Death-related Statistics

Vital Statistics Information Box

Deaths by Decedent's Country of Birth

British Columbia, 2009

Area	Province/Country	Deaths
Canada	**Total**	**20,988**
	British Columbia	8,466
	Saskatchewan	3,826
	Alberta	2,908
	Ontario	2,164
	Manitoba	2,018
	Quebec	741
	Nova Scotia	376
	New Brunswick	243
	Newfoundland & Labrador	144
	Prince Edward Island	55
	Yukon	22
	Northwest Territories & Nunavut	14
	Unknown Province	11
North and Central America	**Total**	**787**
	United States	683
	Other North and Central American Countries	104
South America		**85**
Europe	**Total**	**6,309**
	England	1,935
	Other United Kingdom	839
	Germany	695
	Netherlands	411
	Italy	346
	Scandinavian Countries	344
	Poland	288
	Hungary	182
	Ireland	145
	Russia	145
	Other European Countries	979
Asia and the Middle East	**Total**	**2,508**
	China	1,019
	India	598
	Philippines	191
	Hong Kong	155
	Vietnam	91
	Pakistan	78
	Korea	68
	Iran	55
	Japan	47
	Other Asian and the Middle Eastern Countries	206
Africa	**Total**	**199**
	South Africa	57
	Other African Countries	142
Oceania	**Total**	**195**
	Fiji	113
	Australia	48
	New Zealand	32
	Other Oceanic Countries	2
Unknown	**Total**	**156**
Total		**31,227**

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 2009. 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 2009 for both genders. Deaths in those two categories are further analysed in the following sections.

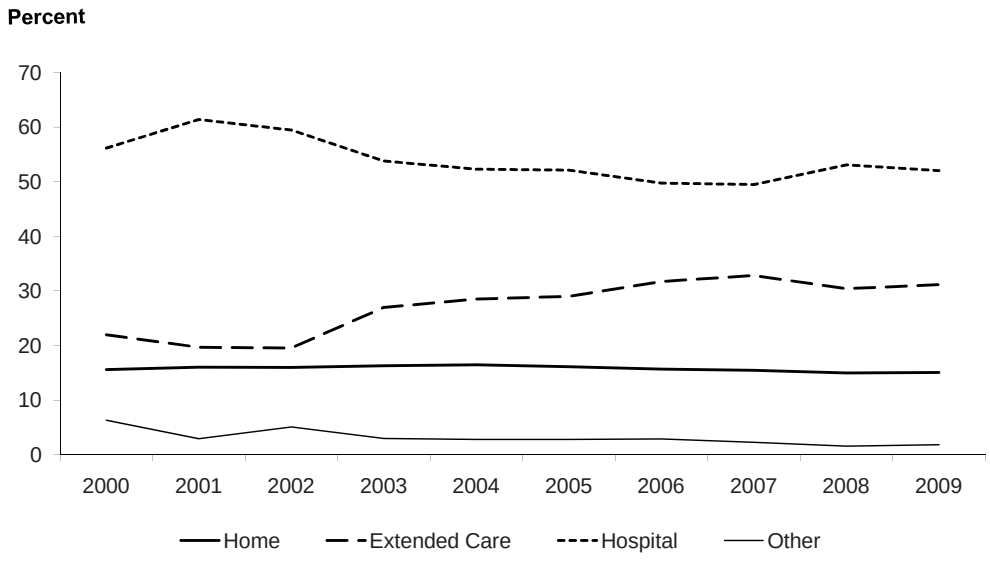
Vital Statistics Information Box

Place of Death for Deaths From Natural Causes
British Columbia, 2000 - 2009

Deaths from natural causes in 2000 to 2009 were examined to determine the place of death. The majority of these deaths to British Columbia residents occurred in hospital (53.8 % over the ten year period). 15.7 percent of deaths from natural causes occurred at home and 27.4 percent occurred in extended care facilities.

Place of Death	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2000-2009
Home	3,967	4,227	4,268	4,438	4,571	4,532	4,499	4,524	4,496	4,440	43,962
Extended Care	5,586	5,189	5,213	7,343	7,916	8,139	9,091	9,607	9,138	9,195	76,417
Hospital	14,303	16,179	15,876	14,641	14,525	14,639	14,268	14,484	15,945	15,356	150,216
Other and Unknown	1,612	775	1,353	813	776	788	826	671	476	536	8,626
Total	**25,468**	**26,370**	**26,710**	**27,235**	**27,788**	**28,098**	**28,684**	**29,286**	**30,055**	**29,527**	**279,221**

Percent of Deaths from Natural Causes by Place of Death
British Columbia, 2000 - 2009



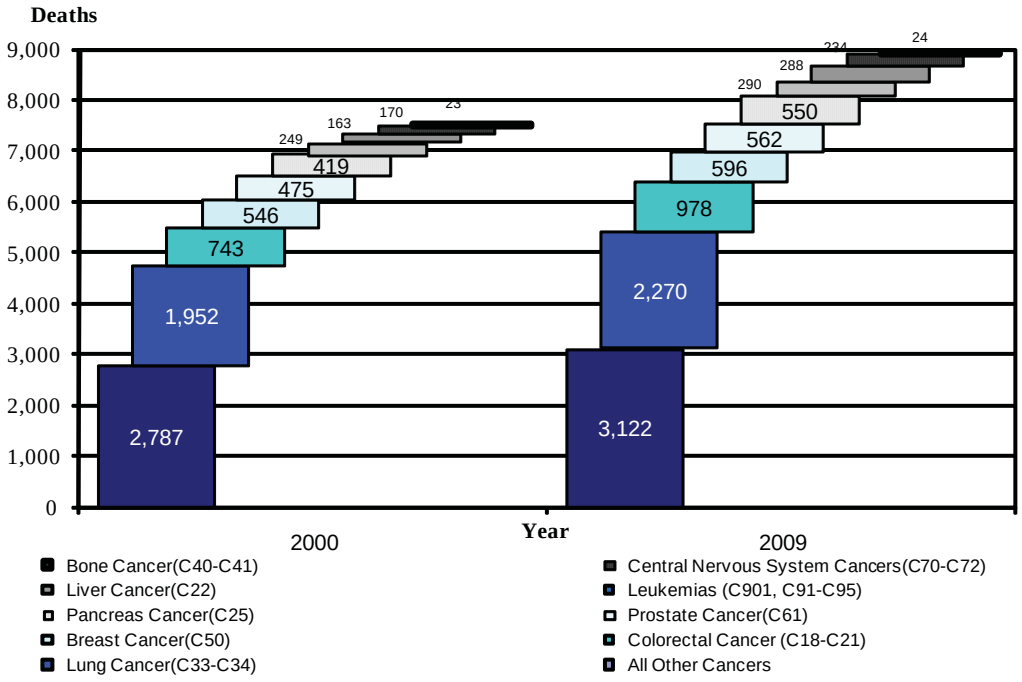
Note: The BC Vital Statistics Agency changed the way the place of death is recorded in 2008.

Vital Statistics Information Box

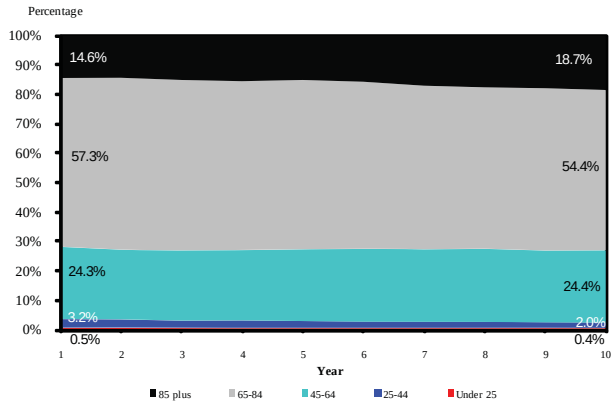
Cancer Deaths in British Columbia, 2000 to 2009

More British Columbians succumbed to Cancer or Malignant Neoplasms (ICD Codes C00-C97) than any other cause in 2009. The following charts illustrate the trends and changes in deaths caused by Cancer from 2000 to 2009. As illustrated, the proportion of deaths caused by specific types of Cancer has not changed substantially from 2000 to 2009. However, those dying of Cancer in 2009 are older than they were in 2000, 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, 2000 and 2009



Share of Cancer Deaths by Age Group 2000-2009



ASMR and PYLLSR, Cancer Deaths, British Columbia 2000 to 2009

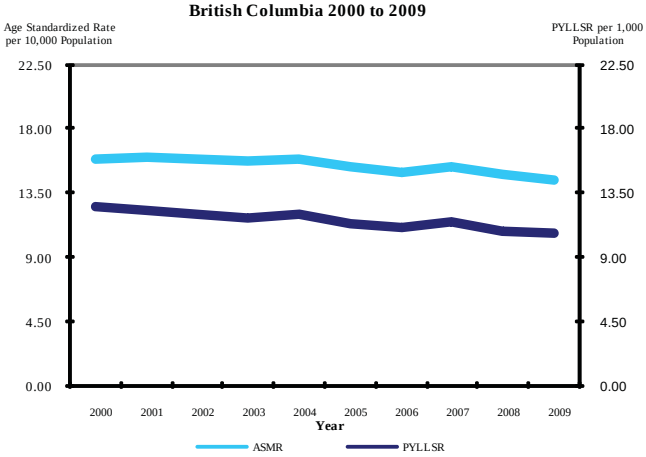


TABLE 21
CAUSES OF DEATH BY GENDER AND AGE
BRITISH COLUMBIA, 2009

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	-	-	-	22	117	71	107	320	2.0	1.12
		F	1	1	-	-	1	1	8	45	49	143	249	1.6	0.66
		T	3	1	1	-	1	1	30	162	120	250	569	1.8	0.87
C00-D48	Neoplasms	M	-	1	5	1	7	4	78	1,142	2,052	1,574	4,864	30.4	17.32
		F	1	4	1	1	4	8	107	1,050	1,530	1,535	4,241	27.8	12.62
		T	1	5	6	2	11	12	185	2,192	3,582	3,109	9,105	29.2	14.68
D50-D89	Diseases of blood and blood-forming organs,certain immune mechanisms	M	1	-	-	-	-	-	6	13	7	30	57	0.4	0.20
		F	1	-	-	1	-	1	3	7	16	27	56	0.4	0.16
		T	2	-	-	1	-	1	9	20	23	57	113	0.4	0.18
E00-E90	Endocrine/nutritional/metabolic diseases	M	1	2	1	1	1	1	16	122	229	261	635	4.0	2.26
		F	-	1	-	1	-	3	14	63	125	368	575	3.8	1.49
		T	1	3	1	2	1	4	30	185	354	629	1,210	3.9	1.85
F00-F99	Mental and behavioural disorders	M	-	-	-	-	-	-	5	60	80	323	468	2.9	1.59
		F	-	-	-	-	-	-	7	27	73	625	732	4.8	1.54
		T	-	-	-	-	-	-	12	87	153	948	1,200	3.8	1.58
G00-G99	Diseases of the nervous system	M	1	-	1	-	-	2	20	67	169	316	576	3.6	2.04
		F	-	2	-	1	1	3	13	70	137	508	735	4.8	1.79
		T	1	2	1	1	1	5	33	137	306	824	1,311	4.2	1.92
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	-	-	-	-	-	-	-	-	-	1	1	0.0	+
		F	-	-	-	-	-	-	-	-	-	-	-	-	-
		T	-	-	-	-	-	-	-	-	-	1	1	0.0	+
I00-I99	Diseases of the circulatory system	M	-	-	1	-	4	2	74	661	1,329	2,481	4,552	28.5	15.82
		F	-	1	-	1	-	-	29	221	752	3,734	4,738	31.1	10.71
		T	-	1	1	1	4	2	103	882	2,081	6,215	9,290	29.7	13.12
J00-J99	Diseases of the respiratory system	M	2	-	3	-	3	2	18	161	492	997	1,678	10.5	5.85
		F	1	3	-	-	-	-	16	146	366	1,188	1,720	11.3	4.19
		T	3	3	3	-	3	2	34	307	858	2,185	3,398	10.9	4.88
K00-K93	Diseases of the digestive system	M	-	-	-	-	-	1	23	195	184	241	644	4.0	2.23
		F	-	-	-	-	-	-	12	121	163	363	659	4.3	1.73
		T	-	-	-	-	-	1	35	316	347	604	1,303	4.2	1.97
L00-L99	Diseases of the skin and subcutaneous tissue	M	-	-	-	-	-	-	1	1	7	14	23	0.1	0.08
		F	-	-	-	-	-	1	-	4	9	27	41	0.3	0.11
		T	-	-	-	-	-	1	1	5	16	41	64	0.2	0.09
M00-M99	Diseases of the musculoskeletal system and connective tissue	M	-	-	-	-	1	-	2	15	14	25	57	0.4	0.20
		F	-	-	-	-	1	-	2	23	32	68	126	0.8	0.34
		T	-	-	-	-	2	-	4	38	46	93	183	0.6	0.28
N00-N99	Diseases of the genitourinary system	M	-	-	-	-	-	1	3	19	74	243	340	2.1	1.17
		F	-	-	-	-	-	-	2	15	83	282	382	2.5	0.89
		T	-	-	-	-	-	1	5	34	157	525	722	2.3	1.00
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	38	-	-	-	-	-	-	-	-	-	38	0.2	0.24
		F	47	-	-	1	-	-	-	1	-	-	49	0.3	0.33
		T	85	-	-	1	-	-	-	1	-	-	87	0.3	0.28
Q00-Q99	Congenital anomalies	M	9	1	1	-	-	3	8	10	7	4	43	0.3	0.20
		F	15	1	-	-	1	2	3	9	2	2	35	0.2	0.18
		T	24	2	1	-	1	5	11	19	9	6	78	0.2	0.19
R00-R99	Symptoms, signs and ill-defined conditions, unknown causes	M	15	4	2	2	15	29	128	206	81	72	554	3.5	2.23
		F	13	2	-	3	4	11	55	100	43	105	336	2.2	1.15
		T	28	6	2	5	19	40	183	306	124	177	890	2.9	1.69
V01-Y98	External causes	M	1	1	2	7	46	68	311	386	147	172	1,141	7.1	4.65
		F	2	1	1	1	7	22	114	121	84	206	559	3.7	1.86
		T	3	2	3	8	53	90	425	507	231	378	1,700	5.4	3.23
	All causes	**M**	**70**	**9**	**17**	**11**	**77**	**113**	**715**	**3,175**	**4,943**	**6,861**	**15,991**	**100.0**	**57.20**
		F	**81**	**16**	**2**	**10**	**20**	**52**	**386**	**2,023**	**3,465**	**9,181**	**15,236**	**100.0**	**39.76**
	PROVINCIAL TOTAL	**T**	**151**	**25**	**19**	**21**	**97**	**165**	**1,101**	**5,198**	**8,408**	**16,042**	**31,227**	**100.0**	**47.82**

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 2004-2008 period and the year 2009, 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 2009 ASMR rank.

For 2009, the 12 leading causes of death shown in Table 22 were responsible for 85.1 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 disease and, cerebrovascular diseases. For 2009, these three leading causes account for 57.0 percent of all deaths.

Figure 35 shows the number of deaths from Table 22 in 2009 graphically. It shows clearly the impact of the top three categories, which cause 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 certain conditions originating in the perinatal period with 56.3 percent of the deaths attributable to this cause. The second highest cause of infant deaths was congenital malformations and chromosome abnormalities. Males accounted for 46.4 percent of the deaths among those under 1 year of age. Deaths occurred in the first seven days after birth accounted for 59.6 percent of all infant deaths and 68.2 percent occurred within the first 28 days after birth (see Table 27). 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 males. Malignant neoplasms and metabolic disorders claimed slightly more male than female lives. Other disorders of the nervous system claimed more females than males, whereas pneumonia/influenza 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 Accidental 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 the 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 35.8 percent of deaths for males and 51.6 percent of deaths for females in this age group.

Between 65 and 84 years of age, 36.3 percent of the deaths were due to malignant neoplasms, followed by cardiovascular disease, which caused 19.8 percent of deaths. For those 85 years and older, the order of those two cause categories was reversed with cardiovascular disease causing 28.5 percent of deaths and malignant neoplasms causing 15.0 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 2004-2008, as well as in 2009 (see Table 22 and Figure 35). Notwithstanding, the ASMR 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, 2004–2008 AND 2009

Cause of Death	ICD-10 Code(s)	2004–2008 Number	Rank	ASMR	Rank	2009 Number	Rank	ASMR	Rank
Malignant neoplasms	C00-C97	42,961	1	15.22	1	8,914	1	14.39	1
Cardiovascular disease	I00-I51	34,093	2	10.87	2	6,586	2	9.34	2
Cerebrovascular diseases	I60-I69	11,475	3	3.59	3	2,299	3	3.17	3
Chronic Pulmonary Disease	J40-J44	6,636	4	2.20	5	1,413	4	2.10	4
Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	6,607	5	2.69	4	1,149	6	2.06	5
Pneumonia/Influenza	J09-J181, J188, J189	6,579	6	2.00	6	1,292	5	1.77	6
Diabetes mellitus	E10-E14	5,060	7	1.72	7	962	8	1.46	7
Vascular/senile dementia	F01, F03	3,952	9	1.15	9	1,028	7	1.31	8
Other diseases of digestive system	K00-K67, K80-K93	4,172	8	1.35	8	903	9	1.31	9
Other disorders of the nervous system	G00-G25, G31-G99	3,179	11	1.12	10	635	12	1.02	10
Other diseases of the respiratory system	J00-J06, J182, J20-J39, J45-J98	3,164	12	1.03	12	693	11	1.02	11
Urinary system diseases	N00-N39, N990, N991, N995	3,433	10	1.07	11	699	10	0.97	12
Other causes[1]		22,074		8.13		4,654		7.91	
TOTAL (All causes of death)		**153,385**		**52.14**		**31,227**		**47.82**	

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 2009 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, 2009

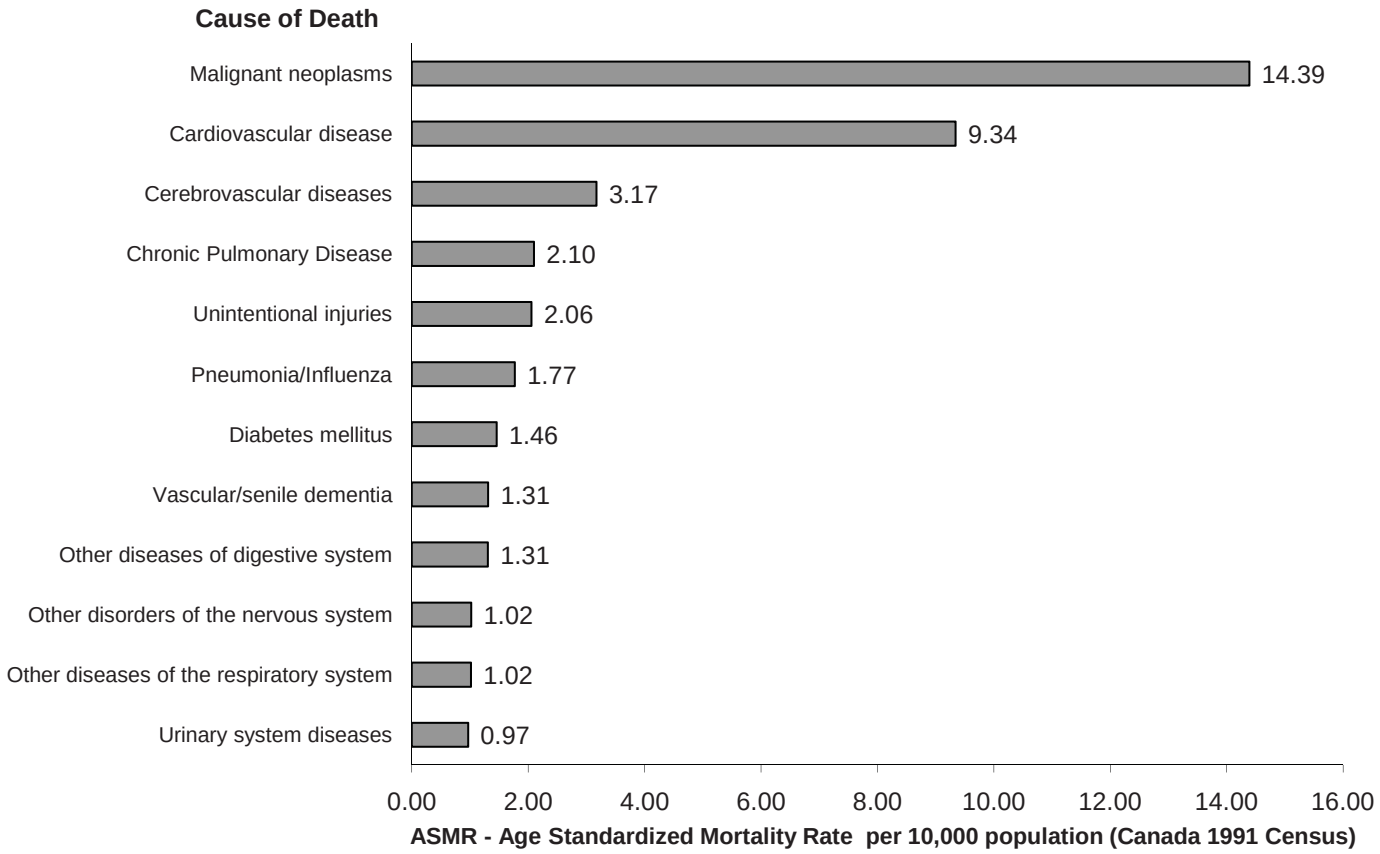


TABLE 23
LEADING CAUSES OF DEATH BY AGE AND GENDER
BRITISH COLUMBIA, 2009

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	38	54.3	47	58.0	85	56.3
2. Congenital malformations and chromosome abnormalities	Q00-Q99	9	12.9	15	18.5	24	15.9
3. Sudden infant death syndrome (SIDS)[2]	R95	6	8.6	4	4.9	10	6.6
4. Certain infectious and parasitic diseases	A00-B99	2	2.9	1	1.2	3	2.0
5. Pneumonia/Influenza	J09-J181, J188, J189	2	2.9	-	-	2	13
Other causes[1]		13	18.6	14	17.3	27	17.9
All causes		**70**	**100.0**	**81**	**100.0**	**151**	**100.0**
1-14 Years Old							
1. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	10	27.0	3	10.7	13	20.0
2. Malignant neoplasms	C00-C97	7	18.9	5	17.9	12	18.5
3. Metabolic disorders	E70-E89	4	10.8	1	3.6	5	7.7
4. Other disorders of the nervous system	G00-G25, G31-G99	1	2.7	3	10.7	4	6.2
5. Pneumonia/Influenza	J09-J181 J188, J189	2	5.4	2	7.1	4	6.2
Other causes[1]		13	35.1	14	50.0	27	41.5
All causes		**37**	**100.0**	**28**	**100.0**	**65**	**100.0**
15-24 Years Old							
1. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	61	32.1	21	29.2	82	31.3
2. Suicide	X60-X84, Y870	35	18.4	6	8.3	41	15.6
3. Malignant neoplasms	C00-C97	11	5.8	11	15.3	22	8.4
4. Homicide	X85-Y09, Y871	16	8.4	2	2.9	18	6.9
5. Other disorders of the nervous system	G00-G25, G31-G99	2	1.1	4	5.6	6	2.3
Other causes[1]		65	34.2	28	38.9	93	35.5
All causes		**190**	**100.0**	**72**	**100.0**	**262**	**100.0**
25-44 Years Old							
1. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	152	21.3	61	15.8	213	19.3
2. Malignant neoplasms	C00-C97	77	10.8	105	27.2	182	16.5
3. Suicide	X60-X84, Y870	126	17.6	41	10.6	167	15.2
4. Cardiovascular disease	I00-I51	55	7.7	21	5.4	76	6.9
5. Homicide	X85-Y09,Y871	27	3.8	8	2.1	35	3.2
Other causes[1]		278	38.9	150	38.9	428	38.9
All causes		**715**	**100.0**	**386**	**100.0**	**1,101**	**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.
[2]The BC Coroners' Service classifies SIDS deaths as "SUDI" - please see glossary (under "SIDS") for explanation.

