

Region 8 Syphilis Quarterly Report

2023 3rd Quarter



Hamilton County Public Health
Division of Epidemiology and Assessment

250 William Howard Taft Road
Cincinnati, Ohio 45219
513.946.7800

www.hamiltoncountyhealth.org

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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.

Data downloaded from Ohio Disease Reporting System (ODRS) on 11/22/2023.

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

Stages of Syphilis

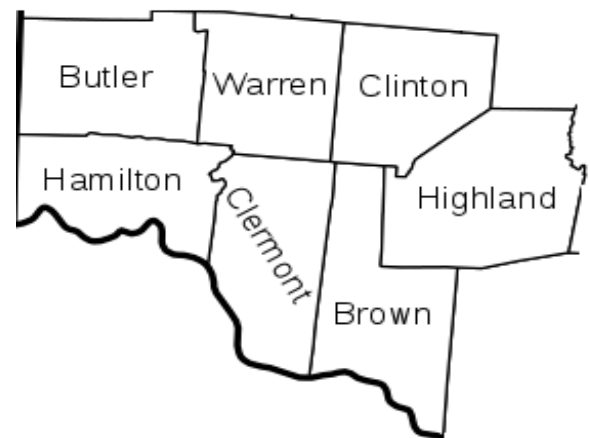
Syphilis infections are categorized into different stages based on the clinical presentation of disease and duration of infection.

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 - Sept 2023
364	333	393	752	606

Table 1 shows total new syphilis infections in Region 8 from 2019 through September 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

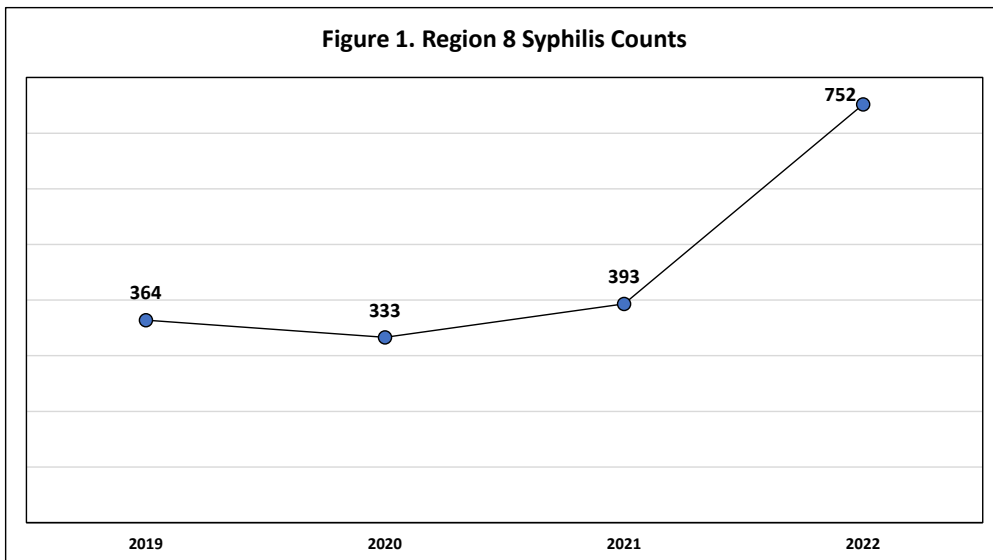


Table 2 displays the breakdown of new syphilis cases for Region 8 residents from January 2022 through Sept 2023 by month. In 2022, the highest number of cases were seen in November (83 cases). In 2023, the highest number of syphilis cases have occurred in January (85 cases).

Table 3 is a comparison of the 1st through 3rd quarters of 2022 and 2023. There has been a **11% increase** of new syphilis infections during this time frame.

