

Region 8 Syphilis Quarterly Report

2023 2nd Quarter



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

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Syphilis Surveillance Background

Hamilton County Public Health conducts syphilis surveillance and mitigation in seven counties (Brown, Butler, Clermont, Clinton, Hamilton, Highland, and Warren) known as Region 8. This quarterly report was created as a surveillance effort to track and prevent new cases of syphilis within Region 8 counties. When a person is determined to have a new syphilis infection in Region 8, disease intervention specialists from Hamilton County Public Health attempt to contact that person and offer partner-services (e.g., interview patient, contact tracing, partner testing, and linkage to treatment). Only new cases of syphilis were counted for analysis purposes in this report. Some syphilis cases are unable to be located for an interview, which may impact data collection. The following report features total new syphilis counts, demographic data, and risk factor data for Region 8 counties.

The purpose of collecting and distributing demographic and risk factor data is to inform programming, community partners, and stakeholders so the best effort can be made to diagnose, prevent, and treat syphilis infections in our community. These data can provide a snapshot of syphilis surveillance in the region, but do not always tell the entire story. To fully understand the situation, community voices, stakeholders, and other sources should be considered.

Syphilis cases for this report include first time infections and re-infections.

These data are provisional and subject to change as there is a lag time in reporting and cases may be added or removed. Ohio Department of Health specifically disclaims responsibility for analyses, interpretations, or conclusions.

Email Jacob.Henderson@Hamilton-Co.Org with any questions regarding this report.

Data downloaded from Ohio Disease Reporting System (ODRS) on 8/22/2023.

Stages of Syphilis

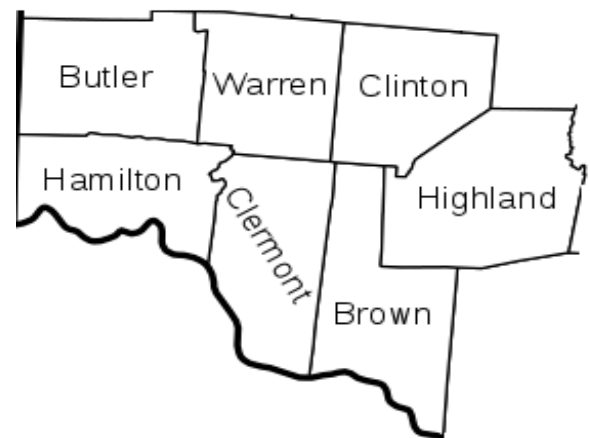
Syphilis infections are categorized into different stages based on the clinical presentation of disease and duration of infection.

Congenital Syphilis: Are cases of syphilis in which the infection is transferred from mother to infant during pregnancy or delivery.

Early Syphilis: This stage is when a person has been infected for less than a year. The stages include Early Latent (no signs or symptoms, but infected for less than a year), Primary (symptoms include a painless sore, called a chancre), and Secondary (symptoms include, but not limited to, a rash on hands and feet). In particular, primary and secondary infections are considered highly infectious stages.

Late Latent: This stage is when a person has been infected for longer than a year. During this stage, the patient may no longer be infectious, and have no symptoms; however if the patient does not receive appropriate treatment the disease could develop into neurological problems, possibly leading to death. Syphilis cases staged as “unknown duration” are grouped together with “late syphilis” for the purposes of surveillance.

Region 8 Map



Overview of Syphilis in Region 8

Table 1. Region 8 Total Syphilis by Year

2019	2020	2021	2022	Jan - June 2023
364	333	393	734	370

Table 1 shows total new syphilis infections in Region 8 from 2019 through June 2023. The most recent data are highlighted in light green.

Figure 1 is a line graph of syphilis cases from 2019-2022.

