HAMILTON COUNTY PUBLIC HEALTH

PREVENT. PROMOTE. PROTECT.

Region 8 HIV Quarterly Report
2023 2nd QUARTER

Hamilton County Public Health
Division of Epidemiology and Assessment

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HIV Surveillance Background

Hamilton County Public Health conducts HIV 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 help track and prevent new cases of HIV within Region 8 counties. When an individual tests positive for HIV in Region 8, disease intervention specialists from Hamilton County Public Health attempt to contact that person and offer partner-services (e.g., interviews, contact tracing, partner testing and linkage to care). Only HIV cases where the resident was identified as a previously unknown new HIV infection by a disease intervention specialist were counted for analysis purposes in this report. Some HIV cases are unable to be located for an interview, which may impact data collection. The following report features total new HIV counts, demographic data and risk factor data for Region 8 counties. The purpose of collecting and distributing demographic and risk factor data are to inform programming, community partners, and stakeholders so the best effort can be made to diagnose, prevent, and treat HIV infections in our community. These data can provide a snapshot of HIV surveillance in the region, but does not always tell the entire story. To fully understand the situation, community voices, stakeholders, and other sources should be considered.

These data are provisional and subject to change as there is 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 8/14/2023.

Q1: January 2023 - March 2023
Q2: April 2023 - June 2023
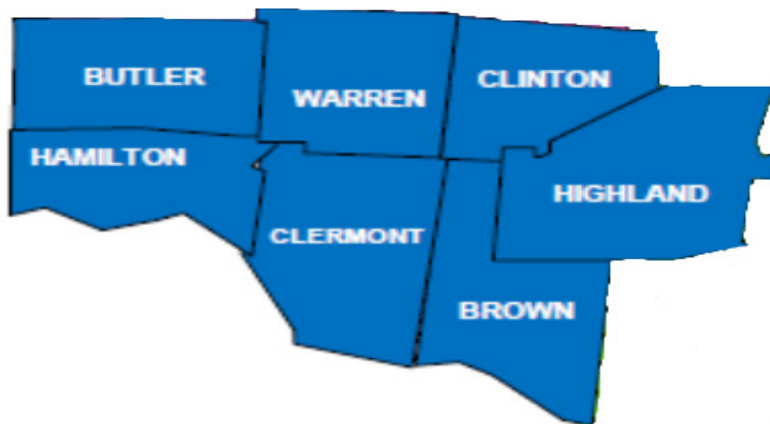
For HIV or other STI testing information please call the HCPH Clinic at 513-946-7600
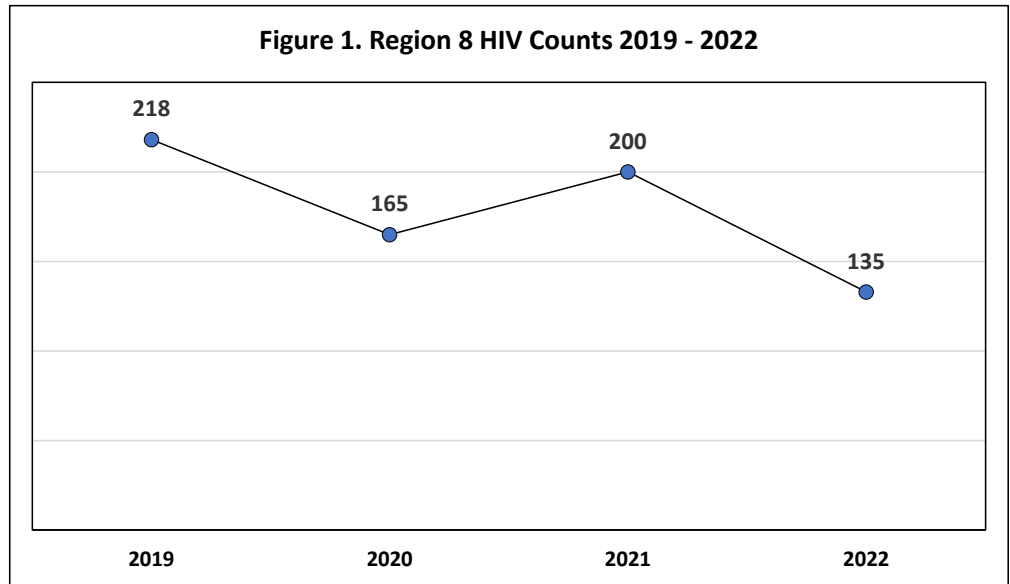
Overview of HIV in Region 8

