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HAMILTON COUNTY PUBLIC HEALTH

PREVENT. PROMOTE. PROTECT.

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Epidemiology and Assessment

Chlamydia and Gonorrhea Quarterly Report

Chlamydia Infections by Month in Hamilton County, Ohio (January 2020 - June 2021)

Table 1. Hamilton County Chlamydia Infections		
Month	**Cases of Chlamydia 2020**	**Cases of Chlamydia 2021**
January	658	481
February	548	443
March	461	536
April	340	432
May	383	518
June	522	534
July	570	
August	624	
September	569	
October	605	
November	455	
December	465	
Total	**6,200**	**2,944**

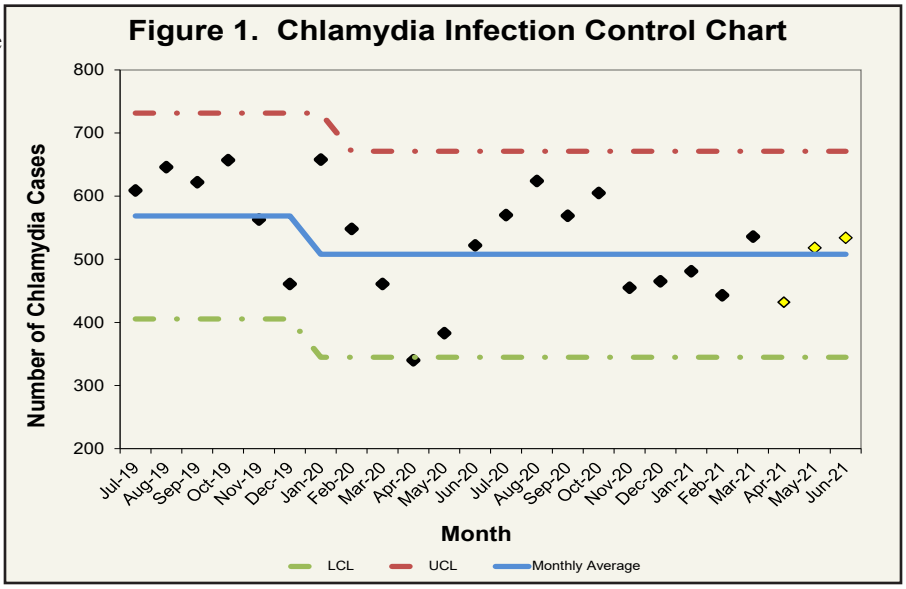
This report was created as a surveillance effort to help prevent new cases of chlamydia and gonorrhea within Hamilton County. Table 1 displays the total number of chlamydia cases for Hamilton County residents (at diagnosis) over the period of 2020 and 2021 on a monthly basis. Only chlamydia cases that have been reported to the CDC were counted for analysis purposes in this report. In 2020, the highest number of chlamydia cases were reported in January (658 cases). In 2021, the highest number of chlamydia cases occurred in March (536 cases). There were 516.7 chlamydia cases per month during 2020 and the monthly average of 490.7 in 2021.

Chlamydia cases are derived from 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 are selected based on address at diagnosis. Source: Ohio Department of Health (ODH), STD Surveillance. Data reported as of 7/20/2021.

Surveillance of Chlamydia Cases in Hamilton County, Ohio (July 2019 - June 2021)

One way to monitor chlamydia infections within Hamilton County is through the use of surveillance control charts. Factors that these control charts show are the number of chlamydia cases for each month (black diamonds), control limits (red or green dashed lines), and the average number of cases (solid blue line). 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 or 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 see which strategies already in place are working. Figure 1 shows the control chart for chlamydia infections from July 2019 through June 2021. All of the single month counts in this time-frame fell within the control limits for the number of monthly infections. The average number of cases from July 2019 to December 2019 was 568.5. This average was recalculated for January 2020 to June 2021 as 508.

Figure 1. Chlamydia Infection Control Chart



Chlamydia cases are derived from 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 are selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 7/20/2021.

Demographics with High Risk for Chlamydia Infection

Identifying high risk demographic groups allows public health and health care the opportunity to create focused intervention methods for preventing the spread of chlamydia. Table 2 shows the percentage of chlamydia cases from 2020 and 2021 based on race, age and sex. Over 65 percent of the chlamydia cases from 2020 and 2021 occurred among black Hamilton County residents. Over 55 percent of chlamydia cases were between the ages of 15-24, and the majority of diagnosed cases in 2020 and 2021 were among female Hamilton County residents. Figure 2 further classifies the differences among age groups over 2017 through 2021. The demographics from 2017 to 2021 shows a large disparity, as black females, continues to make up a large percentage of all chlamydia cases.