TABLE 23 – *concluded*

LEADING CAUSES OF DEATH BY AGE AND GENDER

BRITISH COLUMBIA, 2009

Cause of Death	ICD-10 Code(s)	Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent
45-64 Years Old							
1. Malignant neoplasms	C00-C97	1,136	35.8	1,043	51.6	2,179	41.9
2. Cardiovascular disease	I00-I51	544	17.1	149	7.4	693	13.3
3. Unintentional injuries	V01-X59, Y40-Y86, Y880-Y883	232	7.3	77	3.8	309	5.9
4. Diseases of liver	K70-K76	127	4.0	73	3.6	200	3.8
5. Suicide	X60-84, Y870	141	4.4	34	1.7	175	3.4
Other causes[1]		995	31.3	647	32.0	1,642	31.6
All causes		**3,175**	**100.0**	**2,023**	**100.0**	**5,198**	**100.0**
65-84 Years Old							
1. Malignant neoplasms	C00-C97	2,717	36.4	2,130	36.2	4,847	36.3
2. Cardiovascular disease	I00-I51	1,580	21.2	1,068	18.2	2,648	19.8
3. Cerebrovascular diseases	I60-I69	451	6.0	436	7.4	887	6.6
4. Chronic Pulmonary Disease	J40-J44	399	5.3	365	6.2	764	5.7
5. Diabetes mellitus	E10-E14	295	4.0	207	3.5	502	3.8
Other causes[1]		2,022	27.1	1,674	28.5	3,696	27.7
All causes		**7,464**	**100.0**	**5,880**	**100.0**	**13,344**	**100.0**
85 Years and Older							
1. Cardiovascular disease	I00-I51	1,185	27.3	1,976	29.2	3,161	28.5
2. Malignant neoplasms	C00-C97	819	18.9	852	12.6	1,671	15.0
3. Cerebrovascular diseases	I60-I69	410	9.4	836	12.4	1,246	11.2
4. Pneumonia/Influenza	J09-J181, J188, J189	293	6.8	450	6.7	743	6.7
5. Vascular/senile dementia	F01, F03	218	5.0	509	7.5	727	6.5
Other causes[1]		1,415	32.6	2,143	31.7	3,558	32.0
All causes		**4,340**	**100.0**	**6,766**	**100.0**	**11,106**	**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 2007: the most recent year for which information on Canadian infant mortality rates is available (see Table 5). There were 151 infant deaths in BC in 2009 or 3.36 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 2009 by birth weight and maternal age group. The first column has the mother's age group ranging from less than 20 years 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, 1.16 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 9.06 per 1,000 live births, and infants who weigh less than 1,500 grams had an infant mortality rate of 193.95 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 151 infant deaths in 2009, there were 39 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, 46.4 percent were extremely premature (less than 28 weeks) with low birth weight (less than 2,500 grams), 63.6 percent were low birth weight, 67.5 percent were premature (less than 37 weeks) and 59.6 percent were both low birth weight and premature.

Table 26 shows infant mortality in each LHA of the infants' usual residence, for 2004-2008 and for the year 2009. The left two columns show the LHA number and name. The three columns for 2004-2008 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 6 LHAs with statistically significant ratios (4 high and 2 low). For 2009, 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 151 infant deaths and 429 stillbirths in 2009. More than half (59.6 percent) of infant deaths in 2009 occurred in the early neonatal period, of those, 96.7 percent were due to congenital anomalies or perinatal conditions. In 2009, perinatal conditions were the cause of 56.3 percent of infant deaths and 97.7 percent of stillbirths.

TABLE 24
INFANT MORTALITY BY AGE OF MOTHER AND BIRTH WEIGHT
BRITISH COLUMBIA, 2009

Age of Mother	Birth Weight (in Grams)				Total		
	<1500	1500–2499	2500+	N.S.	Number	Percent	Rate
<20	5	2	4	-	11	7.3	7.70
20-24	14	1	7	-	22	14.6	3.55
25-29	19	8	17	1	45	29.8	3.55
30-34	24	2	13	2	41	27.2	2.84
35-39	7	4	5	-	16	10.6	1.92
40+	8	2	3	-	13	8.6	6.98
N.S.	-	-	-	3	3	2.0	
TOTAL	**77**	**19**	**49**	**6**	**151**	**100.0**	**3.36**
Percent	**51.0**	**12.6**	**32.5**	**4.0**	**100.0**		
Rate	**193.95**	**9.06**	**1.16**		**3.36**		

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

TABLE 25
INFANT MORTALITY BY GESTATIONAL AGE AND BIRTH WEIGHT
BRITISH COLUMBIA, 2009

Gestational Age (In Weeks)	Birth Weight (in Grams)				Total		
	<1500	1500–2499	2500+	N.S.	Number	Percent	Rate
<20	3	-	-	-	3	2.0	+
20-27	67	-	-	1	68	45.0	397.66
28-36	7	13	10	1	31	20.5	9.79
37-41	-	6	39	1	46	30.5	1.12
42+	-	-	-	-	-	-	-
N.S.	-	-	-	3	3	2.0	
TOTAL	**77**	**19**	**49**	**6**	**151**	**100.0**	**3.36**
Percent	**51.0**	**12.6**	**32.5**	**4.0**	**100.0**		
Rate	**193.95**	**9.06**	**1.16**		**3.36**		

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

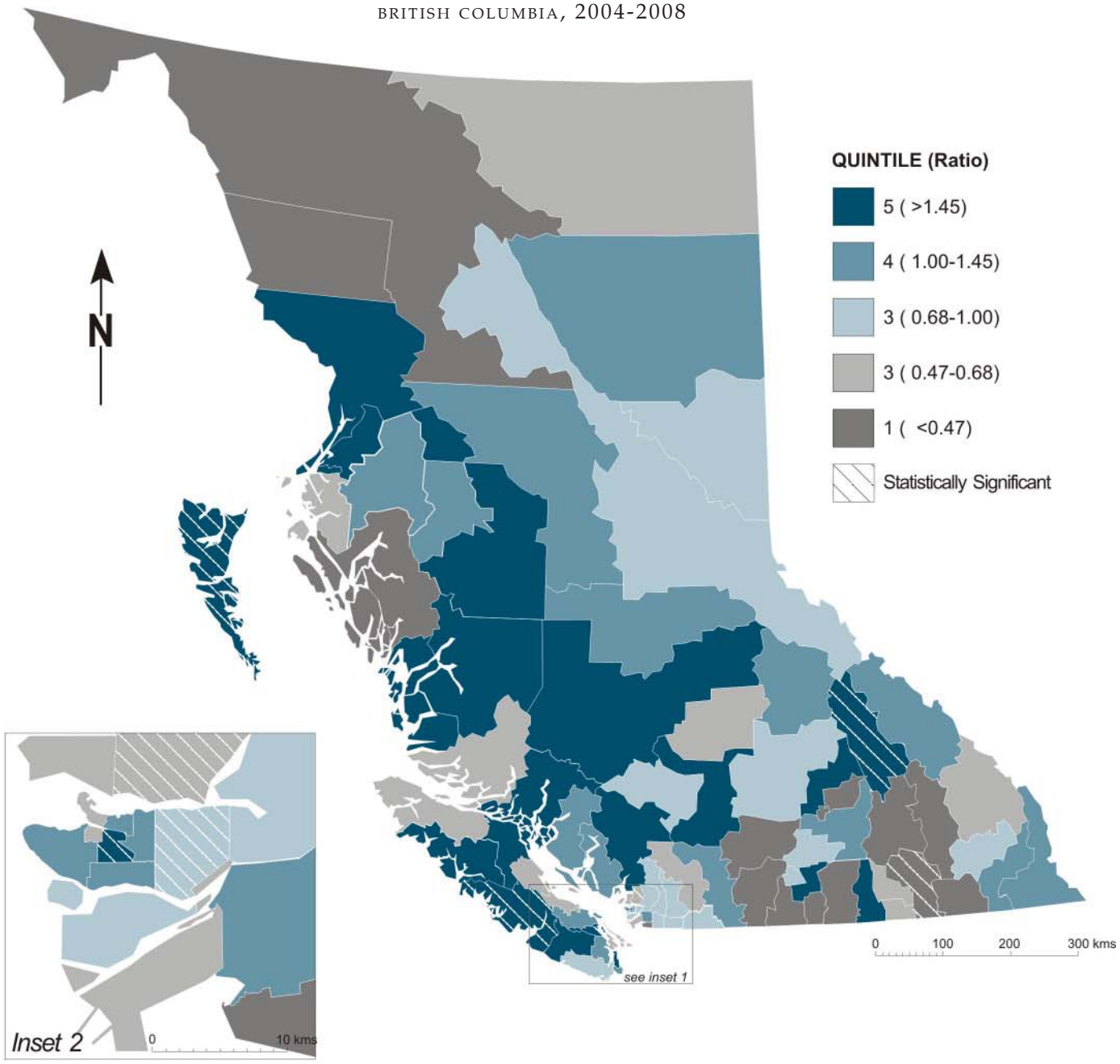
Local Health Area		2004–2008 Observed Deaths	Ratio	(p)	Rate	2009 Age at Death (in Days) 0–6	0–27	28–364	Total Number	Rate
001	Fernie	3	1.11		4.48	1	1	-	1	6.02
002	Cranbrook	5	1.05		4.26	-	-	-	-	-
003	Kimberley	1	0.72		2.91	1	1	-	1	12.05
004	Windermere	1	0.61		2.46	1	1	-	1	9.90
005	Creston	-	-		-	-	-	1	1	7.41
006	Kootenay Lake	-	-		-	-	-	-	-	-
007	Nelson	-	-	*	-	1	1	-	1	4.07
009	Castlegar	1	0.55		2.21	-	-	-	-	-
010	Arrow Lakes	-	-		-	-	-	-	-	-
011	Trail	2	0.65		2.64	-	-	-	-	-
012	Grand Forks	4	2.97		12.01	-	-	-	-	-
013	Kettle Valley	-	-		-	-	-	-	-	-
014	Southern Okanagan	1	0.38		1.56	-	-	-	-	-
015	Penticton	10	1.58		6.37	-	-	-	-	-
016	Keremeos	-	-		-	-	-	-	-	-
017	Princeton	-	-		-	-	-	-	-	-
018	Golden	2	1.43		5.78	-	-	-	-	-
019	Revelstoke	5	3.32	*	13.44	-	-	-	-	-
020	Salmon Arm	9	1.76		7.11	-	-	-	-	-
021	Armstrong - Spallumcheen	-	-		-	1	1	-	1	13.16
022	Vernon	15	1.40		5.66	2	3	1	4	6.16
023	Central Okanagan	29	0.97		3.92	2	2	-	2	1.18
024	Kamloops	17	0.88		3.55	2	2	1	3	2.74
025	100 Mile House	1	0.49		1.97	1	1	-	1	9.09
026	North Thompson	1	1.08		4.39	-	-	-	-	-
027	Cariboo - Chilcotin	11	1.89		7.63	1	1	-	1	3.55
028	Quesnel	6	1.22		4.93	-	-	1	1	3.88
029	Lillooet	1	0.99		3.98	-	-	-	-	-
030	South Cariboo	3	2.49		10.07	-	-	-	-	-
031	Merritt	-	-		-	1	1	-	1	7.69
032	Hope	2	1.34		5.43	-	-	1	1	14.49
033	Chilliwack	16	0.82		3.33	-	2	-	2	1.85
034	Abbotsford	32	0.95		3.86	3	3	2	5	2.83
035	Langley	21	0.80		3.24	2	2	1	3	2.04
037	Delta	12	0.66		2.68	-	-	-	-	-
038	Richmond	27	0.82		3.31	2	2	1	3	1.68
040	New Westminster	8	0.60		2.45	2	2	-	2	2.73
041	Burnaby	30	0.68	*	2.77	6	7	2	9	3.80
042	Maple Ridge	13	0.69		2.80	1	1	-	1	1.00
043	Coquitlam	36	0.87		3.50	3	3	1	4	1.76
044	North Vancouver	14	0.56	*	2.28	3	3	-	3	2.46
045	West Vancouver-Bowen Is.	3	0.52		2.12	-	-	-	-	-
046	Sunshine Coast	5	1.24		5.03	1	2	-	2	9.39
047	Powell River	3	1.11		4.48	-	-	-	-	-
048	Howe Sound	13	1.48		5.99	1	1	1	2	4.25
049	Bella Coola Valley	3	3.13		12.66	-	-	-	-	-
050	Queen Charlotte	4	3.91	+	15.81	-	-	-	-	-
051	Snow Country	1	8.53		34.48	-	-	-	-	-
052	Prince Rupert	2	0.58		2.34	2	2	-	2	11.11
053	Upper Skeena	2	1.54		6.23	-	-	-	-	-
054	Smithers	6	1.36		5.51	-	-	-	-	-
055	Burns Lake	3	1.69		6.85	-	-	-	-	-
056	Nechako	6	1.37		5.55	2	2	1	3	12.99
057	Prince George	18	0.82		3.31	2	2	3	5	4.41
059	Peace River South	6	0.96		3.89	2	4	-	4	11.90
060	Peace River North	13	1.16		4.68	1	1	-	1	1.62
061	Greater Victoria	42	1.17		4.71	1	1	2	3	1.63
062	Sooke	12	0.91		3.68	1	1	1	2	2.64
063	Saanich	14	1.77		7.15	-	-	-	-	-
064	Gulf Islands	1	0.57		2.31	-	-	2	2	24.39
065	Cowichan	14	1.32		5.34	1	2	2	4	7.37
066	Lake Cowichan	2	2.18		8.81	-	-	1	1	23.81
067	Ladysmith	6	1.98		8.01	-	-	-	-	-
068	Nanaimo	19	1.09		4.41	3	3	4	7	7.58
069	Qualicum	3	0.60		2.43	2	2	-	2	8.44
070	Alberni	18	2.75	*	11.14	-	1	-	1	2.81
071	Courtenay	6	0.62		2.50	1	3	3	6	12.15
072	Campbell River	11	1.48		5.97	1	1	-	1	2.42
075	Mission	8	0.88		3.55	1	2	1	3	6.61
076	Agassiz - Harrison	1	0.51		2.05	-	-	-	-	-
077	Summerland	1	0.70		2.82	-	-	-	-	-
078	Enderby	-	-		-	-	-	-	-	-
080	Kitimat	-	-		-	-	-	-	-	-
081	Fort Nelson	1	0.48		1.95	-	-	-	-	-
083	Central Coast	2	3.34		13.51	-	-	-	-	-
084	Vancouver Island West	1	2.06		8.33	-	-	-	-	-
085	Vancouver Island North	2	0.65		2.61	1	1	-	1	6.29
087	Stikine	-	-		-	-	-	-	-	-
088	Terrace	5	1.01		4.09	1	1	-	1	3.86
092	Nisga'a	1	1.54		6.21	-	-	-	-	-
094	Telegraph Creek	-	-		-	-	-	-	-	-
161	Vancouver - City Centre	12	0.67		2.70	-	-	4	4	3.77
162	Vancouver - Downtown E.side	10	1.07		4.33	1	1	-	1	1.80
163	Vancouver - North East	26	1.17		4.73	-	-	2	2	1.81
164	Vancouver - Westside	23	1.01		4.08	5	6	-	6	5.35
165	Vancouver - Midtown	31	1.51	*	6.11	7	7	1	8	7.60
166	Vancouver - South	32	1.20		4.86	5	5	1	6	4.61
201	Surrey	114	1.19		4.80	12	12	7	19	3.66
202	South Surrey/White Rock	5	0.46		1.86	-	-	-	-	-
	PROVINCIAL TOTAL	**850**	**1.00**		**4.04**	**90**	**103**	**48**	**151**	**3.36**

Notes for this table follow the map.

FIGURE 36

INFANT MORTALITY BY LOCAL HEALTH AREA

BRITISH COLUMBIA, 2004-2008



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, 2009

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	0.44
- of the eye, ear, face & neck	Q10-Q18	-	-	-	-	-	-	-
- of the heart and circulatory system	Q20-Q28	4	1	6	11	2.45	5	1.10
- of the respiratory system	Q30-Q34	-	-	1	1	0.22	-	-
- of the digestive system	Q35-Q45	-	-	-	-	-	-	-
- of the genital organs	Q50-Q56	-	-	-	-	-	-	-
- of the urinary system	Q60-Q64	2	-	-	2	0.45	-	-
- of the musculoskeletal system	Q65-Q79	4	-	1	5	1.11	-	-
Other and multiple system syndromes	Q80-Q89	1	-	-	1	0.22	1	0.22
Chromosomal anomalies	Q90-Q99	2	1	1	4	0.89	-	-
Total deaths due to congenital anomalies	**Q00-Q99**	**13**	**2**	**9**	**24**	**5.34**	**8**	**1.76**
Perinatal conditions								
Infant affected by maternal factors	P00-P04	31	1	-	32	7.13	116	25.59
Premature/postmature and fetal growth disorders	P05-P08	19	2	1	22	4.90	16	3.53
Birth trauma	P10-P15	-	-	-	-	-	-	-
Respiratory and cardiovascular disorders	P20-P29	6	-	-	6	1.34	9	1.99
Infections specific to the perinatal period	P35-P39	3	1	-	4	0.89	1	0.22
Hemorrhage and hematological disorders	P50-P61	-	1	-	1	0.22	1	0.22
Transitory endocrine and metabolic disorders	P70-P74	-	-	-	-	-	-	-
Digestive system disorders of fetus and newborn	P75-P78	-	3	-	3	0.67	-	-
Other disorders originating in the perinatal period	P80-P94, P96	15	2	-	17	3.79	217	47.86
Fetal death of unknown cause	P95	-	-	-	-	-	59	13.01
Total deaths due to perinatal conditions	**P00-P96**	**74**	**10**	**1**	**85**	**18.93**	**419**	**92.42**
Pneumonia/influenza	J09-J18.1, J18.8-J18.9	-	-	2	2	0.45	-	-
Sudden infant death syndrome (SIDS)[3]	R95	-	-	10	10	2.23	-	-
Other causes[3]		3	1	26	30	6.68	2	0.44
TOTAL		**90**	**13**	**48**	**151**	**33.62**	**429**	**94.62**
PERCENT		**59.6**	**8.6**	**31.8**	**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. The BC Coroners' Service classifies SIDS deaths as "SUDI" - please see glossary (under "SIDS") for explanation.
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 from 1994 to 2009 broken out by gender and six age groups. 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 2004-2009 most deaths due to HIV disease in BC occurred in individuals who were between 40 and 49 years of age.

Table 29 shows that the yearly numbers of HIV deaths over the past ten years numbers have fluctuated with no significantly increasing or decreasing trend. The HSDA 32-Vancouver had the highest mortality rate (13.72 deaths per 100,000 population), from 1994 to 2009. In 2009, there were 31 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, 2004–2009

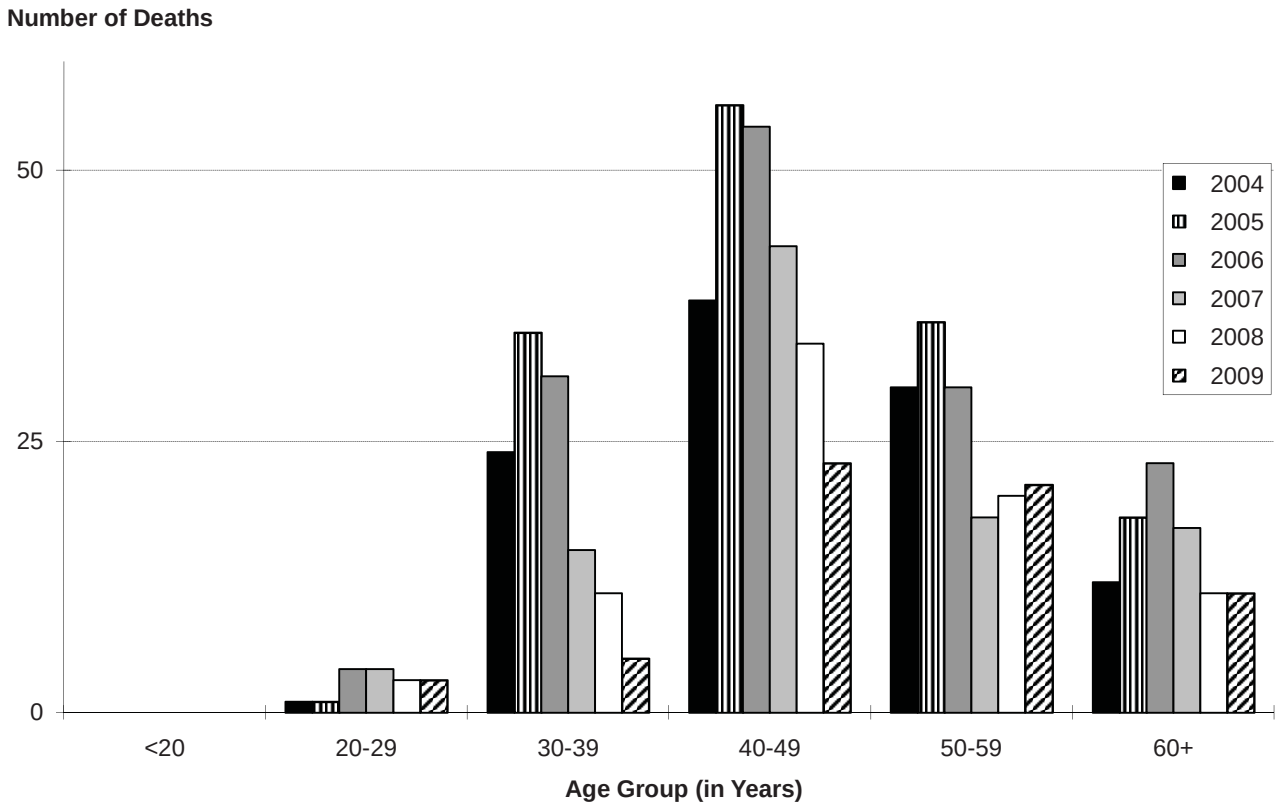


TABLE 28

DEATHS DUE TO HIV DISEASE BY GENDER AND AGE GROUP

BRITISH COLUMBIA, 1994–2009

Year of Death	Gender	Age at Death (in Years) <20	20–29	30–39	40–49	50–59	60+	Total
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	107	73	34	10	236
	F	-	4	6	6	-	1	17
	T	3	13	113	79	34	11	253
	Percent	1.2	5.1	44.7	31.2	13.4	4.3	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
2009	M	-	2	3	18	19	11	53
	F	-	1	2	5	2	-	10
	T	-	3	5	23	21	11	63
	Percent	-	4.8	7.9	36.5	33.3	17.5	100.0
1994-2009	**M**	**4**	**83**	**684**	**708**	**349**	**163**	**1,991**
	F	**2**	**43**	**99**	**114**	**39**	**19**	**316**
	T	**6**	**126**	**783**	**822**	**388**	**182**	**2,307**
	Percent	**0.3**	**5.5**	**33.9**	**35.6**	**16.8**	**7.9**	**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, 1994–2009

	Health Service Delivery Area	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	1994–2009 Number	Percent	Rate
11	East Kootenay	-	1	-	2	-	-	-	1	-	1	-	1	-	-	-	-	6	0.3	0.49
12	Kootenay Boundary	1	3	2	-	1	1	-	-	2	-	1	-	2	-	2	-	15	0.7	1.20
13	Okanagan	6	9	7	2	4	2	3	3	3	6	2	5	11	1	2	2	68	2.9	1.36
14	Thompson Cariboo Shuswap	3	-	3	2	2	2	2	6	2	4	6	2	4	3	1	3	45	2.0	1.32
21	Fraser East	7	6	7	1	5	3	3	2	4	1	5	6	4	1	3	2	60	2.6	1.50
22	Fraser North	25	21	15	8	6	7	11	8	10	10	8	8	10	7	6	3	163	7.1	1.90
23	Fraser South	18	17	23	6	4	11	7	11	10	8	5	12	9	13	5	5	164	7.1	1.69
31	Richmond	6	4	4	5	2	2	1	1	-	1	2	3	1	1	2	1	36	1.6	1.31
32	Vancouver	203	182	146	66	65	53	73	60	62	74	50	78	67	42	27	31	1,279	55.4	13.72
33	North Shore/ Coast Garibaldi	15	12	11	7	5	5	3	3	2	6	3	7	5	5	7	2	98	4.2	2.32
41	South Vancouver Island	28	17	21	10	10	13	7	9	3	8	9	9	17	11	11	6	189	8.2	3.43
42	Central Vancouver Island	13	14	6	4	3	4	8	4	4	4	5	6	3	6	4	5	93	4.0	2.42
43	North Vancouver Island	3	2	1	1	-	-	4	2	-	1	2	3	2	-	2	-	23	1.0	1.25
51	Northwest	-	2	1	-	-	-	-	-	-	-	1	2	-	2	3	1	12	0.5	0.92
52	Northern Interior	2	4	5	2	2	-	-	1	3	3	5	4	7	5	2	2	47	2.0	1.99
53	Northeast	1	1	-	-	1	-	-	-	1	-	1	-	-	-	1	-	6	0.3	0.59
	N.S.	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	3	0.1	
	PROVINCIAL TOTAL	**331**	**295**	**253**	**117**	**110**	**103**	**122**	**111**	**106**	**127**	**105**	**146**	**142**	**97**	**79**	**63**	**2,307**	**100.0**	**3.53**

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, deaths due to suicide or homicide, and deaths 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 2009, there were 1,700 deaths due to external causes or approximately 54 external cause deaths for each 1,000 deaths in BC (see Table 30).

