2005 epidemiology report

2005 British Columbia Annual Summary of Reportable Diseases

BC Centre for Disease Control
AN AGENCY OF THE PROVINCIAL HEALTH SERVICES AUTHORITY

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Above photo: BC Centre for Disease Control - 655 West 12th Avenue, Vancouver BC, V5Z 4R4

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2005 Highlights

Vaccine Preventable Diseases

Surveillance of these diseases uniformly demonstrates low or declining rates. Pertussis was reported at the lowest rate since 1998, although this may be related to the cyclic nature of the infection rather than the recent expansion in use of acellular pertussis vaccine in adolescents. The lowest number of cases of Hib disease was reported in 2005, with a single case of meningitis in a toddler. Continued low rates of measles were reported with one sibling pair of cases among unimmunized children with a travel related exposure. A single case of rubella was reported in a newly immigrated young woman. One case of congenital rubella syndrome occurred in an infant born to a woman newly arrived from the Indian subcontinent who had been infected during her pregnancy overseas. Mumps cases reported were exclusively in adults. Meningococcal disease rates have been stable since 2002, with no geographic clustering noted in 2005; an outbreak occurred among men who have sex with men (MSM) in 2004 with additional related cases in 2005. The effect of the meningococcal C conjugate vaccine program on incidence in children and adolescents cannot be ascertained as yet as group C rates are low and this will require several years of observation. There has been a dramatic decline in age specific rates of invasive pneumococcal disease among children 2 years of age and younger since 1993, thanks to the introduction of conjugate vaccine program in 2003. Acute hepatitis B reports were stable compared to last year although the Canadian rates have increased in 2004 and 2005. Influenza activity was in keeping with a mild season with predominantly influenza A virus circulation but emergence of influenza B late in the season; circulating A strains appeared to be well matched to the season's vaccine but B strains were not.

Sexually Transmitted and Bloodborne Pathogens

The rate of HIV infections decreased from 10.6 last year to 9.9 per 100,000 in 2005. The greatest concentration of cases continues to be in the Lower Mainland. Northern Interior HSDA had a sizeable increase in cases from last year. AIDS rates were reported for 2004 due to delays in reporting. The number of reports declined from 115 in 2003 to 99 in 2004. The highest rates are in Vancouver HSDA.

Genital chlamydia and gonorrhea rates increased in BC. Chlamydia has been on the rise since 1997 and gonorrhea since 2001. Infectious syphilis decreased for the first time since the start of the outbreak in 1997. Hepatitis C rates declined to the lowest rates observed in BC but are still above the nationally reported rates due to the prevalence of injection drug use.

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Diseases Transmitted by Direct Contact and Respiratory Routes

Invasive GAS reports were slightly higher than the year before, but the case fatality rate and proportion of cases with severe manifestations were unchanged. There was a sizeable 13% decline in the rate of tuberculosis case reports with the provincial rate in 2005 at 6.3 per 100,000. There are wide geographic variations in incidence around the province with some HSDAs having no cases and others experiencing increases.

Enteric, Food and Waterborne Diseases

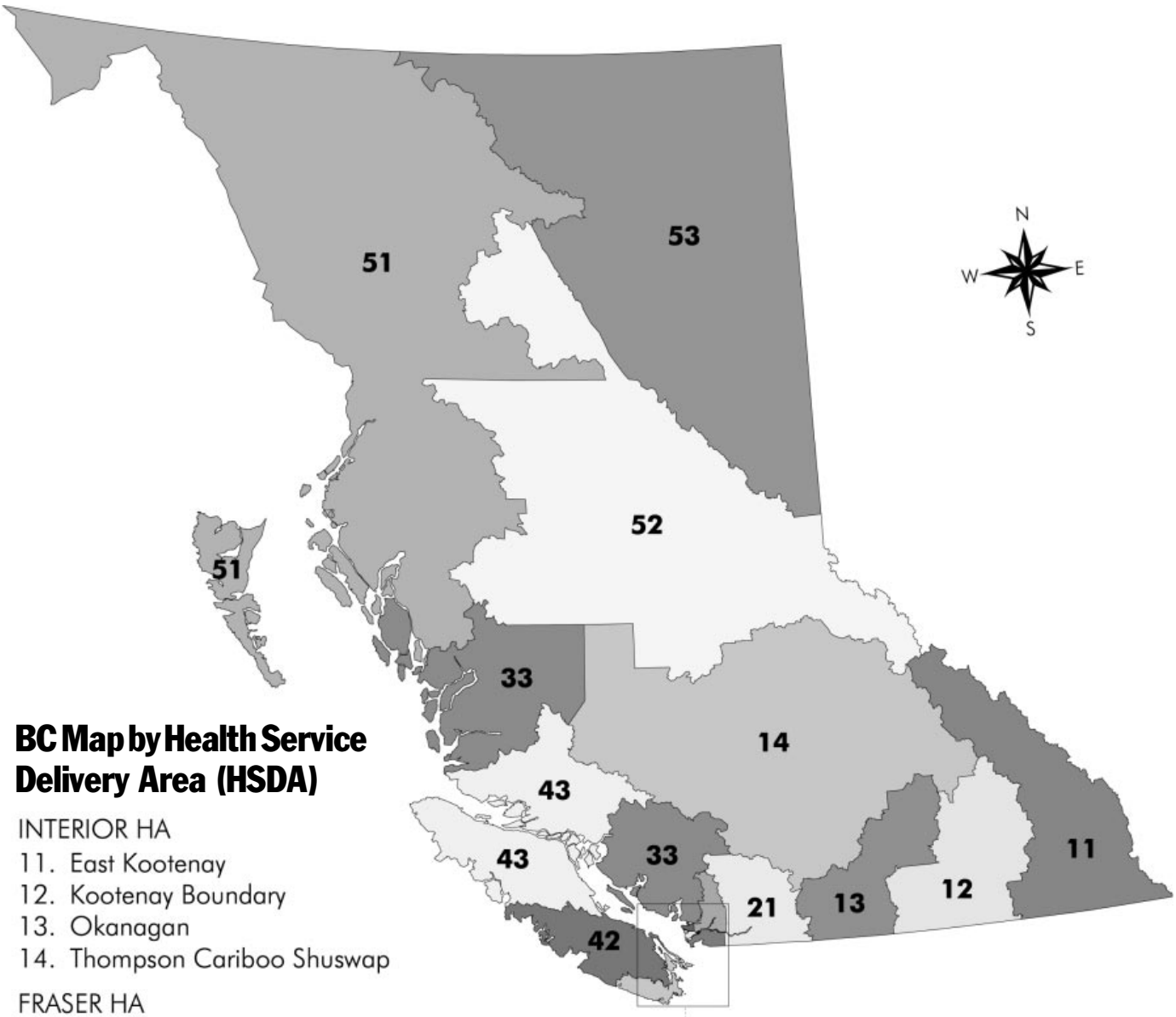
There were no consistent trends in this varied group of diseases, many of which predominate in children, show seasonal patterns with increases in the summer months, and are related to travel. Amebiasis, associated with oral-anal sex among men and diagnosis through screening among new immigrants, is highly concentrated in Vancouver HSDA; rates have remained stable. A generally declining trend has been observed in campylobacteriosis, in keeping with the experience in other industrialized countries. The reason for this decline is unknown. Cryptosporidiosis rates have been low for the past two years. In contrast, cyclosporiasis has been increasing in BC as in Canada but is not endemic, and cases are associated with travel. VTEC infections were reported at the lowest rate in the past decade, with two cases of hemolytic uremic syndrome. One outbreak was associated with contaminated ground beef consumption. Salmonellosis rates were stable, with the majority due to *S. Enteritidis* and *S. Typhimurium*. Most cases of *S. Typhi* and *S. Paratyphi* were associated with travel to India; rates of the latter have increased substantially in BC since 2000 with 46 cases reported in 2005. Acute hepatitis A continues to decline since the introduction of a vaccine program for high risk persons, with case reports among males outnumbering females by 55%. Listeriosis case rates were unchanged from prior years, most cases were elderly, and all were sporadic without a confirmed food source. Shigellosis increased somewhat with two outbreaks identified in the summer, one in the MSM population and one in returning travelers. *Vibrio parahaemolyticus* infections were reported among 15 persons with clustering in July to September in association with shellfish consumption. Yersiniosis rates were unchanged from last year.

Vectorborne and Other Zoonotic Diseases

One case of hantavirus infection was reported, bringing the total reported in BC since 1994 to 8; four of the 8 cases have been fatal. Three cases of Lyme disease were confirmed, as in the previous year. No West Nile virus activity was detected despite extensive surveillance through a variety of activities.

Environmental Fungi

Continued surveillance of the pathogen *Cryptococcus gattii*, newly emerged as endemic to British Columbia, suggests that incidence may be reaching a steady state, with 24 new cases reported in 2005. However, the geographic area of acquisition appears to have spread beyond Vancouver Island, with three cases in 2005 having exposures limited to the Lower Mainland.



BC Map by Health Service Delivery Area (HSDA)

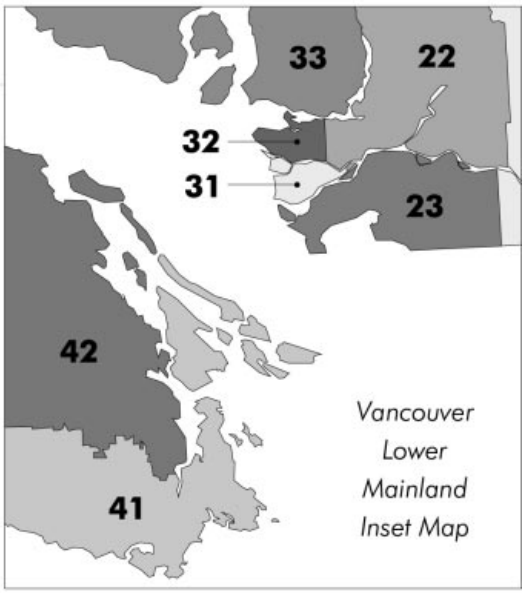
INTERIOR HA
11. East Kootenay
12. Kootenay Boundary
13. Okanagan
14. Thompson Cariboo Shuswap

FRASER HA
21. Fraser East
22. Fraser North
23. Fraser South

VANCOUVER COASTAL HA
31. Richmond
32. Vancouver
33. North Shore/Coast Garibaldi

VANCOUVER ISLAND HA
41. South Vancouver Island
42. Central Vancouver Island
43. North Vancouver Island

NORTHERN HA
51. Northwest
52. Northern Interior
53. Northeast



Diseases Preventable by Vaccination

2005

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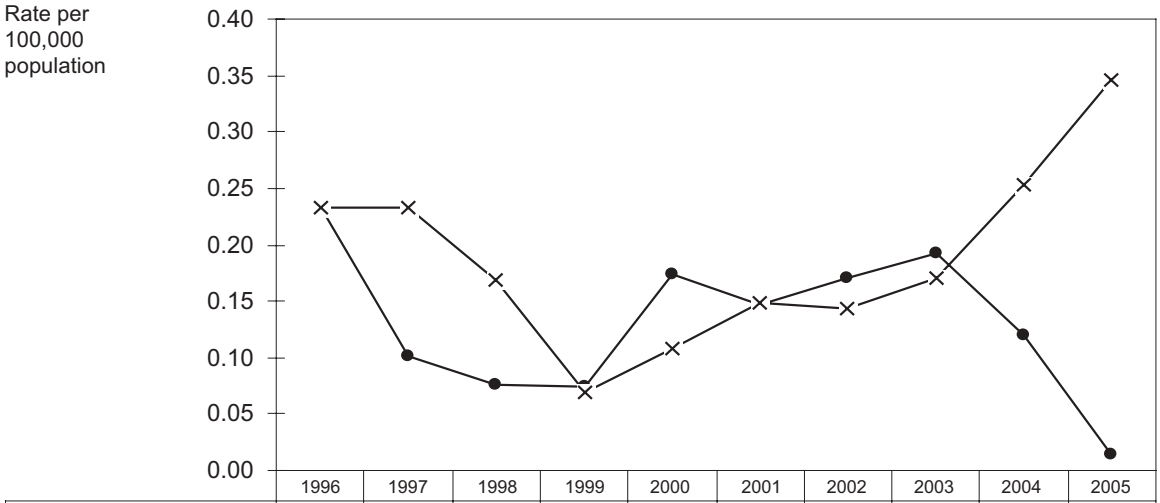
Haemophilus influenzae **type b (Hib), invasive**

A single case of invasive Hib disease was reported in 2005 from Fraser East HSDA in a 16 month old child with meningitis. The case had received three doses of Hib-containing vaccine at the appropriate milestones in infancy.

1.1 *Haemophilus influenzae* type b (invasive) Rates by Year, 1996-2005



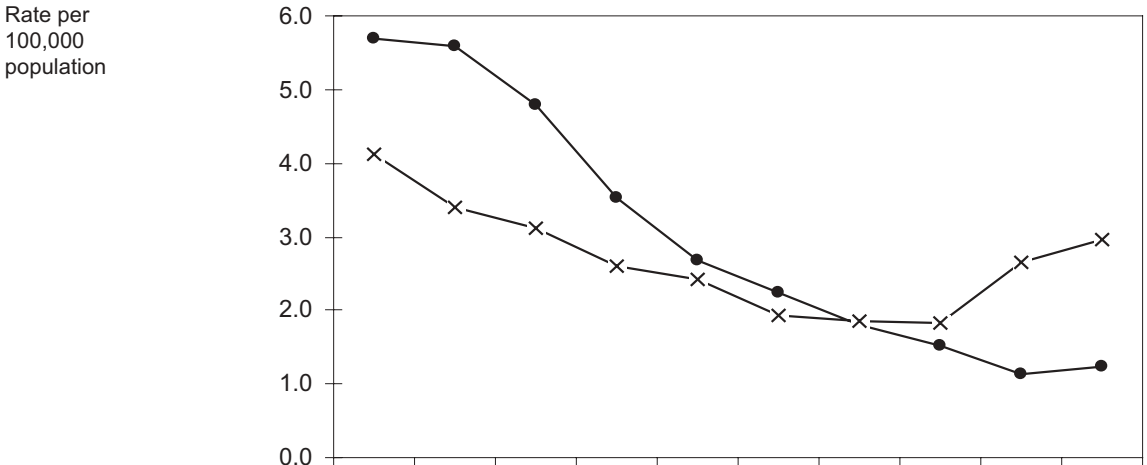
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Invasive Hib Reports	9	4	3	3	7	6	7	8	5	1
BC Invasive Hib Rate	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.0
Canadian Hib Rate	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.3

Hepatitis B

Fifty-two cases of acute hepatitis B were reported in BC in 2005, for a rate of 1.2/100,000 population. The number increased slightly from 48 cases in 2004, but is still less than half the 108 cases reported in 2000. No cases were reported in persons less than 20 years of age. The decline reflects the success of the provincially funded hepatitis B programs. The first cohort of the grade 6-program introduced in 1992, was aged 24 in 2005; the universal infant and expanded high-risk programs were introduced in 2001.

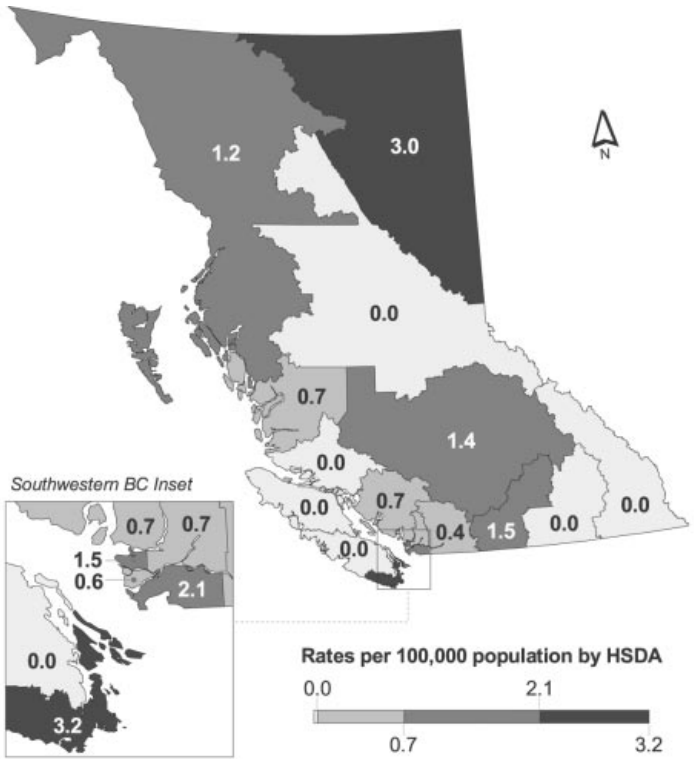
More than two thirds of acute hepatitis B cases were reported in males. The highest rates were in Fraser South, Northeast and South Vancouver Island. Five Health Service Delivery Areas reported no cases in 2005.

2.1 Acute Hepatitis B Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Hepatitis B: Acute Reports	220	221	191	141	108	91	74	63	48	52
BC Hepatitis B: Acute Rate	5.7	5.6	4.8	3.5	2.7	2.2	1.8	1.5	1.1	1.2
Canadian Hepatitis B Rate	4.1	3.4	3.1	2.6	2.4	1.9	1.9	1.8	2.6	3.0

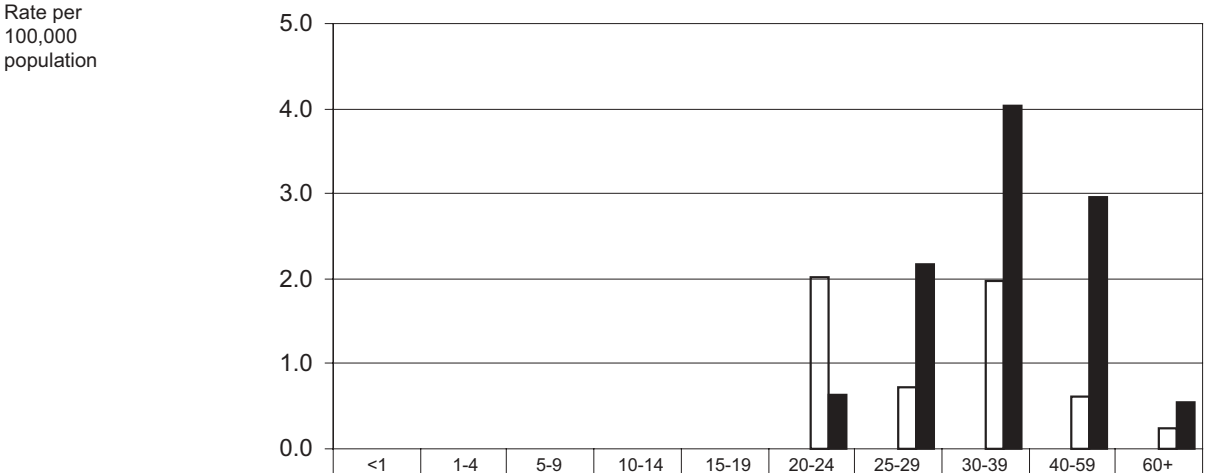
2.2 Acute Hepatitis B Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	0	0.0
13	Okanagan	5	1.5
14	Thompson Cariboo Shuswap	3	1.4
21	Fraser East	1	0.4
22	Fraser North	4	0.7
23	Fraser South	13	2.1
31	Richmond	1	0.6
32	Vancouver	9	1.5
33	North Shore/Coast Garibaldi	2	0.7
41	South Vancouver Island	11	3.2
42	Central Vancouver Island	0	0.0
43	North Vancouver Island	0	0.0
51	Northwest	1	1.2
52	Northern Interior	0	0.0
53	Northeast	2	3.0

Note: Map classification by Jenks natural breaks method.

2.3 Acute Hepatitis B Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Hepatitis B: Acute Reports - Female	0	0	0	0	0	3	1	6	4	1
Hepatitis B: Acute Reports - Male	0	0	0	0	0	1	3	12	19	2
Hepatitis B: Acute Rate - Female	0.0	0.0	0.0	0.0	0.0	2.0	0.7	2.0	0.6	0.2
Hepatitis B: Acute Rate - Male	0.0	0.0	0.0	0.0	0.0	0.6	2.2	4.0	3.0	0.5

Influenza

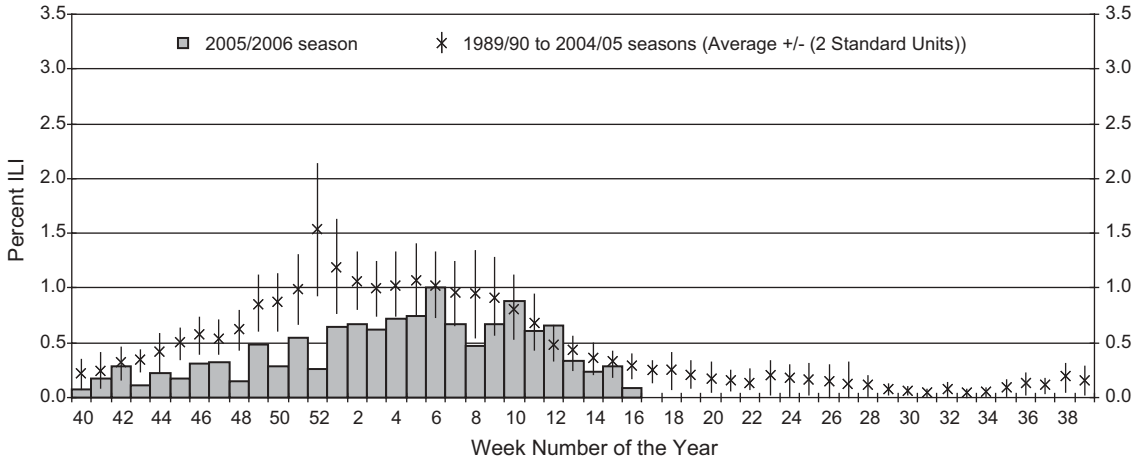
Influenza surveillance in British Columbia (BC) consists of collection, analysis and reporting of results from 4 types of information: sentinel influenza-like-illness (ILI) tracking, facility and school ILI outbreak notifications from health authorities, laboratory confirmation with strain characterization and vital statistics data describing mortality attributed to pneumonia and influenza.

Surveillance is year-round in BC with a new period of sentinel surveillance typically commencing the first week of October (week 40) continued through the end of September (week 39) the following year. The data presented in this report captures surveillance impressions for the 2005-2006 influenza season spanning from week 40 (October 2, 2005) and ending week 16 (April 22, 2006).

Overall, the 2005-2006 influenza season is best characterized as having manifest low level but prolonged influenza activity consisting of primarily influenza A virus circulation prior to January 2006 followed by emergence of influenza B activity thereafter. Influenza A strains have thus far been characterized as having been matched to the vaccine components although a new H3N2 component has been recommended for the 2006-2007 reformulated vaccine. The extent to which this new variant may have already been circulating in Canada in 2005-2006 is still being assessed by the National Microbiology Laboratory applying new reagents for its detection. The circulating influenza B virus in BC belonged to a different lineage (B/Victoria) than the vaccine component (B/Yamagata) and included emergence of a new antigenic variant B/Malaysia/2506/04-like virus also belonging to the vaccine mismatched B/Victoria lineage.

The BC Sentinel physician surveillance system for the 2005/06 influenza season consisted of 45 sentinel sites around the province comprising 115 physicians representing all provincial health authorities. The proportion of patient visits due to ILI reported by sentinel physicians was at or below the historic average throughout the surveillance period with no unusual excess. The highest proportion of sentinel physician visits due to ILI occurred during week 10, (March 5 to March 11, 2006) with 1% of the total sentinel physician visits attributed to ILI (see Figure 3.1).

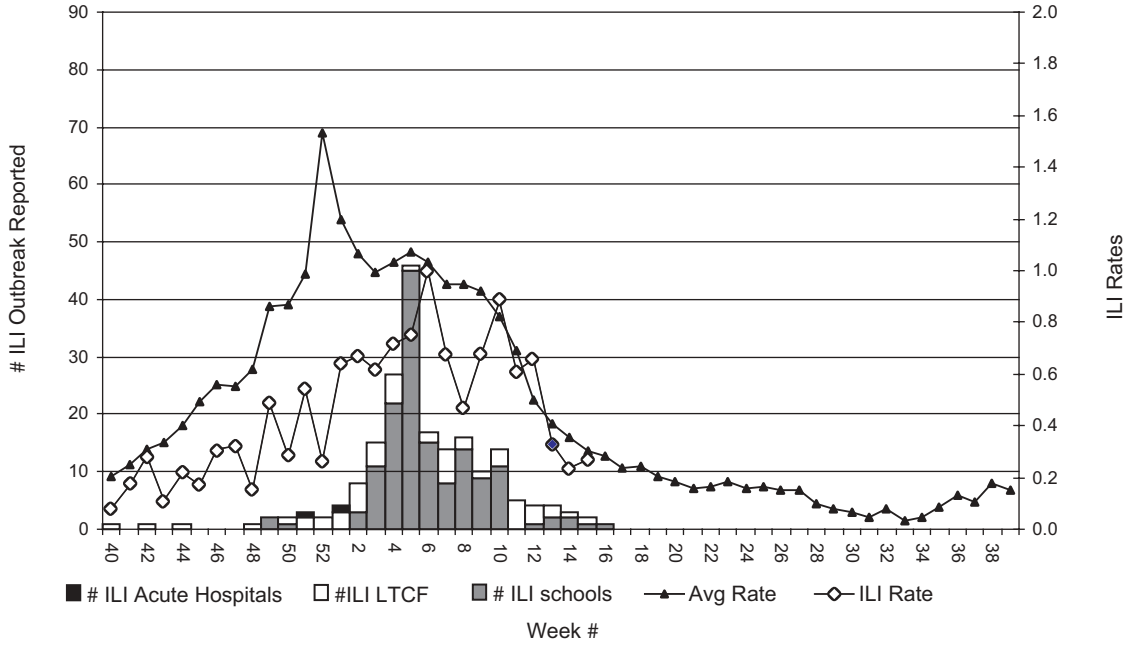
3.1 **Proportion of Patient Visits due to Influenza Like Illness (ILI) per Week Number Compared to Average Proportion of ILI Visits for the Past 16 Seasons Sentinel Physicians, British Columbia, 2005-2006**



During the 2005/06 season there were 203 ILI outbreaks reported to BCCDC - an increase compared with 116 ILI outbreaks reported during the same reporting period for the 2004/05 season. The 2005/06 season was characterized by relatively fewer outbreaks in care facilities and a higher number of school outbreaks, whereas the vast majority of ILI outbreaks during the 2004/05 season were reported by care facilities (an unprecedented number reported compared to historic data). In particular, the majority of ILI outbreaks during the 2005/06 season were reported in schools (73%) followed by long-term care facilities (LTCF) (26%), and there was a higher proportion of ILI outbreaks in LTCF (75%) followed by schools (21%) during the 2004/05 season. Historically, influenza B evolves much more slowly in a season and tends to primarily affect schoolchildren, which was consistent with the 2005/06 season: 75% (9 outbreaks) of the school ILI outbreaks for which influenza virus was isolated were due to influenza B, compared with 7% (2 outbreaks) of the LTCF ILI outbreaks (see Figure 3.2).

3.2

Number of Influenza-Like Illness (ILI) Outbreaks Reported, ILI Rates from Sentinel Physicians and Average ILI Rate for past 16 years, per Week British Columbia, 2005-2006

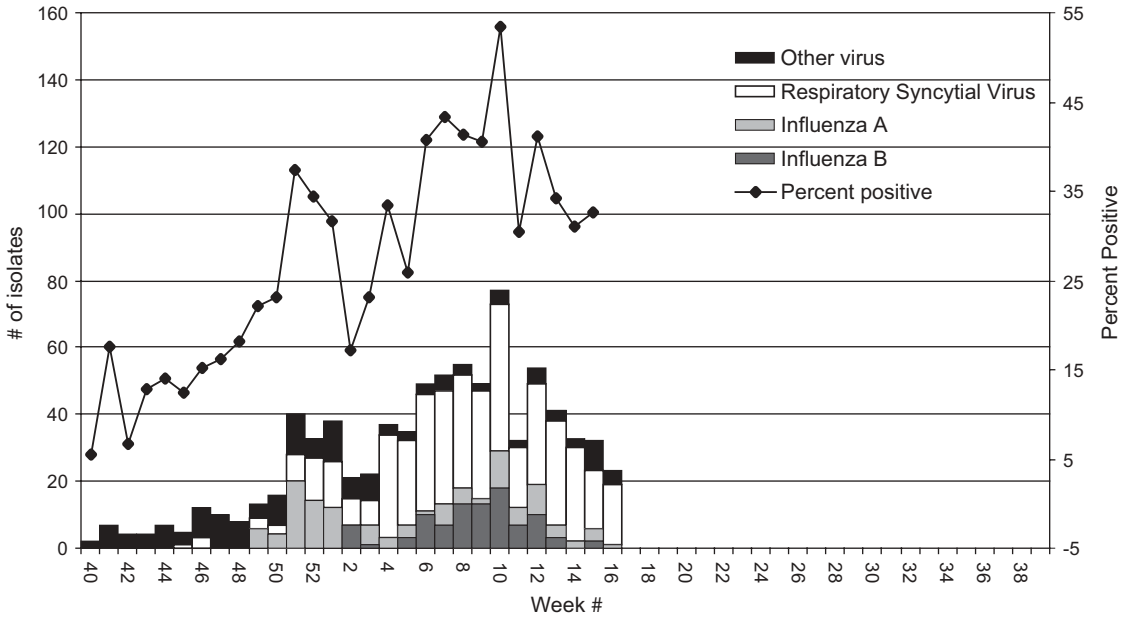


The causative organism was identified in 49 (24%) of the outbreaks. Influenza A was responsible for 30 (15%) of these outbreaks, and 11 (5%) were due to influenza B. Six (3%) outbreaks from other respiratory viruses were detected, and three (2%) were due to respiratory syncytial virus.

The BCCDC Virology Laboratory and the *Children's and Women's Health Centre* Virology Laboratory tested 7092 specimens for respiratory viruses between October 2, 2005 and March 25, 2006, and 14% (1001) were positive for influenza. Of the 7092 specimens, 8% (578) were positive with influenza A, 6% (423) with influenza B, 7% (468) with respiratory syncytial virus and 4% (266) with other respiratory viruses (adenovirus or parainfluenza 1, 2, 3 or 4, see Figure 3.3).

3.3

Virus Isolates and Percent Positive from Respiratory Virus Specimens Submitted to Children and Women's Health Centre Laboratory, per Week British Columbia, 2005-2006



Between September 23, 2006 to April 20, 2006 BC laboratories sent select influenza isolates to the National Microbiology Laboratory (NML) for characterization. Of these isolates, 110 (48.9%) were A/California/7/2004-like[1], 76 (33.8%) were B/Malaysia/2506/04-like[2], and 37 (16.4%) were B/Hong Kong/330/01-like[3], 1 (0.4%) were A/New Caledonia/20/99-like[4], and 1 (0.4%) were B/Shanghai/361/2002-like[5]. The B/Malaysia/2506/04 is a new antigenic variant that belongs to the B/Victoria/02/87 lineage. This variant was not a component of the 2005/06 influenza vaccine; however, the WHO recommended this strain for the influenza B component of the 2006/07 influenza vaccine for the Northern Hemisphere.

The vaccines distributed in Canada for the 2005-2006 influenza season were standardized to contain 15 µg hemagglutinin for A/New Caledonia/20/99 (H1N1), A/New York/55/2004 (H3N2), and B/Jiangsu/10/2003 virus antigens. B/Shanghai and B/Jiangsu/10/2003 belong to the B/Yamagata lineage. For the reporting period, 100% of the influenza A strains from British Columbia have matched those included in the 2005-2006 Canadian vaccine although strains are being further characterized to determine if they may be more closely related to the new H3N2 variant recommended as vaccine component for the 2006-2007 vaccine (A/Wisconsin). However, 99% of the influenza B strains characterized belong to the B/Victoria/02/1987 lineage (includes B/HongKong/330/01-like and B/Malaysia/2506/04-like) and are not covered by this year's vaccine.

The overall P&I-related mortality rate for October 2005 through January 2006 was 8.7 deaths per 100,000 population (the average historic rate for this period is 8.8 deaths per 100,000 population). During this period the mortality rate was within expected limits. All recorded influenza-related deaths were among individuals aged 65 years or older.

During the 2004-2005 influenza season, the BC Centre for Disease Control piloted a method using observational design to assess vaccine effectiveness against laboratory-confirmed influenza through the sentinel physician network. Results of this pilot were published in the September 15, 2005 (Vol 31-18) issue of Canada Communicable Disease Reports. The pilot was repeated for the 2005-2006 influenza season; results for 2005-2006 are pending.

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[1] A/California/7/2004-like virus is a new antigenic variant of the H3N2 virus and is the recommended H3N2 component of the 2005/2006 influenza vaccine

[2] B/Malaysia/2506/04-like virus, which belongs to the B/Victoria/02/87 lineages, is mismatched to 2005/06 vaccine and is the recommended Influenza B component of the 2006-2007 influenza vaccine

[3] B/Hong Kong/330/01, which belongs to the B/Victoria/02/87 lineages, is mismatched to 2005/06 vaccine and was the recommended Influenza B component of the 2003-2004 influenza vaccine

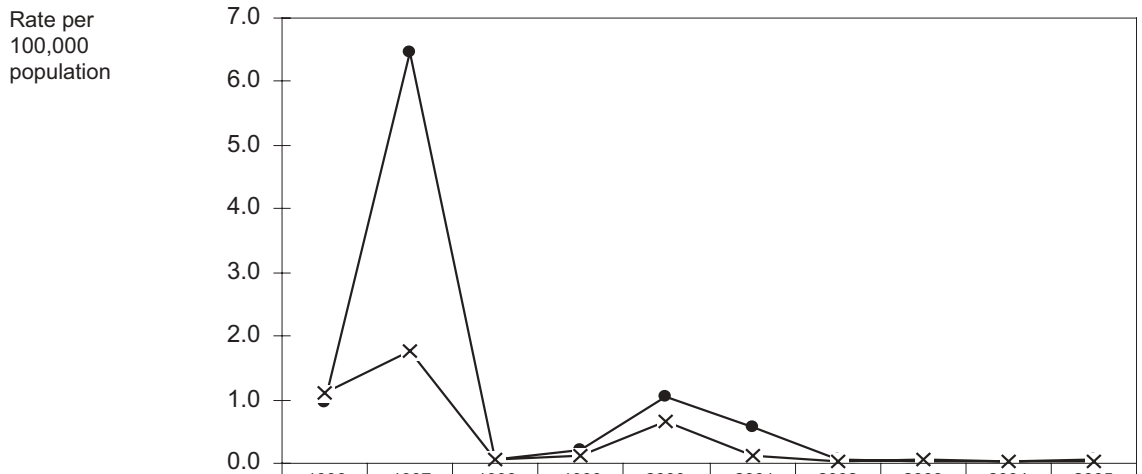
[4] A/New Caledonia/20/99-like, matches 2005/06 vaccine, and is the WHO-recommended influenza A/H1N1 component for the 2006-2007 Northern Hemisphere vaccine

[5] B/Shanghai/361/2002-like virus, which belongs to the Yamagata lineage, is the B component of the 2005/2006 influenza vaccine

Measles

Two cases of measles were reported in 2005, with the second infected by the first. The date of onset in the first case was consistent with acquisition of the infection at an amusement park in California attended by people from all over the world. No source of infection was documented at that venue but several other cases were identified among international attendees. Neither of the two BC cases had been immunized against measles although neither had a valid contraindication or exemption to receipt of the vaccine. No further transmissions occurred despite numerous contacts during the infectious period.

4.1 Measles Rates by Year, 1996-2005

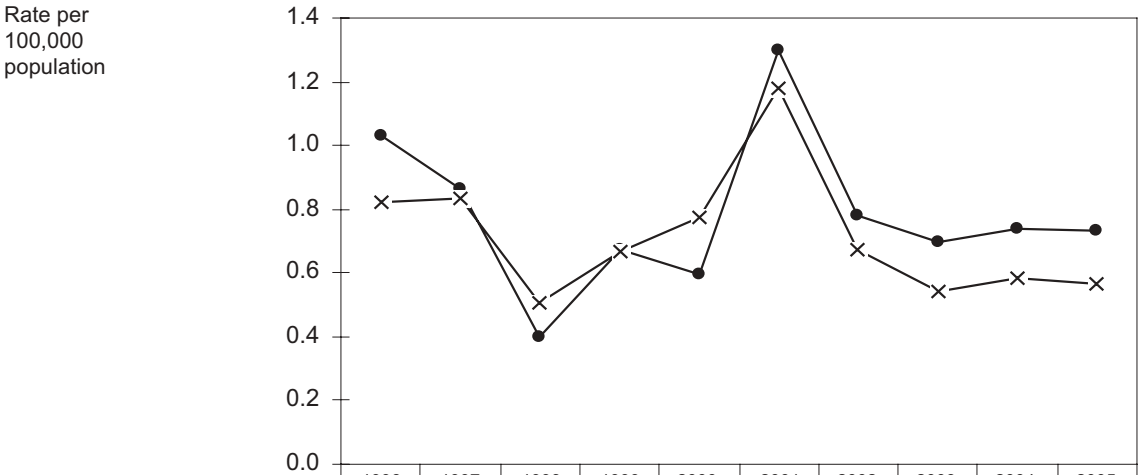


	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Measles Reports	37	255	2	8	42	23	3	1	1	2
BC Measles Rate	1.0	6.5	0.1	0.2	1.0	0.6	0.1	0.0	0.0	0.0
Canadian Measles Rate	1.1	1.8	0.1	0.1	0.6	0.1	0.0	0.0	0.0	0.0

Meningococcal Disease (invasive)

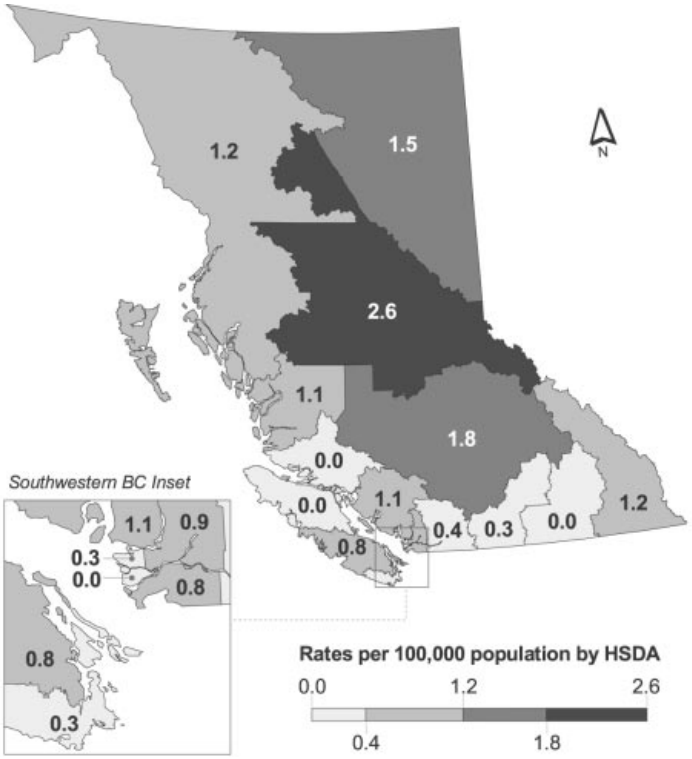
There were 31 reports of invasive meningococcal infection in BC during 2005 for a rate of 0.7 per 100,000 population. This is the same rate as reported in 2004. Most of the cases (22) were male. Three cases occurred in infants (two females, one male) under the age of one year, so that infants had the highest rate (7.5/100,000) of infection. The greatest number of cases (6) occurred in the 40 - 59 year age group, followed by 5 cases in the 15 – 19 year age group. Serogrouping of the 31 isolates in 2005 indicated that 10 (32.3%) were serogroup C (a significant decrease from 70% in 2004 when an outbreak of meningococcal C disease began in men who have sex with men); 8 (25.8%) serogroup B (a slight increase from 23.3% in 2004). Considerable increases occurred in the percentage of cases of serogroups Y and W-135 disease. Serogroup Y accounted for 7 cases (22.6%), compared to 3.3% in 2004; serogroup W-135 for 4 cases (12.9%), compared to 3.3% in 2004. There was no significant geographic clustering. Northern Interior HSDA reported the highest rate of infection at 2.6/100,000 followed by Thompson Cariboo Shuswap HSDA at 1.8/100,000.

