Monthly Communicable Disease Surveillance Report

July 2021

Sara Cannon, MPH, Epidemiologist

HAMILTON COUNTY PUBLIC HEALTH

PREVENT. PROMOTE. PROTECT.

NOTIFIABLE COMMUNICABLE DISEASES

Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 88

Most frequently reported communicable diseases:

- Chronic hepatitis C (n=32)
- Chronic hepatitis B (n=13)
- Campylobacteriosis (n=11)
- E. Coli (n=4)
- Legionellosis (n=3)

Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 443

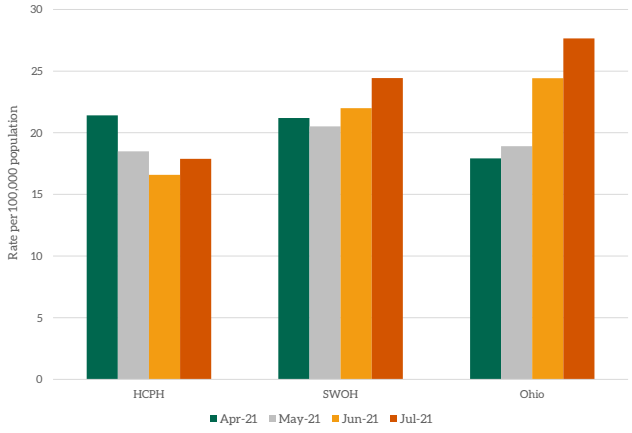
Most frequently reported communicable diseases:

- Chronic hepatitis C (n=171)
- Chronic hepatitis B (n=64)
- Campylobacteriosis (n=37)
- Lyme Disease (n=23)
- Salmonellosis (n=17)

Summary

The overall rates of reported communicable diseases for HCPH, SWOH, and Ohio changed in June by 8%, 11%, and 13% respectively (Figure 1). These rates are pro-rated to 30 days so they can be compared accurately. The Ohio rate (27.7) was the highest of the three rates, and the HCPH rate (17.9) was the lowest. The HCPH rate and SWOH rate (24.4) were both lower than the Ohio rate (Table 1).

Figure 1. 30-Day Rates of Reported Communicable Diseases in Ohio, Southwest Ohio, and Hamilton County Public Health Jurisdiction, April 2021 - July 2021



Chronic hepatitis C was the most commonly reported communicable disease across SWOH, with chronic hepatitis B and Campylobacteriosis 2nd and 3rd respectively (Table 2). Chronic hepatitis (Hepatitis C and Hepatitis B combined) comprised 53.0% of the total communicable diseases reported during July. Southwest Ohio is currently on pace to have 3.5% less hepatitis cases than the previous year's average number of cases (240). The rate of chronic hepatitis within Hamilton County for July was 13.1 per 100,000 residents. This rate was 3% lower than the SWOH rate of 13.5 per 100,000 residents.

Campylobacteriosis was the third most frequently reported disease in SWOH (Table 2). Campylobacteriosis cases accounted for 8.4% of the total communicable diseases reported during July. The number of cases of Campylobacteriosis reported for SWOH in July (37) was higher than the number of cases in the previous month (17). The rate of Campylobacteriosis within Hamilton County for July was 2.2 per 100,000 residents. This rate was higher than the SWOH rate of 2.1 per 100,000 residents.

Table 1. Comparison of the Reported Cases of Notifiable Communicable Diseases by Location, July 2021

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	88	18.48	0.65	0.49 - 0.85
SWOH	443	25.25	0.88	0.78 - 1.01
Ohio	3,308	28.58	.	. - .

Lyme disease was the fourth most frequently reported disease in SWOH (Table 2). Lyme disease cases accounted for 5.2% of the total communicable diseases reported during July. The number of cases of Lyme Disease reported for SWOH in July (23) was higher than the number of cases reported in the previous month (15). The rate of Lyme Disease within Hamilton County for July was 0.9 per 100,000 residents. This rate was higher than the SWOH rate of 1.3 per 100,000 residents.