Table 2. Region 8 Total Syphilis Infections by Month

Month	2022	2023
January	62	85
February	51	67
March	57	63
April	60	56
May	47	61
June	61	59
July	63	77
August	73	75
September	72	63
October	57	-
November	83	-
December	66	-
Total	752	606

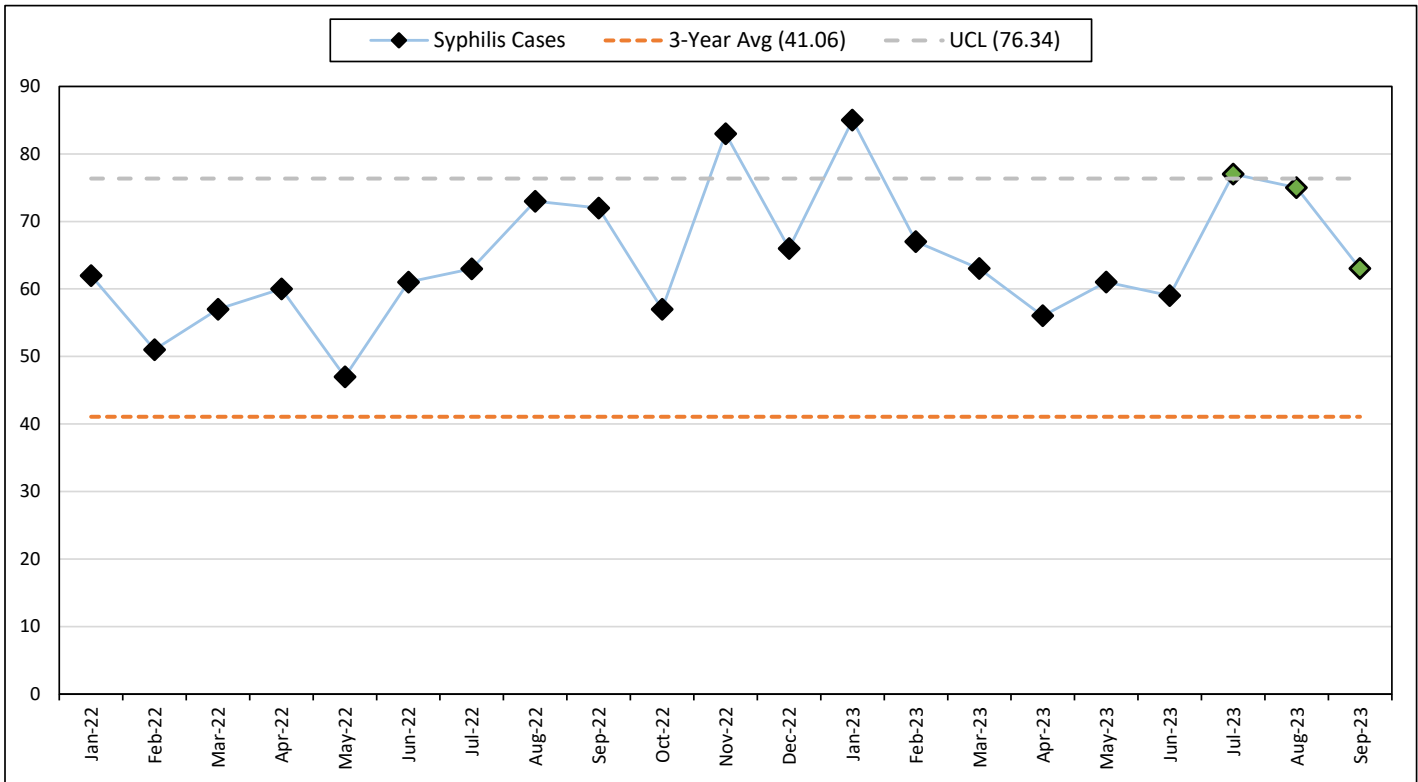
Table 3. Region 8 1st - 3rd Quarter Comparisons