5.1 Meningococcal Disease (invasive) Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Meningococcal Reports	40	34	16	27	24	53	32	29	31	31
BC Meningococcal Rate	1.0	0.9	0.4	0.7	0.6	1.3	0.8	0.7	0.7	0.7
Canadian Meningococcal Rate	0.8	0.8	0.5	0.7	0.8	1.2	0.7	0.5	0.6	0.6

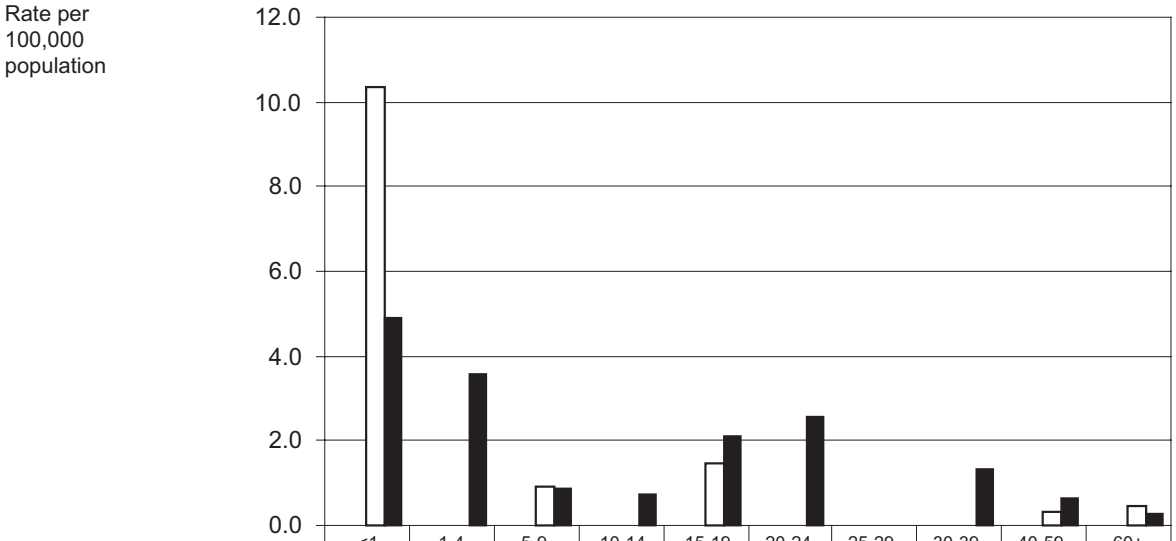
5.2 Meningococcal Disease (invasive) Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	1	1.2
12	Kootenay Boundary	0	0.0
13	Okanagan	1	0.3
14	Thompson Cariboo Shuswap	4	1.8
21	Fraser East	1	0.4
22	Fraser North	5	0.9
23	Fraser South	5	0.8
31	Richmond	0	0.0
32	Vancouver	2	0.3
33	North Shore/Coast Garibaldi	3	1.1
41	South Vancouver Island	1	0.3
42	Central Vancouver Island	2	0.8
43	North Vancouver Island	0	0.0
51	Northwest	1	1.2
52	Northern Interior	4	2.6
53	Northeast	1	1.5

Note: Map classification by Jenks natural breaks method.

5.3 Meningococcal Disease (invasive) Rates by Age Group and Sex, 2005

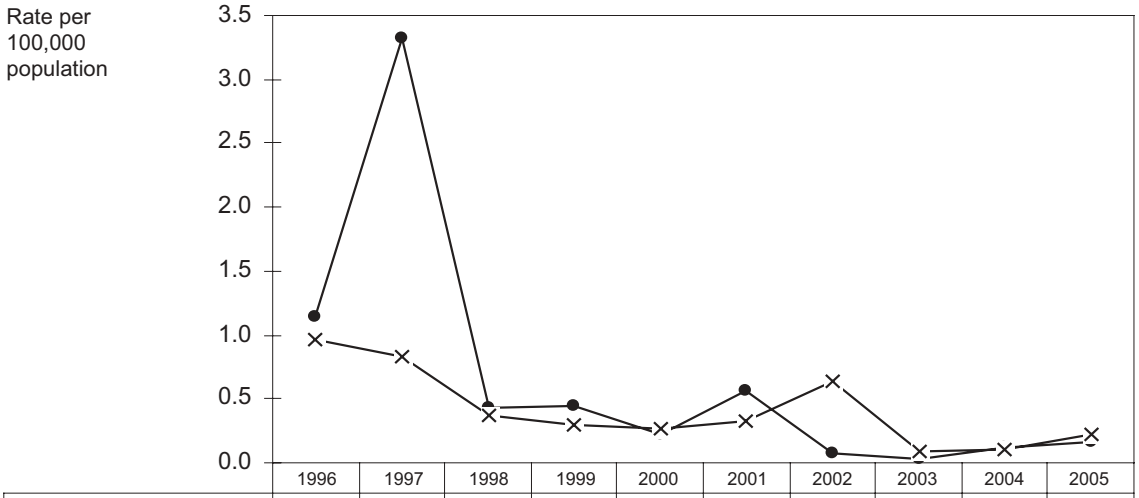


	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Meningococcal Reports - Female	2	0	1	0	2	0	0	0	2	2
Meningococcal Reports - Male	1	3	1	1	3	4	0	4	4	1
□ Meningococcal Rate - Female	10.3	0.0	0.9	0.0	1.5	0.0	0.0	0.0	0.3	0.5
■ Meningococcal Rate - Male	4.9	3.6	0.9	0.8	2.1	2.6	0.0	1.3	0.6	0.3

Mumps

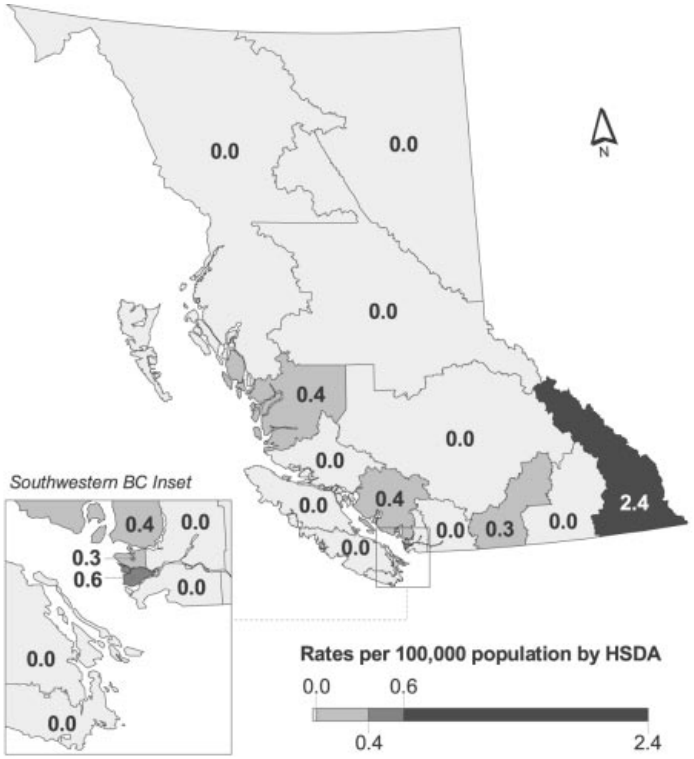
Seven confirmed cases of mumps were reported. All were adults aged 23-57, including 4 cases in their 40s. Immunization status was not reported for any case. No sustained transmission occurred.

6.1 Mumps Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Mumps Reports	44	131	17	18	9	23	3	1	5	7
BC Mumps Rate	1.1	3.3	0.4	0.4	0.2	0.6	0.1	0.0	0.1	0.2
Canadian Mumps Rate	1.0	0.8	0.4	0.3	0.3	0.3	0.6	0.1	0.1	0.2

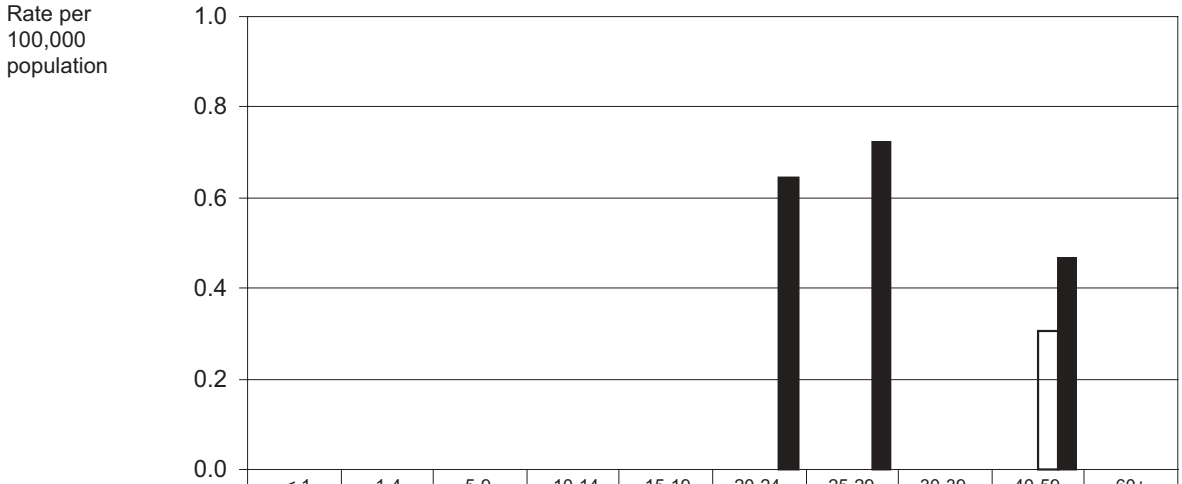
6.2 Mumps Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	2	2.4
12	Kootenay Boundary	0	0.0
13	Okanagan	1	0.3
14	Thompson Cariboo Shuswap	0	0.0
21	Fraser East	0	0.0
22	Fraser North	0	0.0
23	Fraser South	0	0.0
31	Richmond	1	0.6
32	Vancouver	2	0.3
33	North Shore/Coast Garibaldi	1	0.4
41	South Vancouver Island	0	0.0
42	Central Vancouver Island	0	0.0
43	North Vancouver Island	0	0.0
51	Northwest	0	0.0
52	Northern Interior	0	0.0
53	Northeast	0	0.0

Note: Map classification by Jenks natural breaks method.

6.3 Mumps Rates by Age Group and Sex, 2005



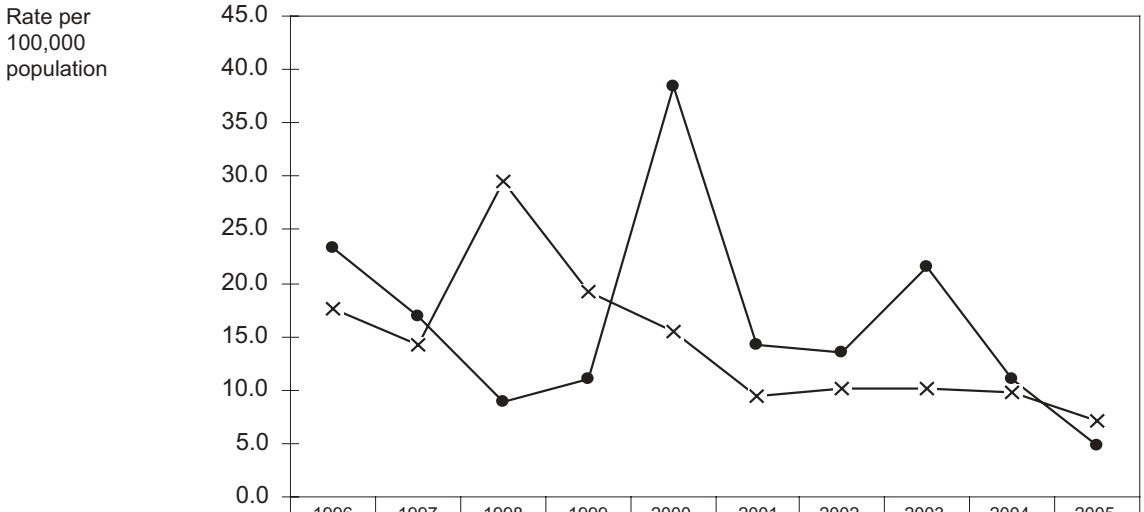
	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Mumps Reports - Female	0	0	0	0	0	0	0	0	2	0
Mumps Reports - Male	0	0	0	0	0	1	1	0	3	0
Mumps Rate - Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Mumps Rate - Male	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.0	0.5	0.0

Pertussis

Pertussis in British Columbia (BC) demonstrates cyclical peaks every three to five years. BC experienced peaks in 2000 and 2003. During 2005, the incidence of pertussis reporting has been the lowest since 1998.

BC has been carefully monitoring trends in the age distribution of pertussis cases because of shifts that have been observed and new immunization programs introduced to address this. In 1990, the highest proportion of cases occurred in children < 5 years of age. In 1993, the pattern was similar, but the proportion among 5 to 9-year-olds had increased substantially. In 1996, there were further increases in the 5-9 year age group and also among 10 to 14-year-olds. In the summer of 1997, BC replaced the historic whole cell pertussis vaccine with a more efficacious acellular pertussis vaccine for infants, toddlers and preschoolers (age 2, 4, 6 and 18 months and 4-6 years). By 2000, both the proportion of pertussis cases and the incidence were greatest among 10 to 14-year-olds and higher even than among infants or preschool children in BC. This led to replacement of the routine Grade 9 booster immunization with tetanus-diphtheria (Td) vaccine to include an acellular pertussis containing vaccine (TdaP) in January 2004. A detailed description of the shifting age distribution of pertussis in BC up to 2000 was published in the Journal of Infectious Diseases in 2002.[6] A detailed summary of further shifts in the age distribution since 2000 is currently under preparation.

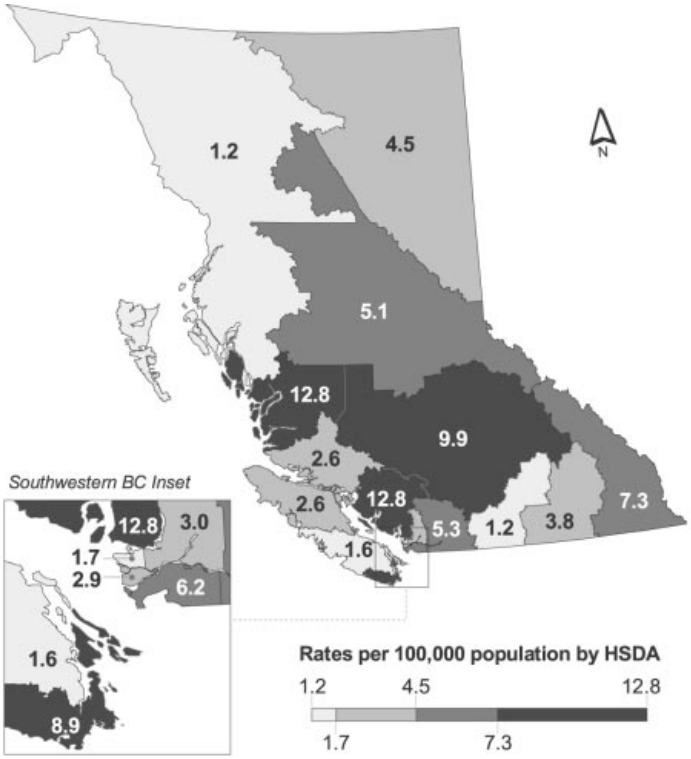
7.1 Pertussis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Pertussis Reports	906	670	357	441	1549	577	557	892	464	205
BC Pertussis Rate	23.4	17.0	9.0	11.0	38.3	14.1	13.5	21.5	11.1	4.8
Canadian Pertussis Rate	17.7	14.3	29.5	19.2	15.4	9.5	10.2	10.2	9.7	7.1

[6] Skowronski DM, De Serres G, MacDonald D, Wu W, Shaw C, Macnabb J, Champagne S, Patrick DM, Halperin SA. The changing age and seasonal profile of pertussis in Canada. J Infect Dis 2002;185:1448-53.

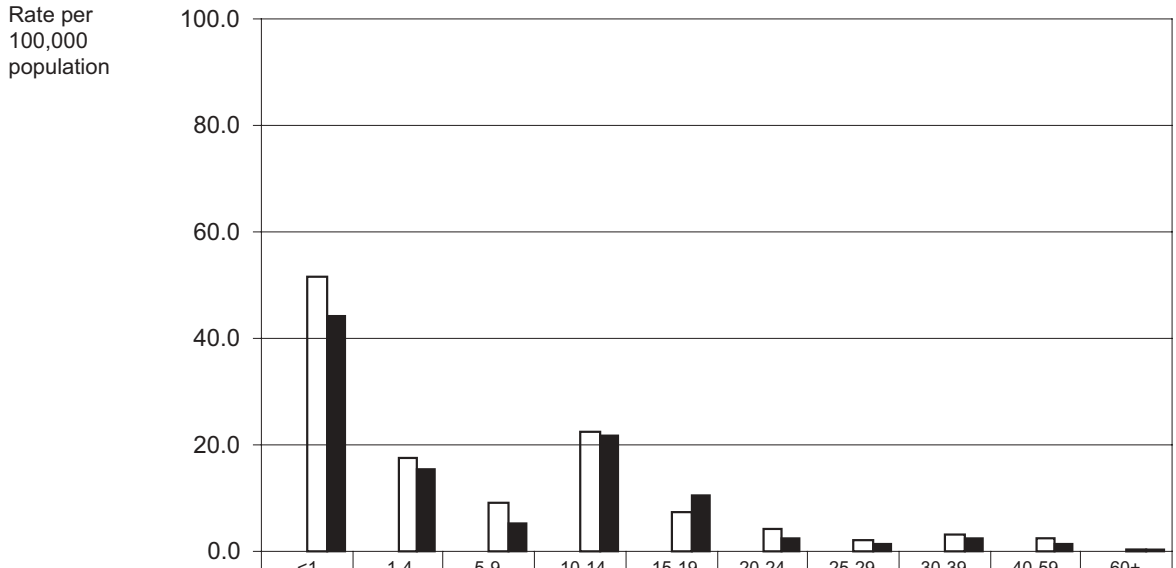
7.2 Pertussis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	6	7.3
12	Kootenay Boundary	3	3.8
13	Okanagan	4	1.2
14	Thompson Cariboo Shuswap	22	9.9
21	Fraser East	14	5.3
22	Fraser North	17	3.0
23	Fraser South	39	6.2
31	Richmond	5	2.9
32	Vancouver	10	1.7
33	North Shore/Coast Garibaldi	35	12.8
41	South Vancouver Island	31	8.9
42	Central Vancouver Island	4	1.6
43	North Vancouver Island	3	2.6
51	Northwest	1	1.2
52	Northern Interior	8	5.1
53	Northeast	3	4.5

Note: Map classification by Jenks natural breaks method.

7.3 Pertussis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Pertussis Reports - Female	10	14	10	28	10	6	3	10	17	1
Pertussis Reports - Male	9	13	6	29	15	4	2	7	10	1
□ Pertussis Rate - Female	51.7	17.7	9.0	22.4	7.4	4.1	2.2	3.3	2.6	0.2
■ Pertussis Rate - Male	44.1	15.4	5.1	21.8	10.6	2.6	1.4	2.4	1.6	0.3

Pneumococcal Disease (invasive)

In 2005, British Columbia reported 325 laboratory-confirmed cases of invasive pneumococcal disease (IPD). The British Columbia rate of IPD is 7.7 per 100,000 population; the rate has remained stable since 2003. The BC rate is below the Canadian rate of 8.4 per 100,000.

Health Service Delivery Areas reporting the highest rates of IPD were Okanagan (12.8/100,000), Thompson Cariboo Shuswap (12.6/100,000) and South Vancouver Island (10.6/100,000).

The highest rates of IPD are seen in infants less than one year of age and in persons 60 years of age and older. The next highest rate is seen in children 1 – 4 years of age.

For females under one year of age, the rate is 25.8/100,000 and for males in this age group the rate is 14.7/100,000.

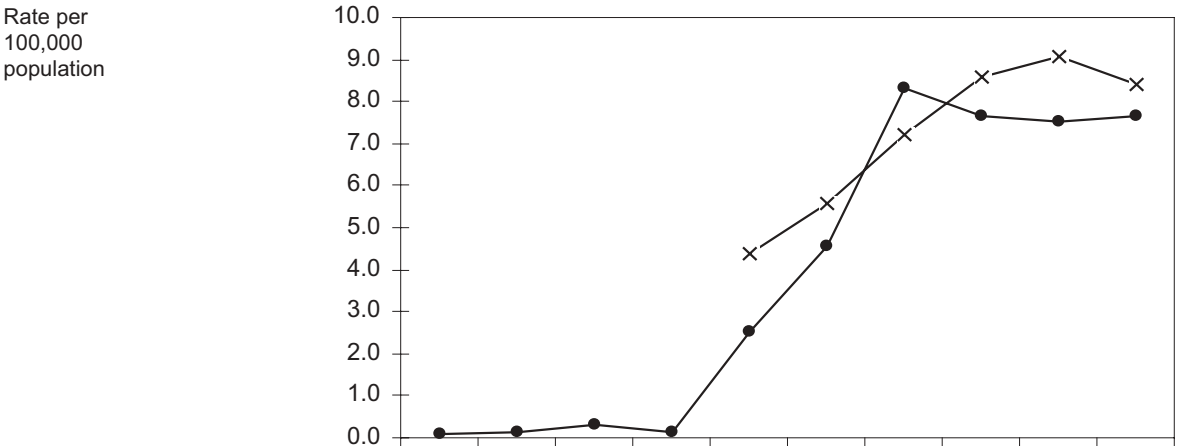
These rates reflect an increase of two cases of IPD reported in this age group in 2005, compared to the number of cases reported in 2004.

In those 60 years of age and older, the rate is 15.0/100,000 for females and 21.2/100,000 for males.

In children age 1 – 4, the rates are 16.4/100,000 for females and 14.2/100,000 for males; there were 25 cases of IPD reported for this age group in 2005, compared to 51 reported cases in 2004.

A detailed description of the declines in IPD in children under 5 as a result of the conjugate pneumococcal vaccine program was published in 2006.[7]

8.1 Pneumococcal Disease (invasive) Rates by Year, 1996-2005

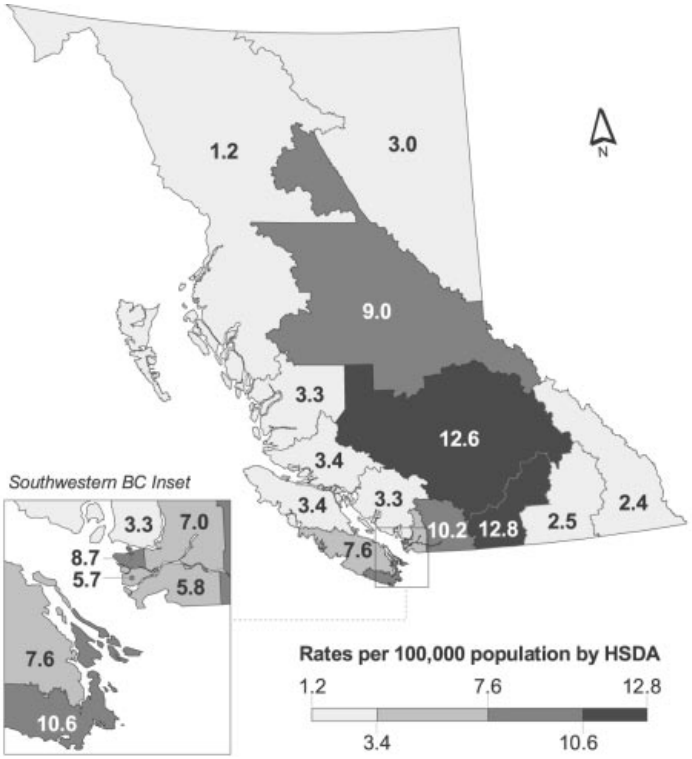


	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Invasive Pneumococcal Reports	4	6	12	5	102	186	343	318	315	325
—●— BC Invasive Pneumococcal Rate	0.1	0.2	0.3	0.1	2.5	4.6	8.3	7.7	7.5	7.7
—×— Canadian Invasive Pneumococcal Rate					4.4	5.6	7.2	8.6	9.1	8.4

Note: Reporting of pneumococcal meningitis under regulations under the Health Act was replaced with Invasive Pneumococcal Disease in Jan. 2000

[7] Paulus S, David ST, Wang T, Winters M, Buxton J, Henry B, Patrick D. Incidence of invasive pneumococcal disease after introducing the universal infant immunization program, British Columbia (2002-2005). Canada Communicable Disease Report 2006;32(14):157-161.

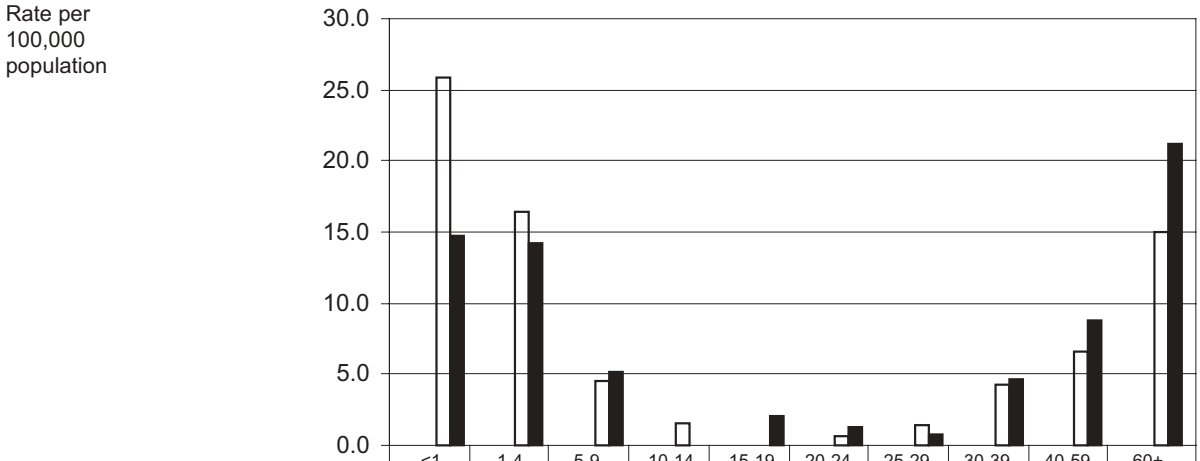
8.2 Pneumococcal Disease (invasive) Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	2	2.4
12	Kootenay Boundary	2	2.5
13	Okanagan	42	12.8
14	Thompson Cariboo Shuswap	28	12.6
21	Fraser East	27	10.2
22	Fraser North	39	7.0
23	Fraser South	37	5.8
31	Richmond	10	5.7
32	Vancouver	52	8.7
33	North Shore/Coast Garibaldi	9	3.3
41	South Vancouver Island	37	10.6
42	Central Vancouver Island	19	7.6
43	North Vancouver Island	4	3.4
51	Northwest	1	1.2
52	Northern Interior	14	9.0
53	Northeast	2	3.0

Note: Map classification by Jenks natural breaks method.

8.3 Pneumococcal Disease (invasive) Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Invasive Pneumococcal Reports - Female	5	13	5	2	0	1	2	13	43	64
Invasive Pneumococcal Reports - Male	3	12	6	0	3	2	1	14	57	78
Invasive Pneumococcal Reports - Unknown	0	0	0	0	0	0	0	0	1	0
□ Invasive Pneumococcal Rate - Female	25.8	16.4	4.5	1.6	0.0	0.7	1.5	4.3	6.6	15.0
■ Invasive Pneumococcal Rate - Male	14.7	14.2	5.1	0.0	2.1	1.3	0.7	4.7	8.9	21.2

Rubella

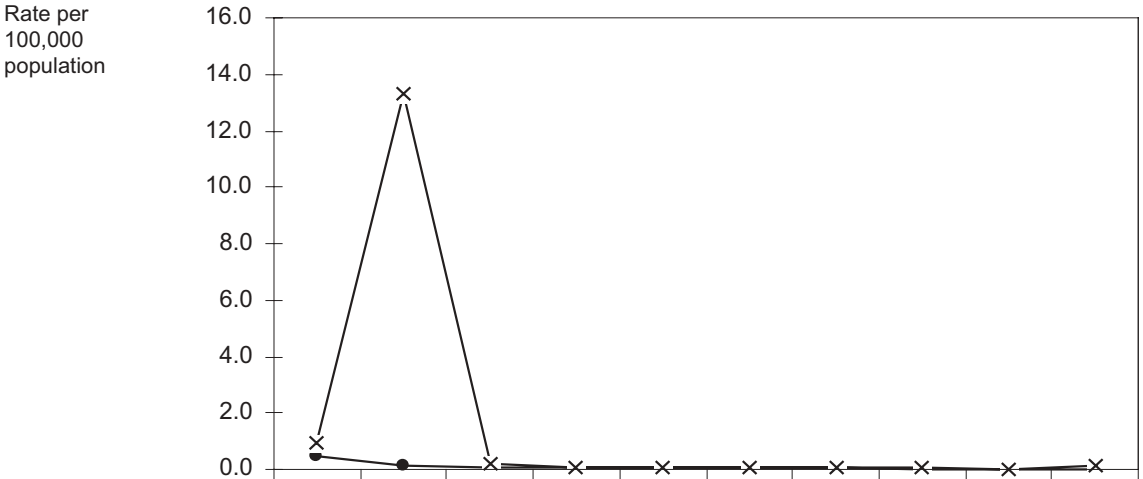
One case of rubella was reported in 2005 in a young woman who had immigrated from India.

Congenital Rubella Syndrome

A case of congenital rubella syndrome was reported in an infant born to a woman newly arrived from Pakistan. Conception and infection had occurred outside of Canada.

Rubella vaccine is still not routinely given as a component of measles-containing vaccine in many parts of the world, and opportunities should be taken to offer MMR vaccine to immigrant women as soon as possible after arrival. Many such immigrants travel back to their countries of origin after immigrating to Canada and are at risk of rubella infection because endemic rates in their countries of origin are high.

9.1 Rubella Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Rubella Reports	19	5	4	3	2	2	2	1	0	1
BC Rubella Rate	0.5	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Canadian Rubella Rate	0.9	13.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1

Sexually Transmitted and Bloodborne Pathogens

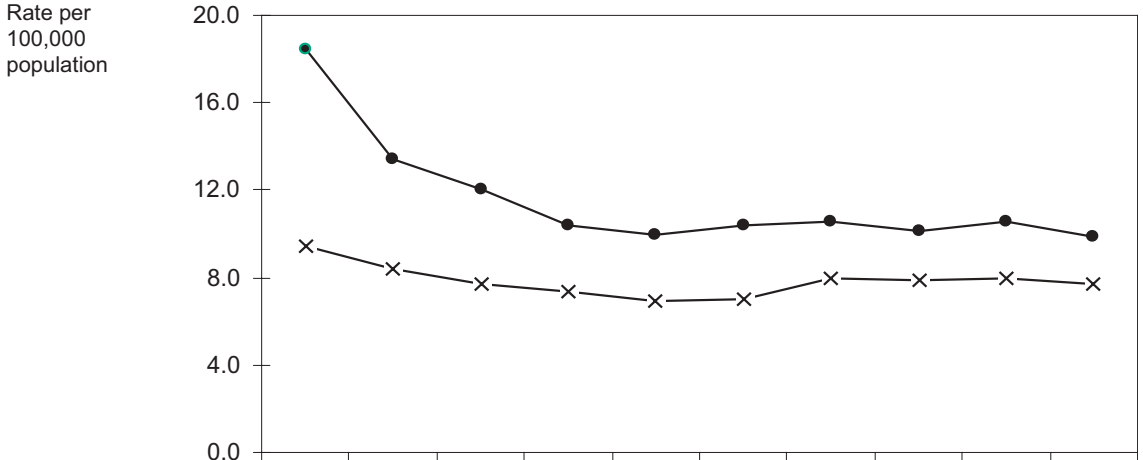
2005

05

HIV

The HIV rate per 100,000 population decreased in 2005 to 9.9 from 10.6 in 2004. Cases continue to be distributed around the province, with the greatest concentration in the Lower Mainland. There were no significant trends for gender or age; however, the rate for the Northern Interior HSDA increased from 8.7 (13 cases) in 2004 to 14.2 (22 cases) in 2005.

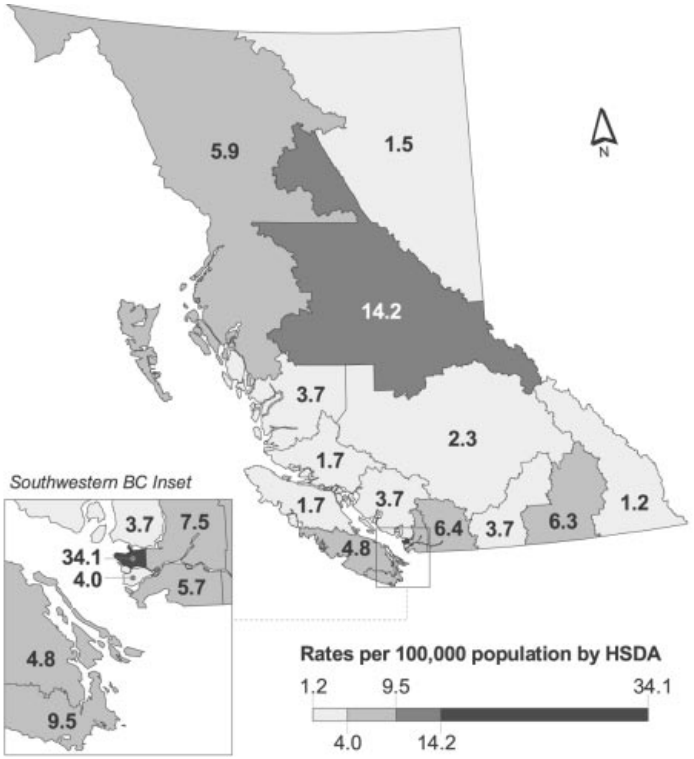
10.1 HIV Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005*
BC HIV Reports	713	529	476	416	403	426	436	418	444	420
BC HIV Rate	18.4	13.4	12.0	10.4	10.0	10.4	10.6	10.1	10.6	9.9
Canadian HIV Rate	9.4	8.4	7.7	7.3	6.9	7.0	8.0	7.9	8.0	7.7

*2005 Canadian rate is preliminary

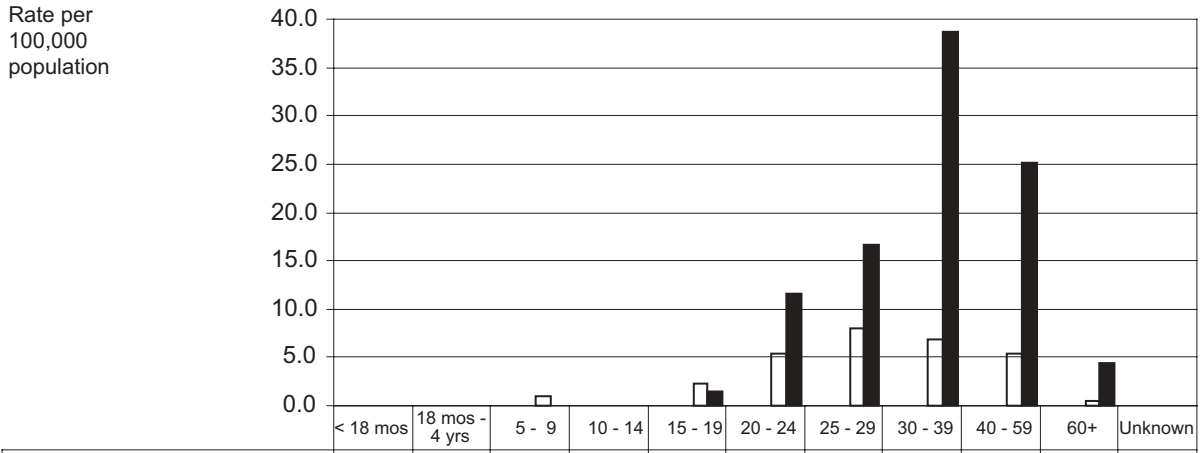
10.2 HIV Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	1	1.2
12	Kootenay Boundary	5	6.3
13	Okanagan	12	3.7
14	Thompson Cariboo Shuswap	5	2.3
21	Fraser East	17	6.4
22	Fraser North	42	7.5
23	Fraser South	36	5.7
31	Richmond	7	4.0
32	Vancouver	204	34.1
33	North Shore/Coast Garibaldi	10	3.7
41	South Vancouver Island	33	9.5
42	Central Vancouver Island	12	4.8
43	North Vancouver Island	2	1.7
51	Northwest	5	5.9
52	Northern Interior	22	14.2
53	Northeast	1	1.5

Note: Map classification by Jenks natural breaks method.

