	2.72
094	Telegraph Creek	18	1.16		5	2.46	2.03		0.65	-	4.74
161	Vancouver - City Centre	3,171	1.04	*	603	641.28	0.94		0.87	-	1.02
162	Vancouver - Downtown E.side	2,568	1.23	*	475	418.84	1.13	*	1.03	-	1.24
163	Vancouver - North East	2,892	0.89	*	571	715.21	0.80	*	0.73	-	0.87
164	Vancouver - Westside	3,704	0.80	*	706	945.24	0.75	*	0.69	-	0.80
165	Vancouver - Midtown	2,369	0.95	*	451	521.80	0.86	*	0.79	-	0.95
166	Vancouver - South	4,109	0.85	*	852	1,038.61	0.82	*	0.77	-	0.88
201	Surrey	8,223	1.00		1,821	1,730.59	1.05	*	1.00	-	1.10
202	South Surrey/White Rock	4,323	0.93	*	858	926.81	0.93	*	0.86	-	0.99
	PROVINCIAL TOTAL	**150,633**	**1.00**		**31,892**	**31,892.00**	**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, 2003-2007



Note: Refer to Figure 1 to clarify geographical location of LHAs.

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 at the age of 6 months 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 PYLL is weighted according to age. Thus a death at a younger age contributes more to total PYLL than a death at an older age.

The tables and figures in this section portray the impact of premature mortality. The *Glossary* further defines PYLL. The precise calculation methods for the various indicators derived from PYLL are referenced in the tables in this section and are shown in the *Methodology* section.

Table 34 shows several PYLL based indicators for deaths of those under 75 years of age contrasted with total deaths and ASMR for all ages for various causes of death. The *No. of Deaths* column shows the number of persons under 75 years of age who have died due to each cause group. The *Percent of PYLL* column shows each disease category's proportion of the total PYLL for all causes. The *Average PYLL* column is the disease category's Total PYLL divided by number of deaths. The PYLLSR column is the rate of PYLL per 1,000 standard population. See *PYLL Standardized Rate* in the *Glossary* and the *Methodology* section for computation details.

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.

Motor vehicle accidents (MVAs), which claim many young lives, have a high value for average PYLL at 35.8 years. Malignant neoplasms, on the other hand, although claiming many lives (4,504 under the age of 75) have a relatively low average PYLL at 12.6 years since malignant neoplasms tend to afflict older individuals more frequently.

Figure 39, by directly and visually contrasting PYLLSR and ASMR for several major causes of death, allows one to compare 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 overall death rate. The clearest contrast is for external causes of death, a relatively moderate ASMR but very high PYLLSR. This clearly shows the contribution of "external causes" to premature mortality.

In Table 35, causes of death in 2008 have been ranked according to the Total PYLL for all genders in four age groups. 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. The *PYLL %* column indicates the percent of all PYLL in the age group due to each cause.

Most of the PYLL under 15 years were due to conditions originating in the perinatal period around birth (see Table 35). The majority of those deaths occurred less than 7 days after birth (see Table 27) and were more frequent among males than females (see Table 21).

MVAs had the highest PYLL in the age group of 15 to 24 year olds. Most of these deaths were to males and therefore the majority of the PYLL in this age group was attributable to males as shown in Table 35.

In the age group of 25 to 44 year olds, among females, malignant neoplasms were responsible for more than the 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 high among males 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 the largest share of PYLL 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 have a higher PYLL 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 index. These causes, in general are considered to be more preventable than 'natural' causes of death and therefore attract attention because of the greater potential for their reduction.

Table 36 shows PYLL due to external causes of death by LHA for the period 2003 through 2007 and for the year 2008. It also displays the observed number of years of lost life in each LHA for both periods and, for 2008, the expected PYLL based on the age distribution in the LHA adjusted to the provincial age and gender specific rate.

During the period, over half (42) of the LHAs had PYLL Indices that indicated significant differences compared to BC as a whole. Of these, 29 were higher than expected. In the more densely populated areas of the lower mainland, only one area (Vancouver Downtown Eastside) was significantly higher.

Vital Statistics Information Box

AGE AT DEATH OF THE OLDEST MALE AND FEMALE

BRITISH COLUMBIA, 1989-2008

Gender	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Male	110	113	105	111	111	109	108	108	106	109	108	109	104	104	107	106	107	105	107	106
Female	110	110	113	107	110	110	108	109	111	113	108	111	113	111	107	108	110	109	110	110

TABLE 34

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

BRITISH COLUMBIA, 2008

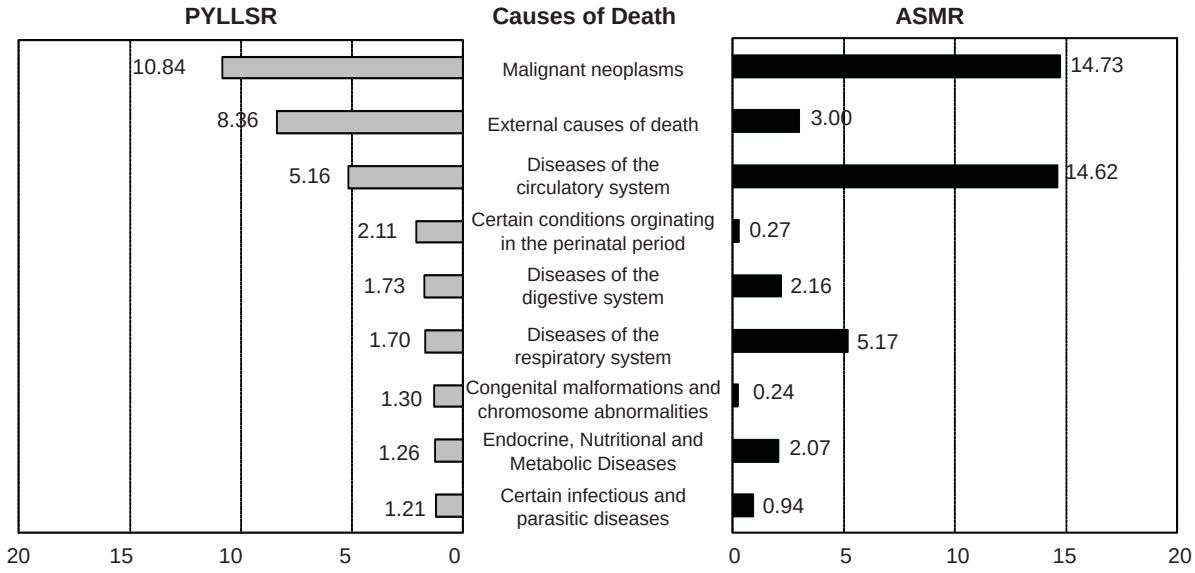
Cause of Death	ICD-10 Code(s)	PYLL (Age Under 75 Years)					Mortality (All Ages)		
		No. of Deaths	Total PYLL	Percent of PYLL	Average PYLL	PYLLSR	No. of Deaths	Percent of Deaths	ASMR
Certain infectious and parasitic diseases	A00-B99	295	5,836.0	3.0	19.8	1.21	580	1.8	0.94
- HIV disease	B20-B24	76	2,035.0	1.0	26.8	0.45	79	0.2	0.15
Malignant neoplasms	C00-C97	4,504	56,937.0	29.3	12.6	10.84	8,843	27.7	14.73
- Malignant neoplasm of trachea and lung	C33-C34	1,270	13,665.0	7.0	10.8	2.44	2,271	7.1	3.85
- Malignant neoplasm of female breast	C500-C509	343	5,692.5	2.9	16.6	2.14	592	1.9	1.83
- Malignant neoplasm of colon and rectum	C18-C21	464	5,720.0	2.9	12.3	1.06	1,027	3.2	1.67
Endocrine nutritional and metabolic diseases	E00-E89	476	6,158.0	3.2	12.9	1.26	1,297	4.1	2.07
- Diabetes mellitus	E10-E14	366	4,132.0	2.1	14.3	0.83	1,021	3.2	1.63
Diseases of the circulatory system	I00-I99	2,329	27,332.0	14.1	11.7	5.16	9,937	31.2	14.62
- Ischemic heart diseases	I20-I25	1,320	15,220.0	7.8	11.5	2.74	4,613	14.5	6.91
- Cerebrovascular diseases	I60-I69	419	4,457.0	2.3	10.6	0.88	2,409	7.6	3.47
Diseases of the respiratory system	J00-J98	775	8,511.0	4.4	11.0	1.70	3,468	10.9	5.17
- Pneumonia/Influenza (excluding hypostatic)	J09-J181, J188, J189	216	3,205.0	1.7	14.8	0.65	1,285	4.0	1.83
- Chronic Pulmonary Disease	J40-J44	364	2,957.0	1.5	8.1	0.56	1,489	4.7	2.28
Diseases of the digestive system	K00-K93	595	9,031.5	4.7	15.2	1.73	1,364	4.3	2.16
- Chronic liver disease/cirrhosis	K70, K73-74, K760-K761	331	5,662.5	2.9	17.1	1.06	392	1.2	0.68
Congenital malformations and chromosome abnormalities	Q00-Q99	76	4,048.5	2.1	53.3	1.30	93	0.3	0.24
Certain conditions originating in the perinatal period	P00-P96	83	6,137.5	3.2	74.0	2.11	83	0.3	0.27
External causes of death	V01-Y98	1,128	33,959.0	17.5	30.1	8.36	1,546	4.8	3.00
- Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	196	7,009.0	3.6	35.8	1.82	225	0.7	0.49
- Suicide	X60-X84, Y870	379	11,222.5	5.8	29.6	2.76	421	1.3	0.88
Other causes[1]		1,572	36,052.0	18.6	22.9	8.79	4,681	14.7	7.41
All causes		**11,833**	**194,002.5**	**100.0**	**16.4**	**42.47**	**31,892**	**100.0**	**50.59**

Note: PYLL – denotes the total number of years of life lost from an established life expectancy (75 years).
PYLLSR – per 1,000 standard population (Canada 1991 Census).
ASMR – per 10,000 standard population (Canada 1991 Census).
[1]Other 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 BC 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, 2008



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, 2008

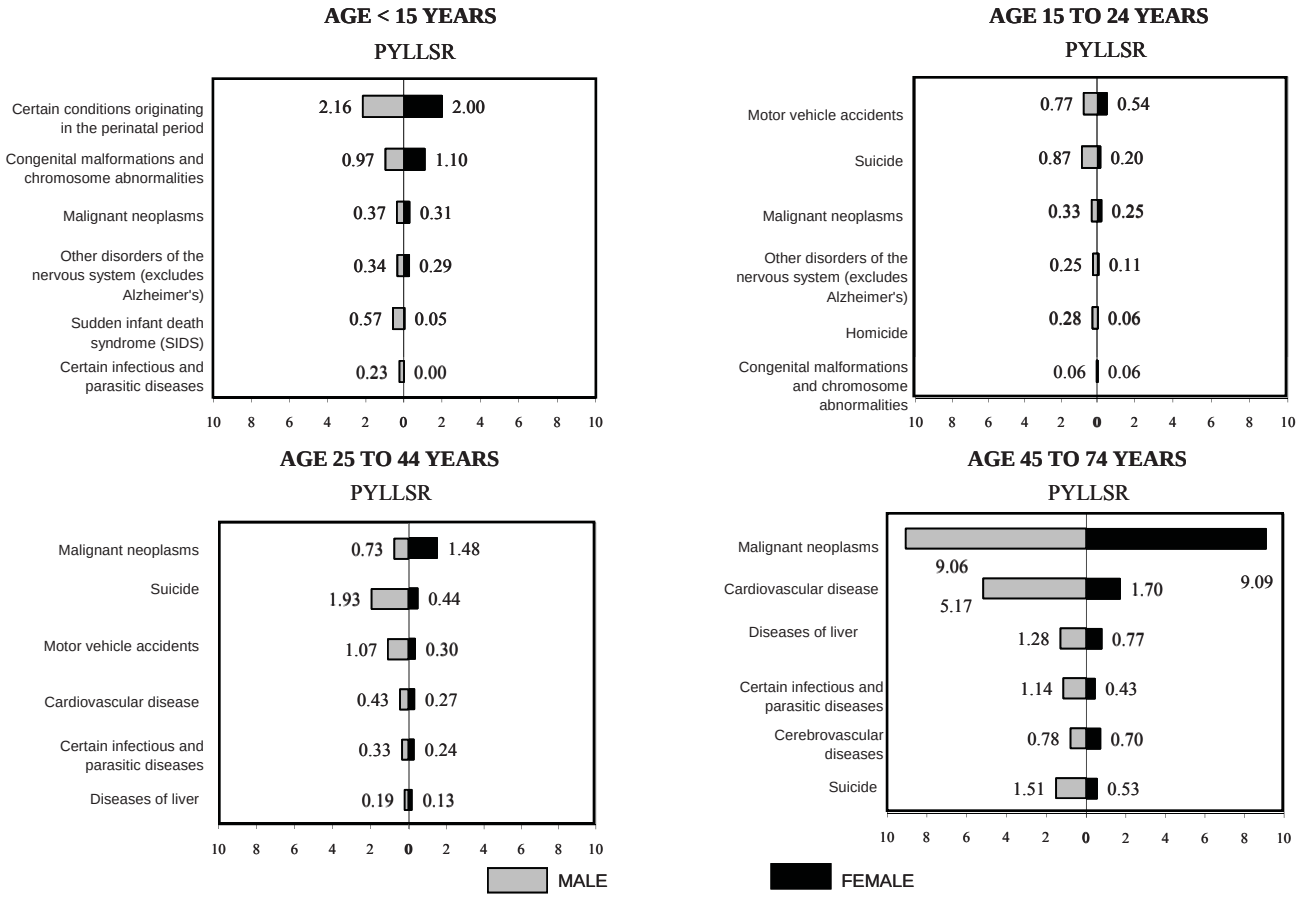
		Male				Female				Total			
Cause of Death	ICD-10 Code(s)	Deaths	PYLL	PYLL %	PYLLSR	Deaths	PYLL	PYLL %	PYLLSR	Deaths	PYLL	PYLL %	PYLLSR
Under 15 Years Old													
Certain conditions originating in the perinatal period	P00-P96	42	3,129.0	29.8	2.16	39	2,898.5	39.3	2.00	81	6,027.5	33.7	2.08
Congenital malformations and chromosome abnormalities	Q00-Q99	19	1,410.5	13.4	0.97	22	1,610.5	21.8	1.10	41	3,021.0	16.9	1.04
Malignant neoplasms	C00-C97	9	598.5	5.7	0.37	7	478.5	6.5	0.31	16	1,077.0	6.0	0.34
Other disorders of the nervous system (exl. Alzheimer's)	G00-G25, G31-G99	7	500.0	4.8	0.34	6	430.0	5.8	0.29	13	930.0	5.2	0.31
Sudden infant death syndrome (SIDS)	R95	11	819.5	7.8	0.57	1	74.5	1.0	0.05	12	894.0	5.0	0.31
Certain infectious and parasitic diseases	A00-B99	5	351.0	3.3	0.23	0	0.0	0.0	0.00	5	351.0	2.0	0.12
Other causes[1]		53	3,700.0	35.2	2.41	27	1,889.5	25.6	1.24	80	5,589.5	31.2	1.83
All causes		**146**	**10,508.5**	**100.0**	**7.05**	**102**	**7,381.5**	**100.0**	**4.99**	**248**	**17,890.0**	**100.0**	**6.02**
15-24 Years Old													
Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, 820-V821, V823-V890, V892, V899, Y850	28	1,525.0	14.4	0.77	19	1,052.5	19.7	0.54	47	2,577.5	16.2	0.66
Suicide	X60-X84, Y870	32	1,730.0	16.4	0.87	7	382.5	7.1	0.20	39	2,112.5	13.3	0.54
Malignant neoplasms	C00-C97	12	665.0	6.3	0.33	9	482.5	9.0	0.25	21	1,147.5	7.2	0.29
Other disorders of the nervous system (exl. Alzheimer's)	G00-G25, G31-G99	9	487.5	4.6	0.25	4	220.0	4.1	0.11	13	707.5	4.4	0.18
Homicide	X85-Y09, Y871	10	550.0	5.2	0.28	2	105.0	2.0	0.06	12	655.0	4.1	0.17
Congenital malformations and chromosome abnormalities	Q00-Q99	2	110.0	1.0	0.06	2	105.0	2.0	0.06	4	215.0	1.4	0.06
Other causes[1]		101	5,502.5	52.1	2.77	55	3,002.5	56.1	1.56	156	8,505.0	53.4	2.17
All causes		**194**	**10,570.0**	**100.0**	**5.32**	**98**	**5,350.0**	**100.0**	**2.77**	**292**	**15,920.0**	**100.0**	**4.06**
25-44 Years Old													
Malignant neoplasms	C00-C97	63	2,272.5	8.4	0.73	127	4,617.5	31.9	1.48	190	6,890.0	16.5	1.11
Suicide	X60-X84, Y870	119	4,562.5	16.8	1.93	29	1,117.5	7.7	0.44	148	5,680.0	13.6	1.18
Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	55	2,187.5	8.0	1.07	14	575.0	4.0	0.30	69	2,762.5	6.6	0.68
Cardiovascular disease	I00-I51	51	1,782.5	6.6	0.43	21	782.5	5.4	0.27	72	2,565.0	6.2	0.35
Certain infectious and parasitic diseases	A00-B99	29	1,052.5	3.9	0.33	11	442.5	3.1	0.24	40	1,495.0	3.6	0.29
Diseases of liver	K70-K76	19	667.5	2.5	0.19	16	560.0	3.9	0.13	35	1,227.5	2.9	0.16
Other causes[1]		381	14,682.5	54.0	6.36	167	6,392.5	44.1	2.67	548	21,075.0	50.5	4.50
All causes		**717**	**27,207.5**	**100.0**	**11.04**	**385**	**14,487.5**	**100.0**	**5.53**	**1,102**	**41,695.0**	**100.0**	**8.26**
45-74 Years Old													
Malignant neoplasms	C00-C97	2,307	24,942.5	34.4	9.06	1,970	22,880.0	49.7	9.09	4,277	47,822.5	40.4	9.10
Cardiovascular disease	I00-I51	1,288	13,675.0	18.9	5.17	446	4,265.0	9.3	1.70	1,674	17,940.0	15.1	3.46
Diseases of liver	K70-K76	222	3,305.0	4.6	1.28	118	1,780.0	3.9	0.77	340	5,085.0	4.3	1.02
Certain infectious and parasitic diseases	A00-B99	161	2,697.5	3.7	1.14	87	1,177.5	2.6	0.43	248	3,875.0	3.3	0.78
Cerebrovascular diseases	I60-I69	216	1,905.0	2.6	0.78	180	1,690.0	3.7	0.70	396	3,595.0	3.0	0.74
Suicide	X60-X84, Y870	134	2,355.0	3.3	1.51	57	1,012.5	2.2	0.53	191	3,367.5	2.8	1.02
Other causes[1]		1,901	23,557.5	32.5	10.21	1,164	13,255.0	28.8	5.66	3,065	36,812.5	31.1	7.95
All causes		**6,169**	**72,437.5**	**100.0**	**29.29**	**4,022**	**46,060.0**	**100.0**	**18.83**	**10,191**	**118,497.5**	**100.0**	**24.12**

