



**HAMILTON COUNTY
PUBLIC HEALTH**

PREVENT. PROMOTE. PROTECT.



Region 8 Syphilis Quarterly Report

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New Syphilis Diagnoses by Month, Region 8, Ohio (January 2018-December 2019)

Table 1. Region 8 New Total Syphilis Infections

Month	Cases of Syphilis 2018	Cases of Syphilis 2019
January	38	36
February	37	24
March	39	35
April	33	27
May	23	29
June	36	24
July	31	20
August	28	28
September	26	33
October	45	42
November	37	30
December	28	36
Total	401	364

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 2018 through December 2019 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 2018, the highest number of syphilis cases occurred in October (45 cases). In 2019, the highest number of syphilis cases occurred in October (42 cases). The average number of syphilis cases per month were 33.4 and 30.3 for the years 2018 and 2019, respectively. In Q4 2019, there were 2 percent less cases of syphilis than in Q4 2018. Data from more recent months are the most likely to change as investigations are finished.

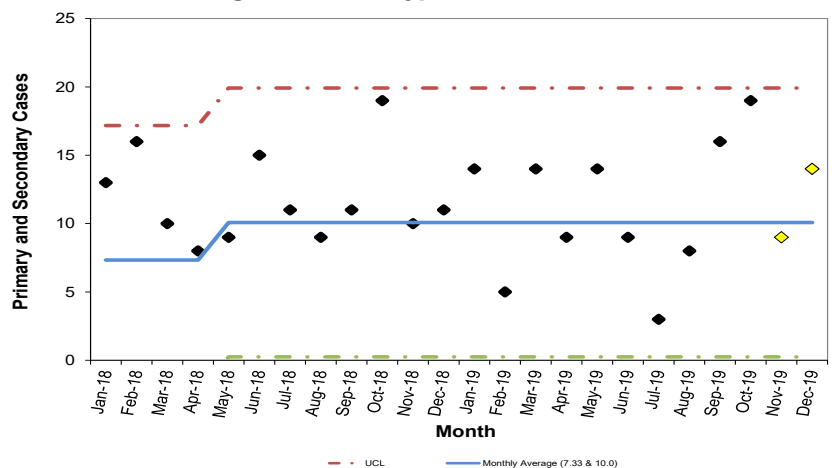
Syphilis cases are derived from partner services data in the Ohio Disease Reporting System and represent only those cases reported to the CDC. These data are provisional and subject to change when additional data are reported. Cases' residences were determined by address at diagnosis. Source: Ohio Department of Health (ODH), Ohio Disease Reporting System (ODRS). Data reported as of 8/22/2020.

Surveillance of Primary and Secondary Cases Diagnosed in Region 8, Ohio (Jan 2018 - Dec 2019)

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

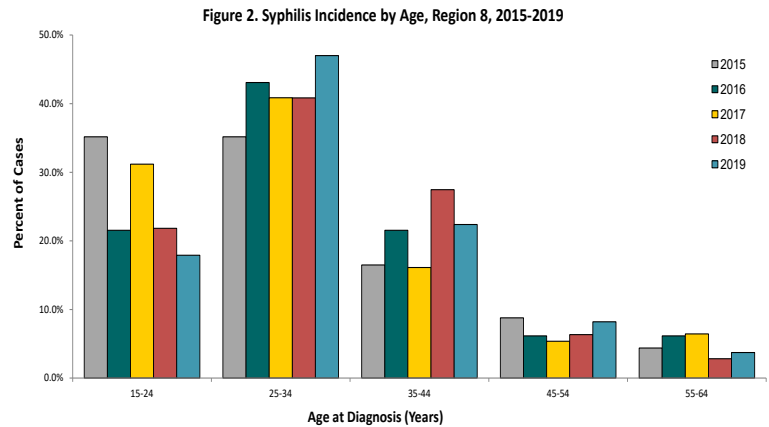
the number of cases in subsequent months or to see which strategies already in place are effective. Figure 1 illustrates the control chart for P&S syphilis infections from January 2018 – December 2019. There was a recalculation of the average number of cases starting June 2018 using data from June 2017 to May 2018 (10), in result of 8 consecutive cases above the average line.

Figure 1. P&S Syphilis Control Chart



Demographics and Social Factors Associated with High Risk for Syphilis Infection

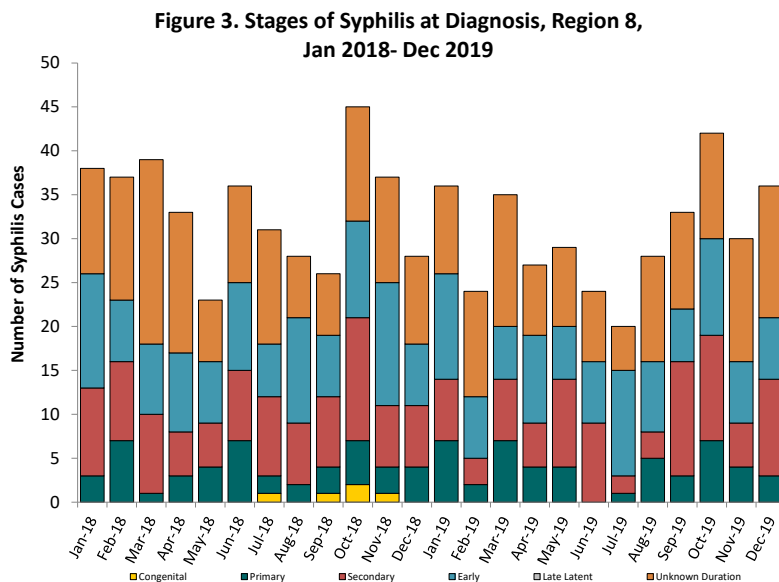
The number of P&S cases is important to monitor as these are the stages in which a person is most likely to transmit the disease to another person. Table 2 and Figure 2 show the demographics and social factors that make up these P&S cases. Table 2 shows the percentage of P&S syphilis cases from 2018 and 2019 based on race, sex, and risk behavior. Over 60 percent of the P&S syphilis cases from 2018 occurred among black Region 8 residents, which has decreased in 2019 to 51.5 percent. Additionally, over 80 percent of the P&S syphilis cases from 2018-2019 were among male Region 8 residents. Figure 2 displays the shift in age distribution of P&S syphilis cases in Region 8.