Table 1. Region 8 New HIV Infections by Year				
2019	**2020**	**2021**	**2022**	**Jan - June 2023**
218	165	200	135	76

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

Figure 1 is a line graph of HIV infections from 2019-2022.

Figure 1. Region 8 HIV Counts 2019 - 2022

Table 2 displays the breakdown of new HIV cases for Region 8 residents from January 2022 through June 2023 by month. In 2022, the highest number of cases were seen in January (17 cases). In 2023, the highest number of new HIV cases occurred in March (17 cases).

Table 3 is a comparison of the 1st and 2nd quarters of 2022 and 2023. In this time frame, there has been a **2.6% decrease** of HIV infections.

Table 2. Region 8 New HIV Infections by Month		
Month	**New Cases of HIV 2022**	**New Cases of HIV 2023**
January	17	10
February	11	11
March	14	17
April	12	11
May	13	11
June	11	16
July	12	-
August	10	-
September	11	-
October	7	-
November	12	-
December	5	-
Total	**135**	**76**

Table 3. Region 8 1st & 2nd Quarter Comparisons		
2022	**2023**	**% Change**
78	76	**-2.6%** ↓

Figure 2 shows a surveillance control chart. The dashed orange line is the previous 3-year average (2020, 2021, and 2022) for new HIV infections by month. The previous 3-year average is 13.69 new HIV infections per month. The dashed gray line is the upper control limit (UCL) with a value of 22.44. The diamonds on the blue line graph show the actual number of new HIV infections by month. The green diamonds are the months from the most recent quarter.