NOTES: Data are provisional and are subject to change as data becomes finalized. Suspected, probable and confirmed cases are included in counts except for arboviral encephalitis and Zika virus diseases, of which only probable and confirmed cases are reported. Novel Influenza A cases are only confirmed cases. COVID-19, chlamydia and gonorrhea are not reported within this report. The completeness of reporting varies by region and can impact the incidences of reported diseases. This report reflects the time period of July 1-31, 2021. Data was accessed from the Ohio Disease Reporting System on 8/2/2021.

†Ratio of local rate to the Ohio rate.

‡Confidence intervals that do not contain the value of one are considered statistically significant.

Table 2. Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, July 2021

Reportable Condition	County								Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren	
Amebiasis	.	.	1	.	.	1	.	.	**2**
C. auris	.	.	.	.	.	1	.	.	**1**
C. auris - Investigation	.	.	.	.	.	1	.	.	**1**
CP-CRE	.	.	3	.	.	2	.	1	**6**
Campylobacteriosis	1	1	7	4	2	18	.	4	**37**
Coccidioidomycosis	.	.	.	.	.	1	.	.	**1**
Creutzfeldt-Jakob Disease	.	.	.	1	.	.	.	.	**1**
Cryptosporidiosis	1	.	2	.	.	1	.	.	**4**
Cyclosporiasis	.	.	.	.	.	2	.	1	**3**
E.Coli (shiga toxin producing)	1	.	1	1	.	6	.	1	**10**
Ehrlichiosis/Anaplasmosis	.	.	1	.	.	1	.	.	**2**
Giardiasis	.	.	4	2	.	4	1	.	**11**
Haemophilus influenzae (invasive)	.	.	.	.	.	2	.	.	**2**
Hantavirus	.	.	.	.	.	1	.	.	**1**
Hepatitis A	.	.	2	2	.	4	.	3	**11**
Hepatitis B (acute)	.	.	.	.	.	1	.	.	**1**
Hepatitis B (chronic)	4	1	16	3	.	29	1	10	**64**
Hepatitis C (acute)	.	.	1	.	.	.	.	.	**1**
Hepatitis C (chronic)	3	3	41	25	2	76	6	15	**171**
Hepatitis E	.	.	.	.	1	.	.	.	**1**
Influenza-associated hospitalization	.	.	.	.	.	1	.	1	**2**
Legionellosis	.	.	.	1	.	4	.	2	**7**
Listeriosis	.	.	.	.	.	.	.	1	**1**
Lyme Disease	1	2	1	8	.	7	1	3	**23**
Malaria	.	.	1	.	.	.	.	.	**1**
Meningitis (aseptic/viral)	.	1	1	.	.	2	.	2	**6**
Meningitis (bacterial)	.	.	.	.	.	3	.	.	**3**
Mumps	.	.	1	.	.	.	.	.	**1**
Pertussis	.	.	1	2	.	1	.	.	**4**
Rubella - congenital	.	.	.	.	.	1	.	.	**1**

Table 2. Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, July 2021, Continued

Reportable Condition	County								Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren	
Salmonellosis	.	1	4	2	.	6	.	4	**17**
Shigellosis	.	.	.	1	.	4	.	.	**5**
Spotted Fever Rickettsiosis	1	.	.	1	.	1	.	.	**3**
Streptococcal pneumoniae (invasive)	.	.	4	.	.	2	.	1	**7**
Streptococcal, Group A (invasive)	.	.	2	2	.	2	.	.	**6**
Streptococcal, Group B (in newborn)	.	.	.	.	.	.	.	1	**1**
Syphilis	.	.	2	.	.	9	.	.	**11**
Tuberculosis	.	.	1	1	.	2	.	.	**4**
Varicella	.	.	2	.	.	2	.	1	**5**
Vibriosis	.	.	1	1	.	.	.	.	**2**
Yersiniosis	.	.	.	1	.	1	.	.	**2**
Total	**12**	**9**	**100**	**58**	**5**	**199**	**9**	**51**	**443**

Table 3. YTD Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, January - July 2021

