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HAMILTON COUNTY PUBLIC HEALTH

PREVENT. PROMOTE. PROTECT.

Alexis Grimes Trotter, MPH, Epidemiologist

# Hamilton County Public Health

## Epidemiology and Assessment

## Chlamydia and Gonorrhea Quarterly Report

## Chlamydia Infections by Month in Hamilton County, Ohio (January 2017-March 2018)

| Table 1. Hamilton County Chlamydia Infections | | |
|---|---|---|
| Month | Cases of Chlamydia 2017 | Cases of Chlamydia 2018 |
| January | 552 | 615 |
| February | 525 | 564 |
| March | 622 | 586 |
| April | 563 | |
| May | 607 | |
| June | 572 | |
| July | 552 | |
| August | 658 | |
| September | 586 | |
| October | 562 | |
| November | 559 | |
| December | 529 | |
| Total | 6,887 | 1,765 |

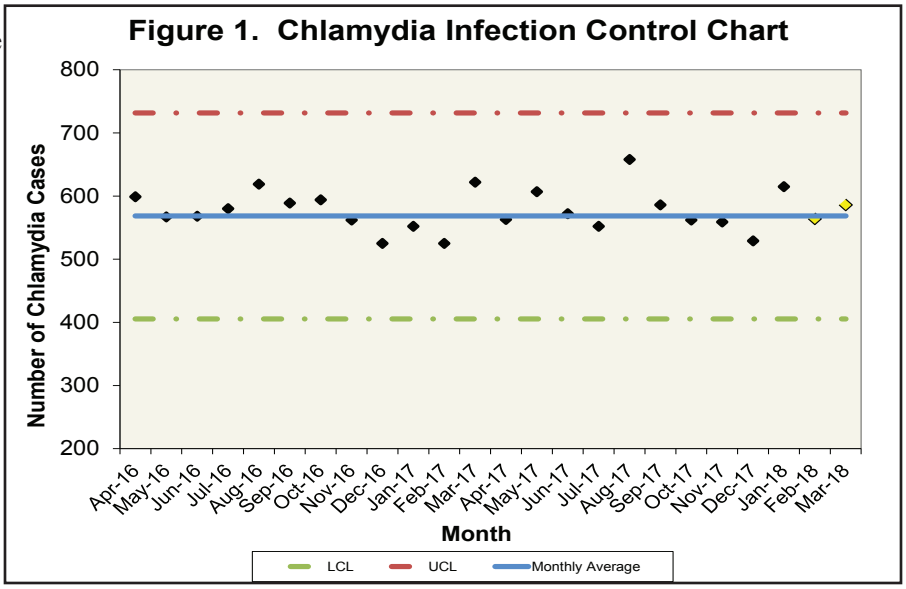
This report was created as a surveillance effort to help prevent new cases of chlamydia and gonorrhea within Hamilton County. Table 1 displays the total number of chlamydia cases for Hamilton County residents (at diagnosis) over the period of 2017 and 2018 on a monthly basis. Only chlamydia cases that have been reported to the CDC were counted for analysis purposes in this report. In 2017, the highest number of chlamydia cases was reported in August (658 cases). In 2018, the highest number of chlamydia cases occurred in January (615 cases). There were 573.9 chlamydia cases per month during 2017, about 2.5 percent lower than the monthly average of 588.3 in 2018. At the time of this report, 1,765 cases of chlamydia were reported for 2018, an increase of 66 cases from 2017 during the same time period.

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 09/18/2018.

## Surveillance of Chlamydia Cases in Hamilton County, Ohio (April 2016-March 2018)

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 2016 through March 2018. All of the other 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).

**Figure 1. Chlamydia Infection Control Chart**

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## 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 2017 and 2018 based on race, age and sex. About 68 percent of the chlamydia cases from 2018 occurred among black Hamilton County residents. Nearly 60 percent of chlamydia cases were between the ages of 15-24, and the majority of diagnosed cases in 2017 and 2018 were among female Hamilton County residents. Figure 2 further classifies the differences among race/sex groups over 2014 through 2018. The demographics from 2014 to 2018 are similar, with a more equitable distribution of cases emerging as the largest group, black females, continues to make up a large percentage of all chlamydia cases.

