

Pneumococcal Disease (invasive)

Three hundred and eighty two cases of invasive pneumococcal disease (IPD) were reported in 2015 for a rate of 8.2 per 100,000 population, which has been stable since 2012. Serotyping results were available for 85% (327/382) of cases. Among cases ≥ 65 years old, serotype was available for 87% (122/141) of cases, and 47% (66/141) were due to serotypes covered by pneumococcal polysaccharide 23-valent (PPV-23) vaccine.

The highest rates of IPD were reported among infants (15.9 per 100,000 population) and those ≥ 60 years old (16.43 per 100,000 population).

Health Service Delivery Areas with the highest rates of IPD were East Kootenay (15.6 cases per 100,000 population) and Thompson Cariboo Shuswap (11.3 per 100,000).

Based on data from enhanced surveillance for pediatric cases ≤ 16 years old, a total of 40 cases were reported, including 22 cases aged ≤ 5 years. None had a fatal outcome. Among cases with clinical presentation reported, 50% presented as 'bacteremia without focus', 35% as bacteremic pneumonia, and 20% as meningitis; clinical presentation was not reported for 3%. Cases ≤ 5 years presented as 'bacteremia without focus' more frequently than children 6-16 years of age.

Among cases ≤ 5 years old, serotype results were available for 21 (95%) of the 22 cases. Sixteen (76%) were due to serotypes not covered by conjugate vaccines, and the remaining five (24%) were due to the serotypes unique to the 13-valent vaccine (PCV-13) and not covered by the 7-valent vaccine (PCV-7).

The 21 cases with serotype results were reviewed for preventability based on their age and immunization status at the time of onset of illness, taking into account recommendations for use of conjugate and polysaccharide vaccines with introduction in BC of PCV-7 in 2003, PCV-13 in June 2010 with a catch-up program only for high risk children, and recommenda-

tions for polysaccharide 23-valent vaccine (PPV-23) for high risk children, with results as follows:

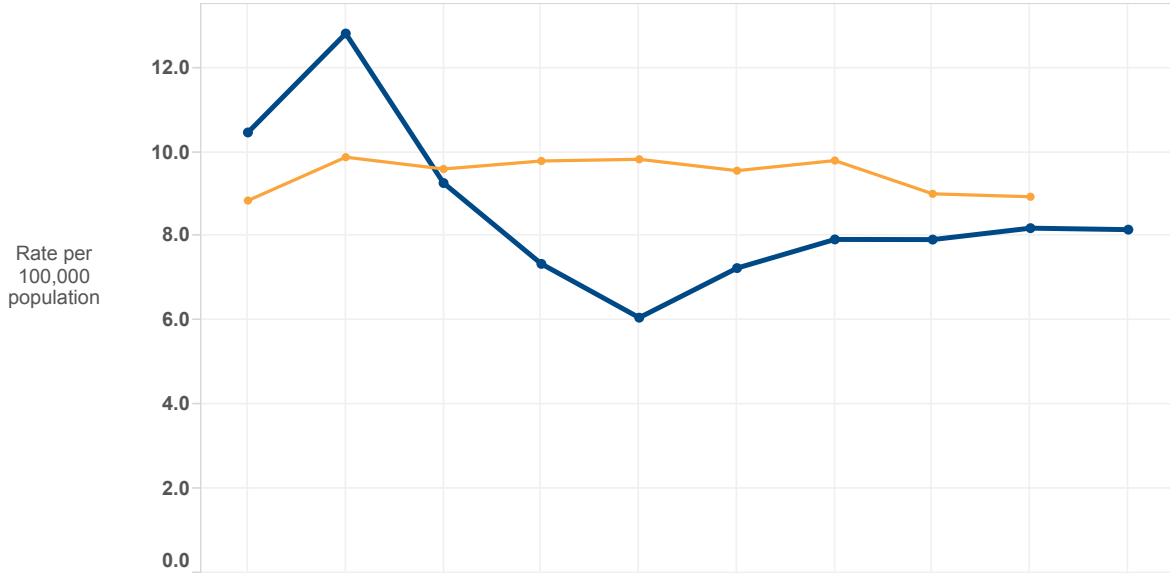
Only 1 case was preventable: an 18 month old child who developed disease due to serotype 19A but had received only one dose of PCV-13 (which covers 19A) at 2 months of age.

The remainder were not preventable; serotype 3 is covered by both PCV-13 and PPV-23, but not PCV-7:

- 16 cases were due to serotypes not covered by PCV-13 and not preventable by the current program
- 2 cases of serotype 3 were in infants too young to have received their first dose
- 2 cases were vaccine failures, both serotype 3:
 - 1 case in a child immunized with 2 valid doses of PCV-13, with disease onset before the on-time receipt of the 12 month dose;
 - 1 case in a high risk 5 year old child who had received a 3+1 series of PCV-13 and no PPV-23