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). [1]Other 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, 2008



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

Table 36

POTENTIAL YEARS OF LIFE LOST BY LOCAL HEALTH AREA
EXTERNAL CAUSES OF DEATH (AGE UNDER 75 YEARS), BRITISH COLUMBIA, 2003–2007 AND 2008

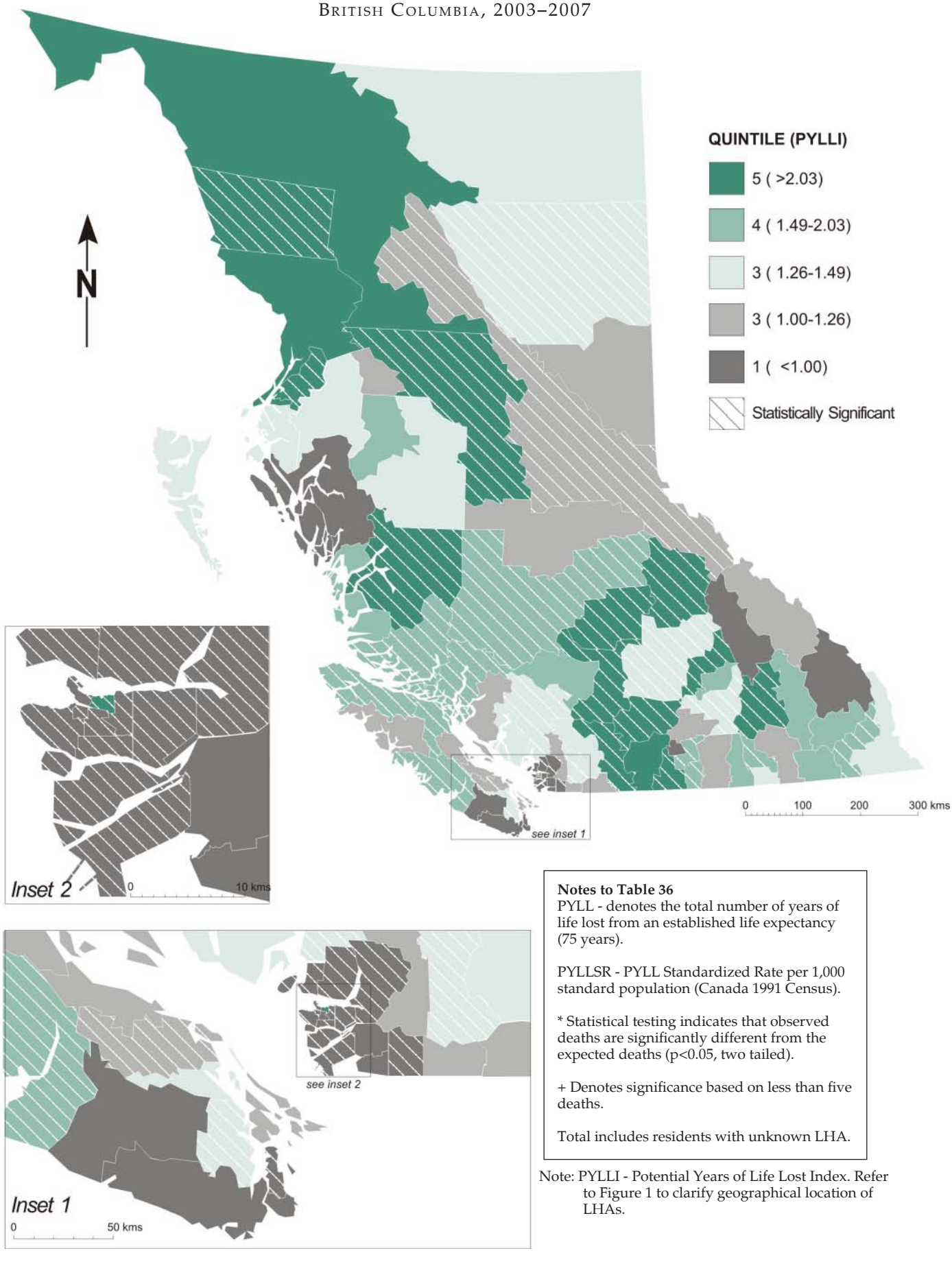
Local Health Area		2003–2007 Observed Deaths	2003–2007 Observed PYLL	2003–2007 PYLL Index (p)		2008 Observed Deaths	2008 Observed PYLL	2008 Expected PYLL	2008 PYLL Index (p)		2008 95% Confidence Limit Lower		Upper
001	Fernie	34	1,150.0	1.37		13	522.5	117.45	4.45	*	1.93	-	6.97
002	Cranbrook	63	2,024.5	1.57	*	11	302.5	184.79	1.64		0.45	-	2.83
003	Kimberley	18	610.0	1.54		5	122.5	58.49	2.10		0.00	-	4.42
004	Windermere	19	457.5	0.93		5	162.5	81.41	2.00		0.17	-	3.83
005	Creston	27	782.5	1.53		9	272.5	75.98	3.59		0.66	-	6.52
006	Kootenay Lake	15	357.5	2.02		1	32.5	24.39	1.35		0.00	-	3.96
007	Nelson	52	1,410.0	1.08		7	227.5	187.84	1.21		0.27	-	2.16
009	Castlegar	30	1,122.0	1.66	*	2	75.0	98.03	0.77		0.00	-	1.83
010	Arrow Lakes	18	590.0	2.70	*	1	62.5	30.68	2.05		0.00	-	6.05
011	Trail	44	1,409.0	1.48		8	215.0	136.96	1.57		0.09	-	3.05
012	Grand Forks	25	657.5	1.63		7	227.5	57.77	3.95		0.89	-	7.00
013	Kettle Valley	9	177.5	1.06		1	37.5	23.54	1.61		0.00	-	4.74
014	Southern Okanagan	39	1,282.5	1.66	*	9	237.5	116.53	2.04		0.44	-	3.64
015	Penticton	94	2,949.5	1.58	*	9	237.5	273.39	0.87		0.18	-	1.56
016	Keremeos	24	745.0	3.73	*	1	27.5	34.61	0.81		0.00	-	2.37
017	Princeton	13	442.5	2.04		1	27.5	29.76	0.94		0.00	-	2.75
018	Golden	13	502.5	1.18		3	97.5	62.67	1.56		0.00	-	3.53
019	Revelstoke	12	360.0	0.80		1	32.5	62.38	0.53		0.00	-	1.55
020	Salmon Arm	95	3,277.5	2.14	*	9	267.5	234.52	1.14		0.32	-	1.97
021	Armstrong - Spallumcheen	23	757.5	1.60		4	70.0	65.40	1.07		0.00	-	2.30
022	Vernon	137	4,387.0	1.42	*	16	465.0	461.58	1.01		0.44	-	1.57
023	Central Okanagan	302	9,543.5	1.10		33	967.5	1,344.93	0.72	*	0.45	-	0.99
024	Kamloops	236	7,186.5	1.26	*	44	1,245.0	820.90	1.52	*	1.01	-	2.03
025	100 Mile House	54	1,550.0	2.16	*	4	160.0	100.99	1.58		0.00	-	3.22
026	North Thompson	16	705.0	3.09	*	5	162.5	30.25	5.39		0.11	-	10.66
027	Cariboo - Chilcotin	87	2,892.5	1.95	*	18	555.0	204.91	2.71	*	1.30	-	4.12
028	Quesnel	51	1,397.5	1.11		10	325.0	173.00	1.88		0.57	-	3.19
029	Lillooet	18	435.0	1.87		4	105.0	32.13	3.27		0.00	-	6.84
030	South Cariboo	28	780.0	2.25	*	4	95.0	49.12	1.93		0.00	-	4.15
031	Merritt	40	1,240.0	2.10	*	7	127.5	83.75	1.53		0.22	-	2.84
032	Hope	34	1,000.0	2.58	*	4	100.0	54.35	1.84		0.00	-	3.82
033	Chilliwack	129	4,147.5	1.02		27	942.5	607.21	1.55		0.92	-	2.18
034	Abbotsford	228	8,081.0	1.11		26	940.0	1,045.31	0.90		0.53	-	1.27
035	Langley	168	5,210.0	0.78	*	28	965.0	990.79	0.97		0.57	-	1.37
037	Delta	111	3,623.5	0.66	*	16	570.0	767.64	0.74		0.33	-	1.15
038	Richmond	134	4,176.5	0.40	*	29	962.5	1,478.40	0.65	*	0.38	-	0.92
040	New Westminster	115	3,377.5	0.95		23	742.5	524.75	1.42		0.79	-	2.04
041	Burnaby	239	7,607.5	0.61	*	39	1,102.5	1,775.73	0.62	*	0.40	-	0.85
042	Maple Ridge	149	5,251.5	1.07		23	627.5	729.07	0.86		0.46	-	1.26
043	Coquitlam	256	8,337.0	0.68	*	31	837.5	1,733.07	0.48	*	0.28	-	0.68
044	North Vancouver	140	4,856.5	0.65	*	20	570.0	1,056.96	0.54	*	0.27	-	0.81
045	West Vancouver-Bowen Is.	45	1,287.0	0.54	*	10	240.0	340.23	0.71		0.21	-	1.20
046	Sunshine Coast	53	1,687.0	1.32		6	140.0	194.60	0.72		0.10	-	1.34
047	Powell River	40	1,140.0	1.22		8	210.0	133.29	1.58		0.28	-	2.87
048	Howe Sound	77	2,862.5	1.35	*	11	402.5	299.25	1.35		0.50	-	2.19
049	Bella Coola Valley	21	752.5	4.47	*	1	52.5	20.04	2.65		0.00	-	7.78
050	Queen Charlotte	13	387.5	1.43		4	105.0	37.55	2.80		0.00	-	6.05
051	Snow Country	3	157.5	4.54		-	-	3.80	-		-	-	-
052	Prince Rupert	34	1,120.0	1.35		3	62.5	108.67	0.58		0.00	-	1.29
053	Upper Skeena	13	387.5	1.26		2	75.0	41.60	1.80		0.00	-	4.39
054	Smithers	40	1,372.0	1.49		7	217.5	122.33	1.78		0.30	-	3.26
055	Burns Lake	21	632.5	1.48		6	230.0	59.61	3.86		0.33	-	7.39
056	Nechako	50	1,870.0	2.15	*	10	260.0	113.18	2.30		0.71	-	3.89
057	Prince George	217	6,977.0	1.23	*	27	732.5	775.75	0.94		0.56	-	1.33
059	Peace River South	51	1,837.5	1.25		8	240.0	214.48	1.12		0.30	-	1.94
060	Peace River North	80	2,934.0	1.47	*	18	749.5	278.41	2.69	*	1.36	-	4.03
061	Greater Victoria	352	10,909.0	0.90		57	1,722.5	1,705.64	1.01		0.72	-	1.30
062	Sooke	88	2,835.0	0.84		17	517.5	521.16	0.99		0.45	-	1.54
063	Saanich	75	2,317.5	0.80	*	16	525.0	416.07	1.26		0.59	-	1.93
064	Gulf Islands	26	745.0	1.18		5	112.5	95.65	1.18		0.03	-	2.33
065	Cowichan	110	3,774.0	1.36	*	20	600.0	405.95	1.48		0.76	-	2.20
066	Lake Cowichan	8	300.0	0.96		1	12.5	45.59	0.29	+	0.00	-	0.82
067	Ladysmith	31	1,137.5	1.39		7	167.5	123.03	1.37		0.07	-	2.66
068	Nanaimo	196	6,426.5	1.26	*	15	447.0	745.76	0.60	*	0.25	-	0.95
069	Qualicum	70	2,155.0	1.21		7	227.5	269.85	0.84		0.15	-	1.54
070	Alberni	97	3,192.0	1.95	*	5	142.5	228.48	0.63		0.00	-	1.30
071	Courtenay	103	3,154.5	1.06		22	590.0	443.77	1.33		0.69	-	1.97
072	Campbell River	112	3,350.0	1.55	*	24	695.0	308.76	2.25	*	1.21	-	3.30
075	Mission	92	3,070.0	1.34	*	12	435.0	334.97	1.30		0.49	-	2.11
076	Agassiz - Harrison	19	652.5	1.46		1	32.5	61.83	0.53		0.00	-	1.56
077	Summerland	10	335.0	0.67		7	262.5	73.76	3.57		0.77	-	6.36
078	Enderby	19	602.5	1.65		5	162.5	55.00	2.96		0.23	-	5.70
080	Kitimat	22	555.0	0.90		2	45.0	81.48	0.55		0.00	-	1.39
081	Fort Nelson	16	619.5	1.48		4	175.0	57.38	3.05		0.00	-	6.22
083	Central Coast	4	165.0	1.75		-	-	12.17	-		-	-	-
084	Vancouver Island West	4	150.0	1.18		4	90.0	18.25	4.93		0.00	-	11.62
085	Vancouver Island North	39	1,419.5	1.96	*	12	340.0	93.59	3.63	*	1.38	-	5.89
087	Stikine	4	135.0	2.37		2	75.0	7.41	10.13		0.00	-	26.99
088	Terrace	45	1,596.5	1.42		10	370.0	155.15	2.38		0.82	-	3.95
092	Nisga'a	12	485.0	4.26	*	4	140.0	14.04	9.97		0.00	-	21.51
094	Telegraph Creek	7	307.5	7.59	*	1	27.5	5.09	5.50		0.00	-	16.10
161	Vancouver - City Centre	192	5,685.0	0.73	*	30	895.0	1,135.13	0.79		0.47	-	1.11
162	Vancouver - Downtown E.side	276	8,115.0	2.21	*	41	1,157.5	564.34	2.05	*	1.37	-	2.74
163	Vancouver - North East	123	4,012.5	0.68	*	12	310.0	836.59	0.37	*	0.13	-	0.61
164	Vancouver - Westside	118	3,415.0	0.45	*	14	270.0	1,072.56	0.25	*	0.09	-	0.41
165	Vancouver - Midtown	109	3,352.0	0.64	*	13	417.5	705.24	0.59	*	0.25	-	0.93
166	Vancouver - South	122	3,960.0	0.52	*	20	630.0	1,040.99	0.61	*	0.31	-	0.90
201	Surrey	582	19,793.0	0.97		88	2,530.0	3,003.94	0.84		0.65	-	1.04
202	South Surrey/White Rock	96	3,444.5	0.93		7	172.5	556.18	0.31	*	0.03	-	0.59
	PROVINCIAL TOTAL	**7,319**	**235,883.5**	**1.00**		**1,128**	**33,959.0**	**33,959.00**	**1.00**		**0.93**	**-**	**1.07**

