Region 8 Syphilis Quarterly Report
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Hamilton County Public Health
Division of Epidemiology and Assessment

250 William Howard Taft Road
Cincinnati, Ohio 45219
513.946.7800
www.hamiltoncountyhealth.org
Bijal Patel, MPH, Infectious Disease Epidemiologist
This report was created as a surveillance effort to help prevent new cases of syphilis within Region 8 counties (Brown, Butler, Clermont, Clinton, Hamilton, Highland, and Warren). Table 1 displays the breakdown of total syphilis cases for Region 8 residents from January 2020 through June 2021 on a monthly basis. These include cases at any stage of disease (i.e. primary, secondary, latent, or congenital). Only syphilis cases that have been reported to the CDC were counted for analysis purposes in this report. In 2020, the highest number of syphilis cases occurred in January (38 cases). In 2021, the highest number of syphilis cases occurred in both April and May (31 cases). The average number of syphilis cases per month were 27.0 and 22.3 for the years 2020 and 2021, respectively. In Q2 2021, there were 17 fewer cases than in Q2 2020. Data from more recent months are the most likely to change as investigations are finished.

Syphilis cases are derived from partner services data in the Ohio Disease Reporting System and represent only those cases reported to the CDC. These data are provisional and subject to change when additional information is reported. Cases’ residences were determined by address at diagnosis. Source: Ohio Department of Health (ODH), Ohio Disease Reporting System (ODRS). Data reported as of 7/21/2021.
Demographics and Social Factors Associated with High Risk for Syphilis Infection

The number of P&S cases is important to monitor as these are the stages in which a person is most likely to transmit the disease to another person. Table 2 and Figure 2 show the demographics and social factors that make up these P&S cases. Table 2 shows the percentage of P&S syphilis cases from 2020 and 2021 based on race, sex, and risk behavior. Over 45 percent of the P&S syphilis cases from 2020 occurred among white Region 8 residents, and 50 percent in 2021. Additionally, approximately 81 percent of the P&S syphilis cases from 2020-2021 were among male Region 8 residents. Figure 2 displays the shift in age distribution of P&S syphilis cases in Region 8.

### Table 2. Demographics of P&S Syphilis Cases

<table>
<thead>
<tr>
<th></th>
<th>Jan - Dec 2020</th>
<th>Jan - Jun 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>53</td>
<td>44.2%</td>
</tr>
<tr>
<td>White</td>
<td>58</td>
<td>48.3%</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>7.5%</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>101</td>
<td>84.2%</td>
</tr>
<tr>
<td>Female</td>
<td>19</td>
<td>15.8%</td>
</tr>
<tr>
<td><strong>Risk Groups</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSM</td>
<td>58</td>
<td>49.6%</td>
</tr>
<tr>
<td>HRH</td>
<td>35</td>
<td>29.9%</td>
</tr>
<tr>
<td>IDU</td>
<td>5</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

Stages of Syphilis Infection: Region 8

Syphilis infections are organized into different stages based on the clinical presentation of disease and duration of infection. Congenital syphilis cases are cases of syphilis in which the infection is transferred from mother to infant during pregnancy or delivery. Congenital syphilis cases serve as key indicators of community health as this stage of infection is easily preventable when proper healthcare is present. Transmission of syphilis is possible during primary, secondary, and early latent stages of disease. In particular, primary and secondary infections are considered highly infectious stages. During late latent and unknown duration syphilis, the patient may no longer be infectious and have no symptoms; however if the patient does not receive treatment the disease can develop into neurological problems, possibly leading to death. Cases of syphilis of unknown duration are grouped together with late syphilis for the purposes of surveillance.

These data are provisional and subject to change when additional data are reported. Cases’ residences were determined by address at diagnosis. Source: ODH, ODRS. Data reported as of 7/21/2021. Percentages may not total to 100 percent due to rounding. Percentages are based on availability of data for all cases. High risk heterosexuals are residents who are not MSM but participate in risky behaviors such as having sex with men who have sex with men (MSM), HIV+, intravenous drug user (IDU), or anonymous people. HRH status is also determined from factors such as having sex while intoxicated, exchanging sex for drugs, or having previous STIs.
Overview of Syphilis in Hamilton County

Table 3 displays the breakdown of new total syphilis cases for Hamilton County residents for January 2020 through June 2021 on a monthly basis. Only syphilis cases where the resident was identified as a new syphilis infection by a disease investigation specialist were counted for analysis purposes in this report. Table 4 compares the race, sex, and risk behavior groups for new primary and secondary syphilis infections from January 2020 through June 2021. Figure 4, below, illustrates the distribution of age among new primary and secondary syphilis diagnoses in Hamilton County. From 2017 to 2021, 25-34 year olds make up the largest percentage of cases. Figure 5 displays the stages of syphilis for Hamilton County. Table 5 and 6 displays the breakdown of new syphilis cases for select counties in Region 8 and the demographic makeup of the newly identified syphilis cases. Table 7 displays the stages of syphilis for select counties in Region 8.