Of the 1,700 deaths:

- 452 were suicides
- 252 were motor vehicle accidents
- 417 were unintentional falls
- 270 were unintentional poisonings
- 31 were accidental drownings
- 73 were homicides
- 119 were due to other external causes

Males accounted for 67.1 percent of deaths by external causes as shown in Table 30. The leading four causes of external deaths in males in 2009 (in ASMR rank order) were suicide (1.50), unintentional poisoning (0.79), motor vehicle accidents (0.77), and unintentional falls (0.72). For females, the leading four (in ASMR rank order) were accidental falls (0.49), suicide (0.40), accidental poisoning (0.35), and motor vehicle accidents (0.28).

Table 31 shows the allocation of external death causes according to the LHA of the deceased's usual residence. The highest ASMRs in 2009 are found in the following LHAs (with 5 or more deaths): Ladysmith (11.19), Armstrong - Spallumcheen (9.05), Cariboo - Chilcotin (9.04), Vancouver Island North (9.00), and Vancouver - Downtown Eastside (7.99).

Table 32 shows the number of deaths from suicide classified by month of occurrence and by gender. Percentages across months are also given. In 2009, there were about 3.8 times more male suicides than female suicides. The data for 2009 shows that April was the month with the fewest number of suicides (26) while July was the month with the highest number of suicides (51).

Coroners' investigations into "externally caused" deaths can be lengthy, resulting in delays in determining the final causes. For this reason, recent year counts and rates may be underestimated and therefore should be interpreted with caution.

TABLE 30
EXTERNAL CAUSES OF DEATH BY GENDER
BRITISH COLUMBIA, 2009

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	184	0.77	68	0.28	252	0.52
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	16	0.07	3	0.01	19	0.04
Accidental drowning (inc water transport)	V90, V92, W65-W74	26	0.10	5	0.02	31	0.06
Accidental falls	W00-W19	203	0.72	214	0.49	417	0.60
Accident caused by machinery	W24, W28-W31	1	-	-	-	1	-
Accidental firearm discharge	W32-W34	1	-	-	-	1	-
Exposure to smoke, fire and flames	X00-X09	17	0.06	15	0.06	32	0.06
Accidental poisoning	X40-X49	185	0.79	85	0.35	270	0.57
All other accidents	W20-W23, W25-W27, W35-W64, W75-W99, X10-X39, X50-X59, Y35-Y36, Y40-Y84, Y88	73	0.27	46	0.13	119	0.20
Suicide	X60-X84, Y870	357	1.50	95	0.40	452	0.94
Homicide	X85-Y09, Y871	56	0.27	17	0.08	73	0.18
External events of undetermined intent	Y10-Y34, Y872	14	0.06	10	0.04	24	0.05
Sequelae of other external causes	Y86, Y89	8	0.03	1	-	9	0.02
TOTAL		**1,141**	**4.65**	**559**	**1.86**	**1,700**	**3.23**

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	-	1	3	-	-	9	5.37
002	Cranbrook	5	-	2	6	1	-	5	-	1	20	5.97
003	Kimberley	2	-	-	2	-	-	1	-	1	6	6.43
004	Windermere	2	-	-	3	-	-	1	-	-	6	4.04
005	Creston	1	-	-	4	-	-	1	1	1	8	4.08
006	Kootenay Lake	1	-	-	2	-	-	-	-	-	3	6.69
007	Nelson	1	-	-	4	1	1	2	-	-	9	3.16
009	Castlegar	-	-	-	1	-	-	2	-	1	4	2.85
010	Arrow Lakes	-	-	-	-	-	-	2	1	1	4	3.99
011	Trail	-	-	1	2	-	-	3	-	-	6	2.69
012	Grand Forks	-	-	-	2	-	-	3	-	-	5	4.04
013	Kettle Valley	1	-	1	-	-	-	1	-	-	3	6.87
014	Southern Okanagan	2	-	-	6	-	-	3	-	2	13	3.25
015	Penticton	3	-	7	13	1	-	5	1	1	31	5.33
016	Keremeos	1	-	-	-	-	-	-	-	1	2	2.43
017	Princeton	-	-	-	-	-	-	-	-	-	-	-
018	Golden	-	-	-	-	-	-	1	-	-	1	1.58
019	Revelstoke	1	1	-	-	-	-	2	-	1	5	5.64
020	Salmon Arm	6	2	2	4	-	1	2	-	-	17	4.55
021	Armstrong - Spallumcheen	2	-	1	1	-	-	2	-	1	7	9.05
022	Vernon	8	1	5	6	-	4	9	1	3	37	4.07
023	Central Okanagan	15	2	11	23	1	1	11	2	4	70	2.96
024	Kamloops	9	2	8	10	1	1	13	1	8	53	4.03
025	100 Mile House	6	-	-	2	-	1	1	1	1	12	6.08
026	North Thompson	2	-	-	1	-	-	-	-	-	3	5.07
027	Cariboo - Chilcotin	3	-	2	4	-	-	10	1	6	26	9.04
028	Quesnel	2	-	1	-	1	1	2	-	3	10	4.28
029	Lillooet	-	-	-	1	-	-	-	-	-	1	1.74
030	South Cariboo	1	-	2	2	-	-	-	-	2	7	7.95
031	Merritt	1	-	1	2	-	-	5	-	1	10	7.06
032	Hope	-	-	-	1	-	-	-	-	-	1	0.67
033	Chilliwack	1	1	5	9	1	2	6	-	5	30	2.98
034	Abbotsford	6	-	9	5	1	1	11	7	1	41	2.92
035	Langley	10	1	2	14	-	-	13	2	5	47	3.15
037	Delta	8	-	6	3	-	-	5	-	2	24	2.39
038	Richmond	2	-	2	8	-	-	7	4	3	26	1.13
040	New Westminster	-	-	2	8	1	1	3	-	2	17	2.14
041	Burnaby	3	1	5	14	2	-	19	7	5	56	2.13
042	Maple Ridge	4	-	7	6	-	1	10	4	1	33	3.56
043	Coquitlam	6	-	5	11	-	-	15	-	7	44	1.89
044	North Vancouver	2	-	6	8	2	1	14	2	2	37	2.17
045	West Vancouver-Bowen Is.	1	-	3	2	-	-	4	1	-	11	2.33
046	Sunshine Coast	4	1	2	4	-	1	-	-	2	14	3.38
047	Powell River	2	-	1	-	-	2	5	1	2	13	6.14
048	Howe Sound	3	-	3	1	2	1	4	-	5	19	6.05
049	Bella Coola Valley	-	-	-	-	-	-	-	-	1	1	3.96
050	Queen Charlotte	-	-	-	2	-	-	-	-	-	2	3.92
051	Snow Country	-	-	-	-	-	-	-	-	-	-	-
052	Prince Rupert	-	-	1	3	-	-	3	-	-	7	5.74
053	Upper Skeena	1	-	-	1	-	-	1	-	1	4	7.12
054	Smithers	4	-	-	4	-	-	2	-	-	10	6.57
055	Burns Lake	1	-	-	-	-	-	1	-	-	2	3.28
056	Nechako	2	-	-	1	-	-	1	-	-	4	3.35
057	Prince George	10	1	6	10	1	-	16	1	1	46	5.10
059	Peace River South	5	-	-	3	-	-	4	-	2	14	5.09
060	Peace River North	5	-	-	-	-	-	5	-	1	11	3.41
061	Greater Victoria	4	-	20	39	1	2	30	1	8	105	3.39
062	Sooke	4	-	4	5	1	-	4	-	3	21	3.08
063	Saanich	4	-	3	14	-	-	6	-	3	30	3.86
064	Gulf Islands	1	1	2	3	2	2	-	-	1	12	5.61
065	Cowichan	4	1	3	5	1	-	8	1	3	26	4.82
066	Lake Cowichan	1	-	1	1	1	-	-	-	-	4	4.87
067	Ladysmith	3	-	-	3	4	-	7	-	1	18	11.19
068	Nanaimo	6	-	5	13	-	1	14	-	3	42	3.35
069	Qualicum	2	-	2	8	-	-	4	-	-	16	2.01
070	Alberni	6	-	6	5	-	1	5	-	2	25	7.33
071	Courtenay	4	-	6	8	1	1	6	-	-	26	2.85
072	Campbell River	2	-	4	4	-	-	7	-	1	18	3.65
075	Mission	2	-	3	3	-	-	3	1	1	13	2.87
076	Agassiz - Harrison	1	-	1	3	-	-	1	-	-	6	5.83
077	Summerland	-	-	-	2	-	-	-	-	1	3	0.80
078	Enderby	1	-	-	-	-	-	1	-	-	2	4.51
080	Kitimat	-	-	-	2	-	-	3	1	1	7	7.14
081	Fort Nelson	2	-	-	-	-	-	-	-	-	2	3.13
083	Central Coast	-	-	-	1	-	-	1	-	-	2	12.96
084	Vancouver Island West	-	-	-	-	-	-	1	-	-	1	7.75
085	Vancouver Island North	1	-	2	2	-	-	3	1	1	10	9.00
087	Stikine	-	-	-	-	-	-	1	-	-	1	6.25
088	Terrace	3	-	-	4	-	-	2	-	-	9	4.44
092	Nisga'a	-	-	-	-	-	-	2	-	1	3	18.65
094	Telegraph Creek	-	-	-	-	-	-	1	-	-	1	12.28
161	Vancouver - City Centre	2	-	15	8	-	-	26	1	3	55	4.17
162	Vancouver - Downtown E.side	3	-	39	7	-	-	13	-	1	63	7.99
163	Vancouver - North East	3	1	6	3	1	-	7	4	5	30	2.46
164	Vancouver - Westside	5	-	2	10	-	1	8	2	6	34	1.88
165	Vancouver - Midtown	2	-	5	3	2	-	6	3	4	25	2.43
166	Vancouver - South	3	2	2	7	-	-	8	3	9	34	2.16
201	Surrey	19	-	25	24	2	2	27	15	7	121	3.14
202	South Surrey/White Rock	7	1	3	9	-	-	7	1	1	29	2.59
	PROVINCIAL TOTAL	**252**	**19**	**270**	**417**	**32**	**31**	**452**	**73**	**154**	**1,700**	**3.23**
	PERCENT	**14.8**	**1.1**	**15.9**	**24.5**	**1.9**	**1.8**	**26.6**	**4.3**	**9.1**	**100.0**	

Notes for table follow table 32.

TABLE 32
SUICIDE DEATHS BY MONTH AND GENDER
BRITISH COLUMBIA, 2009

Month	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
January	33	9.2	4	4.2	37	8.2
February	23	6.4	4	4.2	27	6.0
March	35	9.8	9	9.5	44	9.7
April	21	5.9	5	5.3	26	5.8
May	35	9.8	13	13.7	48	10.6
June	30	8.4	6	6.3	36	8.0
July	41	11.5	10	10.5	51	11.3
August	24	6.7	7	7.4	31	6.9
September	25	7.0	13	13.7	38	8.4
October	30	8.4	11	11.6	41	9.1
November	29	8.1	7	7.4	36	8.0
December	31	8.7	6	6.3	37	8.2
TOTAL	**357**	**100.0**	**95**	**100.0**	**452**	**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.

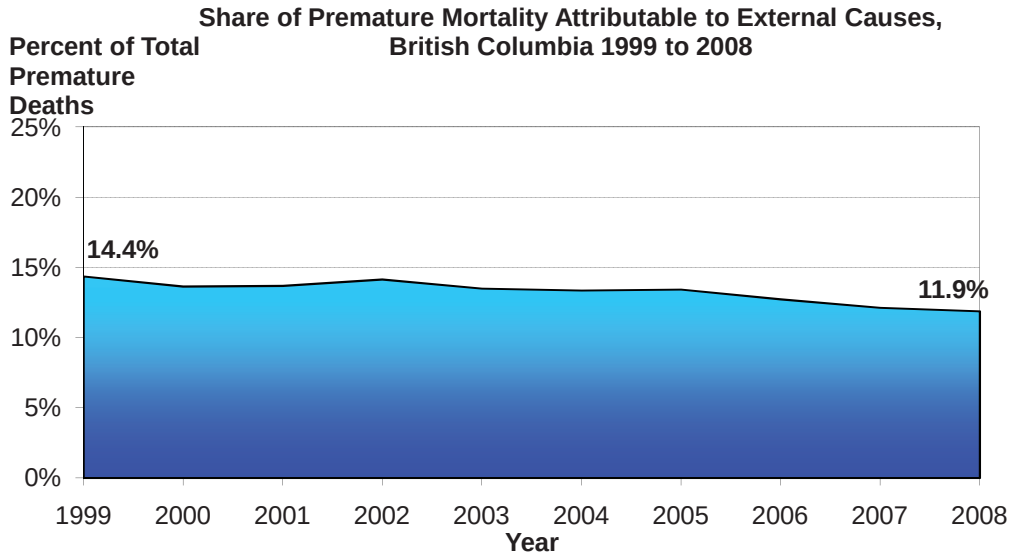
Notes to Table 31

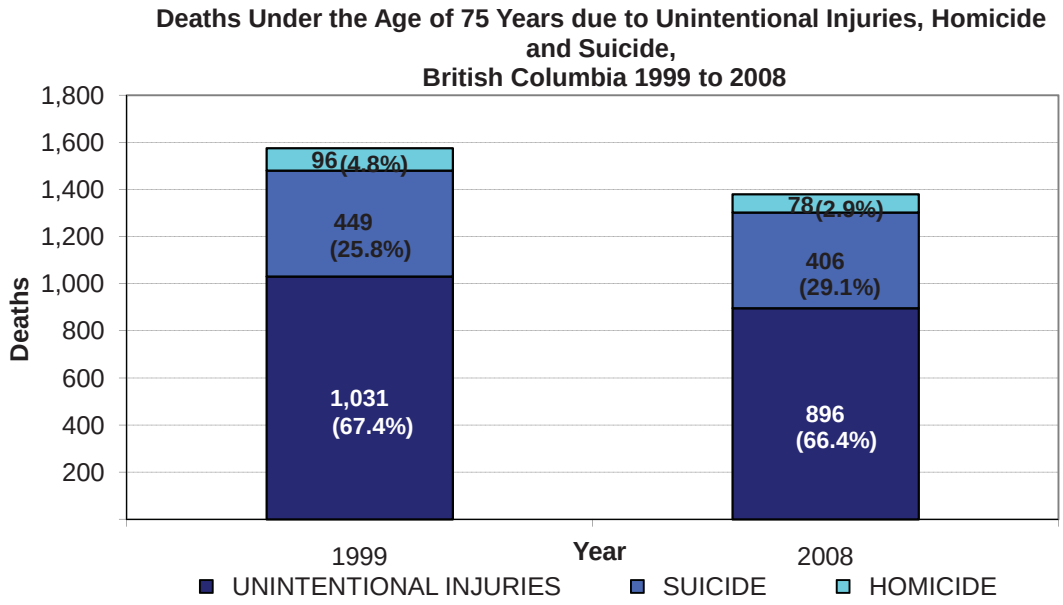
Note: Based on usual residence. ASMR – per 10,000 standard population (Canada 1991 Census). PERCENT – Provincial total for each cause as a percent of the Provincial total for all deaths from external causes. Other is comprised of accident caused by machinery, accidental firearm discharge, all other accidents, 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, 1999 to 2008

From 1999 to 2008, deaths among those under the age of 75 have accounted for just 38.5 percent of all deaths; however, 78.4 percent of deaths from external causes were in this age group. The total number of deaths attributable to external causes has fallen from 2,059 in 1999 to 1,843 in 2008, and among those under the age of 75, the number of deaths has fallen from 1,619 to 1,407. The share of premature deaths attributable to external causes has fallen from 14.4 percent in 1999 to 11.9 percent in 2008. Unintentional injuries account for the vast majority (63.7 percent in 2008) 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 2009 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. Near half (41) of LHAs had statistically significant ratios in 2009 (28 high and 13 low), 61 LHAs had statistically significant ratios (45 high and 16 low) in the period of 2004-2008, and 38 LHAs had statistically significant ratios (25 high and 13 low) in both 2009 and the previous five-year period.

In 2009, the LHAs with the five highest statistically significant SMRs were Central Coast (2.21), Snow Country (2.02), Lillooet (1.71), Fort Nelson (1.56), and Terrace (1.43).

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, 2009

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	36	34	50	64	55	31	3	3	361	76.5%
	F	17	18	32	47	82	49	16	4	313	84.7%
12 Kootenay Boundary	M	42	41	44	61	51	27	15	0	363	77.4%
	F	20	28	39	73	63	60	23	5	363	85.7%
13 Okanagan	M	137	171	265	319	330	156	58	5	1,798	80.1%
	F	110	105	156	282	346	256	107	16	1,616	85.3%
14 Thompson Cariboo Shuswap	M	115	117	129	146	118	64	22	0	1,019	69.8%
	F	49	76	106	107	165	103	37	13	835	78.6%
21 Fraser East	M	100	97	142	157	166	89	25	6	1,074	72.8%
	F	62	85	118	172	169	149	84	9	1,017	83.4%
22 Fraser North	M	142	147	246	284	281	145	46	6	1,726	75.1%
	F	89	118	179	284	345	236	126	35	1,702	83.0%
23 Fraser South	M	164	178	262	284	352	189	58	9	2,036	73.5%
	F	130	158	223	347	424	304	154	39	2,138	83.2%
31 Richmond	M	29	49	58	70	71	36	14	1	427	76.8%
	F	21	29	55	67	86	81	32	7	450	84.0%
32 Vancouver	M	141	156	240	285	281	149	52	7	1,891	69.3%
	F	73	113	161	264	382	319	178	46	1,842	83.4%
33 North Shore/Coast Garibaldi	M	69	62	132	173	142	86	28	7	904	77.3%
	F	45	51	101	162	214	166	93	18	986	86.2%
41 South Vancouver Island	M	98	125	193	248	324	200	51	7	1,607	77.5%
	F	64	107	129	243	404	302	160	24	1,663	86.2%
42 Central Vancouver Island	M	107	118	188	228	196	99	28	4	1,283	75.4%
	F	64	87	124	190	201	174	83	14	1,146	81.8%
43 North Vancouver Island	M	50	57	69	70	56	33	8	0	500	68.6%
	F	28	31	50	76	84	53	19	5	436	79.4%
51 Northwest	M	39	29	38	32	26	8	2	0	291	59.8%
	F	9	20	24	20	25	13	10	0	181	66.9%
52 Northern Interior	M	53	52	68	79	57	19	6	1	513	65.3%
	F	30	39	48	62	60	37	12	4	396	73.7%
53 Northeast	M	19	23	21	21	21	9	0	1	191	60.2%
	F	10	10	24	19	15	18	7	1	150	69.3%
Provincial Total	**M**	**1,342**	**1,456**	**2,145**	**2,521**	**2,527**	**1,340**	**416**	**57**	**15,991**	**73.8%**
	F	**821**	**1,075**	**1,569**	**2,415**	**3,065**	**2,320**	**1,141**	**240**	**15,236**	**83.0%**