10.3 HIV Rates by Age Group and Sex, 2005

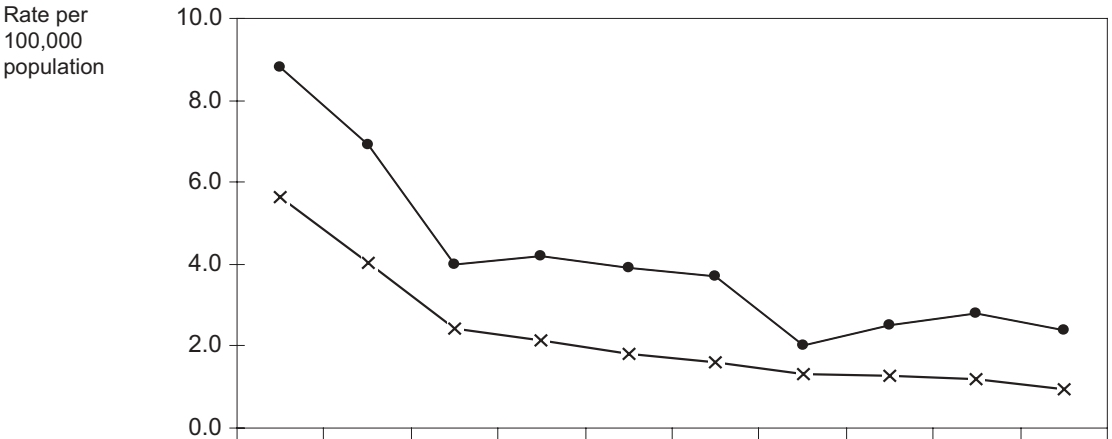


	< 18 mos	18 mos - 4 yrs	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 39	40 - 59	60+	Unknown
HIV Reports - Female	0	0	1	0	3	8	11	21	35	2	0
HIV Reports - Male	0	0	0	0	2	18	23	115	162	16	0
HIV Reports - Transgender/Unknown	0	0	0	0	0	0	0	2	0	0	1
□ HIV Rate - Female	0.0	0.0	0.9	0.0	2.2	5.4	8.0	6.9	5.3	0.5	
■ HIV Rate - Male	0.0	0.0	0.0	0.0	1.4	11.6	16.6	38.6	25.2	4.4	

AIDS

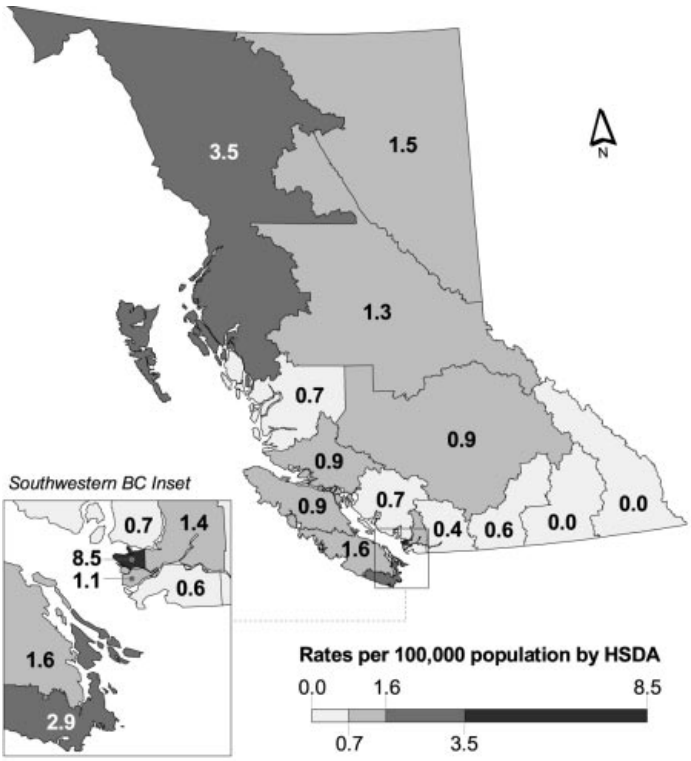
Due to the delays associated with AIDS reporting, this 2005 report includes data on AIDS through 2004 only. In 2004, the AIDS rate in BC decreased to 2.4 (99 cases) from 2.8 (115 cases) in 2003. AIDS cases in males continue to be concentrated in the 30-59 age group, whereas female cases were more evenly distributed over the range of 20-59 years. The highest rate was recorded in the Vancouver Health Service Delivery Area, 8.5/100,000.

11.1 AIDS Rates by Year, 1995-2004



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
BC AIDS Reports	334	268	159	169	158	150	83	102	115	99
—●— BC AIDS Rate	8.8	6.9	4.0	4.2	3.9	3.7	2.0	2.5	2.8	2.4
—×— Canadian AIDS Rate	5.6	4.0	2.4	2.1	1.8	1.6	1.3	1.3	1.2	0.9

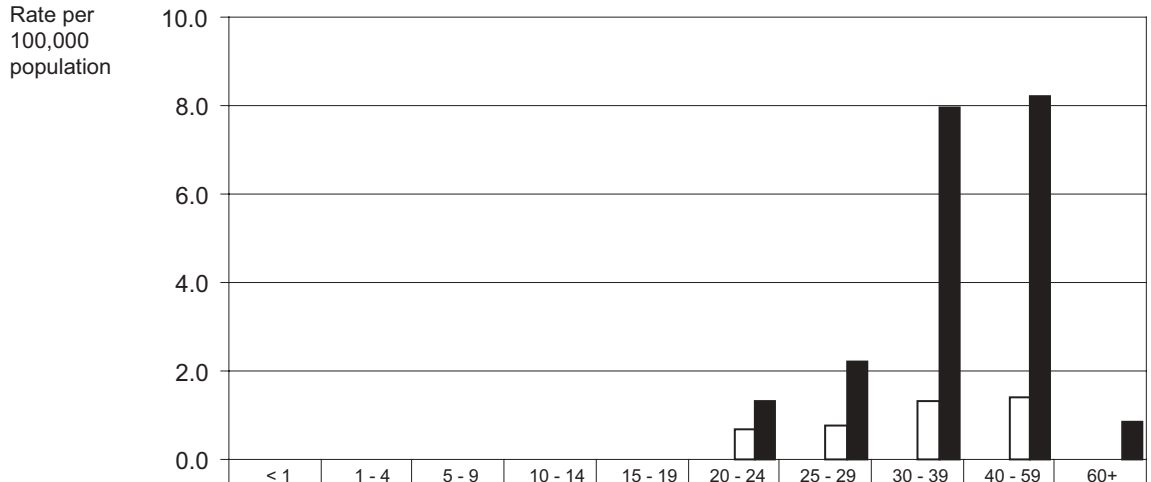
11.2 AIDS Rates by HSDA, 2004



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	0	0.0
13	Okanagan	2	0.6
14	Thompson Cariboo Shuswap	2	0.9
21	Fraser East	1	0.4
22	Fraser North	8	1.4
23	Fraser South	4	0.6
31	Richmond	2	1.1
32	Vancouver	51	8.5
33	North Shore/Coast Garibaldi	2	0.7
41	South Vancouver Island	10	2.9
42	Central Vancouver Island	4	1.6
43	North Vancouver Island	1	0.9
51	Northwest	3	3.5
52	Northern Interior	2	1.3
53	Northeast	1	1.5

Note: Map classification by Jenks natural breaks method.

11.3 AIDS Rates by Age Group and Sex, 2004

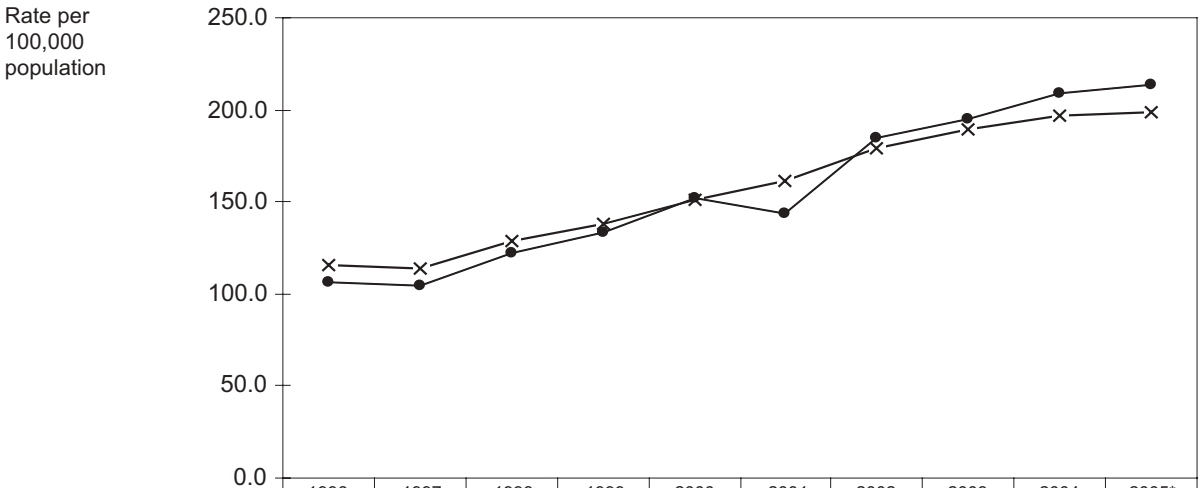


	< 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 39	40 - 59	60+
AIDS Reports - Female	0	0	0	0	0	1	1	4	9	0
AIDS Reports - Male	0	0	0	0	0	2	3	24	52	3
□ AIDS Rate - Female	0.0	0.0	0.0	0.0	0.0	0.7	0.7	1.3	1.4	0.0
■ AIDS Rate - Male	0.0	0.0	0.0	0.0	0.0	1.3	2.2	8.0	8.2	0.8

Genital Chlamydia

The chlamydia rate in BC was 213.3 in 2005, up from 208.6 in 2004. This reflects an increase in case reports from 8752 to 9043. Several Health Service Delivery Areas (HSDAs) saw increases in the chlamydia rate. By age, women aged 15-19 and 20-24 continue to have the highest chlamydia rates at 1430.1 and 1517.0 respectively. Chlamydia cases and rates have been climbing since 1997.

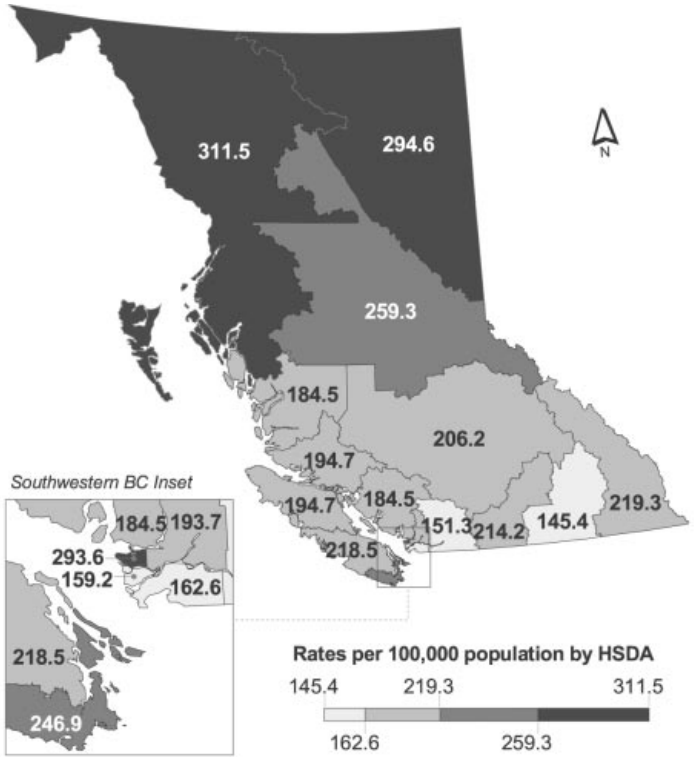
12.1 Genital Chlamydia Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005*
BC Chlamydia Reports	4,116	4,116	4,880	5,353	6,160	5,863	7,616	8,080	8,752	9,043
—●— BC Chlamydia Rate	106.2	104.2	122.5	133.4	152.5	143.8	185.1	194.6	208.6	213.3
—×— Canadian Chlamydia Rate	115.9	113.9	129.0	138.2	150.9	161.4	179.4	189.4	197.1	198.5

*2005 Canadian rate is projected.

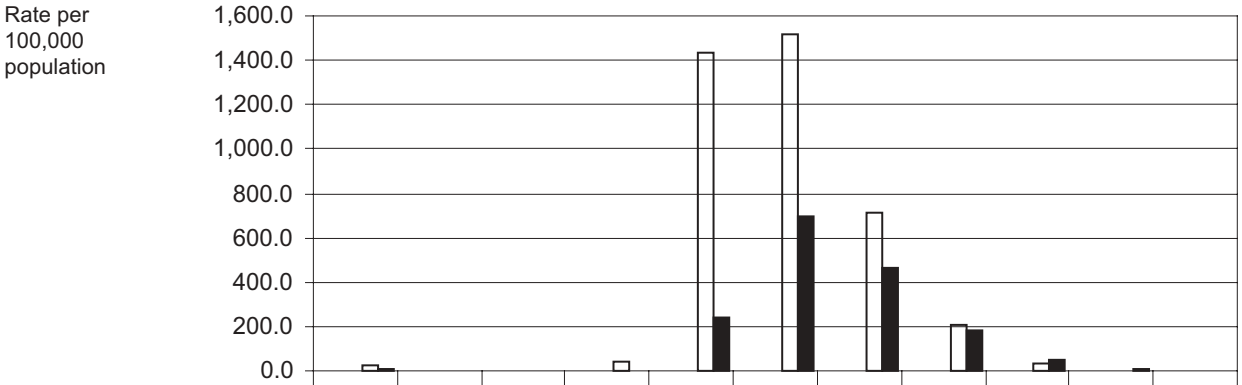
12.2 Genital Chlamydia Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	180	219.3
12	Kootenay Boundary	116	145.4
13	Okanagan	701	214.2
14	Thompson Cariboo Shuswap	457	206.2
21	Fraser East	401	151.3
22	Fraser North	1087	193.7
23	Fraser South	1031	162.6
31	Richmond	277	159.2
32	Vancouver	1755	293.6
33	North Shore/Coast Garibaldi	504	184.5
41	South Vancouver Island	860	246.9
42	Central Vancouver Island	546	218.5
43	North Vancouver Island	229	194.7
51	Northwest	264	311.5
52	Northern Interior	403	259.3
53	Northeast	198	294.6

Note: Map classification by Jenks natural breaks method.

12.3 Genital Chlamydia Rates by Age Group and Sex, 2005

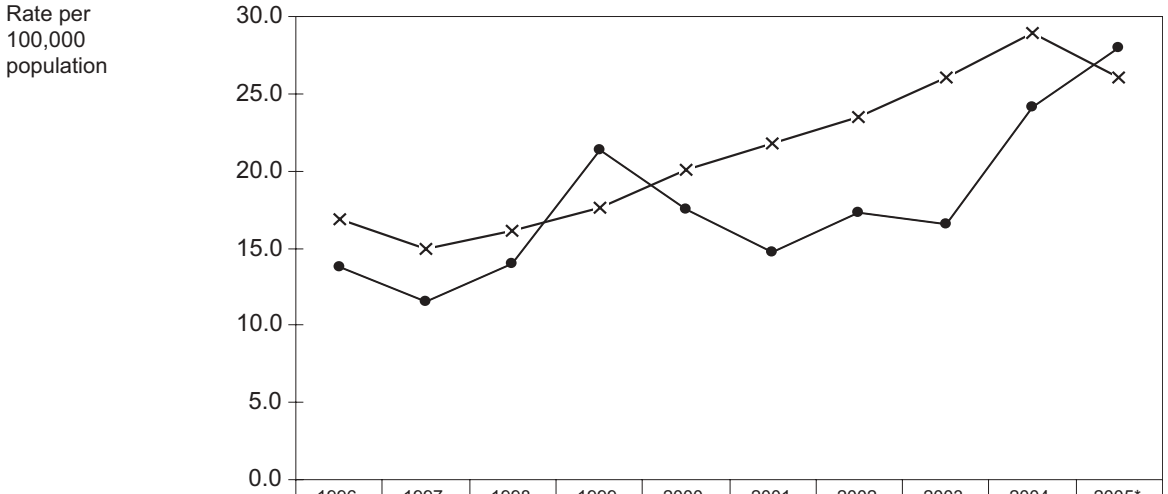


	< 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 39	40 - 59	60+	Unknown
Chlamydia Reports - Female	5	0	0	55	1,925	2,244	973	641	229	5	13
Chlamydia Reports - Male	1	0	0	0	343	1,076	645	552	312	18	5
Chlamydia Reports - Unknown	0	0	0	0	0	0	0	0	0	0	1
□ Chlamydia Rate - Female	25.8	0.0	0.0	43.9	1,430.1	1,517.0	711.4	211.2	34.9	1.2	
■ Chlamydia Rate - Male	4.9	0.0	0.0	0.0	241.9	692.7	465.4	185.5	48.5	4.9	

Gonorrhea

The 2005 gonorrhea rate for BC (28.0) was significantly higher than 2004 (24.1), reflecting an increase in case reports from 1013 to 1187. The major increases involved males across all age groups and Health Authorities. Gonorrhea was concentrated in 20-39 year old males and 15-24 year old females. This continuing rise in gonorrhea over the last 2 years reflects a true increase in incidence as well as more testing in males subsequent to the introduction of nucleic acid amplification testing (NAAT) of urine in men.

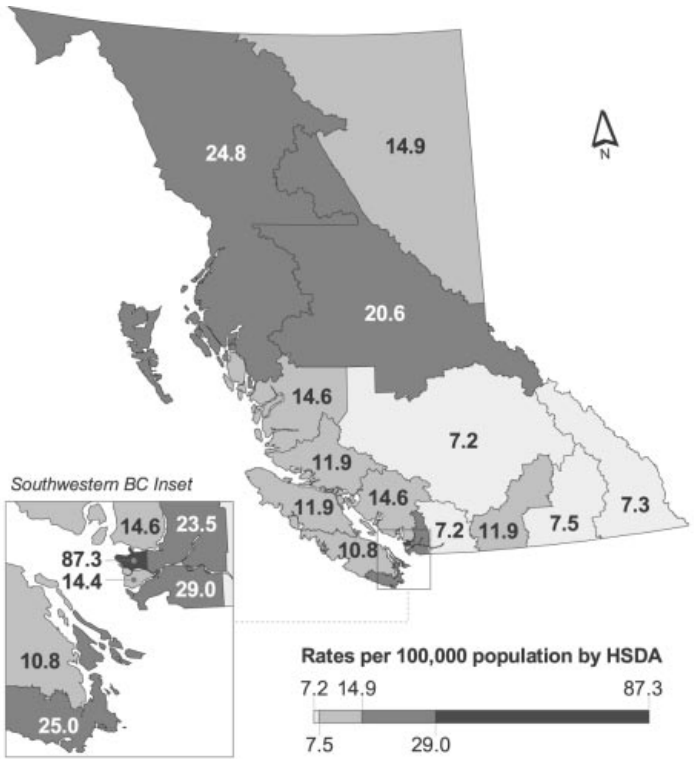
13.1 Gonorrhea Disease Rates in BC by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005*
BC Gonorrhea Reports	534	456	558	859	707	600	714	684	1013	1187
—●— BC Gonorrhea Rate	13.8	11.5	14.0	21.4	17.5	14.7	17.3	16.5	24.1	28.0
—×— Canadian Gonorrhea Rate	16.9	14.9	16.1	17.6	20.1	21.8	23.5	26.0	28.9	26.1

*2005 Canadian rate is projected.

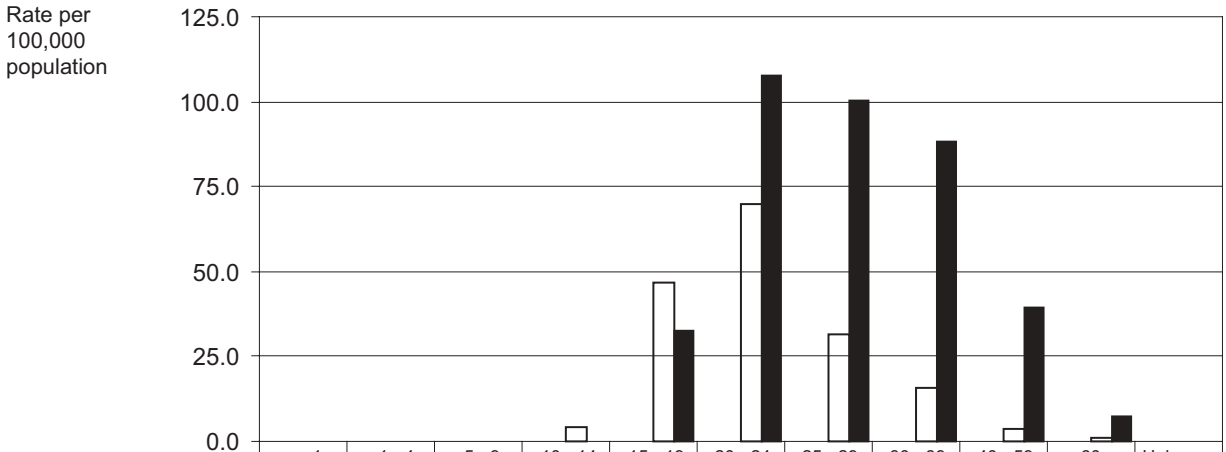
13.2 Gonorrhea Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	6	7.3
12	Kootenay Boundary	6	7.5
13	Okanagan	39	11.9
14	Thompson Cariboo Shuswap	16	7.2
21	Fraser East	19	7.2
22	Fraser North	132	23.5
23	Fraser South	184	29.0
31	Richmond	25	14.4
32	Vancouver	522	87.3
33	North Shore/Coast Garibaldi	40	14.6
41	South Vancouver Island	87	25.0
42	Central Vancouver Island	27	10.8
43	North Vancouver Island	14	11.9
51	Northwest	21	24.8
52	Northern Interior	32	20.6
53	Northeast	10	14.9

Note: Map classification by Jenks natural breaks method.

13.3 Gonorrhea Disease Rates in BC by Age Group and Sex, 2005

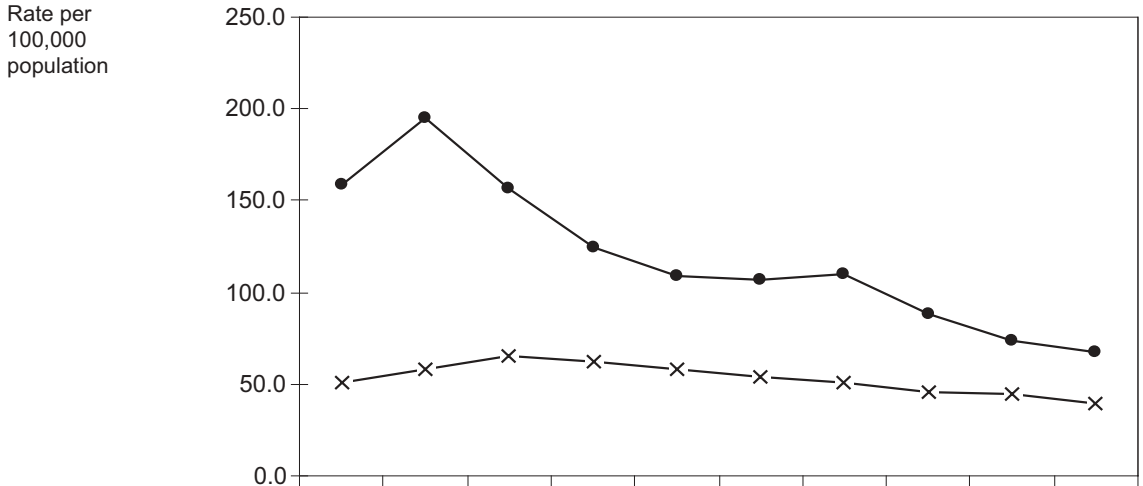


	< 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 39	40 - 59	60+	Unknown
Gonorrhea Reports - Female	0	0	0	5	63	103	43	48	24	5	1
Gonorrhea Reports - Male	0	0	0	0	46	167	139	262	253	27	1
□ Gonorrhea Rate - Female	0.0	0.0	0.0	4.0	46.8	69.6	31.4	15.8	3.7	1.2	
■ Gonorrhea Rate - Male	0.0	0.0	0.0	0.0	32.4	107.5	100.3	88.1	39.3	7.3	

Hepatitis C

The reported cases of hepatitis C in BC continued to decline to 2880 cases in 2005, for a rate of 67.9/100,000 the lowest since 1995. The BC rate continues to be above the Canadian rate due to the high prevalence of injection drug use. The highest rates in BC were reported in Central and Northern Vancouver Island, Vancouver and Fraser East. The 14 cases reported in infants less than one year of age are likely due to vertical transmission. Females had a considerably higher rate in 15-19 and 20-24 year age groups, and males had a higher rate in the older age groups.

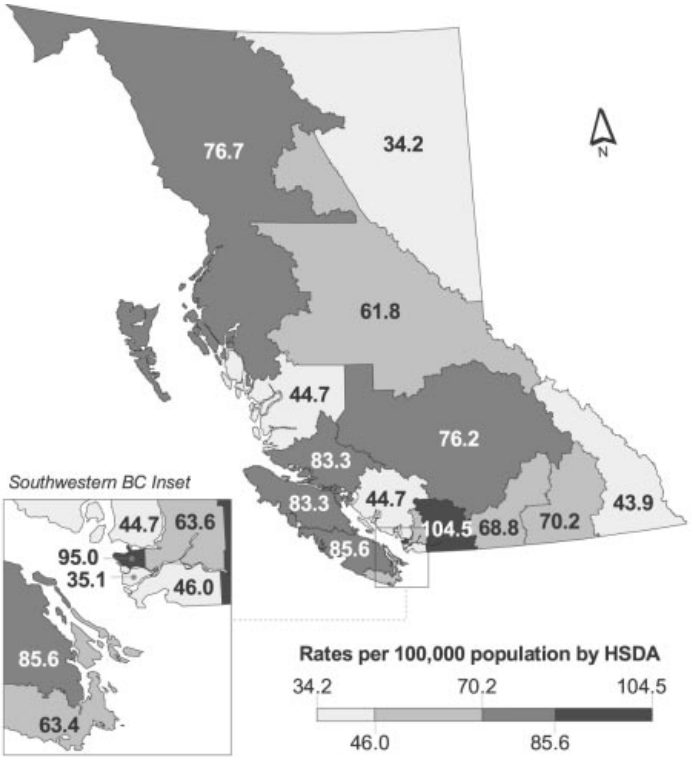
14.1 Hepatitis C Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Hepatitis C Reports	6130	7714	6255	4998	4393	4365	4529	3653	3103	2880
BC Hepatitis C Rate	158.2	195.4	157.0	124.6	108.8	107.0	110.0	88.0	73.9	67.9
Canadian Hepatitis C Rate	51.2	58.1	65.0	61.7	57.8	54.1	50.7	45.5	45.1	39.0

Note: Canadian rates are based on reporting provinces and territories only

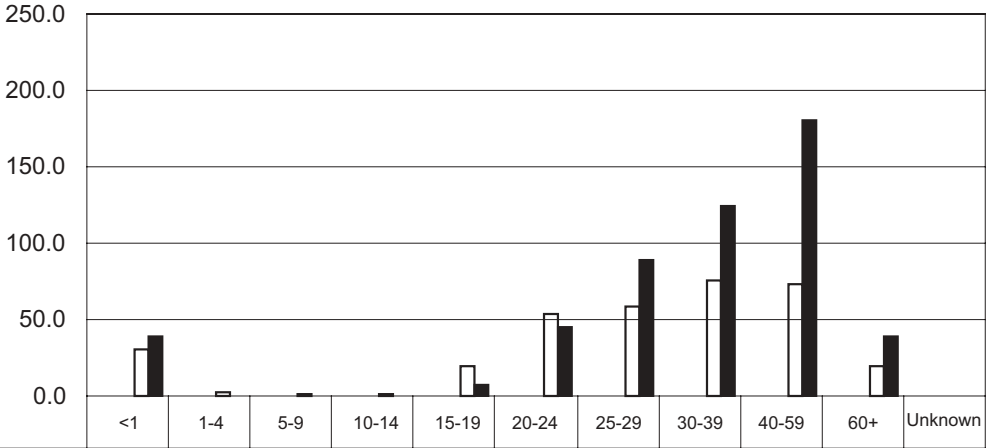
14.2 Hepatitis C Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	36	43.9
12	Kootenay Boundary	56	70.2
13	Okanagan	225	68.8
14	Thompson Cariboo Shuswap	169	76.2
21	Fraser East	277	104.5
22	Fraser North	357	63.6
23	Fraser South	292	46.0
31	Richmond	61	35.1
32	Vancouver	568	95.0
33	North Shore/Coast Garibaldi	122	44.7
41	South Vancouver Island	221	63.4
42	Central Vancouver Island	214	85.6
43	North Vancouver Island	98	83.3
51	Northwest	65	76.7
52	Northern Interior	96	61.8
53	Northeast	23	34.2

Note: Map classification by Jenks natural breaks method.

14.3 Hepatitis C Rates by Age Group and Sex, 2005

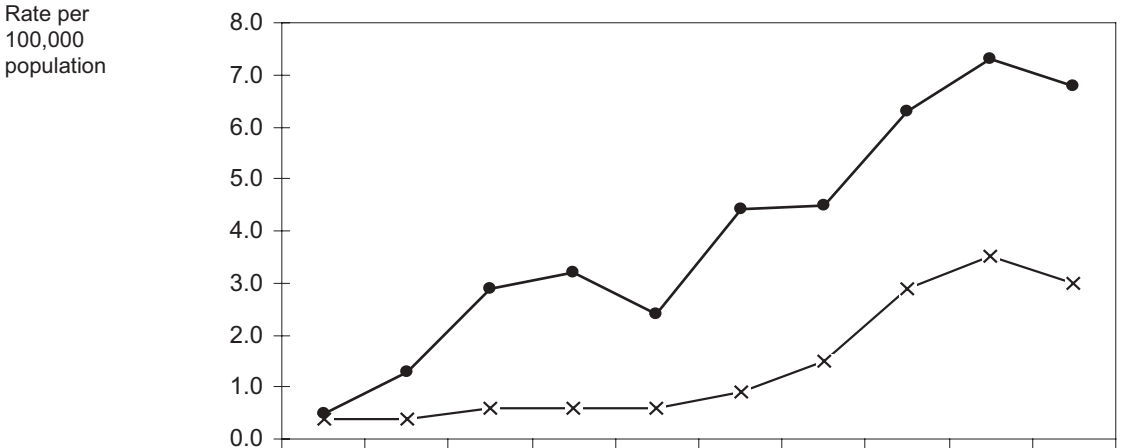


	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+	Unknown
Hepatitis C Reports - Female	6	2	1	2	27	80	80	228	476	84	0
Hepatitis C Reports - Male	8	0	0	2	10	71	123	370	1162	145	1
Hepatitis C Reports - Unknown	0	0	0	0	0	0	0	1	1	0	0
□ Hepatitis C Rate - Female	31.0	2.5	0.9	1.6	20.1	54.1	58.5	75.1	72.6	19.7	
■ Hepatitis C Rate - Male	39.2	0.0	0.0	1.5	7.1	45.7	88.8	124.4	180.5	39.5	

Infectious Syphilis

The rate per 100,000 population of infectious syphilis decreased from 7.3 in 2004 to 6.8 in 2005 reflecting a decrease in cases from 305 to 290. This is the first decrease in cases and rates since the current outbreak began in 1997. The majority of cases continue to be reported from the Lower Mainland. There were no significant trends across genders, age groups or geographically.

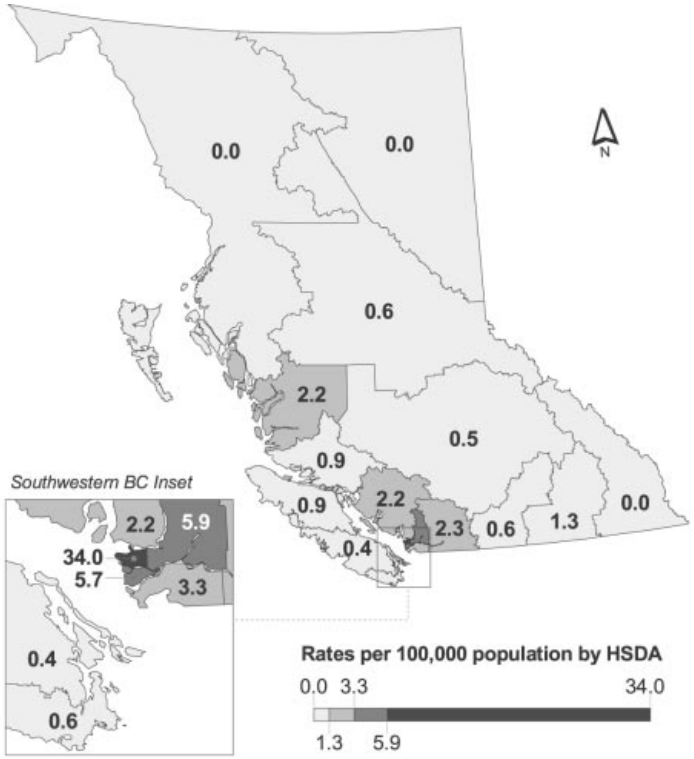
15.1 Infectious Syphilis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005*
BC Syphilis Reports	20	51	115	127	96	178	186	262	305	290
BC Syphilis Rate	0.5	1.3	2.9	3.2	2.4	4.4	4.5	6.3	7.3	6.8
Canadian Syphilis Rate	0.4	0.4	0.6	0.6	0.6	0.9	1.5	2.9	3.5	3.0

*2005 Canadian rate is projected.

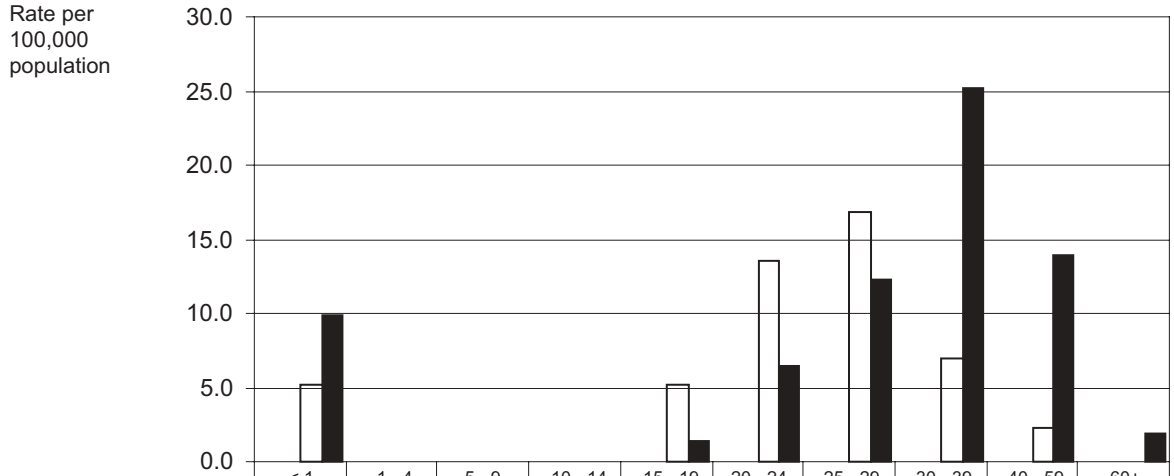
15.2 Infectious Syphilis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	1	1.3
13	Okanagan	2	0.6
14	Thompson Cariboo Shuswap	1	0.5
21	Fraser East	6	2.3
22	Fraser North	33	5.9
23	Fraser South	21	3.3
31	Richmond	10	5.7
32	Vancouver	203	34.0
33	North Shore/Coast Garibaldi	6	2.2
41	South Vancouver Island	2	0.6
42	Central Vancouver Island	1	0.4
43	North Vancouver Island	1	0.9
51	Northwest	0	0.0
52	Northern Interior	1	0.6
53	Northeast	0	0.0

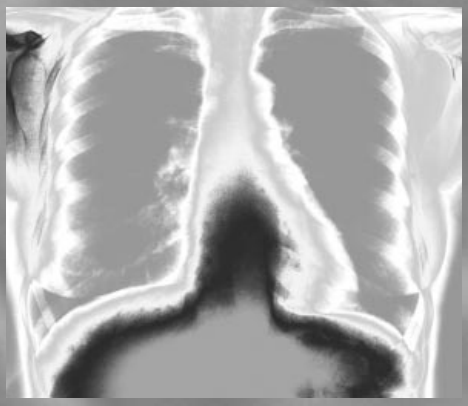
Note: Map classification by Jenks natural breaks method.

