



**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 2021 - September 2022)

Table 1. Region 8 New Total Syphilis Infections

Month	Cases of Syphilis 2021	Cases of Syphilis 2022
January	15	53
February	18	41
March	29	39
April	31	49
May	31	42
June	10	42
July	30	60
August	35	68
September	39	60
October	28	0
November	39	0
December	25	0
Total	330	454

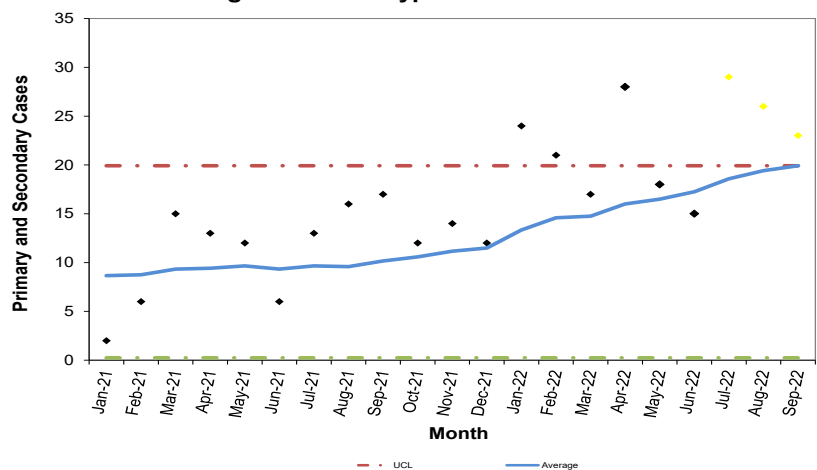
This report was created as a surveillance effort to help prevent new cases of syphilis within Region 8 counties (Brown, Butler, Clermont, Clinton, Hamilton, Highland, and Warren) Table 1 displays the breakdown of total syphilis cases for Region 8 residents from January 2021 through September 2022 on 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 2021, the highest number of syphilis cases occurred in September and November (39 cases). In 2022, the highest number of syphilis cases occurred in August (68 cases). The average number of syphilis cases per month were 27.6 and 50.4 for the years 2021 and 2022, respectively. In Q2 2022, there were 84 more cases than in Q2 2021. Data from more recent months is 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 12/22/2022.

Surveillance of Primary and Secondary Cases Diagnosed in Region 8, Ohio (Jan 2021 - Sept 2022)

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 2021 – September 2022.

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 12/22/2022.

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 2021 and 2022 based on race, sex, and risk behavior groups. Over 45% of the P&S syphilis cases from 2021-2022 occurred among black Region 8 residents. Additionally, over 75% percent of the P&S syphilis cases from 2021-2022 were among male Region 8 residents. Figure 2 displays the shift in age distribution of P&S syphilis cases in Region 8.

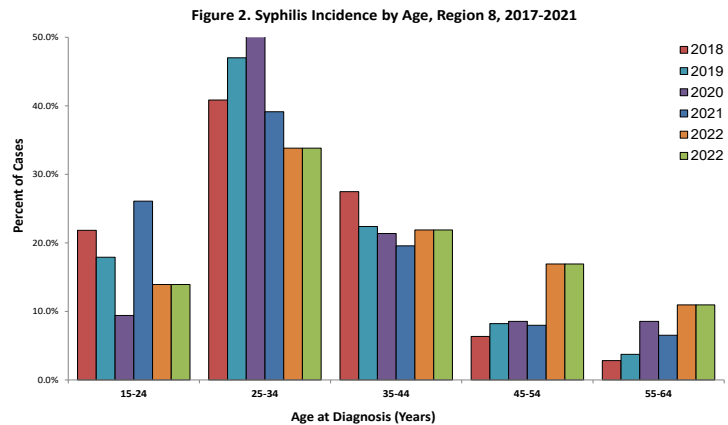
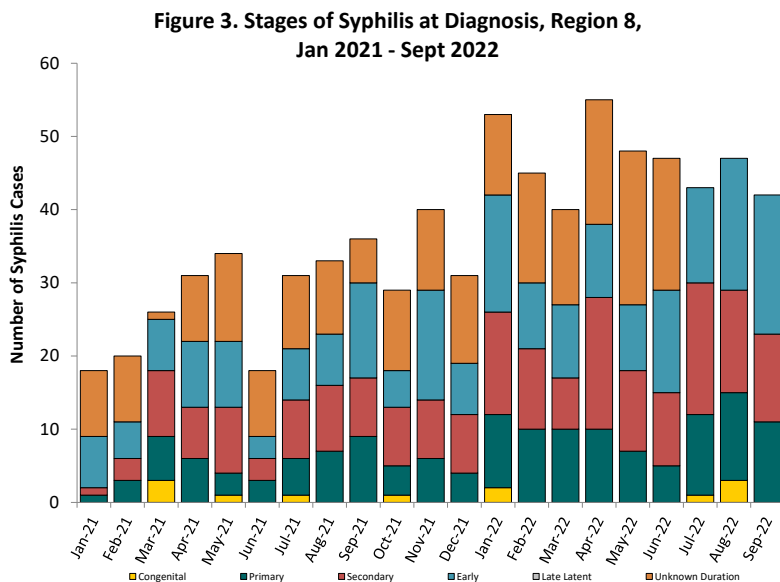


Table 2. Demographics of P&S Syphilis Cases				
	Jan - Dec 2021		Jan - Sept 2022	
	#	%	#	%
Race				
Black	70	50.7%	91	46.0%
White	54	39.1%	81	40.9%
Other	14	10.1%	26	13.1%
Sex				
Male	112	81.2%	156	78.8%
Female	26	18.8%	42	21.2%
Risk Groups				
MSM	58	42.0%	80	39.8%
HRH	47	34.1%	76	37.8%
IDU	4	2.9%	10	5.0%

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. Figure 3 displays the stages of syphilis for Region 8.



