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Chlamydia and Gonorrhea Quarterly Report

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

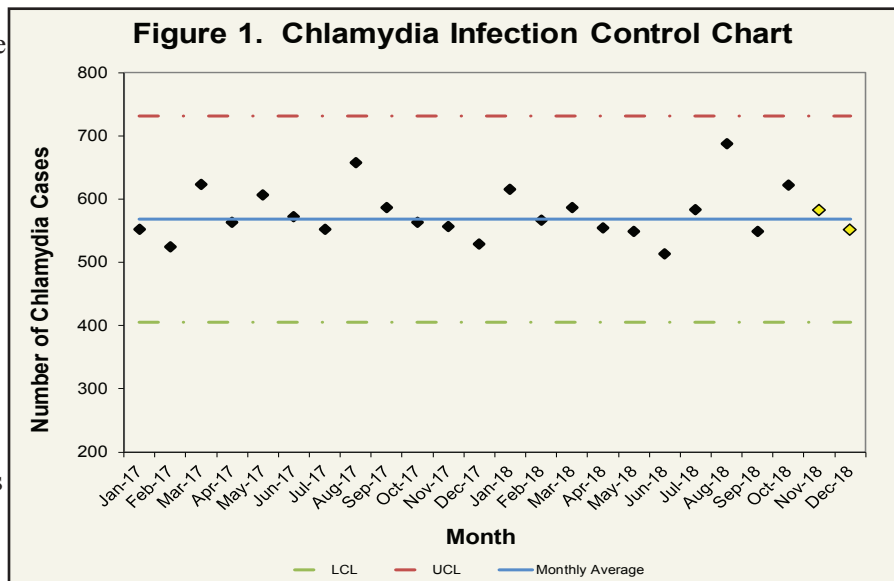
| Month | Cases of Chlamydia 2017 | Cases of Chlamydia 2018 |
|--------------|-------------------------|-------------------------|
| January | 552 | 617 |
| February | 525 | 567 |
| March | 623 | 588 |
| April | 563 | 554 |
| May | 607 | 549 |
| June | 572 | 513 |
| July | 552 | 582 |
| August | 658 | 690 |
| September | 587 | 549 |
| October | 563 | 622 |
| November | 557 | 582 |
| December | 529 | 551 |
| Total | 6,888 | 6,964 |

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 August (690 cases). There were 574 chlamydia cases per month during 2017 and the monthly average of 580.3 in 2018.

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 6/11/2019.

Surveillance of Chlamydia Cases in Hamilton County, Ohio (January 2017-December 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 January 2017 through December 2018. 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).



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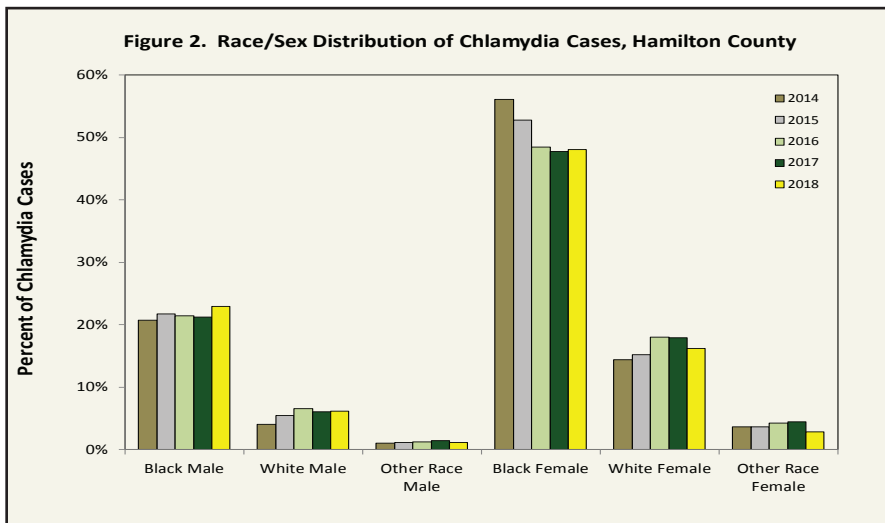


Demographics with High Risk for Chlamydia Infection

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 70 percent of the chlamydia cases from 2018 occurred among black Hamilton County residents. Over 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 age groups over 2014 through 2018. The demographics from 2014 to 2018 shows a large disparity, as black females, continues to make up a large percentage of all chlamydia cases.

| | 2017 | | 2018 | |
|-------------|-------|------|-------|------|
| | # | % | # | % |
| Race | | | | |
| Black | 3,647 | 69.0 | 3,683 | 71.0 |
| White | 1,259 | 24.0 | 1,160 | 22.4 |
| Other | 380 | 7.1 | 347 | 6.7 |
| Sex | | | | |
| Male | 2,126 | 30.9 | 2,277 | 32.7 |
| Female | 4,762 | 69.1 | 4,687 | 67.3 |
| Age | | | | |
| <1 | 4 | 0.1 | 3 | 0.0 |
| 1-14 | 130 | 1.9 | 106 | 1.5 |
| 15-24 | 4,639 | 67.3 | 4,506 | 64.7 |
| 25-34 | 1,639 | 23.8 | 1,831 | 26.3 |
| 35-44 | 330 | 4.8 | 342 | 4.9 |
| 45-54 | 95 | 1.4 | 128 | 1.8 |
| 55-64 | 44 | 0.6 | 37 | 0.5 |
| >65 | 7 | 0.1 | 11 | 0.2 |