15.3 Infectious Syphilis Rates by Age Group and Sex, 2005



	< 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 39	40 - 59	60+
Syphilis Reports - Females	1	0	0	0	7	20	23	21	15	0
Syphilis Reports - Males	2	0	0	0	2	10	17	75	90	7
□ Syphilis Rate - Female	5.2	0.0	0.0	0.0	5.2	13.5	16.8	6.9	2.3	0.0
■ Syphilis Rate - Male	9.8	0.0	0.0	0.0	1.4	6.4	12.3	25.2	14.0	1.9

Diseases Transmitted by Direct Contact and Respiratory Routes



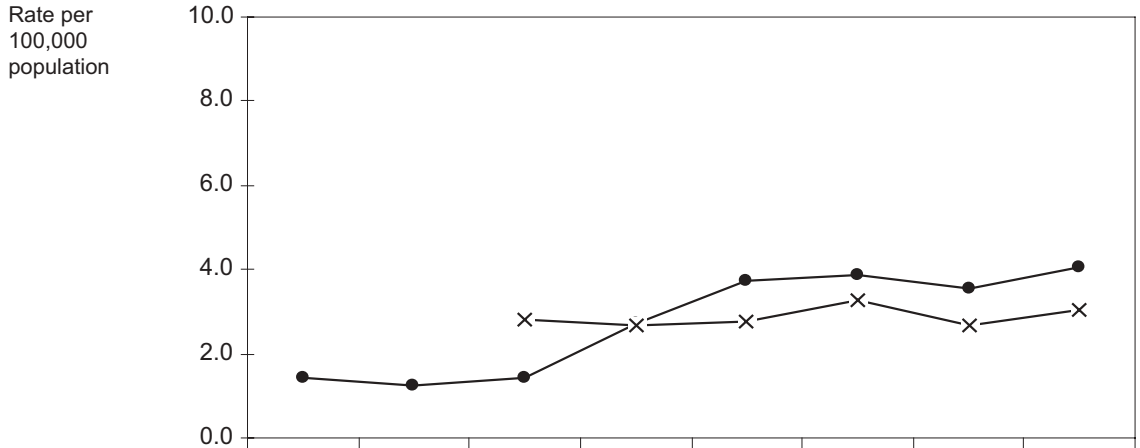
2005

05

Streptococcal Disease, (invasive), Group A

The rate of reported cases of invasive group A streptococcal (iGAS) disease increased from 3.6 to 4 per hundred thousand population from 2004 to 2005. The proportion of cases associated with toxic shock-like syndrome remained unchanged from prior years at about 6%, but the proportion of cases associated with necrotizing fasciitis has declined from 31% in 2000 to 12% in 2002 and about 8% in 2005. The case fatality among the 171 confirmed cases was 10%.

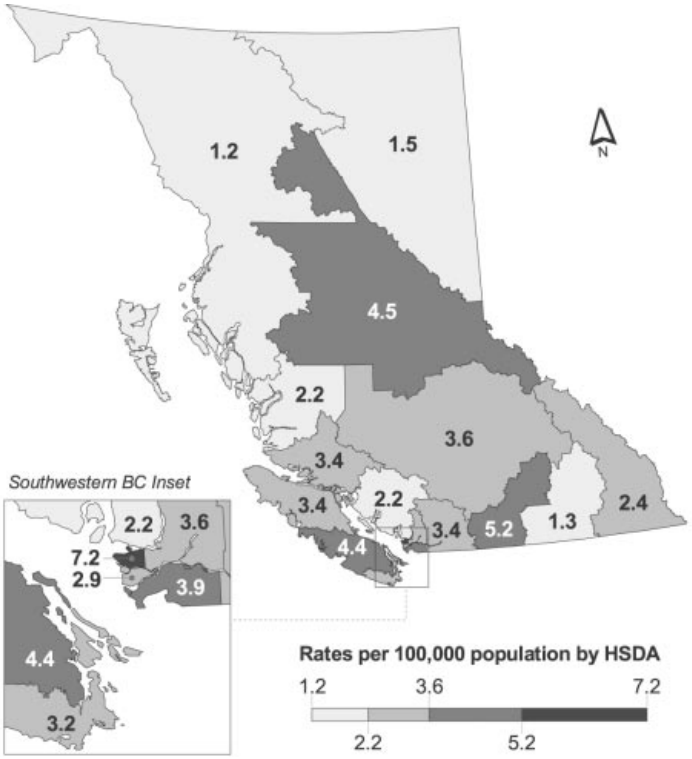
16.1 Streptococcal Disease (invasive) Group A Rates by Year, 1998-2005



	1998	1999	2000	2001	2002	2003	2004	2005
BC GAS Reports	57	49	57	111	153	161	149	171
—●— BC GAS Rate	1.4	1.2	1.4	2.7	3.7	3.9	3.6	4.0
—×— Canadian GAS Rate			2.8	2.7	2.7	3.3	2.7	3.0

Note: Invasive Streptococcal Group A became notifiable nationally in January 2000

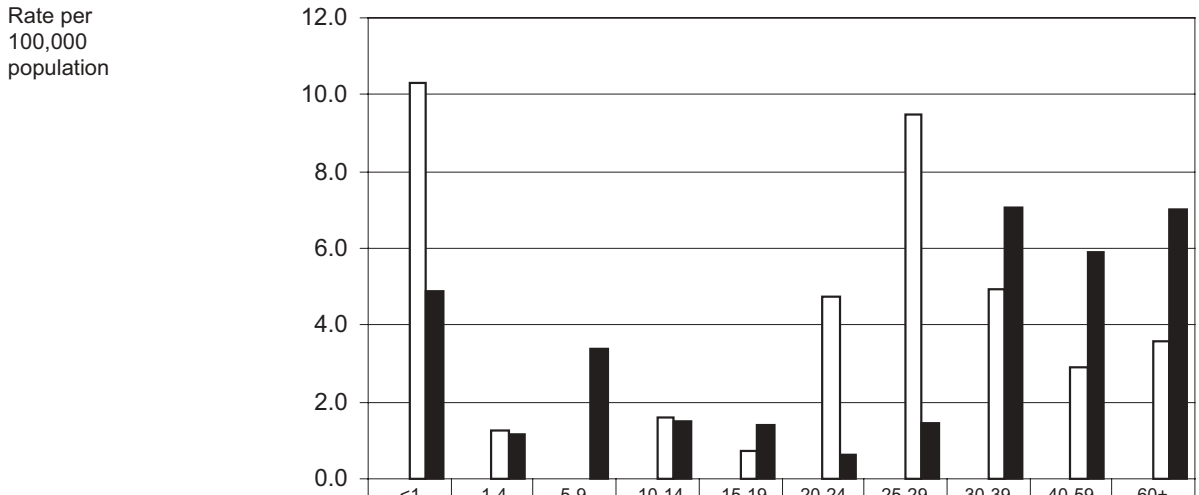
16.2 Streptococcal Disease (invasive) Group A Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	2	2.4
12	Kootenay Boundary	1	1.3
13	Okanagan	17	5.2
14	Thompson Cariboo Shuswap	8	3.6
21	Fraser East	9	3.4
22	Fraser North	20	3.6
23	Fraser South	25	3.9
31	Richmond	5	2.9
32	Vancouver	43	7.2
33	North Shore/Coast Garibaldi	6	2.2
41	South Vancouver Island	11	3.2
42	Central Vancouver Island	11	4.4
43	North Vancouver Island	4	3.4
51	Northwest	1	1.2
52	Northern Interior	7	4.5
53	Northeast	1	1.5

Note: Map classification by Jenks natural breaks method.

16.3 Streptococcus Disease (invasive) Group A Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Invasive Strep Group A Reports - Female	2	1	0	2	1	7	13	15	19	21
Invasive Strep Group A Reports - Male	1	1	4	2	2	1	2	21	38	18
□ Invasive Strep Group A Rate - Female	10.3	1.3	0.0	1.6	0.7	4.7	9.5	4.9	2.9	3.6
■ Invasive Strep Group A Rate - Male	4.9	1.2	3.4	1.5	1.4	0.6	1.4	7.1	5.9	7.0

Tuberculosis

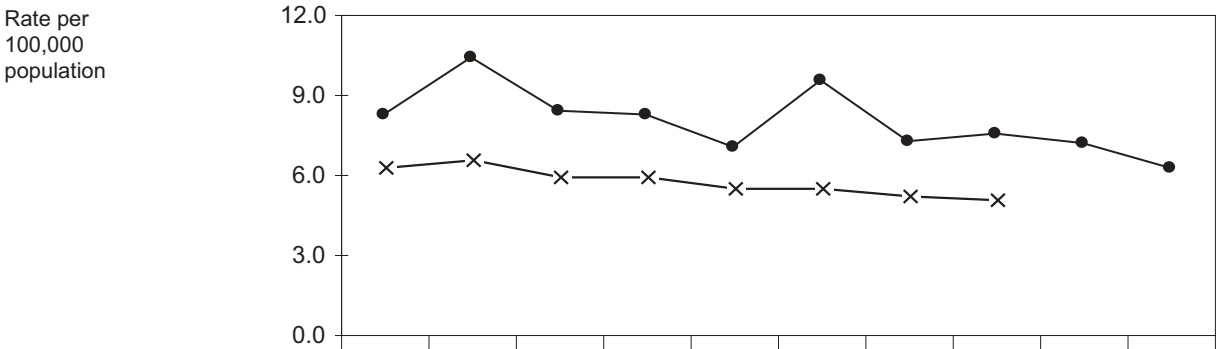
In 2005 there were 268 cases of reported tuberculosis in British Columbia, for a rate of 6.3 per 100,000, a 12% decrease in the number and a 13% decrease in the rate of reported cases compared to 2004.

Rates for health regions vary across the province. The Vancouver, Richmond, Fraser North and Fraser South health service delivery areas have rates exceeding the provincial rate (6.3/100,000 population). The highest incidence rate was reported from Vancouver and Richmond (16.2 and 12.1/100,000 population respectively) while the lowest was in Okanagan and North Vancouver Island (no cases).

Compared to 2004, the rate of tuberculosis increased in Fraser East, South Vancouver Island, East Kootenay, Northwest, Northeast, Kootenay Boundary and Fraser North.

The age specific rates are shown in figure 17.3. Overall, the tuberculosis rate was higher in men than in women (7.0 vs 5.4 per 100,000). For the age group < 60 years the rate of tuberculosis in men was higher than in women (5.7 vs 4.9). In those ≥ 60 years old, the rate of tuberculosis in men was significantly higher than that in women (13.6 vs 7.5 per 100,000).

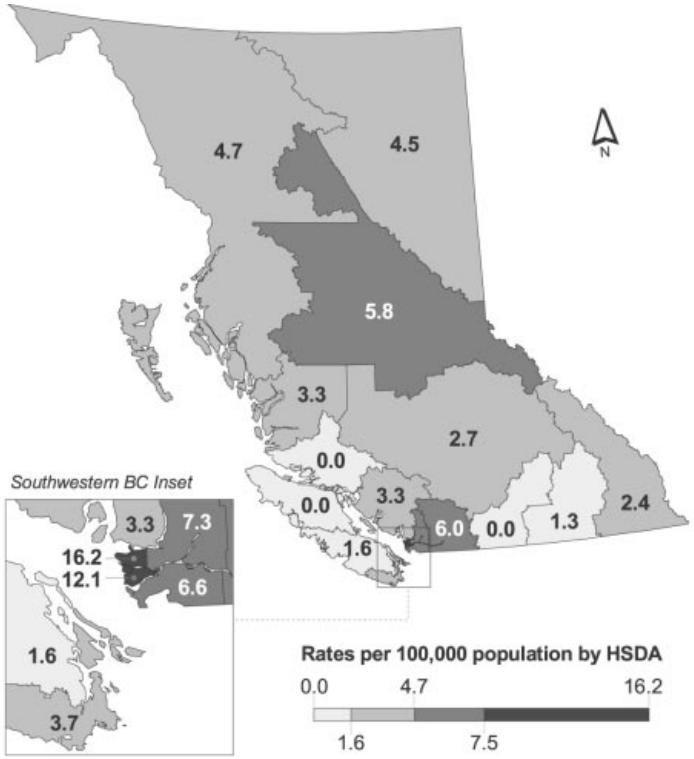
17.1 Tuberculosis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Tuberculosis Cases	323	413	337	332	290	391	303	319	303	268
BC Tuberculosis Rate	8.3	10.4	8.4	8.3	7.1	9.5	7.3	7.6	7.2	6.3
Canadian Tuberculosis Rate	6.3	6.6	5.9	5.9	5.5	5.5	5.2	5.1		

Note: National tuberculosis numbers for 2004 and 2005 not yet available.

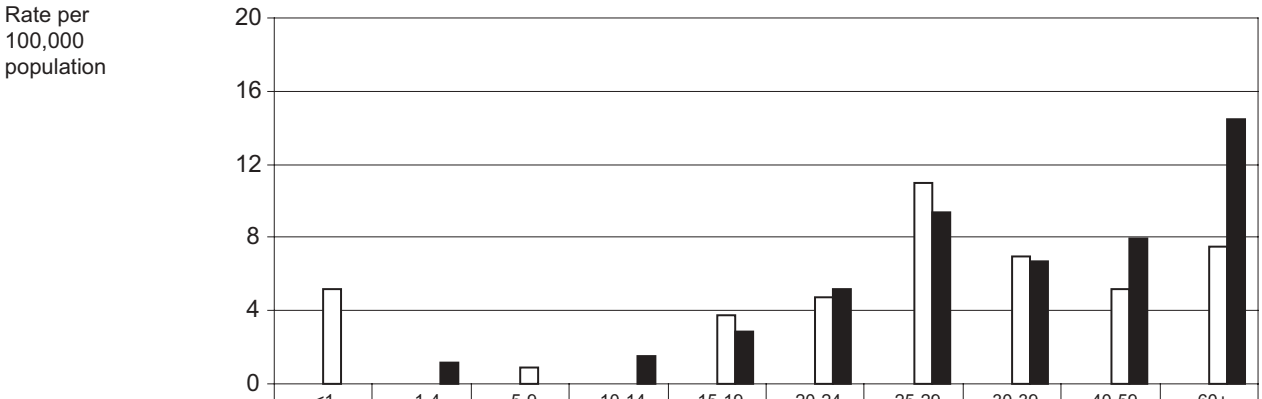
17.2 Tuberculosis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	2	2.4
12	Kootenay Boundary	1	1.3
13	Okanagan	0	0.0
14	Thompson Cariboo Shuswap	6	2.7
21	Fraser East	16	6.0
22	Fraser North	41	7.3
23	Fraser South	42	6.6
31	Richmond	21	12.1
32	Vancouver	97	16.2
33	North Shore/Coast Garibaldi	9	3.3
41	South Vancouver Island	13	3.7
42	Central Vancouver Island	4	1.6
43	North Vancouver Island	0	0.0
51	Northwest	4	4.7
52	Northern Interior	9	5.8
53	Northeast	3	4.5

Note: Map classification by Jenks natural breaks method.

17.3 Tuberculosis Rates by Age Group and Gender, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Tuberculosis Cases - Female	1	0	1	0	5	7	15	21	34	32
Tuberculosis Cases - Male	0	1	0	2	4	8	13	20	51	53
▫ Tuberculosis Rate - Female	5.2	0.0	0.9	0.0	3.7	4.7	11.0	6.9	5.2	7.5
■ Tuberculosis Rate - Male	0.0	1.2	0.0	1.5	2.8	5.2	9.4	6.7	7.9	14.4

Antimicrobial Resistant Organism (ARO) Surveillance in British Columbia

There are several efforts underway to track trends with AROs:

- British Columbia Association of Medical Microbiologists (BCAMM) produces a report on MRSA and VRE. There was an increase from 2003 to 2004 in the proportion of *S. aureus* isolates which are resistant to methicillin. 2005 data are pending.
- Community associated MRSA has been an increasing problem in BC. A report on its emergence is posted at www.bccdc.org (http://www.bccdc.org/download.php?item=2175)
- In concert with microbiologists from around BC, BCCDC is gathering information on trends in resistance in various organisms. Updated reports will also be available at www.bccdc.org

Enteric, Food and Waterborne Diseases

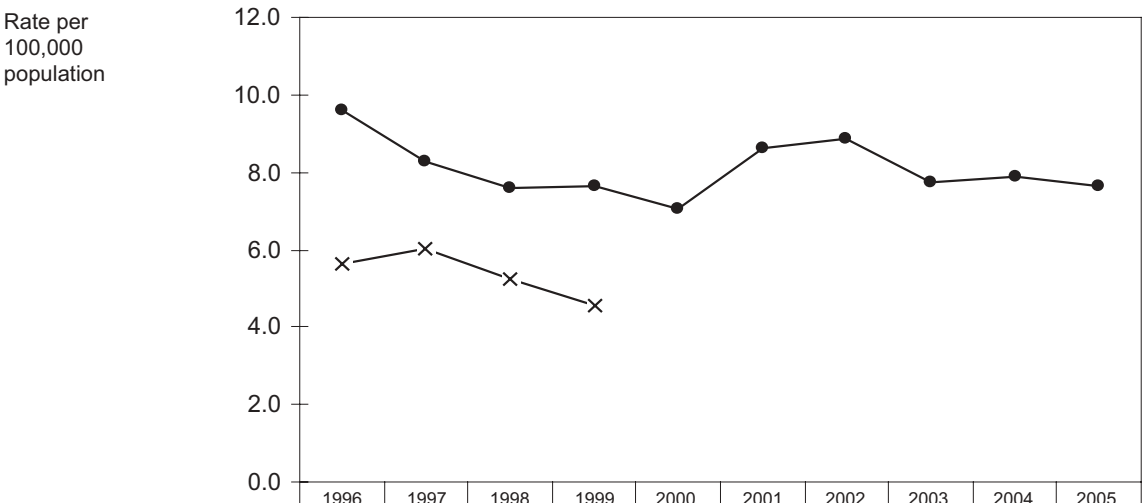
2005

05

Amebiasis

Throughout the last ten years, the rate of amebiasis in British Columbia has remained fairly constant. Reporting rates remained highest among males aged 30 to 39 years (18.5/100,000). Men who have sex with men are at increased risk of amebiasis through oral-anal sex. As in the past, Vancouver reported the highest rate of infection (25.9 cases per 100,000 population). The screening program for refugees in Vancouver may partially account for heightened levels of reporting from this HSDA. This screening program identified a large number of cases in November, explaining the peak in reporting observed in week 47. No outbreaks were identified this year and no seasonal pattern was evident.

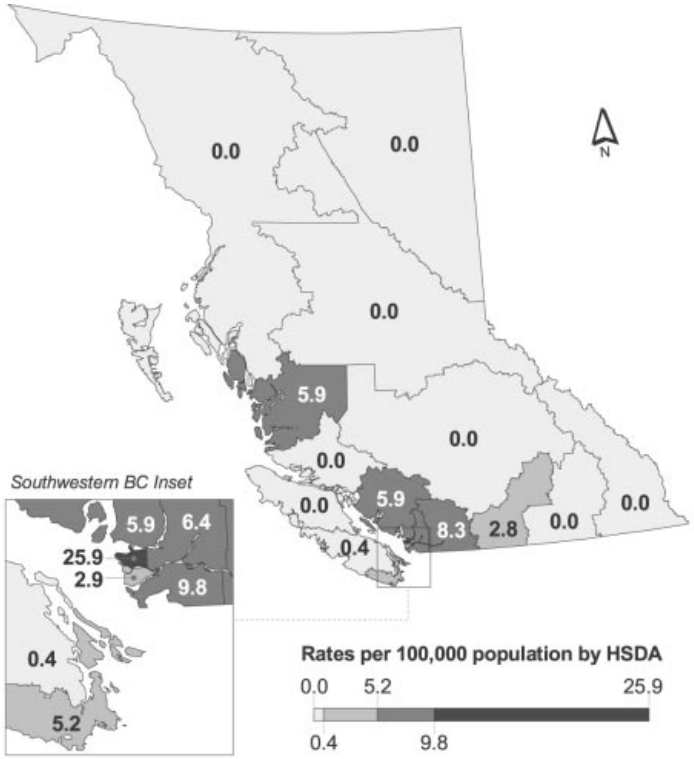
18.1 Amebiasis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Amebiasis Reports	372	327	302	306	284	351	365	321	330	324
BC Amebiasis Rate	9.6	8.3	7.6	7.6	7.0	8.6	8.9	7.7	7.9	7.6
Canadian Amebiasis Rate	5.6	6.0	5.3	4.5						

Note: Amebiasis was removed from national surveillance in January 2000

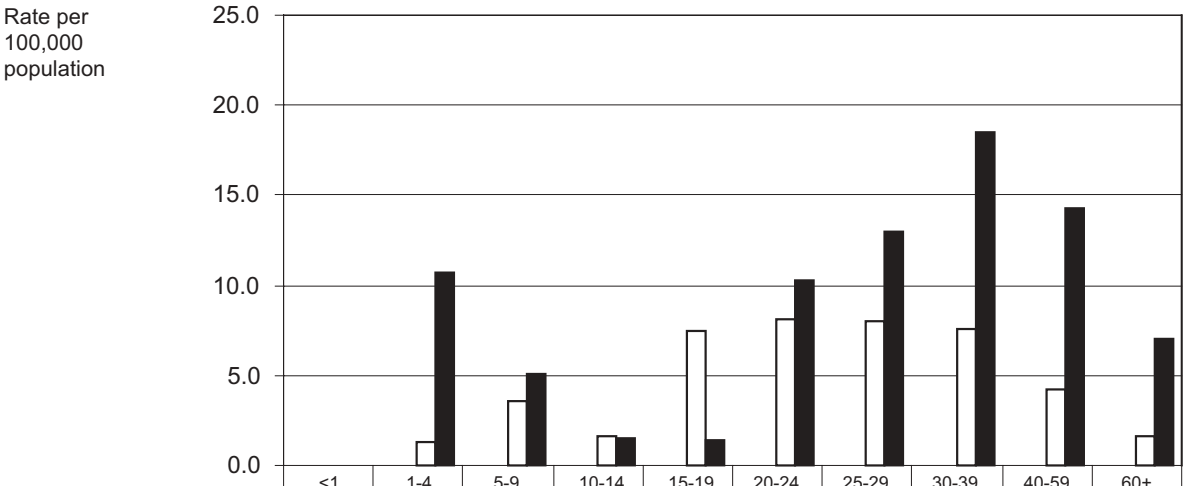
18.2 Amebiasis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	0	0.0
13	Okanagan	9	2.8
14	Thompson Cariboo Shuswap	0	0.0
21	Fraser East	22	8.3
22	Fraser North	36	6.4
23	Fraser South	62	9.8
31	Richmond	5	2.9
32	Vancouver	155	25.9
33	North Shore/Coast Garibaldi	16	5.9
41	South Vancouver Island	18	5.2
42	Central Vancouver Island	1	0.4
43	North Vancouver Island	0	0.0
51	Northwest	0	0.0
52	Northern Interior	0	0.0
53	Northeast	0	0.0

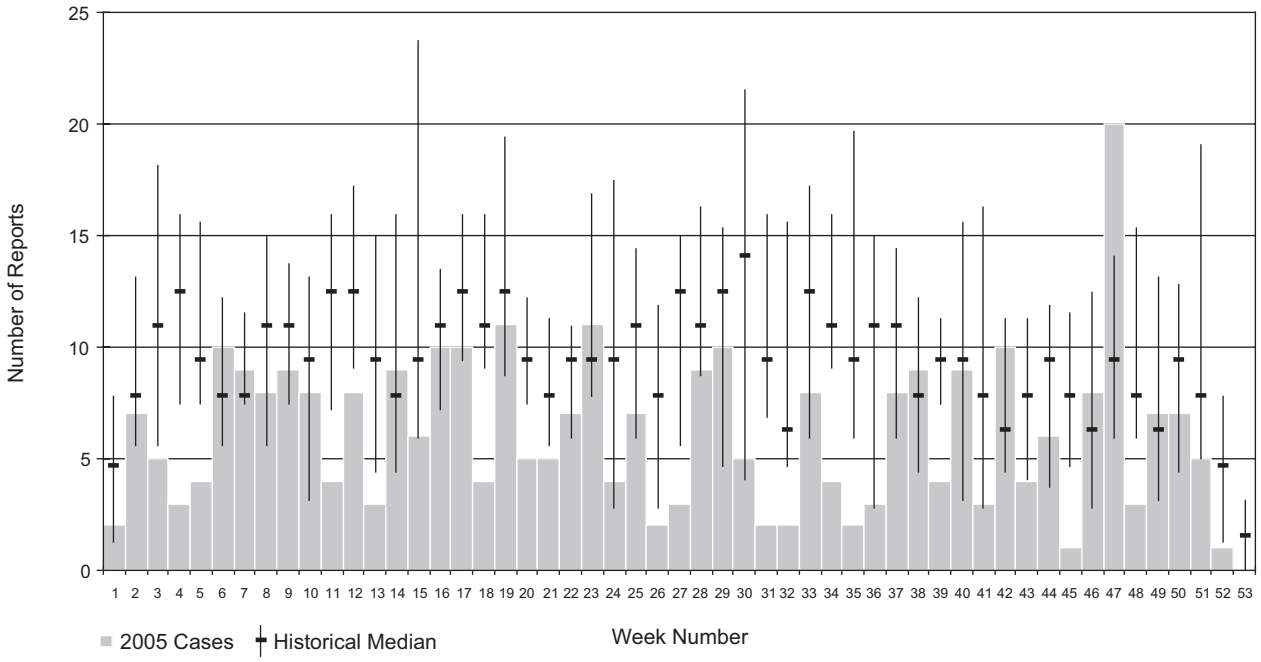
Note: Map classification by Jenks natural breaks method.

18.3 Amebiasis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Amebiasis Reports - Female	0	1	4	2	10	12	11	23	28	7
Amebiasis Reports - Male	0	9	6	2	2	16	18	55	92	26
□ Amebiasis Rate - Female	0.0	1.3	3.6	1.6	7.4	8.1	8.0	7.6	4.3	1.6
■ Amebiasis Rate - Male	0.0	10.7	5.1	1.5	1.4	10.3	13.0	18.5	14.3	7.1

18.4 2005 Amebiasis Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



Campylobacteriosis

Campylobacteriosis remains the most commonly reported enteric disease in the province with a total of 1568 cases reported in 2005.

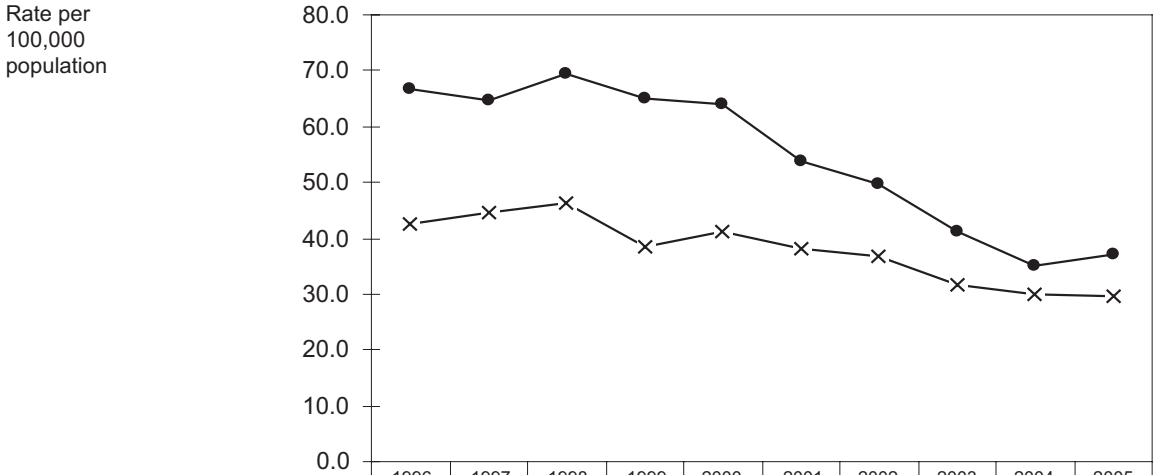
Annual reported incidence was slightly higher in 2005 compared to 2004. However, since 1998 there is a general decreasing trend in reporting of campylobacteriosis. This decline might be artifactual as it coincides with the introduction of a provincial protocol, introduced in the late 1990s, that limits the number of stool tests ordered by physicians. Nevertheless, during the last five years this decreasing trend was also observed in other industrialized countries. This trend remains unexplained by the scientific community.

There were marked regional differences in the rate of reported *Campylobacter* infections. As in past years, the highest incidence rates were reported from health service delivery areas in the south of the province with Fraser South, Vancouver, Richmond, South Vancouver Island, Fraser East and North Shore/Coast Garibaldi reporting rates between 40.5 and 53.8 cases per 100,000 population. There was a decrease in the incidence rate in the Okanagan compared to 2004, although a cluster of *C. coli* cases occurred in this area in late December.

The highest rates were reported among male children aged 1-4 years (65.1 cases/100,000 population) and males aged 25-29 years (58.4 cases/100,000 population). Reasons for this are not clear. Rates in other sex and age groups varied between 11.2 and 50.0 cases/100,000 population.

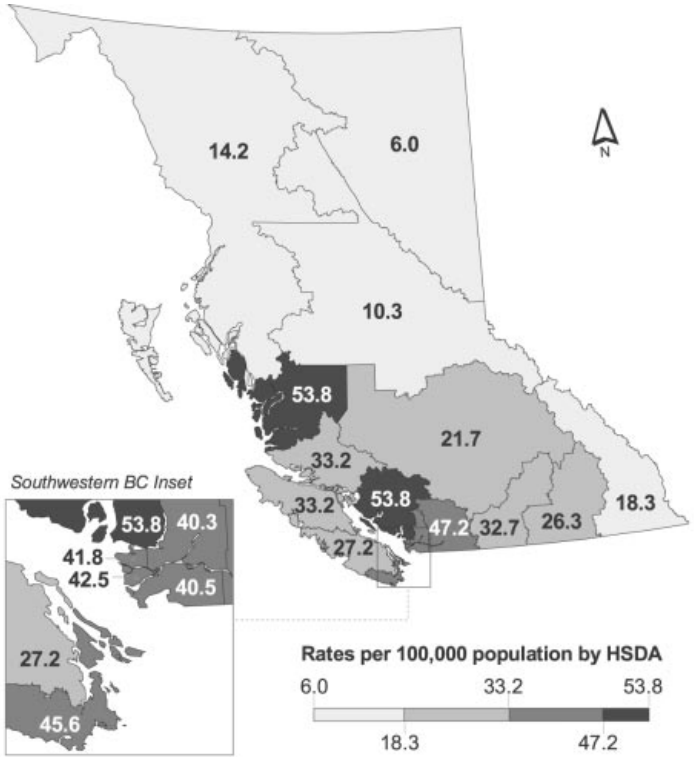
The highest rates were reported in weeks 24 and 31. As in 2004, the summer increase was less pronounced than expected.

19.1 Campylobacteriosis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Campylobacteriosis Reports	2587	2549	2760	2613	2583	2192	2052	1712	1472	1568
BC Campylobacteriosis Rate	66.8	64.6	69.3	65.1	63.9	53.7	49.9	41.2	35.1	37.0
Canadian Campylobacteriosis Rate	42.5	44.5	46.4	38.3	41.1	38.2	36.7	31.6	29.9	29.6

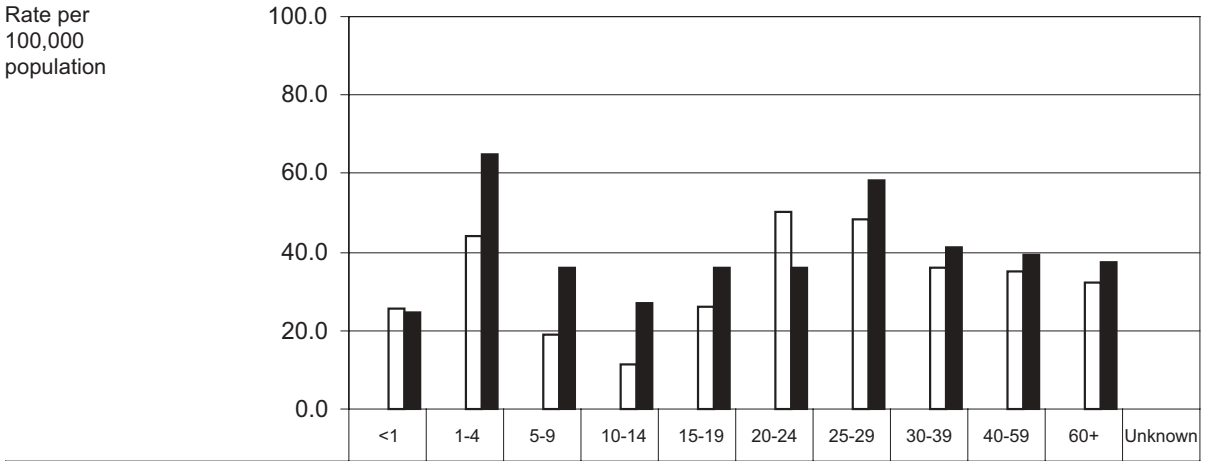
19.2 Campylobacteriosis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	15	18.3
12	Kootenay Boundary	21	26.3
13	Okanagan	107	32.7
14	Thompson Cariboo Shuswap	48	21.7
21	Fraser East	125	47.2
22	Fraser North	226	40.3
23	Fraser South	257	40.5
31	Richmond	74	42.5
32	Vancouver	250	41.8
33	North Shore/Coast Garibaldi	147	53.8
41	South Vancouver Island	159	45.6
42	Central Vancouver Island	68	27.2
43	North Vancouver Island	39	33.2
51	Northwest	12	14.2
52	Northern Interior	16	10.3
53	Northeast	4	6.0

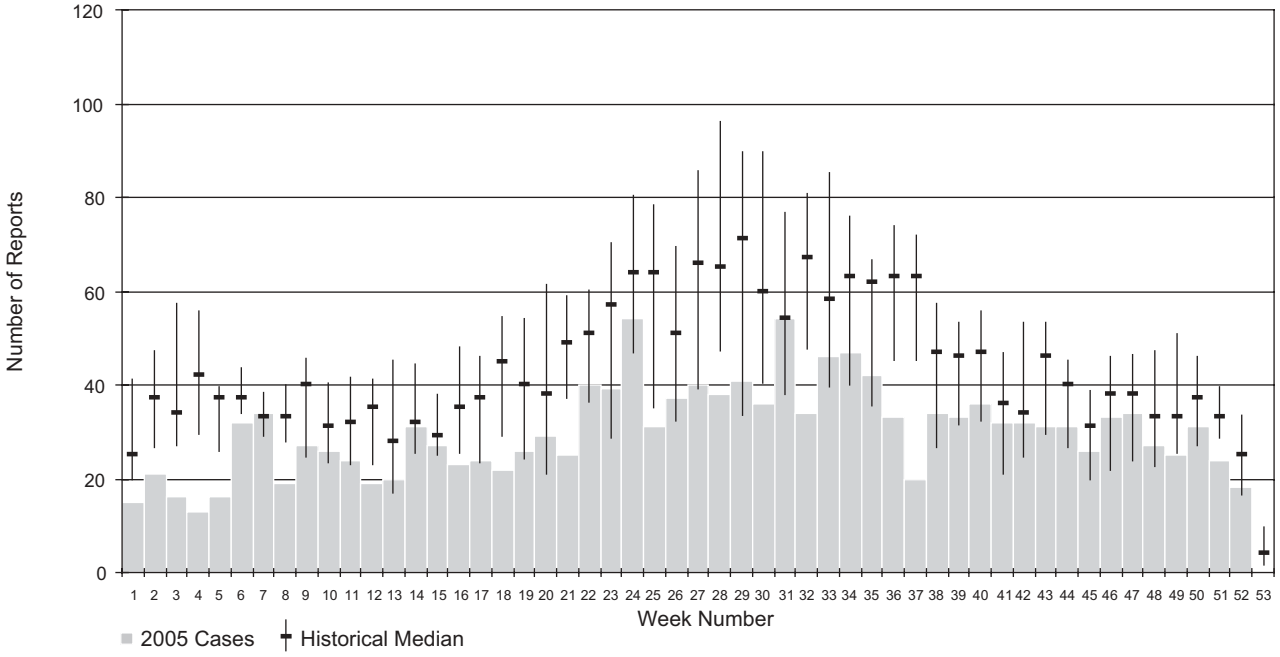
Note: Map classification by Jenks natural breaks method.

19.3 Campylobacteriosis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+	Unknown
Campylobacteriosis Reports - Female	5	35	21	14	35	74	66	109	230	137	0
Campylobacteriosis Reports - Male	5	55	42	36	51	56	81	123	253	138	2
□ Campylobacteriosis Rate - Female	25.8	44.2	18.9	11.2	26.0	50.0	48.3	35.9	35.1	32.2	
■ Campylobacteriosis Rate - Male	24.5	65.1	35.8	27.1	36.0	36.1	58.4	41.3	39.3	37.6	

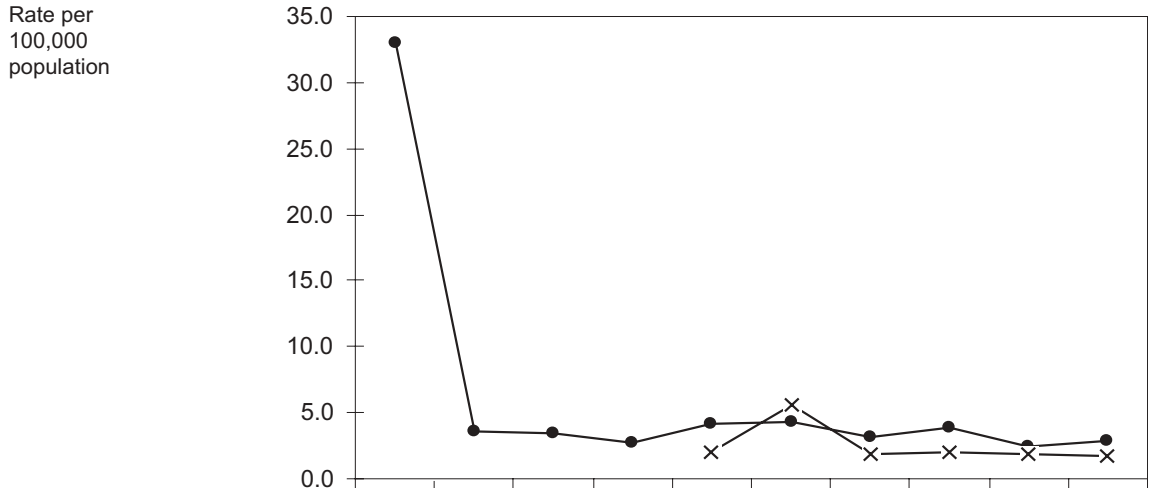
19.4 2005 Campylobacteriosis Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



Cryptosporidiosis

One hundred twenty-four cases of cryptosporidiosis were reported in BC in 2005 (2.9/100,000). The annual reported incidence of cryptosporidiosis has remained relatively stable over the past 8 years. The rate of reporting remained highest in children under the age of 10 years and higher in males than in females. The Northeast, Northern Interior and Kootenay Boundary reported no cases in 2005. No outbreaks were reported in BC in 2005. The highest number of cases was reported in weeks 35-38, typical of the small summer peak for this disease.