Reportable Condition	County								Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren	
Amebiasis	0	0	1	1	0	1	0	0	**3**
Brucellosis	0	0	2	0	0	0	0	0	**2**
C. auris	0	0	0	0	0	1	0	0	**1**
C. auris - Investigation	0	0	0	0	0	1	0	0	**1**
CP-CRE	2	0	8	3	0	16	1	3	**33**
Campylobacteriosis	2	5	15	18	4	39	7	13	**103**
Chancroid	0	0	1	0	0	0	0	0	**1**
Coccidioidomycosis	1	1	0	1	0	5	0	7	**15**
Creutzfeldt-Jakob Disease	0	0	1	1	0	3	0	0	**5**
Cryptosporidiosis	1	1	3	2	0	3	1	0	**11**
Cyclosporiasis	0	0	0	0	0	3	0	1	**4**
Dengue	0	0	1	0	0	0	0	0	**1**
E.Coli (shiga toxin producing)	1	0	8	1	0	16	1	2	**29**
Ehrlichiosis/Anaplasmosis	1	0	1	0	0	2	0	0	**4**
Giardiasis	1	0	10	15	0	37	4	5	**72**
Haemophilus influenzae (invasive)	0	0	3	0	0	8	0	0	**11**
Hantavirus	0	0	0	0	0	1	0	0	**1**
Hemolytic uremic syndrome (HUS)	0	0	1	0	0	0	0	0	**1**
Hepatitis A	1	3	18	2	1	29	2	14	**70**
Hepatitis B (acute)	0	0	1	3	0	4	0	1	**9**
Hepatitis B (chronic)	16	11	80	12	8	174	9	52	**362**
Hepatitis C (acute)	0	0	2	1	0	6	0	0	**9**
Hepatitis C (chronic)	40	60	265	146	36	568	34	103	**1252**
Hepatitis C - Perinatal Infection	0	0	1	1	1	4	1	1	**9**
Hepatitis E	0	0	0	0	1	0	0	0	**1**
Influenza A - novel virus infection	1	0	0	0	0	0	0	0	**1**
Influenza-associated hospitalization	1	0	3	1	0	7	0	3	**15**
Legionellosis	2	0	6	4	1	15	0	8	**36**
Listeriosis	0	0	0	0	0	3	0	1	**4**

Table 3. YTD Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, January - July 2021, Continued

Reportable Condition	County								Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren	
Lyme Disease	6	3	4	22	0	29	2	9	**75**
MIS-C associated with COVID-19	0	1	7	7	0	19	0	10	**44**
Malaria	0	0	1	0	0	5	0	0	**6**
Meningitis (aseptic/viral)	0	1	8	6	0	22	0	5	**42**
Meningitis (bacterial)	0	0	1	0	1	12	0	3	**17**
Meningococcal disease	1	0	0	1	0	1	0	0	**3**
Mumps	0	0	1	0	0	1	0	0	**2**
Pertussis	0	0	2	4	0	2	0	0	**8**
Psittacosis	0	0	0	0	0	1	0	0	**1**
Q fever (acute)	1	0	0	0	0	1	0	0	**2**
Rubella - congenital	0	0	0	0	0	1	0	0	**1**
Salmonella Typhi	0	0	1	0	0	0	0	0	**1**
Salmonellosis	1	5	12	17	3	29	5	11	**83**
Shigellosis	0	0	1	2	0	11	0	1	**15**
Spotted Fever Rickettsiosis	1	2	0	3	0	8	1	2	**17**
Staphylococcal aureus (VISA)	0	0	0	0	0	1	0	0	**1**
Streptococcal pneumoniae (invasive)	0	4	19	5	4	27	1	6	**66**
Streptococcal, Group A (invasive)	1	1	21	6	1	26	0	8	**64**
Streptococcal, Group B (in newborn)	0	0	0	0	0	1	1	1	**3**
Syphilis	2	1	8	1	1	64	1	2	**80**
Tuberculosis	0	0	5	3	0	28	2	2	**40**
Varicella	1	2	5	1	0	15	1	4	**29**
Vibriosis	0	0	2	1	0	3	0	1	**7**
West Nile virus infection (WNV)	0	0	0	0	0	1	0	0	**1**
Yersiniosis	0	0	0	2	0	2	0	2	**6**
Total	**84**	**101**	**529**	**293**	**62**	**1256**	**74**	**281**	**2680**

Table 4. YTD Cases of Notifiable Diseases in Hamilton County, January - July 2021

