



**HAMILTON COUNTY
PUBLIC HEALTH**

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Region 8 Syphilis Quarterly Report

Volume 2 Issue 4

March 5, 2021



**Hamilton County Public Health
Division of Epidemiology and Assessment**

**250 William Howard Taft Road
Cincinnati, Ohio 45219
513.946.7800**

www.hamiltoncountyhealth.org

David Carlson, MPH, Director of Epidemiology



Syphilis Quarterly Report: Region 8

New Syphilis Diagnoses by Month, Region 8, Ohio (January 2019 - December 2020)

Table 1. Region 8 New Total Syphilis Infections

Month	Cases of Syphilis 2019	Cases of Syphilis 2020
January	36	38
February	24	20
March	35	18
April	27	27
May	29	26
June	24	36
July	20	30
August	28	37
September	33	26
October	42	22
November	30	20
December	36	24
Total	364	324

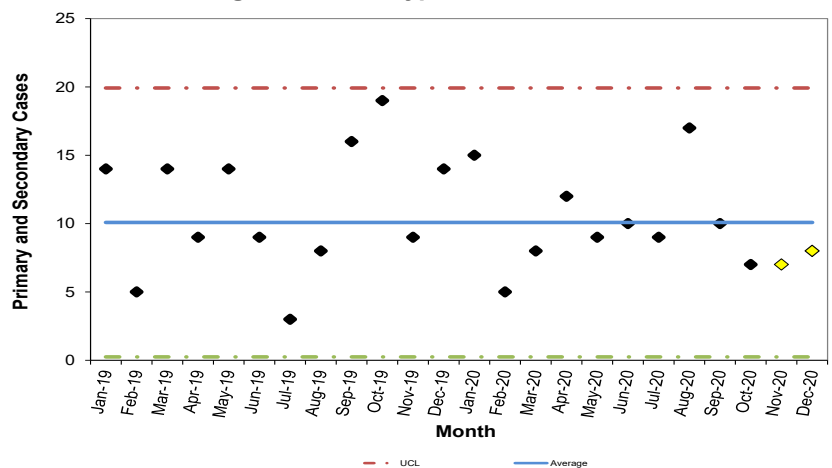
This report was created as a surveillance effort to help prevent new cases of syphilis within Region 8 counties (Brown, Butler, Clermont, Clinton, Hamilton, Highland, and Warren) Table 1 displays the breakdown of total syphilis cases for Region 8 residents from January 2019 through December 2020 on a 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 2019, the highest number of syphilis cases occurred in October (42 cases). In 2020, the highest number of syphilis cases occurred in January (38 cases). The average number of syphilis cases per month were 30.3 and 27.0 for the years 2019 and 2020, respectively. In Q4 2020, there were 42 fewer cases than in Q4 2019. 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 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 2/27/2021.

Surveillance of Primary and Secondary Cases Diagnosed in Region 8, Ohio (Jan 2019 - Dec 2020)

One way to monitor primary and secondary (P&S) syphilis infections within Region 8 is through the use of surveillance control charts. Factors that this control chart shows are the number of P&S syphilis cases for each month (black diamonds), control limits (red dashed lines), and the average number of cases (solid blue line). Data points most likely to change are marked in yellow. Control charts are used to detect unexpected events, such as a single point outside of the control limit, consecutive points above or below the average line, or two to three consecutive points near a control limit. When anomalies such as these occur, it may be beneficial to examine events surrounding the anomalies in order to devise a strategy to reduce the number of cases in subsequent months or to see which strategies already in place are effective. Figure 1 illustrates the control chart for P&S syphilis infections from January 2019 – December 2020.