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

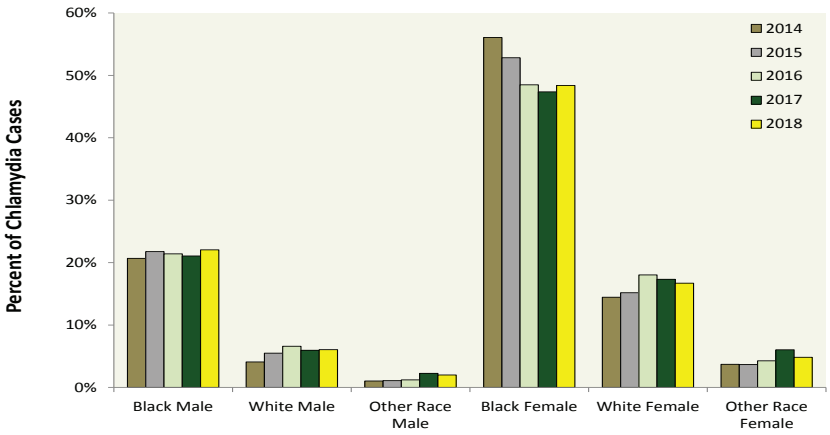



**Table 2. Demographics of Chlamydia Cases**

| | 2017 | | 2018 | |
|---|---|---|---|---|
| | # | % | # | % |
| Race | | | | |
| Black | 3,652 | 68.4 | 920 | 70.4 |
| White | 1,243 | 23.3 | 297 | 22.7 |
| Other | 442 | 8.3 | 89 | 6.8 |
| Sex | | | | |
| Male | 2,126 | 30.9 | 561 | 31.8 |
| Female | 4,761 | 69.1 | 1,204 | 68.2 |
| Age | | | | |
| <1 | 4 | 0.1 | 1 | 0.1 |
| 1-14 | 129 | 1.9 | 23 | 1.3 |
| 15-24 | 4,639 | 67.4 | 1,119 | 63.4 |
| 25-34 | 1,639 | 23.8 | 485 | 27.5 |
| 35-44 | 330 | 4.8 | 87 | 4.9 |
| 45-54 | 95 | 1.4 | 36 | 2.0 |
| 55-64 | 44 | 0.6 | 14 | 0.8 |
| >65 | 7 | 0.1 | 0 | 0.0 |

These data are provisional and subject to change when additional data are reported. Chlamydia cases between January 2017 and March 2018 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 09/18/2018. 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 2017-March 2018)

**Table 1. Hamilton County Gonorrhea Infections**

| Month | Cases of Gonorrhea 2017 | Cases of Gonorrhea 2018 |
|---|---|---|
| January | 267 | 302 |
| February | 228 | 262 |
| March | 246 | 266 |
| April | 289 | |
| May | 287 | |
| June | 274 | |
| July | 275 | |
| August | 317 | |
| September | 344 | |
| October | 328 | |
| November | 288 | |
| December | 249 | |
| Total | 3,392 | 830 |

