

## Syphilis

Syphilis is a sexually transmitted infection (STI) caused by the spirochete bacterium *Treponema pallidum*. Its natural history is well-described and consists of multiple infectious stages, followed by a latent period during which the bacterium is present but there are little to no symptoms. The primary stage of syphilis typically presents as a painless ulcer, known as a chancre. The secondary stage of syphilis presents with systemic symptoms, such as a rash over the trunk. During the latent stage of syphilis, there are no symptoms. The latent stage is usually further separated into early latent (about one year after infection) and late latent (one year or more after infection). Only the primary, secondary, and early latent stages of syphilis are considered infectious and are reported here.

Untreated, up to one third of individuals will go on to develop late complications, which may lead to end-organ disease in the brain, peripheral nerves, eyes and cardiovascular system. If the infectious stages of syphilis are concurrent with pregnancy the child is at risk of developing congenital syphilis, a serious and potentially fatal condition. Syphilis in association with HIV presents additional public health challenges. In those co-infected with HIV, the clinical manifestations of syphilis may be unusual and difficult to diagnose. In addition, syphilis infection itself not only enhances the transmission of HIV but also one's susceptibility to HIV infection.

Following a decline in rates in BC in the early 1990s, infectious syphilis began to re-emerge in BC starting in 1997. Since 2010, the rates of syphilis have been rising dramatically. Over 90% of infectious syphilis cases are in males, primarily driven by infectious syphilis cases among gay, bisexual, and other men who have sex with men. In 2015, there were 759 cases reported – the highest number of new cases in the past decade - representing nearly a 40% increase in reported infectious syphilis compared with 2014. Almost a third of the diagnoses in 2015 were in September and October, raising concerns that BC may be

entering a new phase of the syphilis epidemic.

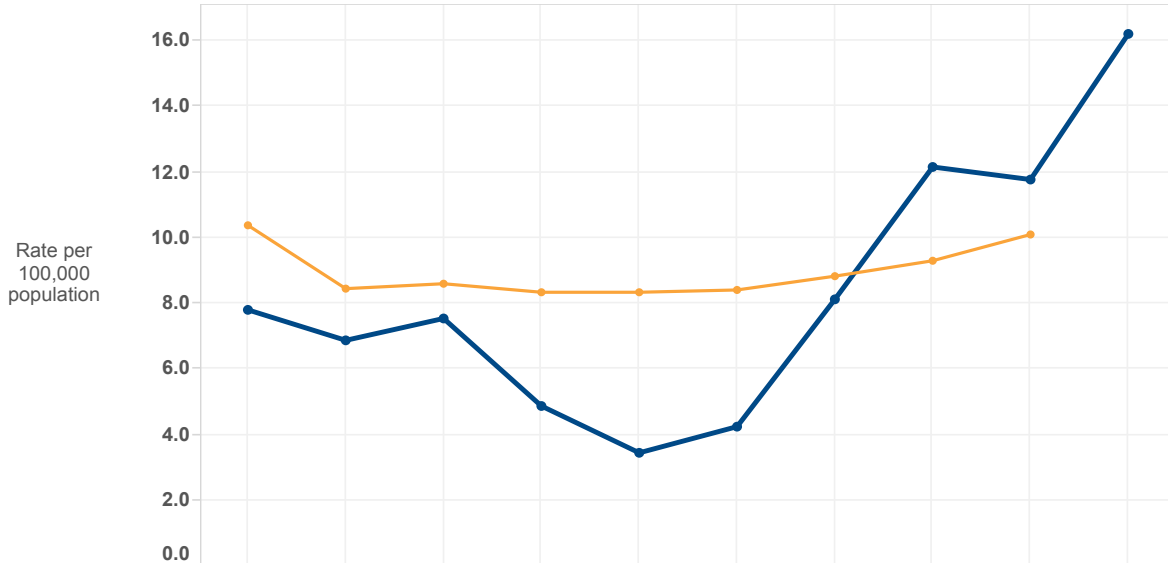
From 2010 to 2015, the highest rates of infectious syphilis were in the Vancouver Coastal Health Authority and the majority of cases were among men 40-59 years old. However, since 2014, the greatest rate of increase appears to be in men 20-29 years old. There has also been a steady increase in the proportion of cases in the early latent stage (i.e. the stage without symptoms) from about 50% in 2005 to almost 65% in 2015, suggesting that an increasing proportion of cases are being detected by screening.

The recent changes in syphilis epidemiology prompted the the BC Centre for Disease Control (BCCDC) to develop a multi-pronged strategy with the regional health authorities, First Nations Health Authority, the BCCDC Public Health Laboratory, Perinatal Services BC, and the Office of the Provincial Health Officer to address this increase, which is currently being implemented. Some goals of this strategy are to increase awareness of syphilis among key populations and health care providers, enhance surveillance of syphilis, maintain high treatment completion rates, and optimize the care of partners, in order to prevent re-infection and onward transmission.

For more information on infectious syphilis, please see the [STI Annual Report](#).