Analysis: For 2023, March and June were above the 3-year average. All other months in 2023 were below 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 New HIV Infection Control Chart
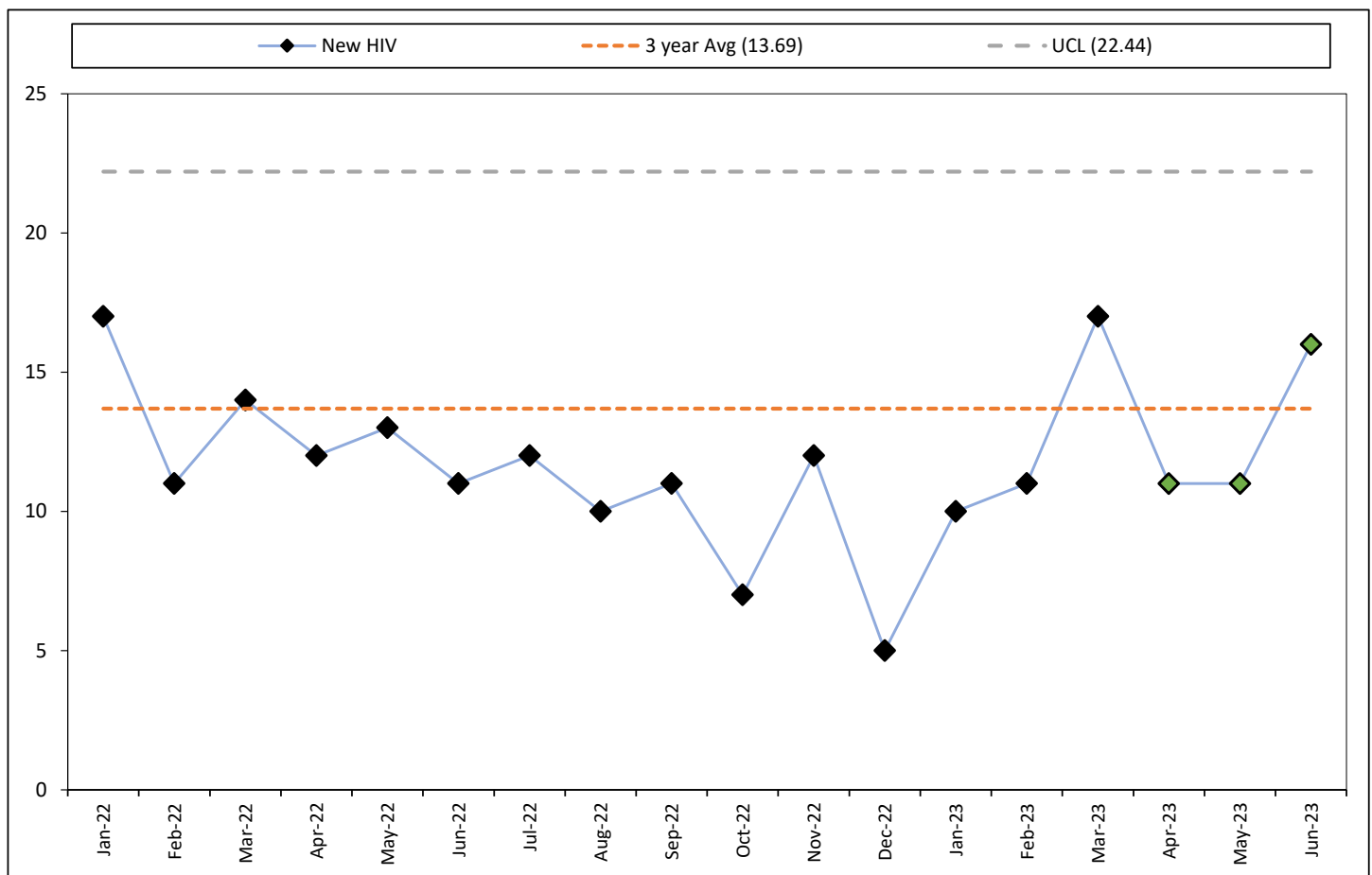
The average is found using HIV counts by month for the previous 3 years. A standard deviation is calculated using the same time frame. The upper control limit is determined by multiplying the standard deviation by 2 and adding the 3-year average.

Table 4 shows demographic and risk factor data for Region 8. Highest number percentages are highlighted in blue. For 2023, Male (73.7%), Black (40.8%), and 25-34 year olds (46.1%) were the demographics that made up the highest percentages of new HIV infections. For risk factors, MSM (32.9%) had the highest percentage of new HIV infections. The "Unknown" category for risk factors could be due to a disease intervention specialist not being able to determine the possible mode of HIV transmission. See the risk factor definitions below the table.

Table 4. Region 8 New HIV Morbidity

	2022		Jan - June 2023	
	#	%	#	%
Gender				
Male	100	74.1%	56	73.7%
Female	35	26.3%	20	26.3%
Race				
Black	72	53.3%	31	40.8%
White	55	40.7%	28	36.8%
Multi	1	0.7%	2	2.6%
Other	7	5.2%	15	19.7%
Unknown/Null	0	0.0%	0	0.0%
Age Group				
<14	0	0%	1	1.3%
15-24	30	22.2%	12	15.8%
25-34	49	36.3%	35	46.1%
35-44	27	20.0%	15	19.7%
45-54	19	14.1%	8	10.5%
55-64	7	5.2%	4	5.3%
65+	3	2.2%	1	1.3%
Risk Factor				
MSM	48	35.6%	25	32.9%
HRH	25	18.5%	19	25.0%
PWID	20	14.8%	10	13.2%
Unknown/Null	42	31.1%	22	28.9%

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.

