



# Hamilton County Public Health - Epidemiology and Assessment

## Chlamydia and Gonorrhea Quarterly Report

Kevin Strobino, MPH, Epidemiologist

### Chlamydia Infections by Month (2015-2016)

**Table 1. Chlamydia Cases by Month for Hamilton County Residents**

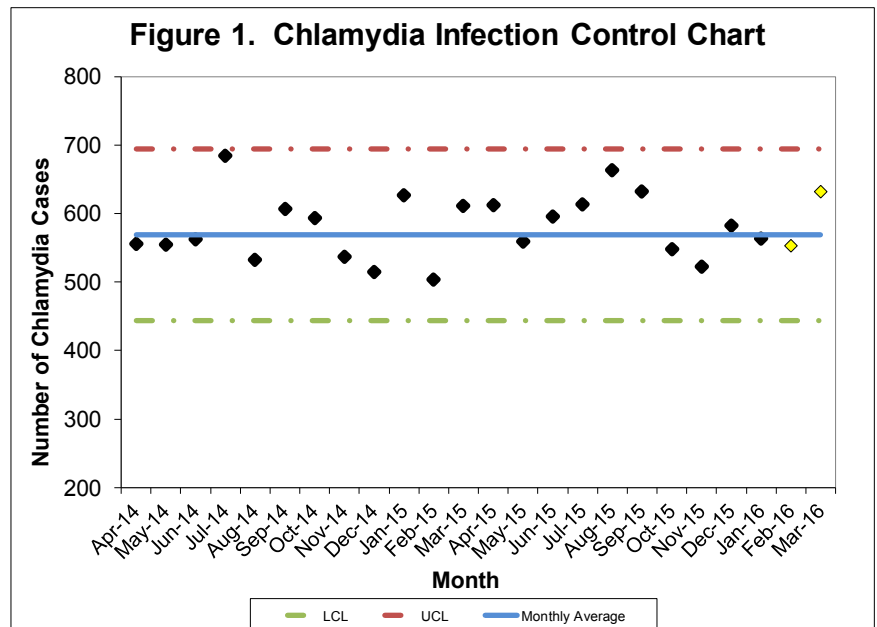
Month	Cases of Chlamydia 2015	Cases of Chlamydia 2016
January	627	563
February	504	553
March	611	632
April	612	
May	559	
June	596	
July	613	
August	663	
September	632	
October	548	
November	522	
December	582	
<b>Total</b>	<b>7,069</b>	<b>1,748</b>

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) from 2015 and the first quarter of 2016 on a monthly basis. Only chlamydia cases that have been reported to the CDC were counted for analysis purposes in this report. In 2015, the highest number of chlamydia cases was reported in August (663 cases). Through Q1 of 2016, the highest number of chlamydia cases occurred in March (632 cases). There have been 582.7 chlamydia cases per month through Q1 2016, about 1% lower than the monthly average of 589.1 in 2015. Assuming negligible variance in cases reported between months, 2016 is presently on pace to have 6,992 reported chlamydia cases, an estimated decrease from 2015 of 77 cases.

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 5/20/2016.

### Surveillance of Chlamydia Cases in Hamilton County

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 April 2014 to March 2016. All of the months in this time frame fell within the control limits for the monthly number of infections. The average number of cases was calculated from August 2013 to July 2014 (568.6).



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 5/20/2016.



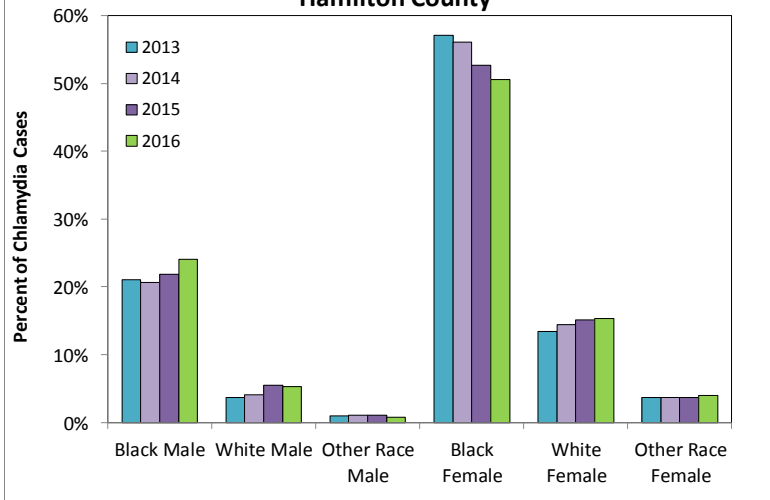
## Demographics with High Risk for Chlamydia Infection