Notes for this table follow the map.

FIGURE 41

EXTERNAL CAUSES OF DEATH BY LOCAL HEALTH AREA

BRITISH COLUMBIA, 2003–2007



Notes to Table 36

PYLL - 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).

* 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.

Total includes residents with unknown LHA.

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

Medically Treatable Diseases

A list of causes has been identified where death could potentially have been avoided through appropriate and timely medical intervention and treatment. It should be noted that the causes are considered to have been amenable to medical treatment only if the death occurred to persons within specific age ranges. Please see the footnote on Table 37 for a list of the causes and ages included in this category.

There were only 159 deaths due to these causes in 2008, which represents 0.5 percent of all deaths in the province.

Table 37 indicates the number and percent of all medically treatable disease (MTD) deaths by cause for 2008 and the five-year period 2003-2007. Bacterial infections accounted for most of the deaths due to MTDs in 2008 and the previous five years. In 2008, two cause categories, *Hypertension and Hypertensive Diseases*, and *Pneumonia and Unqualified Bronchitis*, accounted for almost 5 in 11 male deaths due to MTDs (44.6 percent) and for females, about 1 in 3 (32.9 percent).

Table 38 shows the count of deaths due to MTDs organized by the LHA in which the decedent lived. For the current year (2008) the table shows the actual number of deaths observed in the LHA and the expected deaths (calculated using the 2008 age-specific death rates for MTD).

There were eleven LHAs that had no deaths due to these conditions in 2003-2007 and forty one in 2008 as shown in Table 38. Further, there were only six LHAs in 2003-2007 that showed differences between observed and expected deaths that were statistically significant based on five or more deaths and only two LHAs with five or more deaths had statistically significant and high ratios in 2008.

Figure 42 shows the province divided up into its eighty-nine LHAs, with each area indicated as to whether its SMR for deaths due to MTDs was high or low on a five category scale: deep green indicates the highest SMRs and dark grey indicates the lowest. As might be expected from a table containing such low counts, 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, 2003–2007 AND 2008

Cause of Death	ICD-10 Code(s)	2003–2007		2008					
				Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Bacterial Infections*	A00-A05, ..., M871	266	32.1	35	42.2	24	31.6	59	37.1
Pneumonia and unqualified bronchitis	J12-J181, J188, J189, J40	156	18.8	25	30.1	17	22.4	42	26.4
Hypertension and hypertensive diseases	I10-I15	152	18.4	12	14.5	8	10.5	20	12.6
Malignant neoplasm of cervix	C53	150	18.1	-	-	20	26.3	20	12.6
Abdominal hernias, cholecystitis and cholelithiasis, appendicitis	K35-K37, K40-K46, K80, K81	34	4.1	5	6.0	1	1.3	6	3.8
Asthma	J45-J46	29	3.5	4	4.8	2	2.6	6	3.8
Tuberculosis	A15-A19, B90	17	2.1	2	2.4	2	2.6	4	2.5
Hodgkin's disease	C81	10	1.2	-	-	-	-	-	-
Chronic rheumatic heart disease	I05-I09	9	1.1	-	-	1	1.3	1	0.6
Acute respiratory infections and influenza	J00-J06, J09-J11, J20-22	5	0.6	-	-	1	1.3	1	0.6
Nutritional anemias	D50-D53	-	-	-	-	-	-	-	-
TOTAL		**828**	**100.0**	**83**	**100.0**	**76**	**100.0**	**159**	**100.0**

Note: Medically Treatable Diseases (MTDs) 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 MTDs exclude all deaths less than age 5 years old.
Deaths due to MTDs 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 BC 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 38

STANDARDIZED MORTALITY RATIO BY LOCAL HEALTH AREA DEATHS DUE TO MEDICALLY TREATABLE DISEASES, BRITISH COLUMBIA, 2003–2007 AND 2008

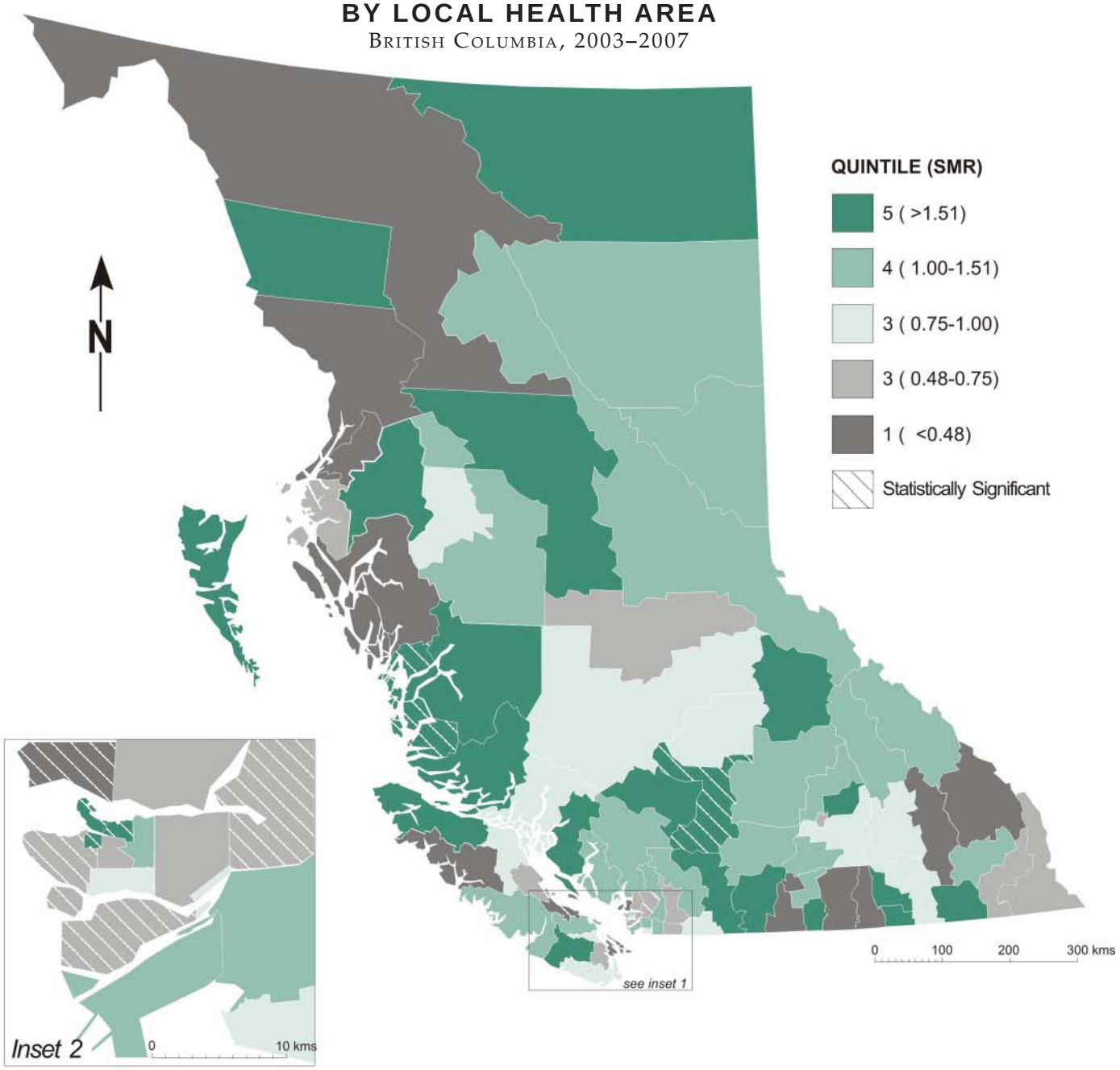
Local Health Area		2003–2007 Observed Deaths	2003–2007 SMR (p)	2008 Observed Deaths	2008 Expected Deaths	2008 SMR (p)	95% Confidence Interval Lower		Upper
001	Fernie	2	0.65	-	0.58	-	-	-	-
002	Cranbrook	3	0.60	-	0.95	-	-	-	-
003	Kimberley	2	1.14	1	0.33	3.01	0.04	-	16.73
004	Windermere	-	-	-	0.42	-	-	-	-
005	Creston	4	1.68	2	0.46	4.35	0.49	-	15.69
006	Kootenay Lake	-	-	-	0.15	-	-	-	-
007	Nelson	4	0.80	1	0.96	1.04	0.01	-	5.79
009	Castlegar	6	2.27	-	0.50	-	-	-	-
010	Arrow Lakes	1	0.93	-	0.20	-	-	-	-
011	Trail	6	1.53	-	0.75	-	-	-	-
012	Grand Forks	-	-	-	0.34	-	-	-	-
013	Kettle Valley	-	-	-	0.15	-	-	-	-
014	Southern Okanagan	6	1.60	-	0.71	-	-	-	-
015	Penticton	10	1.33	1	1.44	0.70	0.01	-	3.87
016	Keremeos	-	-	-	0.23	-	-	-	-
017	Princeton	2	1.76	-	0.19	-	-	-	-
018	Golden	2	1.41	-	0.29	-	-	-	-
019	Revelstoke	2	1.23	-	0.30	-	-	-	-
020	Salmon Arm	10	1.49	2	1.33	1.50	0.17	-	5.43
021	Armstrong - Spallumcheen	1	0.52	-	0.34	-	-	-	-
022	Vernon	10	0.82	6	2.36	2.54	0.93	-	5.53
023	Central Okanagan	33	1.04	5	6.38	0.78	0.25	-	1.83
024	Kamloops	27	1.27	8	4.09	1.95	0.84	-	3.85
025	100 Mile House	3	0.90	1	0.60	1.65	0.02	-	9.21
026	North Thompson	2	2.12	1	0.17	5.78	0.08	-	32.17
027	Cariboo - Chilcotin	5	0.93	-	1.00	-	-	-	-
028	Quesnel	3	0.63	3	0.88	3.41	0.69	-	9.96
029	Lillooet	3	3.41	-	0.16	-	-	-	-
030	South Cariboo	5	3.20 *	1	0.28	3.64	0.05	-	20.22
031	Merritt	3	1.31	1	0.43	2.35	0.03	-	13.05
032	Hope	5	3.00	-	0.30	-	-	-	-
033	Chilliwack	13	0.93	6	2.74	2.19	0.80	-	4.77
034	Abbotsford	14	0.62	3	4.34	0.69	0.14	-	2.02
035	Langley	24	1.04	4	4.53	0.88	0.24	-	2.26
037	Delta	23	1.12	4	3.75	1.07	0.29	-	2.73
038	Richmond	21	0.57 *	3	7.00	0.43	0.09	-	1.25
040	New Westminster	12	0.99	4	2.40	1.67	0.45	-	4.27
041	Burnaby	29	0.72	4	7.61	0.53	0.14	-	1.35
042	Maple Ridge	19	1.14	-	3.32	-	-	-	-
043	Coquitlam	27	0.66 *	5	7.81	0.64	0.21	-	1.49
044	North Vancouver	18	0.67	3	5.10	0.59	0.12	-	1.72
045	West Vancouver-Bowen Is.	4	0.38 +	2	1.90	1.05	0.12	-	3.80
046	Sunshine Coast	7	1.16	1	1.20	0.83	0.01	-	4.63
047	Powell River	7	1.67	1	0.79	1.26	0.02	-	7.03
048	Howe Sound	8	1.33	-	1.19	-	-	-	-
049	Bella Coola Valley	1	1.67	-	0.10	-	-	-	-
050	Queen Charlotte	2	1.96	-	0.19	-	-	-	-
051	Snow Country	-	-	-	0.02	-	-	-	-
052	Prince Rupert	2	0.68	-	0.53	-	-	-	-
053	Upper Skeena	1	0.99	-	0.19	-	-	-	-
054	Smithers	3	0.95	-	0.58	-	-	-	-
055	Burns Lake	2	1.35	-	0.28	-	-	-	-
056	Nechako	6	2.06	1	0.52	1.93	0.03	-	10.76
057	Prince George	25	1.31	9	3.52	2.56 *	1.17	-	4.86
059	Peace River South	7	1.40	3	0.96	3.13	0.63	-	9.16
060	Peace River North	7	1.26	-	1.06	-	-	-	-
061	Greater Victoria	32	0.77	12	7.85	1.53	0.79	-	2.67
062	Sooke	10	0.82	2	2.52	0.79	0.09	-	2.87
063	Saanich	11	0.84	-	2.40	-	-	-	-
064	Gulf Islands	-	-	-	0.65	-	-	-	-
065	Cowichan	7	0.65	-	2.05	-	-	-	-
066	Lake Cowichan	4	3.10	-	0.24	-	-	-	-
067	Ladysmith	3	0.82	1	0.73	1.38	0.02	-	7.65
068	Nanaimo	23	1.18	2	3.71	0.54	0.06	-	1.94
069	Qualicum	3	0.33 +	2	1.83	1.09	0.12	-	3.95
070	Alberni	8	1.26	-	1.16	-	-	-	-
071	Courtenay	8	0.64	3	2.45	1.22	0.25	-	3.57
072	Campbell River	8	0.94	-	1.62	-	-	-	-
075	Mission	5	0.66	1	1.47	0.68	0.01	-	3.80
076	Agassiz - Harrison	2	1.18	2	0.32	6.24	0.70	-	22.52
077	Summerland	-	-	-	0.42	-	-	-	-
078	Enderby	4	2.68	-	0.29	-	-	-	-
080	Kitimat	1	0.44	1	0.40	2.50	0.03	-	13.92
081	Fort Nelson	2	1.77	1	0.22	4.54	0.06	-	25.27
083	Central Coast	3	10.75 +	-	0.05	-	-	-	-
084	Vancouver Island West	-	-	1	0.10	10.39	0.14	-	57.84
085	Vancouver Island North	5	1.85	-	0.47	-	-	-	-
087	Stikine	-	-	-	0.04	-	-	-	-
088	Terrace	7	1.77	2	0.73	2.73	0.31	-	9.85
092	Nisga'a	-	-	-	0.07	-	-	-	-
094	Telegraph Creek	1	8.81	-	0.02	-	-	-	-
161	Vancouver - City Centre	37	1.70 *	4	4.22	0.95	0.25	-	2.43
162	Vancouver - Downtown E.side	50	4.35 *	10	2.40	4.16 *	1.99	-	7.65
163	Vancouver - North East	19	1.04	1	3.52	0.28	0.00	-	1.58
164	Vancouver - Westside	15	0.60 *	4	4.61	0.87	0.23	-	2.22
165	Vancouver - Midtown	10	0.63	1	3.04	0.33	0.00	-	1.83
166	Vancouver - South	21	0.85	4	4.63	0.86	0.23	-	2.21
201	Surrey	69	1.08	16	12.75	1.25	0.72	-	2.04
202	South Surrey/White Rock	13	0.82	2	3.10	0.64	0.07	-	2.33
	PROVINCIAL TOTAL	**828**	**1.00**	**159**	**159.00**	**1.00**	**0.85**	**-**	**1.17**