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, 2004–2008 AND 2009

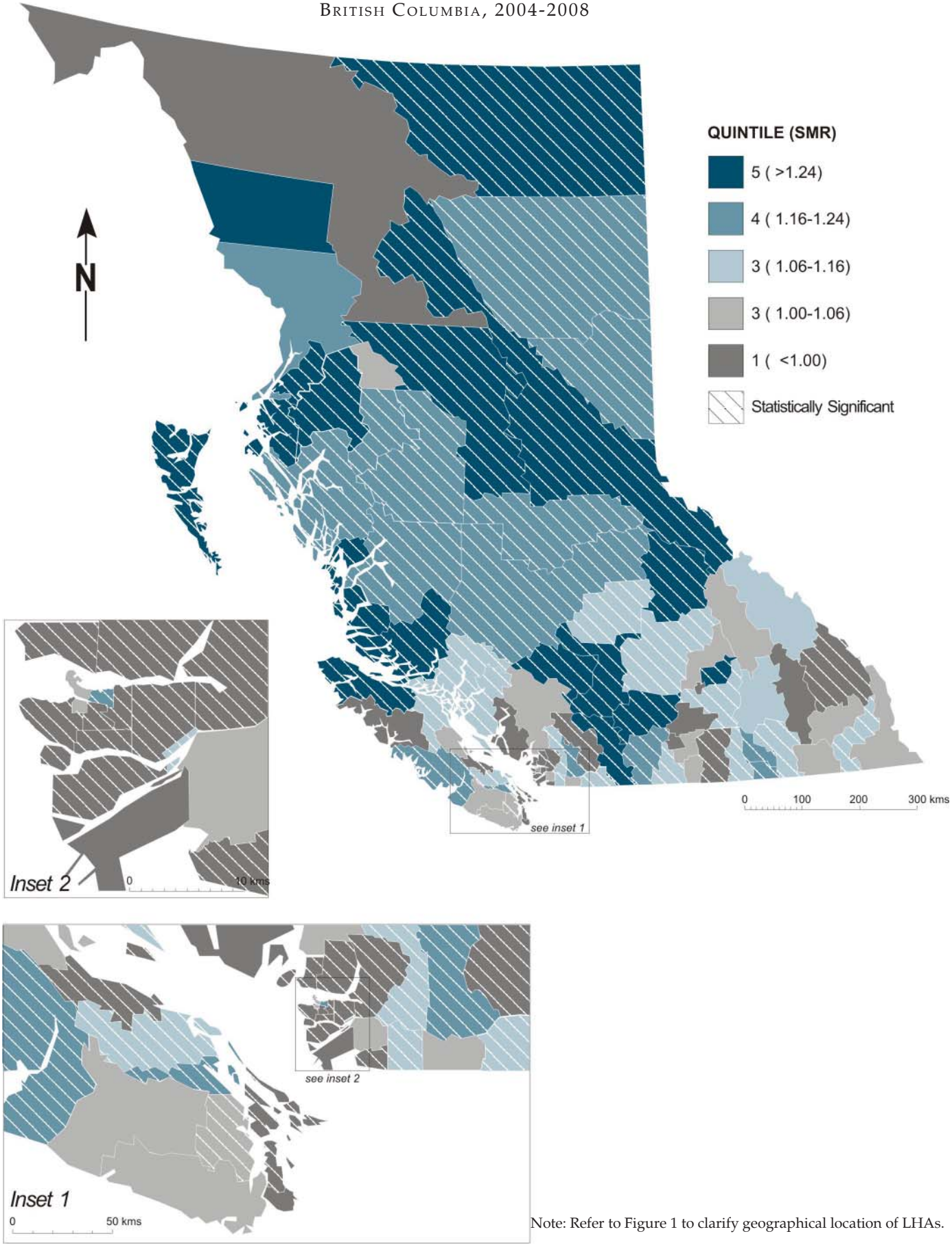
Local Health Area		2004–2008 Observed Deaths	SMR	(p)	2009 Observed Deaths	Expected Deaths	SMR	(p)	95% Confidence Interval Lower	-	Upper
001	Fernie	417	1.04		94	79.17	1.19		0.96	-	1.45
002	Cranbrook	1,031	1.14	*	237	185.14	1.28	*	1.12	-	1.45
003	Kimberley	383	1.00		96	75.30	1.27	*	1.03	-	1.56
004	Windermere	252	0.77	*	47	66.71	0.70	*	0.52	-	0.94
005	Creston	708	1.03		161	137.54	1.17		1.00	-	1.37
006	Kootenay Lake	151	0.95		29	30.77	0.94		0.63	-	1.35
007	Nelson	945	1.07	*	190	175.04	1.09		0.94	-	1.25
009	Castlegar	632	1.21	*	107	101.13	1.06		0.87	-	1.28
010	Arrow Lakes	237	1.06		37	42.79	0.86		0.61	-	1.19
011	Trail	1,087	1.19	*	232	179.58	1.29	*	1.13	-	1.47
012	Grand Forks	506	1.11	*	108	91.48	1.18		0.97	-	1.43
013	Kettle Valley	121	0.83	*	23	32.54	0.71		0.45	-	1.06
014	Southern Okanagan	1,291	1.04		263	248.11	1.06		0.94	-	1.20
015	Penticton	2,598	1.04		574	490.96	1.17	*	1.08	-	1.27
016	Keremeos	344	1.16	*	65	58.01	1.12		0.86	-	1.43
017	Princeton	284	1.17	*	59	51.59	1.14		0.87	-	1.48
018	Golden	200	1.07		39	38.40	1.02		0.72	-	1.39
019	Revelstoke	261	1.03		62	50.89	1.22		0.93	-	1.56
020	Salmon Arm	1,617	1.01		342	325.95	1.05		0.94	-	1.17
021	Armstrong - Spallumcheen	376	0.95		82	84.23	0.97		0.77	-	1.21
022	Vernon	3,086	1.08	*	619	579.32	1.07		0.99	-	1.16
023	Central Okanagan	7,301	0.98		1,551	1,532.71	1.01		0.96	-	1.06
024	Kamloops	4,098	1.13	*	840	757.87	1.11	*	1.03	-	1.19
025	100 Mile House	622	1.14	*	142	112.24	1.27	*	1.07	-	1.49
026	North Thompson	193	1.39	*	35	27.90	1.25		0.87	-	1.74
027	Cariboo - Chilcotin	886	1.23	*	206	149.57	1.38	*	1.20	-	1.58
028	Quesnel	864	1.21	*	169	149.57	1.13		0.97	-	1.31
029	Lillooet	204	1.44	*	48	28.00	1.71	*	1.26	-	2.27
030	South Cariboo	356	1.27	*	77	58.11	1.33	*	1.05	-	1.66
031	Merritt	558	1.38	*	102	80.23	1.27	*	1.04	-	1.54
032	Hope	524	1.45	*	101	71.17	1.42	*	1.16	-	1.72
033	Chilliwack	3,428	1.12	*	741	632.67	1.17	*	1.09	-	1.26
034	Abbotsford	4,649	1.02		911	909.75	1.00		0.94	-	1.07
035	Langley	4,400	1.06	*	890	883.19	1.01		0.94	-	1.08
037	Delta	3,122	0.97		651	689.48	0.94		0.87	-	1.02
038	Richmond	4,482	0.75	*	877	1,242.48	0.71	*	0.66	-	0.75
040	New Westminster	2,576	1.16	*	481	432.44	1.11	*	1.02	-	1.22
041	Burnaby	6,882	0.93	*	1,344	1,455.57	0.92	*	0.87	-	0.97
042	Maple Ridge	2,734	1.11	*	598	514.34	1.16	*	1.07	-	1.26
043	Coquitlam	4,683	0.91	*	1,005	1,087.31	0.92	*	0.87	-	0.98
044	North Vancouver	4,134	0.91	*	793	929.47	0.85	*	0.79	-	0.91
045	West Vancouver-Bowen Is.	2,367	0.84	*	467	554.40	0.84	*	0.77	-	0.92
046	Sunshine Coast	1,355	0.99		272	280.88	0.97		0.86	-	1.09
047	Powell River	974	1.08	*	211	182.95	1.15	*	1.00	-	1.32
048	Howe Sound	589	1.02		121	122.06	0.99		0.82	-	1.18
049	Bella Coola Valley	101	1.24	*	14	16.12	0.87		0.47	-	1.46
050	Queen Charlotte	161	1.37	*	34	24.13	1.41		0.98	-	1.97
051	Snow Country	16	1.22		4	1.98	2.02		0.54	-	5.18
052	Prince Rupert	474	1.28	*	90	75.51	1.19		0.96	-	1.47
053	Upper Skeena	127	1.05		23	24.14	0.95		0.60	-	1.43
054	Smithers	440	1.17	*	86	79.66	1.08		0.86	-	1.33
055	Burns Lake	272	1.19	*	60	45.58	1.32	*	1.00	-	1.69
056	Nechako	523	1.40	*	101	79.98	1.26	*	1.03	-	1.53
057	Prince George	2,739	1.24	*	579	462.47	1.25	*	1.15	-	1.36
059	Peace River South	808	1.19	*	176	139.86	1.26	*	1.08	-	1.46
060	Peace River North	727	1.19	*	142	124.88	1.14		0.96	-	1.34
061	Greater Victoria	10,802	1.00		2,130	2,046.14	1.04		1.00	-	1.09
062	Sooke	1,666	1.00		362	355.70	1.02		0.92	-	1.13
063	Saanich	3,232	0.85	*	631	764.73	0.83	*	0.76	-	0.89
064	Gulf Islands	679	0.78	*	147	174.59	0.84	*	0.71	-	0.99
065	Cowichan	2,329	1.04	*	439	462.61	0.95		0.86	-	1.04
066	Lake Cowichan	220	1.04		39	43.77	0.89		0.63	-	1.22
067	Ladysmith	1,051	1.16	*	247	181.30	1.36	*	1.20	-	1.54
068	Nanaimo	4,472	1.06	*	875	857.29	1.02		0.95	-	1.09
069	Qualicum	2,474	0.93	*	530	551.51	0.96		0.88	-	1.05
070	Alberni	1,430	1.24	*	299	237.22	1.26	*	1.12	-	1.41
071	Courtenay	2,535	1.00		532	536.71	0.99		0.91	-	1.08
072	Campbell River	1,461	1.14	*	318	274.25	1.16	*	1.04	-	1.29
075	Mission	1,391	1.22	*	261	231.18	1.13		1.00	-	1.27
076	Agassiz - Harrison	314	0.87	*	77	67.35	1.14		0.90	-	1.43
077	Summerland	696	0.96		133	145.10	0.92		0.77	-	1.09
078	Enderby	407	1.26	*	68	64.60	1.05		0.82	-	1.33
080	Kitimat	290	1.17	*	70	53.01	1.32	*	1.03	-	1.67
081	Fort Nelson	93	1.31	*	23	14.74	1.56		0.99	-	2.34
083	Central Coast	59	1.92	*	12	5.43	2.21	*	1.14	-	3.86
084	Vancouver Island West	60	0.92		13	11.65	1.12		0.59	-	1.91
085	Vancouver Island North	404	1.60	*	73	52.79	1.38	*	1.08	-	1.74
087	Stikine	22	0.86		5	4.90	1.02		0.33	-	2.38
088	Terrace	625	1.29	*	147	102.88	1.43	*	1.21	-	1.68
092	Nisga'a	73	1.90	*	10	8.15	1.23		0.59	-	2.26
094	Telegraph Creek	19	1.29		3	2.32	1.29		0.26	-	3.77
161	Vancouver - City Centre	3,129	1.01		679	620.04	1.10	*	1.01	-	1.18
162	Vancouver - Downtown E.side	2,564	1.22	*	470	392.10	1.20	*	1.09	-	1.31
163	Vancouver - North East	2,889	0.87	*	582	686.06	0.85	*	0.78	-	0.92
164	Vancouver - Westside	3,722	0.80	*	711	907.00	0.78	*	0.73	-	0.84
165	Vancouver - Midtown	2,323	0.92	*	454	502.65	0.90	*	0.82	-	0.99
166	Vancouver - South	4,183	0.84	*	837	975.73	0.86	*	0.80	-	0.92
201	Surrey	8,516	1.01		1,786	1,855.96	0.96		0.92	-	1.01
202	South Surrey/White Rock	4,307	0.93	*	847	954.17	0.89	*	0.83	-	0.95
	PROVINCIAL TOTAL	**153,385**	**1.00**		**31,227**	**31,227.00**	**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, 2004-2008



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 34.9 years. Malignant neoplasms, on the other hand, although claiming many lives (4,526 under the age of 75) have a relatively low average PYLL at 12.7 years since malignant neoplasms tend to afflict older individuals more frequently.

Figure 39 allows one to compare the profiles of the two sides of the graph by directly and visually contrasting PYLLSR and ASMR for several major causes of death, 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 2009 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 females than males (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 last three 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 2004 to 2008 and for the year 2009. It also displays the observed number of years of lost life in each LHA for both periods and, for 2009, the expected PYLL based on the age distribution in the LHA adjusted to the provincial age and gender specific rate.

During the period, nearly half (44) of the LHAs had PYLL Indices that indicated significant differences compared to BC as a whole. Of these, 32 were higher than expected.

Vital Statistics Information Box

Age at Death of the Oldest Male and Female

British Columbia, 1990-2009

Gender	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Male	113	105	111	111	109	108	108	106	109	108	109	104	104	107	106	107	105	107	106	105
Female	110	113	107	110	110	108	109	111	113	108	111	113	111	107	108	110	109	110	110	109

TABLE 34

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

BRITISH COLUMBIA, 2009

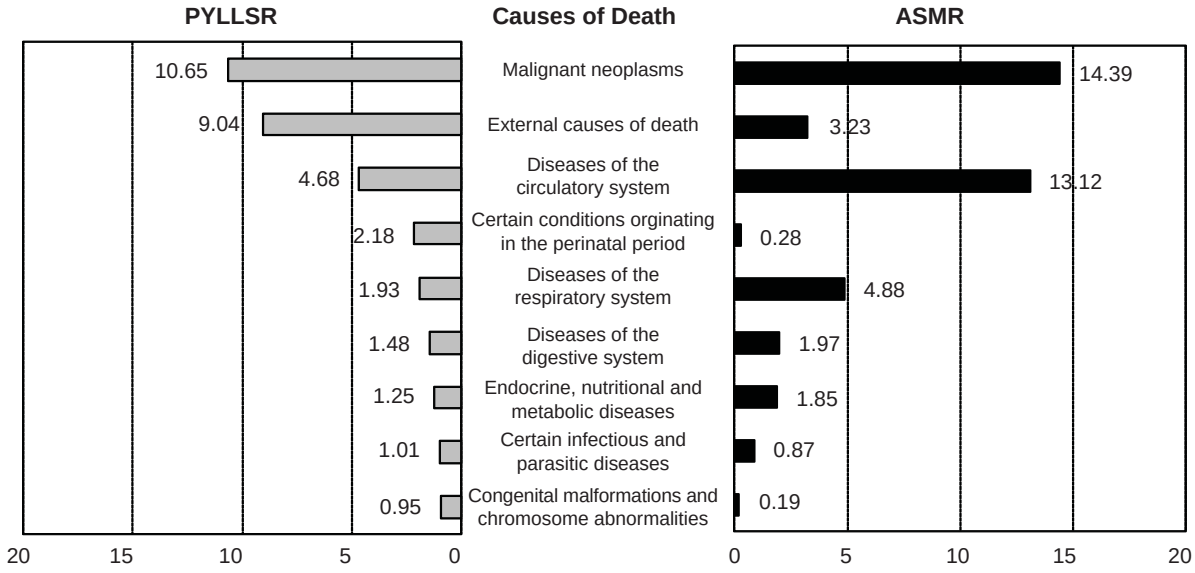
Cause of Death	ICD-10 Code(s)	PYLL (Age Under 75 Years)					Mortality (All Ages)		
		No. of Deaths	Total PYLL	Percent of PYLL	Average PYLL	PYLLSR	No. of Deaths	Percent of Deaths	ASMR
Certain infectious and parasitic diseases	A00-B99	258	4,965.5	2.6	19.2	1.01	569	1.8	0.87
- HIV disease	B20-B24	60	1,495.0	0.8	24.9	0.31	63	0.2	0.11
Malignant neoplasms	C00-C97	4,526	57,400.0	30.3	12.7	10.65	8,914	28.5	14.39
- Malignant neoplasm of trachea and lung	C33-C34	1,255	13,227.5	7.0	10.5	2.32	2,270	7.3	3.75
- Malignant neoplasm of female breast	C500-C509	357	5,422.5	2.9	15.2	2.02	596	1.9	1.82
- Malignant neoplasm of colon and rectum	C18-C21	461	5,767.5	3.0	12.5	1.04	978	3.1	1.54
Endocrine nutritional and metabolic diseases	E00-E89	429	6,093.0	3.2	14.2	1.25	1,210	3.9	1.85
- Diabetes mellitus	E10-E14	323	3,537.5	1.9	11.0	0.64	962	3.1	1.46
Diseases of the circulatory system	I00-I99	2,058	24,969.5	13.2	12.1	4.68	9,290	29.7	13.12
- Ischemic heart diseases	I20-I25	1,147	13,187.5	7.0	11.5	2.34	4,362	14.0	6.26
- Cerebrovascular diseases	I60-I69	381	4,197.5	2.2	11.0	0.79	2,299	7.4	3.17
Diseases of the respiratory system	J00-J98	801	9,742.0	5.1	12.2	1.93	3,398	10.9	4.88
- Pneumonia/Influenza (excluding hypostatic)	J09-J181, J188, J189	254	4,133.0	2.2	16.3	0.85	1,292	4.1	1.77
- Chronic Pulmonary Disease	J40-J44	360	3,022.0	1.6	8.4	0.57	1,413	4.5	2.10
Diseases of the digestive system	K00-K93	560	8,140.0	4.3	14.5	1.48	1,303	4.2	1.97
- Chronic liver disease/cirrhosis	K70, K73-74, K760-K761	277	4,502.5	2.4	16.3	0.79	342	1.1	0.56
Congenital malformations and chromosome abnormalities	Q00-Q99	67	3,144.5	1.7	46.9	0.95	78	0.2	0.19
Certain conditions originating in the perinatal period	P00-P96	87	6,412.5	3.4	73.7	2.18	87	0.3	0.28
External causes of death	V01-Y98	1,231	36,962.5	19.5	30.0	9.04	1,700	5.4	3.23
- Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	209	7,286.5	3.8	34.9	1.80	252	0.8	0.52
- Suicide	X60-X84, Y870	423	12,647.5	6.7	29.9	3.10	452	1.4	0.94
Other causes[1]		1,454	31,457.5	16.6	21.6	7.32	4,678	15.0	7.04
All causes		**11,471**	**189,287.0**	**100.0**	**16.5**	**40.48**	**31,227**	**100.0**	**47.82**

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, 2009



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, 2009

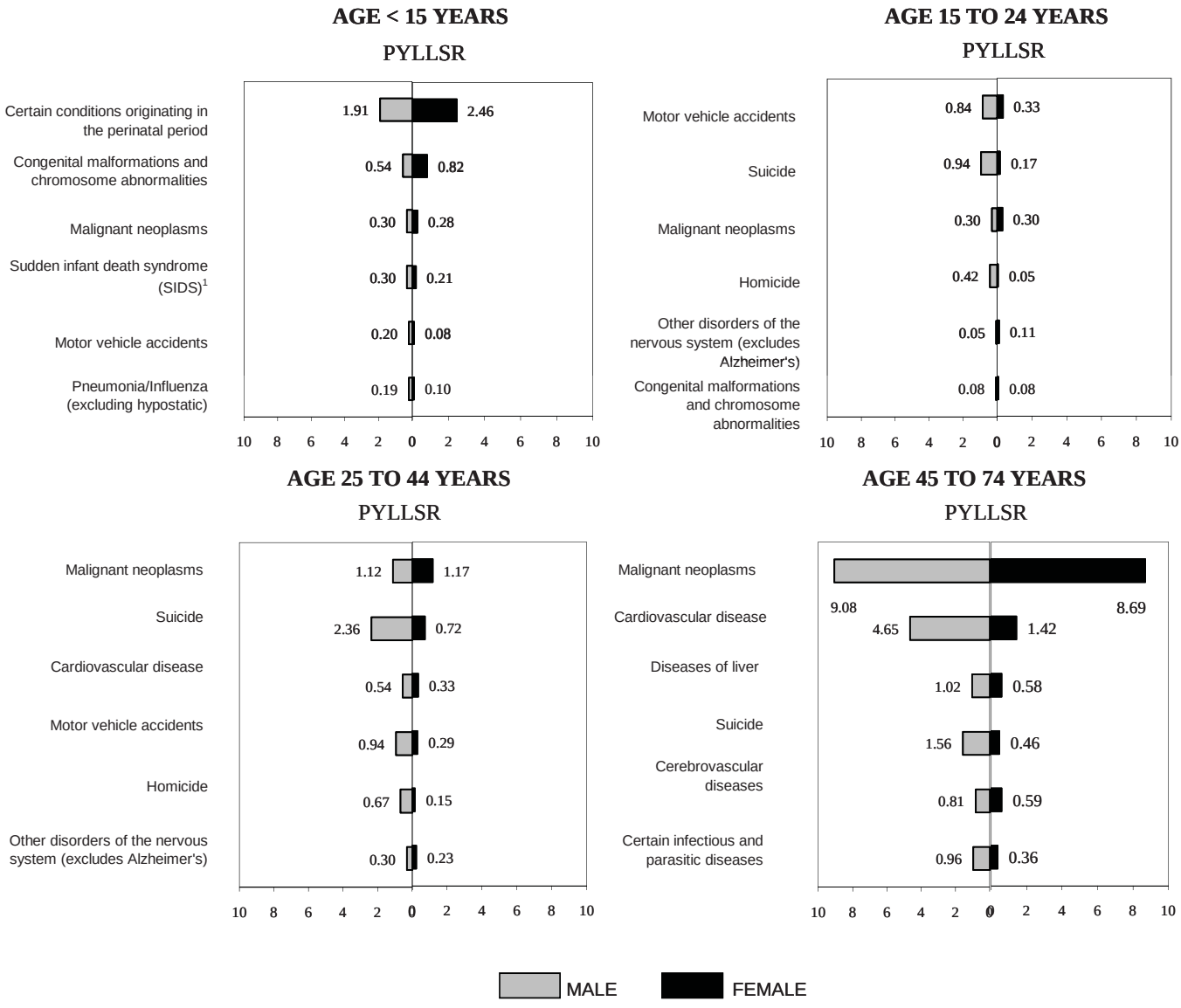
		Male				Female				Total			
Cause of Death	ICD-10 Code(s)	Deaths	PYLL	PYLL %	PYLLSR	Deaths	PYLL	PYLL %	PYLLSR	Deaths	PYLL	PYLL %	PYLLSR
Under 15 Years Old													
Certain conditions originating in the perinatal period	P00-P96	38	2,831.0	36.8	1.91	48	3,564.0	44.8	2.46	86	6,395.0	40.9	2.18
Congenital malformations and chromosome abnormalities	Q00-Q99	11	810.0	10.5	0.54	16	1,189.5	15.0	0.82	27	1,999.5	12.8	0.68
Malignant neoplasms	C00-C97	7	472.0	6.1	0.30	6	420.5	5.3	0.28	13	892.5	5.7	0.29
Sudden infant death syndrome (SIDS)[2]	R95	6	447.0	5.8	0.30	4	298.0	3.8	0.21	10	745.0	4.8	0.25
Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	5	327.0	4.2	0.20	2	134.5	1.7	0.08	7	461.5	2.9	0.14
Pneumonia/Influenza (exl. hypostatic)	J09-J181, J188, J189	4	284.0	3.7	0.19	2	144.0	1.8	0.10	6	428.0	2.7	0.14
Other causes[1]		36	2,527.0	32.8	1.64	31	2,196.0	27.6	1.46	67	4,723.0	30.2	1.55
All causes		**107**	**7,698.0**	**100.0**	**5.09**	**109**	**7,946.5**	**100.0**	**5.40**	**216**	**15,644.5**	**100.0**	**5.24**
15-24 Years Old													
Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	31	1,707.5	16.5	0.84	12	650.0	16.8	0.33	43	2,357.5	16.6	0.59
Suicide	X60-X84, Y870	35	1,912.5	18.5	0.94	6	325.0	8.4	0.17	41	2,237.5	15.7	0.56
Malignant neoplasms	C00-C97	11	612.5	5.9	0.30	11	592.5	15.3	0.30	22	1,205.0	8.5	0.30
Homicide	X85-Y09, Y871	16	860.0	8.3	0.42	2	105.0	2.7	0.05	18	965.0	6.8	0.24
Other disorders of the nervous system (exl. Alzheimer's)	G00-G25, G31-G99	2	105.0	1.0	0.05	4	215.0	5.5	0.11	6	320.0	2.2	0.08
Congenital malformations and chromosome abnormalities	Q00-Q99	3	157.5	1.5	0.08	3	162.5	4.2	0.08	6	320.0	2.2	0.08
Other causes[1]		92	5,005.0	48.3	2.46	34	1,830.0	47.2	0.94	126	6,835.0	48.0	1.71
All causes		**190**	**10,360.0**	**100.0**	**5.10**	**72**	**3,880.0**	**100.0**	**1.99**	**262**	**14,240.0**	**100.0**	**3.57**
25-44 Years Old													
Malignant neoplasms	C00-C97	77	2,862.5	10.4	1.12	105	3,782.5	26.0	1.17	182	6,645.0	15.8	1.14
Suicide	X60-X84, Y870	126	4,955.0	18.0	2.36	41	1,602.5	11.0	0.72	167	6,557.5	15.6	1.53
Cardiovascular disease	I00-I51	55	1,957.5	7.1	0.54	21	802.5	5.5	0.33	76	2,760.0	6.6	0.44
Motor vehicle accidents	V02-V04, V09, V12-V14, V190-V196, V20-V79, V803-V805, V820-V821, V823-V890, V892, V899, Y850	49	1,962.5	7.1	0.94	18	700.0	4.8	0.29	67	2,662.5	6.3	0.61
Homicide	X85-Y09, Y871	27	1,167.5	4.2	0.67	8	305.0	2.1	0.15	35	1,472.5	3.5	0.41
Other disorders of the nervous system (exl. Alzheimer's)	G00-G25, G31-G99	20	770.0	2.8	0.30	13	492.5	3.4	0.23	33	1,262.5	3.0	0.27
Other causes[1]		361	13,802.5	50.2	5.65	180	6,850.0	47.1	2.72	541	20,652.5	49.2	4.17
All causes		**715**	**27,477.5**	**100.0**	**11.57**	**386**	**14,535.0**	**100.0**	**5.62**	**1,101**	**42,012.5**	**100.0**	**8.57**
45-74 Years Old													
Malignant neoplasms	C00-C97	2,351	25,692.5	35.7	9.08	1,958	22,965.0	50.6	8.69	4,309	48,657.5	41.4	8.92
Cardiovascular disease	I00-I51	1,075	12,502.5	17.4	4.65	405	3,682.5	8.1	1.42	1,480	16,185.0	13.8	3.05
Diseases of liver	K70-K76	190	2,725.0	3.8	1.02	105	1,587.5	3.5	0.58	295	4,312.5	3.7	0.80
Suicide	X60-X84, Y870	174	3,060.0	4.3	1.56	41	792.5	1.7	0.46	215	3,852.5	3.3	1.01
Cerebrovascular diseases	I60-I69	211	2,037.5	2.8	0.81	150	1,440.0	3.2	0.59	361	3,477.5	3.0	0.70
Certain infectious and parasitic diseases	A00-B99	154	2,460.0	3.4	0.96	67	912.5	2.0	0.36	221	3,372.5	2.9	0.66
Other causes[1]		1,818	23,485.0	32.6	10.06	1,193	14,047.5	30.9	5.91	3,011	37,532.5	32.0	7.99
All causes		**5,973**	**71,962.5**	**100.0**	**28.12**	**3,919**	**45,427.5**	**100.0**	**18.00**	**9,892**	**117,390.0**	**100.0**	**23.10**

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. [2]The BC Coroners' Service classifies SIDS deaths as "SUDI" - please see glossary (under "SIDS") for explanation.