Figure 2. Race/Sex Distribution of Chlamydia Cases, Hamilton County

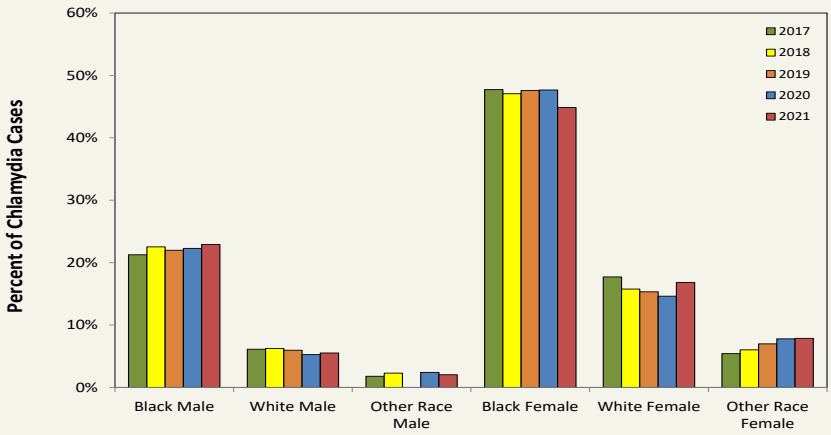


Table 2. Demographics of Chlamydia Cases

	2020		2021	
	#	%	#	%
Race				
Black	3,284	69.9%	1,438	67.8%
White	933	19.9%	474	22.3%
Other	478	10.2%	210	9.9%
Sex				
Male	2,037	32.9%	957	32.5%
Female	4,163	67.1%	1,987	67.5%
Age				
<1	3	0.0%	0	0.0%
1-14.	65	1.0%	20	0.7%
15-24	3,940	63.5%	1,762	59.9%
25-34	1,686	27.2%	866	29.4%
35-44	377	6.1%	222	7.5%
45-54	93	1.5%	56	1.9%
55-64	27	0.4%	13	0.4%
>65	9	0.1%	5	0.2%

These data are provisional and subject to change when additional data are reported. Chlamydia cases between January 2020 and June 2021 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 7/20/2021. Percentages may not total to 100 percent due to rounding. Percentages for demographics are based only on cases that had valid information within the required fields.

Gonorrhea Infections by Month in Hamilton County, Ohio (January 2020-June 2021)

Table 3. Hamilton County Gonorrhea Infections

Month	Cases of Gonorrhea 2020	Cases of Gonorrhea 2021
January	249	327
February	256	289
March	227	323
April	213	289
May	267	258
June	334	309
July	360	
August	423	
September	425	
October	411	
November	300	
December	304	
Total	**3,769**	**1,795**

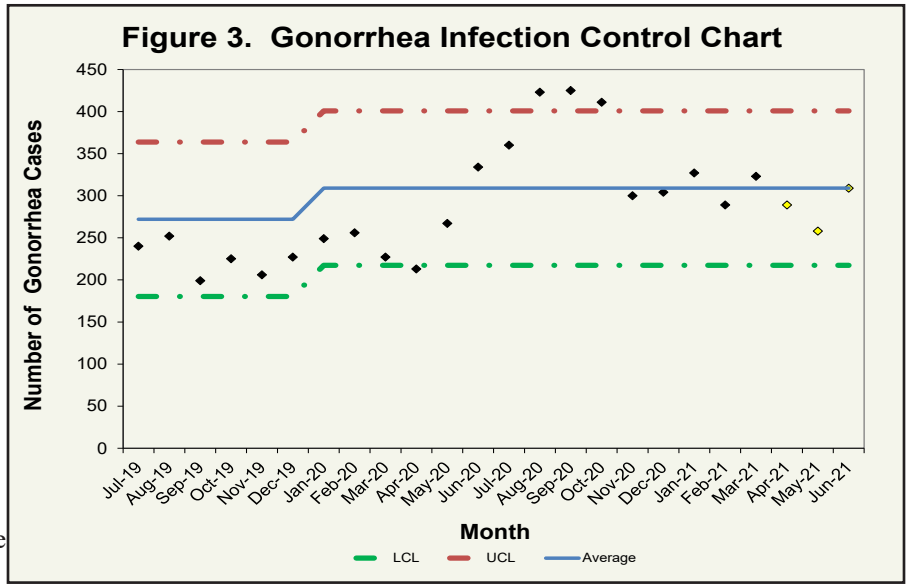
Table 3 displays the total number of gonorrhea cases for Hamilton County residents (at diagnosis) over the period of 2020 and 2021 on a monthly basis. Only gonorrhea cases that have been reported to the CDC were counted for analysis purposes in this report. In 2020, the highest number of gonorrhea cases was reported for September (425 cases). During 2021, the highest number of gonorrhea cases occurred in January (327 cases). The average number of gonorrhea cases per month was respectively 314 and 299.2 for 2020 and 2021. At the time of this report, 1,795 gonorrhea cases were reported for 2021, an increase of 249 cases from 2020 during the same time period.