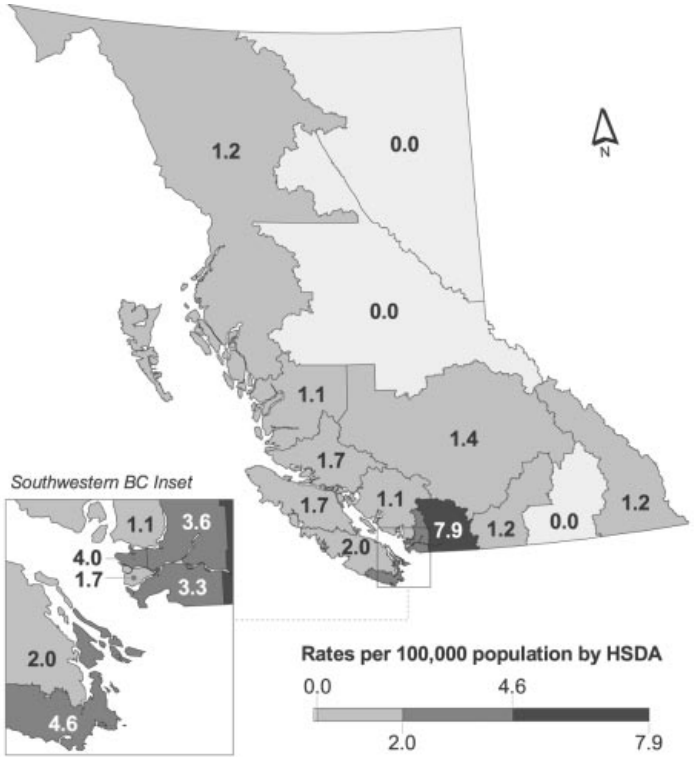
20.1 Cryptosporidiosis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Cryptosporidiosis Reports	1278	144	139	109	167	173	130	162	100	124
BC Cryptosporidiosis Rate	33.0	3.6	3.5	2.7	4.1	4.2	3.2	3.9	2.4	2.9
Canadian Cryptosporidiosis Rate					2.0	5.7	1.9	2.0	1.8	1.8

Note: Cryptosporidiosis became nationally notifiable in January 2000

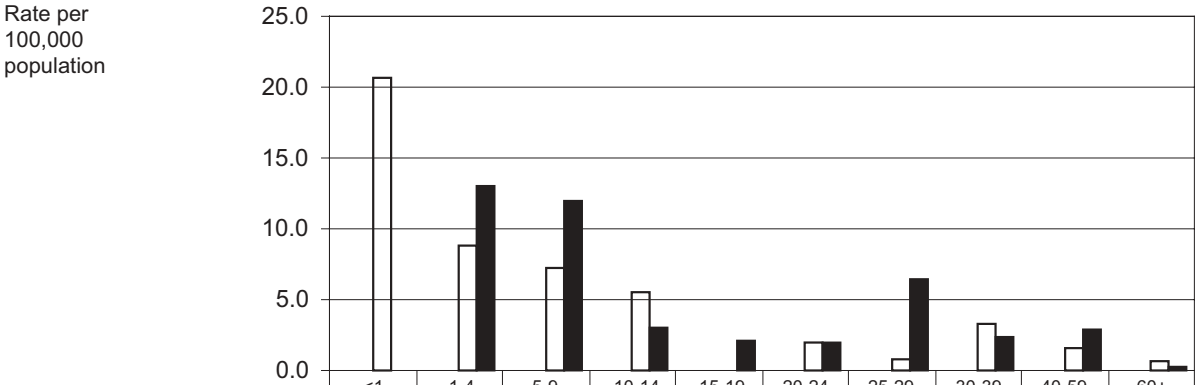
20.2 Cryptosporidiosis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	1	1.2
12	Kootenay Boundary	0	0.0
13	Okanagan	4	1.2
14	Thompson Cariboo Shuswap	3	1.4
21	Fraser East	21	7.9
22	Fraser North	20	3.6
23	Fraser South	21	3.3
31	Richmond	3	1.7
32	Vancouver	24	4.0
33	North Shore/Coast Garibaldi	3	1.1
41	South Vancouver Island	16	4.6
42	Central Vancouver Island	5	2.0
43	North Vancouver Island	2	1.7
51	Northwest	1	1.2
52	Northern Interior	0	0.0
53	Northeast	0	0.0

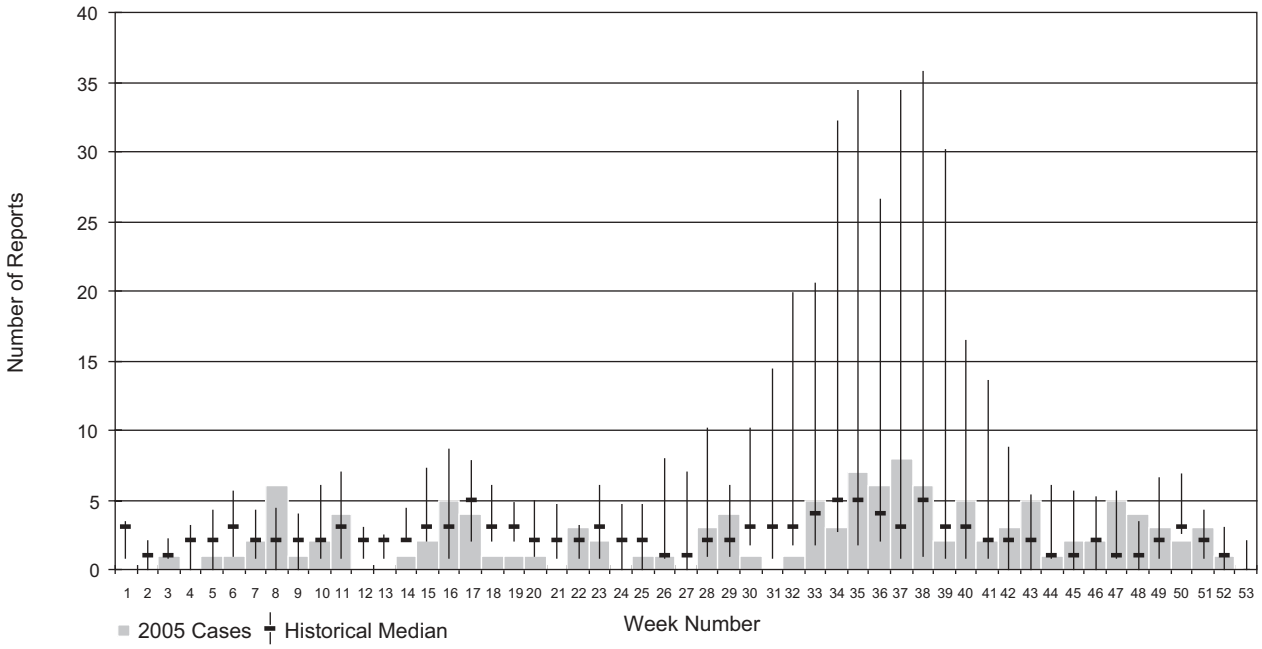
Note: Map classification by Jenks natural breaks method.

20.3 Cryptosporidiosis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Cryptosporidiosis Reports - Female	4	7	8	7	0	3	1	10	10	3
Cryptosporidiosis Reports - Male	0	11	14	4	3	3	9	7	19	1
□ Cryptosporidiosis Rate - Female	20.7	8.8	7.2	5.6	0.0	2.0	0.7	3.3	1.5	0.7
■ Cryptosporidiosis Rate - Male	0.0	13.0	11.9	3.0	2.1	1.9	6.5	2.4	3.0	0.3

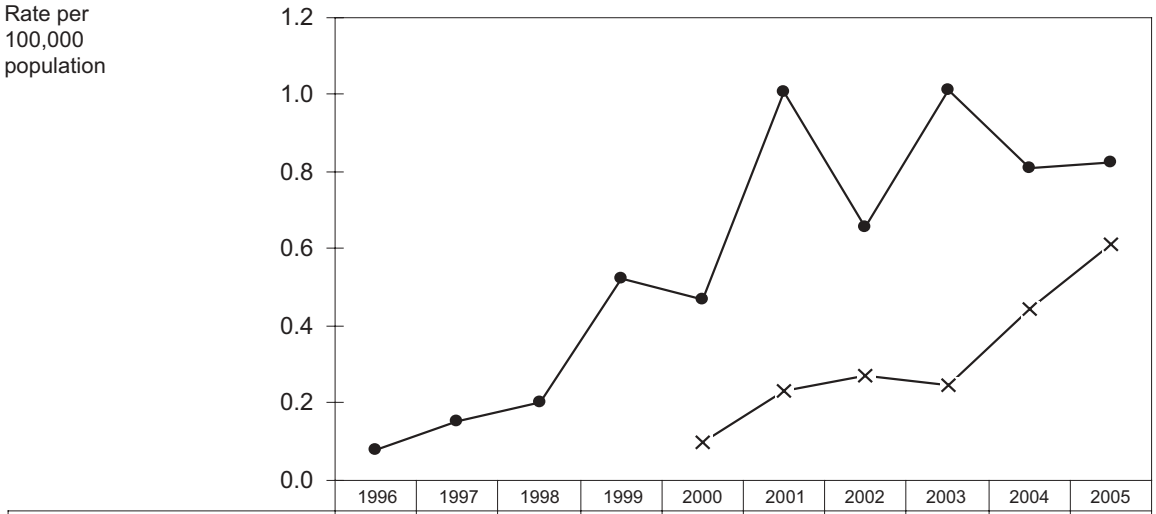
20.4 2005 Cryptosporidiosis Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



Cyclosporiasis

Over the last 10 years, British Columbia has experienced a steady rise in the annual incidence of *Cyclospora* infections. Thirty-five cases (0.8/100,000) were reported in 2005. No outbreaks of locally-acquired disease were reported and most cases were associated with travel to places where the disease is endemic. Most cases occurred in adults and the elderly (only 2 cases occurred in people under 20 years of age). The highest rates were reported from North Shore/Coast Garibaldi (2.2/100,000) and Vancouver (1.8/100,000). The greatest number of cases was reported in the spring and summer.

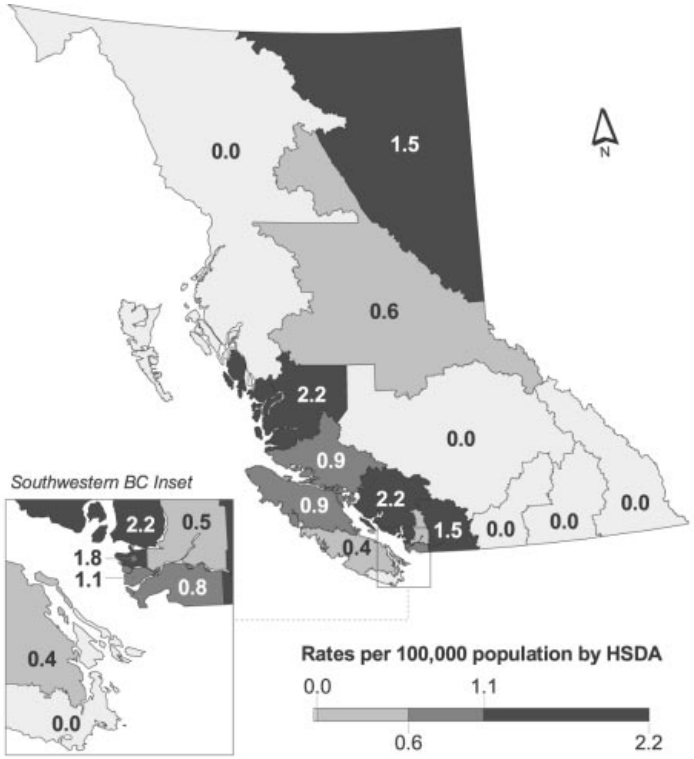
21.1 Cyclosporiasis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Cyclosporiasis Reports	3	6	8	21	19	41	27	42	34	35
BC Cyclosporiasis Rate	0.1	0.2	0.2	0.5	0.5	1.0	0.7	1.0	0.8	0.8
Canadian Cyclosporiasis Rate					0.1	0.2	0.3	0.2	0.4	0.6

Note: Cryptosporidiosis became nationally notifiable in January 2000

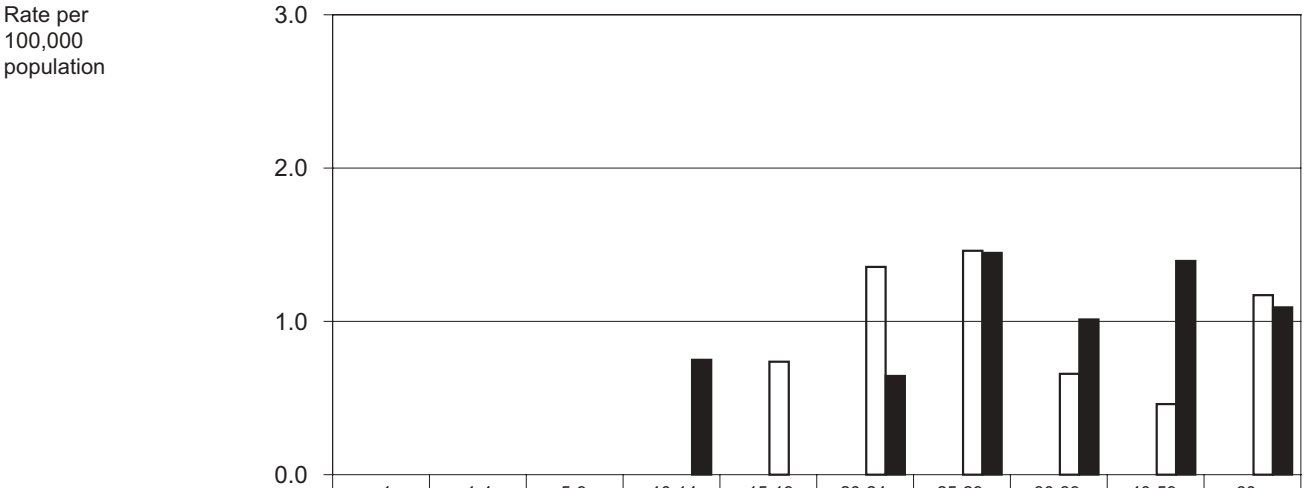
21.2 Cyclosporiasis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	0	0.0
13	Okanagan	0	0.0
14	Thompson Cariboo Shuswap	0	0.0
21	Fraser East	4	1.5
22	Fraser North	3	0.5
23	Fraser South	5	0.8
31	Richmond	2	1.1
32	Vancouver	11	1.8
33	North Shore/Coast Garibaldi	6	2.2
41	South Vancouver Island	0	0.0
42	Central Vancouver Island	1	0.4
43	North Vancouver Island	1	0.9
51	Northwest	0	0.0
52	Northern Interior	1	0.6
53	Northeast	1	1.5

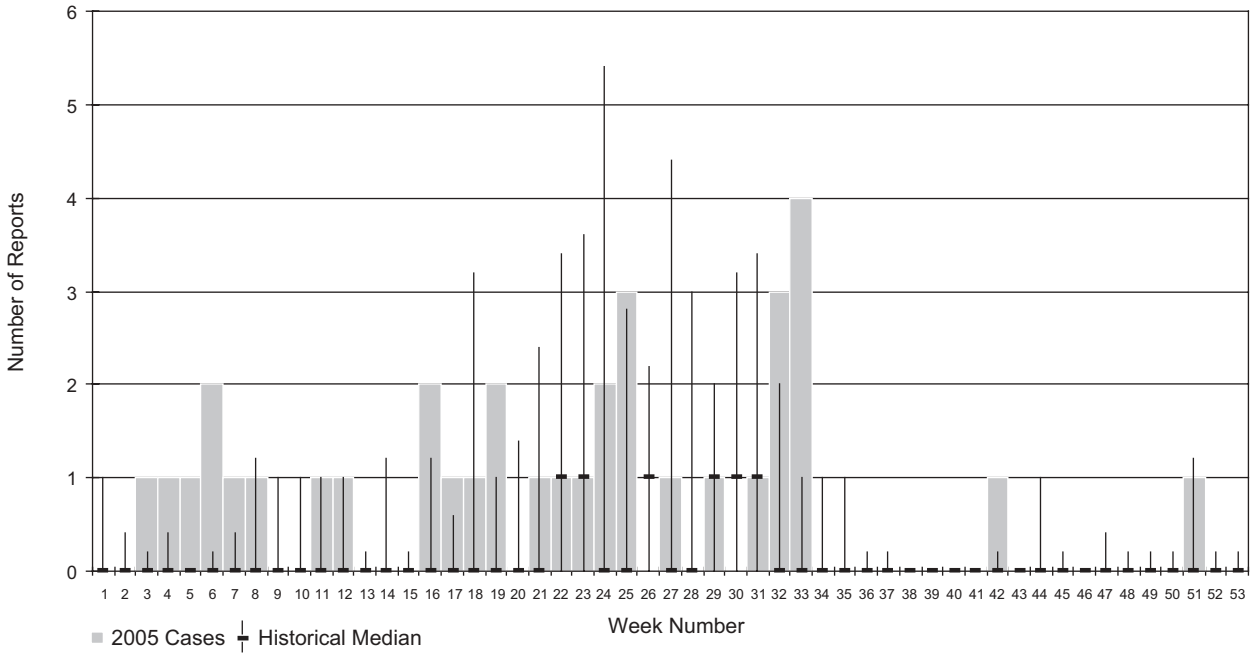
Note: Map classification by Jenks natural breaks method.

21.3 Cyclosporiasis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Cyclosporiasis Reports - Female	0	0	0	0	1	2	2	2	3	5
Cyclosporiasis Reports - Male	0	0	0	1	0	1	2	3	9	4
□ Cyclosporiasis Rate - Female	0.0	0.0	0.0	0.0	0.7	1.4	1.5	0.7	0.5	1.2
■ Cyclosporiasis Rate - Male	0.0	0.0	0.0	0.8	0.0	0.6	1.4	1.0	1.4	1.1

21.4 2005 Cyclosporiasis Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



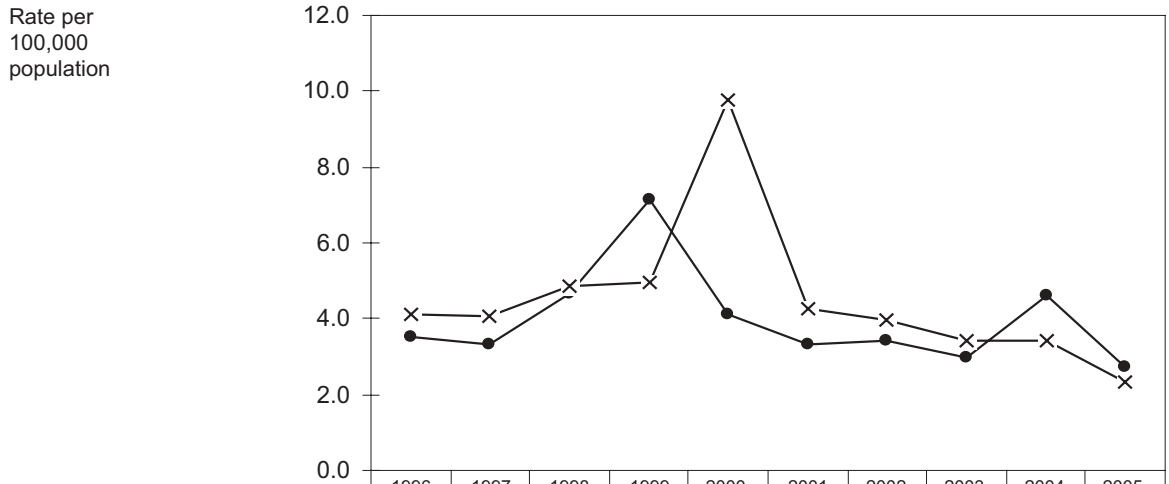
Verotoxigenic *E. coli* (VTEC) Infection

In 2005, reporting of verotoxigenic *E. coli* fell to its lowest level since 1992. There were 115 cases reported, for a rate of 2.7/100,000. The highest rates were reported in females aged 0 to 9 years and in males aged 1 to 19 years.

The highest regional rates were reported from Kootenay Boundary, Northwest, Thompson Cariboo Shuswap, North Vancouver Island and the Okanagan, with reporting rates from 4.3 to 6.3 cases/100,000.

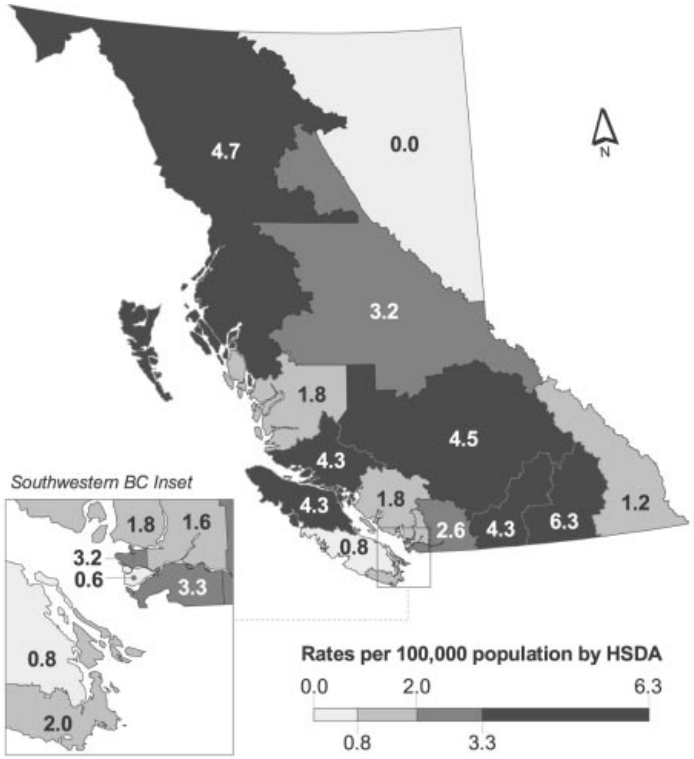
Although some peaks in reporting occurred, the number of cases was lower than expected during summer weeks. The peak observed in week 44 was partly due to an outbreak related to contaminated ground beef. Two outbreak cases were complicated by Hemolytic Uremic Syndrome.

22.1 Verotoxigenic *E. coli* Infection Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Verotoxigenic E. coli Reports	137	132	185	287	166	136	140	123	193	115
BC Verotoxigenic E. coli Rate	3.5	3.3	4.6	7.2	4.1	3.3	3.4	3.0	4.6	2.7
Canadian Verotoxigenic E. coli Rate	4.1	4.1	4.8	5.0	9.8	4.3	3.9	3.4	3.4	2.3

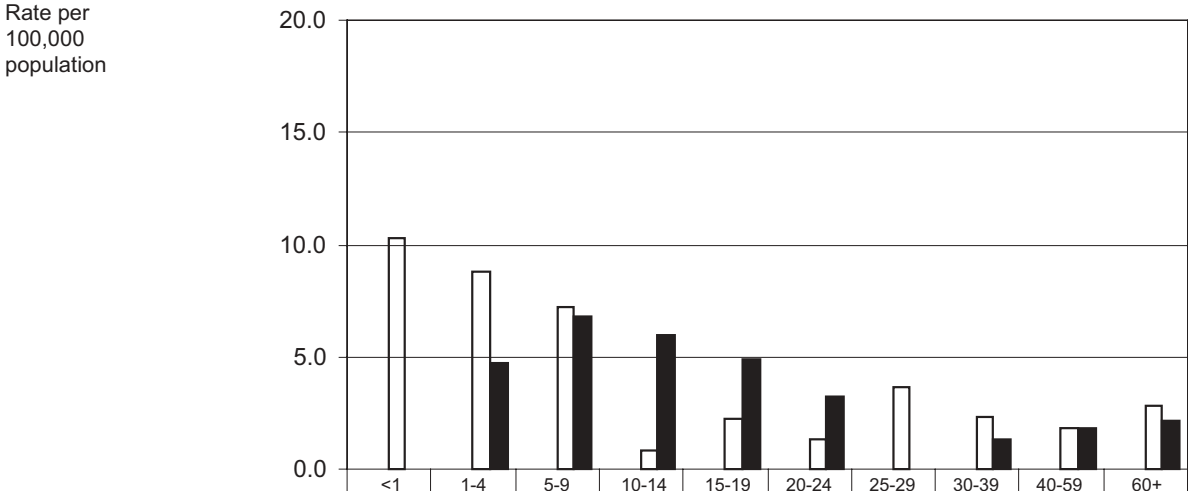
22.2 Verotoxigenic *E. coli* Infection Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	1	1.2
12	Kootenay Boundary	5	6.3
13	Okanagan	14	4.3
14	Thompson Cariboo Shuswap	10	4.5
21	Fraser East	7	2.6
22	Fraser North	9	1.6
23	Fraser South	21	3.3
31	Richmond	1	0.6
32	Vancouver	19	3.2
33	North Shore/Coast Garibaldi	5	1.8
41	South Vancouver Island	7	2.0
42	Central Vancouver Island	2	0.8
43	North Vancouver Island	5	4.3
51	Northwest	4	4.7
52	Northern Interior	5	3.2
53	Northeast	0	0.0

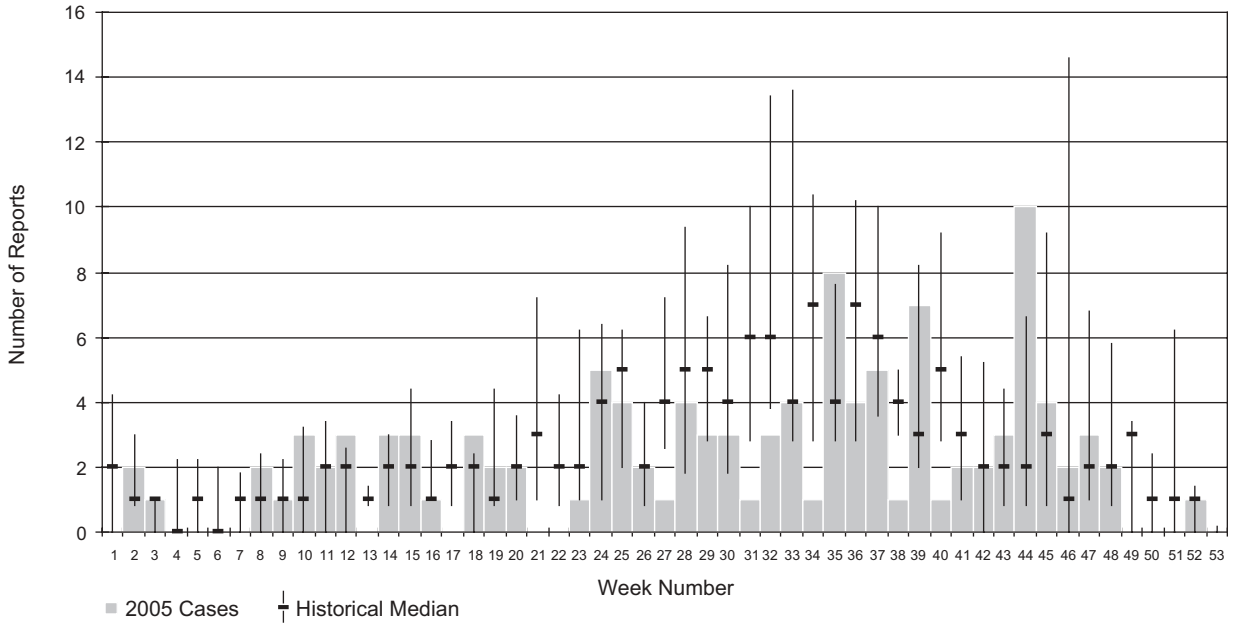
Note: Map classification by Jenks natural breaks method.

22.3 Verotoxigenic *E. coli* Infection Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Verotoxigenic E. coli Reports - Female	2	7	8	1	3	2	5	7	12	12
Verotoxigenic E. coli Reports - Male	0	4	8	8	7	5	0	4	12	8
□ Verotoxigenic E. coli Rate - Female	10.3	8.8	7.2	0.8	2.2	1.4	3.7	2.3	1.8	2.8
■ Verotoxigenic E. coli Rate - Male	0.0	4.7	6.8	6.0	4.9	3.2	0.0	1.3	1.9	2.2

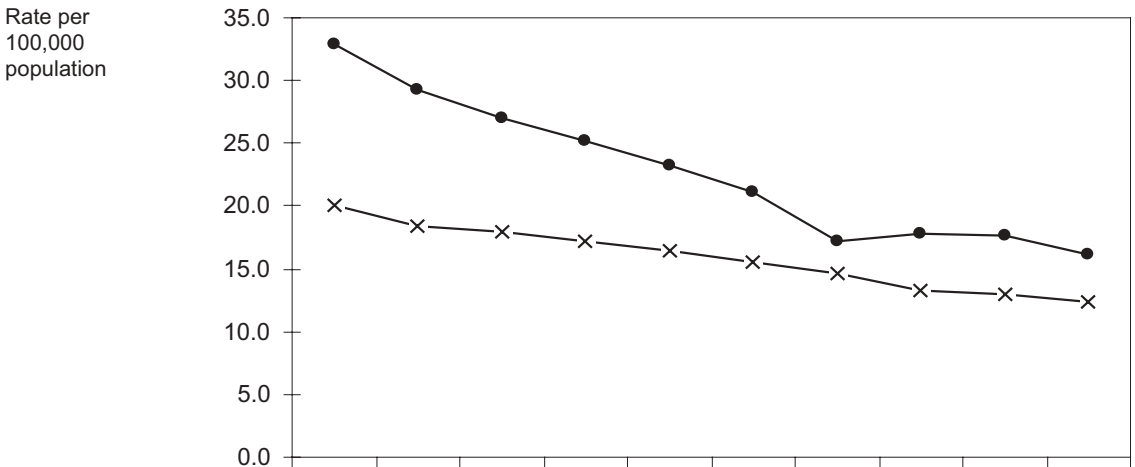
22.4 2005 Verotoxigenic *E. coli* Infection Reports Compared to Historical Median and the 10th and Percentiles Around the Median (1996 to 2004)



Giardiasis

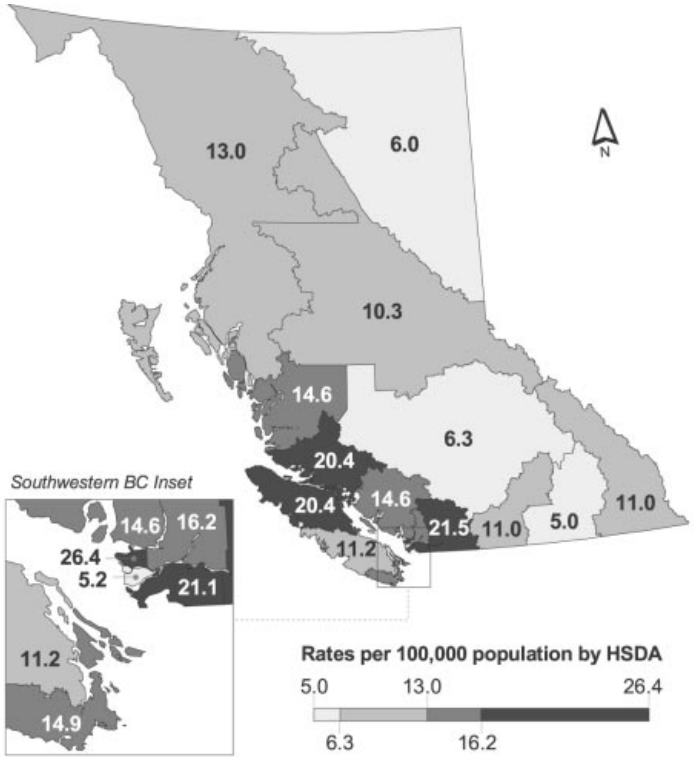
Annual rates of giardiasis in BC have remained stable in the last four years. In 2005, 687 cases (16.2/100,000) were reported. As in the past, a bimodal age distribution is apparent, with rates of infection highest in children aged one to four and adults aged 20 to 39. Rates remain higher in males than females. Vancouver, Fraser East, Fraser South and North Vancouver Island experienced the highest rates of infection at 20.4 to 26.4 cases per 100,000 population. The number of cases reported per week was relatively constant; there was no late summer or fall peak.

23.1 Giardiasis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Giardiasis Reports	1274	1158	1075	1009	941	860	710	742	739	687
—●— BC Giardiasis Rate	32.9	29.3	27.0	25.2	23.3	21.1	17.3	17.9	17.6	16.2
—×— Canadian Giardiasis Rate	20.0	18.5	18.0	17.2	16.5	15.6	14.7	13.3	13.0	12.4

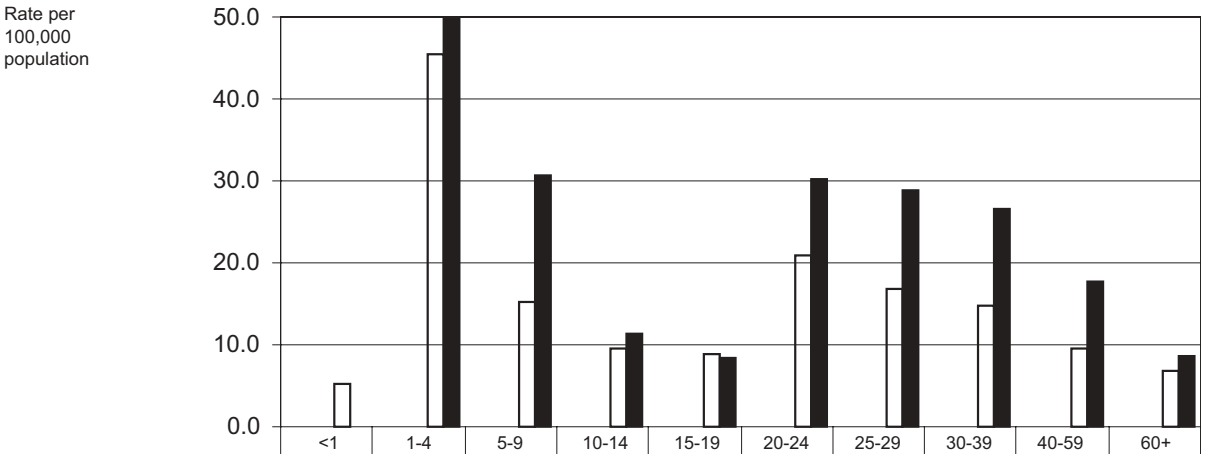
23.2 Giardiasis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	9	11.0
12	Kootenay Boundary	4	5.0
13	Okanagan	36	11.0
14	Thompson Cariboo Shuswap	14	6.3
21	Fraser East	57	21.5
22	Fraser North	91	16.2
23	Fraser South	134	21.1
31	Richmond	9	5.2
32	Vancouver	158	26.4
33	North Shore/Coast Garibaldi	40	14.6
41	South Vancouver Island	52	14.9
42	Central Vancouver Island	28	11.2
43	North Vancouver Island	24	20.4
51	Northwest	11	13.0
52	Northern Interior	16	10.3
53	Northeast	4	6.0

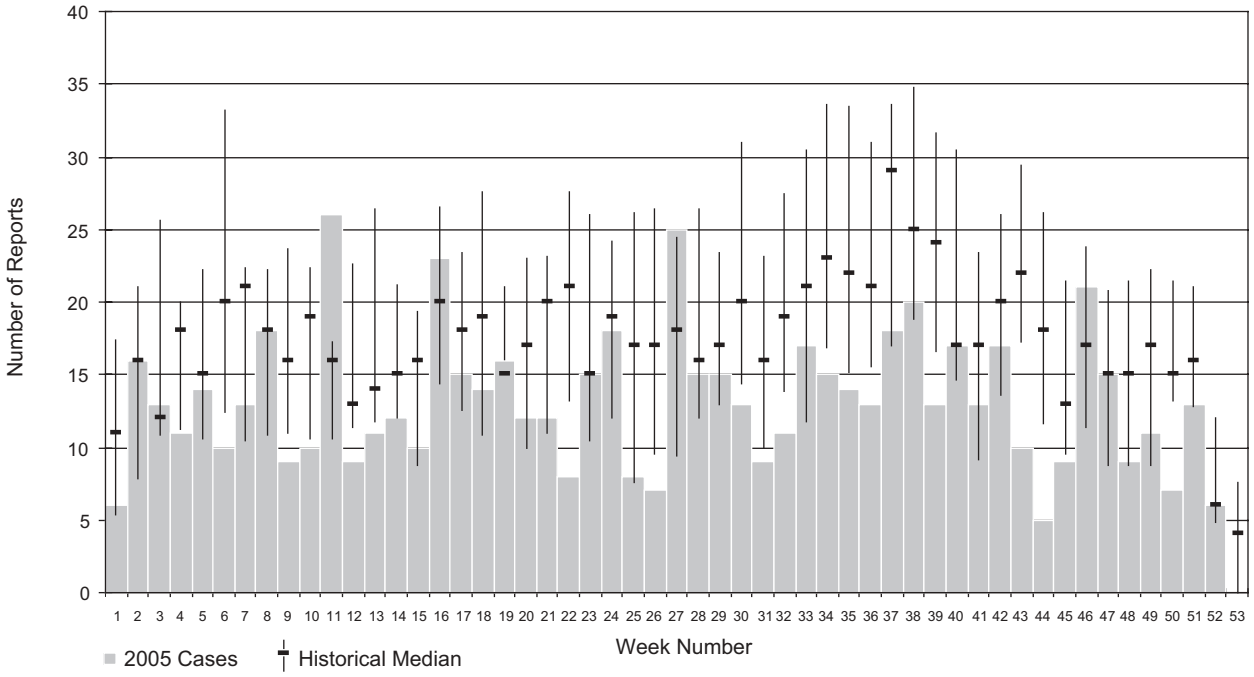
Note: Map classification by Jenks natural breaks method.