FIGURE 40

POTENTIAL YEARS OF LIFE LOST STANDARDIZED RATES BY AGE GROUP AND GENDER MAJOR CAUSES OF DEATH (AGE UNDER 75 YEARS)

BRITISH COLUMBIA, 2009



Note: Causes of death are ordered by total deaths (Table 35).
PYLLSR-PYLL Standardized Rate per 1,000 population.
[1]The BC Coroners' Service classifies SIDS deaths as "SUDI" - please see glossary (under "SIDS") for explanation.

Table 36

POTENTIAL YEARS OF LIFE LOST BY LOCAL HEALTH AREA
EXTERNAL CAUSES OF DEATH (AGE UNDER 75 YEARS), BRITISH COLUMBIA, 2004–2008 AND 2009

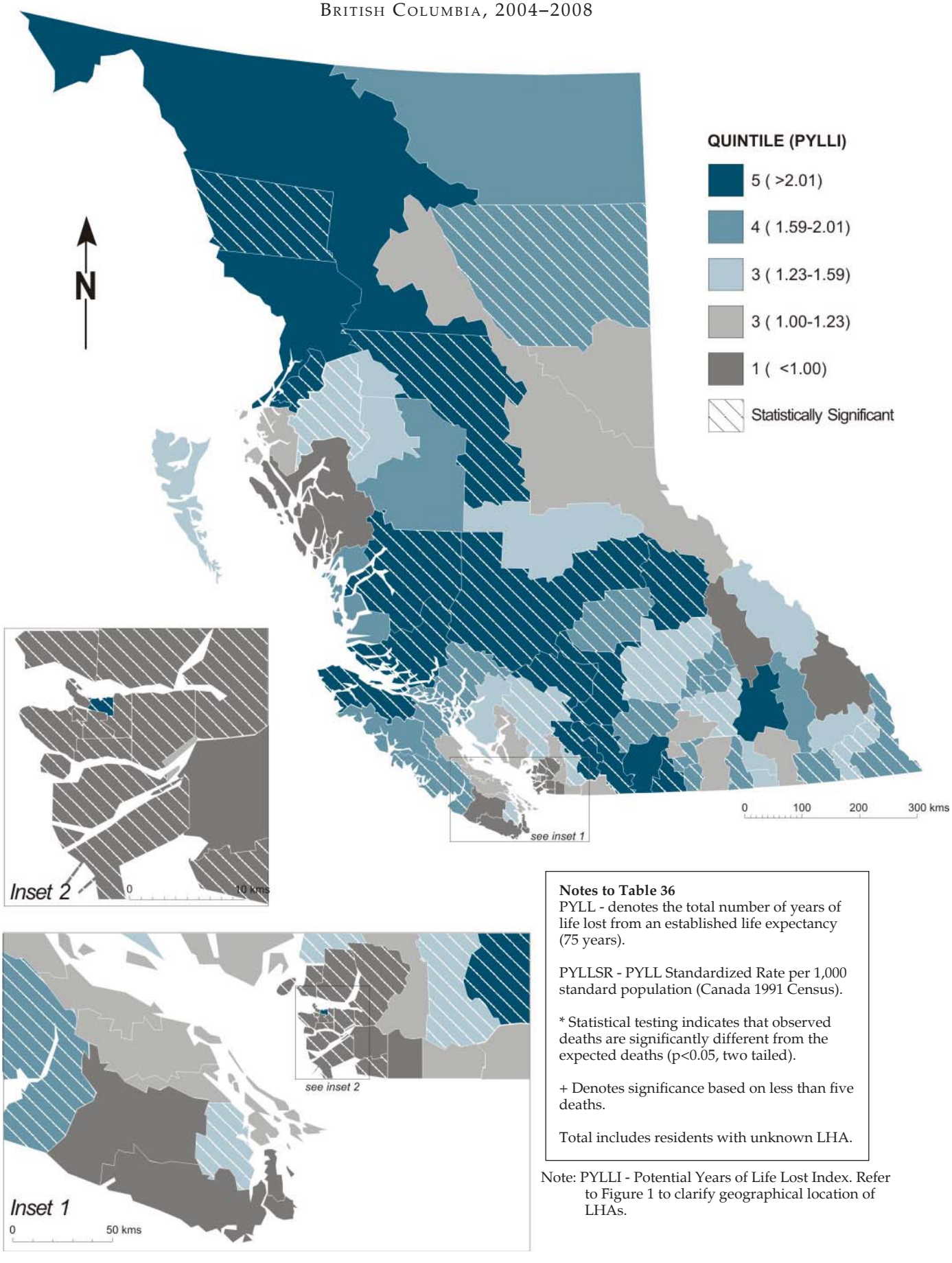
Local Health Area		2004–2008 Observed Deaths	2004–2008 Observed PYLL	2004–2008 PYLL Index (p)	2009 Observed Deaths	2009 Observed PYLL	2009 Expected PYLL	2009 PYLL Index (p)	2009 95% Confidence Limit Lower	2009 95% Confidence Limit Upper
001	Fernie	43	1,467.5	1.79 *	8	210.0	127.69	1.64	0.24 -	3.05
002	Cranbrook	64	1,920.0	1.51 *	12	320.0	201.49	1.59	0.53 -	2.64
003	Kimberley	18	510.0	1.30	3	112.5	65.39	1.72	0.00 -	3.71
004	Windermere	17	472.5	0.94	3	52.5	88.45	0.59	0.00 -	1.38
005	Creston	33	927.5	1.82 *	4	85.0	83.84	1.01	0.00 -	2.25
006	Kootenay Lake	11	312.5	1.80	2	60.0	28.28	2.12	0.00 -	5.80
007	Nelson	53	1,517.5	1.18	4	135.0	204.25	0.66	0.00 -	1.34
009	Castlegar	28	1,052.0	1.58	3	67.5	107.31	0.63	0.00 -	1.54
010	Arrow Lakes	13	442.5	2.09	3	57.5	33.42	1.72	0.00 -	3.68
011	Trail	46	1,339.0	1.43	5	97.5	146.89	0.66	0.00 -	1.37
012	Grand Forks	28	760.0	1.91 *	4	95.0	63.07	1.51	0.00 -	3.05
013	Kettle Valley	9	197.5	1.21	2	55.0	26.12	2.11	0.00 -	5.21
014	Southern Okanagan	41	1,257.5	1.64 *	5	92.5	126.84	0.73	0.00 -	1.48
015	Penticton	92	2,970.0	1.60 *	17	507.5	298.57	1.70	0.81 -	2.59
016	Keremeos	22	695.0	3.53 *	2	30.0	32.49	0.92	0.00 -	2.59
017	Princeton	14	465.0	2.17	-	-	33.66	-	- -	-
018	Golden	14	520.0	1.25	1	42.5	66.25	0.64	0.00 -	1.90
019	Revelstoke	11	292.5	0.67	5	152.5	66.49	2.29	0.16 -	4.43
020	Salmon Arm	90	3,075.0	2.01 *	12	410.0	250.42	1.64	0.64 -	2.64
021	Armstrong - Spallumcheen	23	702.5	1.52	6	260.0	71.63	3.63	0.64 -	6.62
022	Vernon	128	3,950.0	1.29 *	28	720.0	492.28	1.46	0.82 -	2.11
023	Central Okanagan	292	9,148.5	1.05	44	1,245.0	1,465.65	0.85	0.57 -	1.13
024	Kamloops	239	6,977.5	1.23 *	37	1,052.5	901.19	1.17	0.74 -	1.60
025	100 Mile House	48	1,330.0	1.91 *	10	280.0	109.55	2.56	0.75 -	4.36
026	North Thompson	17	732.5	3.37 *	1	12.5	32.33	0.39	0.00 -	1.14
027	Cariboo - Chilcotin	94	2,935.0	2.02 *	23	697.5	220.52	3.16 *	1.67 -	4.66
028	Quesnel	53	1,517.5	1.24	6	195.0	187.62	1.04	0.16 -	1.92
029	Lillooet	20	535.0	2.35 *	-	-	35.24	-	- -	-
030	South Cariboo	26	695.0	2.02 *	5	142.5	55.06	2.59	0.18 -	5.00
031	Merritt	40	1,095.0	1.89 *	6	150.0	90.99	1.65	0.02 -	3.27
032	Hope	36	1,060.0	2.78 *	-	-	59.97	-	- -	-
033	Chilliwack	142	4,505.0	1.11	22	695.0	656.39	1.06	0.56 -	1.56
034	Abbotsford	223	7,849.0	1.08	34	1,285.0	1,143.41	1.12	0.72 -	1.52
035	Langley	179	5,762.5	0.86	32	950.0	1,058.94	0.90	0.55 -	1.24
037	Delta	106	3,319.5	0.62 *	17	627.5	802.25	0.78	0.39 -	1.18
038	Richmond	147	4,739.0	0.46 *	15	402.5	1,654.51	0.24 *	0.10 -	0.38
040	New Westminster	126	3,800.0	1.07	11	252.5	582.27	0.43 *	0.13 -	0.74
041	Burnaby	243	7,477.5	0.61 *	40	1,155.0	1,968.28	0.59 *	0.38 -	0.80
042	Maple Ridge	150	5,174.5	1.06	25	817.5	781.91	1.05	0.61 -	1.48
043	Coquitlam	248	7,859.5	0.66 *	31	932.5	1,887.66	0.49 *	0.30 -	0.68
044	North Vancouver	137	4,549.0	0.62 *	27	722.5	1,144.23	0.63 *	0.36 -	0.91
045	West Vancouver-Bowen Is.	47	1,357.0	0.58 *	9	272.5	360.46	0.76	0.21 -	1.31
046	Sunshine Coast	51	1,572.0	1.23	7	137.5	207.53	0.66	0.00 -	1.34
047	Powell River	45	1,282.5	1.40	10	340.0	144.83	2.35	0.75 -	3.94
048	Howe Sound	77	2,849.5	1.36 *	16	510.0	334.82	1.52	0.69 -	2.36
049	Bella Coola Valley	16	595.0	3.73 *	1	32.5	22.72	1.43	0.00 -	4.23
050	Queen Charlotte	14	390.0	1.47	1	7.5	38.72	0.19 +	0.00 -	0.57
051	Snow Country	2	100.0	3.30	-	-	3.80	-	- -	-
052	Prince Rupert	29	857.5	1.08	5	202.5	115.43	1.75	0.14 -	3.37
053	Upper Skeena	11	367.5	1.24	3	127.5	44.42	2.87	0.00 -	6.63
054	Smithers	41	1,359.5	1.53	9	312.5	130.97	2.39	0.71 -	4.06
055	Burns Lake	22	735.0	1.74	2	50.0	64.77	0.77	0.00 -	2.08
056	Nechako	51	1,782.5	2.14 *	3	117.5	120.91	0.97	0.00 -	2.10
057	Prince George	203	6,449.0	1.17	39	1,287.5	825.05	1.56 *	1.01 -	2.11
059	Peace River South	45	1,537.5	1.05	10	320.0	227.31	1.41	0.48 -	2.34
060	Peace River North	81	3,215.5	1.61 *	11	387.5	312.35	1.24	0.44 -	2.04
061	Greater Victoria	367	11,269.5	0.94	64	1,730.0	1,860.24	0.93	0.67 -	1.19
062	Sooke	89	2,822.5	0.83	18	555.0	566.09	0.98	0.45 -	1.51
063	Saanich	77	2,312.5	0.81	14	470.0	438.46	1.07	0.43 -	1.71
064	Gulf Islands	23	647.5	1.03	8	225.0	104.80	2.15	0.54 -	3.75
065	Cowichan	114	3,777.0	1.38 *	22	719.5	431.16	1.67	0.89 -	2.45
066	Lake Cowichan	8	255.0	0.82	3	82.5	50.47	1.63	0.00 -	3.84
067	Ladysmith	27	992.5	1.22	15	512.5	128.87	3.98 *	1.71 -	6.25
068	Nanaimo	169	5,576.0	1.10	23	752.5	807.69	0.93	0.53 -	1.33
069	Qualicum	68	2,130.0	1.20	9	202.5	289.58	0.70	0.08 -	1.31
070	Alberni	93	2,997.0	1.87 *	18	540.0	246.01	2.20 *	1.05 -	3.34
071	Courtenay	112	3,317.0	1.12	19	422.5	473.69	0.89	0.41 -	1.37
072	Campbell River	123	3,682.5	1.73 *	13	327.5	330.62	0.99	0.39 -	1.59
075	Mission	88	2,985.0	1.30 *	11	292.5	364.30	0.80	0.26 -	1.35
076	Agassiz - Harrison	24	990.0	2.29 *	4	115.0	67.31	1.71	0.00 -	3.70
077	Summerland	17	602.5	1.21	-	-	77.57	-	- -	-
078	Enderby	22	690.0	1.91 *	2	105.0	56.10	1.87	0.00 -	4.51
080	Kitimat	18	455.0	0.77	7	217.5	86.54	2.51	0.40 -	4.63
081	Fort Nelson	17	667.5	1.65	2	95.0	57.14	1.66	0.00 -	3.97
083	Central Coast	4	165.0	1.87	2	55.0	12.37	4.44	0.00 -	10.71
084	Vancouver Island West	9	242.5	1.95	1	37.5	19.29	1.94	0.00 -	5.75
085	Vancouver Island North	50	1,747.0	2.50 *	8	220.0	102.35	2.15	0.56 -	3.73
087	Stikine	4	110.0	2.02	1	7.5	8.06	0.93	0.00 -	2.75
088	Terrace	46	1,607.0	1.48 *	5	157.5	164.79	0.96	0.10 -	1.81
092	Nisga'a	12	470.0	4.29 *	3	157.5	15.86	9.93	0.00 -	21.20
094	Telegraph Creek	6	270.0	6.70 *	1	57.5	6.10	9.42	0.00 -	27.90
161	Vancouver - City Centre	193	5,777.5	0.74 *	51	1,362.5	1,290.38	1.06	0.73 -	1.38
162	Vancouver - Downtown E.side	298	8,725.0	2.39 *	58	1,525.0	635.08	2.40 *	1.71 -	3.09
163	Vancouver - North East	117	3,827.5	0.66 *	25	752.5	911.11	0.83	0.46 -	1.19
164	Vancouver - Westside	120	3,350.0	0.45 *	19	527.5	1,172.41	0.45 *	0.22 -	0.68
165	Vancouver - Midtown	113	3,512.0	0.69 *	20	627.0	795.63	0.79	0.40 -	1.18
166	Vancouver - South	132	4,329.5	0.58 *	22	712.0	1,129.33	0.63 *	0.32 -	0.94
201	Surrey	584	18,965.5	0.93	99	3,354.0	3,266.11	1.03	0.80 -	1.25
202	South Surrey/White Rock	85	2,957.0	0.80 *	19	637.5	590.04	1.08	0.55 -	1.61
	PROVINCIAL TOTAL	**7,351**	**233,339.5**	**1.00**	**1,231**	**36,962.5**	**36,962.50**	**1.00**	**0.94 -**	**1.06**

Notes for this table follow the map.

FIGURE 41

EXTERNAL CAUSES OF DEATH BY LOCAL HEALTH AREA

BRITISH COLUMBIA, 2004–2008



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 164 deaths due to these causes in 2009, 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 2009 and the five-year period 2004-2008. Bacterial infections accounted for most of the deaths due to MTDs in 2009 and the previous five years. In 2009, two cause categories, hypertension and hypertensive diseases, and pneumonia and unqualified bronchitis, accounted for 46.6 percent male deaths due to MTDs and for females, about 30.3 percent.

Table 38 shows the count of deaths due to MTDs organized by the LHA in which the decedent lived. For the current year (2009) the table shows the actual number of deaths observed in the LHA and the expected deaths (calculated using the 2009 age-specific death rates for MTD).

There were 12 LHAs that had no deaths due to these conditions in 2004-2008 and 39 in 2009 as shown in Table 38. Further, there were only 8 LHAs in 2004-2008 that showed differences between observed and expected deaths that were statistically significant based on five or more deaths, and only 1 LHA with five or more deaths had statistically significant and high ratios in 2009.

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 blue 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, 2004–2008 AND 2009

Cause of Death	ICD-10 Code(s)	2004–2008		2009					
				Male		Female		Total	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Bacterial Infections	A00-A05, ..., M871	281	33.7	25	28.4	21	27.6	46	28.0
Pneumonia and unqualified bronchitis	J12-J181, J188, J189, J40	173	20.7	18	20.5	14	18.4	32	19.5
Hypertension and hypertensive diseases	I10-I15	142	17.0	23	26.1	9	11.8	32	19.5
Malignant neoplasm of cervix	C53	137	16.4	-	-	20	26.3	20	12.2
Abdominal hernias, cholecystitis and cholelithiasis, appendicitis	K35-K37, K40-K46, K80, K81	35	4.2	5	5.7	3	3.9	8	4.9
Asthma	J45-J46	28	3.4	2	2.3	1	1.3	3	1.8
Tuberculosis	A15-A19, B90	19	2.3	4	4.5	1	1.3	5	3.0
Hodgkin's disease	C81	7	0.8	1	1.1	-	-	1	0.6
Chronic rheumatic heart disease	I05-I09	7	0.8	-	-	1	1.3	1	0.6
Acute respiratory infections and influenza	J00-J06, J09-J11, J20-22	5	0.6	10	11.4	6	7.9	16	9.8
Nutritional anemias	D50-D53	-	-	-	-	-	-	-	-
TOTAL		**834**	**100.0**	**88**	**100.0**	**76**	**100.0**	**164**	**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, 2004–2008 AND 2009