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 12/22/2022. 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 2021 through June 2022 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 2021 through June 2022. Figure 4, below, illustrates the distribution of age among new primary and secondary syphilis diagnoses in Hamilton County. From 2018 to 2022, 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

Month	New Cases of Syphilis 2021	New Cases of Syphilis 2022
January	11	40
February	15	30
March	20	30
April	23	34
May	21	36
June	8	35
July	23	47
August	26	54
September	23	45
October	19	0
November	29	0
December	19	0
Total	237	351

Table 4. Demographics of P&S Syphilis Cases

	Jan - Dec 2021		Jan - Sept 2022	
	#	%	#	%
Race				
Black	58	59.8%	86	58.1%
White	28	28.9%	38	25.7%
Other	11	11.3%	24	16.2%
Sex				
Male	79	81.4%	122	82.4%
Female	18	18.6%	26	17.6%
Risk Groups				
MSM	42	43.3%	67	44.7%
HRH	35	36.1%	54	36.0%
IDU	3	3.1%	4	2.7%

Figure 4. Primary & Secondary Syphilis Incidence by Age, Hamilton County, 2018-2022

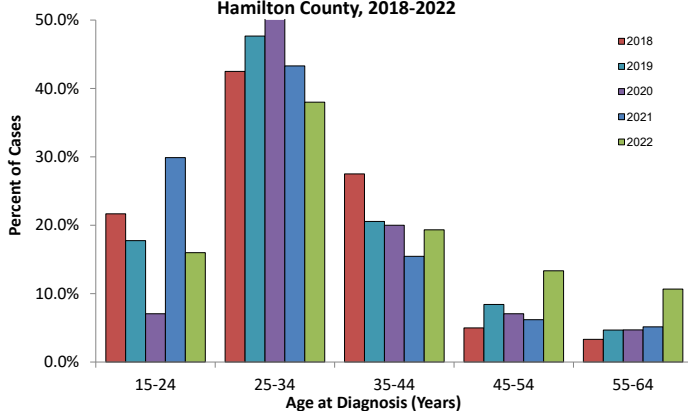
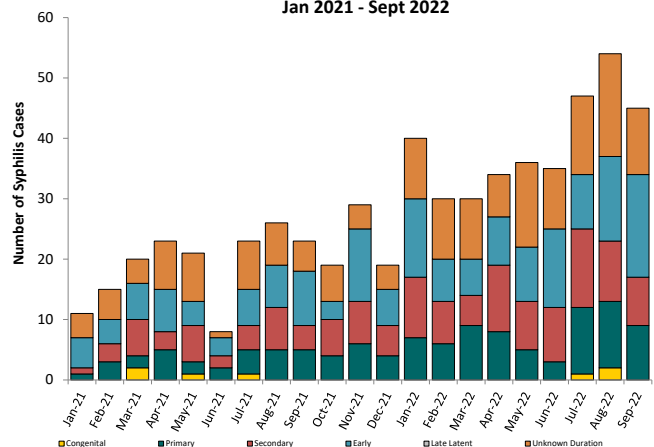


Figure 5. Stages of Syphilis at Diagnosis, Hamilton County, Jan 2021 - Sept 2022



Overview of Syphilis for Select Counties in Region 8

Table 5. Select Counties in Region 8 Total Syphilis Infections by Quarters, 2021-2022

	Brown	Butler	Clermont	Clinton	Highland	Warren
2021-Q1	1	12	0	1	1	1
2021-Q2	2	12	3	2	0	1
2021-Q3	1	20	5	0	0	6
2021-Q4	0	13	7	0	1	4
2022-Q1	0	21	2	2	1	7
2022-Q2	1	22	1	0	1	3
2022-Q3	2	25	4	4	1	6
2022-Q4	0	0	0	0	0	0

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

	Jan - Dec 2021		Jan - Sept 2022	
	#	%	#	%
Race				
Black	12	29.3%	5	10.0%
White	26	63.4%	43	86.0%
Other	3	7.3%	2	4.0%
Sex				
Male	33	80.5%	34	68.0%
Female	8	19.5%	16	32.0%
Risk Group				
MSM	16	39.0%	13	25.5%
HRH	12	29.3%	22	43.1%
IDU	1	2.4%	6	11.8%

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

	Jan - Dec 2021		Jan - Sept 2022	
	#	%	#	%
Stages of Syphilis				
Congenital	2	2.2%	3	2.9%
Early	22	23.7%	22	21.4%
Late Latent	0	0.0%	0	0.0%
Late w/ Clinical	0	0.0%	0	0.0%
Primary	14	15.1%	17	16.5%
Secondary	27	29.0%	34	33.0%
Unknown Duration	28	30.1%	27	26.2%

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