Notes for this table follow the map.

FIGURE 42

DEATHS DUE TO MEDICALLY TREATABLE DISEASES BY LOCAL HEALTH AREA

BRITISH COLUMBIA, 2003–2007



Notes to Table 38
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.

Note: Refer to Figure 1 to clarify geographical location of LHAs.

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 in this publication 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 2008 and in the five preceding years, while figure 43 graphically shows the pattern of alcohol-related deaths by cause. About one quarter (23.0 percent) of the 1,947 deaths related to alcohol in 2008 were directly attributable to alcohol (448 deaths). Alcohol was a contributing factor in the remaining 77.0 percent of these deaths. The table indicates that most of the deaths directly attributable to alcohol were caused by liver disease (14.7 percent).

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, are included in this table.

Alcohol-related deaths constitute 6.1 percent of all deaths in 2008 and 8.8 percent of all male deaths. Males died of such causes nearly three times more frequently as women in 2008.

Nearly half (42.6 percent) of all alcohol deaths were of seniors (65 or older); 44.9 percent were people between the ages of 45 and 64.

The numbers of deaths directly and indirectly related to alcohol are shown for the LHAs in Table 41.

There were twenty-one LHAs with at least five deaths where the observed values were statistically significant and above the expected values in both 2003-2007 and 2008 as shown in Table 41. There were ten 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 2003-2007.

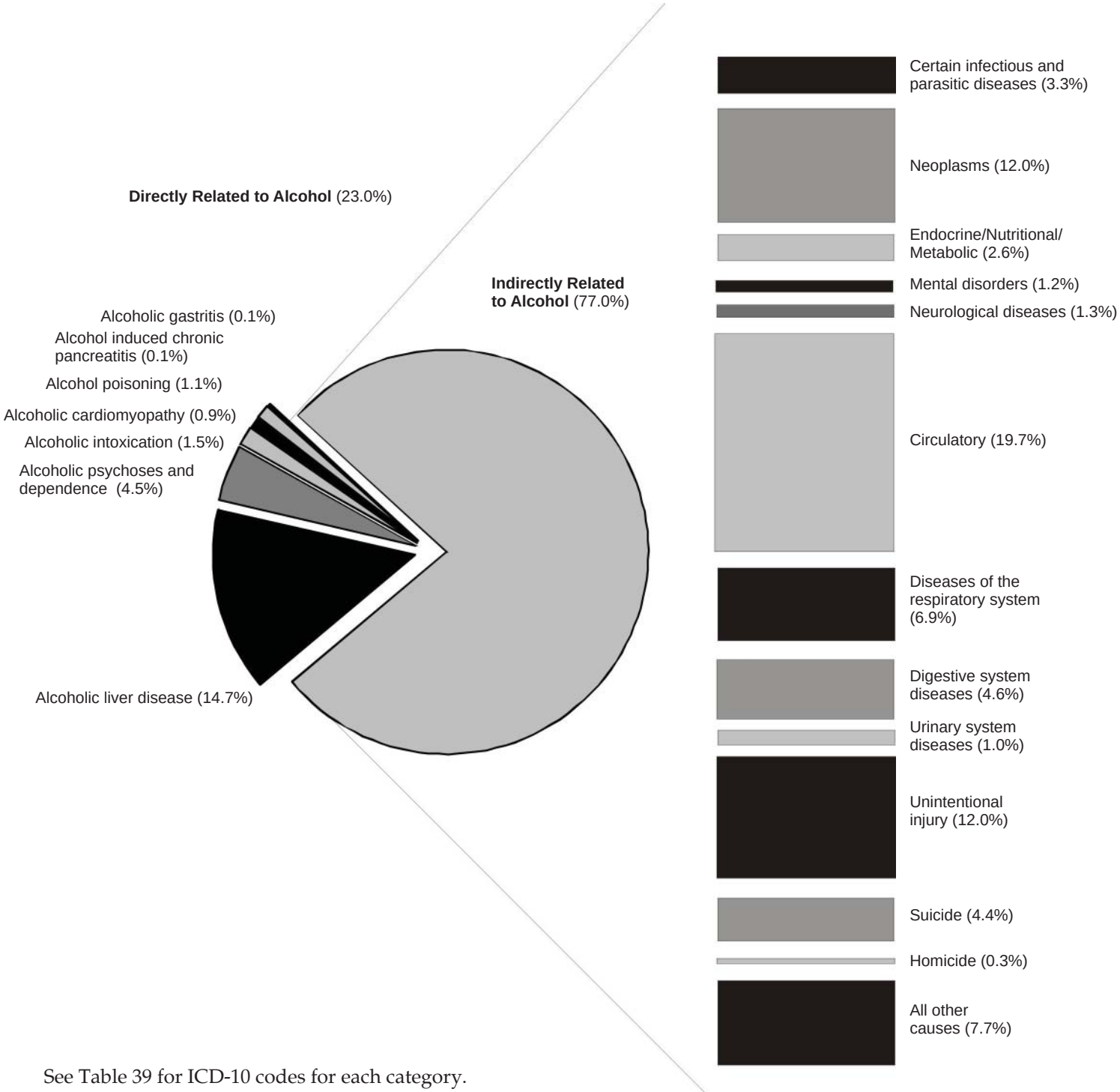
Reports of alcohol-related deaths in 2008 are lower than in previous years. Many alcohol related deaths are referred to the BC Coroner Service for investigation. As with external causes of death, the medical coding will be incomplete until the coroner closes the investigation. For this reason the counts are often lower in the current year and are adjusted upwards in later annual reports.

TABLE 39
ALCOHOL-RELATED DEATHS BY CAUSE
BRITISH COLUMBIA, 2003–2007 AND 2008

Cause of Death	ICD-10 Code(s)	Year of Death: 2003–2007 Number	2003–2007 Percent	2008 Number	2008 Percent
Directly Related to Alcohol					
Alcohol intoxication	F100	194	1.9	30	1.5
Alcoholic psychoses and dependence	F101-F109	514	5.1	87	4.5
Alcoholic neurological disorders	G312, G621, G721	-	-	-	-
Alcoholic cardiomyopathy	I426	82	0.8	18	0.9
Alcoholic gastritis	K292	9	0.1	4	0.2
Alcoholic liver disease	K70	1,025	10.2	286	14.7
Alcohol induced chronic pancreatitis	K860	12	0.1	1	0.1
Alcohol poisoning	X45, X65	88	0.9	22	1.1
Other alcohol causes	E244, O354, O993, P043, Q860, R780 T510-T512, T519	-	-	-	-
SUBTOTAL		**1,924**	**19.2**	**448**	**23.0**
Indirectly Related to Alcohol[1]					
Certain infectious and parasitic diseases	A00-B99	311	3.1	64	3.3
Neoplasms	C00-D48	1,193	11.9	233	12.0
Endocrine/Nutritional/Metabolic	E00-E243, E248-E89	284	2.8	51	2.6
Mental disorders	F00-F09, F11-F99	130	1.3	23	1.2
Neurological diseases	G00-G311, G318-G620, G622-G720, G722-G99	120	1.2	26	1.3
Circulatory	I00-I425, I427-I99	2,120	21.2	384	19.7
Diseases of the respiratory system	J00-J98	676	6.7	135	6.9
Digestive system diseases	K00-K291, K293-K69, K71-K85, K861-K92	618	6.2	89	4.6
Urinary system diseases	N00-N39, N990, N991, N995	100	1.0	20	1.0
Unintentional injury	V01-X44, X46-X59, Y40-Y86, Y88	1,544	15.4	234	12.0
Suicide	X60-X64, X66-X84, Y87	527	5.3	85	4.4
Homicide	X85-Y09, Y871	53	0.5	5	0.3
All other causes		419	4.2	150	7.7
SUBTOTAL		**8,095**	**80.8**	**1,499**	**77.0**
TOTAL		**10,019**	**100.0**	**1,947**	**100.0**

Note: [1]ICD-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 BC 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.
In 2008, the BC Coroners Service and BC Vital Statistics Agency engaged in a retrospective review of death registrations of alcohol-related fatalities. As a result of the project, a number of registrations were ammended and are reflected in this report.

FIGURE 43
ALCOHOL-RELATED DEATHS BY CAUSE
BRITISH COLUMBIA, 2008



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

TABLE 40

ALCOHOL-RELATED DEATHS BY AGE AND GENDER

BRITISH COLUMBIA, 2008

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
<15	-	-	2	0.4	2	0.1
15-19	7	0.5	4	0.8	11	0.6
20-24	21	1.5	4	0.8	25	1.3
25-44	147	10.2	57	11.3	204	10.5
45-64	651	45.1	224	44.4	875	44.9
65-84	548	38.0	173	34.3	721	37.0
85+	68	4.7	41	8.1	109	5.6
TOTAL	**1,442**	**100.0**	**505**	**100.0**	**1,947**	**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.
In 2008, the BC Coroners Service and BC Vital Statistics Agency engaged in a retrospective review of death registrations of alcohol-related fatalities. As a result of the project, a number of registrations were ammended and are reflected in this report.