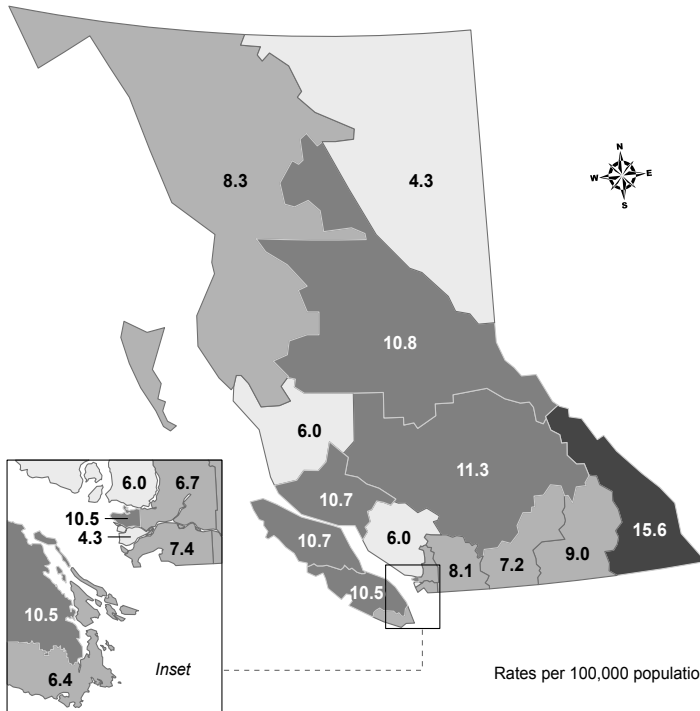


29.1 Pneumococcal Disease (invasive) Rates by Year, 2006-2015

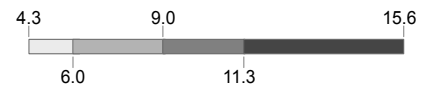


	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Reports	444	550	403	324	271	326	360	363	380	382
BC Rate	10.47	12.82	9.27	7.35	6.07	7.25	7.93	7.92	8.19	8.16
Canadian Rate	8.85	9.88	9.60	9.79	9.83	9.56	9.80	9.01	8.94	

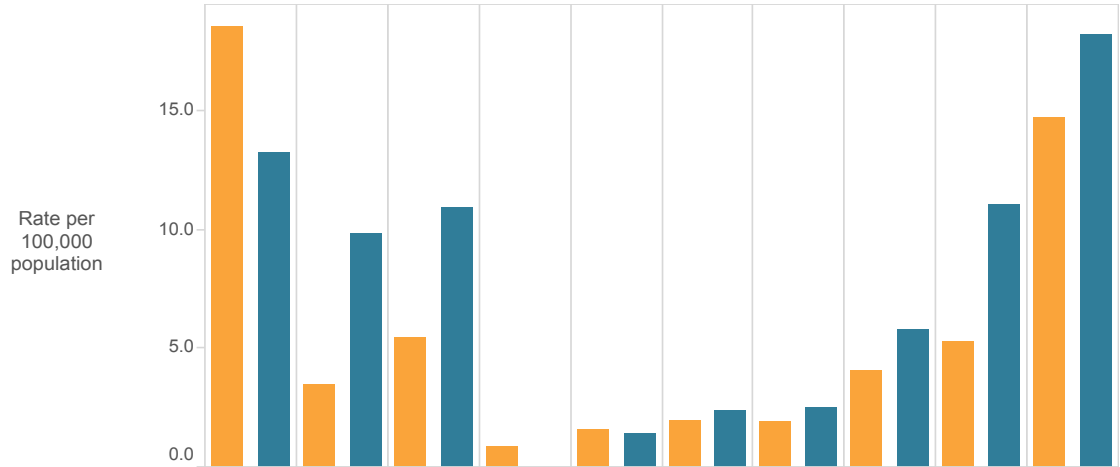
29.2 Pneumococcal Disease (invasive) Rates by HSDA, 2015



ID	Health Service Delivery Area	Cases	Rate
11	East Kootenay	12	15.6
12	Kootenay Boundary	7	9.0
13	Okanagan	26	7.2
14	Thompson Cariboo Shuswap	25	11.3
21	Fraser East	24	8.1
22	Fraser North	44	6.7
23	Fraser South	59	7.4
31	Richmond	9	4.3
32	Vancouver	70	10.5
33	North Shore/Coast Garibaldi	17	6.0
41	South Vancouver Island	24	6.4
42	Central Vancouver Island	28	10.5
43	North Vancouver Island	13	10.7
51	Northwest	6	8.3
52	Northern Interior	15	10.8
53	Northeast	3	4.3



29.3 Pneumococcal Disease (invasive) Rates by Age Group and Sex, 2015



		<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Reports	Female	4	3	6	1	2	3	3	13	36	87
	Male	3	9	13	0	2	4	4	18	73	98
	Total	7	12	19	1	4	7	7	31	109	185
BC Rate	Female	18.59	3.48	5.44	0.90	1.55	1.94	1.88	4.10	5.30	14.78
	Male	13.29	9.89	10.93	0.00	1.45	2.36	2.52	5.80	11.06	18.25
	Total	15.88	6.77	8.29	0.44	1.50	2.16	2.20	4.94	8.14	16.43