These data are provisional and subject to change when additional data are reported. Chlamydia cases between January 2017 and December 2018 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 06/11/2019. 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-December 2018)

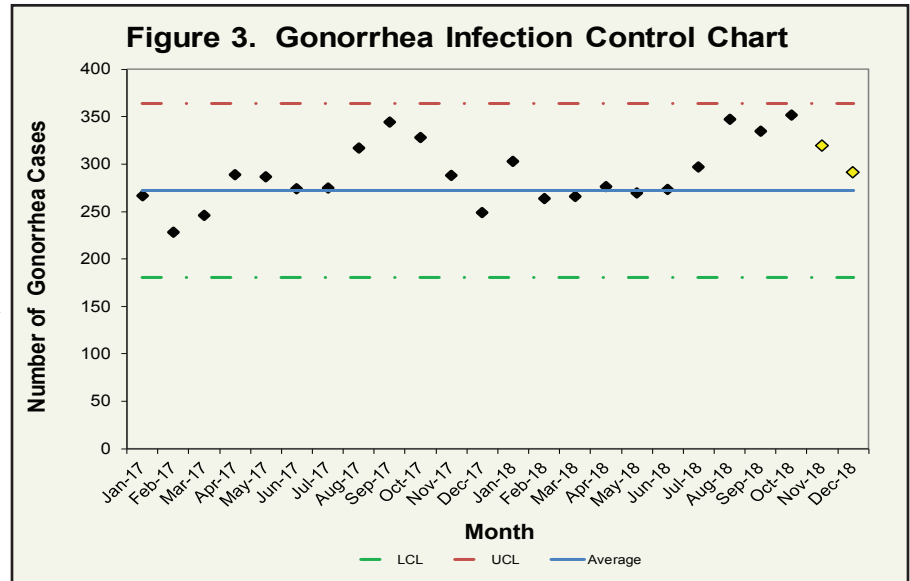
| Month | Cases of Gonorrhea 2017 | Cases of Gonorrhea 2018 |
|--------------|-------------------------|-------------------------|
| January | 267 | 303 |
| February | 228 | 264 |
| March | 246 | 266 |
| April | 289 | 276 |
| May | 287 | 270 |
| June | 274 | 273 |
| July | 275 | 297 |
| August | 317 | 347 |
| September | 344 | 335 |
| October | 328 | 352 |
| November | 288 | 319 |
| December | 249 | 291 |
| Total | 3,392 | 3,593 |

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 2018, the highest number of gonorrhea cases occurred in October (352 cases). The average number of gonorrhea cases per month was respectively 282.7 and 299.4 for 2017 and 2018. At the time of this report, 3,593 gonorrhea cases were reported for 2018, an increase of 201 cases from 2017 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 06/11/2019.

Surveillance of Gonorrhea Cases in Hamilton County (January 2017-December 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 January 2017 and December 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 2016 to September 2017 (271.8).

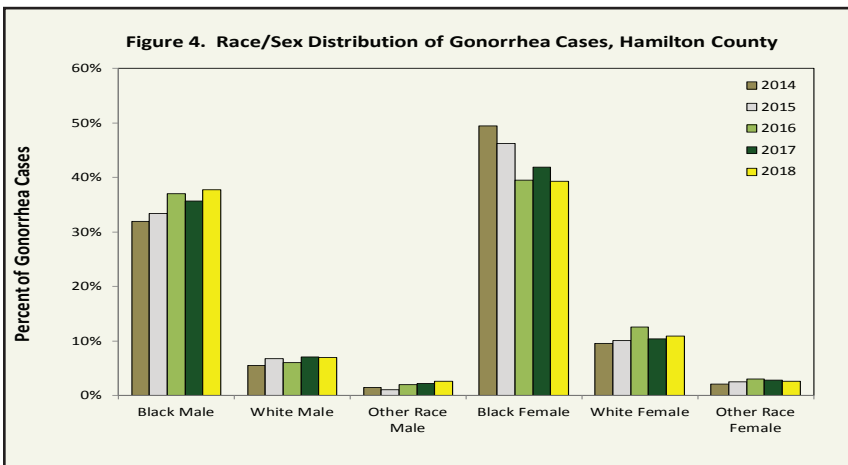


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Demographics with High Risk Gonorrhea Infection

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. Over 75 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.

| | 2017 | | 2018 | |
|-------------|-------|------|-------|------|
| | # | % | # | % |
| Race | | | | |
| Black | 2,179 | 77.4 | 2,233 | 76.7 |
| White | 491 | 17.5 | 527 | 18.1 |
| Other | 144 | 5.1 | 153 | 5.3 |
| Sex | | | | |
| Male | 1,601 | 47.2 | 1,298 | 49.4 |
| Female | 1,791 | 52.8 | 1,329 | 50.6 |
| Age | | | | |
| <1 | 1 | 0.0 | 1 | 0.0 |
| 1-14 | 54 | 1.6 | 38 | 1.1 |
| 15-24 | 1,678 | 49.5 | 1,707 | 47.5 |
| 25-34 | 1,064 | 31.4 | 1,207 | 33.6 |
| 35-44 | 347 | 10.2 | 386 | 10.7 |
| 45-54 | 157 | 4.6 | 151 | 4.2 |
| 55-64 | 75 | 2.2 | 82 | 2.3 |
| >65 | 16 | 0.5 | 21 | 0.6 |



These data are provisional and subject to change when additional data are reported. Gonorrhea cases between January 2017 and December 2018 were used for analysis. Cases were selected based on address at diagnosis. Source: Ohio Department of Health, STD Surveillance. Data reported as of 06/11/2019. 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.