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Infectious Syphilis in British Columbia

1. Infectious syphilis case reports in BC, 2010-2022*

*Projected case counts/rates assume that the average number of reported cases per month year to date (YTD) will remain constant throughout 2022. See technical appendix (calculations) for more details.

Note: 2018 to 2022 case counts are subject to change. Infectious syphilis case reports exclude congenital syphilis cases.
2. Infectious syphilis case reports in BC by quarter

3. Infectious syphilis case reports in BC by month
Infectious Syphilis by Gender and Age Group

4. Infectious syphilis case reports in BC by gender, 2010-2022*

![Bar chart showing infectious syphilis cases by gender from 2010 to 2022.](chart.jpg)

*Projected case counts.

Note: Collection on Transgender as a gender value began in 2018 in the new EMR system.
5. Rate of infectious syphilis case reports in BC by age group and by quarter - total

6. Rate of infectious syphilis case reports in BC by age group and by quarter - female
7. Rate of infectious syphilis case reports in BC by age group and by quarter - male
8. Infectious syphilis case reports in BC by health authority 2010-2022* - total

*Projected case counts

Note: Excludes missing and unknown geography.
9. Infectious syphilis case reports in BC by health authority 2010-2022* - female

*Projected case counts

Note: Excludes missing and unknown geography.
10. Infectious syphilis case reports in BC by health authority 2010-2022* - male

*Projected case counts

Note: Excludes missing and unknown geography.
11. Count of infectious syphilis case reports in BC by health authority and by quarter

12. Rate of infectious syphilis case reports in BC by health authority and by quarter
Infectious Syphilis by Gender and Gender of Sexual Partner

13. Proportion of infectious syphilis case reports by gender of sexual partner and by quarter

Note: Gender of sexual partner is based on the “gender of sexual partners” variable values collected in Intrahealth Profile EMR which is structured as male, female, transgender and unknown. Data shown reflect male, female, and transgender responses only.

*Other gender of partner category includes cases who reported the gender(s) of their sexual partners as any of the following: Transgender; Female and Transgender; Male and Transgender; Male, Female and Transgender; Female partner (for female cases only).
Infectious Syphilis in by Stage of Infection

14. Proportion of infectious syphilis case reports in BC by stage of infection and by quarter

Note: Early Latent cases include both Early Latent and Early Latent Probable Stages
Infectious Neurosyphilis

15. Infectious neurosyphilis case reports in BC by quarter

![Bar chart showing infectious neurosyphilis cases by quarter.](chart.png)
### Time to Treatment

#### 16. Time to initial treatment for infectious syphilis cases in BC, by quarter

<table>
<thead>
<tr>
<th>Quarter</th>
<th>On or prior to diagnosis date</th>
<th>15 to 30 days post-diagnosis</th>
<th>1 to 7 days post-diagnosis</th>
<th>8 to 14 days post-diagnosis</th>
<th>&gt;30 days post-diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Q1</td>
<td>3%</td>
<td>26%</td>
<td>56%</td>
<td>12%</td>
<td>17%</td>
</tr>
<tr>
<td>2019 Q2</td>
<td>4%</td>
<td>21%</td>
<td>53%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>2019 Q3</td>
<td>2%</td>
<td>28%</td>
<td>54%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>2019 Q4</td>
<td>4%</td>
<td>30%</td>
<td>38%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>2020 Q1</td>
<td>5%</td>
<td>28%</td>
<td>47%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>2020 Q2</td>
<td>2%</td>
<td>29%</td>
<td>55%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>2020 Q3</td>
<td>10%</td>
<td>35%</td>
<td>43%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>2020 Q4</td>
<td>5%</td>
<td>30%</td>
<td>42%</td>
<td>9%</td>
<td>13%</td>
</tr>
<tr>
<td>2021 Q1</td>
<td>5%</td>
<td>33%</td>
<td>39%</td>
<td>9%</td>
<td>15%</td>
</tr>
<tr>
<td>2021 Q2</td>
<td>8%</td>
<td>32%</td>
<td>35%</td>
<td>13%</td>
<td>14%</td>
</tr>
<tr>
<td>2021 Q3</td>
<td>9%</td>
<td>31%</td>
<td>47%</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>2021 Q4</td>
<td>8%</td>
<td>27%</td>
<td>45%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>2022 Q1</td>
<td>3%</td>
<td>28%</td>
<td>47%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>2022 Q2</td>
<td>5%</td>
<td>28%</td>
<td>45%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>2022 Q3</td>
<td>5%</td>
<td>31%</td>
<td>43%</td>
<td>11%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Note: Excludes infectious syphilis cases without information on treatment and date of treatment (3.3% of infectious syphilis cases from 2019-2022Q3). Some individuals (e.g., recent partners of individuals diagnosed with infectious syphilis) may be treated empirically, as it can take up to 3 months before syphilis infection is detectable on serology, so treatment may occur prior to diagnosis date.