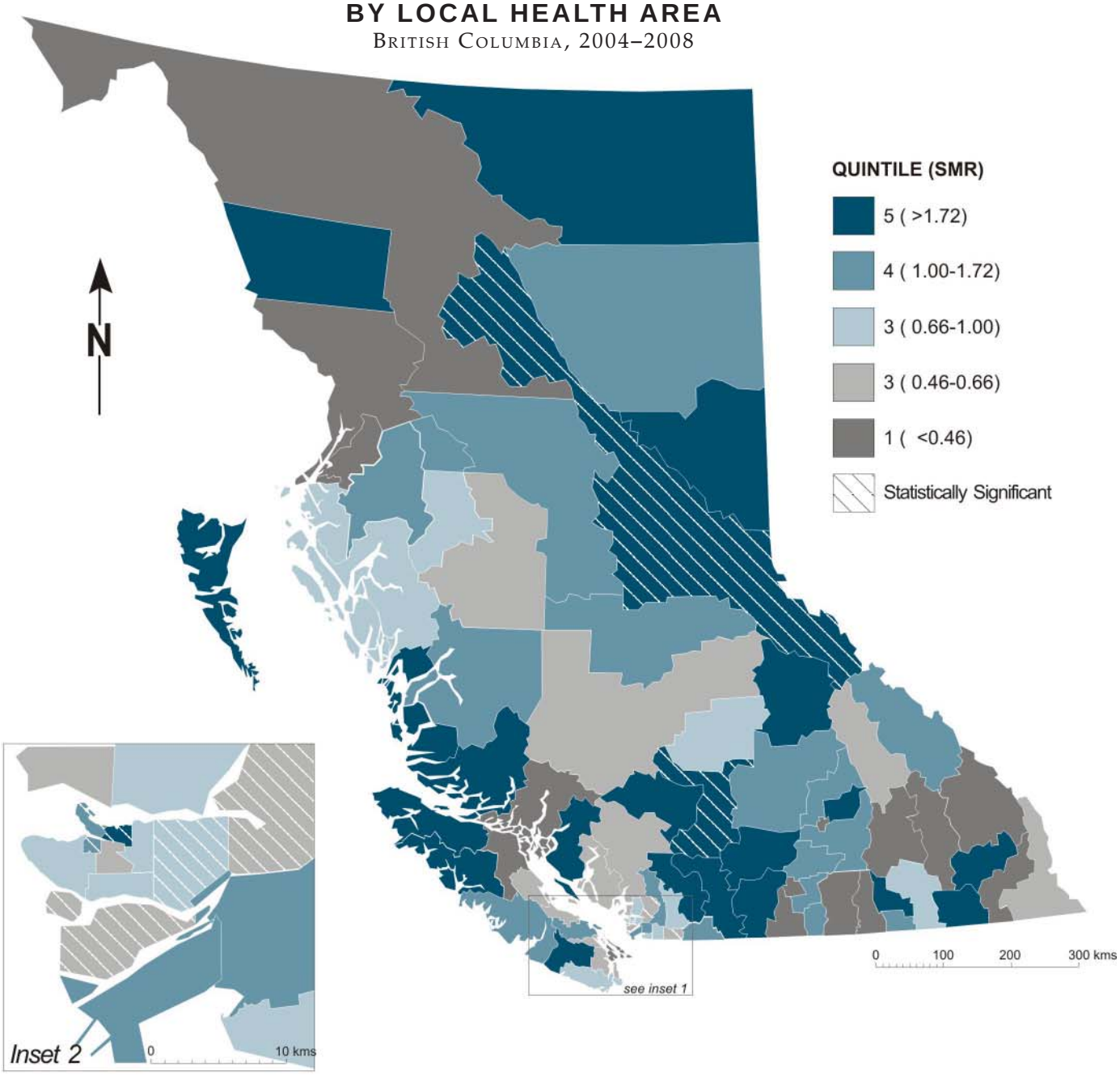
Local Health Area		2004–2008 Observed Deaths	2004–2008 SMR (p)	2009 Observed Deaths	2009 Expected Deaths	2009 SMR (p)	95% Confidence Interval Lower	95% Confidence Interval Upper
001	Fernie	2	0.65	-	0.59	-	- -	-
002	Cranbrook	2	0.40	1	0.97	1.03	0.01 -	5.72
003	Kimberley	3	1.72	-	0.34	-	- -	-
004	Windermere	-	-	-	0.42	-	- -	-
005	Creston	6	2.52	-	0.45	-	- -	-
006	Kootenay Lake	-	-	-	0.16	-	- -	-
007	Nelson	5	1.00	-	0.98	-	- -	-
009	Castlegar	6	2.28	1	0.51	1.97	0.03 -	10.94
010	Arrow Lakes	-	-	-	0.20	-	- -	-
011	Trail	5	1.29	1	0.73	1.38	0.02 -	7.66
012	Grand Forks	-	-	-	0.34	-	- -	-
013	Kettle Valley	-	-	-	0.16	-	- -	-
014	Southern Okanagan	6	1.58	1	0.74	1.36	0.02 -	7.54
015	Penticton	9	1.18	3	1.51	1.99	0.40 -	5.82
016	Keremeos	-	-	-	0.20	-	- -	-
017	Princeton	2	1.76	1	0.21	4.72	0.06 -	26.28
018	Golden	2	1.40	-	0.29	-	- -	-
019	Revelstoke	1	0.62	1	0.31	3.25	0.04 -	18.10
020	Salmon Arm	11	1.62	-	1.36	-	- -	-
021	Armstrong - Spallumcheen	-	-	-	0.35	-	- -	-
022	Vernon	14	1.13	3	2.48	1.21	0.24 -	3.53
023	Central Okanagan	35	1.08	6	6.76	0.89	0.32 -	1.93
024	Kamloops	29	1.36	5	4.13	1.21	0.39 -	2.83
025	100 Mile House	3	0.92	-	0.60	-	- -	-
026	North Thompson	2	2.15	-	0.17	-	- -	-
027	Cariboo - Chilcotin	3	0.56	1	1.01	0.99	0.01 -	5.49
028	Quesnel	5	1.06	1	0.90	1.11	0.01 -	6.17
029	Lillooet	3	3.43	-	0.16	-	- -	-
030	South Cariboo	6	3.91 *	-	0.28	-	- -	-
031	Merritt	4	1.75	-	0.43	-	- -	-
032	Hope	5	3.02	-	0.30	-	- -	-
033	Chilliwack	20	1.40	3	2.89	1.04	0.21 -	3.04
034	Abbotsford	13	0.57 *	9	4.52	1.99	0.91 -	3.78
035	Langley	21	0.89	9	4.57	1.97	0.90 -	3.74
037	Delta	25	1.23	5	3.75	1.33	0.43 -	3.11
038	Richmond	17	0.46 *	2	7.19	0.28	0.03 -	1.00
040	New Westminster	14	1.14	1	2.48	0.40	0.01 -	2.24
041	Burnaby	27	0.67 *	4	7.99	0.50	0.13 -	1.28
042	Maple Ridge	17	1.00	6	3.44	1.74	0.64 -	3.80
043	Coquitlam	25	0.61 *	3	8.23	0.36	0.07 -	1.07
044	North Vancouver	18	0.66	3	5.29	0.57	0.11 -	1.66
045	West Vancouver-Bowen Is.	6	0.58	2	1.95	1.03	0.12 -	3.70
046	Sunshine Coast	4	0.64	1	1.25	0.80	0.01 -	4.44
047	Powell River	8	1.91	1	0.78	1.28	0.02 -	7.10
048	Howe Sound	4	0.65	1	1.27	0.79	0.01 -	4.39
049	Bella Coola Valley	1	1.71	-	0.11	-	- -	-
050	Queen Charlotte	2	1.95	-	0.19	-	- -	-
051	Snow Country	-	-	-	0.02	-	- -	-
052	Prince Rupert	2	0.69	1	0.54	1.86	0.02 -	10.38
053	Upper Skeena	1	1.00	-	0.19	-	- -	-
054	Smithers	3	0.96	-	0.58	-	- -	-
055	Burns Lake	1	0.66	-	0.29	-	- -	-
056	Nechako	3	1.04	1	0.52	1.91	0.03 -	10.64
057	Prince George	33	1.74 *	4	3.58	1.12	0.30 -	2.86
059	Peace River South	9	1.77	1	0.99	1.01	0.01 -	5.64
060	Peace River North	6	1.06	-	1.15	-	- -	-
061	Greater Victoria	39	0.94	10	8.04	1.24	0.60 -	2.29
062	Sooke	10	0.80	4	2.60	1.54	0.41 -	3.94
063	Saanich	7	0.54	-	2.46	-	- -	-
064	Gulf Islands	-	-	-	0.69	-	- -	-
065	Cowichan	6	0.55	2	2.12	0.95	0.11 -	3.41
066	Lake Cowichan	4	3.07	-	0.26	-	- -	-
067	Ladysmith	2	0.53	2	0.75	2.66	0.30 -	9.59
068	Nanaimo	22	1.12	7	3.87	1.81	0.72 -	3.73
069	Qualicum	5	0.54	-	1.81	-	- -	-
070	Alberni	7	1.10	3	1.18	2.54	0.51 -	7.43
071	Courtenay	8	0.63	1	2.51	0.40	0.01 -	2.22
072	Campbell River	4	0.46	2	1.64	1.22	0.14 -	4.39
075	Mission	6	0.78	1	1.53	0.65	0.01 -	3.64
076	Agassiz - Harrison	3	1.78	-	0.32	-	- -	-
077	Summerland	-	-	-	0.44	-	- -	-
078	Enderby	3	1.99	1	0.29	3.50	0.05 -	19.46
080	Kitimat	2	0.91	1	0.40	2.49	0.03 -	13.83
081	Fort Nelson	3	2.67	-	0.21	-	- -	-
083	Central Coast	2	7.61	-	0.05	-	- -	-
084	Vancouver Island West	1	1.83	-	0.11	-	- -	-
085	Vancouver Island North	5	1.88	-	0.48	-	- -	-
087	Stikine	-	-	-	0.04	-	- -	-
088	Terrace	6	1.52	1	0.74	1.35	0.02 -	7.49
092	Nisga'a	-	-	-	0.07	-	- -	-
094	Telegraph Creek	1	8.66	-	0.02	-	- -	-
161	Vancouver - City Centre	35	1.58 *	5	4.30	1.16	0.37 -	2.71
162	Vancouver - Downtown E.side	58	4.94 *	8	2.59	3.09 *	1.33 -	6.08
163	Vancouver - North East	14	0.76	4	3.73	1.07	0.29 -	2.74
164	Vancouver - Westside	17	0.68	3	4.75	0.63	0.13 -	1.85
165	Vancouver - Midtown	10	0.63	4	3.23	1.24	0.33 -	3.17
166	Vancouver - South	19	0.77	5	4.84	1.03	0.33 -	2.41
201	Surrey	70	1.08	17	13.03	1.30	0.76 -	2.09
202	South Surrey/White Rock	13	0.81	1	3.10	0.32	0.00 -	1.79
	PROVINCIAL TOTAL	**834**	**1.00**	**164**	**164.00**	**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, 2004–2008



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 2009 and in the five preceding years, while Figure 43 graphically shows the pattern of alcohol-related deaths by cause. About 22.1 percent of the 1,755 deaths related to alcohol in 2009 were directly attributable to alcohol (387 deaths). Alcohol was a contributing factor in the remaining 77.9 percent of these deaths. The table indicates that most of the deaths directly attributable to alcohol were caused by liver disease (14.3 percent) in 2009.

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 5.6 percent of all deaths in 2009 and 8.3 percent of all male deaths. Males died of such causes nearly 3 times more frequently than women in 2009.

Alcohol-related deaths for seniors (65 or older) accounted for 42.6 percent of deaths; 43.6 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 17 LHAs with at least five deaths where the observed values were statistically significant and above the expected values in both 2004-2008 and 2009 as shown in Table 41. There were 11 LHAs with SMRs that were statistically significant and low in both time periods. The map in Figure 44 shows the SMR quintiles and statistical significance patterns in each LHA during 2004-2008.

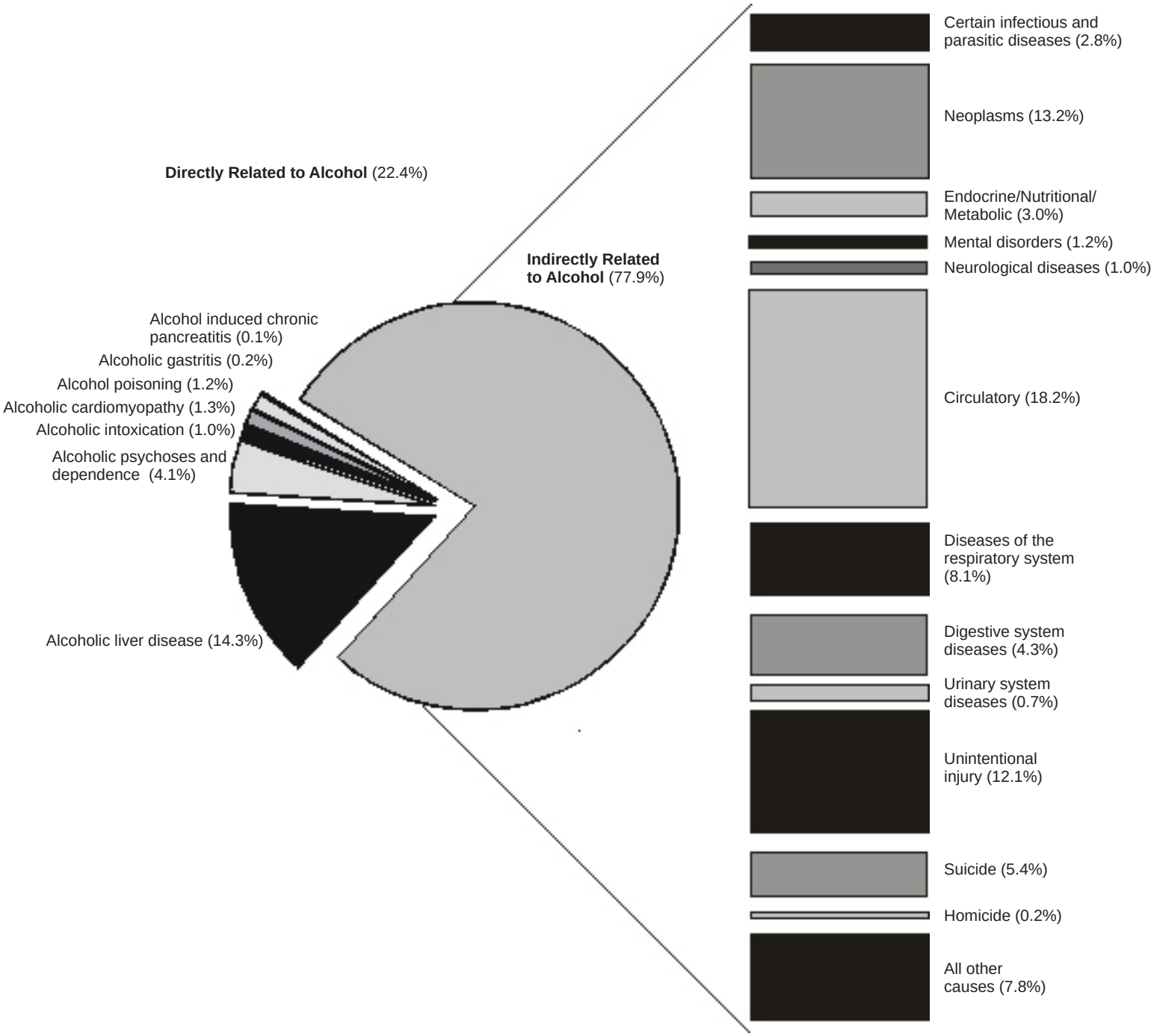
Reports of alcohol-related deaths in 2009 are lower than in previous years. Many alcohol related deaths are referred to the BC Coroner Service for investigation. As with external causes of death, the medical coding will be incomplete until the coroner closes the investigation. For this reason the counts are often lower in the current year and are adjusted upwards in later annual reports.

TABLE 39
ALCOHOL-RELATED DEATHS BY CAUSE
BRITISH COLUMBIA, 2004–2008 AND 2009

Cause of Death	ICD-10 Code(s)	Year of Death: 2004–2008 Number	2004–2008 Percent	2009 Number	2009 Percent
Directly Related to Alcohol					
Alcohol intoxication	F100	179	1.8	17	1.0
Alcoholic psychoses and dependence	F101-F109	526	5.2	72	4.1
Alcoholic neurological disorders	G312, G621, G721	-	-	-	-
Alcoholic cardiomyopathy	I426	89	0.9	22	1.3
Alcoholic gastritis	K292	12	0.1	3	0.2
Alcoholic liver disease	K70	1,136	11.2	251	14.3
Alcohol induced chronic pancreatitis	K860	11	0.1	1	0.1
Alcohol poisoning	X45, X65	95	0.9	21	1.2
Other alcohol causes	E244, O354, O993, P043, Q860, R780, T510-T512, T519	-	-	-	-
SUBTOTAL		**2,048**	**20.1**	**387**	**22.1**
Indirectly Related to Alcohol[1]					
Certain infectious and parasitic diseases	A00-B99	330	3.2	50	2.8
Neoplasms	C00-D48	1,182	11.6	232	13.2
Endocrine/Nutritional/Metabolic	E00-E243, E248-E89	283	2.8	52	3.0
Mental disorders	F00-F09, F11-F99	131	1.3	21	1.2
Neurological diseases	G00-G311, G318-G620, G622-G720, G722-G99	117	1.1	17	1.0
Circulatory	I00-I425, I427-I99	2,063	20.3	319	18.2
Diseases of the respiratory system	J00-J98	682	6.7	143	8.1
Digestive system diseases	K00-K291, K293-K69, K71-K85, K861-K92	576	5.7	75	4.3
Urinary system diseases	N00-N39, N990, N991, N995	94	0.9	12	0.7
Unintentional injury	V01-X44, X46-X59, Y40-Y86, Y88	1,634	16.0	212	12.1
Suicide	X60-X64, X66-X84, Y87	511	5.0	94	5.4
Homicide	X85-Y09, Y871	52	0.5	4	0.2
All other causes		481	4.7	137	7.8
SUBTOTAL		**8,136**	**79.9**	**1,368**	**77.9**
TOTAL		**10,184**	**100.0**	**1,755**	**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, 2009



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

TABLE 40
ALCOHOL-RELATED DEATHS BY AGE AND GENDER
BRITISH COLUMBIA, 2009

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
<15	-	-	-	-	-	-
15-19	15	1.1	3	0.7	18	1.0
20-24	22	1.7	8	1.8	30	1.7
25-44	143	10.8	51	11.8	194	11.1
45-64	580	43.9	185	42.7	765	43.6
65-84	485	36.7	130	30.0	615	35.0
85+	77	5.8	56	12.9	133	7.6
TOTAL	**1,322**	**100.0**	**433**	**100.0**	**1,755**	**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.

Table 41

STANDARDIZED MORTALITY RATIO BY LOCAL HEALTH AREA ALCOHOL-RELATED DEATHS, BRITISH COLUMBIA, 2004–2008 AND 2009

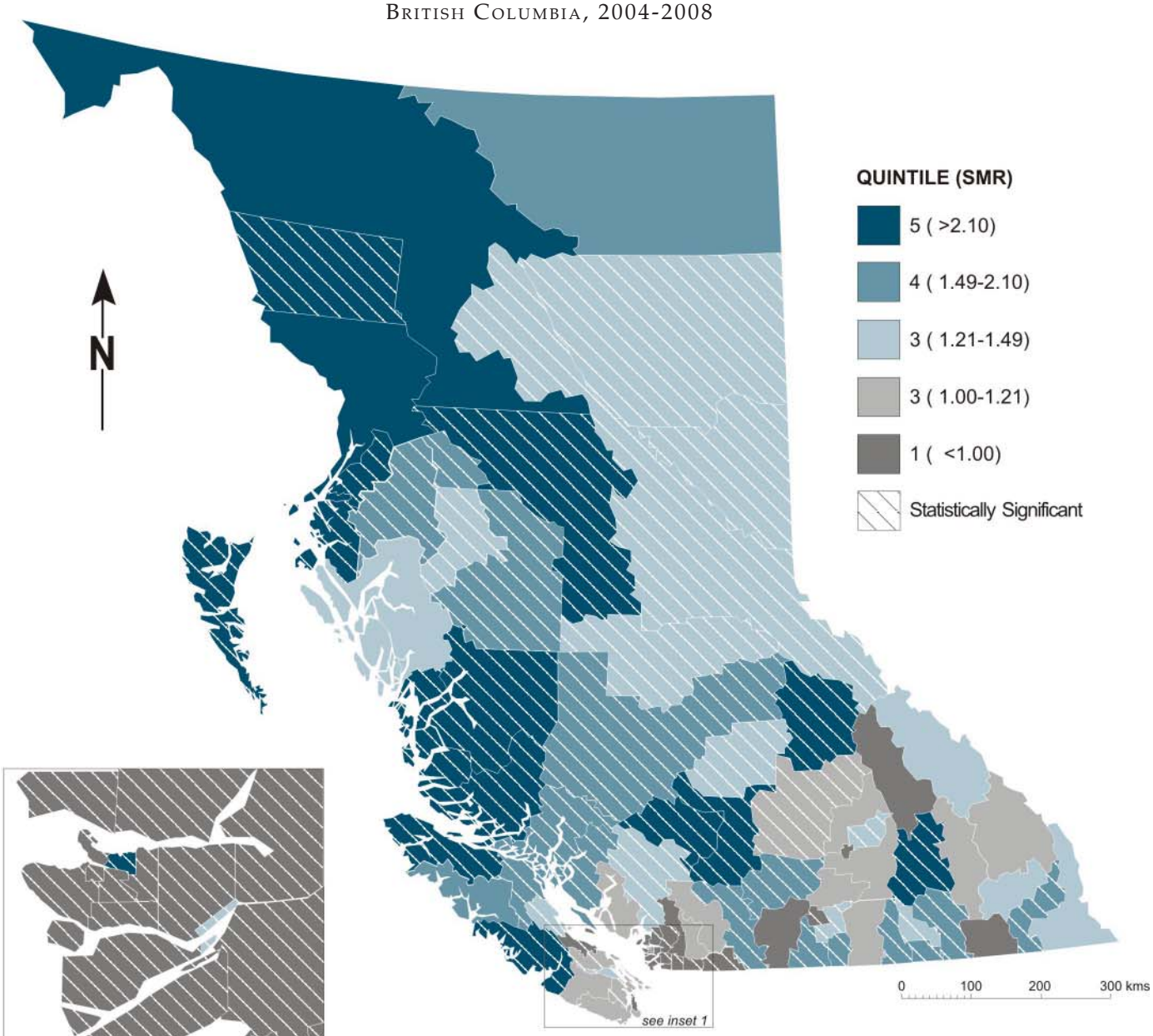
Local Health Area		2004–2008 Observed Deaths	SMR	(p)	2009 Observed Deaths	Expected Deaths	SMR	(p)	95% Confidence Interval Lower	-	Upper
001	Fernie	43	1.28		6	5.78	1.04		0.38	-	2.26
002	Cranbrook	97	1.56	*	10	10.76	0.93		0.44	-	1.71
003	Kimberley	30	1.25		8	4.09	1.96		0.84	-	3.85
004	Windermere	29	1.17		3	4.36	0.69		0.14	-	2.01
005	Creston	36	0.93		13	6.52	1.99	*	1.06	-	3.41
006	Kootenay Lake	11	1.00		2	1.89	1.06		0.12	-	3.82
007	Nelson	97	1.61	*	17	10.41	1.63		0.95	-	2.62
009	Castlegar	49	1.45	*	10	5.83	1.72		0.82	-	3.16
010	Arrow Lakes	31	2.11	*	2	2.48	0.81		0.09	-	2.91
011	Trail	103	1.94	*	17	8.97	1.90	*	1.10	-	3.03
012	Grand Forks	43	1.54	*	7	4.71	1.48		0.59	-	3.06
013	Kettle Valley	12	1.05		3	2.00	1.50		0.30	-	4.37
014	Southern Okanagan	112	1.63	*	17	11.58	1.47		0.85	-	2.35
015	Penticton	157	1.25	*	28	21.21	1.32		0.88	-	1.91
016	Keremeos	32	1.80	*	6	3.04	1.98		0.72	-	4.30
017	Princeton	12	0.70		3	2.97	1.01		0.20	-	2.95
018	Golden	19	1.21		2	2.72	0.74		0.08	-	2.66
019	Revelstoke	16	0.85		6	3.16	1.90		0.69	-	4.14
020	Salmon Arm	111	1.12		23	17.32	1.33		0.84	-	1.99
021	Armstrong - Spallumcheen	19	0.75		4	4.44	0.90		0.24	-	2.31
022	Vernon	181	1.06		31	29.87	1.04		0.70	-	1.47
023	Central Okanagan	457	1.01		80	78.96	1.01		0.80	-	1.26
024	Kamloops	308	1.17	*	45	45.44	0.99		0.72	-	1.33
025	100 Mile House	58	1.34	*	5	7.36	0.68		0.22	-	1.59
026	North Thompson	24	2.15	*	2	1.91	1.05		0.12	-	3.77
027	Cariboo - Chilcotin	121	2.00	*	37	10.38	3.57	*	2.51	-	4.92
028	Quesnel	83	1.48	*	7	9.65	0.73		0.29	-	1.49
029	Lillooet	36	3.38	*	8	1.82	4.39	*	1.89	-	8.65
030	South Cariboo	55	2.63	*	9	3.57	2.52	*	1.15	-	4.78
031	Merritt	58	2.00	*	12	4.92	2.44	*	1.26	-	4.26
032	Hope	47	1.96	*	7	3.99	1.76		0.70	-	3.62
033	Chilliwack	162	0.85	*	38	33.26	1.14		0.81	-	1.57
034	Abbotsford	215	0.76	*	37	47.89	0.77		0.54	-	1.06
035	Langley	223	0.82	*	39	48.51	0.80		0.57	-	1.10
037	Delta	159	0.68	*	25	40.51	0.62	*	0.40	-	0.91
038	Richmond	165	0.39	*	29	72.36	0.40	*	0.27	-	0.58
040	New Westminster	193	1.37	*	35	24.08	1.45	*	1.01	-	2.02
041	Burnaby	361	0.75	*	66	81.81	0.81		0.62	-	1.03
042	Maple Ridge	173	0.94		18	32.03	0.56	*	0.33	-	0.89
043	Coquitlam	268	0.64	*	42	73.96	0.57	*	0.41	-	0.77
044	North Vancouver	178	0.57	*	29	53.17	0.55	*	0.37	-	0.78
045	West Vancouver-Bowen Is.	77	0.51	*	13	25.01	0.52	*	0.28	-	0.89
046	Sunshine Coast	89	1.04		14	15.27	0.92		0.50	-	1.54
047	Powell River	91	1.58	*	20	9.84	2.03	*	1.24	-	3.14
048	Howe Sound	75	1.29	*	15	10.35	1.45		0.81	-	2.39
049	Bella Coola Valley	31	4.59	*	7	1.12	6.28	*	2.51	-	12.93
050	Queen Charlotte	37	3.48	*	7	1.81	3.86	*	1.55	-	7.95
051	Snow Country	3	2.11		-	0.20	-		-	-	-
052	Prince Rupert	72	2.30	*	14	5.22	2.68	*	1.46	-	4.50
053	Upper Skeena	23	2.10	*	1	1.84	0.54		0.01	-	3.03
054	Smithers	46	1.40	*	8	5.67	1.41		0.61	-	2.78
055	Burns Lake	34	1.90	*	6	2.99	2.01		0.73	-	4.37
056	Nechako	70	2.17	*	12	5.46	2.20	*	1.14	-	3.84
057	Prince George	278	1.40	*	58	33.93	1.71	*	1.30	-	2.21
059	Peace River South	84	1.48	*	12	9.62	1.25		0.64	-	2.18
060	Peace River North	75	1.32	*	13	9.74	1.34		0.71	-	2.28
061	Greater Victoria	670	1.20	*	110	92.10	1.19		0.98	-	1.44
062	Sooke	137	1.03		29	23.88	1.21		0.81	-	1.74
063	Saanich	142	0.71	*	25	33.89	0.74		0.48	-	1.09
064	Gulf Islands	58	1.12		14	9.02	1.55		0.85	-	2.61
065	Cowichan	173	1.20	*	29	24.93	1.16		0.78	-	1.67
066	Lake Cowichan	19	1.15		5	2.87	1.74		0.56	-	4.06
067	Ladysmith	76	1.41	*	11	9.54	1.15		0.57	-	2.06
068	Nanaimo	310	1.18	*	47	45.49	1.03		0.76	-	1.37
069	Qualicum	128	0.83	*	29	27.07	1.07		0.72	-	1.54
070	Alberni	175	2.15	*	39	13.87	2.81	*	2.00	-	3.84
071	Courtenay	227	1.37	*	42	29.62	1.42	*	1.02	-	1.92
072	Campbell River	149	1.49	*	31	17.63	1.76	*	1.19	-	2.50
075	Mission	90	1.05		10	14.69	0.68		0.33	-	1.25
076	Agassiz - Harrison	25	1.06		3	3.97	0.76		0.15	-	2.21
077	Summerland	18	0.48	*	8	6.27	1.28		0.55	-	2.51
078	Enderby	31	1.47	*	5	3.63	1.38		0.44	-	3.21
080	Kitimat	30	1.26		4	4.02	1.00		0.27	-	2.55
081	Fort Nelson	15	1.56		-	1.56	-		-	-	-
083	Central Coast	22	7.82	*	2	0.44	4.51		0.51	-	16.28
084	Vancouver Island West	10	1.63		2	1.03	1.94		0.22	-	7.00
085	Vancouver Island North	86	3.19	*	6	4.59	1.31		0.48	-	2.84
087	Stikine	6	2.37		5	0.41	12.22	*	3.94	-	28.52
088	Terrace	77	1.80	*	15	7.34	2.04	*	1.14	-	3.37
092	Nisga'a	12	3.19	*	4	0.65	6.13	+	1.65	-	15.68
094	Telegraph Creek	6	4.82	*	1	0.19	5.22		0.07	-	29.03
161	Vancouver - City Centre	196	0.83	*	39	39.95	0.98		0.69	-	1.33
162	Vancouver - Downtown E.side	339	2.35	*	50	25.53	1.96	*	1.45	-	2.58
163	Vancouver - North East	126	0.55	*	18	38.69	0.47	*	0.28	-	0.74
164	Vancouver - Westside	135	0.47	*	17	47.22	0.36	*	0.21	-	0.58
165	Vancouver - Midtown	144	0.81	*	19	30.11	0.63	*	0.38	-	0.99
166	Vancouver - South	156	0.51	*	29	50.94	0.57	*	0.38	-	0.82
201	Surrey	575	0.84	*	90	124.34	0.72	*	0.58	-	0.89
202	South Surrey/White Rock	138	0.59	*	26	41.73	0.62	*	0.41	-	0.91
	PROVINCIAL TOTAL	**10,184**	**1.00**		**1,755**	**1,755.00**	**1.00**		**0.95**	**-**	**1.05**

Notes for this table follow the map.

