CLAY COUNTY
PUBLIC HEALTH CENTER

2019 Communicable Disease Summary Report

Per State Statute, the Clay County Public Health Center (CCPHC) Epidemiology Program routinely monitors over 200 reportable diseases and conditions. In 2019, CCPHC received a total of 1,773 reportable condition cases (excluding animal bites and influenza). Among these reports were 1,655 (93%) of newly reported sexually transmitted infections (STIs), 55 (3%) enteric illnesses, 8 (1%) vaccine preventable conditions and 55 (3%) of other miscellaneous conditions. Figure 1 shows the distribution of cases reported in 2019.

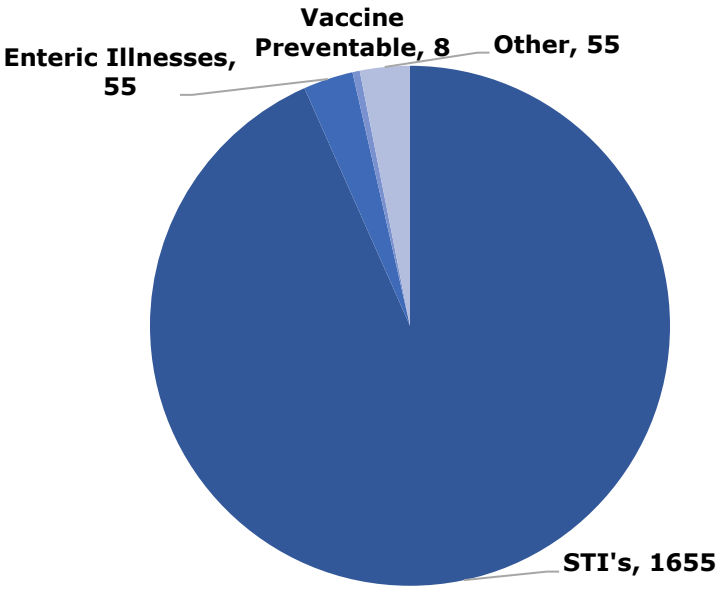

Figure 1. Number of CCPHC Reportable Condition Reports, 2019.

Sexually Transmitted Infections (STIs)

As noted above, STIs contribute to the bulk of reportable conditions, aside from influenza, in Clay County. Chlamydia and gonorrhea are the two most commonly reported STIs, followed by Syphilis. Figure 2 shows the trend of infection from 2015 through 2019 and demonstrates an upward trend which is also mirrored at the state and national level. These rising trends can be attributed to multiple factors ranging from a decrease in federal funding for STI prevention activities to an increase in local testing and treatment initiatives. A decrease in federal funding limits access to testing and treatment at the state/local levels which in turn increases the level of infection circulating in the community and

increasing exposure risk regionally. An increase in testing and treatment initiatives in some local jurisdictions leads to an increase in disease detection for surveillance purposes which may be occurring to some extent in Clay County.