Certain demographic groups are at higher risk for chlamydia infection. Table 2 shows the percentage of chlamydia cases from 2015 and 2016 based on race, age and sex. Nearly 75 percent of the chlamydia cases from 2015 occurred among black Hamilton County residents; that figure has remained the same for Q1 2016. Nearly 70% of chlamydia cases were between the ages of 15-24, and the majority of diagnosed cases in 2015 and 2016 were among female Hamilton County residents. Identifying these at-risk groups allows public health and health care the opportunity to create focused intervention methods for preventing the spread of chlamydia. Figure 2 further classifies the differences among race/sex groups from 2013 to Q1 2016. The demographics from 2013 to 2016 are similar, with a more equitable distribution of cases emerging as the largest group, black females, continues to make up a lower percentage of all chlamydia cases (50.6% through Q1 2016).

**Table 2. Demographics of Chlamydia Cases**

	2015		2016	
	#	%	#	%
<b>Race</b>				
Black	3,375	74.7	868	74.7
White	935	20.7	239	20.6
Other	215	4.8	55	4.7
<b>Age</b>				
<1	1	0.0	0	0.0
1-14	116	1.6	24	1.4
15-24	4,842	68.6	1,180	67.6
25-34	1,636	23.2	430	24.6
35-44	339	4.8	85	4.9
45-54	95	1.4	20	1.2
55-64	27	0.4	6	0.3
>65	5	0.1	1	0.1
<b>Sex</b>				
Male	2,073	29.3	549	31.4
Female	4,996	70.7	1,199	68.6

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



These data are provisional and subject to change when additional data are reported. Chlamydia cases between January 2015 and March 2016 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 5/20/2016. 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 (2015-2016)

**Table 3. Gonorrhea Cases by Month for Hamilton County Residents**

Month	Cases of Gonorrhea 2015	Cases of Gonorrhea 2016
January	265	240
February	179	215
March	233	248
April	229	
May	212	
June	237	
July	231	
August	239	
September	244	
October	258	
November	223	
December	246	
<b>Total</b>	<b>2,796</b>	<b>703</b>

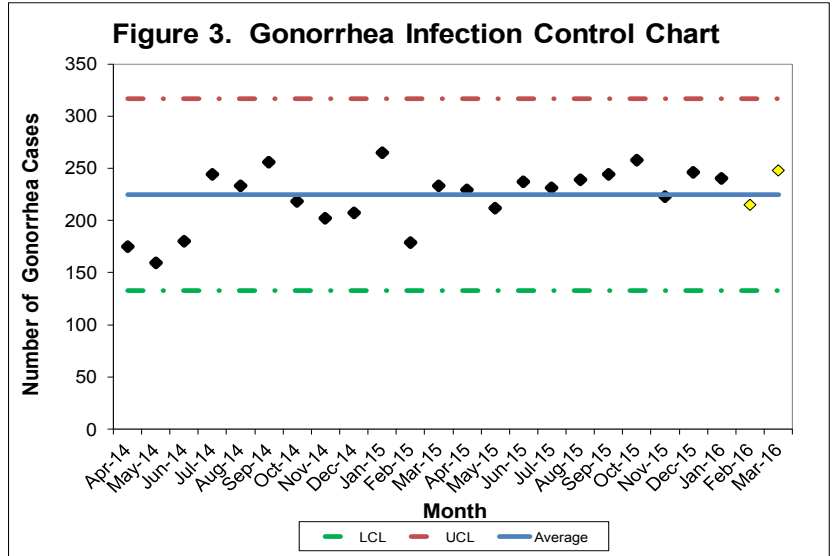
Table 3 displays the total number of gonorrhea cases for Hamilton County residents (at diagnosis) from 2015 and the first quarter of 2016 on a monthly basis. Only gonorrhea cases that have been reported to the CDC were counted for analysis purposes in this report. In 2015, the highest number of gonorrhea cases was reported for January (265 cases). Through Q1 of 2016, the highest number of gonorrhea cases occurred in March (248 cases). The average number of gonorrhea cases per month was 233 and 234.3 for 2015 and through Q1 2016, respectively. Assuming negligible variance in cases reported between months, 2016 is presently on pace to have 2,812 reported gonorrhea cases, an estimated small increase from 2015 of 16 cases.