Gonorrhea cases are derived from 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 are selected based on address at diagnosis. Source: Ohio Department of Health (ODH), STD Surveillance. Data reported as of 7/20/2021.

Surveillance of Gonorrhea Cases in Hamilton County (July 2019-June 2021)

One way to monitor gonorrhea infections within Hamilton County is through the use of surveillance control charts. Factors that these control charts show are the number of gonorrhea cases for each month (black diamonds), control limits (red or green dashed lines), and the average number of cases (solid blue line). 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 or 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 see which strategies already in place are working. Figure 3 illustrates the control chart for gonorrhea infections over the course of July 2019 and June 2021. All of the months within this time frame fell below the upper control limit for number of gonorrhea infections, except the months of August 2020 to October 2020. The average number of cases from July 2019 to December 2019 2016 was 272. this average was recalculated due to an increase of cases; the average number of cases from January 2020 to June 2021 was 309.1.

Figure 3. Gonorrhea Infection Control Chart



Gonorrhea cases are derived from 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 are selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 07/20/2021.

Demographics with High Risk Gonorrhea Infection

Certain demographic groups are more likely to be infected with gonorrhea. Table 4 shows the percentage of gonorrhea cases from 2020 and 2021 based on race, age and sex. Over 75 percent of the gonorrhea cases from 2020 and 2021 occurred among black Hamilton County residents. Approximately 50 percent of gonorrhea cases were between the ages of 15 and 24. Identifying these aforementioned at-risk groups allows public health and health care the opportunity to create focused intervention methods for preventing the spread of gonorrhea. Figure 4 further classifies the differences among race/sex groups from 2017 to 2021. The percentage of cases that are black males and white females make up a large percentage of gonorrhea cases.

Figure 4. Race/Sex Distribution of Gonorrhea Cases, Hamilton County

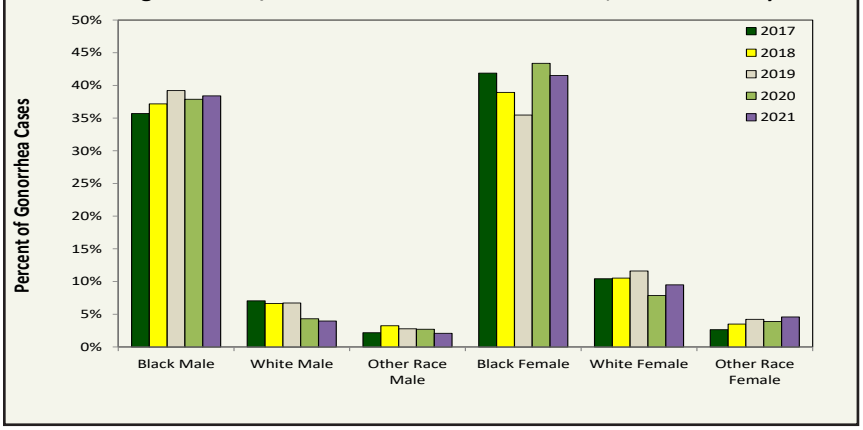


Table 4. Demographics of Gonorrhea Cases

	2020		2021	
	#	%	#	%
Race				
Black	2,527	81.3%	1,153	79.9%
White	378	12.2%	194	13.4%
Other	205	6.6%	96	6.7%
Sex				
Male	1,770	47.0%	840	46.8%
Female	1,999	53.0%	955	53.2%
Age				
<1	0	0.0%	0	0.0%
1-14.	31	0.8%	11	0.6%
15-24	1,915	50.8%	894	49.8%
25-34	1,208	32.1%	609	33.9%
35-44	426	11.3%	206	11.5%
45-54	109	2.9%	51	2.8%
55-64	62	1.6%	19	1.1%
>65	18	0.5%	5	0.3%

These data are provisional and subject to change when additional data are reported. Gonorrhea cases between January 2020 and June 2021 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 07/20/2021. Percentages may not total to 100 percent due to rounding. Percentages for demographics are based only on cases that had valid information within the required fields.