Pertussis

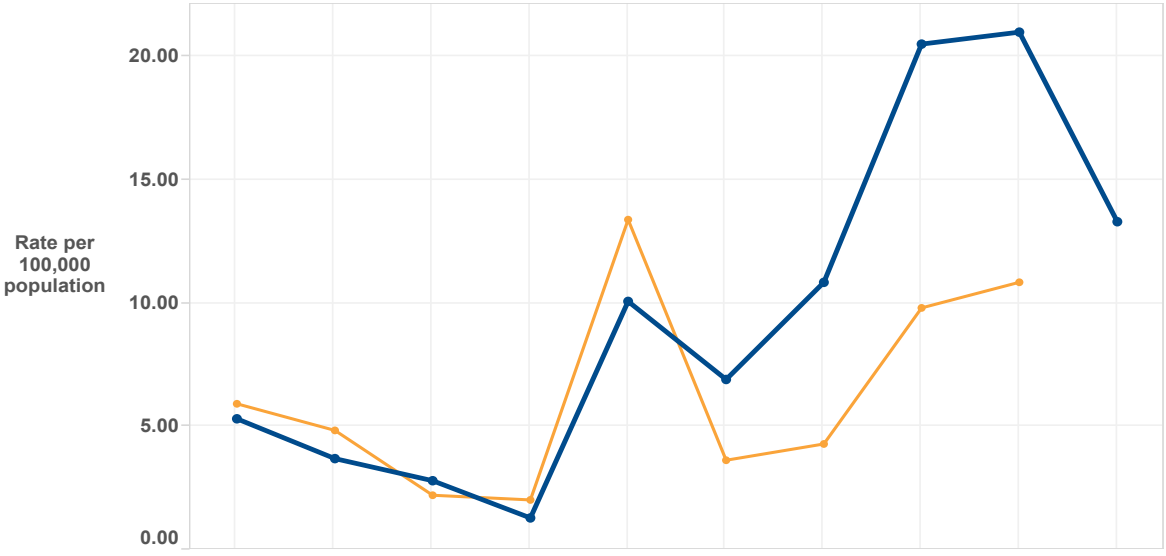
As elsewhere, pertussis remains an endemic disease in BC, with cyclical peaks occurring every 3-5 years. Since 2012, there has been a gradual increase in overall pertussis activity in BC. This recent increase follows a period of trough activity levels from 2004 to 2011 and is driven by asynchronous cyclical peaks in certain regions. The reasons for this increase are likely multifactorial but may reflect changes in population-level immunity due in part to recent periods of historically low-level activity in some regions of BC and waning of immunity from acellular vaccine.

Overall the incidence rate of confirmed pertussis in BC was ~13 per 100,000 in 2017 (Figure 25.1). This is slightly lower than incidence rates of ~20 per 100,000 in 2015 and 2016, but higher than rates of ~5-10 per 100,000 during the preceding years between 2008 and 2014. Incidence rates were highest in Vancouver Island Health Authority and Interior Health Authority, driven by pockets of regional activity notably in Kootenay Boundary, South Vancouver Island, and Okanagan HSDAs (Figure 25.2).

The highest age-specific incidence rates in 2017 were in infants <1 year old followed by near-identical rates in pre-teens/teens (10-14 years old) and younger school-aged children (5-9 years old) (Figure 25.3); lower incidence was observed in pre-school-aged children (1-4 years old). Age-specific incidence was also lower in older teens (15-19 years old) and in adults ≥20 years old.