FIGURE 44

ALCOHOL-RELATED DEATHS BY LOCAL HEALTH AREA

BRITISH COLUMBIA, 2004-2008



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

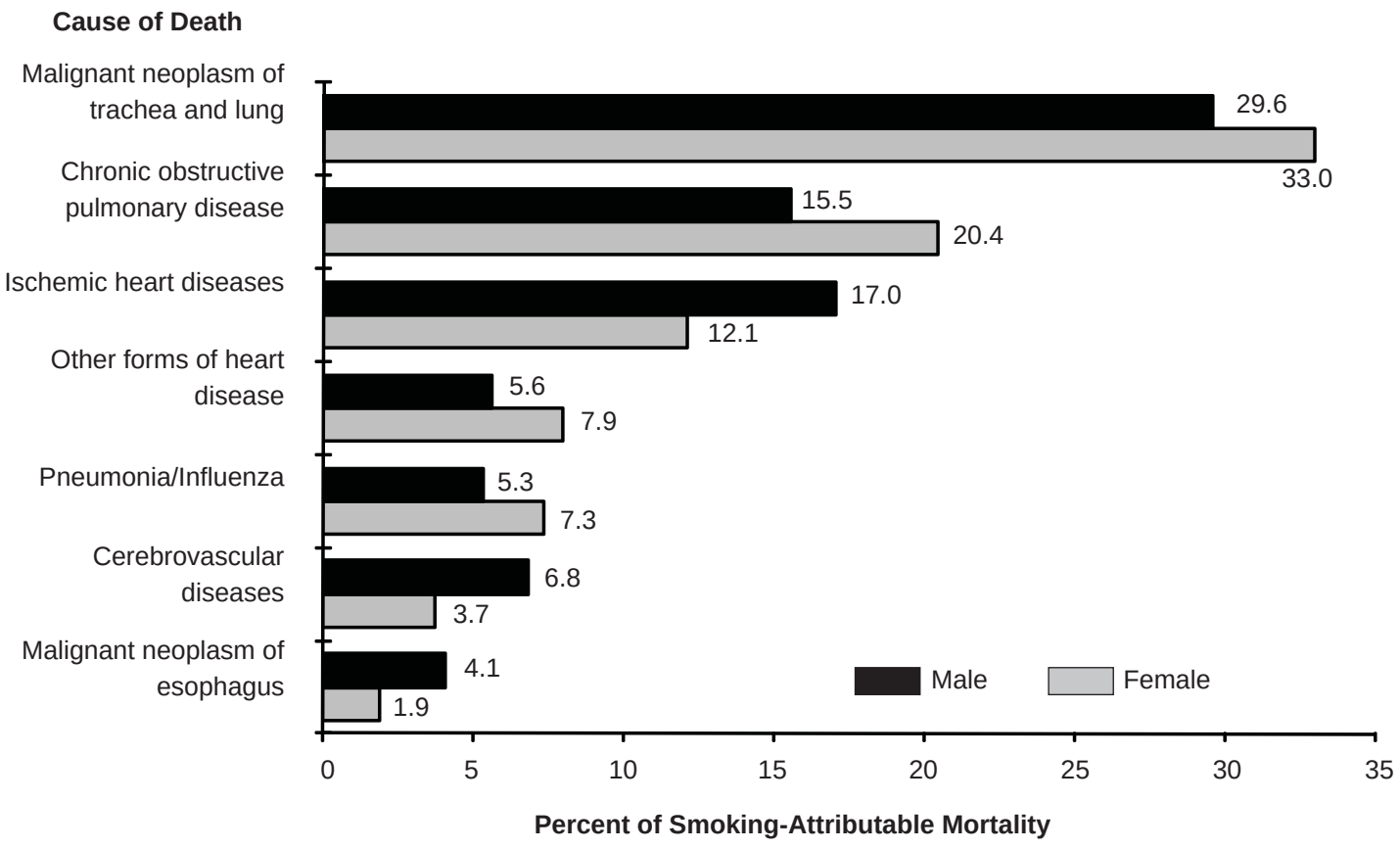
Table 42 and Figure 45 portray the number and percent of deaths in 2009 that were attributable to smoking for those aged 35 years and older. The age restriction relates to the fact that smoking-attributable conditions generally become apparent over time and after several years of tobacco use. Because 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 the percentage of total SAM by cause category.

In 2009, there were 6,089 deaths attributed to smoking as shown in Table 42. By far the largest disease category was malignant neoplasms of trachea and lung (31.0 percent) followed by chronic obstructive pulmonary disease (17.6 percent) and ischemic heart disease (15.0 percent).

FIGURE 45
SMOKING-ATTRIBUTABLE MORTALITY BY SELECTED CAUSES AND GENDER
BRITISH COLUMBIA, 2009



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, 2009

Cause of Death	ICD-10 Code(s)	Male				Female				Total		
				SAM				SAM			SAM	
		Deaths	SAM (%)	Number	Percent	Deaths	SAM (%)	Number	Percent	Deaths	Number	Percent
Malignant Neoplasms												
Malignant neoplasms of lip, oral cavity and pharynx	C00-C14	112	91.2	102	2.9	48	59.9	29	1.1	160	131	2.1
Malignant neoplasm of esophagus	C15	186	78.2	145	4.1	66	71.0	47	1.9	252	192	3.2
Malignant neoplasm of pancreas	C25	313	21.7	68	1.9	236	33.9	80	3.2	549	148	2.4
Malignant neoplasm of larynx	C32	34	79.7	27	0.8	6	87.2	5	0.2	40	32	0.5
Malignant neoplasm of trachea and lung	C33-C34	1,186	89.3	1,059	29.6	1,081	76.5	827	33.0	2,267	1,886	31.0
Malignant neoplasms of cervix, uterus	C53-C55	-	-	-	-	120	33.9	41	1.6	120	41	0.7
Malignant neoplasm of bladder	C67	207	44.8	93	2.6	89	37.6	33	1.3	296	126	2.1
Malignant neoplasm of kidney and other unspecified urinary organs	C64-C66, C68	139	46.8	65	1.8	76	12.4	9	0.4	215	74	1.2
SUBTOTAL		**2,177**		**1,560**	**43.6**	**1,722**		**1,071**	**42.7**	**3,899**	**2,631**	**43.2**
Circulatory System Diseases												
Hypertension	I10-I13	142	24.6	35	1.0	209	16.4	34	1.4	351	69	1.1
Ischemic heart diseases :	I20-I25											
35-64 years		445	43.2	192	5.4	96	36.5	35	1.4	541	227	3.7
65+ years		1,980	21.1	418	11.7	1,838	14.6	268	10.7	3,818	686	11.3
Other forms of heart disease	I01-I09, I27, I30-I52	760	26.5	201	5.6	1,028	19.4	199	7.9	1,788	401	6.6
Cerebrovascular diseases :	I60-I69											
35-64 years		95	44.8	43	1.2	66	49.3	33	1.3	161	75	1.2
65+ years		861	23.4	201	5.6	1,272	4.8	61	2.4	2,133	263	4.3
Atherosclerosis	I70	26	55.5	14	0.4	42	31.7	13	0.5	68	28	0.5
Aortic aneurysm	I71	120	55.5	67	1.9	64	31.7	20	0.8	184	87	1.4
Other arterial diseases	I26, I28, I72-I78	84	55.5	47	1.3	93	31.7	29	1.2	177	76	1.2
SUBTOTAL		**4,513**		**1,218**	**34.0**	**4,708**		**694**	**27.6**	**9,221**	**1,912**	**31.4**
Respiratory System Diseases												
Pneumonia/Influenza	J09-J181, J188, J189	580	32.7	190	5.3	698	26.3	184	7.3	1,278	373	6.1
Bronchitis, emphysema	J40-J43	57	84.7	48	1.3	49	79.2	39	1.5	106	87	1.4
Chronic obstructive pulmonary disease	J44	657	84.7	556	15.5	648	79.2	513	20.4	1,305	1,070	17.6
Other respiratory diseases	A15-A19, J45-J46	23	32.7	8	0.2	34	26.3	9	0.4	57	16	0.3
SUBTOTAL		**1,317**		**802**	**22.4**	**1,429**		**745**	**29.7**	**2,746**	**1,546**	**25.4**
TOTAL		**8,007**		**3,579**	**100.0**	**7,859**		**2,510**	**100.0**	**15,866**	**6,089**	**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 (232) died of drug-induced causes than females (131). Among individuals aged 25 to 64 years, there were 308 drug-induced deaths (84.8 percent), and 176 drug-induced deaths (48.5 percent) in the 45 to 64 year age-group.

Table 44 presents drug-induced deaths by cause for 2004-2008 and 2009. In 2009, 67.5 percent of drug-induced deaths were the result of accidental poisoning by drugs compared to 67.1 percent in the previous five years. Of the 452 suicide deaths in BC in 2009, 17.7 percent were drug-induced.

Figure 46 is a graphic presentation of the results from Table 44. In 2009, 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 2009 and in the previous five years. In 2009, 30 LHAs had no drug-induced deaths and 7 had no drug-induced deaths in 2004-2008. Vancouver - City Centre , Penticton and Vancouver - Downtown Eastside were the only LHAs where the observed number of deaths was more than 5 and statistically significantly higher than the expected numbers in 2009 as well as the previous five years.

Figure 47 maps the variation of SMRs in the LHAs divided into quintiles for 2004-2008.

TABLE 43

DRUG–INDUCED DEATHS BY AGE AND GENDER

BRITISH COLUMBIA, 2009

Age	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
<15	-	-	1	0.8	1	0.3
15-19	2	0.9	1	0.8	3	0.8
20-24	10	4.3	9	6.9	19	5.2
25-44	90	38.8	42	32.1	132	36.4
45-64	112	48.3	64	48.9	176	48.5
65-84	15	6.5	12	9.2	27	7.4
85+	3	1.3	2	1.5	5	1.4
TOTAL	**232**	**100.0**	**131**	**100.0**	**363**	**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, 2004–2008 AND 2009

Cause of Death	ICD-10 Code(s)	Year of Death: 2004–2008 Number	2004–2008 Percent	2009 Number	2009 Percent
Psychoactive substance and drug use/abuse	F11-F16, F19	126	6.0	15	4.1
Accidental poisoning by drugs	X40-X44	1,405	67.1	245	67.5
Suicide by drugs	X60-X64	470	22.4	80	22.0
Assault by drugs and medicaments	X85	1	0.0	-	-
Poisoning by drugs and medicaments undetermined if accidental or intentional	Y10-Y14	70	3.3	14	3.9
Adverse effects of drugs and medicaments	Y40-Y574, Y577-Y579, Y598, Y880	21	1.0	8	2.2
Other drug causes*		1	0.0	1	0.3
TOTAL		**2,094**	**100.0**	**363**	**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, 2009

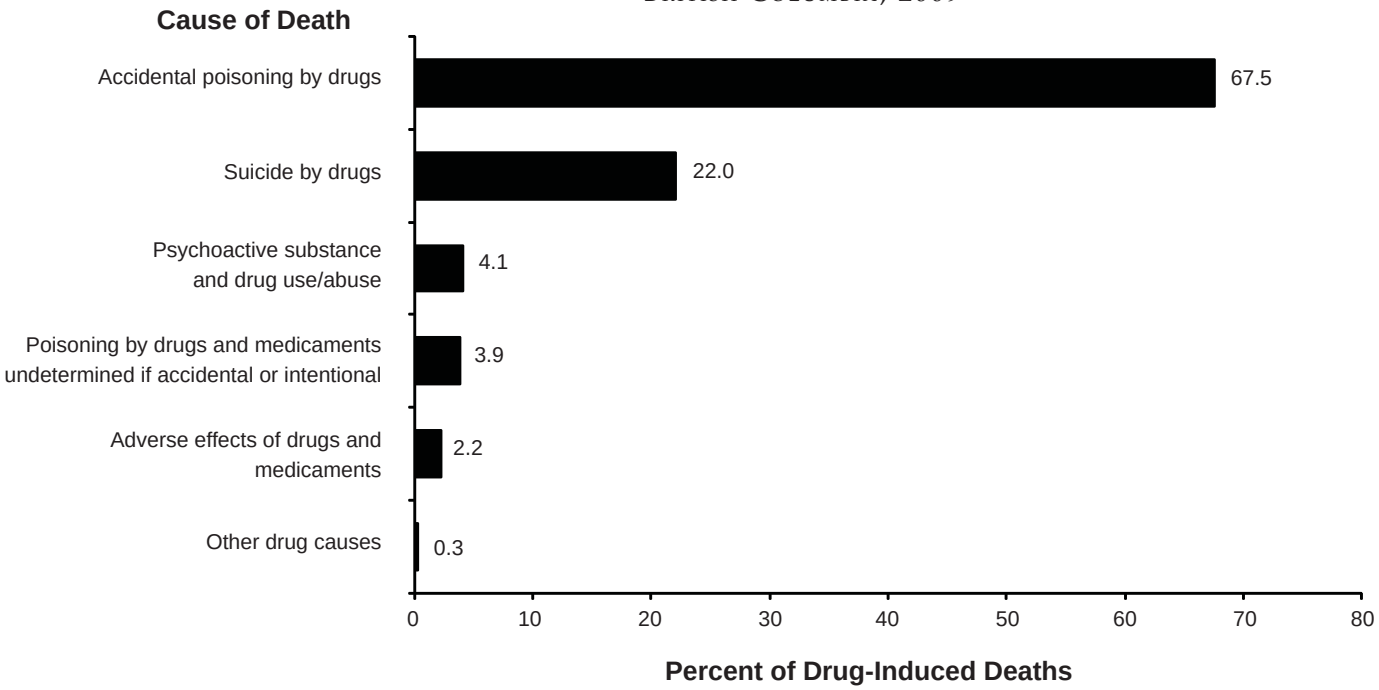


Table 45

STANDARDIZED MORTALITY RATIO BY LOCAL HEALTH AREA DRUG-INDUCED DEATHS, BRITISH COLUMBIA, 2004–2008 AND 2009

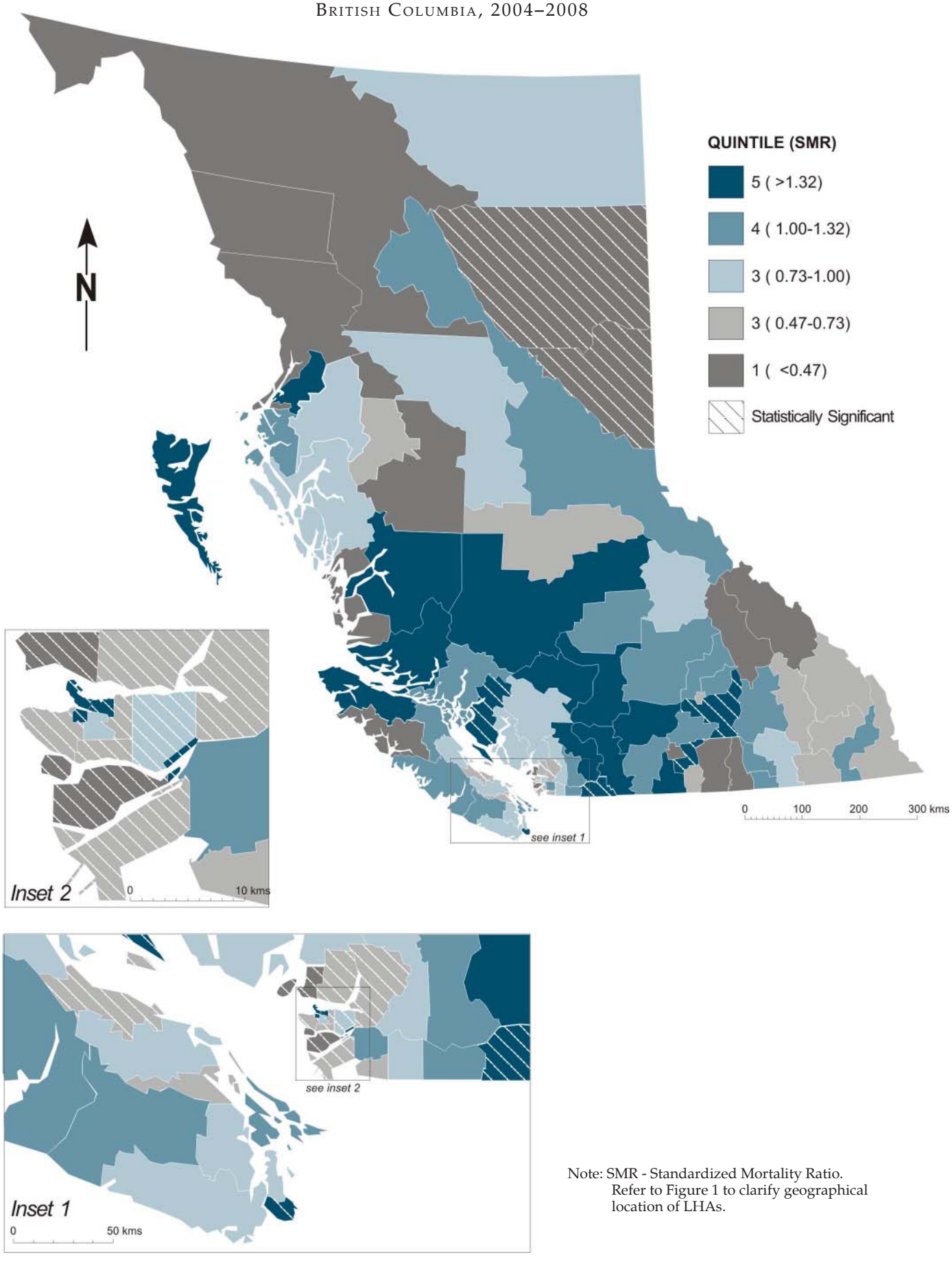
Local Health Area		2004–2008 Observed Deaths	SMR	(p)	2009 Observed Deaths	Expected Deaths	SMR	(p)	95% Confidence Interval Lower		Upper
001	Fernie	4	0.53		1	1.27	0.79		0.01	-	4.38
002	Cranbrook	13	1.10		2	2.04	0.98		0.11	-	3.53
003	Kimberley	2	0.50		-	0.71	-		-	-	-
004	Windermere	3	0.64		-	0.89	-		-	-	-
005	Creston	3	0.56		1	0.94	1.07		0.01	-	5.95
006	Kootenay Lake	1	0.55		-	0.32	-		-	-	-
007	Nelson	12	0.99		-	2.09	-		-	-	-
009	Castlegar	7	1.11		-	1.09	-		-	-	-
010	Arrow Lakes	3	1.31		-	0.39	-		-	-	-
011	Trail	10	1.08		1	1.57	0.64		0.01	-	3.55
012	Grand Forks	1	0.24		1	0.71	1.41		0.02	-	7.87
013	Kettle Valley	-	-		1	0.31	3.26		0.04	-	18.14
014	Southern Okanagan	5	0.59		1	1.52	0.66		0.01	-	3.66
015	Penticton	34	1.82	*	9	3.31	2.72	*	1.24	-	5.17
016	Keremeos	3	1.34		-	0.40	-		-	-	-
017	Princeton	3	1.26		-	0.42	-		-	-	-
018	Golden	1	0.28		-	0.64	-		-	-	-
019	Revelstoke	1	0.25		1	0.67	1.50		0.02	-	8.33
020	Salmon Arm	20	1.30		2	2.78	0.72		0.08	-	2.60
021	Armstrong - Spallumcheen	3	0.68		1	0.75	1.32		0.02	-	7.37
022	Vernon	41	1.40	*	8	5.20	1.54		0.66	-	3.03
023	Central Okanagan	89	1.11		14	14.77	0.95		0.52	-	1.59
024	Kamloops	60	1.17		7	8.97	0.78		0.31	-	1.61
025	100 Mile House	9	1.27		-	1.20	-		-	-	-
026	North Thompson	2	0.95		-	0.35	-		-	-	-
027	Cariboo - Chilcotin	18	1.40		4	2.16	1.85		0.50	-	4.75
028	Quesnel	8	0.71		1	1.89	0.53		0.01	-	2.95
029	Lillooet	4	1.90		1	0.36	2.81		0.04	-	15.65
030	South Cariboo	5	1.46		3	0.59	5.11	+	1.03	-	14.92
031	Merritt	9	1.66		1	0.92	1.09		0.01	-	6.06
032	Hope	7	1.83		-	0.64	-		-	-	-
033	Chilliwack	50	1.38	*	8	6.39	1.25		0.54	-	2.47
034	Abbotsford	63	1.05		11	10.43	1.05		0.53	-	1.89
035	Langley	44	0.75		7	10.19	0.69		0.28	-	1.42
037	Delta	32	0.66	*	5	7.95	0.63		0.20	-	1.47
038	Richmond	33	0.36	*	4	15.93	0.25	+	0.07	-	0.64
040	New Westminster	50	1.54	*	4	5.66	0.71		0.19	-	1.81
041	Burnaby	78	0.73	*	7	18.59	0.38	*	0.15	-	0.78
042	Maple Ridge	36	0.83		10	7.49	1.33		0.64	-	2.45
043	Coquitlam	66	0.64	*	11	17.82	0.62		0.31	-	1.10
044	North Vancouver	43	0.64	*	12	11.39	1.05		0.54	-	1.84
045	West Vancouver-Bowen Is.	7	0.30	*	4	3.95	1.01		0.27	-	2.59
046	Sunshine Coast	10	0.74		2	2.44	0.82		0.09	-	2.96
047	Powell River	17	1.80	*	2	1.59	1.26		0.14	-	4.53
048	Howe Sound	13	0.77		5	3.02	1.65		0.53	-	3.86
049	Bella Coola Valley	2	1.39		-	0.23	-		-	-	-
050	Queen Charlotte	4	1.65		-	0.39	-		-	-	-
051	Snow Country	-	-		-	0.04	-		-	-	-
052	Prince Rupert	8	1.14		1	1.13	0.89		0.01	-	4.94
053	Upper Skeena	1	0.40		-	0.41	-		-	-	-
054	Smithers	5	0.65		-	1.25	-		-	-	-
055	Burns Lake	-	-		-	0.61	-		-	-	-
056	Nechako	7	0.97		-	1.15	-		-	-	-
057	Prince George	48	1.02		8	7.82	1.02		0.44	-	2.02
059	Peace River South	5	0.40	*	-	2.14	-		-	-	-
060	Peace River North	7	0.45	*	-	2.70	-		-	-	-
061	Greater Victoria	161	1.49	*	27	18.46	1.46		0.96	-	2.13
062	Sooke	25	0.81		4	5.57	0.72		0.19	-	1.84
063	Saanich	25	0.85		4	5.01	0.80		0.21	-	2.04
064	Gulf Islands	8	1.11		2	1.31	1.53		0.17	-	5.51
065	Cowichan	23	0.89		5	4.46	1.12		0.36	-	2.62
066	Lake Cowichan	3	0.99		1	0.53	1.88		0.02	-	10.45
067	Ladysmith	4	0.48		-	1.50	-		-	-	-
068	Nanaimo	46	0.97		11	8.30	1.32		0.66	-	2.37
069	Qualicum	11	0.56	*	3	3.58	0.84		0.17	-	2.45
070	Alberni	16	1.06		5	2.54	1.97		0.64	-	4.60
071	Courtenay	26	0.89		6	5.16	1.16		0.42	-	2.53
072	Campbell River	26	1.30		5	3.41	1.47		0.47	-	3.42
075	Mission	25	1.26		4	3.41	1.17		0.32	-	3.00
076	Agassiz - Harrison	7	1.74		1	0.69	1.46		0.02	-	8.12
077	Summerland	1	0.19		-	0.91	-		-	-	-
078	Enderby	4	1.15		-	0.60	-		-	-	-
080	Kitimat	4	0.75		-	0.85	-		-	-	-
081	Fort Nelson	3	0.95		-	0.50	-		-	-	-
083	Central Coast	-	-		1	0.11	9.19		0.12	-	51.14
084	Vancouver Island West	-	-		-	0.20	-		-	-	-
085	Vancouver Island North	9	1.44		2	1.00	2.00		0.22	-	7.22
087	Stikine	-	-		-	0.08	-		-	-	-
088	Terrace	8	0.84		1	1.57	0.64		0.01	-	3.55
092	Nisga'a	2	2.21		-	0.15	-		-	-	-
094	Telegraph Creek	-	-		-	0.05	-		-	-	-
161	Vancouver - City Centre	88	1.33	*	23	11.67	1.97	*	1.25	-	2.96
162	Vancouver - Downtown E.side	192	5.70	*	40	6.26	6.39	*	4.56	-	8.70
163	Vancouver - North East	36	0.72	*	9	8.69	1.04		0.47	-	1.97
164	Vancouver - Westside	39	0.60	*	2	10.94	0.18	+	0.02	-	0.66
165	Vancouver - Midtown	40	0.90		6	7.61	0.79		0.29	-	1.72
166	Vancouver - South	34	0.52	*	5	10.96	0.46		0.15	-	1.06
201	Surrey	186	1.10		29	29.80	0.97		0.65	-	1.40
202	South Surrey/White Rock	27	0.72		5	6.56	0.76		0.25	-	1.78
	PROVINCIAL TOTAL	**2,094**	**1.00**		**363**	**363.00**	**1.00**		**0.90**	**-**	**1.11**