	Jan - Dec 2018		Jan - Dec 2019	
	#	%	#	%
Race				
Black	90	63.4%	69	51.5%
White	42	29.6%	62	46.3%
Other	10	7.0%	3	2.2%
Sex				
Male	128	90.1%	109	81.3%
Female	14	9.9%	25	18.7%
Risk Groups				
MSM	73	51.4%	67	50.0%
HRH	36	25.4%	47	35.1%
IDU	7	4.9%	8	6.0%

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 8/22/2020. 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.

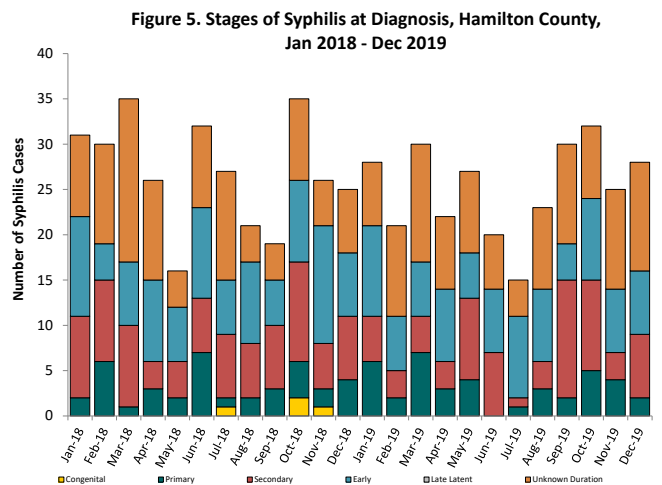
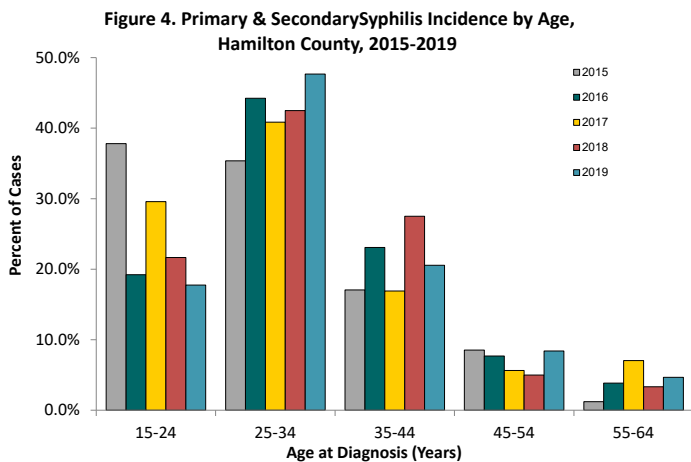


Overview of Syphilis in Hamilton County

Table 3 displays the breakdown of new total syphilis cases for Hamilton County residents for January 2018 through December 2019 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 2018 through December 2019. Figure 4, below, illustrates the distribution of age among new primary and secondary syphilis diagnoses in Hamilton County. From 2015 to 2019, 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 2018	New Cases of Syphilis 2019
January	31	28
February	30	21
March	35	30
April	26	22
May	16	27
June	32	20
July	27	15
August	21	23
September	19	30
October	35	32
November	26	25
December	25	28
Total	323	301

	Jan - Dec 2018		Jan - Dec 2019	
	#	%	#	%
Race				
Black	86	71.7%	64	59.8%
White	25	20.8%	41	38.3%
Other	9	7.5%	2	1.9%
Sex				
Male	108	90.0%	87	81.3%
Female	12	10.0%	20	18.7%
Risk Groups				
MSM	59	49.2%	53	49.5%
HRH	35	29.2%	39	36.4%
IDU	4	3.3%	5	4.7%



Overview of Syphilis for Select Counties in Region 8

Table 5. Select Counties in Region 8 Total Syphilis Infections by Quarters, 2018-2019

	Brown	Butler	Clermont	Clinton	Highland	Warren
2018-Q1	0	10	4	2	0	2
2018-Q2	0	13	0	0	1	4
2018-Q3	1	9	2	1	1	4
2018-Q4	0	15	5	1	1	2
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

Table 6. Select Counties in Region 8 Primary & Secondary Infections, 2018-2019

	Jan - Dec 2018		Jan - Dec 2019	
	#	%	#	%
Race				
Black	4	18.2%	5	18.5%
White	17	77.3%	21	77.8%
Other	1	4.5%	1	3.7%
Sex				
Male	20	90.9%	22	81.5%
Female	2	9.1%	5	18.5%
Risk Group				
MSM	14	63.6%	14	51.9%
HRH	1	4.5%	8	29.6%
IDU	3	13.6%	3	11.1%

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

	Jan - Dec 2018		Jan - Dec 2019	
	#	%	#	%
Stages of Syphilis				
Congenital	1	1.3%	0	0.0%
Early	15	19.2%	13	20.6%
Late Latent	0	0.0%	0	0.0%
Late w/ Clinical	0	0.0%	0	0.0%
Primary	7	9.0%	8	12.7%
Secondary	15	19.2%	19	30.2%
Unknown Duration	40	51.3%	23	36.5%