HAMILTON COUNTY PUBLIC HEALTH

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Region 8 Syphilis Quarterly Report

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Syphilis Quarterly Report: Region 8

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

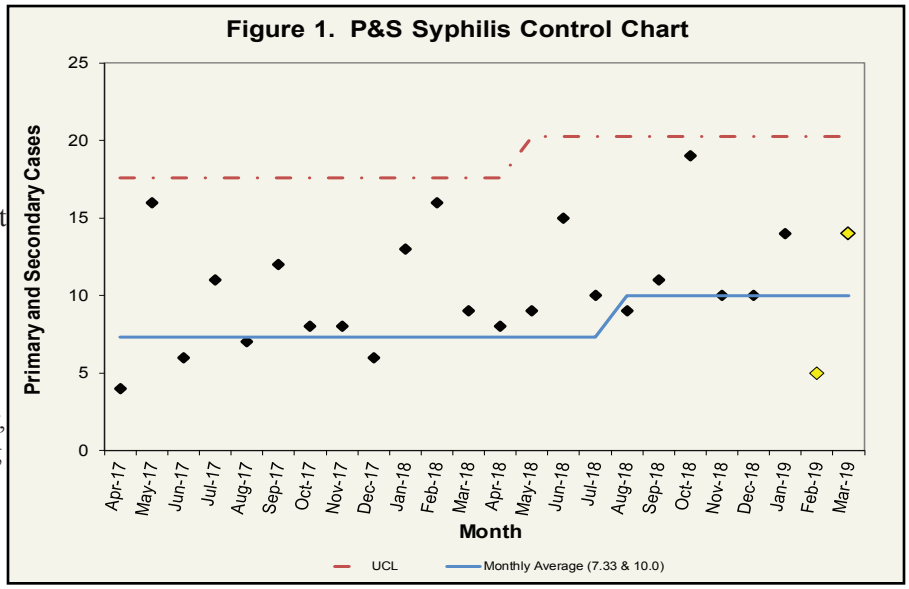
Table 1. Region 8 Syphilis Infections		
Month	Cases of Syphilis 2018	Cases of Syphilis 2019
January	38	37
February	36	24
March	37	35
April	32	
May	24	
June	36	
July	31	
August	28	
September	26	
October	45	
November	37	
December	27	
Total	397	96

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 March 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 January (37 cases). The average number of syphilis cases per month were 33.1 and 32 for the years 2018 and 2019, respectively. In Q1 2019, there were 13 percent less cases of syphilis than in Q1 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 06/10/2019

Surveillance of Primary and Secondary Cases Diagnosed in Region 8, Ohio (April 2017-March 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 April 2017 – March 2019. The monthly average number of cases (7.3) was calculated using data from October 14-September 2015 and is reflected in the chart. There was a recalculation of the average starting June 2018 using data from June 2017 to May 2018 (10), in result of 8 consecutive cases above the average line.



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 06/10/2019.

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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. About 60 percent of the P&S syphilis cases from 2018 occurred among black Region 8 residents, which has decreased in 2019 to 50 percent. Additionally, 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.