Table 41

STANDARDIZED MORTALITY RATIO BY LOCAL HEALTH AREA ALCOHOL-RELATED DEATHS, BRITISH COLUMBIA, 2003–2007 AND 2008

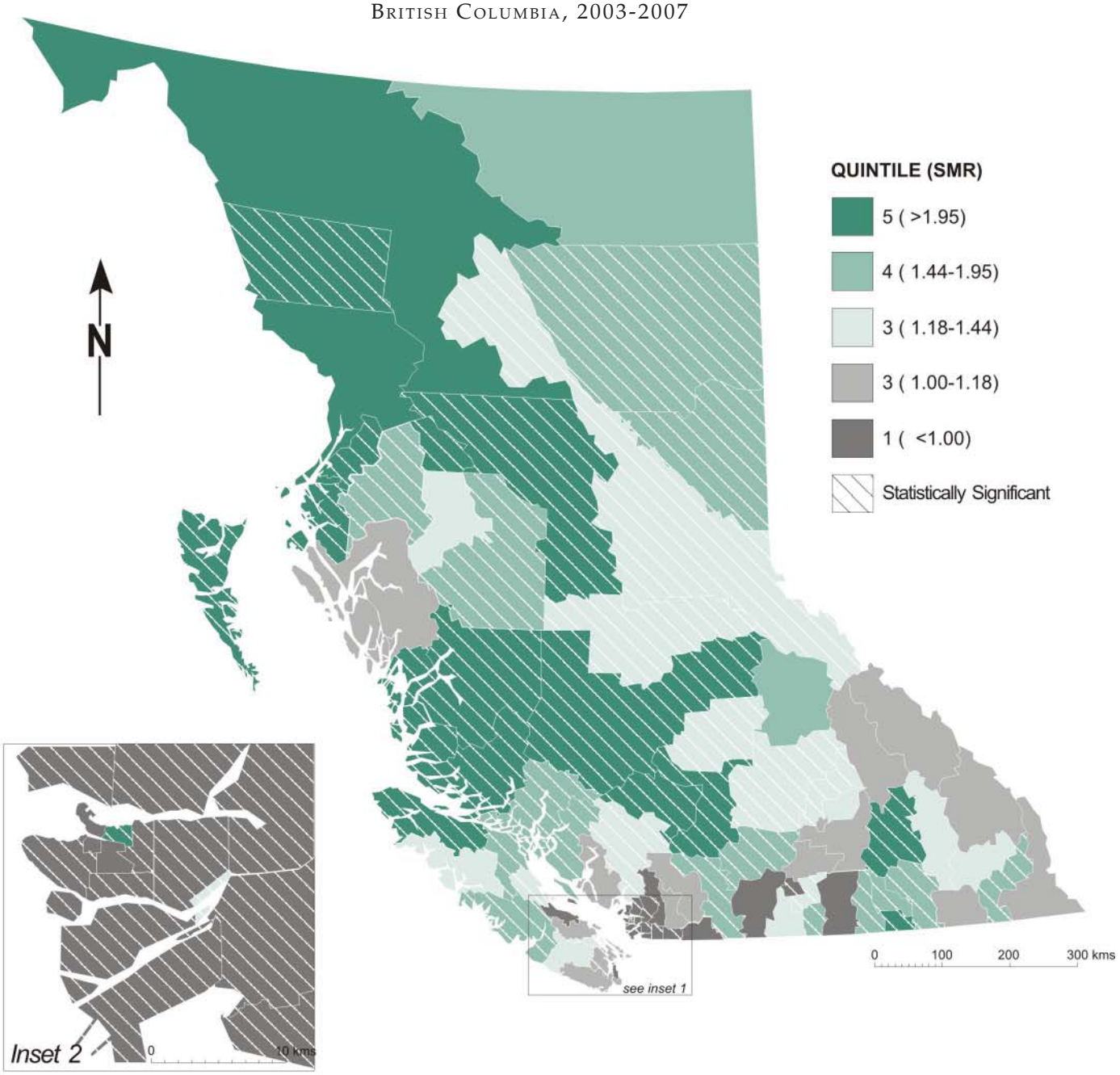
Local Health Area		2003–2007 Observed Deaths	SMR	(p)	2008 Observed Deaths	Expected Deaths	SMR	(p)	95% Confidence Interval Lower		Upper
001	Fernie	36	1.09		8	6.42	1.25		0.54	-	2.46
002	Cranbrook	102	1.66	*	13	12.03	1.08		0.57	-	1.85
003	Kimberley	32	1.34		6	4.61	1.30		0.48	-	2.83
004	Windermere	25	1.04		10	4.99	2.01		0.96	-	3.69
005	Creston	40	1.03		3	7.53	0.40		0.08	-	1.16
006	Kootenay Lake	15	1.38		2	2.11	0.95		0.11	-	3.43
007	Nelson	95	1.58	*	20	11.55	1.73	*	1.06	-	2.67
009	Castlegar	52	1.55	*	7	6.53	1.07		0.43	-	2.21
010	Arrow Lakes	34	2.32	*	4	2.84	1.41		0.38	-	3.60
011	Trail	111	2.09	*	14	10.25	1.37		0.75	-	2.29
012	Grand Forks	41	1.47	*	5	5.32	0.94		0.30	-	2.19
013	Kettle Valley	11	0.98		-	2.24	-		-	-	-
014	Southern Okanagan	105	1.53	*	24	13.06	1.84	*	1.18	-	2.74
015	Penticton	149	1.19	*	25	23.59	1.06		0.69	-	1.56
016	Keremeos	25	1.40		5	3.75	1.33		0.43	-	3.11
017	Princeton	14	0.84		2	3.22	0.62		0.07	-	2.24
018	Golden	18	1.17		2	3.05	0.65		0.07	-	2.36
019	Revelstoke	20	1.07		3	3.55	0.84		0.17	-	2.47
020	Salmon Arm	123	1.27	*	12	19.42	0.62		0.32	-	1.08
021	Armstrong - Spallumcheen	25	1.00		1	4.91	0.20		0.00	-	1.13
022	Vernon	184	1.09		26	32.60	0.80		0.52	-	1.17
023	Central Okanagan	442	1.00		98	87.12	1.12		0.91	-	1.37
024	Kamloops	310	1.20	*	50	51.28	0.98		0.72	-	1.29
025	100 Mile House	57	1.33	*	12	8.37	1.43		0.74	-	2.50
026	North Thompson	17	1.55		8	2.16	3.71	*	1.60	-	7.31
027	Cariboo - Chilcotin	118	2.00	*	24	11.68	2.05	*	1.32	-	3.06
028	Quesnel	76	1.38	*	20	10.76	1.86	*	1.14	-	2.87
029	Lillooet	31	2.97	*	7	2.05	3.41	*	1.37	-	7.02
030	South Cariboo	58	2.80	*	11	4.02	2.73	*	1.36	-	4.89
031	Merritt	48	1.68	*	14	5.55	2.52	*	1.38	-	4.23
032	Hope	45	1.89	*	9	4.59	1.96		0.90	-	3.73
033	Chilliwack	162	0.87		27	36.44	0.74		0.49	-	1.08
034	Abbotsford	208	0.74	*	36	53.10	0.68	*	0.47	-	0.94
035	Langley	207	0.77	*	49	52.24	0.94		0.69	-	1.24
037	Delta	162	0.70	*	32	43.95	0.73		0.50	-	1.03
038	Richmond	168	0.41	*	29	83.00	0.35	*	0.23	-	0.50
040	New Westminster	181	1.30	*	40	26.93	1.49	*	1.06	-	2.02
041	Burnaby	364	0.76	*	58	91.98	0.63	*	0.48	-	0.82
042	Maple Ridge	178	0.99		24	35.43	0.68		0.43	-	1.01
043	Coquitlam	279	0.68	*	42	81.49	0.52	*	0.37	-	0.70
044	North Vancouver	183	0.60	*	40	58.89	0.68	*	0.49	-	0.92
045	West Vancouver-Bowen Is.	83	0.55	*	10	28.35	0.35	*	0.17	-	0.65
046	Sunshine Coast	85	1.02		20	16.74	1.19		0.73	-	1.85
047	Powell River	88	1.55	*	21	11.12	1.89	*	1.17	-	2.89
048	Howe Sound	74	1.30	*	17	11.12	1.53		0.89	-	2.45
049	Bella Coola Valley	32	4.74	*	5	1.26	3.96	*	1.28	-	9.25
050	Queen Charlotte	30	2.88	*	10	2.05	4.87	*	2.33	-	8.95
051	Snow Country	3	1.99		-	0.24	-		-	-	-
052	Prince Rupert	62	1.99	*	16	5.81	2.76	*	1.57	-	4.47
053	Upper Skeena	24	2.23	*	2	2.07	0.97		0.11	-	3.49
054	Smithers	40	1.24		9	6.26	1.44		0.66	-	2.73
055	Burns Lake	29	1.64	*	7	3.27	2.14		0.86	-	4.41
056	Nechako	71	2.22	*	15	6.07	2.47	*	1.38	-	4.07
057	Prince George	267	1.37	*	58	37.81	1.53	*	1.16	-	1.98
059	Peace River South	84	1.52	*	15	10.73	1.40		0.78	-	2.30
060	Peace River North	81	1.47	*	11	10.52	1.05		0.52	-	1.87
061	Greater Victoria	641	1.15	*	156	103.14	1.51	*	1.28	-	1.77
062	Sooke	141	1.10		27	26.34	1.02		0.68	-	1.49
063	Saanich	139	0.70	*	29	37.80	0.77		0.51	-	1.10
064	Gulf Islands	51	1.01		16	9.95	1.61		0.92	-	2.61
065	Cowichan	167	1.18	*	38	27.62	1.38		0.97	-	1.89
066	Lake Cowichan	22	1.36		2	3.21	0.62		0.07	-	2.25
067	Ladysmith	70	1.33	*	18	10.39	1.73	*	1.03	-	2.74
068	Nanaimo	279	1.09		78	50.16	1.56	*	1.23	-	1.94
069	Qualicum	131	0.87		27	30.92	0.87		0.58	-	1.27
070	Alberni	153	1.91	*	34	15.51	2.19	*	1.52	-	3.06
071	Courtenay	221	1.37	*	46	32.90	1.40	*	1.02	-	1.87
072	Campbell River	147	1.51	*	27	19.57	1.38		0.91	-	2.01
075	Mission	89	1.06		13	16.26	0.80		0.43	-	1.37
076	Agassiz - Harrison	24	1.03		2	4.54	0.44		0.05	-	1.59
077	Summerland	11	0.29	*	9	7.02	1.28		0.59	-	2.43
078	Enderby	28	1.35		7	4.06	1.72		0.69	-	3.55
080	Kitimat	28	1.18		8	4.50	1.78		0.76	-	3.50
081	Fort Nelson	15	1.59		2	1.80	1.11		0.12	-	4.01
083	Central Coast	23	8.16	*	3	0.53	5.71	+	1.15	-	16.70
084	Vancouver Island West	7	1.18		4	1.10	3.63		0.98	-	9.30
085	Vancouver Island North	75	2.82	*	20	5.14	3.89	*	2.38	-	6.01
087	Stikine	6	2.40		1	0.48	2.08		0.03	-	11.59
088	Terrace	73	1.74	*	18	8.18	2.20	*	1.30	-	3.48
092	Nisga'a	17	4.62	*	2	0.72	2.80		0.31	-	10.09
094	Telegraph Creek	5	3.99	*	1	0.21	4.81		0.06	-	26.74
161	Vancouver - City Centre	214	0.93		29	44.11	0.66	*	0.44	-	0.94
162	Vancouver - Downtown E.side	358	2.52	*	55	27.88	1.97	*	1.49	-	2.57
163	Vancouver - North East	128	0.57	*	25	43.62	0.57	*	0.37	-	0.85
164	Vancouver - Westside	125	0.44	*	25	53.02	0.47	*	0.31	-	0.70
165	Vancouver - Midtown	156	0.88		19	33.31	0.57	*	0.34	-	0.89
166	Vancouver - South	153	0.51	*	27	57.79	0.47	*	0.31	-	0.68
201	Surrey	555	0.83	*	111	132.41	0.84		0.69	-	1.01
202	South Surrey/White Rock	134	0.57	*	26	44.75	0.58	*	0.38	-	0.85
	PROVINCIAL TOTAL	**10,019**	**1.00**		**1,947**	**1,947.00**	**1.00**		**0.96**	**-**	**1.05**

Notes for this table follow the map.

FIGURE 44

ALCOHOL-RELATED DEATHS BY LOCAL HEALTH AREA

BRITISH COLUMBIA, 2003-2007



Notes to Table 41

*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. 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.

Note: Refer to Figure 1 to clarify geographical location of LHAs.

Smoking-Attributable Deaths

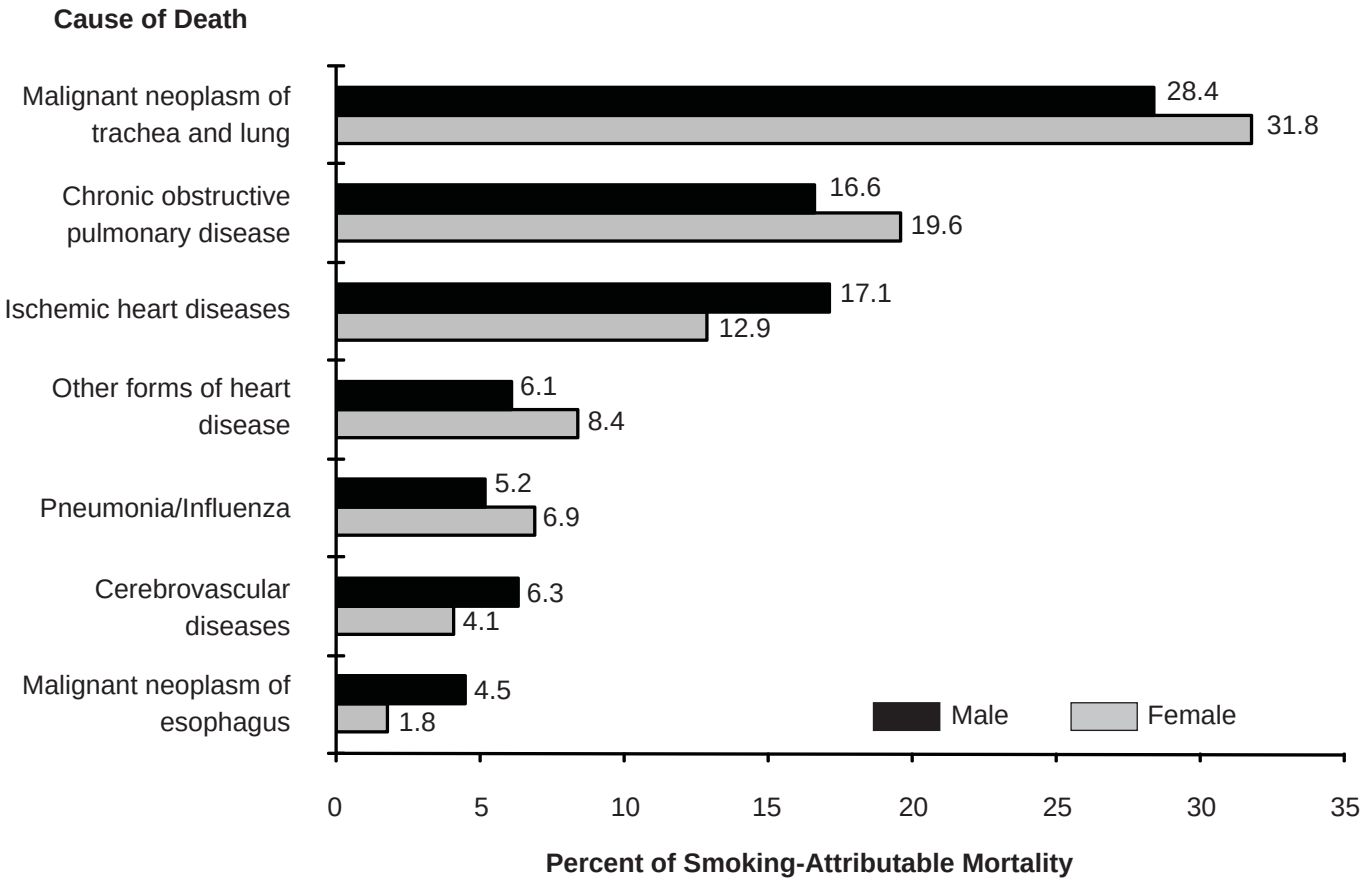
Table 42 and Figure 45 portray the number and percent of deaths in 2008 that were attributable to smoking for those aged 35 years and older. The age restriction relates to the fact that smoking-attributable conditions generally become apparent over time and after several years of tobacco use. Because the decedent's smoking history is usually not available on the death record, the link between smoking and mortality is estimated indirectly. Research-derived proportions of deaths from certain diseases (like lung cancer) that are due to smoking are 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 the smoking-attributable portion of each of seven cause-of-death categories selected according to highest SAM number from Table 42.

Table 42 shows the number of deaths by causes and the percentage and number of those deaths that are attributed to smoking. Also shown is percentage total SAM by cause category.