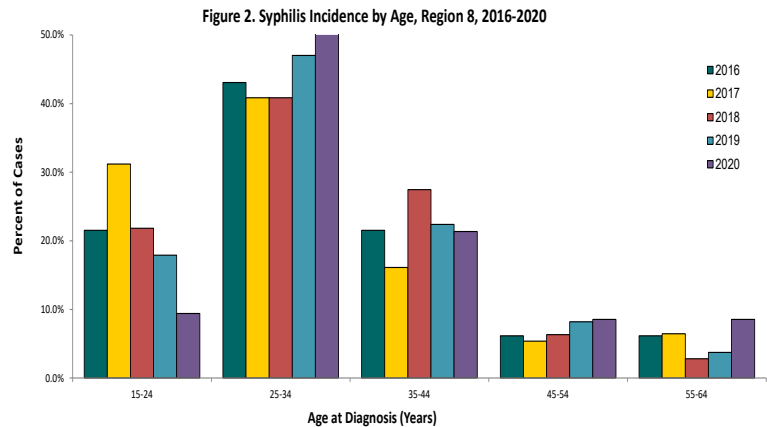
Figure 1. P&S Syphilis Control Chart



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: ODH, ODRS. Data reported as of 2/27/2021.

Demographics and Social Factors Associated with High Risk for Syphilis Infection

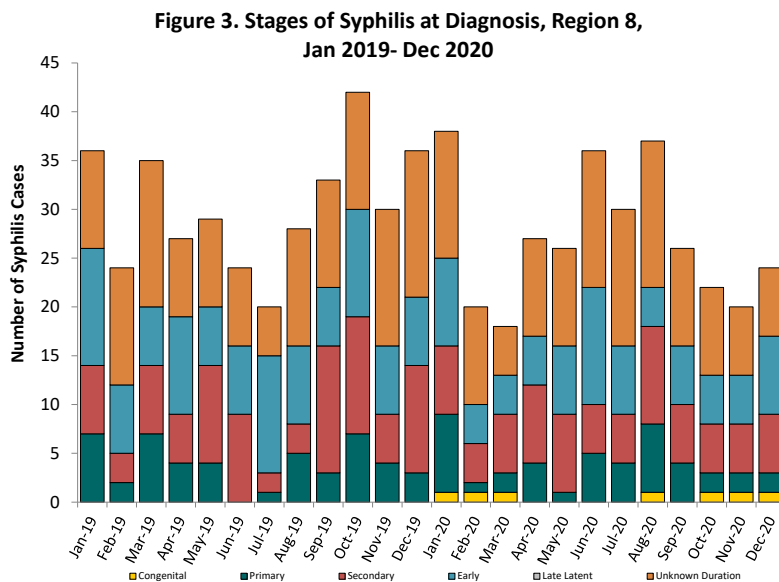
The number of P&S cases is important to monitor as these are the stages in which a person is most likely to transmit the disease to another person. Table 2 and Figure 2 show the demographics and social factors that make up these P&S cases. Table 2 shows the percentage of P&S syphilis cases from 2019 and 2020 based on race, sex, and risk behavior. Over 50 percent of the P&S syphilis cases from 2019 occurred among black Region 8 residents, which has decreased in 2020 to 45.3 percent. Additionally, over 80 percent of the P&S syphilis cases from 2019-2020 were among male Region 8 residents. Figure 2 displays the shift in age distribution of P&S syphilis cases in Region 8.



	Jan - Dec 2019		Jan - Dec 2020	
	#	%	#	%
Race				
Black	69	51.5%	53	45.3%
White	62	46.3%	57	48.7%
Other	3	2.2%	7	6.0%
Sex				
Male	109	81.3%	98	83.8%
Female	25	18.7%	19	16.2%
Risk Groups				
MSM	67	50.0%	58	49.6%
HRH	47	35.1%	35	29.9%
IDU	8	6.0%	5	4.3%

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 2/27/2021. 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.