Overview of HIV in Hamilton County

Table 5. Hamilton County New HIV Infections by Year				
2019	**2020**	**2021**	**2022**	**Jan - June 2023**
175	132	129	93	57

Table 5 shows total new HIV 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 HIV infections from 2019-2022.

Figure 3. Hamilton County HIV Counts 2019-2022
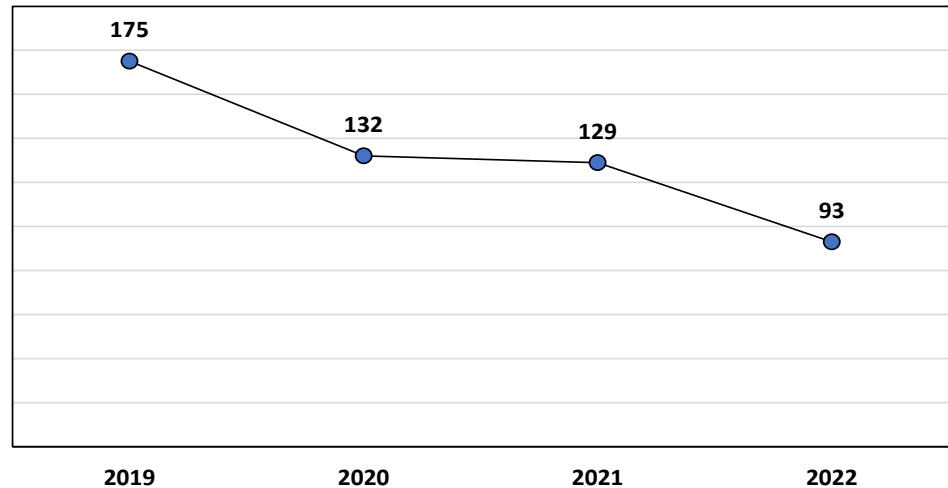
Table 6 displays the breakdown of new HIV cases for Hamilton County residents from January 2022 through June 2023 by month. In 2022, the highest number of cases were seen in January (12 cases). In 2023, the highest number of new HIV cases occurred in March (14 cases).

Table 7 is a comparison of the 1st and 2nd quarters of 2022 and 2023. In this time frame, there has been a **14% increase** of HIV infections.

Table 6. Hamilton County New HIV Infections by Month		
Month	**New Cases of HIV 2022**	**New Cases of HIV 2023**
January	12	6
February	4	9
March	10	14
April	6	7
May	9	9
June	9	12
July	9	-
August	8	-
September	9	-
October	5	-
November	8	-
December	4	-
Total	**93**	**57**

Table. 7 Hamilton County 1st & 2nd Quarter Comparisons		
2022	**2023**	**% Change**
50	57	**14.0% ↑**

Figure 4 shows a surveillance control chart. The dashed orange line is the previous 3-year average (2020, 2021, and 2022) for new HIV infections by month. The previous 3-year average is 9.78 new HIV infections per month. The dashed gray line is the upper control limit (UCL) with a value of 16.41. The diamonds on the blue line graph show the actual number of new HIV infections by month. The green diamonds are the months from the most recent quarter.