In 2008, there were 6,367 deaths attributed to smoking as shown in Table 42. By far the largest disease category was *Malignant Neoplasms of Trachea and Lung* (29.7 percent) followed by *Chronic Obstructive Pulmonary Disease* (17.8 percent) and *Ischemic Heart Disease* (15.5 percent).

FIGURE 45
SMOKING-ATTRIBUTABLE MORTALITY BY SELECTED CAUSES AND GENDER
BRITISH COLUMBIA, 2008



Note: 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, 2008

Cause of Death	ICD-10 Code(s)	Male				Female				Total		
		Deaths	SAM (%)	SAM Number	SAM Percent	Deaths	SAM (%)	SAM Number	SAM Percent	Deaths	SAM Number	SAM Percent
Malignant Neoplasms												
Malignant neoplasms of lip, oral cavity and pharynx	C00-C14	119	91.2	109	2.8	48	59.9	29	1.1	167	137	2.2
Malignant neoplasm of esophagus	C15	220	78.2	172	4.5	66	71.0	47	1.8	286	219	3.4
Malignant neoplasm of pancreas	C25	236	21.7	51	1.3	250	33.9	85	3.3	486	136	2.1
Malignant neoplasm of larynx	C32	43	79.7	34	0.9	6	87.2	5	0.2	49	40	0.6
Malignant neoplasm of trachea and lung	C33-C34	1,216	89.3	1,086	28.4	1,054	76.5	806	31.8	2,270	1,892	29.7
Malignant neoplasms of cervix, uterus	C53-C55	-	-	-	-	122	33.9	41	1.6	122	41	0.6
Malignant neoplasm of bladder	C67	203	44.8	91	2.4	71	37.6	27	1.1	274	118	1.8
Malignant neoplasm of kidney and other unspecified urinary organs	C64-C66, C68	151	46.8	71	1.8	75	12.4	9	0.4	226	80	1.3
SUBTOTAL		**2,188**		**1,614**	**42.2**	**1,692**		**1,049**	**41.3**	**3,880**	**2,663**	**41.8**
Circulatory System Diseases												
Hypertension	I10-I13	129	24.6	32	0.8	206	16.4	34	1.3	335	66	1.0
Ischemic heart diseases :	I20-I25											
35-64 years		538	43.2	232	6.1	125	36.5	46	1.8	663	278	4.4
65+ years		2,009	21.1	424	11.1	1,939	14.6	283	11.1	3,948	707	11.1
Other forms of heart disease	I01-I09, I27, I30-I52	881	26.5	233	6.1	1,096	19.4	213	8.4	1,977	446	7.0
Cerebrovascular diseases :	I60-I69											
35-64 years		80	44.8	36	0.9	76	49.3	37	1.5	156	73	1.2
65+ years		872	23.4	204	5.3	1,377	4.8	66	2.6	2,249	270	4.2
Atherosclerosis	I70	40	55.5	22	0.6	42	31.7	13	0.5	82	36	0.6
Aortic aneurysm	I71	143	55.5	79	2.1	100	31.7	32	1.2	243	111	1.7
Other arterial diseases	I26, I28, I72-I78	115	55.5	64	1.7	111	31.7	35	1.4	226	99	1.6
SUBTOTAL		**4,807**		**1,327**	**34.7**	**5,072**		**759**	**29.9**	**9,879**	**2,086**	**32.8**
Respiratory System Diseases												
Pneumonia/Influenza	J09-J181, J188, J189	607	32.7	198	5.2	671	26.3	176	6.9	1,278	375	5.9
Bronchitis, emphysema	J40-J43	53	84.7	45	1.2	57	79.2	45	1.8	110	90	1.4
Chronic obstructive pulmonary disease	J44	749	84.7	634	16.6	629	79.2	498	19.6	1,378	1,133	17.8
Other respiratory diseases	A15-A19, J45-J46	30	32.7	10	0.3	44	26.3	12	0.5	74	21	0.3
SUBTOTAL		**1,439**		**888**	**23.2**	**1,401**		**731**	**28.8**	**2,840**	**1,619**	**25.4**
TOTAL		**8,434**		**3,828**	**100.0**	**8,165**		**2,540**	**100.0**	**16,599**	**6,367**	**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 BC 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, including use of illicit, prescribed, and over-the-counter drugs. This category excludes causes indirectly related to drug use and also excludes those deaths due to alcohol or smoking. See Table 44 for a list of the drug induced death categories.

Table 43 shows that more males (183) died of drug-induced causes than females (124). 264 of the drug-induced deaths (86.0 percent) were among individuals aged 25 to 64 years. Almost half of drug-induced deaths (146) were in the 45 to 64 year age-group.

Table 44 presents drug-induced deaths by cause for 2003-2007 and 2008. About two-thirds of drug-induced deaths in 2008 (68.4 percent) and in the previous five years (66.5 percent) were the result of unintentional poisoning by drugs. Of the 421 suicide deaths in BC in 2008, 16.2 percent were drug-induced.

Figure 46 is a graphic presentation of the results from Table 44. In 2008, almost all drug induced deaths were unintentional poisoning or suicide.

Table 45 shows the number of observed and expected drug-induced deaths and the ratio of observed to expected deaths (SMR) in each LHA in 2008 and in the previous five years. Twenty-eight LHAs had no drug-induced deaths in 2008 and seven had no drug-induced deaths in 2003-2007. Vancouver's City Center and Greater Victoria were the only LHAs where the observed numbers were more than 5 and statistically significantly higher than the expected numbers in 2008 as well as the previous five years.

Figure 47 maps the variation of SMRs in the LHAs divided into quintiles for 2003-2007.

TABLE 43
DRUG–INDUCED DEATHS BY AGE AND GENDER
BRITISH COLUMBIA, 2008

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
<15	-	-	-	-	-	-
15-19	2	1.1	3	2.4	5	1.6
20-24	4	2.2	7	5.6	11	3.6
25-44	86	47.0	32	25.8	118	38.4
45-64	76	41.5	70	56.5	146	47.6
65-84	15	8.2	8	6.5	23	7.5
85+	-	-	4	3.2	4	1.3
TOTAL	**183**	**100.0**	**124**	**100.0**	**307**	**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, 2003–2007 AND 2008

Cause of Death	ICD-10 Code(s)	Year of Death			
		2003–2007		2008	
		Number	Percent	Number	Percent
Psychoactive substance and drug use/abuse	F11-F16, F19	131	6.2	18	5.9
Accidental poisoning by drugs	X40-X44	1,395	66.5	210	68.4
Suicide by drugs	X60-X64	479	22.8	68	22.1
Assault by drugs and medicaments	X85	3	0.1	-	-
Poisoning by drugs and medicaments undetermined if accidental or intentional	Y10-Y14	66	3.1	9	2.9
Adverse effects of drugs and medicaments	Y40-Y574, Y577-Y579, Y598, Y880	22	1.0	2	0.7
Other drug causes*		1	-	-	-
TOTAL		**2,097**	**100.0**	**307**	**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, 2008