2022	2023	% Change
546	606	11.0%↑

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 41.06 new syphilis infections per month. The dashed gray line is the upper control limit (UCL) with a value of 76.34. 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 and July were 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%), Black (54%), and 25-34 year olds (32.3%) made up the highest percentage of new syphilis infections. For risk factors, high risk heterosexuals (HRH) had the highest percentage of new syphilis infections (39.6%). 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 - Sept 2023	
	#	%	#	%
Syphilis Stages				
Early Latent	183	24.3%	145	23.9%
Primary	129	17.2%	90	14.9%
Secondary	175	23.3%	125	20.6%
Late/Unknown	255	33.9%	234	38.6%
Congenital	10	1.3%	12	2.0%
Gender				
Male	567	75.4%	430	71.0%
Female	185	24.6%	176	29.0%
Race				
Black	354	47.1%	327	54.0%
White	299	39.8%	215	35.5%
Multi	37	4.9%	17	2.8%
Other	61	8.1%	43	7.1%
Unknown/Null	1	0.1%	4	0.7%
Age Group				
<1	9	2.0%	12	2.0%
1-14	2	0.2%	1	0.2%
15-24	101	15.3%	93	15.3%
25-34	272	32.3%	196	32.3%
35-44	173	23.6%	143	23.6%
45-54	103	13.4%	81	13.4%
55-64	70	9.2%	56	9.2%
65+	22	4.0%	24	4.0%
Risk Factor				
MSM	278	37.0%	172	28.4%
HRH	216	28.7%	240	39.6%
PWID	37	4.9%	40	6.6%
Unknown/Null	221	29.4%	154	25.4%

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 - Sept 2023
301	248	280	561	445

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

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

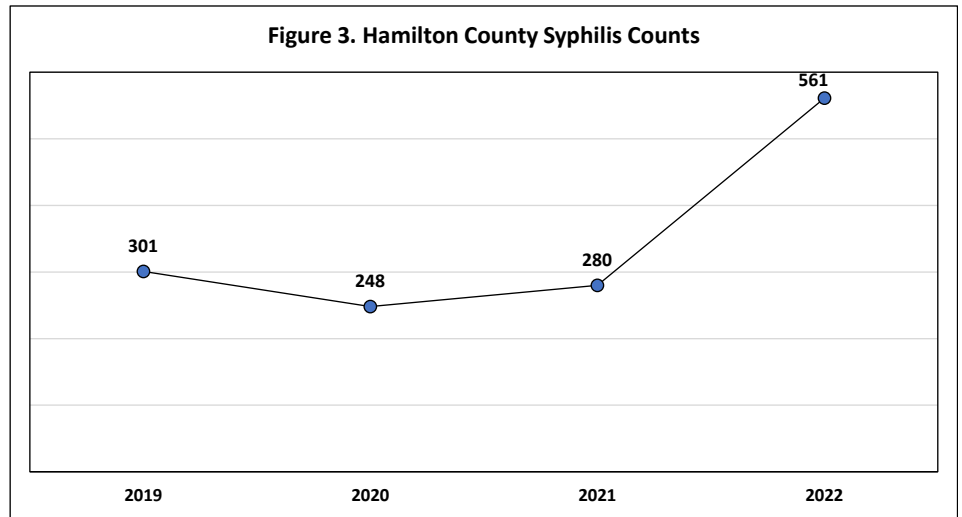


Table 6. Hamilton County Total Syphilis

Month	2022	2023
January	46	58
February	36	53
March	41	47
April	43	46
May	40	44
June	47	41
July	49	54
August	57	54
September	53	48
October	41	-
November	68	-
December	40	-
Total	561	445

Table 6 displays the breakdown of new syphilis cases for Hamilton County residents from January 2022 through September 2023 by month. In 2022, the highest number of cases were seen in November (68 cases). In 2023, the highest number of syphilis cases have occurred in January (58 cases).

Table 7 is a comparison of the 1st through 3rd quarters of 2022 and 2023. There has been a **8% increase** of new syphilis infections during this time frame.