Analysis: For 2023, March and June were above the 3-year average. All other months in 2023 were below 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 New HIV Infection Control Chart
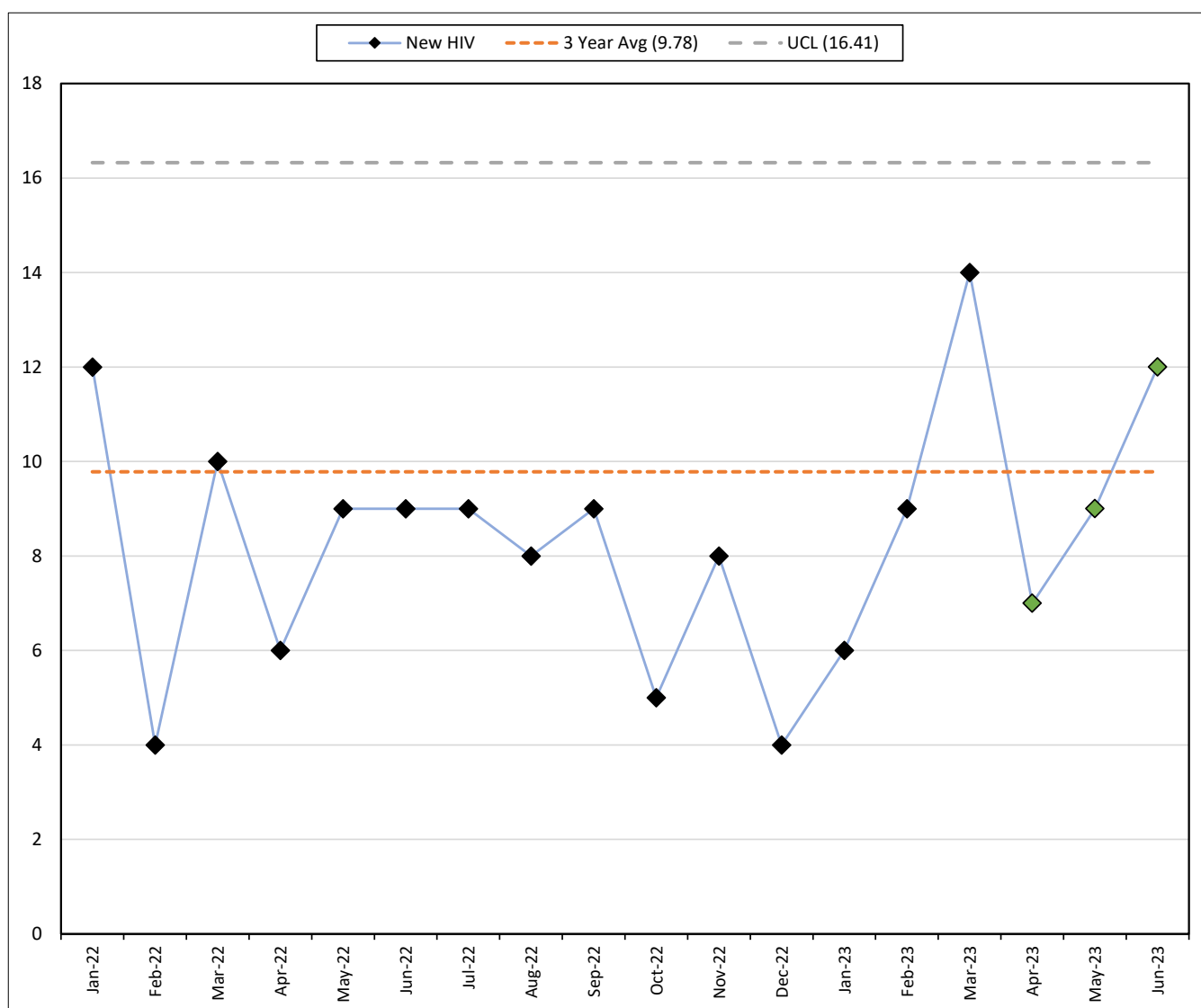
The average is found using HIV counts by month for the previous 3 years. A standard deviation is calculated using the same time frame. The upper control limit is determined by multiplying the standard deviation by 2 and adding the 3-year average.

Table 8 shows demographic and risk factor data in Hamilton County. Highest number percentages are highlighted in blue. For 2023, Male (78.9%), Black (50.9%), 25-34 year olds (50.9%) were the demographics that made up the highest percentages of new HIV infections. For risk factors, MSM (38.6%) had the highest percentage of new HIV infections. The "Unknown" category for risk factors could be due to a disease intervention specialist not being able to determine the possible mode of HIV transmission. See the risk factor definitions below the table.