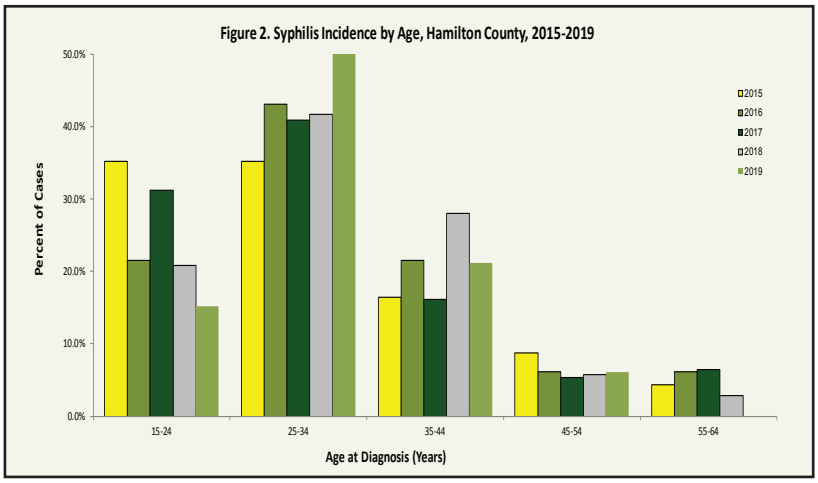
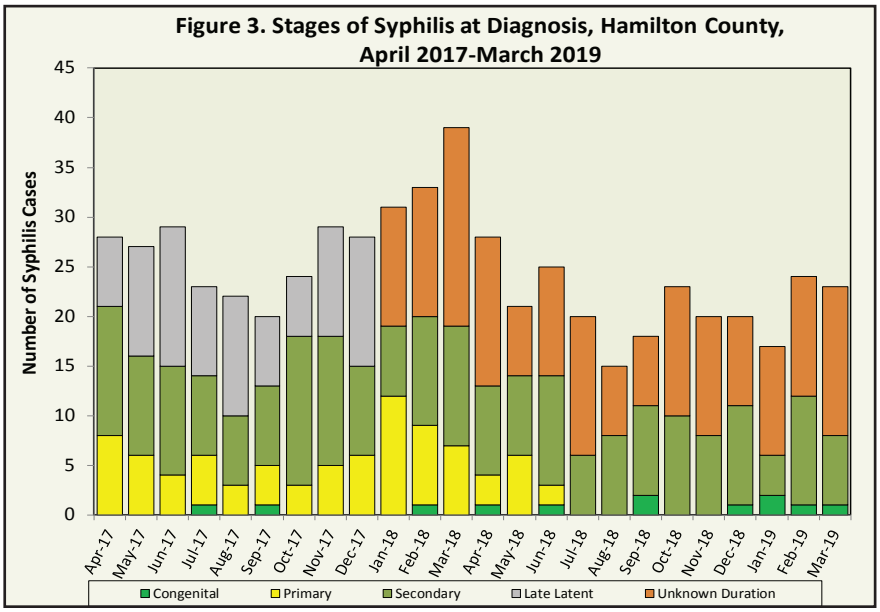


Table 2. Demographics of P&S Syphilis Cases

	Jan. - Dec. 2018		Jan. - March 2019	
	#	%	#	%
Race				
Black	87	62.6	17	51.5
White	43	30.9	15	45.5
Other	9	6.5	1	3.0
Sex				
Male	125	89.9	28	84.8
Female	14	10.1	5	15.2
Risk Group				
MSM	71	51.1	18	54.5
HRH	35	25.2	13	39.4
IDU	7	5.0	1	3.0

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 06/10/2019. 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.