Figure 1. Region 8 Syphilis Counts

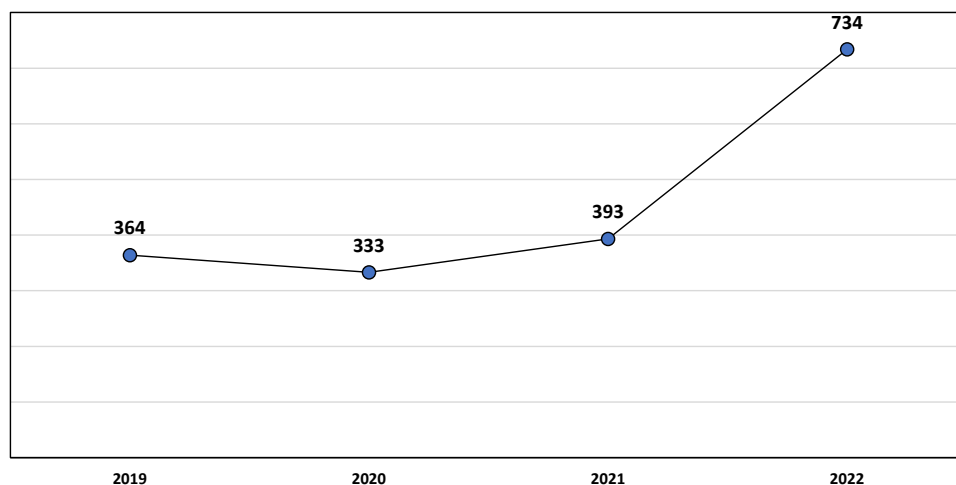


Table 2. Region 8 Total Syphilis Infections by Month

Month	2022	2023
January	62	78
February	50	66
March	57	59
April	60	54
May	47	60
June	61	53
July	61	-
August	71	-
September	72	-
October	52	-
November	81	-
December	60	-
Total	734	370

Table 2 displays the breakdown of new syphilis cases for Region 8 residents from January 2022 through June 2023 by month. In 2022, the highest number of cases were seen in November (81 cases). In 2023 Q1, the highest number of syphilis cases occurred in January (78 cases).

Table 3 is a comparison of the 1st and 2nd quarters of 2022 and 2023. There has been a **9.8% increase** of new syphilis infections during this time frame.

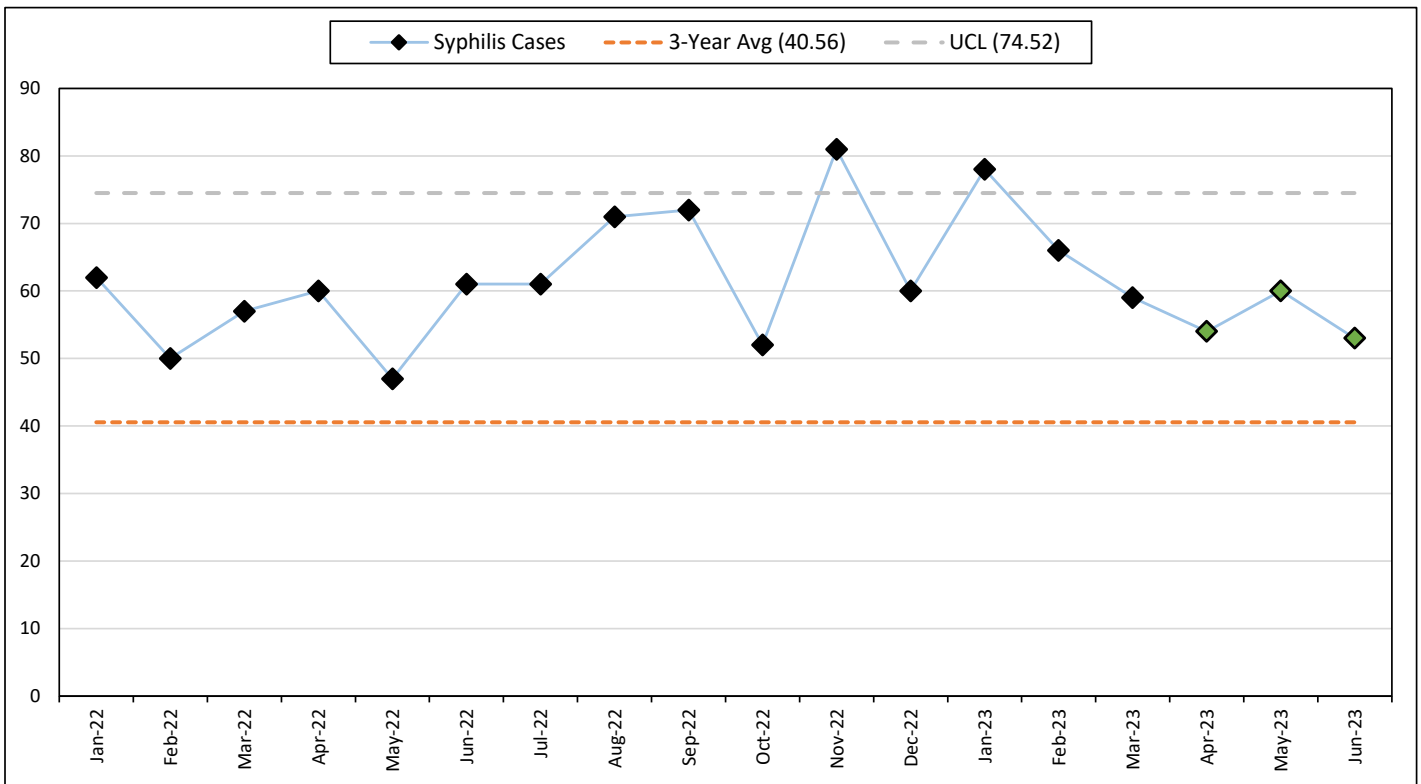
Table 3. Region 8 1st & 2nd Quarter Comparisons