Reportable Disease	July 2020	YTD 2020	July 2021	YTD 2021
Amebiasis	0	1	1	1
Botulism (Infant)	1	2	0	0
Brucellosis	0	1	0	0
C. auris	0	1	1	1
C. auris - Investigation	0	0	1	1
CP-CRE	1	7	2	13
Campylobacteriosis	12	43	18	39
Coccidioidomycosis	0	9	1	5
Creutzfeldt-Jakob Disease	1	1	0	3
Cryptosporidiosis	1	8	1	3
Cyclosporiasis	0	0	2	3
Dengue	0	1	0	0
E.Coli (shiga toxin producing)	2	12	6	16
Ehrlichiosis/Anaplasmosis	0	1	1	2
Giardiasis	3	13	4	37
Haemophilus influenzae (invasive)	0	18	2	8
Hantavirus	0	0	1	1
Hemolytic uremic syndrome (HUS)	0	1	0	0
Hepatitis A	3	45	4	29
Hepatitis B (acute)	2	8	1	4
Hepatitis B (chronic)	21	149	29	174
Hepatitis C (acute)	0	11	0	6
Hepatitis C (chronic)	80	472	76	568
Hepatitis C - Perinatal Infection	0	2	0	4
Influenza-associated hospitalization	0	701	1	7
Legionellosis	2	17	4	15

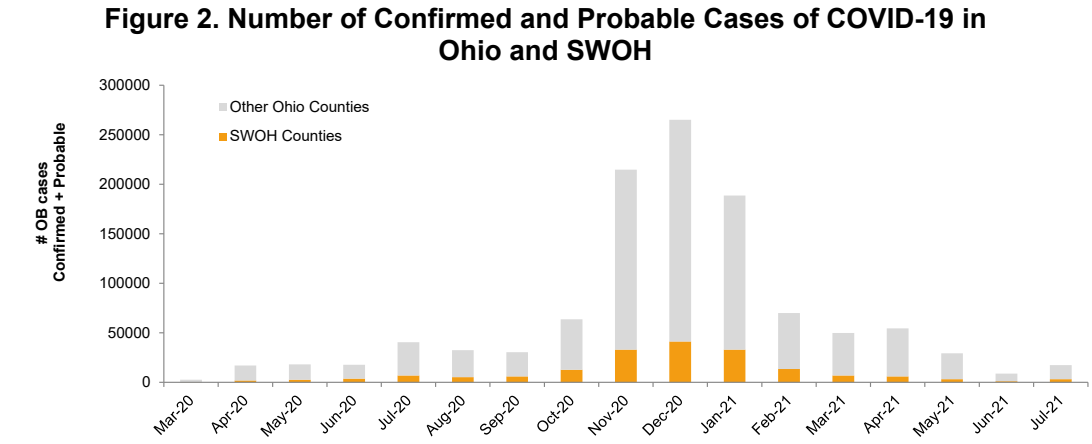
Reportable Disease	July 2020	YTD 2020	July 2021	YTD 2021
Leptospirosis	1	1	0	0
Listeriosis	0	1	0	3
Lyme Disease	4	15	7	29
MIS-C associated with COVID-19	1	1	0	19
Malaria	0	1	0	5
Meningitis (aseptic/viral)	3	24	2	22
Meningitis (bacterial)	2	15	3	12
Meningococcal disease	0	0	0	1
Mumps	0	0	0	1
Pertussis	2	72	1	2
Psittacosis	0	1	0	1
Q fever (acute)	0	0	0	1
Rubella - congenital	0	0	1	1
Salmonellosis	17	47	6	29
Shigellosis	0	8	4	11
Spotted Fever Rickettsiosis	2	2	1	8
Staphylococcal aureus (VISA)	0	0	0	1
Streptococcal pneumoniae (invasive)	4	54	2	27
Streptococcal, Group A (invasive)	3	44	2	26
Streptococcal, Group B (in newborn)	1	2	0	1
Syphilis	11	90	9	64
Toxic shock syndrome (TSS)	1	1	0	0
Tuberculosis	1	11	2	28
Varicella	2	9	2	15
Vibriosis	0	0	0	3
Yersiniosis	3	5	1	2