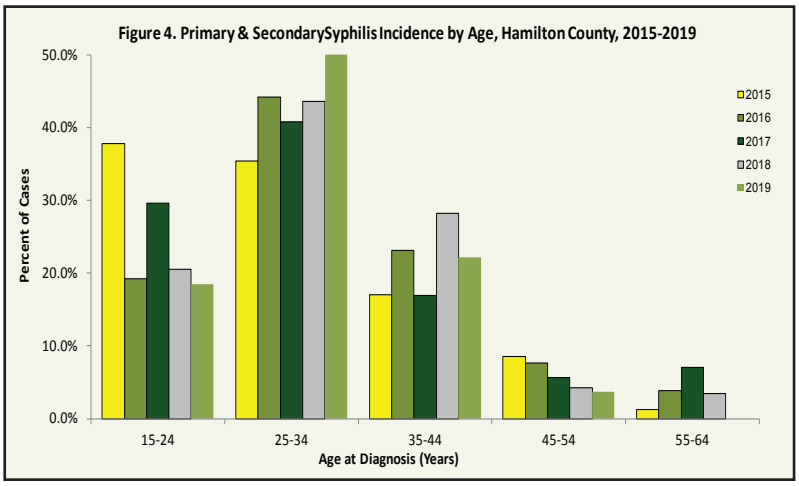
Overview of Syphilis in Hamilton County

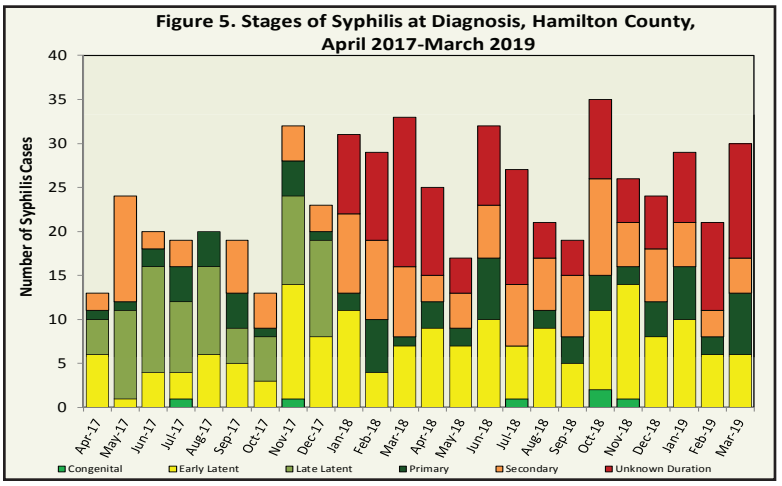
Table 3 displays the breakdown of new total syphilis cases for Hamilton County residents for January 2018 through March 2019 on a monthly basis. Only syphilis cases where the resident was identified as a new syphilis infection by a disease investigation specialist were counted for analysis purposes in this report. 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 4 compares the race, sex, and risk behavior groups for new primary and secondary syphilis infections from January 2018 through March 2019. Table 5 and 6 displays the breakdown of new syphilis cases for Region 8 without Hamilton County and the demographic makeup of the newly identified HIV cases. Table 7 displays the stages of syphilis for Region 8 without Hamilton County.

Table 3. Hamilton County New Total Syphilis Infections

Month	New Cases of Syphilis 2018	New Cases of Syphilis 2019
January	31	29
February	29	21
March	33	30
April	25	
May	17	
June	32	
July	27	
August	21	
September	19	
October	35	
November	26	
December	24	
Total	319	80

Table 4. P&S Syphilis	Jan. - Dec. 2018		Jan. - March 2019	
	#	%	#	%
Race				
Black	83	70.9	17	63.0
White	26	22.2	9	33.3
Other	8	6.8	1	3.7
Sex				
Male	105	89.7	23	85.2
Female	12	10.3	4	14.8
Risk Groups				
MSM	57	48.7	16	59.3
HRH	34	29.1	11	40.7
IDU	4	3.4	1	3.7





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Overview of Syphilis for Select Counties in Region 8

Table 5. Select Counties in Region 8 Total Syphilis Infections by Quarters, 2018-2019						
County	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	13	2	1	1	4
2018-Q4	0	15	5	1	1	2
2019-Q1	0	8	4	0	2	2
2019-Q2						
2019-Q3						
2019-Q4						

Table 6. Select Counties in Region 8 Primary & Secondary Infections, 2018-2019				
	Jan. - Dec. 2018		Jan. - March 2019	
	#	%	#	%
Race				
Black	4	18.2	0	0.0
White	17	77.3	6	100.0
Other	1	4.5	0	0.0
Sex				
Male	20	90.9	5	83.3
Female	2	9.1	1	16.7
Risk Groups				
MSM	14	63.6	2	33.3
HRH	1	4.5	2	33.3
IDU	3	13.6	0	0.0

Table 7.	Jan. - Dec. 2018		Jan. - March 2019	
	#	%	#	%
Stages of Syphilis				
Congenital	1	1.3	0	0.0
Early	15	19.2	3	18.8
Late Latent	0	0.0	0	0.0
Late w/ Clinical	0	0.0	0	0.0
Primary	7	9.0	1	6.3
Secondary	15	19.2	5	31.3
Unknown Duration	40	51.3	7	43.8

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 06/10/2019