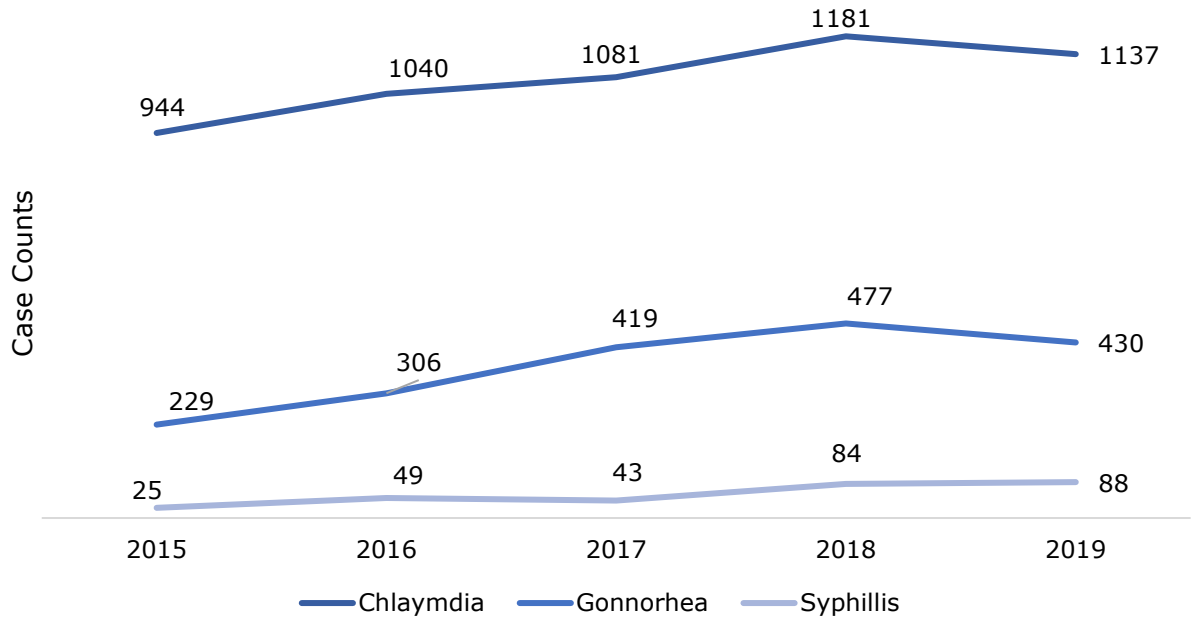

Figure 2. Reportable Sexually Transmitted Infections 2015-2019, Clay County

Flu 2019-2020

According to the Centers for Disease Control and Prevention (CDC) 2019-2020 flu vaccine interim report, the flu vaccine effectiveness for general population is a 45% match against laboratory-confirmed influenza and is 55% effective for children aged 6 months to 17 years.[1] The 2019–20 influenza season began early with predominant influenza B/Victoria virus circulation, followed by increasing A(H1N1)pdm09 virus activity, with ongoing detection of both viruses. Markers of severe illness, including laboratory-confirmed influenza-associated hospitalization rates among children and adolescents aged <18 years and young adults aged 18–49 years, were higher this season than past season, including the 2017–18 season. Figure 3 shows the trend of flu seasons from 2017-2021.