	2022		Jan - June 2023	
Table 8. Hamilton County New HIV Morbidity				
	#	%	#	%
Gender				
Male	73	78.5%	45	78.9%
Female	20	21.5%	12	21.1%
Race				
Black	67	72.0%	29	50.9%
White	24	25.8%	16	28.1%
Multi	1	1.1%	1	1.8%
Other	1	1.1%	11	19.3%
Age Group				
<14	0	0.0%	1	1.8%
15-24	27	29.0%	9	15.8%
25-34	30	32.3%	29	50.9%
35-44	13	14.0%	11	19.3%
45-54	15	16.1%	5	8.8%
55-64	5	5.4%	1	1.8%
65+	3	3.2%	1	1.8%
Risk Factor				
MSM	38	40.9%	22	38.6%
HRH	21	22.6%	12	21.1%
PWID	4	4.3%	5	8.8%
Unknown/Null	30	32.3%	18	31.6%

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.
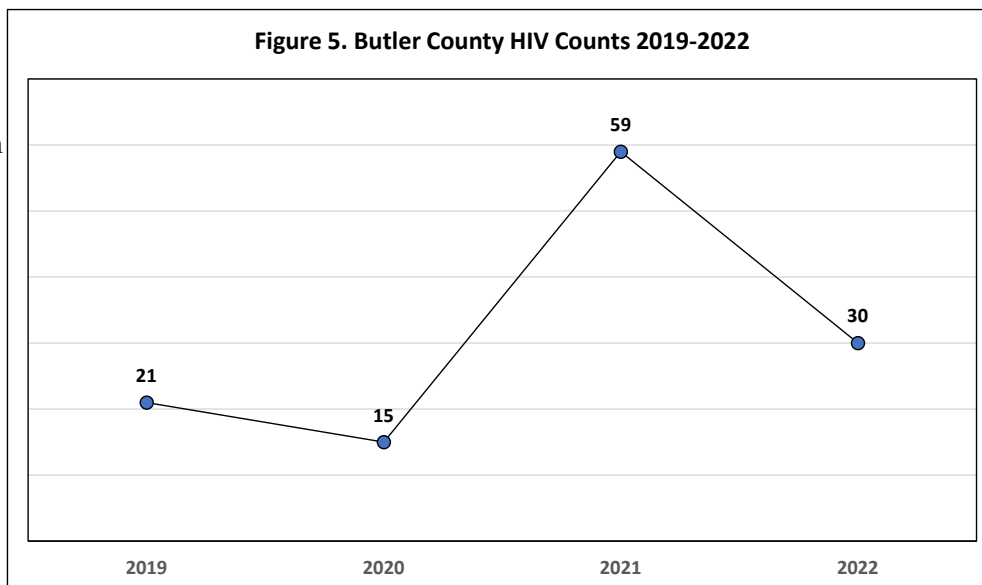
Overview of HIV in Butler County

Table 9. Butler County New HIV Infections by Year				
2019	**2020**	**2021**	**2022**	**Jan - June 2023**
21	15	59	30	15

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

Figure 5 is a line graph of HIV infections from 2019-2022.

Figure 5. Butler County HIV Counts 2019-2022

Table 10 displays the breakdown of new HIV cases for Butler County residents from January 2022 through June 2023 by month. In 2022, the highest number of cases were seen in February (7 cases). In 2023, the highest number of cases occurred in January and April (4 cases).

Table 11 is a comparison of the 1st and 2nd quarters of 2022 and 2023. In this time frame, there has been a **31.8% decrease** of HIV infections during this time frame.

