



# Hamilton County Public Health - Epidemiology and Assessment

## Chlamydia and Gonorrhea Quarterly Report

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### Chlamydia Infections by Month (January 2016 - March 2017)

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

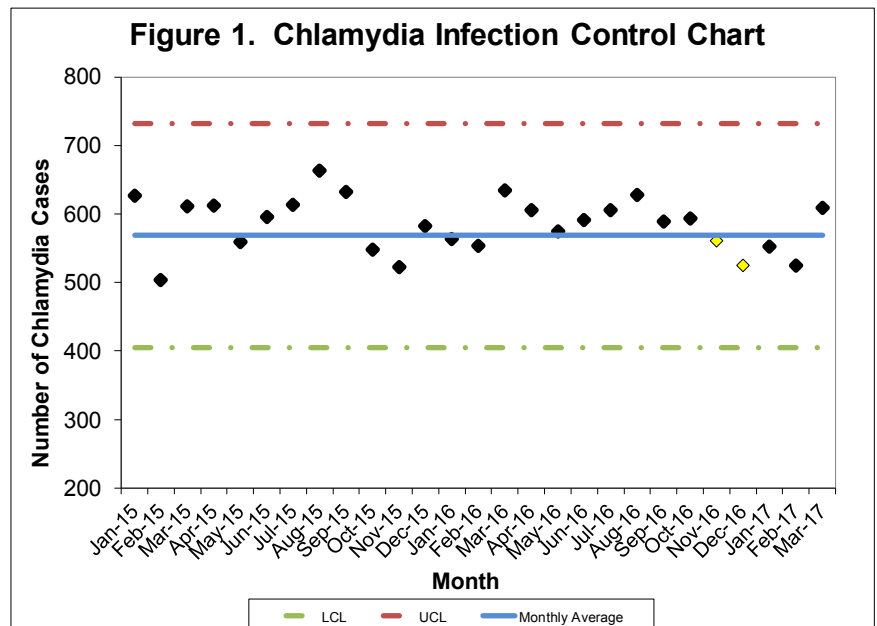
Month	Cases of Chlamydia	Cases of Chlamydia
January	564	552
February	553	525
March	635	609
April	606	
May	575	
June	591	
July	606	
August	628	
September	589	
October	594	
November	561	
December	525	
<b>Total</b>	<b>7,027</b>	<b>1,686</b>

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) over the period of 2016 and 2017 on a monthly basis. Only chlamydia cases that have been reported to the CDC were counted for analysis purposes in this report. In 2016, the highest number of chlamydia cases was reported in March (635 cases). In 2017, the highest number of chlamydia cases occurred in March (609 cases). There were 562 chlamydia cases per month during 2017, about four percent lower than the monthly average of 585.5 in 2016. At the time of this report, 1,686 cases of chlamydia were reported for 2017, a decrease of 66 cases from 2016.

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 06/23/2017.

### 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 January 2015 through March 2017. 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 was calculated from August 2013 to July 2014 (568.6).

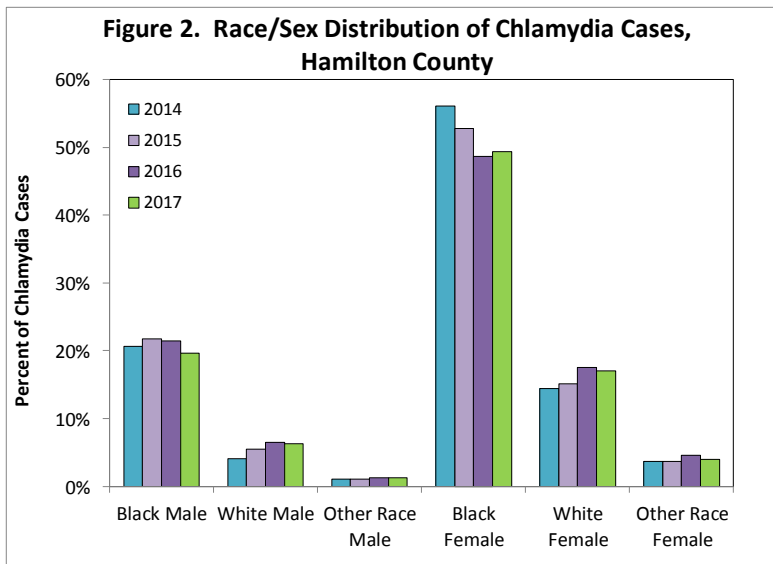


Chlamydia cases are derived from data in the Ohio Disease Reporting System and represent only those cases reported to the CDC. These data are provisional and subject to change when additional information is reported. Cases are selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 6/23/2017.



## 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 2016 and 2017 based on race, age and sex. Nearly 70 percent of the chlamydia cases from 2017 occurred among black Hamilton County residents. About 67% of chlamydia cases were between the ages of 15-24, and the majority of diagnosed cases in 2016 and 2017 were among female Hamilton County residents. Figure 2 further classifies the differences among race/sex groups over 2014 through 2017. The demographics from 2014 to 2017 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 (49.3% during 2017, down from 56.1% in 2014).