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

FIGURE 47

DRUG-INDUCED DEATHS BY LOCAL HEALTH AREA

BRITISH COLUMBIA, 2004–2008



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 2009 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, 2003–2009

Health Authority	2003	2004	2005	2006	2007	2008	2009
01 Interior	0.78	0.75	0.71	0.53	0.66	0.52	0.40
02 Fraser	0.43	0.41	0.58	0.68	0.43	0.47	0.30
03 Vancouver Coastal	0.49	0.58	0.63	0.61	0.51	0.41	0.51
04 Vancouver Island	0.71	0.75	0.64	0.75	0.60	0.63	0.46
05 Northern	0.43	0.40	0.37	0.18	0.47	0.39	0.18
PROVINCIAL TOTAL	**0.54**	**0.56**	**0.60**	**0.61**	**0.51**	**0.49**	**0.39**

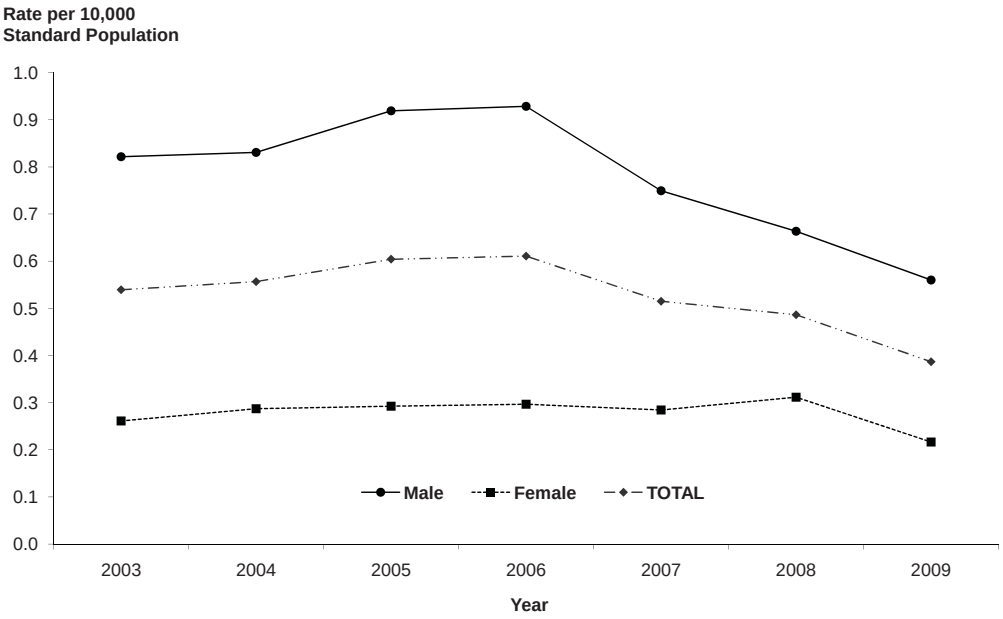
Note: Deaths that are still under investigation may later be identified as unintentional illicit/illegal overdose deaths.
ASMR - Age Standardized Mortality Rate per 10,000 standard population (Canada 1991 Census).
Non-residents are excluded.

TABLE 47
ASMR FOR UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS BY GENDER
BRITISH COLUMBIA, 2003–2009

Gender	2003	2004	2005	2006	2007	2008	2009
Male	0.82	0.83	0.92	0.93	0.75	0.66	0.56
Female	0.26	0.29	0.29	0.30	0.28	0.31	0.22
TOTAL	**0.54**	**0.56**	**0.60**	**0.61**	**0.51**	**0.49**	**0.39**

Note: Deaths that are 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, 2003-2009



See Table 47 for notes.

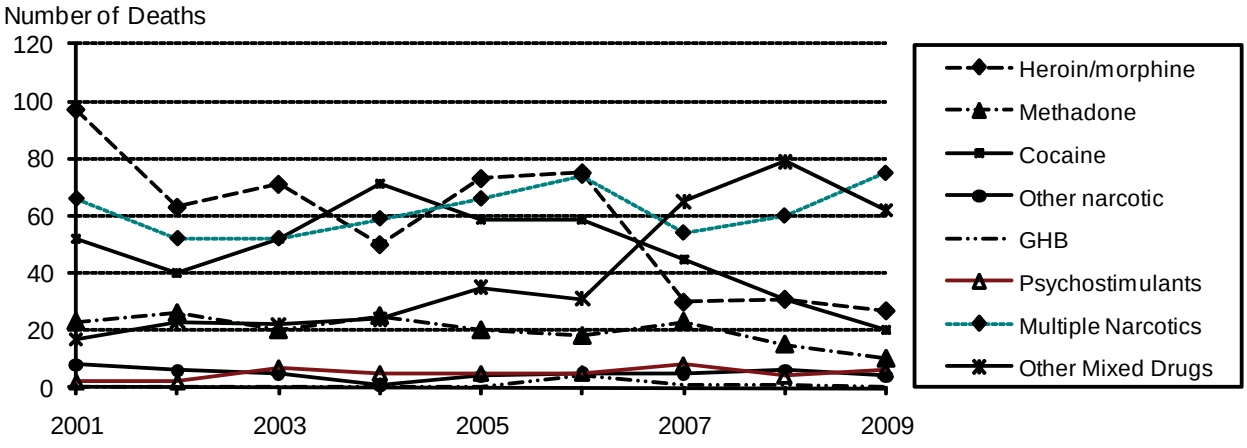
Vital Statistics Information Box

UNINTENTIONAL ILLICIT/ILLEGAL DRUG DEATHS
BRITISH COLUMBIA, 2001-2009

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 2001. It is important to note that numbers for 2009 (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.

UNINTENTIONAL ILLICIT/ILLEGAL OVERDOSE DEATHS BY TYPE OF DRUG
BRITISH COLUMBIA, 2001-2009



Vital Statistics Information Box

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 since 2007 and remained the leading cause of illicit drug overdose in 2008. Multiple narcotics became the leading cause of illicit drug overdose in 2009.

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 itself.

Overdose Deaths by Type of Drug

British Columbia, 2001-2009

Drug	2001	2002	2003	2004	2005	2006	2007	2008	2009
Heroin/morphine type only	97	63	71	50	73	75	30	31	27
Methadone only	23	26	20	25	20	18	23	15	10
Cocaine only	52	40	52	71	59	59	45	31	20
Other narcotic/ hallucinongen only	8	6	5	1	4	5	5	6	4
GHB only	0	0	0	0	0	4	1	1	0
Physchostimulants* only	2	2	7	5	5	5	8	4	6
Multiple narcotics	66	52	52	59	66	74	54	60	75
Other mixed drugs	17	23	22	24	35	31	65	79	62
TOTAL	**265**	**212**	**229**	**235**	**262**	**271**	**231**	**227**	**204**

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 Fall Deaths

In 2009, there were 1,700 deaths due to external causes among BC residents and of these, unintentional (accidental) deaths comprised over 67.7 percent (1,151) of non-natural deaths. Overall, falls were the leading cause of unintentional death, contributing 36.2 percent to this category in 2009 and exceeding fatal motor-vehicle incidents 417 to 252 (see Table 30).

Analysis of various causes of unintentional (accidental) mortality in 2009 shows that more females died as the result of a fall than males did. Of unintentional mortality, 28.4 percent of male deaths were the result of falls. In contrast, 49.0 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 (direct). There are additional deaths that involve accidental falls, but where the fall was considered to be only a contributing factor (indirect).

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

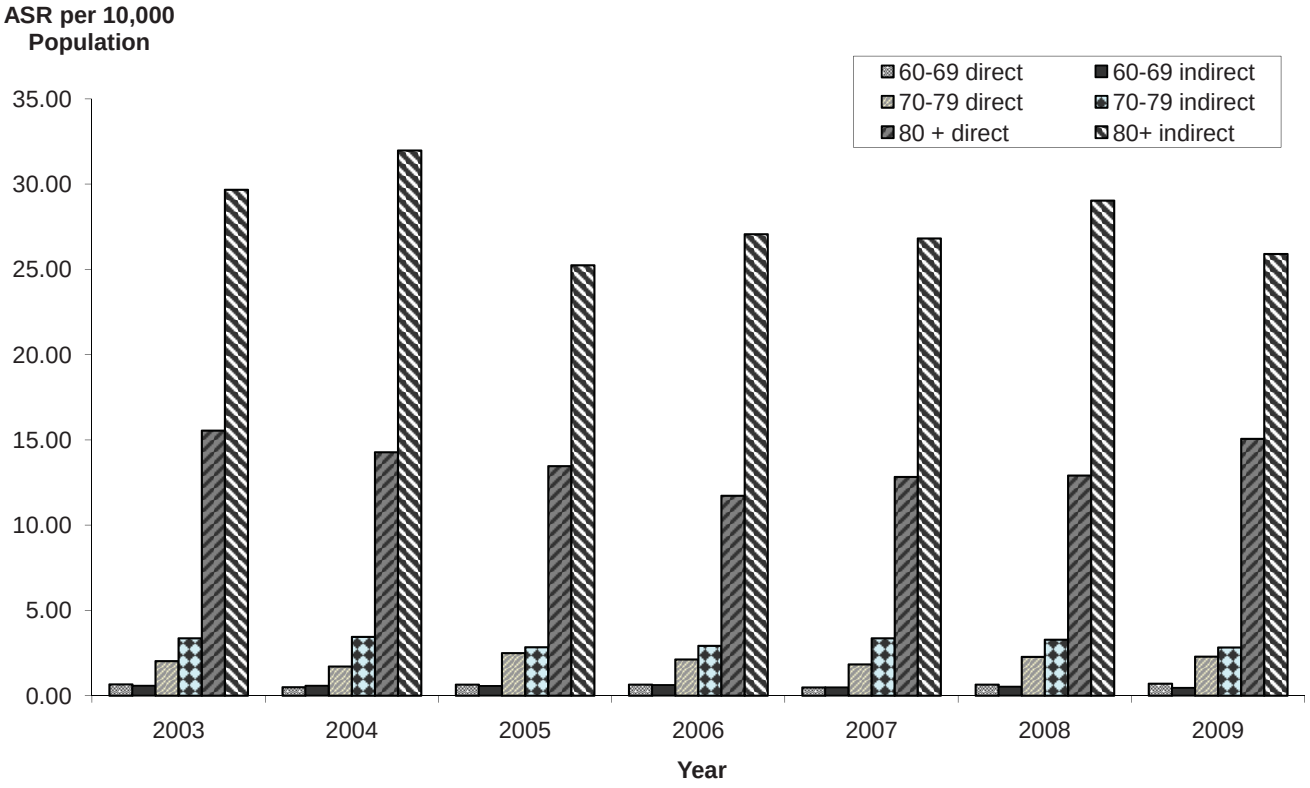
The BC Injury Research and Prevention Unit (BCIRPU) is a national leader in falls injury research and in the design and implementation of falls prevention strategies. A summary of the initiatives undertaken by the BCIRPU can be viewed at the Unit's website: http://www.injuryresearch.bc.ca/index.aspx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

TABLE 48
DEATHS DIRECTLY AND INDIRECTLY DUE TO FALLS BY AGE
BRITISH COLUMBIA, 2003–2009

Cause of Death	Age (inYears)	2003		2004		2005		2006		2007		2008		2009	
		Counts	ASR	Counts	ASR	Counts	ASR	Counts	ASR	Counts	ASR	Counts	ASR	Counts	ASR
Directly due to falls															
	60-69	23	0.67	18	0.50	24	0.65	25	0.64	20	0.48	28	0.64	32	0.70
	70-79	52	2.03	44	1.71	65	2.50	56	2.12	49	1.83	62	2.28	63	2.28
	80+	231	15.54	221	14.27	216	13.46	195	11.73	221	12.83	230	12.92	278	15.07
Indirectly due to falls															
	60-69	20	0.58	21	0.59	21	0.56	24	0.62	20	0.48	23	0.53	21	0.46
	70-79	86	3.36	89	3.45	74	2.84	77	2.92	90	3.37	89	3.28	78	2.83
	80+	441	29.67	495	31.97	405	25.24	450	27.06	462	26.82	517	29.03	478	25.90

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

FIGURE 49
DEATHS DIRECTLY AND INDIRECTLY DUE TO FALLS, AGES 60-80+
BRITISH COLUMBIA, 2003-2009



Burials and Cremations

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

In 2009, 80.7 percent of deaths resulted in cremations (25,190) and 18.7 percent involved burials (5,842).

Since 1986, the percentage of burials has consistently decreased.

TABLE 49

METHOD OF DISPOSITION OF DECEDENT

BRITISH COLUMBIA, 1986–2009

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	186	63	26,225
1996	7,640	27.9	19,545	71.4	195	12	27,392
1997	7,359	27.0	19,651	72.1	208	46	27,264
1998	7,197	25.9	20,378	73.3	225	9	27,809
1999	7,062	25.3	20,633	74.0	198	-	27,893
2000	6,469	23.7	20,695	75.7	187	1	27,352
2001	6,687	23.7	21,331	75.5	223	1	28,242
2002	6,541	22.8	21,979	76.5	192	3	28,715
2003	6,608	22.7	22,362	76.7	187	-	29,157
2004	6,380	21.5	23,162	77.9	185	-	29,727
2005	6,281	20.9	23,633	78.5	186	-	30,100
2006	6,361	20.8	24,013	78.6	168	-	30,542
2007	6,148	19.8	24,804	79.7	168	-	31,120
2008	6,311	19.8	25,395	79.6	195	-	31,901
2009	5,842	18.7	25,190	80.7	195	-	31,227

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, 2009

Local Health Area		Burial		Cremation		Other	Total
		Number	Percent	Number	Percent		
001	Fernie	23	24.5	71	75.5	-	94
002	Cranbrook	40	16.9	196	82.7	1	237
003	Kimberley	9	9.4	87	90.6	-	96
004	Windermere	6	12.8	40	85.1	1	47
005	Creston	36	22.4	125	77.6	-	161
006	Kootenay Lake	3	10.3	26	89.7	-	29
007	Nelson	38	20.0	150	78.9	2	190
009	Castlegar	40	37.4	67	62.6	-	107
010	Arrow Lakes	3	8.1	34	91.9	-	37
011	Trail	37	15.9	194	83.6	1	232
012	Grand Forks	30	27.8	78	72.2	-	108
013	Kettle Valley	2	8.7	21	91.3	-	23
014	Southern Okanagan	40	15.2	223	84.8	-	263
015	Penticton	73	12.7	499	86.9	2	574
016	Keremeos	10	15.4	54	83.1	1	65
017	Princeton	5	8.5	54	91.5	-	59
018	Golden	6	15.4	33	84.6	-	39
019	Revelstoke	10	16.1	51	82.3	1	62
020	Salmon Arm	54	15.8	287	83.9	1	342
021	Armstrong-Spallumcheen	10	12.2	72	87.8	-	82
022	Vernon	108	17.4	509	82.2	2	619
023	Central Okanagan	256	16.5	1,292	83.3	3	1,551
024	Kamloops	99	11.8	731	87.0	10	840
025	100 Mile House	19	13.4	122	85.9	1	142
026	North Thompson	6	17.1	29	82.9	-	35
027	Cariboo-Chilcotin	51	24.8	154	74.8	1	206
028	Quesnel	25	14.8	143	84.6	1	169
029	Lillooet	18	37.5	30	62.5	-	48
030	South Cariboo	18	23.4	59	76.6	-	77
031	Merritt	18	17.6	84	82.4	-	102
032	Hope	23	22.8	78	77.2	-	101
033	Chilliwack	136	18.4	604	81.5	1	741
034	Abbotsford	264	29.0	645	70.8	2	911
035	Langley	131	14.7	755	84.8	4	890
037	Delta	84	12.9	562	86.3	5	651
038	Richmond	231	26.3	639	72.9	7	877
040	New Westminster	85	17.7	391	81.3	5	481
041	Burnaby	350	26.0	968	72.0	26	1,344
042	Maple Ridge	89	14.9	503	84.1	6	598
043	Coquitlam	191	19.0	805	80.1	9	1,005
044	North Vancouver	125	15.8	661	83.4	7	793
045	West Vancouver-Bowen Is.	69	14.8	394	84.4	4	467
046	Sunshine Coast	29	10.7	242	89.0	1	272
047	Powell River	20	9.5	181	85.8	10	211
048	Howe Sound	22	18.2	99	81.8	-	121
049	Bella Coola Valley	9	64.3	5	35.7	-	14
050	Queen Charlotte	17	50.0	17	50.0	-	34
051	Snow Country	-	-	4	100.0	-	4
052	Prince Rupert	28	31.1	62	68.9	-	90
053	Upper Skeena	14	60.9	9	39.1	-	23
054	Smithers	24	27.9	62	72.1	-	86
055	Burns Lake/Eutsuk	20	33.3	40	66.7	-	60
056	Nechako	34	33.7	67	66.3	-	101
057	Prince George	104	18.0	475	82.0	-	579
059	Peace River South	57	32.4	119	67.6	-	176
060	Peace River North	45	31.7	97	68.3	-	142
061	Greater Victoria	264	12.4	1,858	87.2	8	2,130
062	Sooke	43	11.9	319	88.1	-	362
063	Saanich	69	10.9	561	88.9	1	631
064	Gulf Islands	13	8.8	133	90.5	1	147
065	Cowichan	54	12.3	384	87.5	1	439
066	Lake Cowichan	2	5.1	37	94.9	-	39
067	Ladysmith	48	19.4	199	80.6	-	247
068	Nanaimo	84	9.6	789	90.2	2	875
069	Qualicum	35	6.6	495	93.4	-	530
070	Alberni	52	17.4	247	82.6	-	299
071	Courtenay	44	8.3	488	91.7	-	532
072	Campbell River	27	8.5	291	91.5	-	318
075	Mission	30	11.5	231	88.5	-	261
076	Agassiz-Harrison	25	32.5	51	66.2	1	77
077	Summerland	16	12.0	117	88.0	-	133
078	Enderby	13	19.1	55	80.9	-	68
080	Kitimat	29	41.4	41	58.6	-	70
081	Fort Nelson	7	30.4	16	69.6	-	23
083	Central Coast	10	83.3	2	16.7	-	12
084	Vancouver Island West	2	15.4	11	84.6	-	13
085	Vancouver Island North	19	26.0	54	74.0	-	73
087	Stikine	4	80.0	1	20.0	-	5
088	Terrace	51	34.7	96	65.3	-	147
092	Nisga'a	10	100.0	-	0.0	-	10
094	Telegraph Creek	2	66.7	1	33.3	-	3
161	Vancouver - City Centre	116	17.1	558	82.2	5	679
162	Vancouver - Downtown E.side	134	28.5	327	69.6	9	470
163	Vancouver - North East	256	44.0	309	53.1	17	582
164	Vancouver - Westside	169	23.8	535	75.2	7	711
165	Vancouver - Midtown	166	36.6	280	61.7	8	454
166	Vancouver - South	282	33.7	546	65.2	9	837
201	Surrey	360	20.2	1,417	79.3	9	1,786
202	South Surrey/White Rock	109	12.9	737	87.0	1	847
	PROVINCIAL TOTAL	**5,842**	**18.7**	**25,190**	**80.7**	**195**	**31,227**

Note: Total includes residents with unkown LHA.