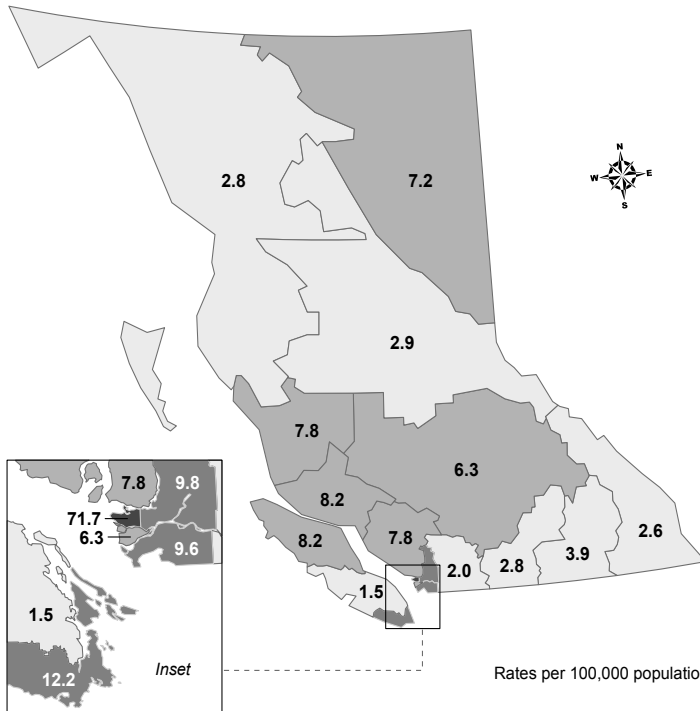


### 2.1 Infectious Syphilis Rates by Year, 2006-2015



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Reports</b>	331	295	328	215	154	191	369	557	546	759
<b>BC Rate</b>	7.80	6.87	7.54	4.87	3.45	4.25	8.12	12.16	11.77	16.21
<b>Canadian Rate</b>	10.38	8.45	8.60	8.34	8.34	8.41	8.83	9.30	10.10	

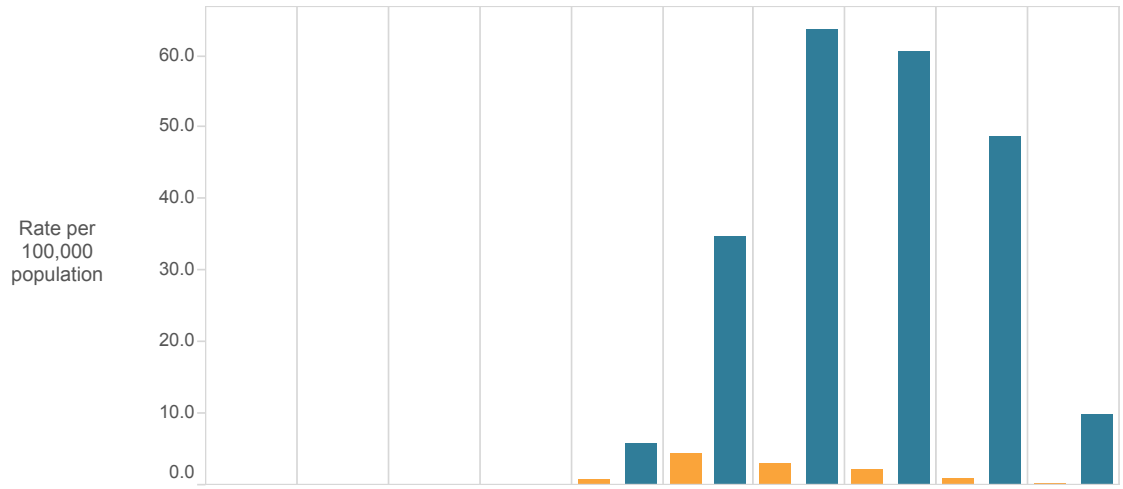
### 2.2 Infectious Syphilis Rates by HSDA, 2015



ID	Health Service Delivery Area	Cases	Rate
11	East Kootenay	2	2.6
12	Kootenay Boundary	3	3.9
13	Okanagan	10	2.8
14	Thompson Cariboo Shuswap	14	6.3
21	Fraser East	6	2.0
22	Fraser North	64	9.8
23	Fraser South	76	9.6
31	Richmond	13	6.3
32	Vancouver	478	71.7
33	North Shore/Coast Garibaldi	22	7.8
41	South Vancouver Island	46	12.2
42	Central Vancouver Island	4	1.5
43	North Vancouver Island	10	8.2
51	Northwest	2	2.8
52	Northern Interior	4	2.9
53	Northeast	5	7.2



**2.3 Infectious Syphilis 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+
<b>Reports</b>	Female	0	0	0	0	1	7	5	7	7	2
	Male	0	0	0	0	8	59	101	188	322	52
	<b>Total</b>	0	0	0	0	9	66	106	195	329	54
<b>BC Rate</b>	Female	0.00	0.00	0.00	0.00	0.77	4.53	3.14	2.21	1.03	0.34
	Male	0.00	0.00	0.00	0.00	5.80	34.78	63.70	60.55	48.78	9.68
	<b>Total</b>	0.00	0.00	0.00	0.00	3.37	20.36	33.36	31.08	24.56	4.80