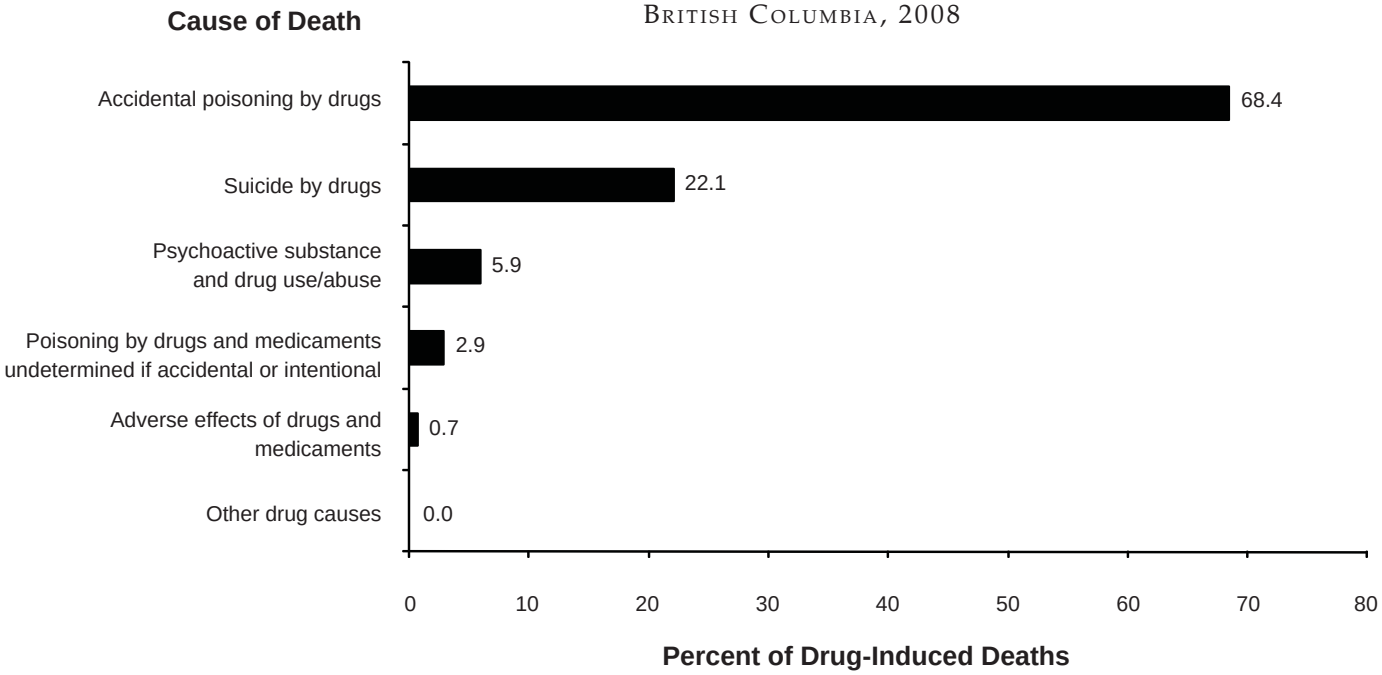


Table 45

STANDARDIZED MORTALITY RATIO BY LOCAL HEALTH AREA DRUG-INDUCED DEATHS, BRITISH COLUMBIA, 2003–2007 AND 2008

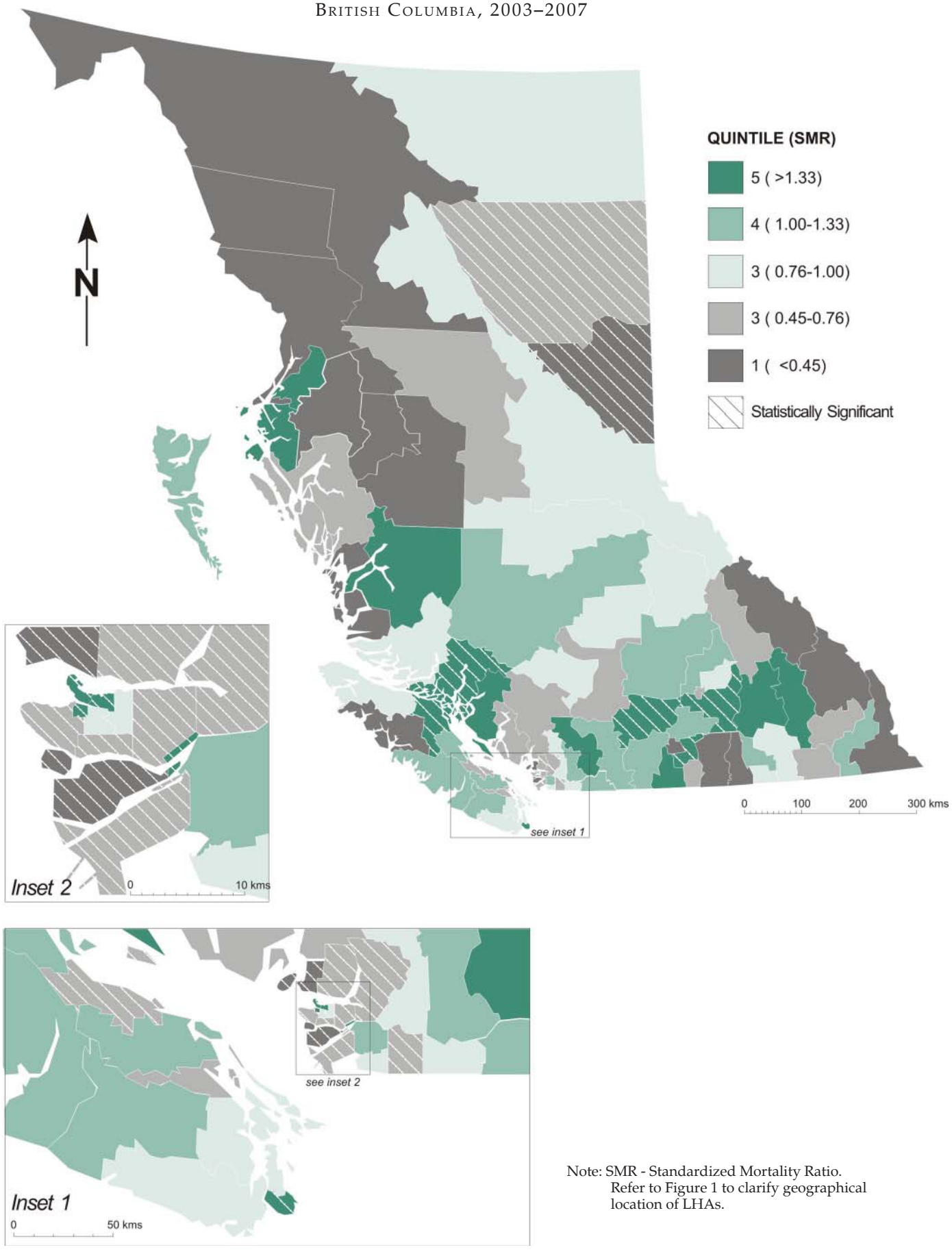
	Local Health Area	2003–2007 Observed Deaths	2003–2007 SMR	(p)	2008 Observed Deaths	2008 Expected Deaths	2008 SMR	(p)	95% Confidence Interval Lower		Upper
001	Fernie	3	0.39		1	1.08	0.93		0.01	-	5.16
002	Cranbrook	13	1.09		1	1.75	0.57		0.01	-	3.18
003	Kimberley	2	0.50		-	0.60	-		-	-	-
004	Windermere	2	0.43		2	0.77	2.61		0.29	-	9.44
005	Creston	3	0.57		-	0.82	-		-	-	-
006	Kootenay Lake	3	1.63		-	0.26	-		-	-	-
007	Nelson	12	0.98		2	1.78	1.12		0.13	-	4.06
009	Castlegar	8	1.26		-	0.94	-		-	-	-
010	Arrow Lakes	4	1.71		-	0.34	-		-	-	-
011	Trail	9	0.95		2	1.38	1.45		0.16	-	5.22
012	Grand Forks	1	0.24		-	0.61	-		-	-	-
013	Kettle Valley	-	-		-	0.26	-		-	-	-
014	Southern Okanagan	6	0.72		1	1.31	0.76		0.01	-	4.24
015	Penticton	30	1.63	*	4	2.77	1.44		0.39	-	3.69
016	Keremeos	3	1.35		-	0.39	-		-	-	-
017	Princeton	3	1.27		1	0.34	2.95		0.04	-	16.39
018	Golden	1	0.27		-	0.54	-		-	-	-
019	Revelstoke	2	0.49		-	0.57	-		-	-	-
020	Salmon Arm	20	1.33		4	2.40	1.66		0.45	-	4.26
021	Armstrong - Spallumcheen	3	0.67		-	0.64	-		-	-	-
022	Vernon	50	1.72	*	1	4.44	0.23		0.00	-	1.25
023	Central Okanagan	95	1.20		8	12.39	0.65		0.28	-	1.27
024	Kamloops	57	1.11		13	7.66	1.70		0.90	-	2.90
025	100 Mile House	7	0.98		2	1.05	1.90		0.21	-	6.86
026	North Thompson	2	0.92		-	0.30	-		-	-	-
027	Cariboo - Chilcotin	15	1.15		4	1.86	2.16		0.58	-	5.52
028	Quesnel	9	0.79		-	1.61	-		-	-	-
029	Lillooet	2	0.94		2	0.30	6.62		0.74	-	23.89
030	South Cariboo	2	0.58		3	0.50	6.05	+	1.22	-	17.69
031	Merritt	11	2.02	*	2	0.79	2.52		0.28	-	9.10
032	Hope	5	1.30		2	0.56	3.58		0.40	-	12.93
033	Chilliwack	43	1.21		11	5.36	2.05	*	1.02	-	3.67
034	Abbotsford	57	0.95		9	8.70	1.03		0.47	-	1.96
035	Langley	40	0.68	*	7	8.71	0.80		0.32	-	1.66
037	Delta	35	0.71	*	3	6.92	0.43		0.09	-	1.27
038	Richmond	32	0.35	*	6	13.51	0.44	*	0.16	-	0.97
040	New Westminster	51	1.56	*	8	4.78	1.67		0.72	-	3.30
041	Burnaby	72	0.67	*	13	15.47	0.84		0.45	-	1.44
042	Maple Ridge	36	0.84		4	6.40	0.63		0.17	-	1.60
043	Coquitlam	67	0.64	*	5	15.06	0.33	*	0.11	-	0.77
044	North Vancouver	46	0.68	*	6	9.72	0.62		0.23	-	1.34
045	West Vancouver-Bowen Is.	6	0.26	*	2	3.43	0.58		0.07	-	2.10
046	Sunshine Coast	10	0.75		1	2.10	0.48		0.01	-	2.65
047	Powell River	13	1.37		5	1.40	3.58	*	1.15	-	8.34
048	Howe Sound	10	0.59		1	2.44	0.41		0.01	-	2.28
049	Bella Coola Valley	2	1.34		-	0.19	-		-	-	-
050	Queen Charlotte	3	1.22		1	0.34	2.93		0.04	-	16.31
051	Snow Country	-	-		-	0.04	-		-	-	-
052	Prince Rupert	11	1.52		-	0.97	-		-	-	-
053	Upper Skeena	1	0.39		-	0.35	-		-	-	-
054	Smithers	3	0.38		2	1.07	1.87		0.21	-	6.74
055	Burns Lake	-	-		-	0.51	-		-	-	-
056	Nechako	4	0.54		3	0.99	3.04		0.61	-	8.87
057	Prince George	43	0.89		11	6.69	1.65		0.82	-	2.94
059	Peace River South	5	0.40	*	2	1.83	1.09		0.12	-	3.94
060	Peace River North	7	0.46	*	1	2.17	0.46		0.01	-	2.56
061	Greater Victoria	166	1.53	*	26	15.52	1.67	*	1.09	-	2.45
062	Sooke	28	0.92		3	4.73	0.63		0.13	-	1.85
063	Saanich	26	0.88		3	4.36	0.69		0.14	-	2.01
064	Gulf Islands	7	0.99		3	1.10	2.72		0.55	-	7.94
065	Cowichan	24	0.93		1	3.82	0.26		0.00	-	1.46
066	Lake Cowichan	3	1.00		-	0.44	-		-	-	-
067	Ladysmith	5	0.61		1	1.29	0.77		0.01	-	4.31
068	Nanaimo	48	1.02		6	7.04	0.85		0.31	-	1.86
069	Qualicum	10	0.52	*	-	3.15	-		-	-	-
070	Alberni	19	1.26		-	2.15	-		-	-	-
071	Courtenay	29	1.01		4	4.45	0.90		0.24	-	2.30
072	Campbell River	31	1.55	*	3	2.92	1.03		0.21	-	3.00
075	Mission	22	1.12		4	2.88	1.39		0.37	-	3.55
076	Agassiz - Harrison	6	1.46		-	0.60	-		-	-	-
077	Summerland	1	0.19		1	0.78	1.27		0.02	-	7.09
078	Enderby	3	0.87		1	0.53	1.88		0.02	-	10.45
080	Kitimat	3	0.54		1	0.74	1.35		0.02	-	7.52
081	Fort Nelson	3	0.92		-	0.45	-		-	-	-
083	Central Coast	-	-		-	0.10	-		-	-	-
084	Vancouver Island West	-	-		-	0.17	-		-	-	-
085	Vancouver Island North	5	0.78		6	0.85	7.03	*	2.57	-	15.29
087	Stikine	-	-		-	0.07	-		-	-	-
088	Terrace	4	0.41		3	1.36	2.20		0.44	-	6.43
092	Nisga'a	2	2.17		-	0.12	-		-	-	-
094	Telegraph Creek	-	-		-	0.04	-		-	-	-
161	Vancouver - City Centre	94	1.42	*	11	9.35	1.18		0.59	-	2.11
162	Vancouver - Downtown E.side	189	5.60	*	24	5.08	4.72	*	3.02	-	7.02
163	Vancouver - North East	44	0.87		4	7.25	0.55		0.15	-	1.41
164	Vancouver - Westside	38	0.58	*	5	9.25	0.54		0.17	-	1.26
165	Vancouver - Midtown	42	0.93		5	6.25	0.80		0.26	-	1.87
166	Vancouver - South	35	0.54	*	5	9.25	0.54		0.17	-	1.26
201	Surrey	183	1.08		28	25.03	1.12		0.74	-	1.62
202	South Surrey/White Rock	30	0.81		2	5.66	0.35		0.04	-	1.28
	PROVINCIAL TOTAL	**2,097**	**1.00**		**307**	**307.00**	**1.00**		**0.89**	**-**	**1.12**

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, 2003–2007



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

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 exclude accidental poisoning by drugs in therapeutic use.

Data on unintentional illicit/illegal drug deaths are retrieved from the Coroners' Medical Certificate of Death. This section only considers 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 from consideration.

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" (methylenedioxy-methamphetamine). 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 differentiate. Often coroners record "morphine type" overdose, hence the label "heroin/morphine type".

Although methadone is often used legally in the treatment of opiate addiction, a number of deaths are occurring as the result of unintentional methadone overdoses. Therefore it would appear that methadone is being used in unsanctioned ways resulting in death.

Table 46 shows that deaths due to unintentional overdoses are not confined to any one area in the province. ASMRs for 2008 at the time of reporting appear to have declined in all areas. However, as with other externally caused deaths, reporting is often delayed due to the time required for coroners to complete and report their findings to the Agency. Therefore these results should be viewed with caution.

Table 47 and Figure 48 depict a general decline in drug overdose fatalities. The ASMR has been consistently much higher for males than for females.

TABLE 46
ASMR FOR UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS BY HEALTH AUTHORITY
BRITISH COLUMBIA, 2002–2008

Health Authority	2002	2003	2004	2005	2006	2007	2008
01 Interior	0.74	0.78	0.73	0.71	0.53	0.66	0.40
02 Fraser	0.38	0.43	0.41	0.58	0.68	0.43	0.35
03 Vancouver Coastal	0.52	0.49	0.58	0.63	0.61	0.51	0.37
04 Vancouver Island	0.79	0.71	0.75	0.64	0.73	0.59	0.46
05 Northern	0.32	0.43	0.40	0.37	0.18	0.47	0.29
PROVINCIAL TOTAL	**0.52**	**0.54**	**0.55**	**0.60**	**0.61**	**0.51**	**0.38**

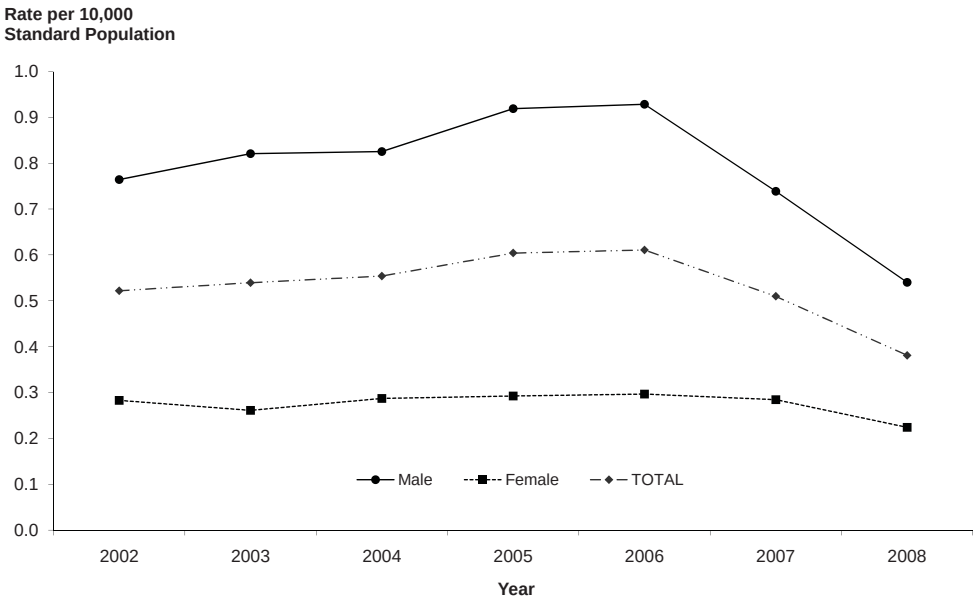
Note: Deaths that were still under investigation may later be identified as unintentional illicit/illegal.
ASMR - Age Standardized Mortality Rate per 10,000 standard population (Canada 1991 Census).
Non-residents are excluded.

TABLE 47
ASMR FOR UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS BY GENDER
BRITISH COLUMBIA, 2002–2008

Gender	2002	2003	2004	2005	2006	2007	2008
Male	0.76	0.82	0.83	0.92	0.93	0.74	0.54
Female	0.28	0.26	0.29	0.29	0.30	0.28	0.22
TOTAL	**0.52**	**0.54**	**0.55**	**0.60**	**0.61**	**0.51**	**0.38**

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 48
ASMR FOR UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS BY GENDER
BRITISH COLUMBIA, 2002-2008



See Table 47 for notes.

Vital Statistics Information Box

UNINTENTIONAL ILLICIT/ILLEGAL DRUG DEATHS
BRITISH COLUMBIA, 2000-2008

In 1993, British Columbia experienced an unprecedented "high water" mark in unintentional drug overdoses. In that year, 470 people died as the result of unintentional poisoning by drugs. Over 300 of these were determined to be the result of illicit drug use. These included heroin and other opiates, methadone and cocaine, used alone or in various combinations or with a variety of other substances being used illicitly.

This information box provides a code-based analysis of deaths due to unintentional illicit drug overdoses in British Columbia since 2000. It is important to note that numbers for 2008 (and to a certain extent previous years) may be revised upwards as final reports from investigating coroners are submitted to the Agency for processing. This analysis includes deaths where unintentional drug overdose was determined to be the "underlying cause of death" (see Glossary for the definition of this term), and where the offending substances included selected "narcotics and psychodsleptics" - heroin, morphine, methadone, and cocaine - and "psychostimulants with abuse potential", specifically so-called "crystal meth" (methamphetamine hydrochloride) and "ecstasy" (methylenedioxymethamphetamine). "Mixed drug overdoses" included at least one of the above substances, as well as any other drug. A seperate total for deaths in which mixed narcotics such as heroin with cocaine were implicated is also included, because multiple narcotic substances are used in combination relatively frequently.

COUNTS OF DEATHS BY CAUSATIVE SUBSTANCES

Over the past nine years, deaths involving single heroin/morphine type drug use appear to be declining slightly. On the other hand, deaths where cocaine was the only substance implicated appear to be on the increase, along with deaths from combined narcotics.

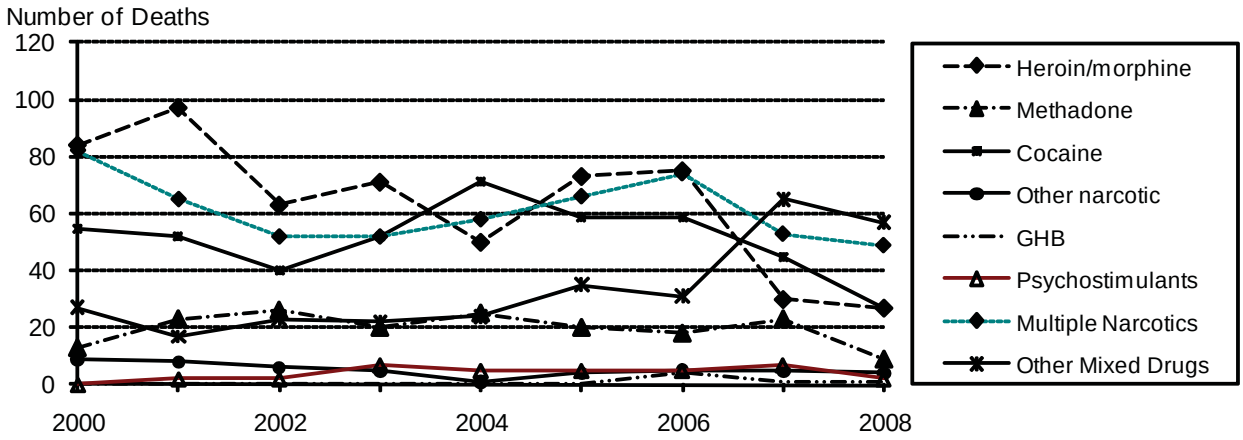
Deaths from the combined use of illicit drugs with other drugs (other than narcotics) have risen sharply in 2007 and remain the leading cause of illicit drug overdose in 2008.

The use of psychostimulants is a relatively new phenomenon. Its place as the direct cause of unintentional overdose does not appear to be rising. It is interesting to note that methadone, a substance used in the treatment of heroin addiction, is apparently being used illicitly and causing overdose deaths in and of itself.