2022	2023	% Change
337	370	9.8%↑

Figure 2 shows a surveillance control chart. The dashed orange line is the previous 3-year average (2020, 2021, and 2022) for new syphilis infections by month. The previous 3-year average is 40.56 new syphilis infections per month. The dashed gray line is the upper control limit (UCL) with a value of 74.52. The diamonds on the blue line graph show the actual number of new syphilis infections by month. The green diamonds are the months from the most recent quarter.

Analysis: For 2023, January was above the UCL. All months in 2023 have been above the average. A single point above or near the upper control limit or consecutive points above the average may signal anomalies that need to be investigated. When there are only a small number of cases, it may be difficult to distinguish random fluctuations in disease/injury incidence from true changes in the underlying risk for the disease/injury.

Figure 2. Region 8 Syphilis Infection Control Chart



The average is found using syphilis counts by month for the previous 3 years. A standard deviation is calculated using the same time frame. The upper control limit is determined by multiplying the standard deviation by 2 and adding the 3-year average.

Syphilis Quarterly Report: Region 8

Table 4 shows syphilis stages, demographics, and risk factor data in Region 8. Highest number percentages are highlighted in blue. For 2023, Male (71.9%), Black (52.7%), and 25-34 year olds (31.9%) made up the highest percentage of new syphilis infections. For risk factors, high risk heterosexuals (HRH) had the highest percentage of new syphilis infections (35.9%). The “Unknown” risk factor category could be due to a disease intervention specialist not being able to determine the risk factors of the patient. See additional information below the table.

Table 4. Region 8 Syphilis Morbidity				
	2022		Jan - June 2023	
	#	%	#	%
Syphilis Stages				
Early Latent	181	24.7%	98	26.5%
Primary	126	17.2%	48	13.0%
Secondary	171	23.3%	77	20.8%
Late/Unknown	246	33.5%	142	38.4%
Congenital	10	1.4%	5	1.4%
Gender				
Male	556	75.7%	266	71.9%
Female	178	24.3%	104	28.1%
Race				
Black	346	47.1%	195	52.7%
White	281	38.3%	137	37.0%
Multi	57	7.8%	8	2.2%
Other	49	6.7%	27	7.3%
Unknown/Null	1	0.1%	3	0.8%
Age Group				
<1	9	1.2%	5	1.4%
1-14	2	0.3%	0	0.0%
15-24	101	13.8%	58	15.7%
25-34	266	36.2%	118	31.9%
35-44	166	22.6%	95	25.7%
45-54	99	13.5%	47	12.7%
55-64	69	9.4%	34	9.2%
65+	22	3.0%	13	3.5%
Risk Factor				
MSM	275	37.5%	117	31.6%
HRH	209	28.5%	133	35.9%
PWID	36	4.9%	20	5.4%
Unknown/Null	214	29.2%	100	27.0%

Percentages may not total to 100 due to rounding. Percentages are based on availability of data for all cases. MSM are men who have sex with men. High risk heterosexuals (HRH) are determined by factors including but not limited to: having a previous STI, sex while intoxicated, exchanging sex for drugs, or having anonymous sexual partners. PWID is a person who injects drugs. Early syphilis cases include early latent, primary, and secondary stages. Early syphilis cases are cases where a person has been infected for less than a year.