Table 7 Hamilton County 1st - 3rd Quarter Comparisons

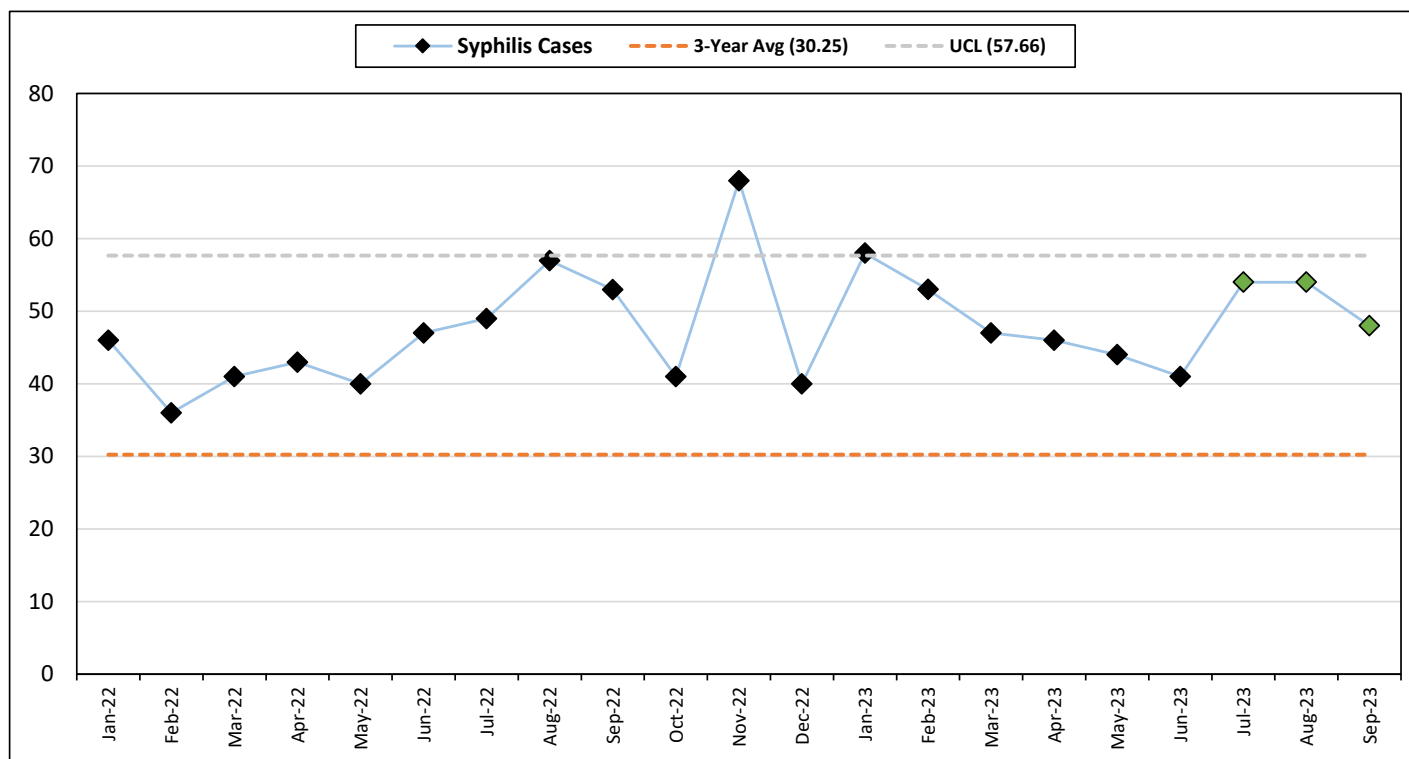
2022	2023	% Change
412	445	8.0%↑

Syphilis Quarterly Report: Hamilton County

Figure 4 shows a surveillance control chart. The dashed orange line is the 3-year average (2020, 2021, and 2022) for new syphilis infections by month. The 3-year average is 30.25 new syphilis infections per month. The dashed gray line is the upper control limit (UCL) with a value of 57.66. 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 have been above the 3-year 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.