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 5/20/2016.



## Surveillance of Gonorrhea Cases in Hamilton County

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 from April 2014 to March 2016. All of the months within this time frame fell below the upper control limit for number of gonorrhea infections. The average number of cases was calculated from October 2014 to September 2015 (224.7).



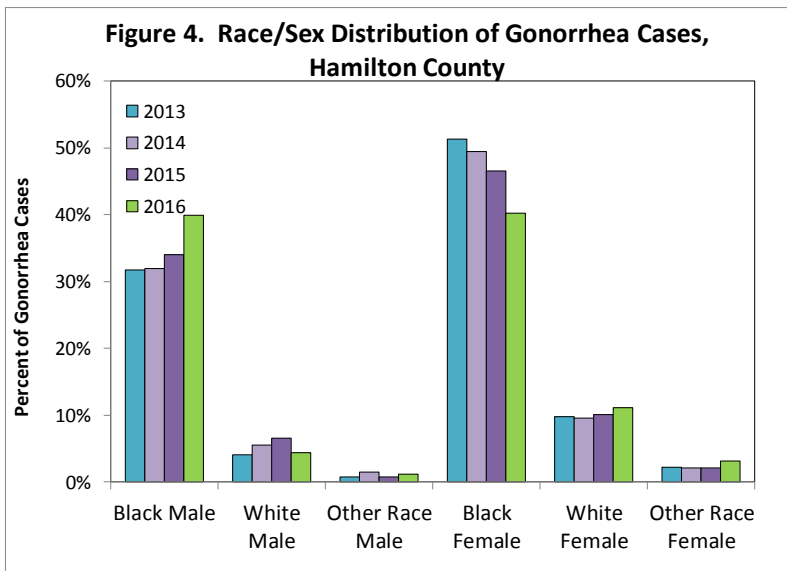
Gonorrhea cases are derived from data in the Ohio Disease Reporting System and represent only those cases reported to the CDC. These data are provisional and subject to change when additional information is reported. Cases are selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 5/20/2016.

## Demographics with High Risk for Gonorrhea Infection

Individuals with certain demographics are more likely to be infected with gonorrhea. Table 4 shows the percentage of gonorrhea cases from 2015 and 2016 based on race, age and sex. Over 80 percent of the gonorrhea cases from 2015 and through Q1 2016 occurred among black Hamilton County residents. About 55% of gonorrhea cases were between the ages of 15-24. 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 2013 to 2016. There has been a large reduction in the percentage of cases that are in the majority group, black females, while the percentage of cases that are black males has steadily increased.

**Table 4. Demographics of Gonorrhea Cases**

	2015		2016	
	#	%	#	%
<b>Race</b>				
Black	1,633	80.6	404	80.2
White	336	16.6	78	15.5
Other	58	2.9	22	4.4
<b>Age</b>				
<1	0	0	0	0
1-14	23	0.8	4	0.6
15-24	1,567	56.1	379	54.0
25-34	814	29.1	214	30.5
35-44	233	8.3	70	10.0
45-54	101	3.6	26	3.7
55-64	45	1.6	7	1.0
>65	11	0.4	2	0.3
<b>Sex</b>				
Male	1,266	45.3	334	47.5
Female	1,530	54.7	369	52.5



These data are provisional and subject to change when additional data are reported. Gonorrhea cases between January 2015 and March 2016 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 5/20/2016. 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.