Table 3. Hamilton County New Total Syphilis Infections

<table>
<thead>
<tr>
<th>Month</th>
<th>New Cases of Syphilis 2020</th>
<th>New Cases of Syphilis 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>29</td>
<td>11</td>
</tr>
<tr>
<td>February</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>March</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>April</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>May</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>June</td>
<td>31</td>
<td>8</td>
</tr>
<tr>
<td>July</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td>August</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>September</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>October</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>November</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>December</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>245</strong></td>
<td><strong>98</strong></td>
</tr>
</tbody>
</table>

Table 4. Demographics of P&S Syphilis Cases

<table>
<thead>
<tr>
<th>Race</th>
<th>Jan - Dec 2020</th>
<th>Jan - June 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>49</td>
<td>57.6%</td>
</tr>
<tr>
<td>White</td>
<td>31</td>
<td>36.5%</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>5.9%</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>69</td>
<td>81.2%</td>
</tr>
<tr>
<td>Female</td>
<td>16</td>
<td>18.8%</td>
</tr>
<tr>
<td>Risk Groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MSM</td>
<td>41</td>
<td>48.2%</td>
</tr>
<tr>
<td>HRH</td>
<td>28</td>
<td>32.9%</td>
</tr>
<tr>
<td>IDU</td>
<td>4</td>
<td>4.7%</td>
</tr>
</tbody>
</table>

Figure 4. Primary & Secondary Syphilis Incidence by Age, Hamilton County, 2017-2021

Figure 5. Stages of Syphilis at Diagnosis, Hamilton County, Jan 2020 - Jun 2021
Overview of Syphilis for Select Counties in Region 8

Table 5. Select Counties in Region 8 Total Syphilis Infections by Quarters, 2020-2021

<table>
<thead>
<tr>
<th></th>
<th>Brown</th>
<th>Butler</th>
<th>Clermont</th>
<th>Clinton</th>
<th>Highland</th>
<th>Warren</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020-Q1</td>
<td>0</td>
<td>9</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2020-Q2</td>
<td>1</td>
<td>13</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>2020-Q3</td>
<td>3</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2020-Q4</td>
<td>0</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2021-Q1</td>
<td>1</td>
<td>12</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2021-Q2</td>
<td>2</td>
<td>12</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2021-Q3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2021-Q4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 6. Select Counties in Region 8 Primary & Secondary Infections

<table>
<thead>
<tr>
<th>Race</th>
<th>Jan - Dec 2020</th>
<th>Jan - Jun 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>White</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Race %</td>
<td>12.5%</td>
<td>33.3%</td>
</tr>
<tr>
<td>White %</td>
<td>84.4%</td>
<td>66.7%</td>
</tr>
<tr>
<td>Other %</td>
<td>3.1%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>Jan - Dec 2020</th>
<th>Jan - Jun 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>29</td>
<td>12</td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Sex %</td>
<td>85.3%</td>
<td>66.7%</td>
</tr>
<tr>
<td>Female %</td>
<td>14.7%</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk Group</th>
<th>Jan - Dec 2020</th>
<th>Jan - Jun 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSM</td>
<td>17</td>
<td>4</td>
</tr>
<tr>
<td>HRH</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>IDU</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Risk Group %</td>
<td>53.1%</td>
<td>22.2%</td>
</tr>
<tr>
<td>HRH %</td>
<td>21.9%</td>
<td>27.8%</td>
</tr>
<tr>
<td>IDU %</td>
<td>3.1%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Table 7. Select Counties in Region 8 Stages of Stages of Syphilis

<table>
<thead>
<tr>
<th>Stages of Syphilis</th>
<th>Jan - Dec 2020</th>
<th>Jan - Jun 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congenital</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Early</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Late Latent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Late w/ Clinical</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Primary</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Secondary</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Unknown Duration</td>
<td>34</td>
<td>6</td>
</tr>
<tr>
<td>Stages of Syphilis %</td>
<td>6.1%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Early %</td>
<td>13.4%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Late Latent %</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Late w/ Clinical %</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Primary %</td>
<td>13.4%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Secondary %</td>
<td>25.6%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Unknown Duration %</td>
<td>41.5%</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

Syphilis cases are derived from partner services data in the Ohio Disease Reporting System and represent only those cases reported to the CDC. These data are provisional and subject to change when additional data are reported. Cases’ residences were determined by address at diagnosis. Source: Ohio Department of Health (ODH), Ohio Disease Reporting System (ODRS). Data reported as of 7/21/2021.