Overview of Syphilis in Hamilton County

Table 5. Hamilton County Total Syphilis by Year

2019	2020	2021	2022	Jan - June 2023
301	248	280	551	277

Table 5 shows total new syphilis infections in Hamilton County from 2019 through June 2023. The most recent data are highlighted in light green.

Figure 3 is a line graph of syphilis cases from 2019-2022.

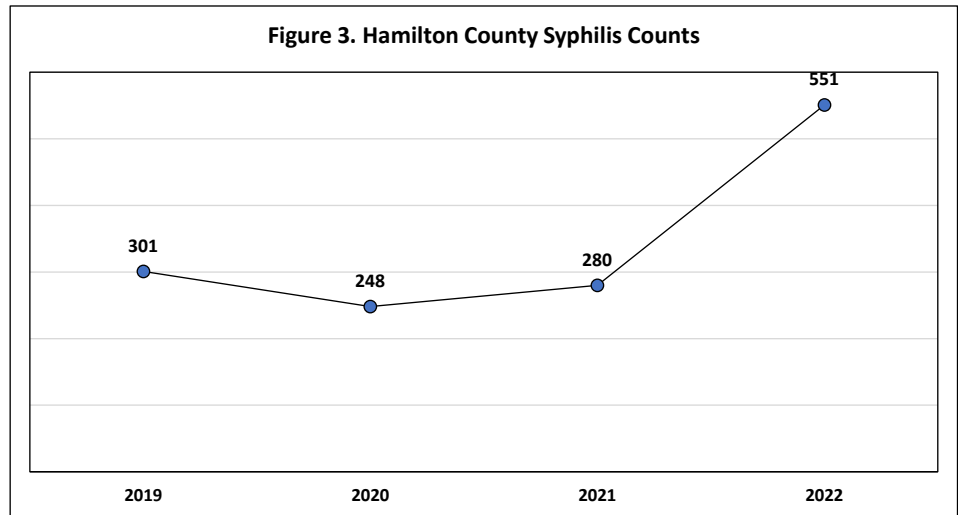


Table 6. Hamilton County Total Syphilis

Month	2022	2023
January	46	54
February	35	52
March	42	45
April	43	44
May	40	44
June	47	38
July	48	-
August	55	-
September	53	-
October	38	-
November	66	-
December	38	-
Total	551	277

Table 6 displays the breakdown of new syphilis cases for Hamilton County residents from January 2022 through June 2023 by month. In 2022, the highest number of cases were seen in November (66 cases). In 2023, the highest number of syphilis cases occurred in January (54 cases).

Table 7 is a comparison of the 1st and 2nd quarters of 2022 and 2023. There has been a **9.5% increase** of new syphilis infections during this time frame.