23.3 Giardiasis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Giardiasis Reports - Female	1	36	17	12	12	31	23	45	63	29
Giardiasis Reports - Male	0	42	36	15	12	47	40	79	114	32
Giardiasis Reports - Unknown	0	0	1	0	0	0	0	0	0	0
□ Giardiasis Rate - Female	5.2	45.4	15.3	9.6	8.9	21.0	16.8	14.8	9.6	6.8
■ Giardiasis Rate - Male	0.0	49.7	30.7	11.3	8.5	30.3	28.9	26.6	17.7	8.7

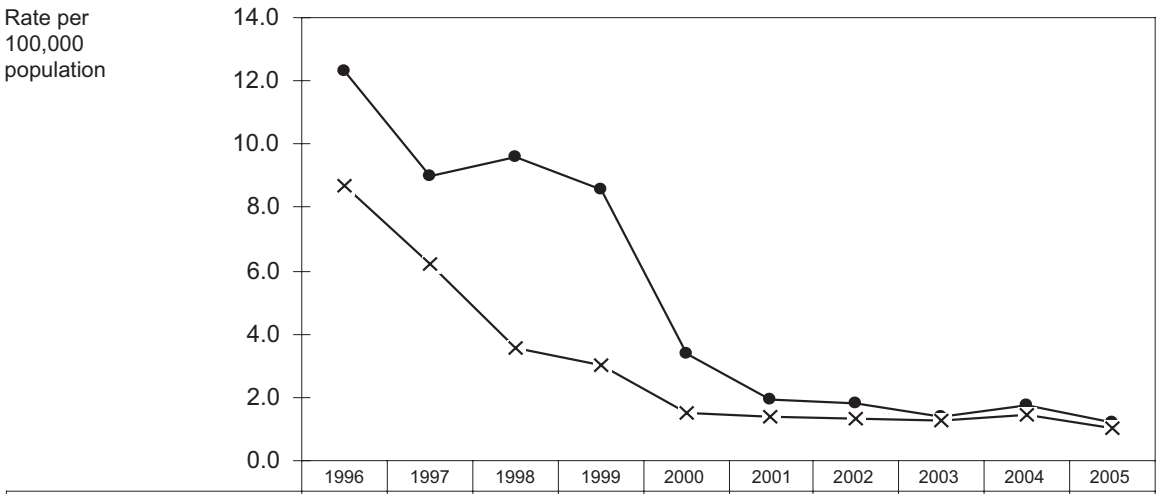
23.4 2005 Giardiasis Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



Hepatitis A

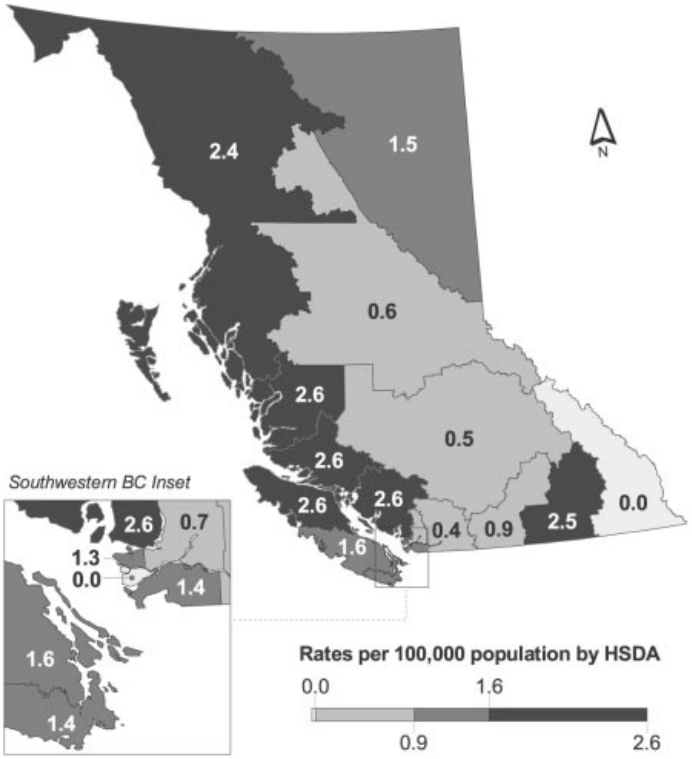
In 2005, fifty one cases of acute hepatitis A were reported in BC, for an overall rate of 1.2/100,000 population. The rate of hepatitis A in BC has declined since the introduction of publicly funded hepatitis A vaccine for individuals at high-risk for infection such as illicit drug users and men who have sex with men. The rate by Health Service Delivery Areas ranged from 0/100,000 in East Kootney and Richmond, to a high of 2.6/100,000 in North Shore/Coast Garibaldi and North Vancouver Island. However due to small numbers some rates may be unstable. Overall more cases were reported in males than females with a ratio of 31:20.

24.1 Hepatitis A Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Hepatitis A Reports	478	356	382	344	136	78	75	57	74	51
BC Hepatitis A Rate	12.3	9.0	9.6	8.6	3.4	1.9	1.8	1.4	1.8	1.2
Canadian Hepatitis A Rate	8.7	6.2	3.6	3.0	1.5	1.4	1.3	1.2	1.4	1.1

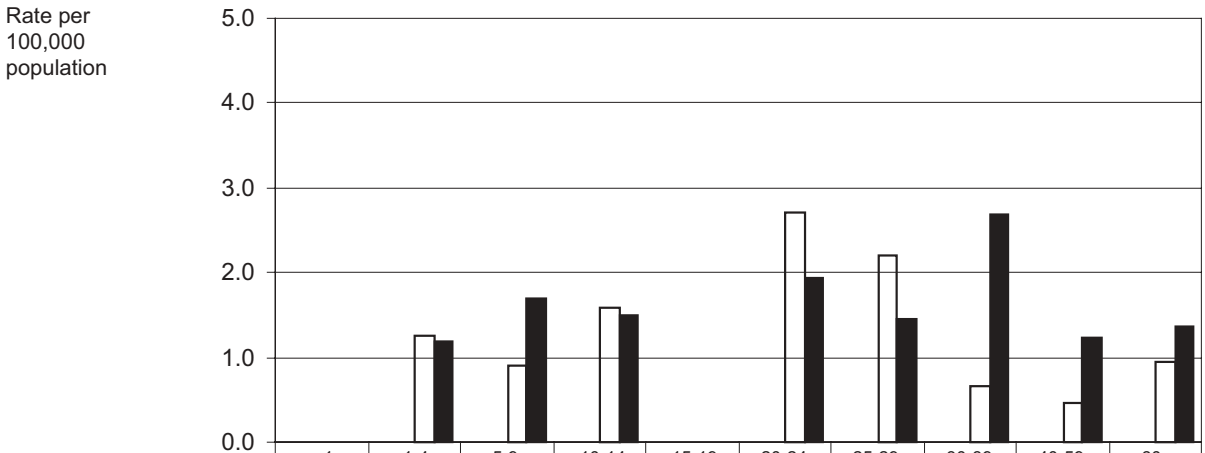
24.2 Hepatitis A Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	2	2.5
13	Okanagan	3	0.9
14	Thompson Cariboo Shuswap	1	0.5
21	Fraser East	1	0.4
22	Fraser North	4	0.7
23	Fraser South	9	1.4
31	Richmond	0	0.0
32	Vancouver	8	1.3
33	North Shore/Coast Garibaldi	7	2.6
41	South Vancouver Island	5	1.4
42	Central Vancouver Island	4	1.6
43	North Vancouver Island	3	2.6
51	Northwest	2	2.4
52	Northern Interior	1	0.6
53	Northeast	1	1.5

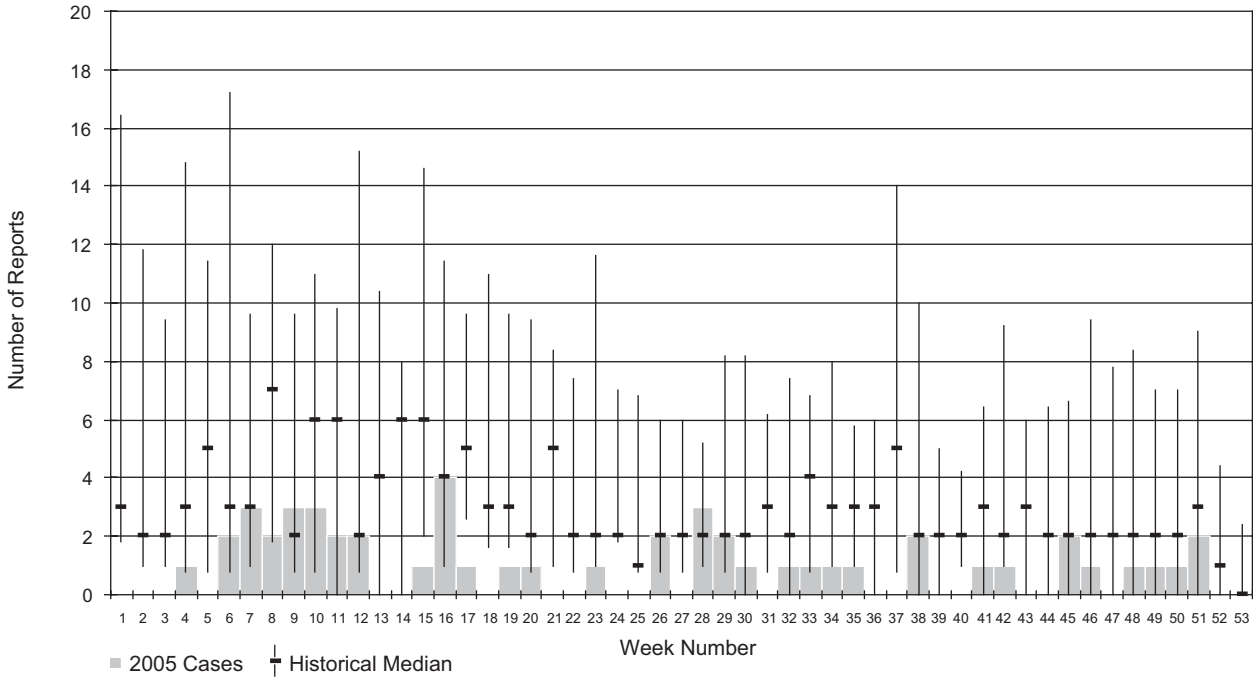
Note: Map classification by Jenks natural breaks method.

24.3 Hepatitis A Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Hepatitis A Reports - Female	0	1	1	2	0	4	3	2	3	4
Hepatitis A Reports - Male	0	1	2	2	0	3	2	8	8	5
□ Hepatitis A Rate - Female	0.0	1.3	0.9	1.6	0.0	2.7	2.2	0.7	0.5	0.9
■ Hepatitis A Rate - Male	0.0	1.2	1.7	1.5	0.0	1.9	1.4	2.7	1.2	1.4

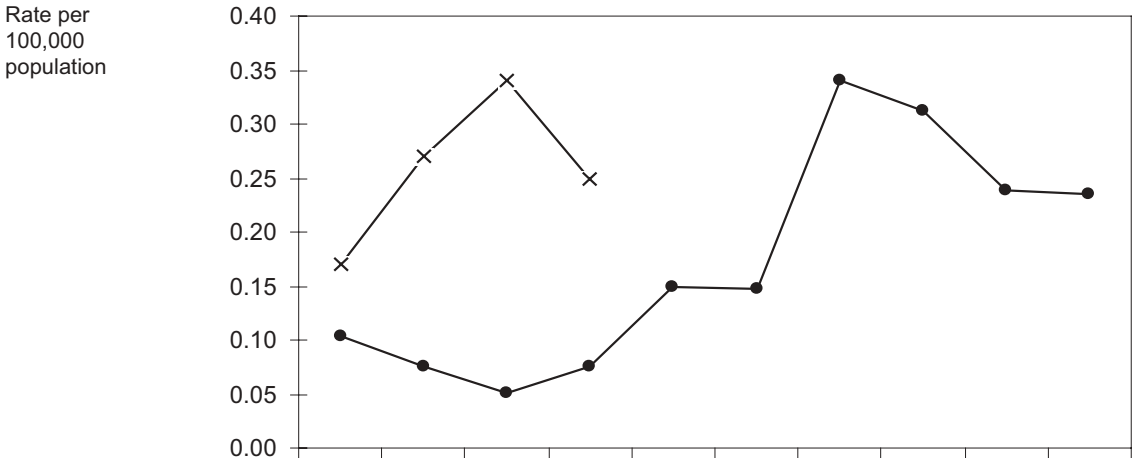
24.4 2005 Hepatitis A Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



Listeriosis

Ten cases of listeriosis were reported in 2005. The rate of 0.2/100,000 has been relatively stable in the last few years and comparable to national rates when the disease was nationally notifiable. All cases were sporadic and none were associated with a known food source. Most cases (90%) were over 60 years of age. South Vancouver Island reported the highest rate of infection (0.9/100,000).

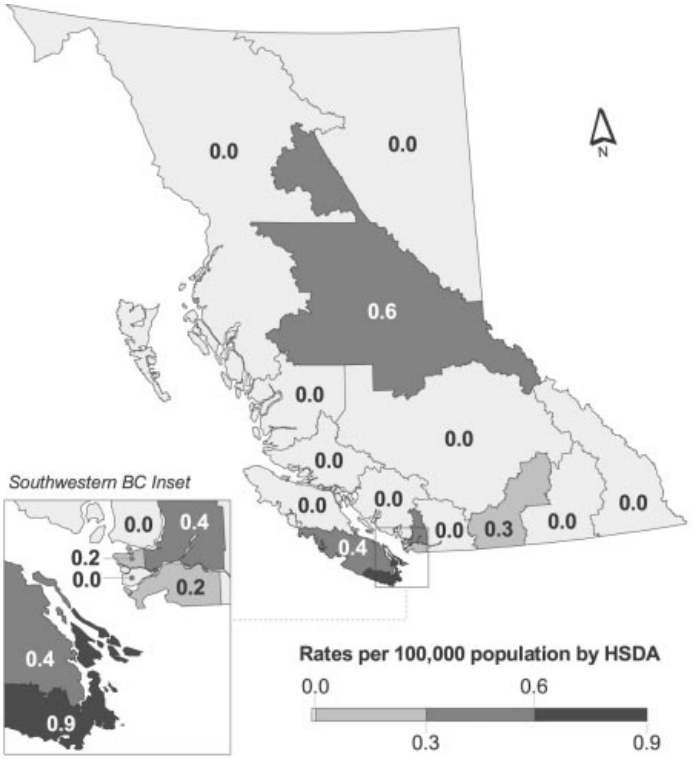
25.1 Listeriosis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Listeriosis Reports	4	3	2	3	6	6	14	13	10	10
—●— BC Listeriosis Rate	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2	0.2
—×— Candadian Listeriosis Rate	0.2	0.3	0.3	0.3						

Note: Listeriosis was removed from national surveillance in January 2000

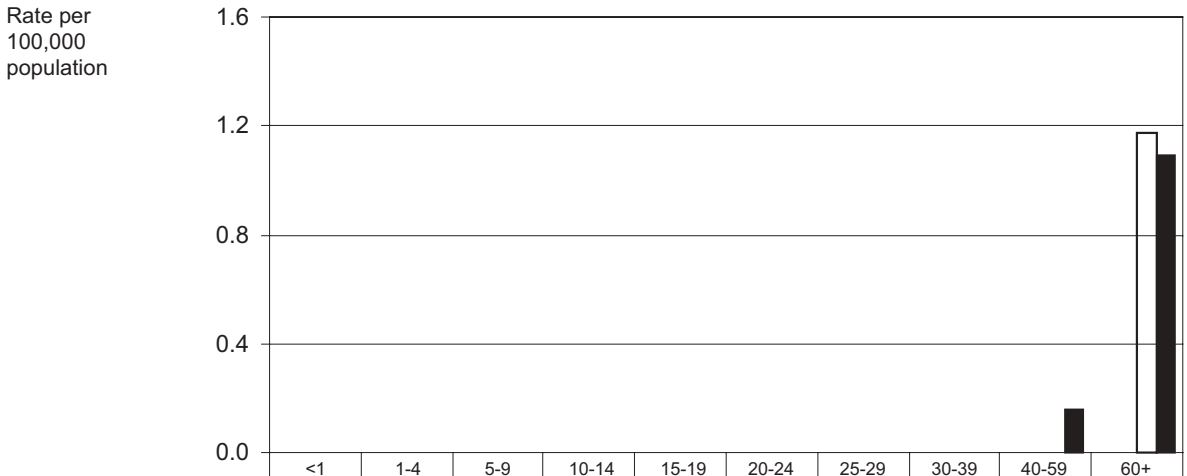
25.2 Listeriosis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	0	0.0
13	Okanagan	1	0.3
14	Thompson Cariboo Shuswap	0	0.0
21	Fraser East	0	0.0
22	Fraser North	2	0.4
23	Fraser South	1	0.2
31	Richmond	0	0.0
32	Vancouver	1	0.2
33	North Shore/Coast Garibaldi	0	0.0
41	South Vancouver Island	3	0.9
42	Central Vancouver Island	1	0.4
43	North Vancouver Island	0	0.0
51	Northwest	0	0.0
52	Northern Interior	1	0.6
53	Northeast	0	0.0

Note: Map classification by Jenks natural breaks method.

25.3 Listeriosis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Listeriosis Reports - Female	0	0	0	0	0	0	0	0	0	5
Listeriosis Reports - Male	0	0	0	0	0	0	0	0	1	4
□ Listeriosis Rate - Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
■ Listeriosis Rate - Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.1

Salmonellosis, Typhoid Fever and Paratyphoid Fever

In 2005, the method of analysis for salmonellosis was changed. All cases of *Salmonella* infection reported through iPHIS, including *S.* Typhi and *S.* Paratyphi, have been included in the overall numbers and rates by year, the rates by age and sex, the geographical distribution of cases and the cases reported by week. We continue to report *S.* Typhi (typhoid fever) cases and rates by year and have added *S.* Paratyphi cases and rates by year, as reported in iPHIS. Due to this change, *S.* Typhi numbers and rates have changed for some previously reported years. As all *Salmonella* isolates in BC are referred to the public health laboratory for serotyping, the table of serotype distribution is based on BCCDC Laboratory Services data. The small difference in totals between cases reported through iPHIS (739) and those reported by Laboratory Services (731) is due to differences in reporting dates used by the two systems.

In 2005, 739 cases of *Salmonella* infection were reported for a rate of 17.4/100,000. In the last few years, the rate of salmonellosis has remained relatively constant in BC and similar to the Canadian rate. Rates were highest in children under 5 years of age and similar in males and females overall. As in previous years, rates were highest in Vancouver, Richmond and Fraser Health. The number of cases of *Salmonella* infection reported by week was above the historical 10-90% range in weeks 5, 27 and 47. There was no known outbreak associated with these peaks.

In the spring, an outbreak of *S.* Thompson was identified in BC, AB and WA in association with animal-derived pet treats; four cases occurred in BC residents in 2004-05.

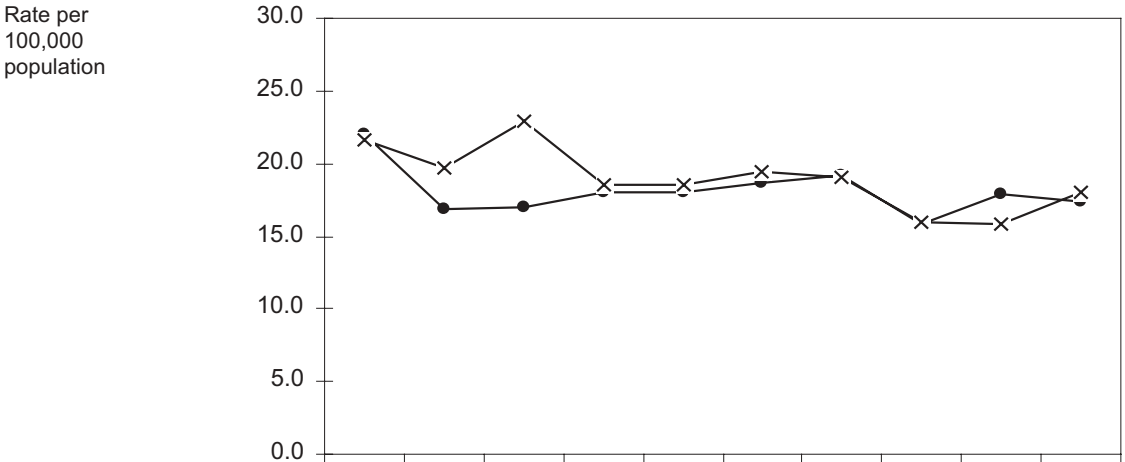
In 2005, the most common *Salmonella* serotype was *S.* Enteritidis, followed closely by *S.* Typhimurium, together accounting for 39.1% of cases. The top three serotypes (Enteritidis, Typhimurium and Heidelberg) were the same in both 2004 and 2005. The proportion of *S.* Typhi decreased while the proportion of *S.* Paratyphi increased from 2004 to 2005. *Salmonella* ssp I 4,5,12:i:-, *S.* Stanley and *S.* Paratyphi B var. Java were newly reported in the top 10 serotypes in 2005.

In 2005, the *S.* Typhi rate dropped with 26 cases (0.6/100,000) reported.

In 2005, 46 cases (1.1/100,000) of *S.* Paratyphi were reported. Twenty-nine cases (63%) were *S.* Paratyphi A and the remainder were *S.* Paratyphi B. This distribution among paratyphoid serotypes has remained constant over the last 3 years. The rate of paratyphoid infection has increased substantially over the last 6 years in BC and has been higher than the rate of typhoid infection since 2004.

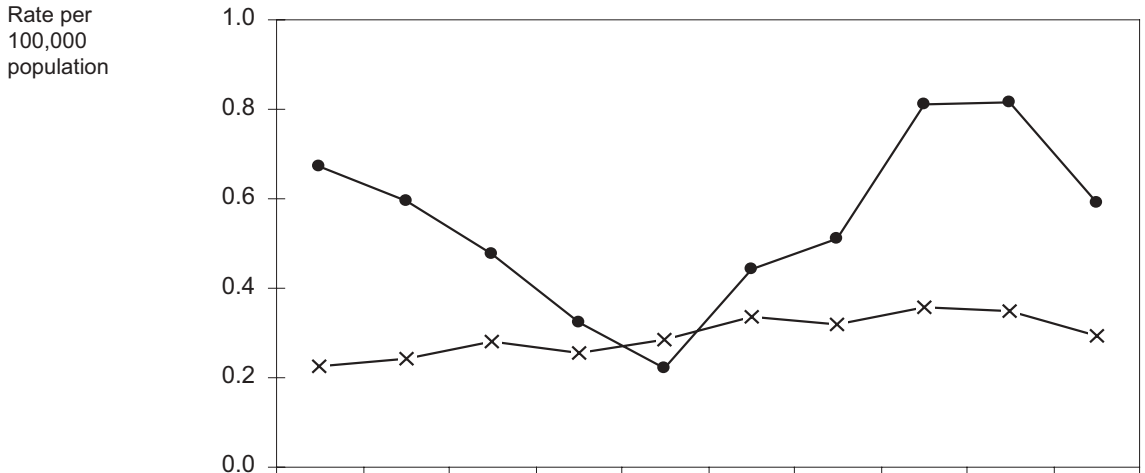
Most cases of *S.* Typhi and *S.* Paratyphi in BC remain associated with travel to India.

26.1 Salmonellosis Rates by Year, 1996-2005



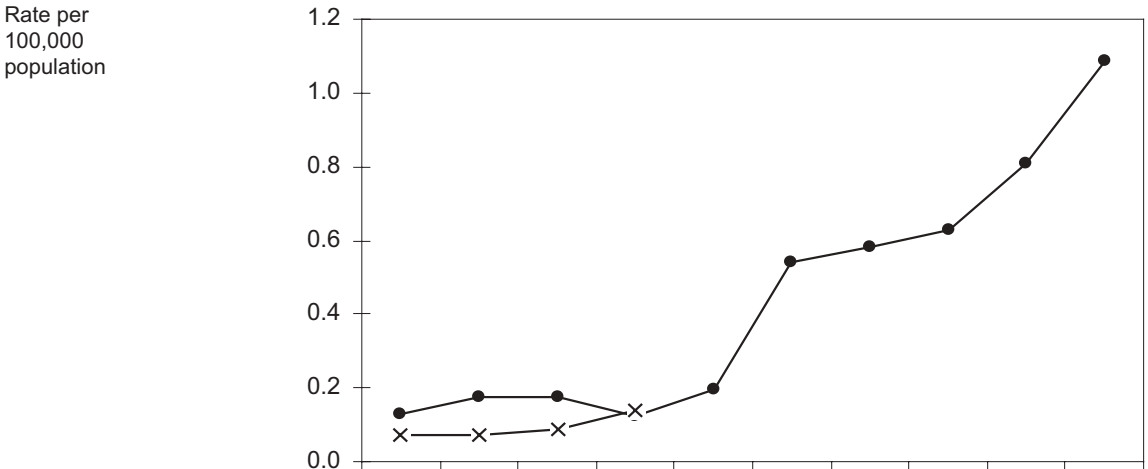
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Salmonellosis Reports	852	667	679	725	727	763	790	660	749	739
BC Salmonellosis Rate	22.0	16.9	17.0	18.1	18.0	18.7	19.2	15.9	17.8	17.4
Canadian Salmonellosis Rate	21.6	19.6	23.0	18.6	18.5	19.5	19.0	16.0	15.9	18.0

26.2 Typhoid Fever Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Typhoid Reports	26	23	19	13	9	18	21	34	35	26
BC Typhoid Rate	0.7	0.6	0.5	0.3	0.2	0.4	0.5	0.8	0.8	0.6
Canadian Typhoid Rate	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3

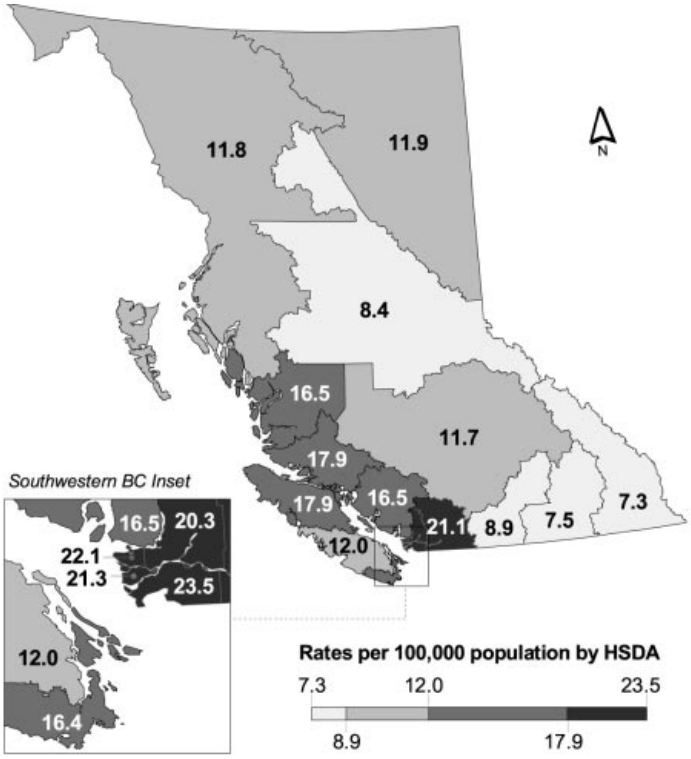
26.3 Paratyphoid Fever Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Paratyphoid Fever Reports	5	7	7	5	8	22	24	26	34	46
BC Paratyphoid Fever Rate	0.1	0.2	0.2	0.1	0.2	0.5	0.6	0.6	0.8	1.1
Canadian Paratyphoid Fever Rate	0.1	0.1	0.1	0.1						

Note: Paratyphoid Fever was removed from national surveillance in January 2000

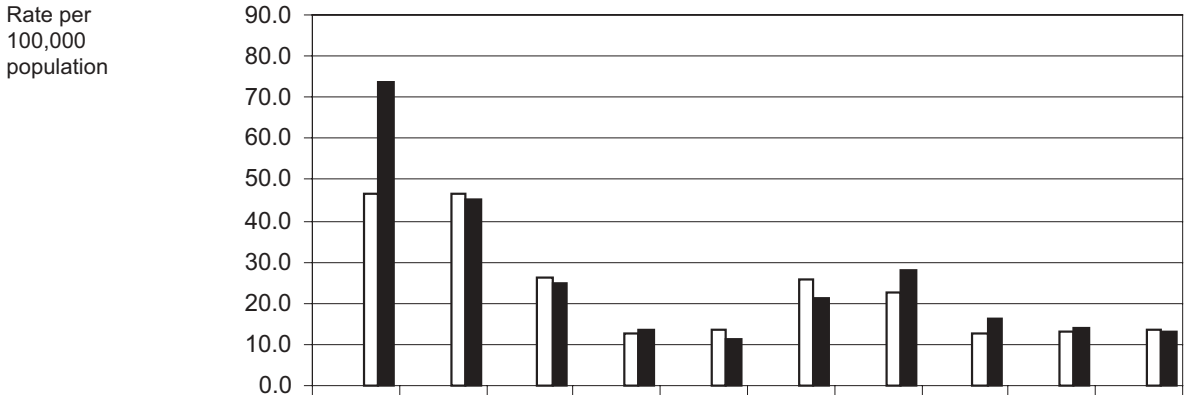
26.4 Salmonellosis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	6	7.3
12	Kootenay Boundary	6	7.5
13	Okanagan	29	8.9
14	Thompson Cariboo Shuswap	26	11.7
21	Fraser East	56	21.1
22	Fraser North	114	20.3
23	Fraser South	149	23.5
31	Richmond	37	21.3
32	Vancouver	132	22.1
33	North Shore/Coast Garibaldi	45	16.5
41	South Vancouver Island	57	16.4
42	Central Vancouver Island	30	12.0
43	North Vancouver Island	21	17.9
51	Northwest	10	11.8
52	Northern Interior	13	8.4
53	Northeast	8	11.9

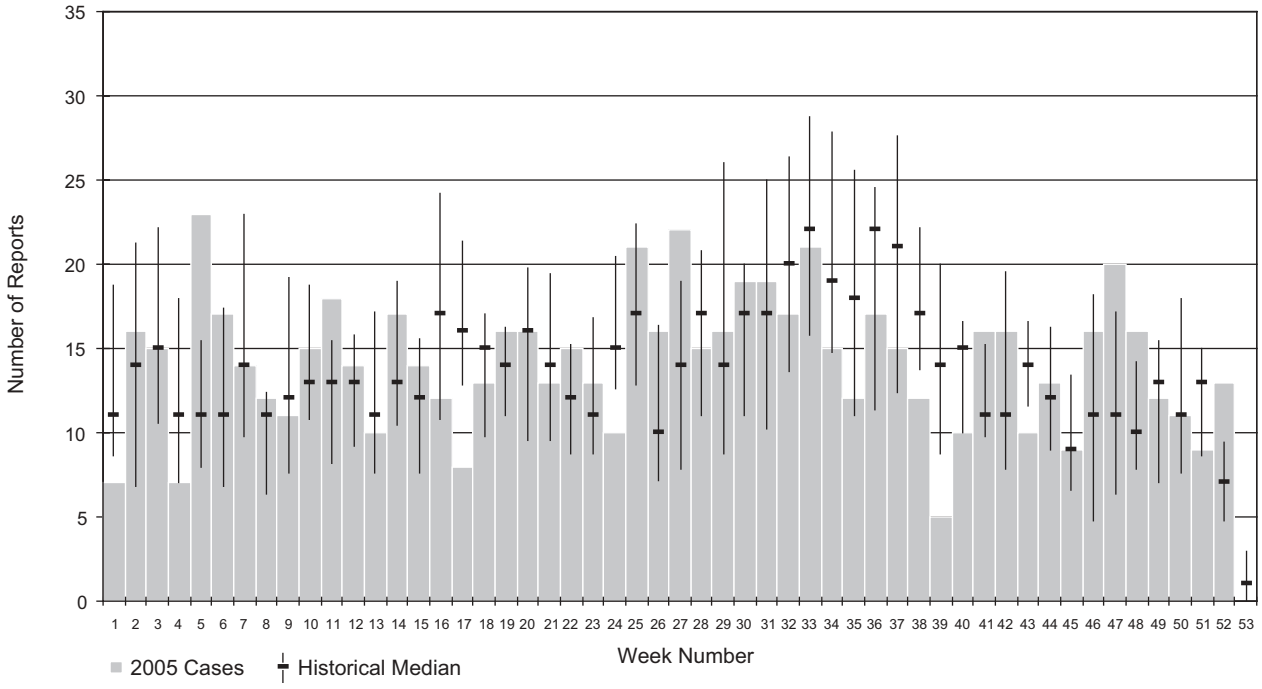
Note: Map classification by Jenks natural breaks method.

26.5 Salmonellosis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Salmonellosis Reports - Female	9	37	29	16	18	38	31	39	86	58
Salmonellosis Reports - Male	15	38	29	18	16	33	39	49	90	49
Salmonellosis Reports - Unknown	0	0	0	0	0	0	0	0	1	1
□ Salmonellosis Rate - Female	46.5	46.7	26.1	12.8	13.4	25.7	22.7	12.9	13.1	13.6
■ Salmonellosis Rate - Male	73.6	45.0	24.7	13.5	11.3	21.2	28.1	16.5	14.0	13.3

26.6 2005 Salmonellosis Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



26.7 *Salmonella* serotype distribution, 2004-2005

	2005		2004	
Rank	**Serotype**	**# (%)**	**Serotype**	**# (%)**
1	Enteritidis	160 (21.9%)	Enteritidis	147 (19.6%)
2	Typhimurium	126 (17.2%)	Typhimurium	137 (18.3%)
3	Heidelberg	62 (8.5%)	Heidelberg	105 (14.0%)
4	Paratyphi A	28 (3.8%)	Typhi	33 (4.4%)
5	Hadar	24 (3.3%)	Hadar	31 (4.1%)
6	Salmonella ssp I 4,5,12:i:-	24 (3.3%)	Paratyphi A	19 (2.5%)
7	Typhi	22 (3.0%)	Newport	17(2.3%)
8	Stanley	21 (2.9%)	Brandenburg	15 (2.0%)
9	Saintpaul	20 (2.7%)	Saintpaul	15 (2.0%)
10	Paratyphi B var. Java	19 (2.6%)	Agona	14 (1.9)
	Others	225 (30.8%)	Others	216 (28.8%)
Total		**731 (100%)**		**749 (100%)**

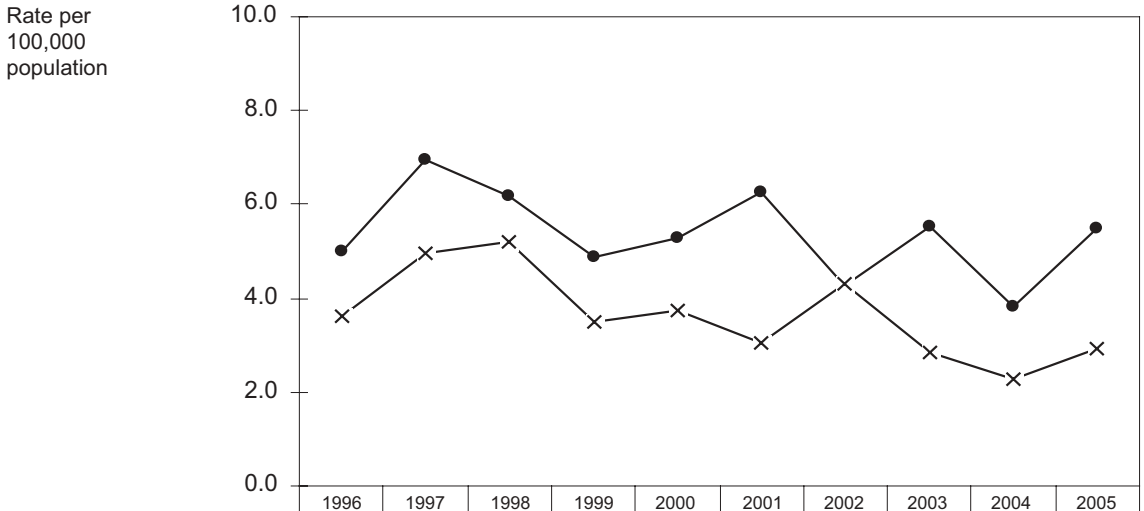
Shigellosis

There were 232 cases of shigellosis reported in 2005 for a rate of 5.5/100,000, higher than in 2004. Children aged 1-4 had the highest reported rates in 2004, followed by adults aged 25-59 years. As in previous years, the highest rate was reported from Vancouver (13.9/100,000).

A cluster of cases of *S. sonnei* was identified in Vancouver among men who have sex with men. Another cluster of *S. sonnei* was identified among BC travelers returning from Mexico and Oregon (Oregon was experiencing an outbreak associated with a religious retreat). Both of these clusters occurred during the summer.

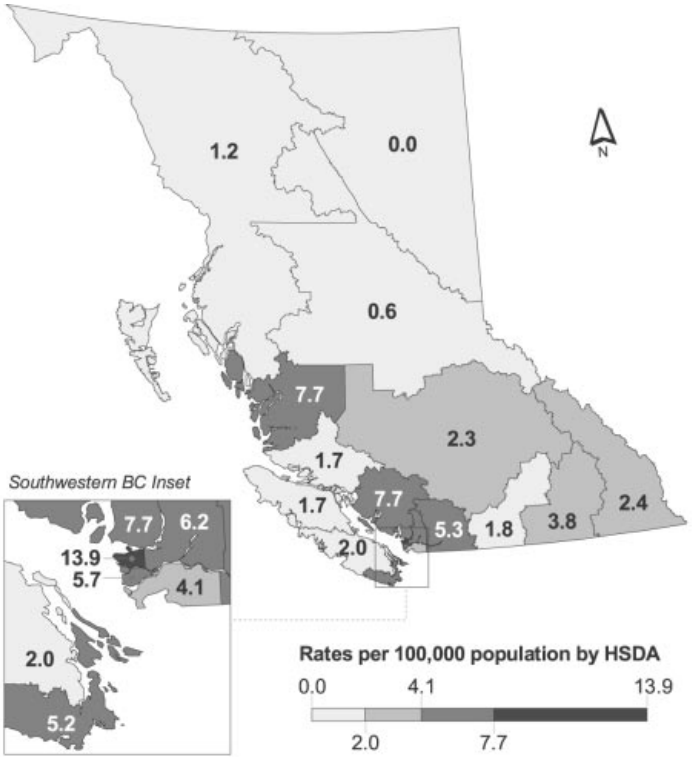
S. sonnei was the most common *Shigella* species in BC, accounting for over a third of cases. (Species distribution is based on BCCDC Laboratory Services data.) The small difference in totals between cases reported through iPHIS (232) and those reported by Laboratory Services (221) is due to differences in reporting dates used by the two systems.