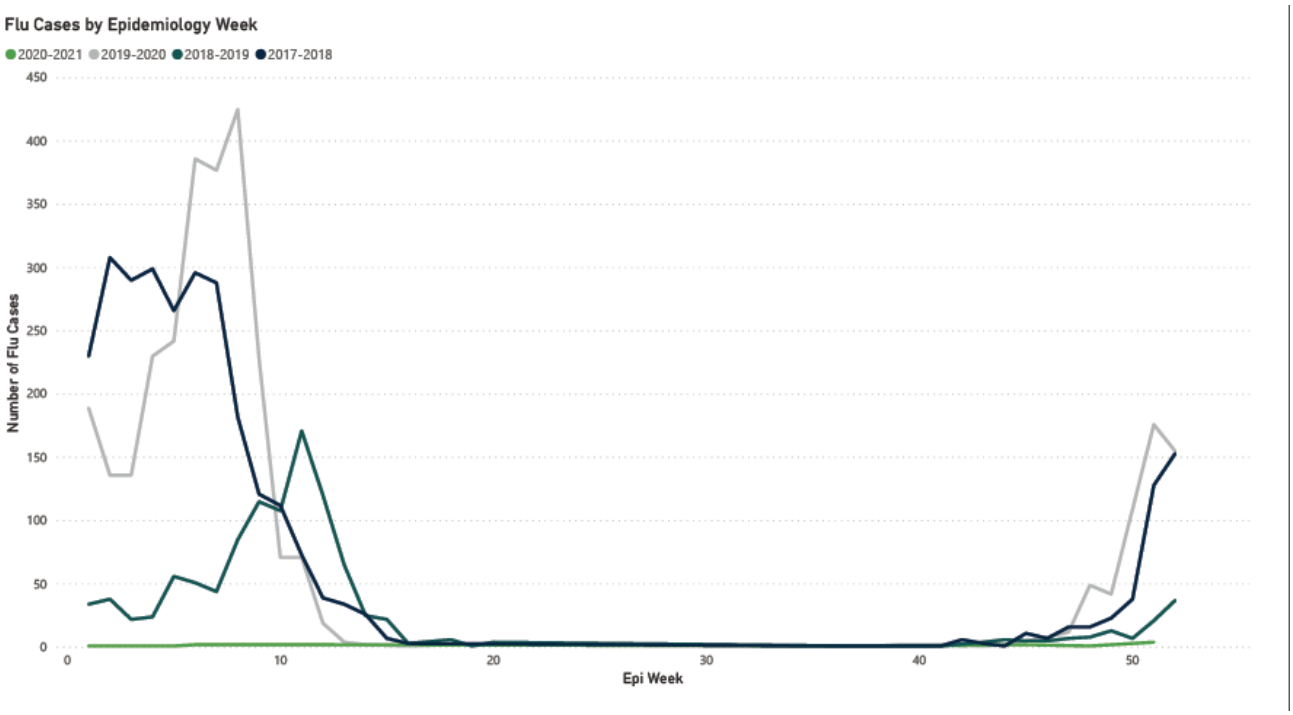

Figure 3. Flu Cases by Epidemiology Week

Enteric Illnesses

Enteric bacteria typically enter the body through the ingestion of contaminated food and water, by contact with animals or their environments, or by contact with the feces of an infected person. We conduct our work through surveillance, investigation, and research to identify causes, sources, and prevention measures for bacterial infections. Figure 4 shows the cases that were investigated in 2019.

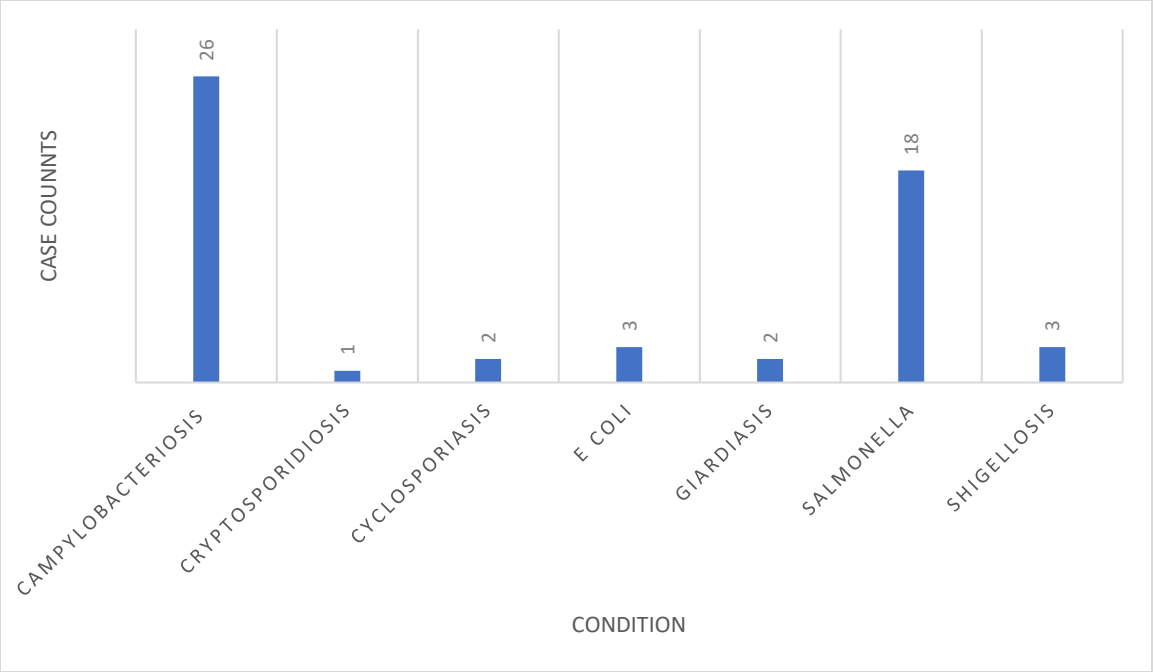

Figure 4. Enteric Illnesses Clay County 2019

Vaccine Preventable Illnesses

Although some reportable conditions are vaccine preventable, infections such as Varicella (Chicken Pox), Pertussis (Whooping Cough), Mumps, and Hemophilus Influenzae continue to be reported every year. In 2019, a total of 8 vaccine preventable infections, excluding influenza, were reported. Figure 4 demonstrates case counts of vaccine reportable conditions reported in 2019. This is a significant decrease from 2018; 37 cases were reported the year previous. Vaccination efforts within the county and by CCPHC attribute to the decrease in cases.