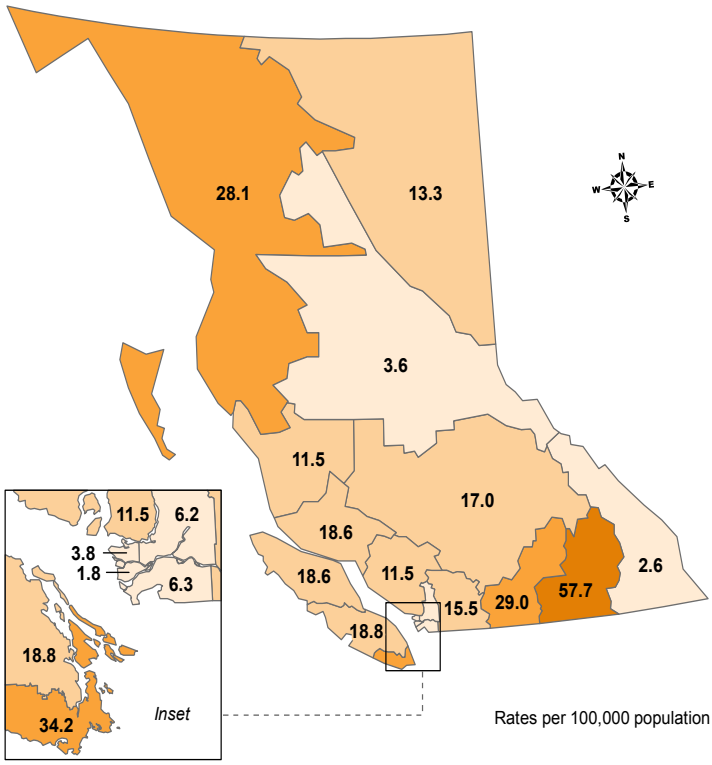
interactive dashboard

25.1 Pertussis Rates by Year, 2008-2017

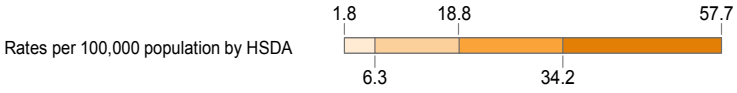


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Reports	231	163	125	58	458	317	504	963	999	641
BC Rate	5.31	3.70	2.80	1.29	10.07	6.91	10.85	20.51	21.00	13.31
Canada Rate	5.92	4.84	2.21	2.02	13.39	3.63	4.29	9.81	10.85	

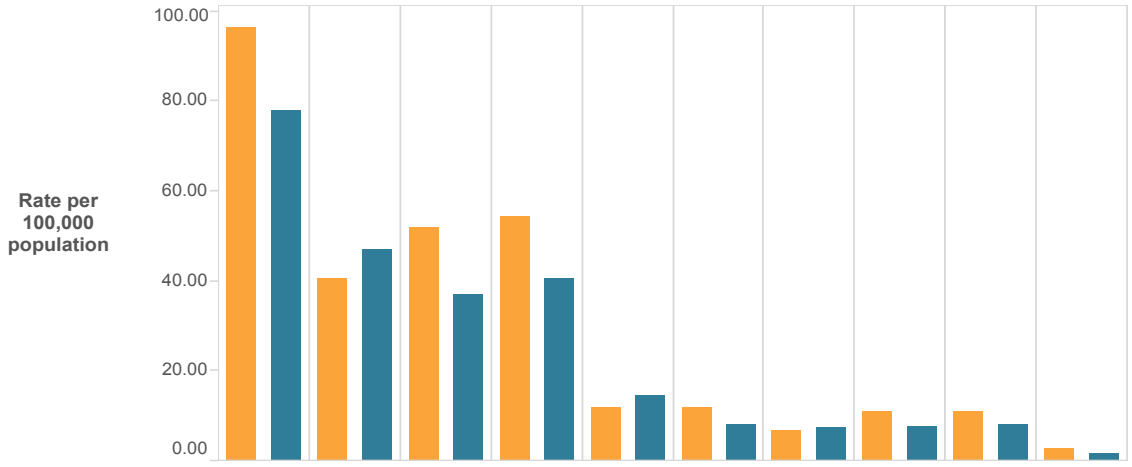
25.2 Pertussis Rates by HSDA, 2017



ID	Health Service Delivery Area	Cases	Rate
11	East Kootenay	2	2.6
12	Kootenay Boundary	45	57.7
13	Okanagan	108	29.0
14	Thompson Cariboo Shuswap	39	17.0
21	Fraser East	47	15.5
22	Fraser North	41	6.2
23	Fraser South	53	6.3
31	Richmond	4	1.8
32	Vancouver	26	3.8
33	North Shore/Coast Garibaldi	33	11.5
41	South Vancouver Island	134	34.2
42	Central Vancouver Island	52	18.8
43	North Vancouver Island	23	18.6
51	Northwest	20	28.1
52	Northern Interior	5	3.6
53	Northeast	9	13.3



25.3 Pertussis Rates by Age Group and Sex, 2017



		<1	1-4	5-9	10-14	15-19	20-24	25-29	30-39	40-59	60+
Reports	Female	21	36	59	62	16	19	11	36	73	18
	Male	18	44	45	49	20	14	12	25	52	11
	Total	39	80	104	111	36	33	23	61	125	29
BC Rate	Female	96.41	40.45	51.95	54.48	12.09	11.99	6.81	10.89	10.80	2.86
	Male	78.11	46.89	36.92	40.40	14.35	8.09	7.32	7.73	7.94	1.91
	Total	87.01	43.76	44.17	47.22	13.25	9.95	7.07	9.32	9.39	2.41