Table 10. Butler County New HIV Infections by Month		
Month	**New Cases of HIV 2022**	**New Cases of HIV 2023**
January	1	4
February	7	2
March	3	2
April	5	4
May	4	1
June	2	2
July	1	-
August	1	-
September	1	-
October	2	-
November	3	-
December	0	-
Total	**30**	**15**

Table 11. Butler County 1st & 2nd Quarter Comparisons		
2022	**2023**	**% Change**
22	15	**-31.8% ↓**

Figure 6 shows a surveillance control chart. The dashed orange line is the previous 3-year average (2020, 2021, and 2022) for new HIV infections by month. The previous 3-year average is 2.89 new HIV infections per month. The dashed gray line is the upper control limit (UCL) with a value of 7.99. The diamonds on the blue line graph show the actual number of new HIV infections by month. The green diamonds are the months from the most recent quarter.

Analysis: For 2023, January and April were above the 3-year average. All other months in 2023 were below 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 New HIV Infection Control Chart
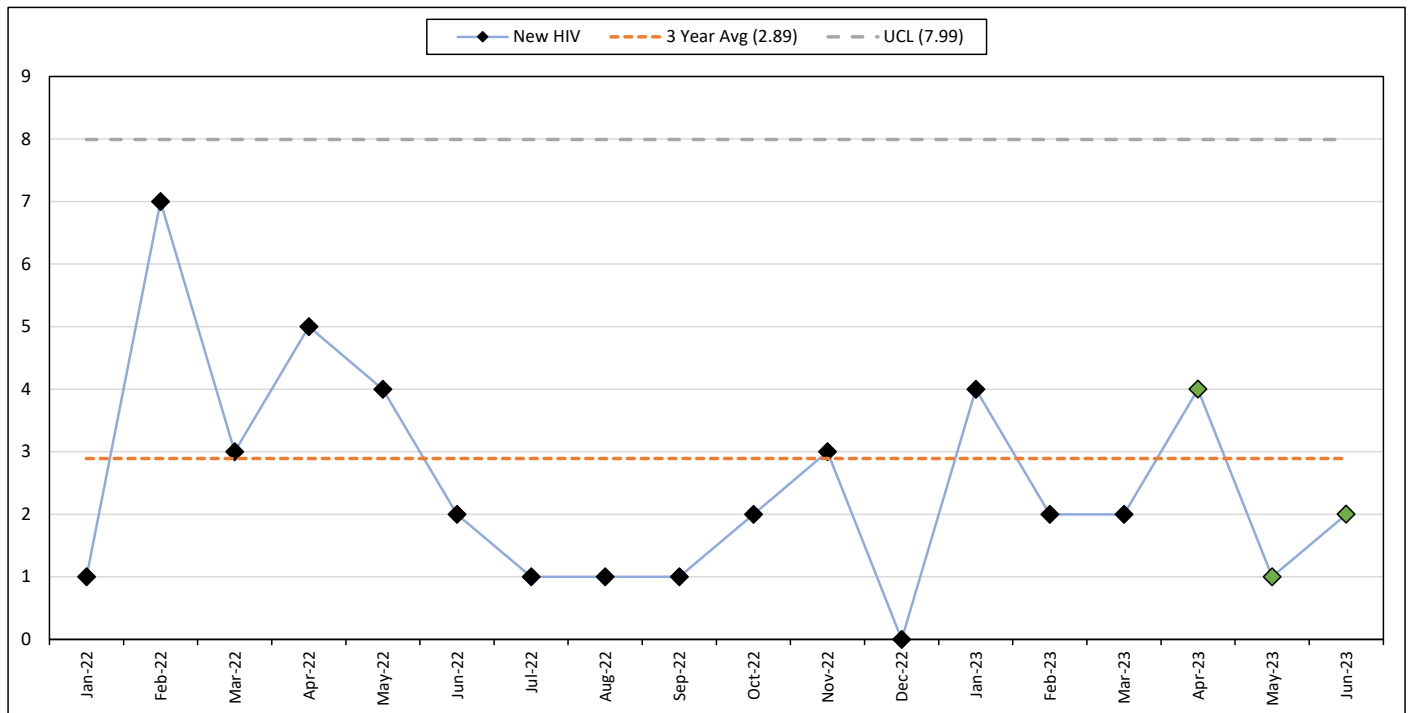
The average is found using HIV counts by month for the previous 3 years. A standard deviation is calculated using the same time frame. The upper control limit is determined by multiplying the standard deviation by 2 and adding the 3-year average.