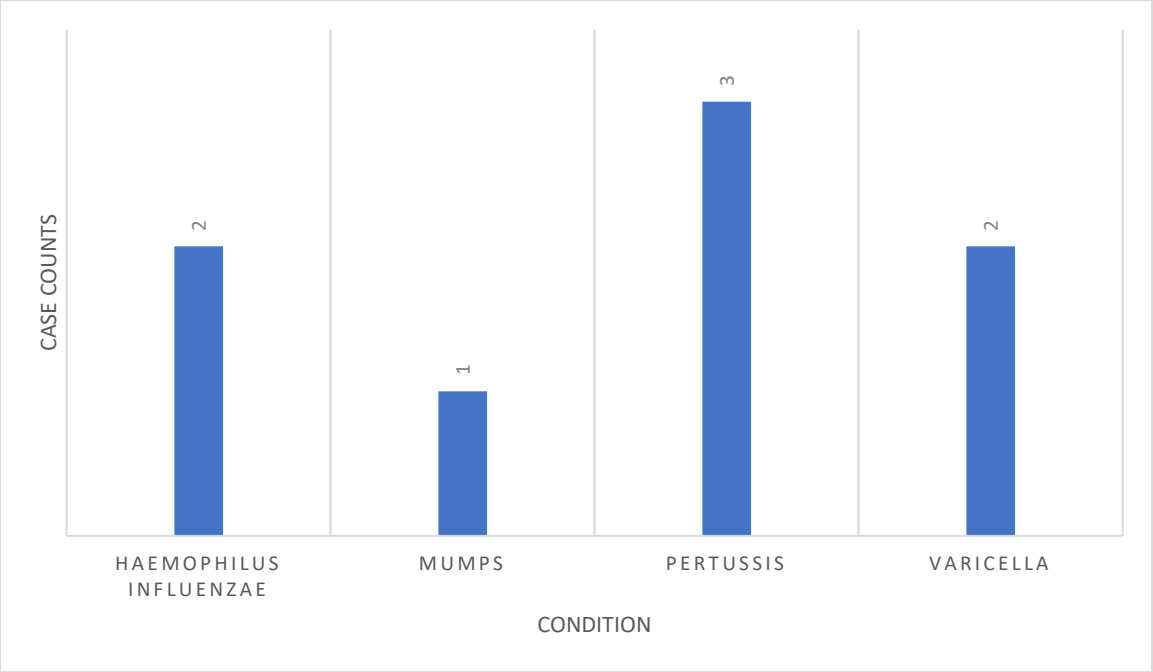

Figure 5. Vaccine Preventable Illnesses Clay County 2019

Discussion and Next Steps

When evaluating 5 year trends, STI cases remain consistently high and make up majority of reportable conditions investigated by the Epi Program. According to County Health Rankings, the number of new Chlamydia infections reported in 2018 lands this sexual activity indicator as one of the priorities recommended for policy and community level intervention action to improve health factors within the county.[2] To decrease the number of STI cases within our county, identifying the populations that are disproportionally impacted is essential. The impact of the STI epidemic does not fall equally across all populations. Across the United States, adolescents and young adults, men who have sex with men, and pregnant women are disproportionately impacted by STIs.[3] Health inequities contribute to an unequal burden of STIs in Black, American Indian/Alaska Native and Latinx communities. The Epi Program is making it a priority to ensure those who test positive receive the proper treatment and

sexual health education through a study planned for summer and fall 2021 that will identify who receives education on sexual health practices both during and after treatment. In addition, the Epi Program will work with the Community Health Promotion section to identify a realistic community level intervention to address these issues.

References

1. Centers for Disease Control and Prevention, MMWR: Interim Estimate of 2019 Seasonal Influenza Vaccine Effectiveness – United States, February 2020.
   Interim Estimates of 2019–20 Seasonal Influenza Vaccine Effectiveness — United States, February 2020 | MMWR (cdc.gov)
2. County Health Rankings, Missouri, Clay County, Health Factors, 2021
   https://www.countyhealthrankings.org/app/missouri/2021/rankings/clay/county/outcomes/overall/snapshot
3. Sexually Transmitted Infections Prevalence, Incidence, and Cost Estimates in the United States-CDC 2021
   https://www.cdc.gov/std/statistics/prevalence-incidence-cost-2020.htm