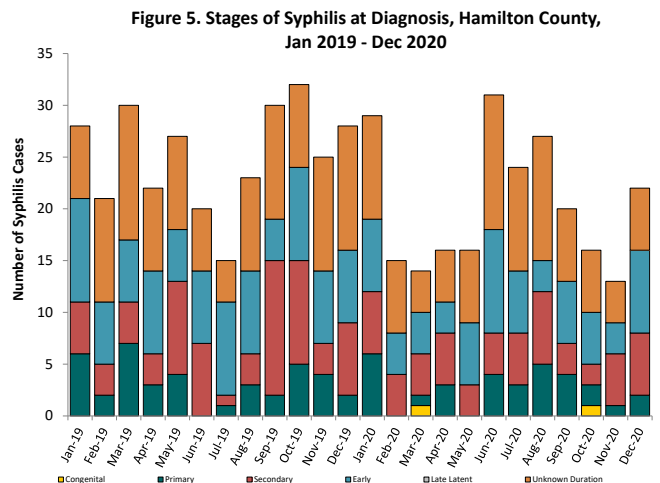
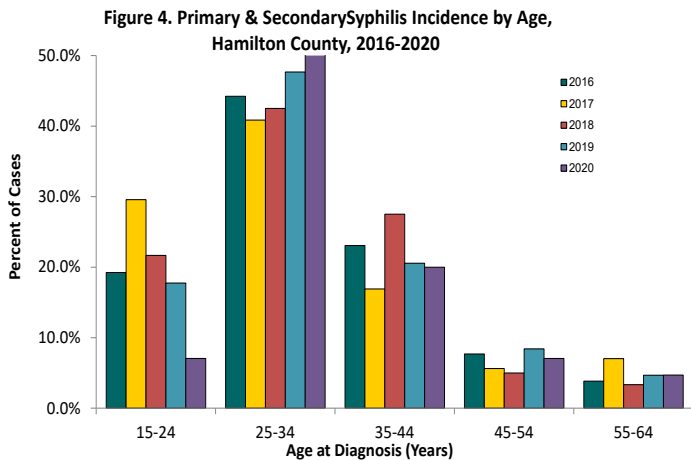


Overview of Syphilis in Hamilton County

Table 3 displays the breakdown of new total syphilis cases for Hamilton County residents for January 2019 through December 2020 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 2019 through December 2020. Figure 4, below, illustrates the distribution of age among new primary and secondary syphilis diagnoses in Hamilton County. From 2016 to 2020, 25-34 year olds made 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.

Month	New Cases of Syphilis 2019	New Cases of Syphilis 2020
January	28	29
February	21	15
March	30	14
April	22	16
May	27	16
June	20	31
July	15	24
August	23	27
September	30	20
October	32	16
November	25	13
December	28	22
Total	301	243

	Jan - Dec 2019		Jan - Dec 2020	
	#	%	#	%
Race				
Black	64	59.8%	49	57.6%
White	41	38.3%	30	35.3%
Other	2	1.9%	6	7.1%
Sex				
Male	87	81.3%	69	81.2%
Female	20	18.7%	16	18.8%
Risk Groups				
MSM	53	49.5%	41	48.2%
HRH	39	36.4%	28	32.9%
IDU	5	4.7%	4	4.7%



Overview of Syphilis for Select Counties in Region 8

Table 5. Select Counties in Region 8 Total Syphilis Infections by Quarters, 2019-2020

	Brown	Butler	Clermont	Clinton	Highland	Warren
2019-Q1	0	8	4	0	2	2
2019-Q2	0	5	5	0	1	0
2019-Q3	0	8	2	0	1	2
2019-Q4	1	16	4	0	0	2
2020-Q1	0	9	5	0	0	4
2020-Q2	1	13	6	0	0	6
2020-Q3	3	8	3	1	2	5
2020-Q4	0	7	1	0	1	6

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

	Jan - Dec 2019		Jan - Dec 2020	
	#	%	#	%
Race				
Black	5	18.5%	4	12.5%
White	21	77.8%	27	84.4%
Other	1	3.7%	1	3.1%
Sex				
Male	22	81.5%	29	90.6%
Female	5	18.5%	3	9.4%
Risk Group				
MSM	14	51.9%	10	52.6%
HRH	8	29.6%	5	26.3%
IDU	3	11.1%	1	5.3%

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

	Jan - Dec 2019		Jan - Dec 2020	
	#	%	#	%
Stages of Syphilis				
Congenital	0	1.3%	2	0.0%
Early	13	19.2%	7	20.6%
Late Latent	0	0.0%	0	0.0%
Late w/ Clinical	0	0.0%	0	0.0%
Primary	8	9.0%	7	12.7%
Secondary	19	19.2%	12	30.2%
Unknown Duration	23	51.3%	16	36.5%