Table. 7 Hamilton County 1st & 2nd Quarter Comparisons

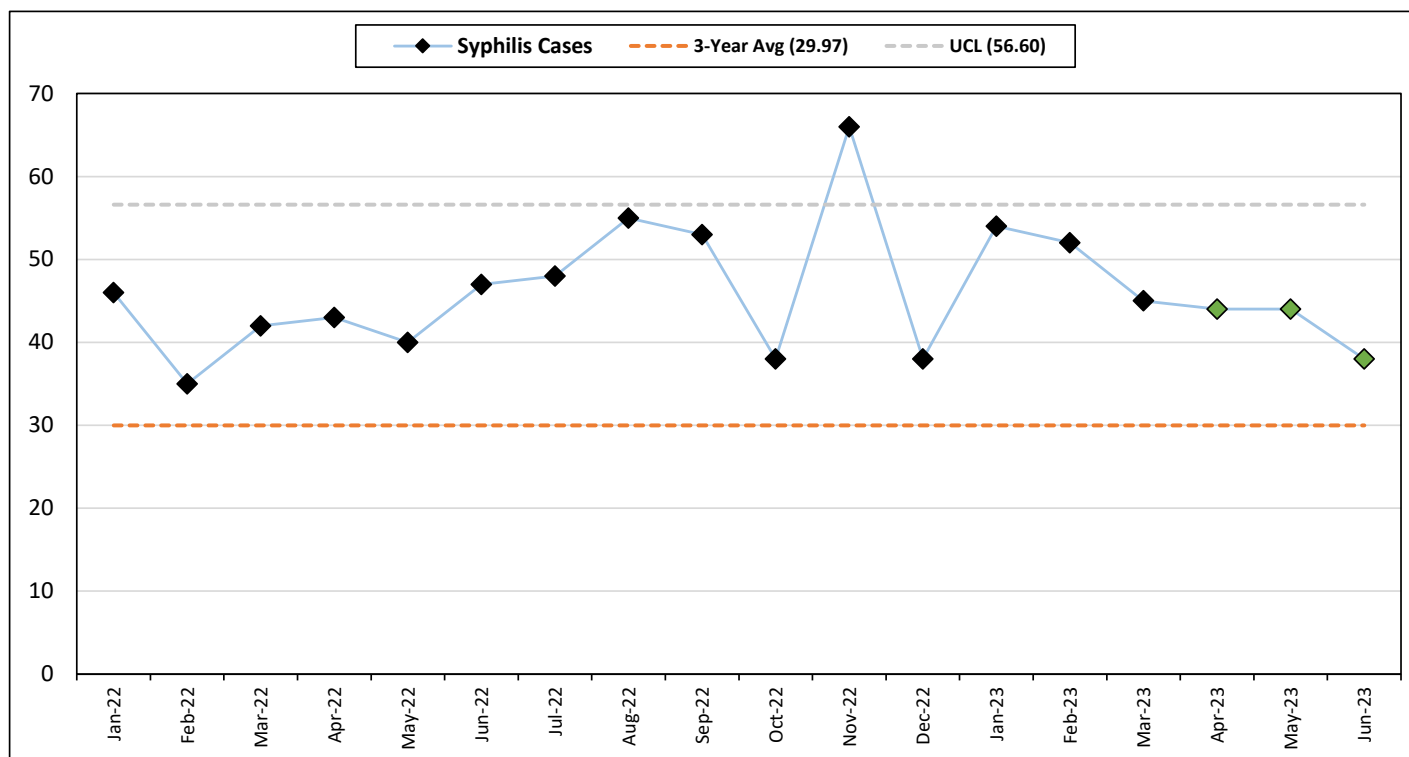
2022	2023	% Change
253	277	9.5%↑

Syphilis Quarterly Report: Hamilton County

Figure 4 shows a surveillance control chart. The dashed orange line is the previous 3-year average (2020, 2021, and 2022) for new syphilis infections by month. The previous 3-year average is 29.97 new syphilis infections per month. The dashed gray line is the upper control limit (UCL) with a value of 56.60. The diamonds on the blue line graph show the actual number of new syphilis infections by month. The green diamonds are the months from the most recent quarter.

Analysis: For 2023, no points have been above the UCL, but all points have been above the average. A single point above or near the upper control limit or consecutive points above the average may signal anomalies that need to be investigated. When there are only a small number of cases, it may be difficult to distinguish random fluctuations in disease/injury incidence from true changes in the underlying risk for the disease/injury.

Figure 4. Hamilton County Syphilis Infection Control Chart



The average is found using syphilis counts by month for the previous 3 years. A standard deviation is calculated using the same time frame. The upper control limit is determined by multiplying the standard deviation by 2 and adding the 3-year average.

Syphilis Quarterly Report: Hamilton County

Table 8 shows syphilis stages, demographic, and risk factor data. Highest number percentages are highlighted in blue. For 2023, Male (75.1%), Black (65%), and 25-34 year olds (33.6%) made up the highest percentage of new syphilis infections. For risk factors, high risk heterosexuals (HRH) had the highest percentage of new syphilis infections (37.5%). The “Unknown” risk factor category could be due to a disease intervention specialist not being able to determine the risk factors of the patient. See additional information below the table..

Table 8. Hamilton County Syphilis Morbidity				
	2022		Jan - June 2023	
	#	%	#	%
Syphilis Stages				
Early Latent	148	26.9%	76	27.4%
Primary	86	15.6%	33	11.9%
Secondary	124	22.5%	60	21.7%
Late/Unknown	187	33.9%	104	37.5%
Congenital	6	1.1%	4	1.4%
Gender				
Male	433	78.5%	208	75.1%
Female	118	21.5%	69	24.9%
Race				
Black	326	59.2%	180	65.0%
White	142	25.8%	79	28.5%
Multi	51	9.3%	6	2.2%
Other	31	5.6%	11	4.0%
Unknown/Null	1	0.2%	1	0.4%
Age Group				
<1	6	1.1%	4	1.4%
1-14	1	0.2%	0	0.0%
15-24	78	14.2%	36	13.0%
25-34	213	38.7%	93	33.6%
35-44	122	22.1%	75	27.1%
45-54	63	11.4%	32	11.6%
55-64	50	9.1%	25	9.0%
65+	18	3.3%	12	4.3%
Risk Factor				
MSM	224	40.7%	101	36.5%
HRH	158	28.7%	104	37.5%
PWID	15	2.7%	7	2.5%
Unknown/Null	154	27.9%	65	23.5%