Vital Statistics Information Box

UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS BY TYPE OF DRUG

BRITISH COLUMBIA, 2000-2008



OVERDOSE DEATHS BY TYPE OF DRUG

BRITISH COLUMBIA, 2000-2008

Drug	2000	2001	2002	2003	2004	2005	2006	2007	2008
Heroin/morphine type only	84	97	63	71	50	73	75	30	27
Methadone only	13	23	26	20	25	20	18	23	9
Cocaine only	55	52	40	52	71	59	59	45	27
Other narcotic/ hallucinongen only	9	8	6	5	1	4	5	5	4
GHB only	0	0	0	0	0	0	4	1	1
Physchostimulants* only	0	2	2	7	5	5	5	7	2
Multiple narcotics	82	65	52	52	58	66	74	53	49
Other mixed drugs	27	17	23	22	24	35	31	65	57
TOTAL	**270**	**264**	**212**	**229**	**234**	**262**	**271**	**229**	**176**

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".
Unintentional illicit/illegal drug overdose deaths (X41, X42, X44) include these specified drug injury categories:

1) T40.0, T40.1, or T40.2 for heroin/morphine type.
2) T40.3 for methadone.
3) T40.5 for cocaine.
4) T40.4, T40.6, T40.9 for other narcotic/hallucinogen.
5) T41.2 for gamma hydroxybutyrate (GHB).
6) T43.6 for psychostimulant*.

Multiple Narcotic deaths involve mixed drugs from categories 1 - 4 only.
Other Mixed Drug deaths include one illicit drug from categories 1 - 6 (T40.0-T40.9, T41.2, T43.6) and one or more other drugs (T36.0-T48.6, T52.8, T53.9) and are not multiple narcotic deaths.
Non-residents are excluded.

Accidental Falls Deaths

In 2008, there were 1,546 deaths due to external causes among BC residents and of these, unintentional (accidental) deaths comprised over 69.5 percent (1,074) of non-natural deaths. Overall, falls were the leading cause of unintentional death, contributing 33.5 percent to this category in 2008 and exceeding fatal motor-vehicle incidents in number (360 vs. 225), see Table 30.

Analysis of various causes of unintentional (accidental) mortality in 2008 shows that more females died as the result of a fall than males did. Of unintentional mortality, 25.7 percent of male deaths were the result of falls. In contrast, 46.6 percent of female unintentional mortality was the result of falls.

While fatal falls occur across the lifespan of British Columbians, the elderly are far more likely to succumb to the effects of a fall.

The data discussed so far only include events where the fall was determined to be the underlying cause of death. There are additional deaths that involve accidental falls, but where the fall was considered to be only a contributing factor.

Table 48 and Figure 49 show how age specific rates compare between the 2 categories (direct and indirect) of fall-related deaths in BC for individuals aged 60 and older. Indirect falls-related deaths are more frequent among the over-eighty age group than direct falls deaths however, in the 60-69 and 70-79 age groups, direct falls deaths are more frequent.

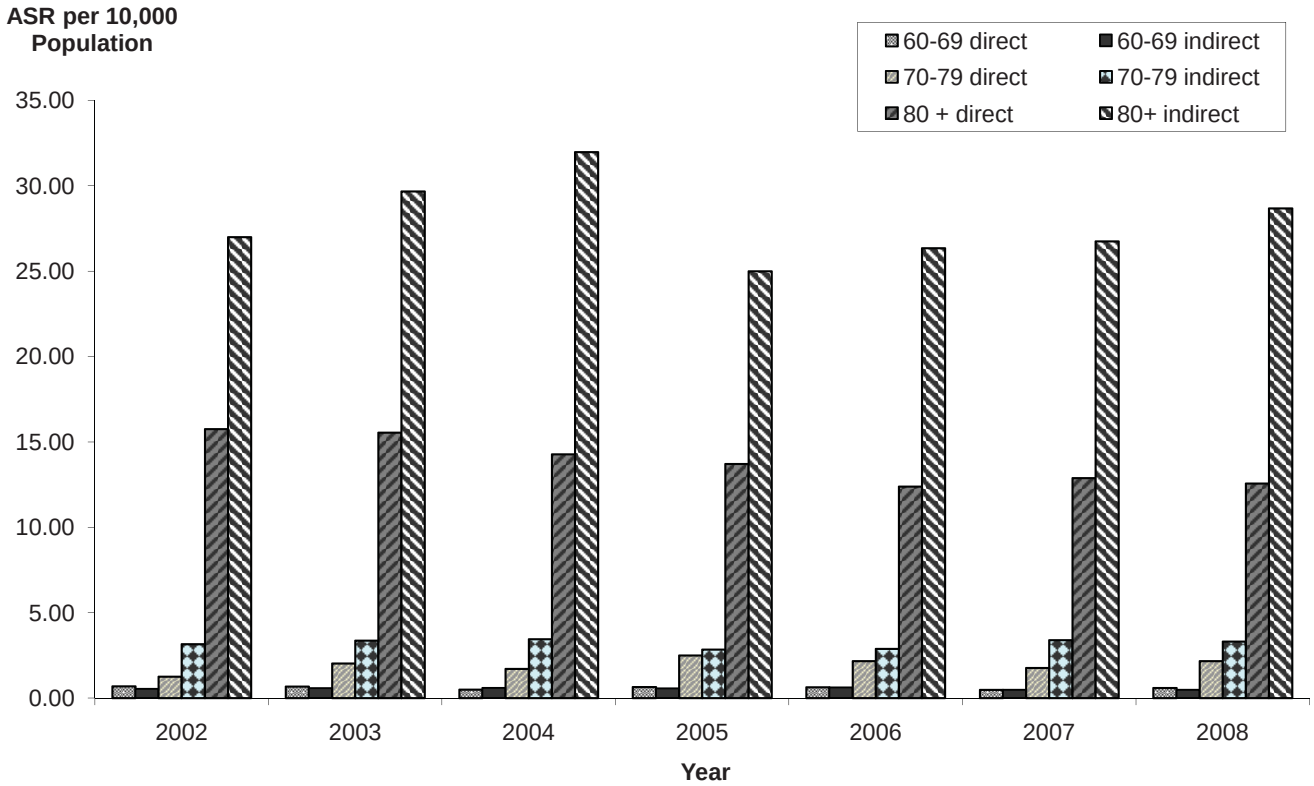
The BC Injury Research and Prevention Unit (BCIRPU) is a national leader in falls injury research and in the design and implementation of falls prevention strategies. A summary of the initiatives undertaken by the BCIRPU can be viewed at the Unit's website: http://www.injuryresearch.bc.ca/index.aspx go to "Falls Prevention" in the "Injury Topics" menu.

TABLE 48
DEATHS DIRECTLY AND INDIRECTLY DUE TO FALLS BY AGE
BRITISH COLUMBIA, 2002–2008

Cause of Death	Age (inYears)	2002		2003		2004		2005		2006		2007		2008	
		Counts	ASR	Counts	ASR	Counts	ASR	Counts	ASR	Counts	ASR	Counts	ASR	Counts	ASR
Directly due to falls															
	60-69	23	0.69	23	0.67	18	0.50	24	0.65	25	0.64	20	0.48	26	0.60
	70-79	32	1.26	52	2.03	44	1.71	65	2.50	57	2.16	47	1.76	59	2.17
	80+	224	15.75	231	15.54	221	14.27	220	13.71	206	12.39	222	12.88	224	12.57
Indirectly due to falls															
	60-69	18	0.54	20	0.58	21	0.59	21	0.56	24	0.62	20	0.48	21	0.48
	70-79	80	3.16	86	3.36	89	3.45	74	2.84	76	2.88	91	3.40	90	3.31
	80+	384	27.00	441	29.67	495	31.97	401	24.99	438	26.34	461	26.75	511	28.68

Note: ASR - Age Specific Rate per 10,000 population.

FIGURE 49
DEATHS DIRECTLY AND INDIRECTLY DUE TO FALLS, AGES 60-80+
BRITISH COLUMBIA, 2002-2008



Burials and Cremations

Table 49 shows the method used to dispose of decedents' remains.

In 2008, out of every 100 deaths approximately 80 resulted in cremations (25,392) and 20 involved burials (6,309).

Since 1985, the percentage of burials has consistently decreased.

TABLE 49

METHOD OF DISPOSITION OF DECEDENT

BRITISH COLUMBIA, 1986–2008

Year	Burial		Cremation		Other	N.S.	Total
	Number	Percent	Number	Percent			
1986	8,204	39.0	12,686	60.4	98	21	21,009
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	29	23,416
1991	8,035	33.7	15,675	65.8	75	35	23,820
1992	7,818	32.0	16,512	67.5	97	36	24,463
1993	7,989	31.2	17,214	67.2	151	251	25,605
1994	7,712	29.9	17,888	69.2	177	55	25,832
1995	7,615	29.0	18,361	70.0	185	63	26,224
1996	7,640	27.9	19,545	71.4	194	12	27,391
1997	7,359	27.0	19,651	72.1	207	46	27,263
1998	7,197	25.9	20,377	73.3	225	9	27,808
1999	7,061	25.3	20,632	74.0	197	-	27,890
2000	6,469	23.7	20,694	75.7	187	1	27,351
2001	6,685	23.7	21,330	75.5	223	1	28,239
2002	6,541	22.8	21,978	76.5	192	3	28,714
2003	6,608	22.7	22,362	76.7	186	-	29,156
2004	6,380	21.5	23,161	77.9	184	-	29,725
2005	6,281	20.9	23,631	78.5	184	-	30,096
2006	6,358	20.8	24,014	78.6	167	-	30,539
2007	6,148	19.8	24,801	79.7	168	-	31,117
2008	6,309	19.8	25,392	79.6	191	-	31,892

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, 2008

Local Health Area		Burial		Cremation		Other	Total
		Number	Percent	Number	Percent		
001	Fernie	24	24.7	73	75.3	-	97
002	Cranbrook	42	23.0	138	75.4	3	183
003	Kimberley	8	9.4	77	90.6	-	85
004	Windermere	5	8.2	56	91.8	-	61
005	Creston	38	23.5	124	76.5	-	162
006	Kootenay Lake	3	10.3	26	89.7	-	29
007	Nelson	29	17.2	138	81.7	2	169
009	Castlegar	50	40.3	74	59.7	-	124
010	Arrow Lakes	6	11.8	45	88.2	-	51
011	Trail	27	13.0	179	86.5	1	207
012	Grand Forks	35	34.7	66	65.3	-	101
013	Kettle Valley	3	12.0	22	88.0	-	25
014	Southern Okanagan	50	18.5	220	81.5	-	270
015	Penticton	81	15.0	459	85.0	-	540
016	Keremeos	10	14.5	58	84.1	1	69
017	Princeton	7	10.8	57	87.7	1	65
018	Golden	10	23.8	32	76.2	-	42
019	Revelstoke	10	22.7	34	77.3	-	44
020	Salmon Arm	51	15.5	278	84.5	-	329
021	Armstrong-Spallumcheen	21	26.3	59	73.8	-	80
022	Vernon	114	19.0	487	81.0	-	601
023	Central Okanagan	278	18.1	1,258	81.8	2	1,538
024	Kamloops	126	14.5	733	84.3	11	870
025	100 Mile House	27	19.0	115	81.0	-	142
026	North Thompson	6	10.0	54	90.0	-	60
027	Cariboo-Chilcotin	48	24.4	149	75.6	-	197
028	Quesnel	33	16.3	170	83.7	-	203
029	Lillooet	12	26.7	33	73.3	-	45
030	South Cariboo	15	21.4	55	78.6	-	70
031	Merritt	32	22.5	110	77.5	-	142
032	Hope	18	17.5	85	82.5	-	103
033	Chilliwack	152	20.9	574	78.8	2	728
034	Abbotsford	286	29.5	678	69.9	6	970
035	Langley	155	16.2	797	83.5	3	955
037	Delta	109	16.4	553	83.0	4	666
038	Richmond	257	27.6	670	72.0	4	931
040	New Westminster	105	19.2	438	80.2	3	546
041	Burnaby	386	27.4	996	70.7	26	1,408
042	Maple Ridge	78	13.3	508	86.5	1	587
043	Coquitlam	176	18.6	764	80.9	4	944
044	North Vancouver	103	12.3	728	87.1	5	836
045	West Vancouver-Bowen Is.	76	15.9	399	83.3	4	479
046	Sunshine Coast	22	8.5	234	90.7	2	258
047	Powell River	26	13.8	158	84.0	4	188
048	Howe Sound	30	24.2	94	75.8	-	124
049	Bella Coola Valley	14	50.0	14	50.0	-	28
050	Queen Charlotte	21	61.8	13	38.2	-	34
051	Snow Country	-	-	2	100.0	-	2
052	Prince Rupert	33	28.4	83	71.6	-	116
053	Upper Skeena	13	52.0	12	48.0	-	25
054	Smithers	26	26.5	72	73.5	-	98
055	Burns Lake/Eutsuk	10	22.2	35	77.8	-	45
056	Nechako	43	38.7	68	61.3	-	111
057	Prince George	99	17.0	481	82.6	2	582
059	Peace River South	38	25.7	108	73.0	2	148
060	Peace River North	41	27.0	111	73.0	-	152
061	Greater Victoria	295	13.0	1,963	86.3	17	2,275
062	Sooke	42	11.0	339	88.7	1	382
063	Saanich	78	11.4	602	88.1	3	683
064	Gulf Islands	10	7.4	126	92.6	-	136
065	Cowichan	79	15.7	424	84.1	1	504
066	Lake Cowichan	3	6.5	43	93.5	-	46
067	Ladysmith	36	14.5	211	84.7	2	249
068	Nanaimo	93	10.0	833	89.9	1	927
069	Qualicum	48	8.8	498	90.9	2	548
070	Alberni	60	19.9	241	80.1	-	301
071	Courtenay	40	7.6	485	92.2	1	526
072	Campbell River	29	9.5	274	90.1	1	304
075	Mission	49	16.4	248	82.9	2	299
076	Agassiz-Harrison	15	21.4	54	77.1	1	70
077	Summerland	30	18.8	130	81.3	-	160
078	Enderby	15	16.5	75	82.4	1	91
080	Kitimat	24	35.8	43	64.2	-	67
081	Fort Nelson	11	47.8	12	52.2	-	23
083	Central Coast	3	50.0	3	50.0	-	6
084	Vancouver Island West	2	11.1	16	88.9	-	18
085	Vancouver Island North	26	31.0	58	69.0	-	84
087	Stikine	3	60.0	2	40.0	-	5
088	Terrace	44	29.1	107	70.9	-	151
092	Nisga'a	13	92.9	1	7.1	-	14
094	Telegraph Creek	5	100.0	-	-	-	5
161	Vancouver - City Centre	116	19.2	479	79.4	8	603
162	Vancouver - Downtown E.side	157	33.1	312	65.7	6	475
163	Vancouver - North East	296	51.8	269	47.1	6	571
164	Vancouver - Westside	175	24.8	527	74.6	4	706
165	Vancouver - Midtown	169	37.5	276	61.2	6	451
166	Vancouver - South	332	39.0	510	59.9	10	852
201	Surrey	375	20.8	1,427	79.2	-	1,802
202	South Surrey/White Rock	113	13.2	739	86.1	6	858
	PROVINCIAL TOTAL	**6,309**	**19.8**	**25,392**	**79.6**	**191**	**31,892**

Note: Total includes residents with unkown LHA.