Table 8 shows syphilis stages, demographic, and risk factor data. Highest number percentages are highlighted in blue. For 2023, Male (73.5%), Black (66.7%), and 25-34 year olds (35.1%) made up the highest percentage of new syphilis infections. For risk factors, high risk heterosexuals (HRH) had the highest percentage of new syphilis infections (42.7%). 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 - Sept 2023	
	#	%	#	%
Syphilis Stages				
Early Latent	149	26.6%	113	25.4%
Primary	88	15.7%	66	14.8%
Secondary	127	22.6%	99	22.2%
Late/Unknown	191	34.0%	160	36.0%
Congenital	6	1.1%	7	1.6%
Gender				
Male	438	78.0%	327	73.5%
Female	123	22.0%	118	26.5%
Race				
Black	332	59.2%	297	66.7%
White	151	26.9%	116	26.1%
Multi	35	6.2%	12	2.7%
Other	42	7.5%	18	4.0%
Unknown/Null	1	0.2%	2	0.4%
Age Group				
<1	6	1.6%	7	1.6%
1-14	1	0.2%	1	0.2%
15-24	78	13.3%	59	13.3%
25-34	216	35.1%	156	35.1%
35-44	125	24.7%	110	24.7%
45-54	66	12.1%	54	12.1%
55-64	51	8.5%	38	8.5%
65+	18	4.5%	20	4.5%
Risk Factor				
MSM	226	40.3%	142	31.9%
HRH	164	29.2%	190	42.7%
PWID	15	2.7%	14	3.1%
Unknown/Null	156	27.8%	99	22.2%

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 - Sept 2023
37	38	68	133	98

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

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

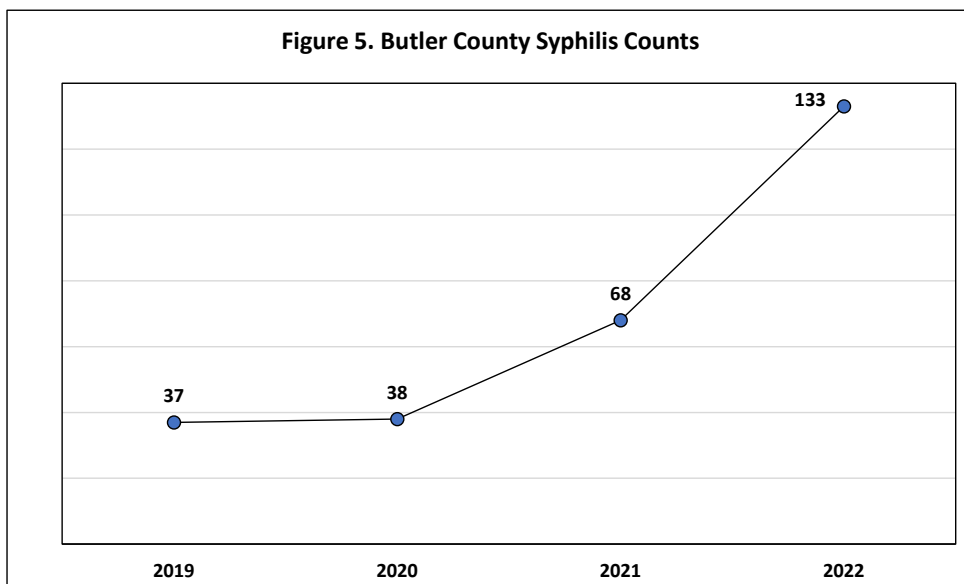


Table 10. Butler County Total Syphilis

Month	2022	2023
January	6	18
February	12	7
March	12	9
April	14	8
May	4	11
June	12	8
July	8	15
August	11	16
September	13	6
October	11	-
November	12	-
December	18	-
Total	133	98

Table 10 displays the breakdown of new syphilis cases for Butler County residents from January 2022 through September 2023 by month. In 2022, the highest number of cases were seen in December (18 cases). In 2023, the highest number of new cases have occurred in January (18 cases).