Percentages may not total to 100 due to rounding. Percentages are based on availability of data for all cases. MSM are men who have sex with men. High risk heterosexuals (HRH) are determined by factors including but not limited to: having a previous STI, sex while intoxicated, exchanging sex for drugs, or having anonymous sexual partners. PWID is a person who injects drugs. Early syphilis cases include early latent, primary, and secondary stages. Early syphilis cases are cases where a person has been infected for less than a year.

Overview of Syphilis in Butler County

Table 9. Butler County Total Syphilis by Year

2019	2020	2021	2022	Jan - June 2023
37	38	68	126	56

Table 9 shows total new syphilis infections in Butler County from 2019 through June of 2023. The most recent data are highlighted in light green.

Figure 5 is a line graph of syphilis cases from 2019-2022.

Figure 5. Butler County Syphilis Counts

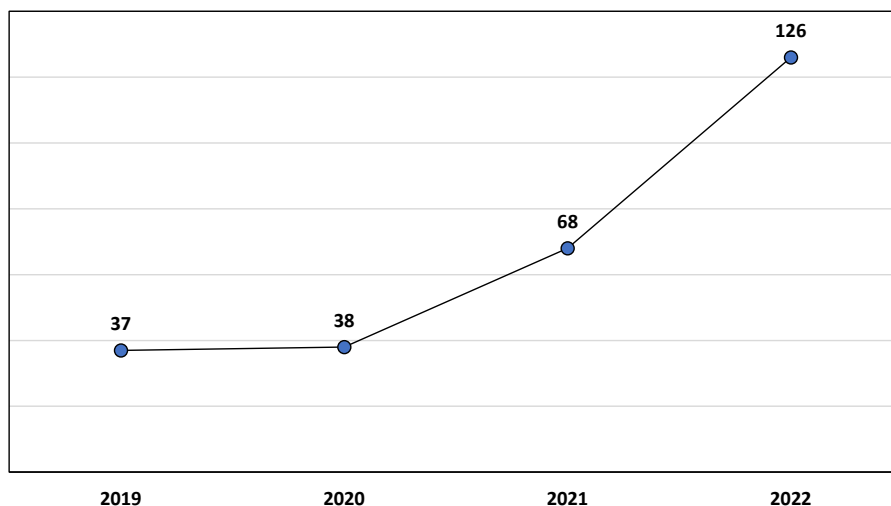


Table 10 displays the breakdown of new syphilis cases for Butler County residents from January 2022 through June 2023 by month. In 2022, the highest number of cases were seen in April and December (14 cases). In 2023 Q1, the highest number of new cases occurred in January (16 cases).

Table 11 is a comparison of the 1st and 2nd quarters of 2022 and 2023. There has been a **6.7% decrease** of new syphilis infections during this time frame

Table 10. Butler County Total Syphilis

Month	2022	2023
January	6	16
February	12	7
March	12	9
April	14	8
May	4	10
June	12	6
July	7	-
August	11	-
September	13	-
October	9	-
November	12	-
December	14	-
Total	126	56