27.1 Shigellosis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Shigellosis Reports	194	274	246	195	214	255	175	229	161	232
BC Shigellosis Rate	5.0	6.9	6.2	4.9	5.3	6.3	4.3	5.5	3.8	5.5
Canadian Shigellosis Rate	3.6	5.0	5.2	3.5	3.8	3.0	4.3	2.8	2.3	2.9

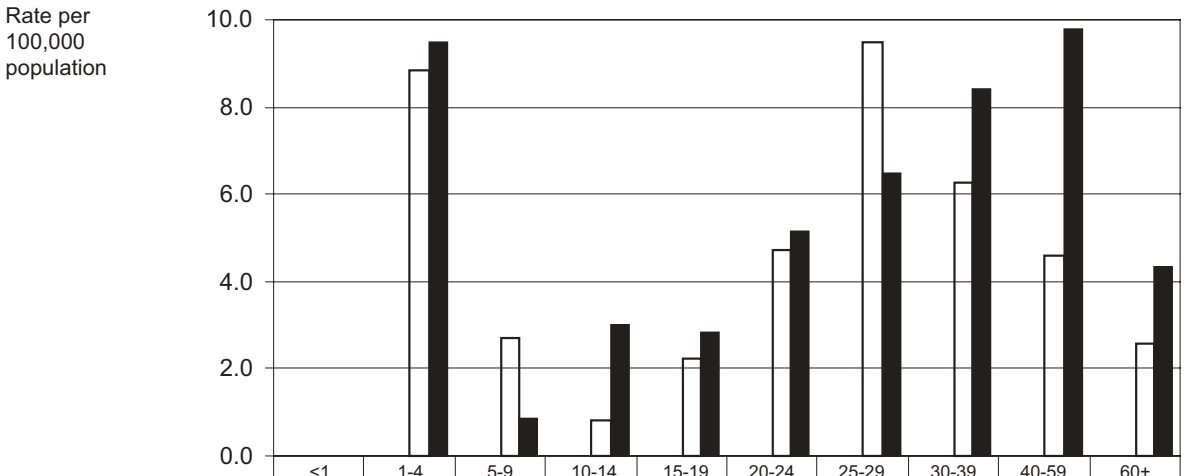
27.2 Shigellosis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	2	2.4
12	Kootenay Boundary	3	3.8
13	Okanagan	6	1.8
14	Thompson Cariboo Shuswap	5	2.3
21	Fraser East	14	5.3
22	Fraser North	35	6.2
23	Fraser South	26	4.1
31	Richmond	10	5.7
32	Vancouver	83	13.9
33	North Shore/Coast Garibaldi	21	7.7
41	South Vancouver Island	18	5.2
42	Central Vancouver Island	5	2.0
43	North Vancouver Island	2	1.7
51	Northwest	1	1.2
52	Northern Interior	1	0.6
53	Northeast	0	0.0

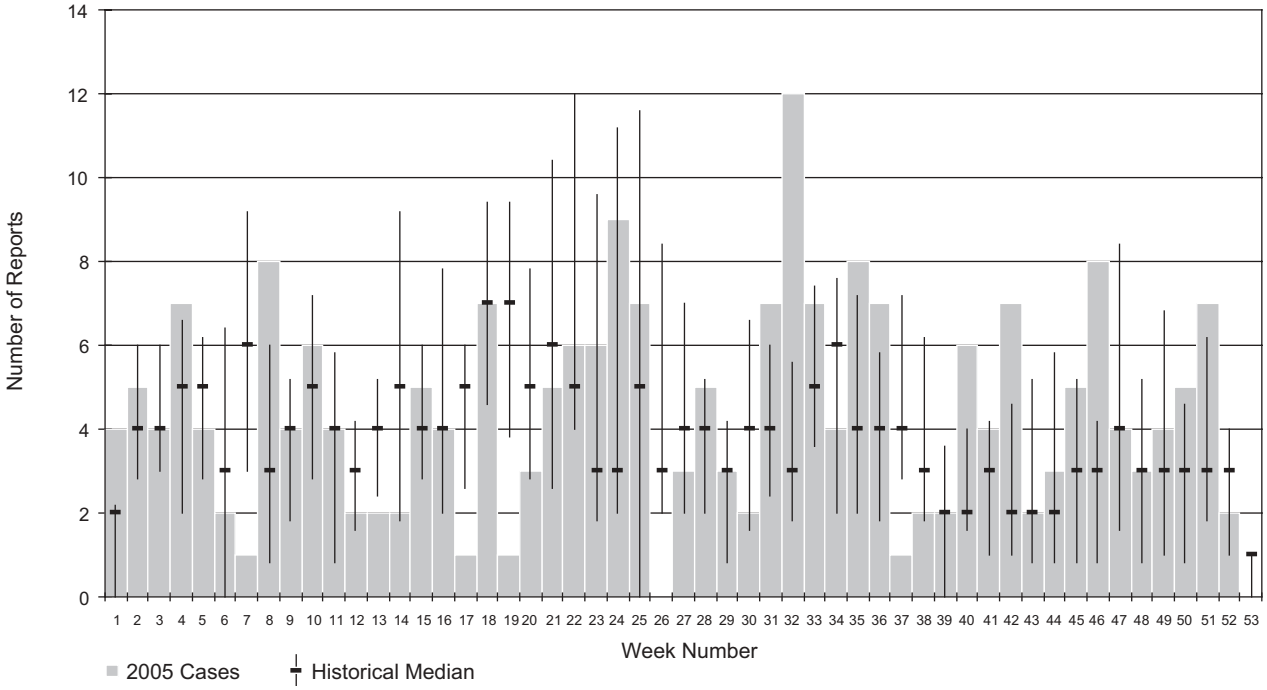
Note: Map classification by Jenks natural breaks method.

27.3 Shigellosis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Shigellosis Reports - Female	0	7	3	1	3	7	13	19	30	11
Shigellosis Reports - Male	0	8	1	4	4	8	9	25	63	16
□ Shigellosis Rate - Female	0.0	8.8	2.7	0.8	2.2	4.7	9.5	6.3	4.6	2.6
■ Shigellosis Rate - Male	0.0	9.5	0.9	3.0	2.8	5.2	6.5	8.4	9.8	4.4

27.4 2005 Shigellosis Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



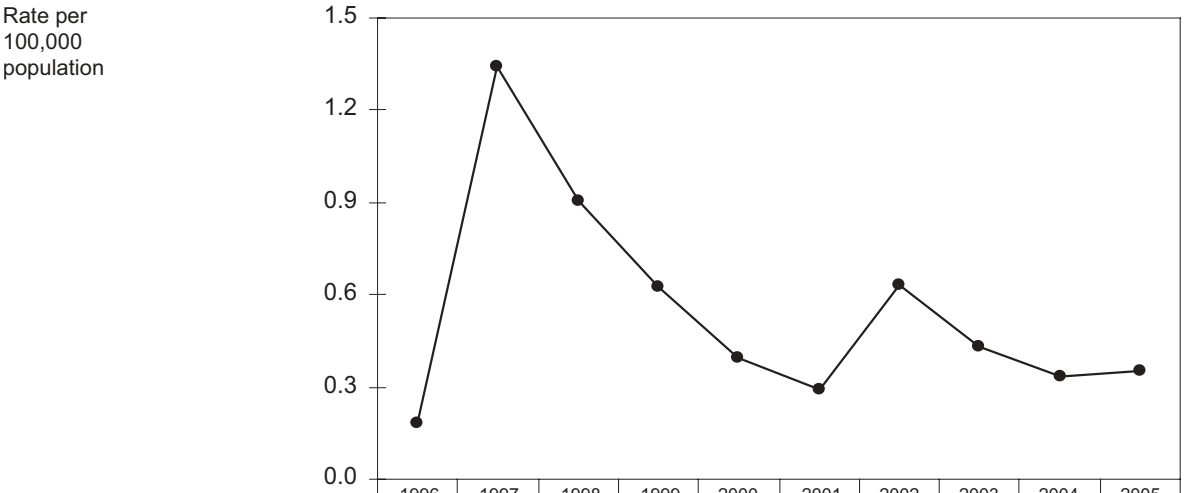
27.5 *Shigella* species distribution, 2005

Rank	Species	Number of Cases	Proportion
1	*sonnei*	157	71.0%
2	*flexneri*	40	18.1%
3	*boydii*	9	4.1%
4	*dysenteriae*	5	2.3%
	Others	10	4.5%
	Total	**221**	**100.0%**

Vibrio parahaemolyticus

Fifteen cases of *Vibrio parahaemolyticus* infection were reported in 2005 for a rate of 0.4/100,000. Cases were reported from coastal regions only. Most cases were reported in adults. The majority of cases were reported from July to September. *V. parahaemolyticus* infections are mostly associated with consumption of shellfish during the warmer months.

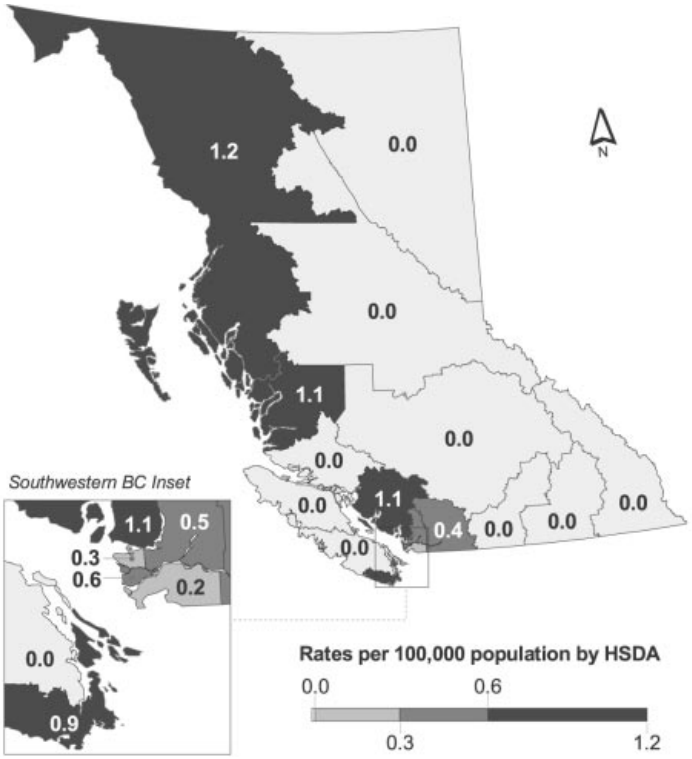
28.1 *Vibrio parahaemolyticus* Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Vibrio parahaemolyticus Reports	7	53	36	25	16	12	26	18	14	15
BC Vibrio parahaemolyticus Rate	0.2	1.3	0.9	0.6	0.4	0.3	0.6	0.4	0.3	0.4

Note: *Vibrio parahaemolyticus* is not notifiable nationally

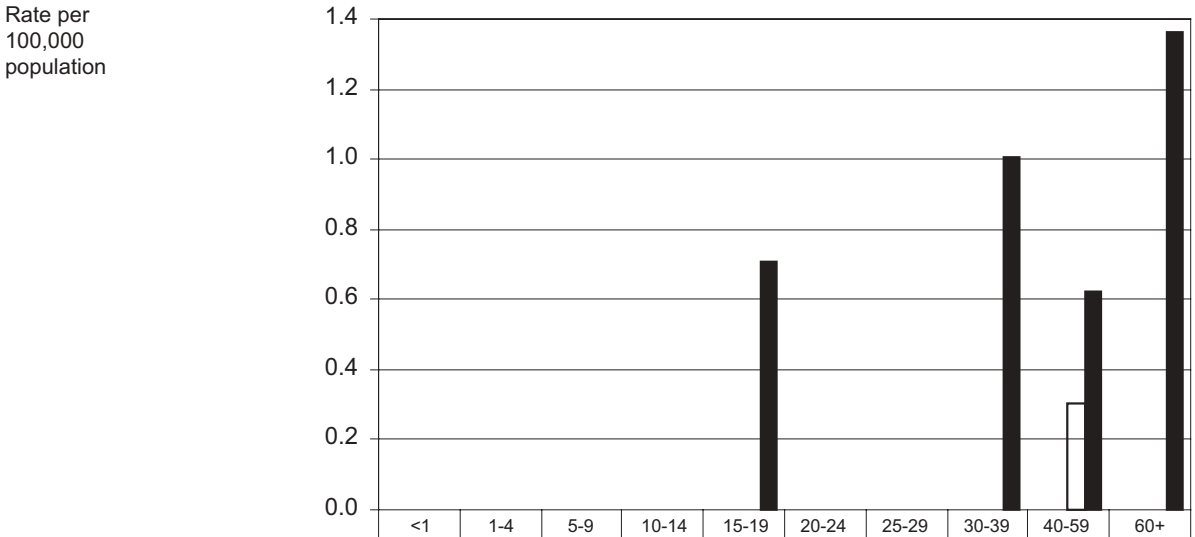
28.2 *Vibrio parahaemolyticus* Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	0	0.0
13	Okanagan	0	0.0
14	Thompson Cariboo Shuswap	0	0.0
21	Fraser East	1	0.4
22	Fraser North	3	0.5
23	Fraser South	1	0.2
31	Richmond	1	0.6
32	Vancouver	2	0.3
33	North Shore/Coast Garibaldi	3	1.1
41	South Vancouver Island	3	0.9
42	Central Vancouver Island	0	0.0
43	North Vancouver Island	0	0.0
51	Northwest	1	1.2
52	Northern Interior	0	0.0
53	Northeast	0	0.0

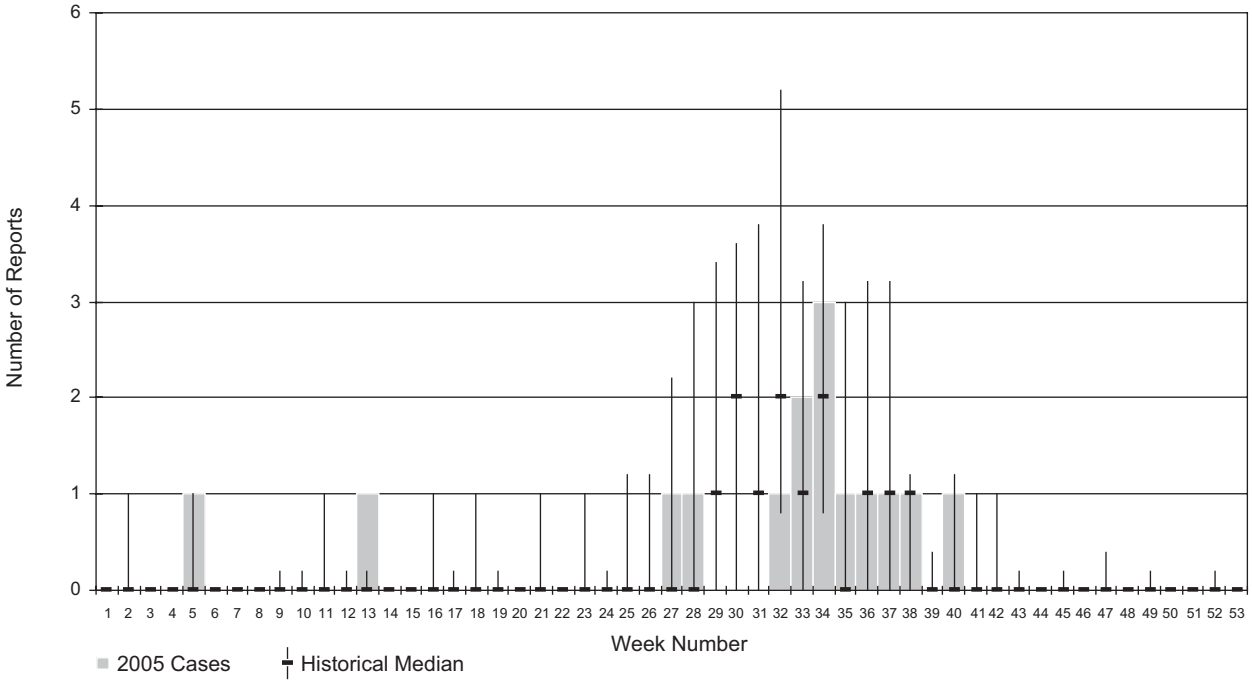
Note: Map classification by Jenks natural breaks method.

28.3 *Vibrio parahaemolyticus* Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Vibrio parahaemolyticus Reports - Female	0	0	0	0	0	0	0	0	2	0
Vibrio parahaemolyticus Reports - Male	0	0	0	0	1	0	0	3	4	5
□ Vibrio parahaemolyticus Rate - Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
■ Vibrio parahaemolyticus Rate - Male	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.0	0.6	1.4

28.4 2005 *Vibrio parahaemolyticus* Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



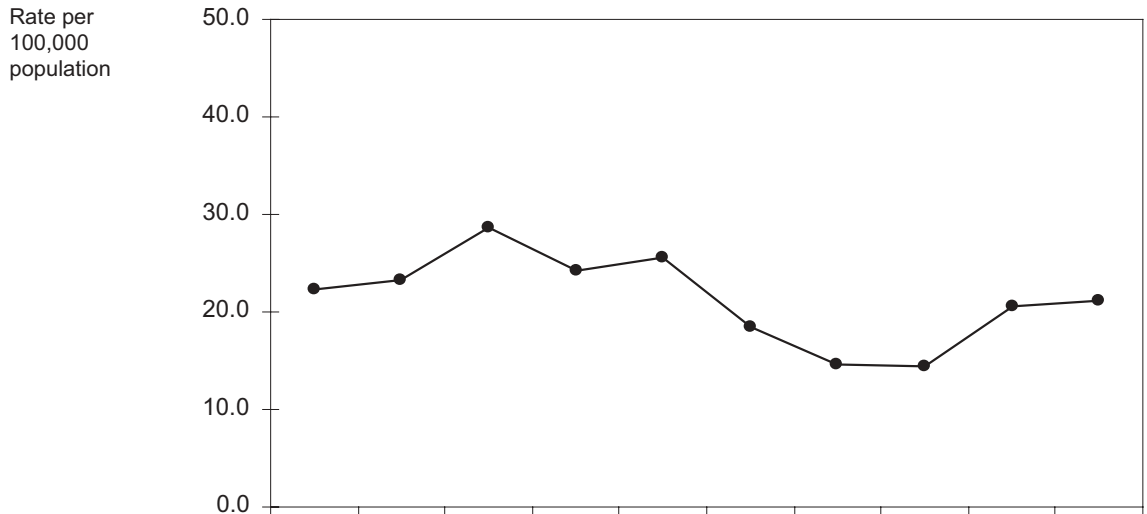
Yersiniosis

There were 900 cases of yersiniosis reported in 2005 for a rate of 21.2/100,000, similar to that seen in 2004.

The highest rates were reported from children aged 1-4 years and adult women. Cases were reported throughout the year with the peak in weeks 34-40 seen a little later than in previous years.

There was considerable geographic variation in rates. This variation has been seen consistently from year to year and is likely related to geographic differences in isolation techniques used at clinical laboratories; cold-enrichment, promoting the growth of *Yersinia*, is used in some labs servicing the Lower Mainland and Vancouver Island. The highest rate of reporting was again seen in North Shore/Coast Garibaldi at 60.8/100,000, followed by Richmond and South Vancouver Island.

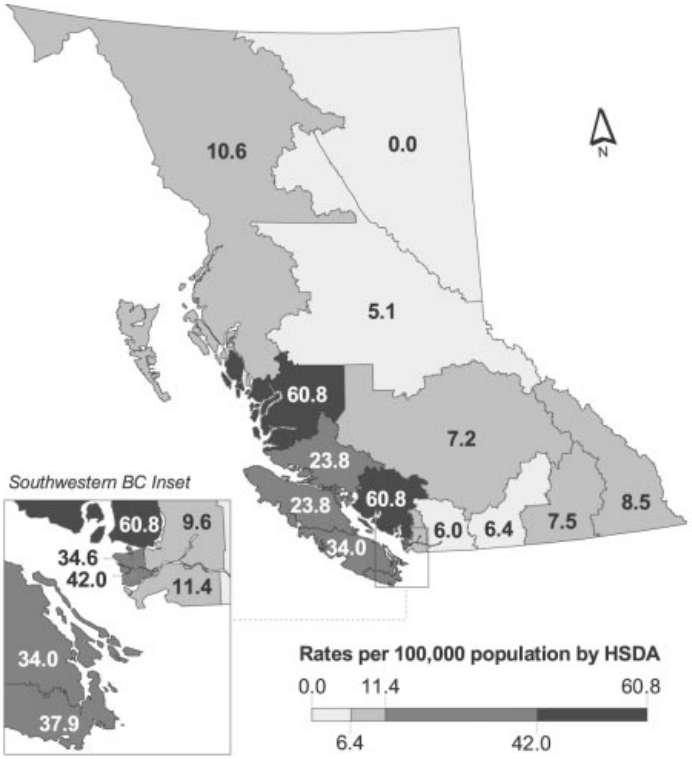
29.1 Yersiniosis Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Yersiniosis Reports	867	921	1138	970	1036	750	605	598	861	900
BC Yersiniosis Rate	22.4	23.3	28.6	24.2	25.6	18.4	14.7	14.4	20.5	21.2

Note: Yersiniosis is not notifiable nationally

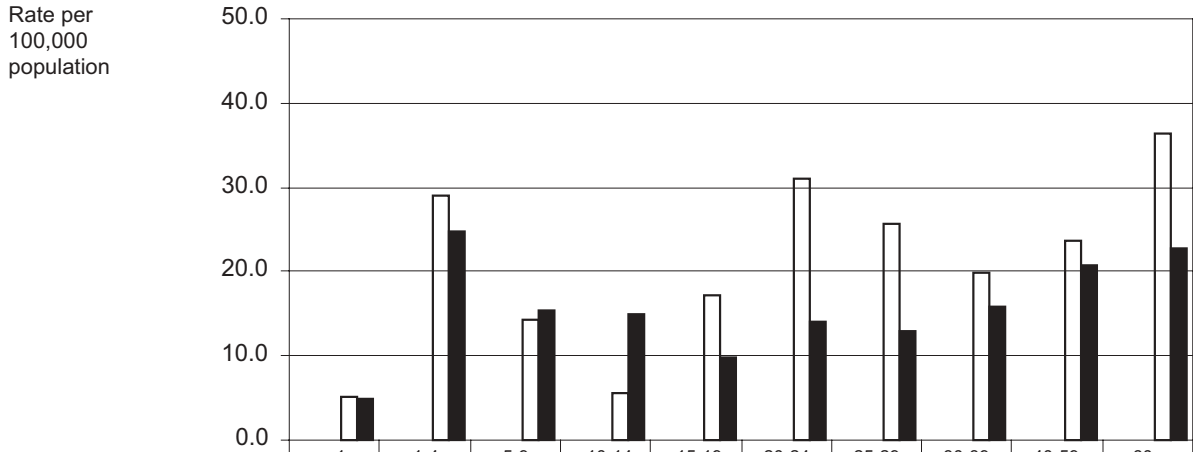
29.2 Yersiniosis Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	7	8.5
12	Kootenay Boundary	6	7.5
13	Okanagan	21	6.4
14	Thompson Cariboo Shuswap	16	7.2
21	Fraser East	16	6.0
22	Fraser North	54	9.6
23	Fraser South	72	11.4
31	Richmond	73	42.0
32	Vancouver	207	34.6
33	North Shore/Coast Garibaldi	166	60.8
41	South Vancouver Island	132	37.9
42	Central Vancouver Island	85	34.0
43	North Vancouver Island	28	23.8
51	Northwest	9	10.6
52	Northern Interior	8	5.1
53	Northeast	0	0.0

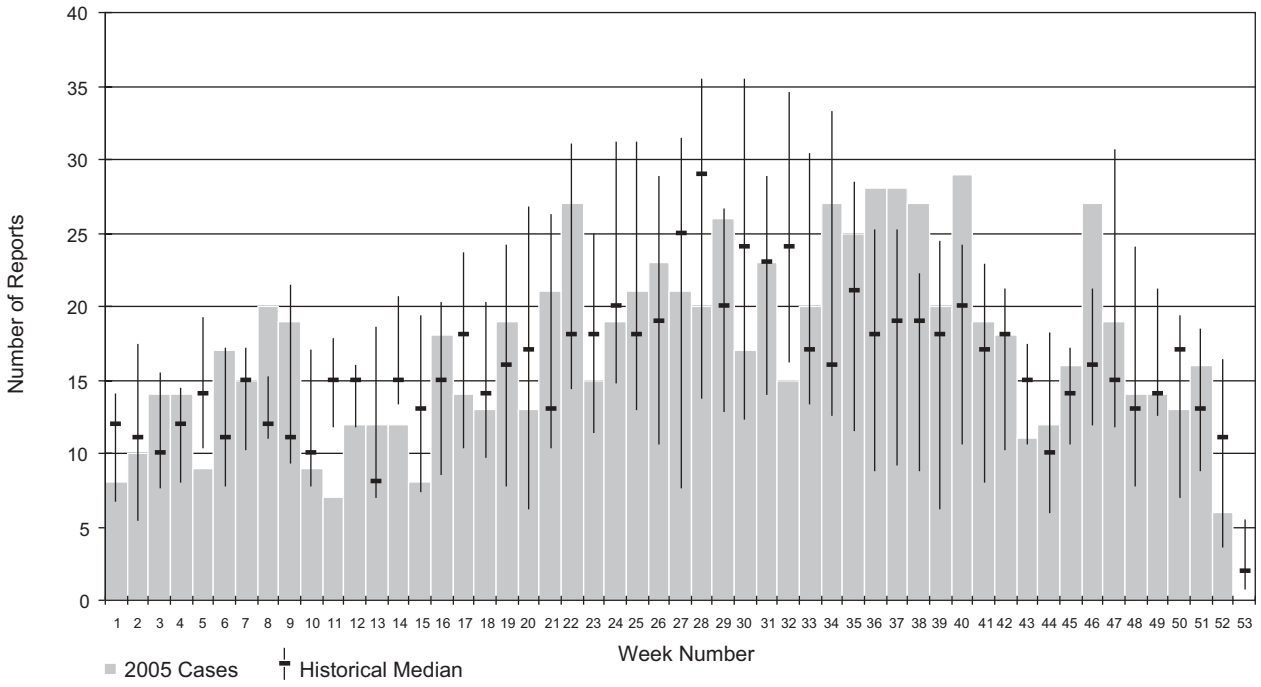
Note: Map classification by Jenks natural breaks method.

29.3 Yersiniosis Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Yersiniosis Reports - Female	1	23	16	7	23	46	35	60	155	155
Yersiniosis Reports - Male	1	21	18	20	14	22	18	47	133	84
Yersiniosis Reports - Unknown	0	0	0	0	0	0	0	0	1	0
□ Yersiniosis Rate - Female	5.2	29.0	14.4	5.6	17.1	31.1	25.6	19.8	23.7	36.4
■ Yersiniosis Rate - Male	4.9	24.9	15.3	15.0	9.9	14.2	13.0	15.8	20.7	22.9

29.4 2005 Yersiniosis Reports Compared to Historical Median and the 10th and 90th Percentiles Around the Median (1996 to 2004)



Vectorborne and Other Zoonotic Diseases

2005

05

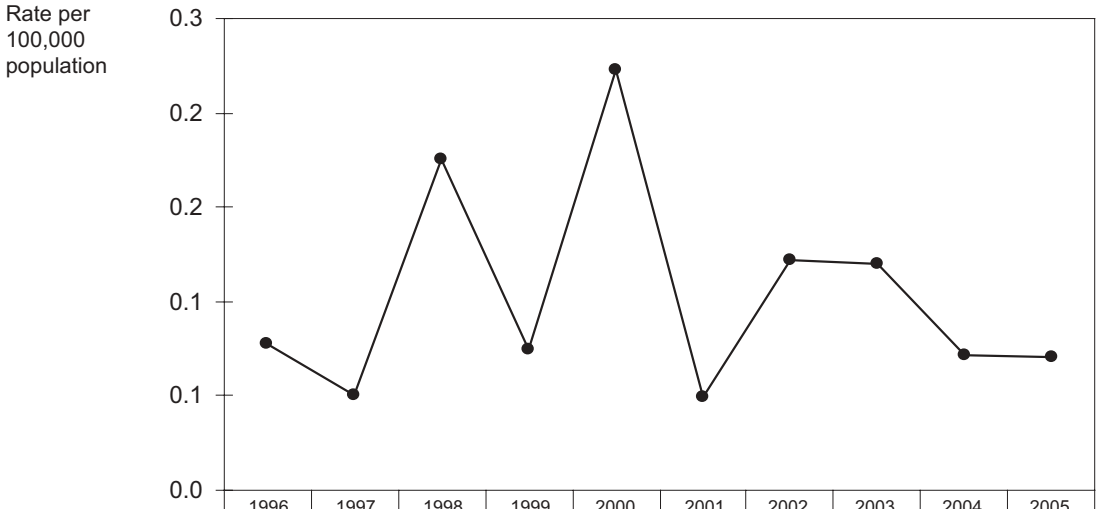
Hantavirus Pulmonary Syndrome

One case of hantavirus infection was reported in Interior Health Authority in 2005. Eight cases have been reported in BC since 1994. Six (75%) of these cases have been reported from the interior of the province and all have been related to contact with rodent excreta through recreational, peri-domestic, occupational or farming activities. Four cases (50%) have died.

Lyme Disease

BC continues to have a low endemic rates of Lyme Disease. There were three confirmed cases of Lyme Disease reported in BC in 2005.

30.1 Lyme Rates by Year, 1996-2005



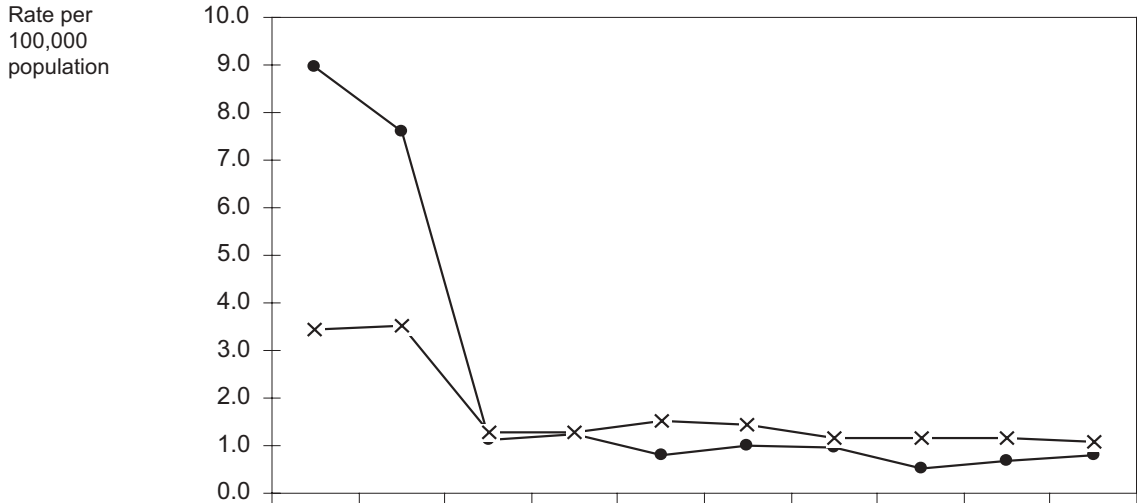
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Lyme Reports	3	2	7	3	9	2	5	5	3	3
BC Lyme Rate	0.1	0.1	0.2	0.1	0.2	0.0	0.1	0.1	0.1	0.1

Note: Lyme Disease is not notifiable nationally

Malaria

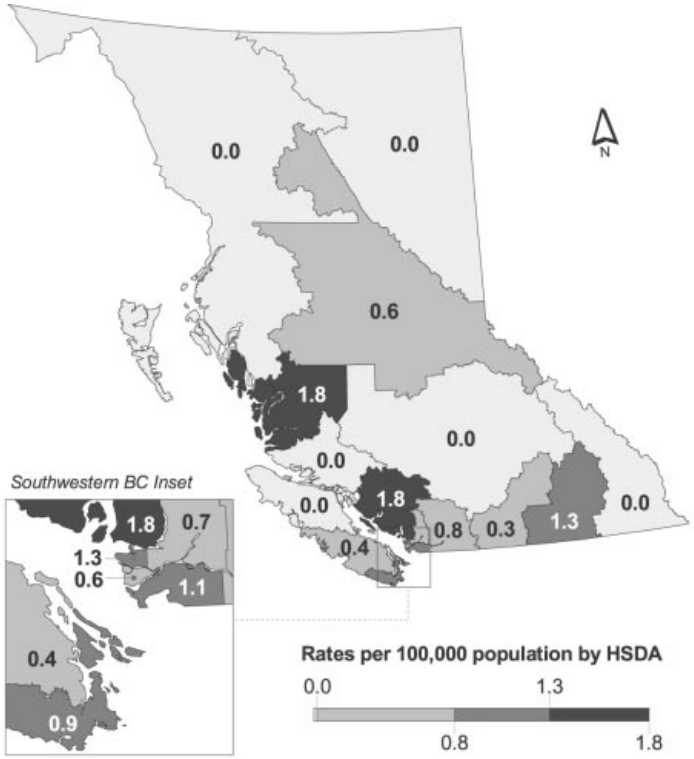
Malaria is not endemic in British Columbia. The rate of reporting of imported cases remained stable at 0.8 cases per 100,000 population or 34 cases.

31.1 Malaria Rates by Year, 1996-2005



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BC Malaria Reports	347	300	44	49	33	40	40	21	28	34
BC Malaria Rate	9.0	7.6	1.1	1.2	0.8	1.0	1.0	0.5	0.7	0.8
Canadian Malaria Rate	3.4	3.5	1.3	1.3	1.5	1.4	1.2	1.2	1.2	1.1

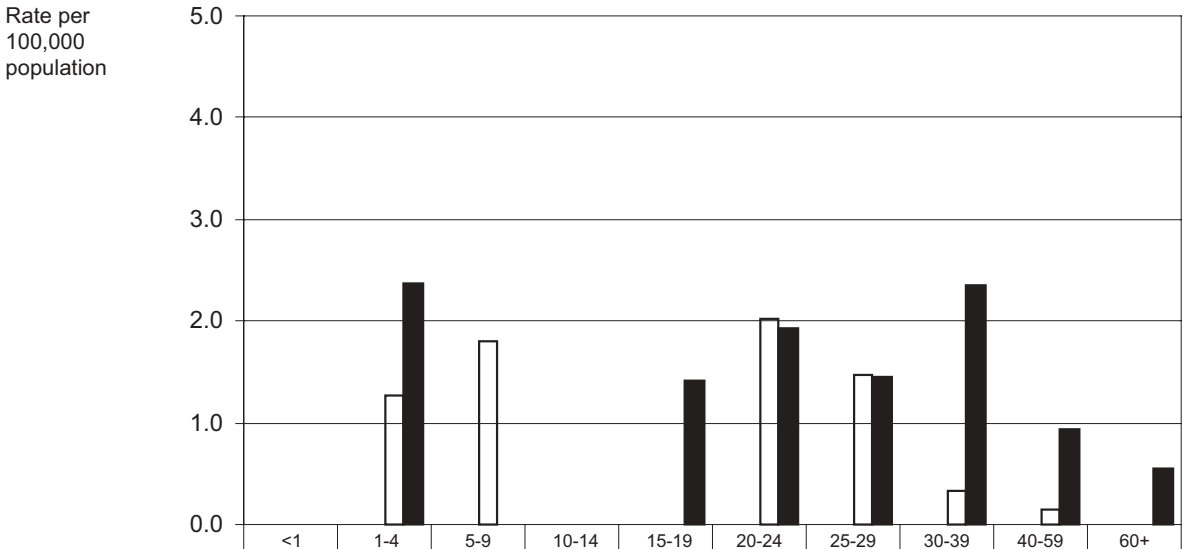
31.2 Malaria Rates by HSDA, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	1	1.3
13	Okanagan	1	0.3
14	Thompson Cariboo Shuswap	0	0.0
21	Fraser East	2	0.8
22	Fraser North	4	0.7
23	Fraser South	7	1.1
31	Richmond	1	0.6
32	Vancouver	8	1.3
33	North Shore/Coast Garibaldi	5	1.8
41	South Vancouver Island	3	0.9
42	Central Vancouver Island	1	0.4
43	North Vancouver Island	0	0.0
51	Northwest	0	0.0
52	Northern Interior	1	0.6
53	Northeast	0	0.0

Note: Map classification by Jenks natural breaks method.