Information are subject to change as case data are completed. See technical appendix for more details.
17. Time to initial treatment for infectious syphilis cases in BC, by gender and quarter

Figure only includes information on Female and Male gender due to low case counts for other genders.

Note: Excludes infectious syphilis cases without information on treatment and date of treatment (3.3% of infectious syphilis cases from 2019-2022Q3). Some individuals (e.g., recent partners of individuals diagnosed with infectious syphilis) may be treated empirically, as it can take up to 3 months before syphilis infection is detectable on serology, so treatment may occur prior to diagnosis date.

Information are subject to change as case data are completed. See technical appendix for more details.
Infectious Syphilis among Females 15-49 years

18. Infectious syphilis case reports in BC among females 15-49 years, 2010-2022*

*Projected rate for 2022.

Note: The rate per 100,000 population uses the BC population data of people of female sex aged 15-49 years.
Infectious Syphilis Diagnosed During Prenatal Screening

19. Infectious syphilis case reports in BC among females 15-49 years diagnosed during prenatal screening by quarter

Note: Includes all female infectious syphilis cases who are indicated as being pregnant at their time of diagnosis in Intrahealth Profile EMR.
20. Congenital syphilis case reports in BC by stage, 1998-2022 YTD*

*YTD = January to September 2022
Syphilis Testing Episodes

21. Syphilis non-prenatal testing episodes* and percent positivity in BC by month - total

*Testing episode = 30-day window (see technical appendix for further details)

Note: Percent positivity is calculated as the number of infectious syphilis cases over testing episodes, where a testing episode is defined as a 30-day window.
22. Syphilis non-prenatal testing episodes* and percent positivity in BC by month - female

*Testing episode = 30-day window (see technical appendix for further details).

Note: Percent positivity is calculated as the number of infectious syphilis cases over testing episodes, where a testing episode is defined as a 30-day window.

-The number of female syphilis non-prenatal testing episodes is based on sex reported on the laboratory requisition. The number of female infectious syphilis cases is based on gender variable values collected in Intrahealth Profile EMR.
23. Syphilis non-prenatal testing episodes* and percent positivity in BC by month - male

*Testing episode = 30-day window (see technical appendix for further details).

Note: Percent positivity is calculated as the number of infectious syphilis cases over testing episodes, where a testing episode is defined as a 30-day window.

-The number of male syphilis non-prenatal testing episodes is based on sex reported on the laboratory requisition. The number of male infectious syphilis cases is based on gender variable values collected in Intrahealth Profile EMR.
Technical Appendix

British Columbia Syphilis Case Definitions
http://www.bccdc.ca/health-professionals/clinical-resources/case-definitions/syphilis

Data Sources

**Case data:** This report contains preliminary data on Infectious Syphilis. The STI-IS was sunsetted and a new electronic medical record system (EMR) went live on March 13th, 2018. The report contains data from the following sources:

- Cases reported up to March 12th, 2018: Data extracted from the STIBBI Mart (source system STIS);
- Cases reported after March 12th, 2018: Data extracted from Intrahealth Profile EMR*.

*During the ongoing system transition, there will be slight changes in counts and categorization of some cases, reflecting differences in algorithms and data structure between the data sources.

Note: “Gender” is based on the gender variable values collected in Intrahealth Profile EMR which is structured as Male, Female, Transgender and Unknown. This variable is separate from the sex variable. However, to calculate rates per 100,000 population by gender, the denominator uses BC Stats population data, which are presented by male and female sex.

**Treatment data:** Treatment information for each case is extracted only from the same Intrahealth Profile EMR form as that which holds the respective infectious syphilis diagnosis. Treatments that are recorded in a separate EMR form/diagnosis are not currently reflected in this report.

**Testing data:** This report contains non-prenatal testing data for syphilis. A test episode consists of all tests conducted for an individual in a 30-day period (as follow-up or simultaneous test may be required to clarify test results within this period, for example).

- Syphilis testing episodes: Data was extracted from STIBBI.

**Denominator data file:** This report uses two sources to calculate rates: 1) P.E.O.P.L.E. 2021 Population Estimates data file (projections released by BC Stats) for current 2022 rates and 2) Population Estimates data file for all previous years.

***Please note that the data used to create the 2022Q3 infectious syphilis report were extracted from EMR on October 15th, 2022.
Calculations

- **The % change in cases** compares the number of syphilis diagnoses during January-September 2022 (2022Q3) to January-September 2021 (2021Q3);

- **The % change in incidence** compares the projected annual incidence in 2022 to the annual incidence in 2021.

- **Time to treatment** is calculated based on the difference (in days) between the surveillance/diagnosis date (i.e. date of specimen collection or, if not available, date of lab test) and earliest recorded treatment date with an appropriate medication (e.g., Benzathine penicillin G (Bicillin LA) 2.4 million units in a single dose (administered in divided doses of 1.2 million units given IM into each hip/buttock at the same visit); or Doxycycline 100mg PO bid x 28 days).