Table 11. Butler County 1st & 2nd Quarter Comparisons

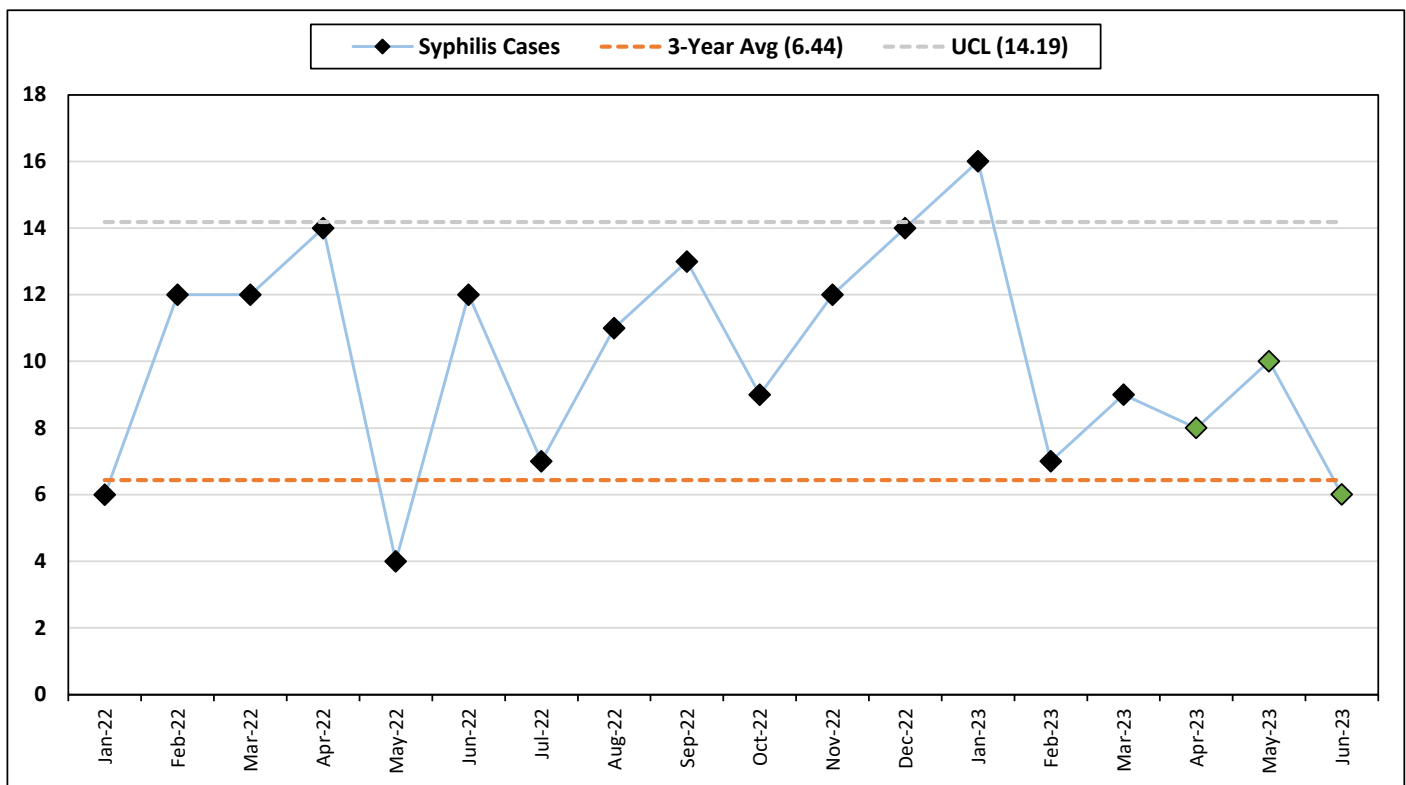
2022	2023	% Change
60	56	-6.7%↓

Syphilis Quarterly Report: Butler County

Figure 6 shows a surveillance control chart. The dashed orange line is the previous 3-year average (2020, 2021, and 2022) for new syphilis infections by month. The previous 3-year average is 6.44 new syphilis infections per month. The dashed gray line is the upper control limit (UCL) with a value of 14.19. The diamonds on the blue line graph show the actual number of new syphilis infections by month. The green diamonds are the months from the most recent quarter.

Analysis: For 2023, January was above the UCL. All other months, with the exception of June, were above the average. A single point above or near the upper control limit or consecutive points above the average may signal anomalies that need to be investigated. When there are only a small number of cases, it may be difficult to distinguish random fluctuations in disease/injury incidence from true changes in the underlying risk for the disease/injury.

Figure 6. Butler County Syphilis Infection Control Chart



The average is found using syphilis counts by month for the previous 3 years. A standard deviation is calculated using the same time frame. The upper control limit is determined by multiplying the standard deviation by 2 and adding the 3-year average.

Syphilis Quarterly Report: Butler County

Table 12 shows syphilis stages, demographic, and risk factor data. Highest number percentages are highlighted in blue. For 2023, Male (60.8%), Black (57.1%), and 25-34 year olds (32.1%) made up the highest percentage of new syphilis infections. For risk factors, high risk heterosexuals (HRH) had the highest percentage of new syphilis infections (32.1%). The “Unknown” risk factor category could be due to a disease intervention specialist not being able to determine the risk factors of the patient. See additional information below the table.