SARS-CoV-2 (COVID-19) Outbreak

Chinese Health Officials identified the novel coronavirus, now known as SARS-CoV-2 or COVID-19, in December, 2019. Due to rapid global spread of disease, the World Health Organization declared COVID-19 a pandemic March 11, 2020. The United States identified its first case of COVID-19 January 21, 2020 and declared COVID-19 a national emergency March 13, 2020. Outbreak confirmed and probable cases increased rapidly between March and April, 2020. Cases remained steady through May and June, 2020 before experiencing a spike in July, 2020. After a slight decrease in cases through August and September, 2020, Ohio experienced an increase in confirmed and probable cases in October 2020 followed by a significant spike in November 2020 and December 2020. Cases began to decrease in January 2021 and and continued to decline through June 2021, with the exception of a slight increase in cases in April, 2021. In July 2021 Ohio experienced an increase in confirmed and probable cases. The Southwest Ohio (SWOH) counties recognize the same pattern of confirmed and probable cases as Ohio with the exception of April 2021, when SWOH continued to experience a decline in cases. As of July 31, 2021, the SWOH counties account for 180,253 confirmed and probable cases (Figure 2).

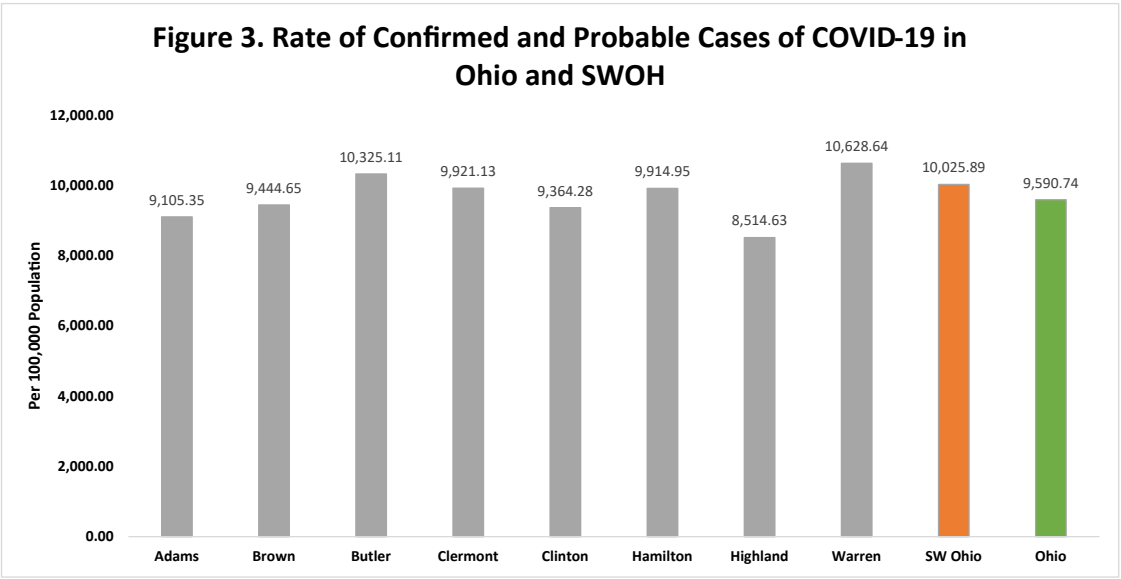
Overall, the rate of confirmed and probable outbreak cases in SWOH is higher than the Ohio rate (Figure 3). The SWOH region accounts for 16.1 percent of Ohio cases. The Warren County rate is the highest of the 8 SWOH counties, followed by Butler County and Clermont County. Currently the Warren County, Butler County, Clermont County, and Hamilton County rates are greater than that of Ohio, while the other SWOH counties' rates are less than that of Ohio.