31.3 Malaria Rates by Age Group and Sex, 2005



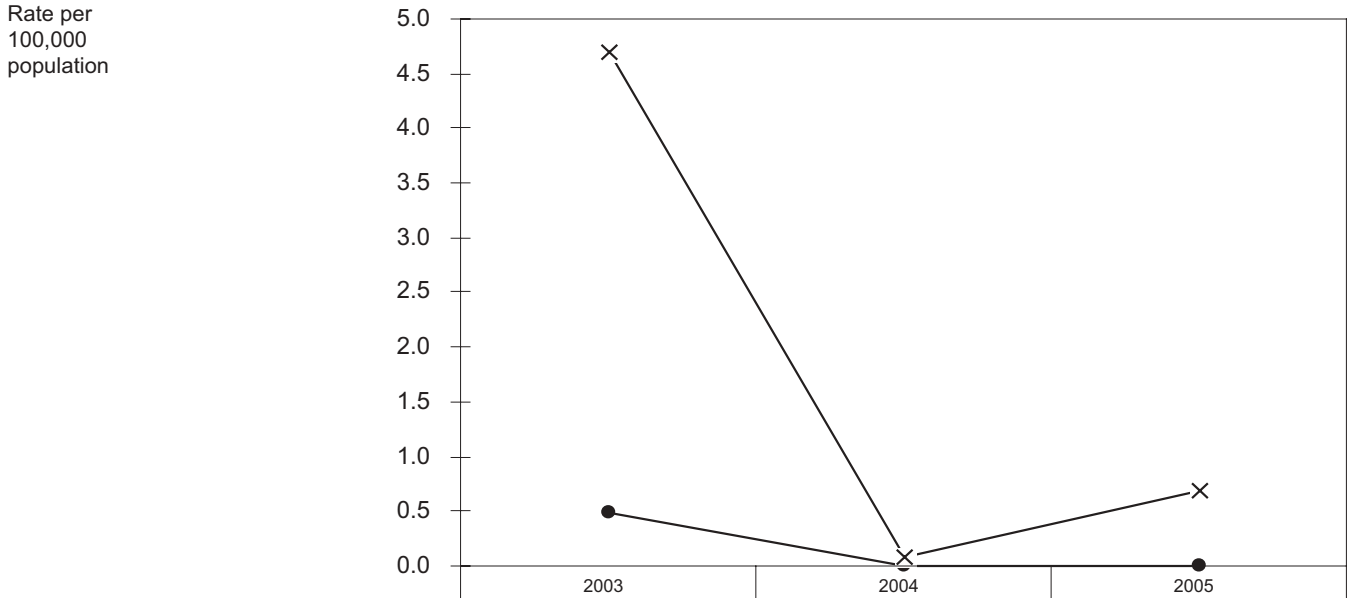
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Malaria Reports - Female	0	1	2	0	0	3	2	1	1	0
Malaria Reports - Male	0	2	0	0	2	3	2	7	6	2
□ Malaria Rate - Female	0.0	1.3	1.8	0.0	0.0	2.0	1.5	0.3	0.2	0.0
■ Malaria Rate - Male	0.0	2.4	0.0	0.0	1.4	1.9	1.4	2.4	0.9	0.5

West Nile Virus

No WNv activity was detected in BC in 2005, however, activity in the rest of Canada was increased over 2004 with 229 cases and 12 deaths from WNv reported. The majority of cases were in Ontario and Manitoba but there were human infections in Quebec, Saskatchewan and Alberta as well. 2005 was thought to be an 'average' year for endemic WNv transmission in Canada and it is expected that this level of activity will continue. By contrast 2004 was a year with uncharacteristically low activity with only 30 cases detected and 2003 was an outbreak year with 1494 cases and 10 deaths reported from 7 provinces.

In the US, WNv activity in 2005 was also greatly increased over 2004, with 2949 cases and 116 deaths reported from 42 states; the median age of those affected was 55 years (range 2-84). California continued to experience the most severe outbreak with 928 cases and 18 fatalities related to WNv reported in 2005. In addition, activity was seen in Oregon, and in Washington State for the first time since 2003. An increased season was noted in the US with human cases being reported from 2 Jan until 6 Dec in 2005.

32.1 West Niles Virus Infection Rates by Year, 2003-2005



	2003	2004	2005
BC West Niles Virus Infection Reports	20	0	0
BC West Niles Virus Infection Rate	0.5	0.0	0.0
Canadian West Niles Virus Rate	4.7	0.1	0.7

Environmental Fungi

2005

05

Cryptococcus gattii

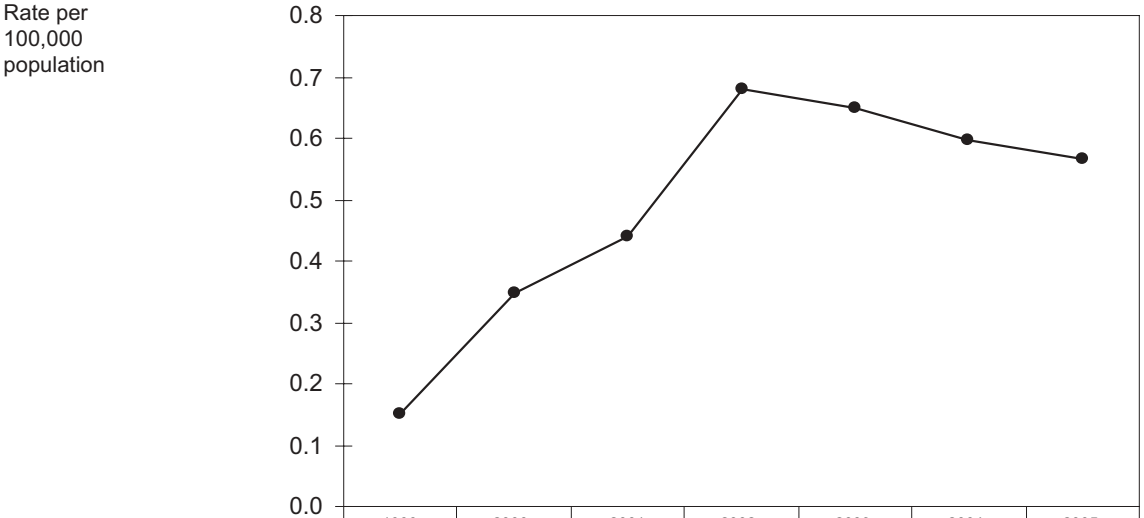
The numbers presented in this section are based on information generated through enhanced surveillance for *C. gattii*. 2005 data are preliminary.

The rate of cryptococcal infection due to variety *gattii* increased in the three years since its discovery in 1999 as human contact with the fungus increased as did recognition, diagnosis and reporting of the disease. In 2002, the rate of infection began to level off and this trend has continued through 2005. In 2005, 24 cases were reported. Twenty of these were confirmed by culture and four were classified as probable based on serology or histopathology and epidemiological information.

Unlike previous years where more cases were reported among males, the proportion of male and female cases was the same in 2005. Most cases occurred in adults, with 42% occurring in those over the age of 60 years.

Until 2004, all cases had either lived on or traveled to Vancouver Island. In early 2005, 3 cases (2 from Vancouver Coastal Health Authority and 1 from Fraser Health Authority) were identified with no exposure to Vancouver Island or international endemic regions. It is believed these cases were exposed in the greater Vancouver area and/or the Fraser Valley. The map shows the distribution of cases by place of residence. The highest rates of infection continue to occur among Vancouver Island residents at 1.4-3.4/100,000. These are among the highest reported rates of *C. gattii* infection in the world.

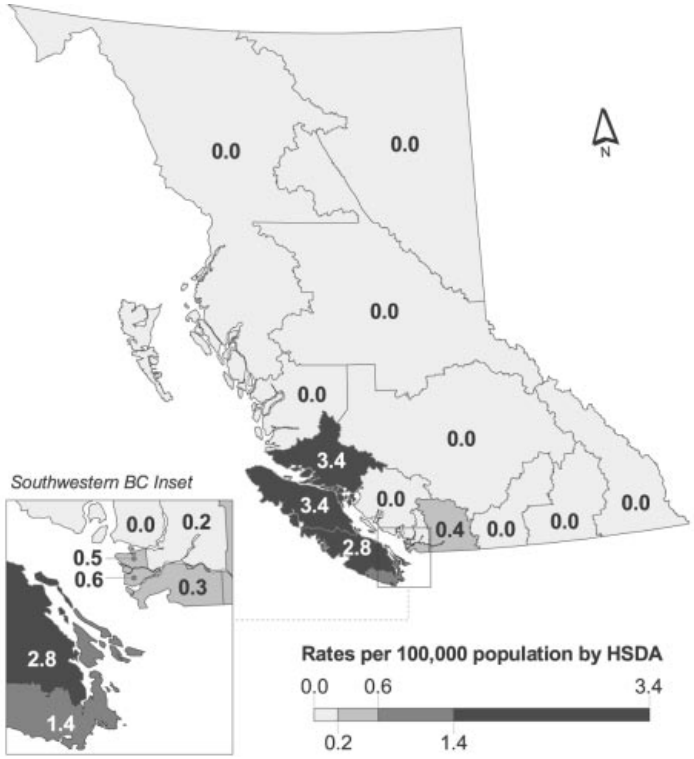
33.1 *Cryptococcus gattii* Infection Rates by Year, 1999-2005



	1999	2000	2001	2002	2003	2004	2005
BC *Cryptococcus gattii* Reports	6	14	18	28	27	25	24
BC *Cryptococcus gattii* Rate	0.1	0.3	0.4	0.7	0.7	0.6	0.6

Note: 2005 data is preliminary. Cryptococcal Infection became notifiable in BC in 2003

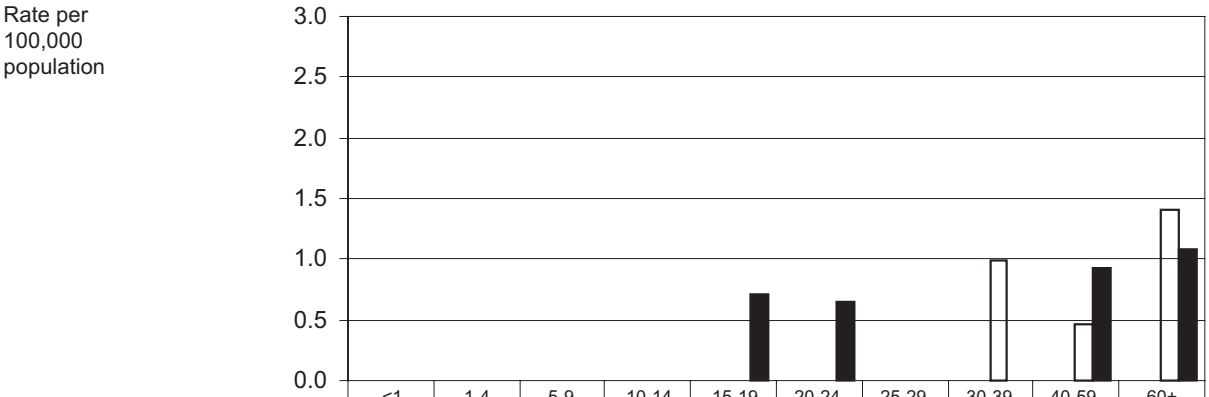
33.2 *Cryptococcus gattii* Infection Rates by Health Region, 2005



HSDA	Health Service Delivery Area	Cases	Rate
11	East Kootenay	0	0.0
12	Kootenay Boundary	0	0.0
13	Okanagan	0	0.0
14	Thompson Cariboo Shuswap	0	0.0
21	Fraser East	1	0.4
22	Fraser North	1	0.2
23	Fraser South	2	0.3
31	Richmond	1	0.6
32	Vancouver	3	0.5
33	North Shore/Coast Garibaldi	0	0.0
41	South Vancouver Island	5	1.4
42	Central Vancouver Island	7	2.8
43	North Vancouver Island	4	3.4
51	Northwest	0	0.0
52	Northern Interior	0	0.0
53	Northeast	0	0.0

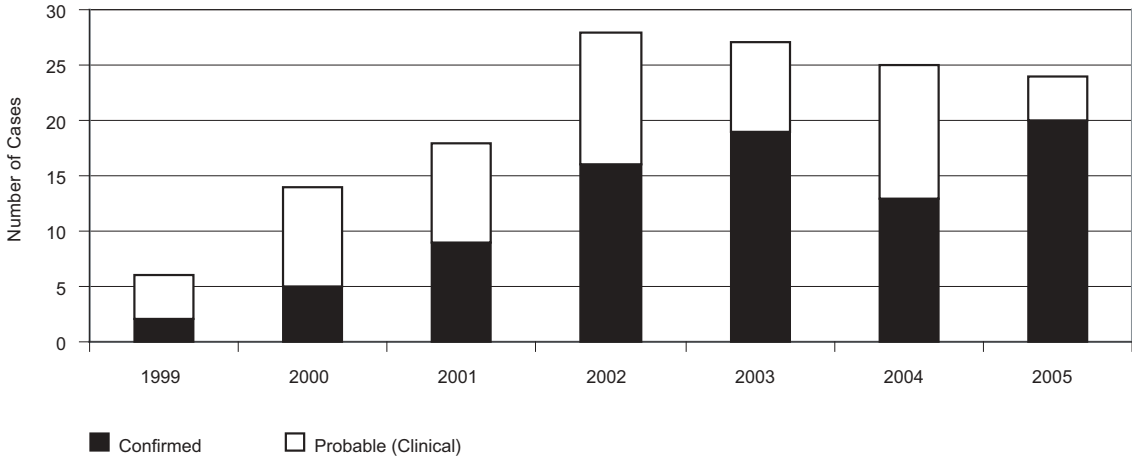
Note: Map classification by Jenks natural breaks method.

33.3 *Cryptococcus gattii* Rates by Age Group and Sex, 2005



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Cryptococcus gattii Reports - Female	0	0	0	0	0	0	0	3	3	6
Cryptococcus gattii Reports - Male	0	0	0	0	1	1	0	0	6	4
□ *Cryptococcus gattii* Rate - Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	1.4
■ *Cryptococcus gattii* Rate - Male	0.0	0.0	0.0	0.0	0.7	0.6	0.0	0.0	0.9	1.1

33.4 ***Cryptococcus gattii* Cases Confirmed vs. Probable 1999-2005**



Reportable Communicable Diseases in BC

SCHEDULE A: Reportable by all sources, including Laboratories

Anthrax
Acquired Immune Deficiency Syndrome
Botulism
Brucellosis
Cholera
Congenital Infections:
- Toxoplasmosis
- Rubella
- Cytomegalovirus
- Herpes Simplex
- Varicella-Zoster
- Hepatitis B Virus
- Listeriosis and any other congenital infection

Cryptococcal infection
Cryptosporidiosis
Cyclospora infection
Diffuse Lamellar Keratitis
Diphtheria:
- Cases
- Carriers

Encephalitis:
- Post-infectious
- Subacute sclerosing panencephalitis
- Vaccine-related
- Viral

Foodborne illness:
- All causes

Gastroenteritis epidemic:
- Bacterial
- Parasitic
- Viral

Genital Chlamydia Infection
Giardiasis
Group A Streptococcal Disease, Invasive
Haemophilus influenzae Disease,
- All Invasive, by Type

Hantavirus Pulmonary Syndrome
Hemorrhagic Viral Fevers
Hemolytic Uremic Syndrome (HUS)
Hepatitis Viral:
- Hepatitis A
- Hepatitis B
- Hepatitis C
- Hepatitis E
- Other Viral Hepatitis

Human Immunodeficiency Virus Infection
Leprosy
Lyme Disease
Measles
Meningitis: All causes
- (i) Bacterial: Haemophilus, Pneumococcal, Other
- (ii) Viral

Meningococcal Disease, All Invasive
- including "Primary Meningococcal Pneumonia" and "Primary Meningococcal Conjunctivitis"

Mumps
Neonatal Group B Streptococcal Infection
Pertussis (Whooping Cough)
Paralytic Shellfish Poisoning (PSP)
Plague
Poliomyelitis
Rabies
Reye Syndrome
Rubella
Severe Acute Respiratory Syndrome (SARS)
Smallpox
Streptococcus pneumoniae Infection, Invasive
Syphilis
Tetanus
Transfusion Transmitted Infection
Tuberculosis
Tularemia
Typhoid Fever and Paratyphoid Fever
Venereal Disease:
- Chancroid
- Gonorrhea – all sites

Waterborne Illness
- All causes

West Nile Virus Infection
Yellow Fever

SCHEDULE B: Reportable by Laboratories only

All specific bacterial and viral stool pathogens:
- (i) Bacterial: *Campylobacter*, *Salmonella*, *Shigella*, *Yersinia*
- (ii) Viral

Amoebiasis
Borrelia burgdorferi infection
Cerebrospinal Fluid Micro-organisms
Chlamydial Diseases, including Psittacosis
Cryptococcal Infection
Herpes Genitalis
Human Immunodeficiency Virus Infection
Influenza
Legionellosis
Leptospirosis
Listeriosis
Malaria
Q Fever
Rickettsial Diseases
Severe Acute Respiratory Syndrome (SARS)
Smallpox
Tularemia
West Nile Virus Infection

For the most up to date list of reportable diseases, see http://www.bccdc.org/download.php?item=129

2005 BC Selected Notifiable Disease Case Reports by Health Service Delivery Area

	INTERIOR					FRASER			
	East Kootenay	Kootenay Boundary	Okanagan	Thompson Cariboo Shuswap	**Interior Cases**	Fraser East	Fraser North	Fraser South	**Fraser Cases**
2005 Population	82088	79786	327254	221640	710768	265038	561098	634117	1460253
AIDS (2004)	0	0	2	2	4	1	8	4	13
Amebiasis	0	0	9	0	9	22	36	62	120
Campylobacteriosis	15	21	107	48	191	125	226	257	608
Chlamydia (genital)	180	116	701	457	1454	401	1087	1031	2519
***Cryptococcus gattii* Infection**	0	0	0	0	0	1	1	2	4
Cryptosporidiosis	1	0	4	3	8	21	20	21	62
Cyclosporiasis	0	0	0	0	0	4	3	5	12
***E. coli* Verotoxigenic**	1	5	14	10	30	7	9	21	37
Giardiasis	9	4	36	14	63	57	91	134	282
Gonorrhea	6	6	39	16	67	19	132	184	335
***Haemophilus infl.* b (invasive)**	0	0	0	0	0	1	0	0	1
Hepatitis A	0	2	3	1	6	1	4	9	14
Hepatitis B: Acute	0	0	5	3	8	1	4	13	18
Hepatitis B: Chronic carrier	2	2	8	1	13	16	231	184	431
Hepatitis B: Undetermined	0	0	4	0	4	9	93	22	124
Hepatitis C	36	56	225	169	486	277	357	292	926
HIV	1	5	12	5	23	17	42	36	95
Malaria	0	1	1	0	2	2	4	7	13
Measles: Rubeola (Red)	0	0	0	0	0	0	0	2	2
Meningococcal Disease (invasive)	1	0	1	4	6	1	5	5	11
Mumps	2	0	1	0	3	0	0	0	0
Pertussis	6	3	4	22	35	14	17	39	70
Pneumococcal Disease (invasive)	2	2	42	28	74	27	39	37	103
Rubella (German Measles)	0	0	0	0	0	1	0	0	1
Salmonellosis	6	6	29	26	67	56	114	149	319
Shigellosis	2	3	6	5	16	14	35	26	75
Streptococcal Group A (invasive)	2	1	17	8	28	9	20	25	54
Syphilis (Infectious)	0	1	2	1	4	6	33	21	60
Tuberculosis	2	1	0	6	9	16	41	42	99
Vibrio parahaemolyticus	0	0	0	0	0	1	3	1	5
West Nile Virus Infection	0	0	0	0	0	0	0	0	0
Yersiniosis	7	6	21	16	50	16	54	72	142
LESS COMMON DISEASES									
Botulism	0	0	0	0	0	0	0	0	0
Hantavirus Pulmonary Syndrome	0	1	0	0	1	0	0	0	0
Leprosy	0	0	0	0	0	0	0	0	0
Listeriosis	0	0	1	0	1	0	2	1	3
Lyme Disease	0	0	1	0	1	0	0	0	0
Trichinosis	0	0	0	0	0	0	0	0	0

VANCOUVER COASTAL				VANCOUVER ISLAND				Northern				BC TOTAL
Richmond	Vancouver	North Shore Coast/ Garibaldi	Vancouver Coastal Cases	South Vancouver Island	Central Vancouver Island	North Vancouver Island	Vancouver Island Cases	Northwest	Northern Interior	Northeast	Northern Cases	
173970	597682	273098	1044750	348382	249905	117628	715915	84754	155417	67207	307378	4239064
2	51	2	55	10	4	1	15	3	2	1	6	99
5	155	16	176	18	1	0	19	0	0	0	0	324
74	250	147	471	159	68	39	266	12	16	4	32	1568
277	1755	504	2536	860	546	229	1635	264	403	198	865	9043
1	3	0	4	5	7	4	16	0	0	0	0	24
3	24	3	30	16	5	2	23	1	0	0	1	124
2	11	6	19	0	1	1	2	0	1	1	2	35
1	19	5	25	7	2	5	14	4	5	0	9	115
9	158	40	207	52	28	24	104	11	16	4	31	687
25	522	40	587	87	27	14	128	21	32	10	63	1187
0	0	0	0	0	0	0	0	0	0	0	0	1
0	8	7	15	5	4	3	12	2	1	1	4	51
1	9	2	12	11	0	0	11	1	0	2	3	52
254	685	36	975	30	11	3	44	6	5	3	14	1477
18	4	31	53	15	3	0	18	0	2	0	2	201
61	568	122	751	221	214	98	533	65	96	23	184	2880
7	204	10	221	33	12	2	47	5	22	1	28	420
1	8	5	14	3	1	0	4	0	1	0	1	34
0	0	0	0	0	0	0	0	0	0	0	0	2
0	2	3	5	1	2	0	3	1	4	1	6	31
1	2	1	4	0	0	0	0	0	0	0	0	7
5	10	35	50	31	4	3	38	1	8	3	12	205
10	52	9	71	37	19	4	60	1	14	2	17	325
0	0	0	0	0	0	0	0	0	0	0	0	1
37	132	45	214	57	30	21	108	10	13	8	31	739
10	83	21	114	18	5	2	25	1	1	0	2	232
5	43	6	54	11	11	4	26	1	7	1	9	171
10	203	6	219	2	1	1	4	0	1	0	1	290
21	97	9	127	13	4	0	17	4	9	3	16	268
1	2	3	6	3	0	0	3	1	0	0	1	15
0	0	0	0	0	0	0	0	0	0	0	0	0
73	207	166	446	132	85	28	245	9	8	0	17	900
0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0	0	0
0	1	0	1	3	1	0	4	0	1	0	1	10
0	0	0	0	1	0	1	2	0	0	0	0	3
0	0	0	0	0	0	0	0	0	0	0	0	0

Note: No cases reported in 2005 for Anthrax, Botulism, Brucellosis, Diphtheria, Hemorrhagic Viral Fevers, Plague, Poliomyelitis, Severe Acute Respiratory Syndrome, Smallpox, Tetanus, and Tularemia. BC total of AIDS, Chlamydia (Genital), Gonorrhea, HIV, and Syphilis includes cases of non-BC residents and cases of unspecified residency and thus may exceed the sum of cases of the five health authorities.

2005 BC Selected Notifiable Disease Case Rates by Health Service Delivery Area

	INTERIOR					FRASER			
	East Kootenay	Kootenay Boundary	Okanagan	Thompson Cariboo Shuswap	Interior Rates	Fraser East	Fraser North	Fraser South	Fraser Rates
2005 Population	82088	79786	327254	221640	710768	265038	561098	634117	1460253
AIDS (2004)	0.0	0.0	0.6	0.9	0.6	0.4	1.4	0.6	0.9
Amebiasis	0.0	0.0	2.8	0.0	1.3	8.3	6.4	9.8	8.2
Campylobacteriosis	18.3	26.3	32.7	21.7	26.9	47.2	40.3	40.5	41.6
Chlamydia (genital)	219.3	145.4	214.2	206.2	204.6	151.3	193.7	162.6	172.5
Cryptococcus gattii Infection	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.3	0.3
Cryptosporidiosis	1.2	0.0	1.2	1.4	1.1	7.9	3.6	3.3	4.2
Cyclosporiasis	0.0	0.0	0.0	0.0	0.0	1.5	0.5	0.8	0.8
E. coli Verotoxigenic	1.2	6.3	4.3	4.5	4.2	2.6	1.6	3.3	2.5
Giardiasis	11.0	5.0	11.0	6.3	8.9	21.5	16.2	21.1	19.3
Gonorrhea	7.3	7.5	11.9	7.2	9.4	7.2	23.5	29.0	22.9
Haemophilus infl. b (invasive)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1
Hepatitis A	0.0	2.5	0.9	0.5	0.8	0.4	0.7	1.4	1.0
Hepatitis B: Acute	0.0	0.0	1.5	1.4	1.1	0.4	0.7	2.1	1.2
Hepatitis B: Chronic carrier	2.4	2.5	2.4	0.5	1.8	6.0	41.2	29.0	29.5
Hepatitis B: Undetermined	0.0	0.0	1.2	0.0	0.6	3.4	16.6	3.5	8.5
Hepatitis C	43.9	70.2	68.8	76.2	68.4	104.5	63.6	46.0	63.4
HIV	1.2	6.3	3.7	2.3	3.2	6.4	7.5	5.7	6.5
Malaria	0.0	1.3	0.3	0.0	0.3	0.8	0.7	1.1	0.9
Measles: Rubeola (Red)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1
Meningococcal Disease (invasive)	1.2	0.0	0.3	1.8	0.8	0.4	0.9	0.8	0.8
Mumps	2.4	0.0	0.3	0.0	0.4	0.0	0.0	0.0	0.0
Pertussis	7.3	3.8	1.2	9.9	4.9	5.3	3.0	6.2	4.8
Pneumococcal Disease (invasive)	2.4	2.5	12.8	12.6	10.4	10.2	7.0	5.8	7.1
Rubella (German Measles)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1
Salmonellosis	7.3	7.5	8.9	11.7	9.4	21.1	20.3	23.5	21.8
Shigellosis	2.4	3.8	1.8	2.3	2.3	5.3	6.2	4.1	5.1
Streptococcal Group A (invasive)	2.4	1.3	5.2	3.6	3.9	3.4	3.6	3.9	3.7
Syphilis (Infectious)	0.0	1.3	0.6	0.5	0.6	2.3	5.9	3.3	4.1
Tuberculosis	2.4	1.3	0.0	2.7	1.3	6.0	7.3	6.6	6.8
Vibrio parahaemolyticus	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.2	0.3
West Nile Virus Infection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yersiniosis	8.5	7.5	6.4	7.2	7.0	6.0	9.6	11.4	9.7
LESS COMMON DISEASES									
Botulism	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hantavirus Pulmonary Syndrome	0.0	1.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Leprosy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Listeriosis	0.0	0.0	0.3	0.0	0.1	0.0	0.4	0.2	0.2
Lyme Disease	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0	0.0
Trichinosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

VANCOUVER COASTAL				VANCOUVER ISLAND				Northern				BC TOTAL
Richmond	Vancouver	North Shore Coast/ Garibaldi	Vancouver Coastal Rates	South Vancouver Island	Central Vancouver Island	North Vancouver Island	Vancouver Island Rates	Northwest	Northern Interior	Northeast	Northern Rates	
173970	597682	273098	1044750	348382	249905	117628	715915	84754	155417	67207	307378	4239064
1.1	8.5	0.7	5.3	2.9	1.6	0.9	2.1	3.5	1.3	1.5	2.0	2.4
2.9	25.9	5.9	16.8	5.2	0.4	0.0	2.7	0.0	0.0	0.0	0.0	7.6
42.5	41.8	53.8	45.1	45.6	27.2	33.2	37.2	14.2	10.3	6.0	10.4	37.0
159.2	293.6	184.5	242.7	246.9	218.5	194.7	228.4	311.5	259.3	294.6	281.4	213.3
0.6	0.5	0.0	0.4	1.4	2.8	3.4	2.2	0.0	0.0	0.0	0.0	0.6
1.7	4.0	1.1	2.9	4.6	2.0	1.7	3.2	1.2	0.0	0.0	0.3	2.9
1.1	1.8	2.2	1.8	0.0	0.4	0.9	0.3	0.0	0.6	1.5	0.7	0.8
0.6	3.2	1.8	2.4	2.0	0.8	4.3	2.0	4.7	3.2	0.0	2.9	2.7
5.2	26.4	14.6	19.8	14.9	11.2	20.4	14.5	13.0	10.3	6.0	10.1	16.2
14.4	87.3	14.6	56.2	25.0	10.8	11.9	17.9	24.8	20.6	14.9	20.5	28.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	1.3	2.6	1.4	1.4	1.6	2.6	1.7	2.4	0.6	1.5	1.3	1.2
0.6	1.5	0.7	1.1	3.2	0.0	0.0	1.5	1.2	0.0	3.0	1.0	1.2
146.0	114.6	13.2	93.3	8.6	4.4	2.6	6.1	7.1	3.2	4.5	4.6	34.8
10.3	0.7	11.4	5.1	4.3	1.2	0.0	2.5	0.0	1.3	0.0	0.7	4.7
35.1	95.0	44.7	71.9	63.4	85.6	83.3	74.5	76.7	61.8	34.2	59.9	67.9
4.0	34.1	3.7	21.2	9.5	4.8	1.7	6.6	5.9	14.2	1.5	9.1	9.9
0.6	1.3	1.8	1.3	0.9	0.4	0.0	0.6	0.0	0.6	0.0	0.3	0.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.3	1.1	0.5	0.3	0.8	0.0	0.4	1.2	2.6	1.5	2.0	0.7
0.6	0.3	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
2.9	1.7	12.8	4.8	8.9	1.6	2.6	5.3	1.2	5.1	4.5	3.9	4.8
5.7	8.7	3.3	6.8	10.6	7.6	3.4	8.4	1.2	9.0	3.0	5.5	7.7
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21.3	22.1	16.5	20.5	16.4	12.0	17.9	15.1	11.8	8.4	11.9	10.1	17.4
5.7	13.9	7.7	10.9	5.2	2.0	1.7	3.5	1.2	0.6	0.0	0.7	5.5
2.9	7.2	2.2	5.2	3.2	4.4	3.4	3.6	1.2	4.5	1.5	2.9	4.0
5.7	34.0	2.2	21.0	0.6	0.4	0.9	0.6	0.0	0.6	0.0	0.3	6.8
12.1	16.2	3.3	12.2	3.7	1.6	0.0	2.4	4.7	5.8	4.5	5.2	6.3
0.6	0.3	1.1	0.6	0.9	0.0	0.0	0.4	1.2	0.0	0.0	0.3	0.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.0	34.6	60.8	42.7	37.9	34.0	23.8	34.2	10.6	5.1	0.0	5.5	21.2
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.2	0.0	0.1	0.9	0.4	0.0	0.6	0.0	0.6	0.0	0.3	0.2
0.0	0.0	0.0	0.0	0.3	0.0	0.9	0.3	0.0	0.0	0.0	0.0	0.1
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: No cases reported in 2005 for Anthrax, Botulism, Brucellosis, Diphtheria, Hemorrhagic Viral Fevers, Plague, Poliomyelitis, Severe Acute Respiratory Syndrome, Smallpox, Tetanus, and Tularemia. BC total of AIDS, Chlamydia (Genital), Gonorrhea, HIV, and Syphilis includes cases of non-BC residents and cases of unspecified residency and thus may exceed the sum of cases of the five health authorities.

Confirmed and Clinical Cases 1996-2005

Disease Code Description	Status	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Amebiasis	Confirmed	372	327	302	306	284	351	365	321	330	324
Amebiasis	Clinical	0	0	0	0	0	0	0	0	0	1
Botulism	Confirmed	3	3	0	1	1	2	1	0	0	0
Botulism	Clinical	0	0	0	0	0	0	0	0	0	0
Campylobacteriosis	Confirmed	2587	2549	2760	2613	2583	2192	2052	1712	1472	1568
Campylobacteriosis	Clinical	0	0	0	0	0	0	0	3	2	11
Cryptosporidiosis	Confirmed	1278	144	139	109	167	173	130	162	100	124
Cryptosporidiosis	Clinical	0	0	0	0	0	0	0	0	1	0
Cyclosporiasis	Confirmed	3	6	8	21	19	41	27	42	34	35
Cyclosporiasis	Clinical	0	0	0	0	0	0	0	0	0	0
E.coli, Verotoxigenic	Confirmed	137	132	185	287	166	136	140	123	193	115
E.coli, Verotoxigenic	Clinical	0	0	0	0	0	1	0	0	0	3
Giardiasis	Confirmed	1274	1158	1075	1009	941	860	710	742	739	687
Giardiasis	Clinical	0	0	0	0	0	0	0	2	3	3
Haemophilus influenzae type b, Invasive	Confirmed	9	4	3	3	7	6	7	8	5	1
Haemophilus influenzae type b, Invasive	Clinical	0	0	0	0	0	0	0	0	1	0
Hantavirus Pulmonary Syndrome	Confirmed	1	0	0	0	0	0	0	0	0	1
Hantavirus Pulmonary Syndrome	Clinical	0	0	0	0	0	0	0	0	0	0
Hepatitis A	Confirmed	478	356	382	344	136	78	75	57	74	51
Hepatitis A	Clinical	0	0	0	1	0	0	0	1	0	1
Hepatitis B: Acute	Confirmed	220	221	191	141	108	91	74	63	48	52
Hepatitis B: Acute	Clinical	0	0	0	0	0	0	0	1	0	0
Hepatitis C	Confirmed	6130	7714	6255	4998	4393	4365	4529	3653	3103	2880
Hepatitis C	Clinical	0	0	0	9	5	5	1	10	9	9
Leprosy (Hansen's Disease)	Confirmed	0	0	2	2	1	2	0	0	2	0
Leprosy (Hansen's Disease)	Clinical	0	0	0	0	0	1	0	0	0	0
Listeriosis	Confirmed	4	3	2	3	6	6	14	13	10	10
Listeriosis	Clinical	0	0	0	0	0	0	0	0	0	0
Lyme Disease	Confirmed	3	2	7	3	9	2	5	5	3	3
Lyme Disease	Clinical	0	0	0	0	2	1	0	1	0	0
Malaria	Confirmed	347	300	44	49	33	40	40	21	28	34
Malaria	Clinical	0	0	0	0	0	0	0	1	0	0
Measles: Rubeola (Red)	Confirmed	37	255	2	8	42	23	3	1	1	2
Measles: Rubeola (Red)	Clinical	2	18	0	0	0	0	0	0	0	0
Meningococcal (Invasive)	Confirmed	40	34	16	27	24	53	32	29	31	31
Meningococcal (Invasive)	Clinical	0	0	0	0	0	4	0	1	1	1
Mumps	Confirmed	44	131	17	18	9	23	3	1	5	7
Mumps	Clinical	2	8	1	1	8	3	3	0	1	1
Pertussis	Confirmed	906	670	357	441	1549	577	557	892	464	205
Pertussis	Clinical	54	50	12	100	264	68	88	68	46	28
Pneumococcal (Invasive)	Confirmed	4	6	12	5	102	186	343	318	315	325
Pneumococcal (Invasive)	Clinical	0	0	0	0	0	0	0	2	1	5
Rubella (German Measles)	Confirmed	19	5	4	3	2	2	2	1	0	1
Rubella (German Measles)	Clinical	0	0	0	0	0	0	0	0	0	0
Salmonellosis	Confirmed	852	667	679	725	727	763	790	660	749	739
Salmonellosis	Clinical	0	0	0	0	0	0	0	2	5	4
Shigellosis	Confirmed	194	274	246	195	214	255	175	229	161	232
Shigellosis	Clinical	0	0	0	0	0	0	0	0	0	1
Streptococcal Group A (Invasive)	Confirmed	--	--	57	49	57	111	153	161	149	171
Streptococcal Group A (Invasive)	Clinical	--	--	0	0	1	2	5	5	3	3
Trichinosis	Confirmed	0	0	2	1	0	0	0	0	0	0
Trichinosis	Clinical	0	0	0	0	0	0	0	0	0	0
Vibrio Parahaemolyticus	Confirmed	7	53	36	25	16	12	26	18	14	15
Vibrio Parahaemolyticus	Clinical	0	0	0	0	0	0	0	0	0	0
West Nile Virus	Confirmed	--	--	--	--	--	--	--	20	0	0
West Nile Virus	Clinical	--	--	--	--	--	--	--	0	0	0
Yersiniosis	Confirmed	867	921	1138	970	1036	750	605	598	861	900
Yersiniosis	Clinical	0	0	0	0	0	0	0	0	1	2

Sources and Explanatory Remarks

1) Clinical and confirmed case reports are collected from the health regions in British Columbia through the integrated Public Health Information System (iPHIS). Starting in 2005, only confirmed cases are described in the main report, in keeping with BC reporting to the Public Health Agency of Canada. For the breakdown of cases by their confirmed or clinical case status for 2005 and prior years, see page 96. The exception is *Cryptococcus gattii* for which clinical cases are included in reporting (see table 33.4 on page 90 for 2005 and prior year breakdowns).

2) Numbers in this report were generated in March 2006 and are subject to change due to possible late reporting and/or data clean up in the regions. This may also explain changes in the number of reported cases in previous years for some diseases.

3) Data for influenza, invasive meningococcal disease and invasive group A streptococcal disease, *Cryptococcus gattii* infection, West Nile virus, MRSA and VRE are collected through enhanced surveillance systems. Invasive meningococcal disease, invasive group A streptococcal disease, and *Cryptococcus gattii* infection are reported using episode date. Episode date is the onset date if reported. Other diseases are classified by the reported date which is the date reported to the health authority.

4) Data for HIV and AIDS are collected through the HIV/AIDS Surveillance System. Data for other sexually transmitted infections (STI) are collected through the STI Surveillance System. AIDS case reports are for 2004. The 2005 AIDS statistics will be available in our next report due to a delay associated with AIDS data collection. The BC total numbers for AIDS, Chlamydia (genital), Gonorrhea, HIV and Syphilis (infectious) include cases of non-BC residents and cases of unknown residency and thus may exceed the sum of cases of the five health authorities.

5) Statistics on tuberculosis are based on the analysis on the data extracted in March 2006. For more updated statistics on tuberculosis please refer to TB Annual Report 2005.

6) Amebiasis, cryptosporidiosis and listeriosis were removed from national surveillance in January 2000. Lyme disease, HIV, methicillin resistant *Staphylococcus aureus*, vancomycin resistant enterococci, *Vibrio parahaemolyticus* and yersiniosis are not nationally notifiable diseases.

7) Data for invasive pneumococcal disease (IPD) 1992-1999 had previously been limited to pneumococcal meningitis. Since July 2000, changes in the case definition now include all other invasive cases in addition to meningitis.

8) Salmonellosis reports include Paratyphoid (*S.* Paratyphi) and Typhoid Fever (*S.* Typhi).

9) The Jenks Natural Breaks Classification method was used for defining different classifications of disease rates in the maps. This classification method identifies gaps or depressions within the data distribution and creates the categories based on the best fit of the data (i.e., groups based on similarities).

10) Health Service Delivery Area boundaries are taken from BC STATS, Ministry of Management Services.

11) National rates are provided by the Public Health Agency of Canada – Division of Surveillance and Risk Assessment. 2004 and 2005 numbers are preliminary and are subject to change. 2005 numbers do not include Nunavut. Tuberculosis numbers for 2004 and 2005 not yet available.

12) Population estimates and projections are taken from P.E.O.P.L.E. Projection 30 (Population Extrapolation for Organizational Planning with Less Error). Health Data Warehouse Release Date: Totals: December 2004; Age/Sex: January 2005.

13) While we endeavour to include data on the majority of reportable diseases in this publication, data on some are not included. For information on the incidence of these diseases in 2005 in British Columbia, please contact epidserv@bccdc.ca.

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