**Table 2. Demographics of Chlamydia Cases**

	2016		2017	
	#	%	#	%
<b>Race</b>				
Black	3,654	70.2	864	69.0
White	1249	24.0	292	23.3
Other	305	5.9	97	7.7
<b>Age</b>				
<1	10	0.1	2	0.1
1-14	108	1.6	33	2.0
15-24	4698	67.6	1145	67.9
25-34	1661	23.9	388	23.0
35-44	369	5.3	84	5.0
45-54	72	1.0	21	1.2
55-64	30	0.4	9	0.5
>65	5	0.1	4	0.2
<b>Sex</b>				
Male	2,137	30.8	497	29.5
Female	4,793	69.2	1,189	70.5

These data are provisional and subject to change when additional data are reported. Chlamydia cases between January 2016 and March 2017 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 06/23/2017. 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 (January 2016 - March 2017)

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

Month	Cases of Gonorrhea 2016	Cases of Gonorrhea 2017
January	240	267
February	216	227
March	244	242
April	226	
May	221	
June	249	
July	239	
August	238	
September	265	
October	256	
November	244	
December	237	
<b>Total</b>	<b>2,875</b>	<b>736</b>

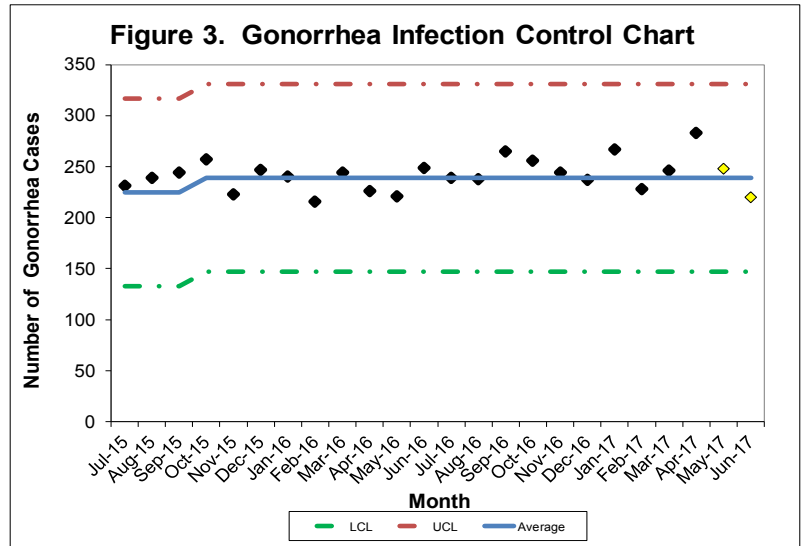
Table 3 displays the total number of gonorrhea cases for Hamilton County residents (at diagnosis) over the period of 2016 and 2017 on a monthly basis. Only gonorrhea cases that have been reported to the CDC were counted for analysis purposes in this report. In 2016, the highest number of gonorrhea cases was reported for September (265 cases). During 2017, the highest number of gonorrhea cases occurred in January (267 cases). The average number of gonorrhea cases per month was very close - respectively 239.6 and 245.3 for 2016 and 2017. At the time of this report, 736 gonorrhea cases were reported for 2017, an increase of 36 cases from 2016.

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 06/23/2017.



## 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 over the course of 2016 and 2017. 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). There was a recalculation of the average from October 2015 to September 2016 (238.8), in result of 8 consecutive cases above the average line.



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## Demographics with High Risk for Gonorrhea Infection

Certain demographic groups are more likely to be infected with gonorrhea. Table 4 shows the percentage of gonorrhea cases from 2016 and 2017 based on race, age and sex. About 77 percent of the gonorrhea cases from 2016 and 2017 occurred among black Hamilton County residents. Over half 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 2014 to 2017. There has been a large reduction in the percentage of cases that are in the majority group, black females, from 49.4% in 2014 to 43.2% in 2017. The percentage of cases that are black males and white females have increased over this period.

**Table 4. Demographics of Gonorrhea Cases**

	2016		2017	
	#	%	#	%
<b>Race</b>				
Black	1,774	77.7	456	77.3
White	397	17.4	104	17.6
Other	112	4.9	30	5.1
<b>Age</b>				
<1	3	0.1	0	0.0
1-14	30	1.0	9	1.2
15-24	1507	52.5	378	51.4
25-34	871	30.3	230	31.3
35-44	275	9.6	69	9.4
45-54	121	4.2	29	3.9
55-64	53	1.8	18	2.4
>65	11	0.4	3	0.4
<b>Sex</b>				
Male	1,357	47.3	336	45.7
Female	1,514	52.7	400	54.3

These data are provisional and subject to change when additional data are reported. Gonorrhea cases between January 2016 and March 2017 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 06/23/2017. 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.

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