Table 11 is a comparison of the 1st through 3rd quarters of 2022 and 2023. There has been a **6.5% increase** of new syphilis infections during this time frame.

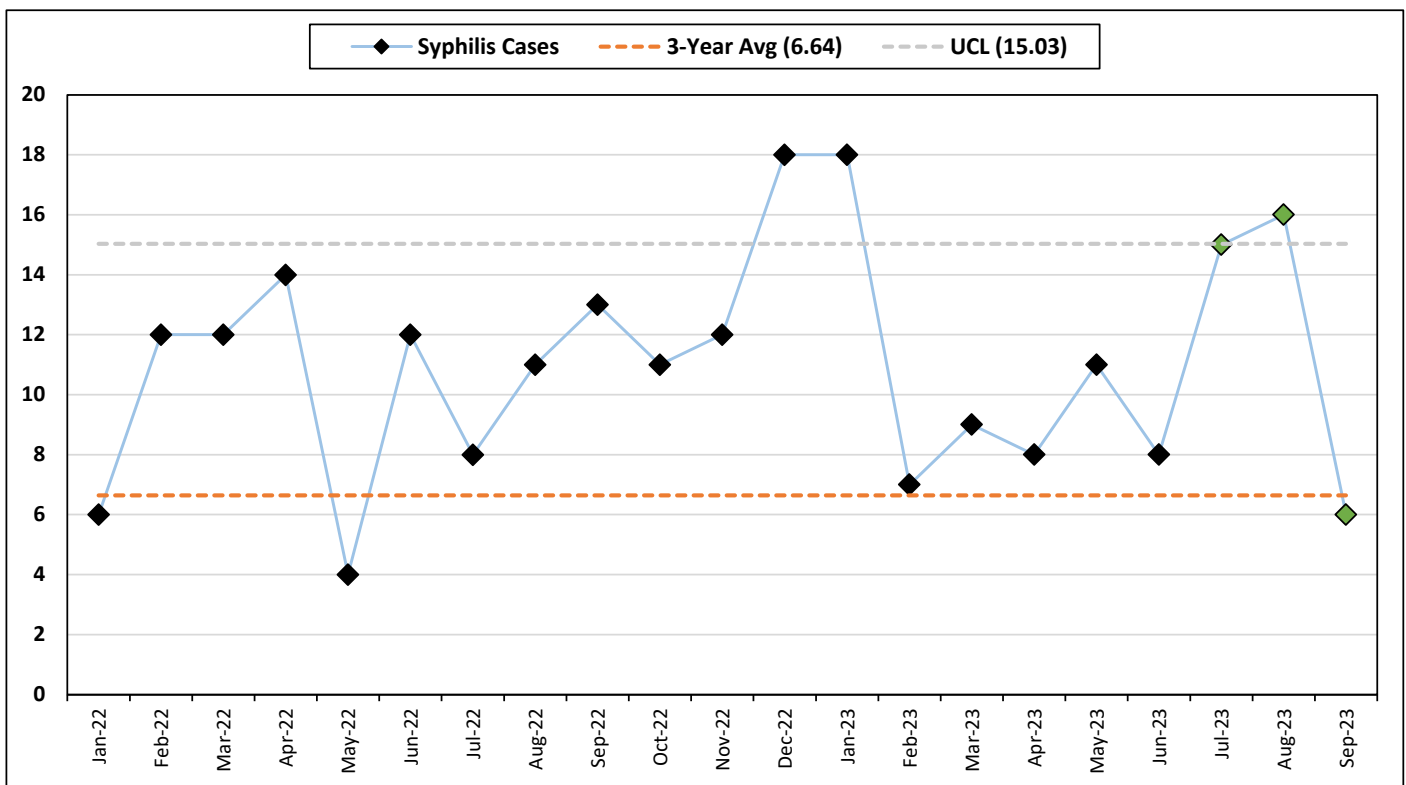
Table 11. Butler County 1st - 3rd Quarter Comparisons