Table 12. Butler County Syphilis Morbidity				
	2022		Jan - June 2023	
	#	%	#	%
Syphilis Stages				
Early Latent	22	17.5%	13	23.2%
Primary	30	23.8%	10	17.9%
Secondary	29	23.0%	9	16.1%
Late/Unknown	42	33.3%	24	42.9%
Congenital	3	2.4%	0	0.0%
Gender				
Male	80	63.7%	34	60.8%
Female	46	36.3%	22	39.2%
Race				
Black	14	11.1%	11	19.6%
White	95	75.4%	32	57.1%
Multi	4	3.2%	1	1.8%
Other	13	10.3%	10	17.9%
Unknown/Null	0	0.0%	2	3.6%
Age Group				
<1	2	1.6%	0	0.0%
1-14	1	0.8%	0	0.0%
15-24	16	12.7%	14	25.0%
25-34	37	29.4%	18	32.1%
35-44	33	26.2%	10	17.9%
45-54	21	16.7%	8	14.3%
55-64	13	10.3%	6	10.7%
65+	3	2.4%	0	0.0%
Risk Factor				
MSM	26	20.6%	9	16.1%
HRH	36	28.6%	18	32.1%
PWID	19	15.1%	8	14.3%
Unknown/Null	45	35.7%	21	37.5%

Percentages may not total to 100 due to rounding. Percentages are based on availability of data for all cases. MSM are men who have sex with men. High risk heterosexuals (HRH) are determined by factors including but not limited to: having a previous STI, sex while intoxicated, exchanging sex for drugs, or having anonymous sexual partners. PWID is a person who injects drugs. Early syphilis cases include early latent, primary, and secondary stages. Early syphilis cases are cases where a person has been infected for less than a year.

Overview of Syphilis in Brown, Clermont, Clinton, Highland, and Warren

Table 13: Select Region 8 Counties Syphilis Infections by Quarter

	Brown	Clermont	Clinton	Highland	Warren
2022					
Q1	1	3	3	1	8
Q2	1	2	0	1	4
Q3	2	4	4	1	6
Q4	1	8	3	0	4
Total	5	17	10	3	22
2023					
Q1	1	8	2	1	8
Q2	2	6	0	3	6
Total	3	14	2	4	14

Table 14. Select Region 8 Counties Syphilis Morbidity

	2022		Jan - June 2023	
	#	%	#	%
Syphilis Stages				
Early Latent	11	19.3%	9	24.3%
Primary	10	17.5%	5	13.5%
Secondary	18	31.6%	8	21.6%
Late/Unknown	17	29.8%	14	37.8%
Congenital	1	1.8%	1	2.7%
Gender				
Male	43	75.7%	24	64.9%
Female	14	24.3%	13	35.1%
Race				
Black	6	10.5%	4	10.8%
White	44	77.2%	26	70.3%
Multi	2	3.5%	1	2.7%
Other	5	8.8%	6	16.2%
Unknown/Null	0	0.0%	0	0.0%
Age Group				
<1	1	1.8%	1	2.7%
15-24	7	12.3%	8	21.6%
25-34	16	28.1%	7	18.9%
35-44	11	19.3%	10	27.0%
45-54	15	26.3%	7	18.9%
55-64	6	10.5%	3	8.1%
65+	1	1.8%	1	2.7%
Risk Factor				
MSM	25	43.9%	7	18.9%
HRH	15	26.3%	11	29.7%
PWID	2	3.5%	5	13.5%
Unknown/Null	15	26.3%	14	37.8%

Table 13 shows total new syphilis infections in select Region 8 counties by quarter for 2022 and 2023. For 2023, Clermont and Warren County have the most new syphilis infections (14 cases).

Table 14 shows demographic and risk factor data for the aggregate of the select Region 8 counties. The highest number of percentages are highlighted in blue. For 2023, Male (64.9%), White (70.3%), and 35 to 44 year olds (27%) made up the highest percentage of new syphilis infections. For risk factors, high risk heterosexuals (HRH) had the highest percentage of new syphilis infections (29.7%). Risk factor definitions are on previous pages.