Table 12 shows demographic and risk factor data in Butler County. Highest number percentages are highlighted in blue. For 2023, Female (53.3%), White (60%), and 25-34 year olds (33.3%) were the demographics that made up the highest percentages of new HIV infections. For risk factors, HRH (33.3%) had the highest percentage of new HIV infections. The "Unknown" category for risk factors could be due to a disease intervention specialist not being able to determine the possible mode of HIV transmission. See the risk factor definitions below the table.

Table 12. Butler County New HIV Morbidity				
	2022		**Jan - June 2023**	
	#	%	#	%
Gender				
Male	19	63.3%	7	46.7%
Female	11	36.7%	8	53.3%
Race				
Black	4	13.3%	2	13.3%
White	21	70.0%	9	60.0%
Multi	0	0.0%	1	6.7%
Other	5	16.7%	3	20.0%
Age Group				
15-24	2	6.7%	3	20.0%
25-34	13	43.3%	5	33.3%
35-44	13	43.3%	2	13.3%
45-54	2	6.7%	3	20.0%
55-64	0	0.0%	2	13.3%
65+	0	0.0%	0	0.0%
Risk Factor				
MSM	7	23.3%	2	13.3%
HRH	0	0.0%	5	33.3%
PWID	16	53.3%	4	26.7%
Unknown/Null	7	23.3%	4	26.7%

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.

Overview of HIV in Brown, Clermont, Clinton, Highland, and Warren County

Table 13. Select Region 8 Counties New HIV Infections by Quarter					
	Brown	**Clermont**	**Clinton**	**Highland**	**Warren**
2022					
Q1	1	2	0	0	2
Q2	0	0	0	0	1
Q3	0	1	1	0	2
Q4	0	1	0	0	1
Total	**1**	**4**	**1**	**0**	**6**
2023					
Q1	0	0	0	0	1
Q2	0	1	2	0	0
Total	**0**	**1**	**2**	**0**	**1**

Table 13 shows total new HIV infections in select Region 8 counties by quarter for 2022 and 2023. For 2023, Clinton County has had the highest number of new HIV infections (2 cases).

Table 14. Select Region 8 Counties HIV Morbidity

	2022		Jan - June 2023	
	#	%	#	%
Gender				
Male	8	66.7%	4	100.0%
Female	4	33.3%	0	0.0%
Race				
Black	1	8.3%	0	0.0%
White	10	83.3%	3	75.0%
Multi	0	0.0%	0	0.0%
Other	1	8.3%	1	25.0%
Age Group				
15-24	1	8.3%	0	0.0%
25-34	6	50.0%	1	25.0%
35-44	1	8.3%	2	50.0%
45-54	2	16.7%	0	0.0%
55-64	2	16.7%	1	25.0%
65+	0	0.0%	0	0.0%
Risk Factor				
MSM	3	25.0%	1	25.0%
HRH	4	33.0%	2	50.0%
PWID	0	0.0%	1	25.0%
Unknown/Null	5	42.0%	0	0.0%

Table 14 shows demographic and risk factor data for the aggregate of the select Region 8 counties. Highest number of percentages are highlighted in blue. For 2023, Male (100%), White (75%), and 35-44 year olds (50%) made up the highest percentages of new HIV infections. For Risk Factors, HRH (50%) had the highest percentage of new HIV infections. Risk factor definitions are on previous pages.