2022	2023	% Change
92	98	6.5%↑

Figure 6 shows a surveillance control chart. The dashed orange line is the 3-year average (2020, 2021, and 2022) for new syphilis infections by month. The 3-year average is 6.64 new syphilis infections per month. The dashed gray line is the upper control limit (UCL) with a value of 15.03. 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 and August were above the UCL. All other months, with the exception of September, 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 (61.2%), White (58.2%), and 25-34 year olds (28.6%) made up the highest percentage of new syphilis infections. For risk factors, (excluding Unknown/Null) high risk heterosexuals (HRH) had the highest percentage of new syphilis infections (27.6%). 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 - Sept 2023	
	#	%	#	%
Syphilis Stages				
Early Latent	22	16.5%	17	17.3%
Primary	31	23.3%	15	15.3%
Secondary	30	22.6%	14	14.3%
Late/Unknown	47	35.3%	49	50.0%
Congenital	3	2.3%	3	3.1%
Gender				
Male	85	64.2%	60	61.2%
Female	48	35.8%	38	38.8%
Race				
Black	15	11.3%	22	22.4%
White	101	75.9%	57	58.2%
Multi	2	1.5%	3	3.1%
Other	15	11.3%	14	14.3%
Unknown/Null	0	0.0%	2	2.0%
Age Group				
<1	2	1.5%	3	3.1%
1-14	1	80.0%	0	0.0%
15-24	16	12.0%	23	23.5%
25-34	39	29.3%	28	28.6%
35-44	37	27.8%	16	16.3%
45-54	22	16.5%	14	14.3%
55-64	13	9.8%	12	12.2%
65+	3	2.3%	2	2.0%
Risk Factor				
MSM	27	20.3%	16	16.3%
HRH	37	27.8%	27	27.6%
PWID	20	15.0%	19	19.4%
Unknown/Null	49	36.8%	36	36.7%

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	4	3	1	8
Q2	1	2	0	1	4
Q3	2	4	4	1	6
Q4	1	8	3	0	4
Total	5	18	10	3	22
2023					
Q1	2	10	2	1	8
Q2	2	7	0	3	6
Q3	2	9	3	1	7
Total	6	26	5	5	21

Table 13 shows total new syphilis infections in select Region 8 counties by quarter for 2022 and 2023. For 2023, Clermont County has the most new syphilis infections (26 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 (68.3%), White (66.7%), 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 (36.5%). Risk factor definitions are on previous pages.

Table 14. Select Region 8 Counties Syphilis Morbidity				
	2022		Jan - Sept 2023	
	#	%	#	%
Syphilis Stages				
Early Latent	12	20.7%	15	23.8%
Primary	10	17.2%	9	14.3%
Secondary	18	31.0%	12	19.0%
Late/Unknown	17	29.3%	25	39.7%
Congenital	1	1.7%	2	3.2%
Gender				
Male	44	76.1%	43	68.3%
Female	14	23.9%	20	31.7%
Race				
Black	7	12.1%	8	12.7%
White	47	81.0%	42	66.7%
Multi	0	0.0%	2	3.2%
Other	4	6.9%	11	17.5%
Unknown/Null	0	0.0%	0	0.0%
Age Group				
<1	1	1.7%	2	3.2%
15-24	7	12.1%	11	17.5%
25-34	17	29.3%	12	19.0%
35-44	11	19.0%	17	27.0%
45-54	15	25.9%	13	20.6%
55-64	6	10.3%	6	9.5%
65+	1	1.7%	2	3.2%
Risk Factor				
MSM	25	43.1%	14	22.2%
HRH	15	25.9%	23	36.5%
PWID	2	3.4%	7	11.1%
Unknown/Null	16	27.6%	19	30.2%