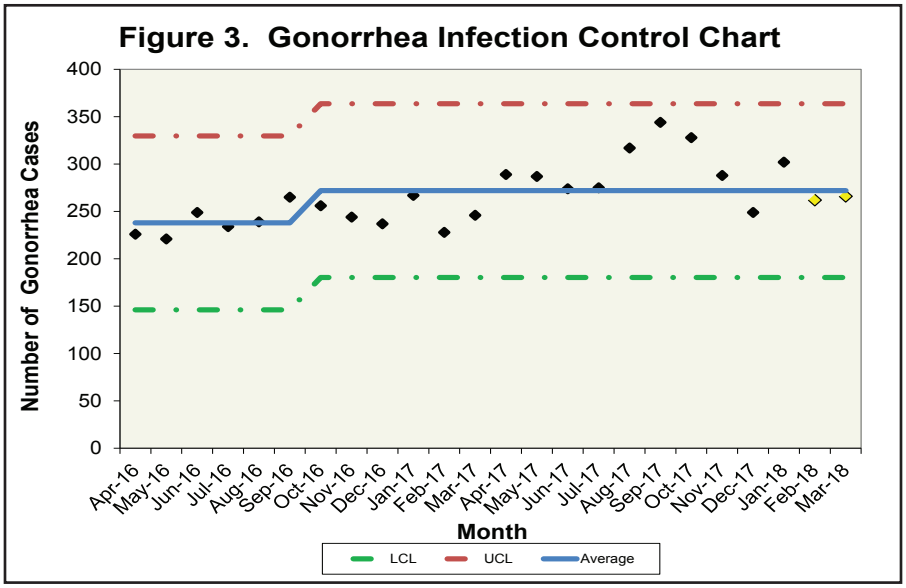
Table 3 displays the total number of gonorrhea cases for Hamilton County residents (at diagnosis) over the period of 2017 and 2018 on a monthly basis. Only gonorrhea cases that have been reported to the CDC were counted for analysis purposes in this report. In 2017, the highest number of gonorrhea cases was reported for September (344 cases). During 2017, the highest number of gonorrhea cases occurred in January (302 cases). The average number of gonorrhea cases per month was respectively 282.7 and 276.7 for 2017 and 2018. At the time of this report, 830 gonorrhea cases were reported for 2018, an increase of 89 cases from 2017.

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 09/18/2018.

## Surveillance of Gonorrhea Cases in Hamilton County (April 2016-March 2018)

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 April 2016 and March 2018. 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 2015 to September 2016 (238.8). There was a recalculation of the average from October 2016 to September 2017 (271.8),in result of 8 consecutive cases above the average line.

**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 09/18/2018.

## 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 2017 and 2018 based on race, age and sex. About 77 percent of the gonorrhea cases from 2017 and 2018 occurred among black Hamilton County residents. About 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 2018. The percentage of cases that are black males and white females have increased over this period.

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

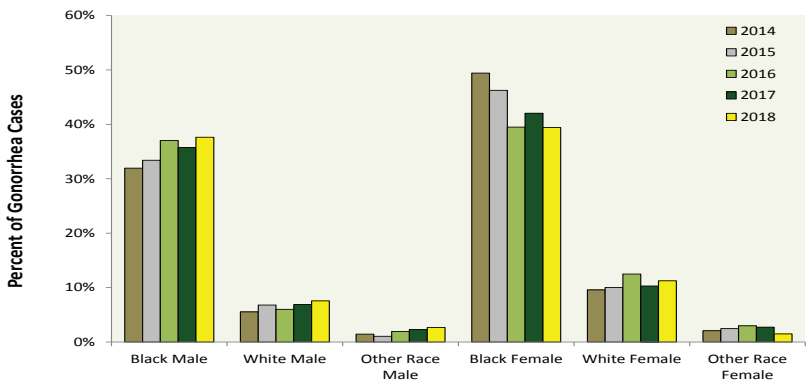



**Table 2. Demographics of Gonorrhea Cases**

| | 2017 | | 2018 | |
|---|---|---|---|---|
| | # | % | # | % |
| Race | | | | |
| Black | 2,183 | 77.8 | 520 | 77.0 |
| White | 482 | 17.2 | 127 | 18.8 |
| Other | 141 | 5.0 | 28 | 4.2 |
| Sex | | | | |
| Male | 1,601 | 47.2 | 408 | 49.2 |
| Female | 1,791 | 52.8 | 422 | 50.8 |
| Age | | | | |
| <1 | 1 | 0.0 | 0 | 0.0 |
| 1-14 | 54 | 1.6 | 8 | 1.0 |
| 15-24 | 1,678 | 49.5 | 394 | 47.5 |
| 25-34 | 1,064 | 31.4 | 273 | 32.9 |
| 35-44 | 347 | 10.2 | 87 | 10.5 |
| 45-54 | 157 | 4.6 | 41 | 4.9 |
| 55-64 | 75 | 2.2 | 25 | 3.0 |
| >65 | 16 | 0.5 | 2 | 0.2 |

These data are provisional and subject to change when additional data are reported. Gonorrhea cases between January 2017 and March 2018 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 09/18/2018. 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.