Figure 2. Number of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, March 9, 2020 - July 31, 2021



	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21
Other Ohio Counties	2404	15271	15536	14077	33657	27135	24454	50972	181827	224005	155640	56593	42898	48406	26152	7524	14267
SWOH Counties	264	1787	2537	3673	6872	5308	5897	12689	32961	41161	33090	13458	7003	6011	3237	1211	3094

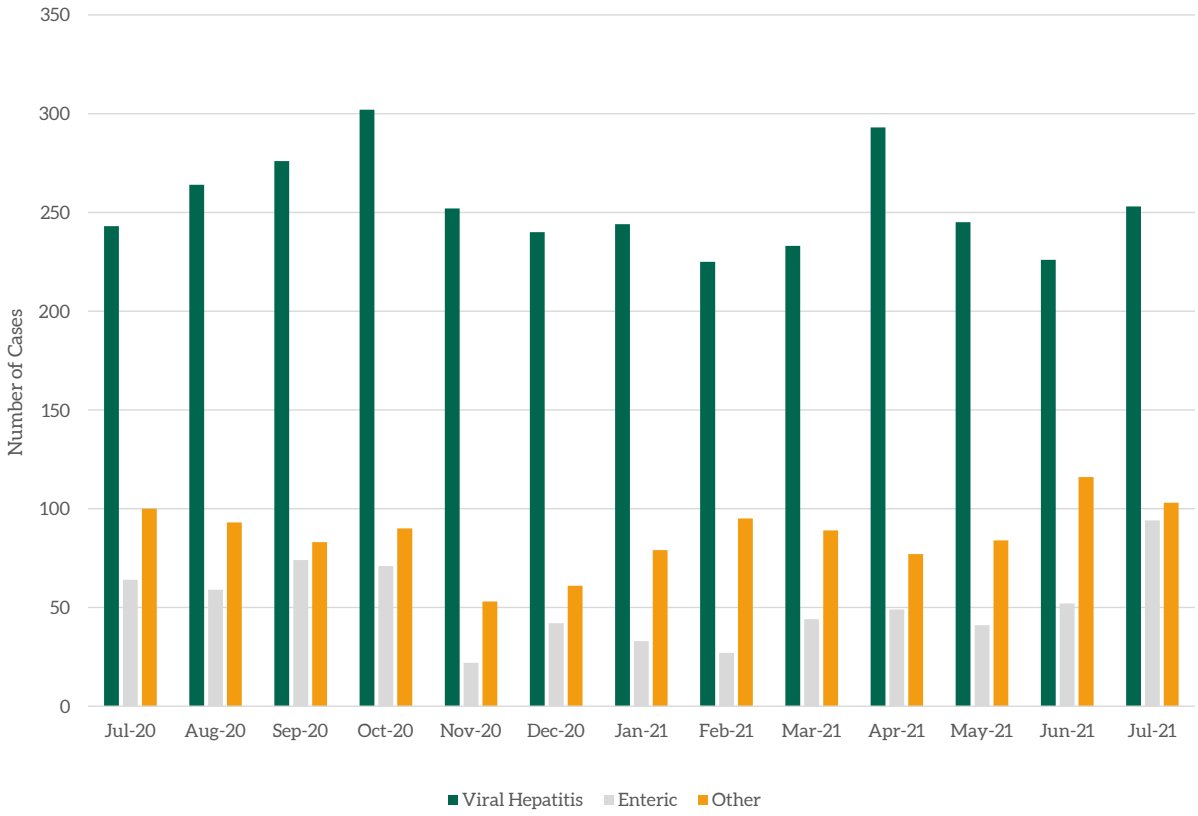
Figure 3. Rate of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, March 9, 2020 - July 31, 2021



NOTES: This data is provisional and subject to change when additional information is gained. Outbreak confirmed positive cases between March 9, 2020 and July 31, 2021 were used for analysis. Cases were selected based on address at diagnosis. Confirmed and probable cases determined by date reported to local health department.

Source: Ohio Department of Health, Ohio Disease Reporting System. Data reported as of August 2, 2021. Outbreak confirmed and probable cases have to meet the criteria set by ODH. Detailed information regarding the statewide COVID-19 outbreak is available at:
https://coronavirus.ohio.gov/wps/portal/gov/covid-19/home

Figure 4. Notifiable Communicable Diseases in Southwest Ohio by Disease Category as Reported in ODRS, July 2020 - July 2021*



*Suspected, Probable and Confirmed cases included in the counts. Cases counted by month reported to the local health department. STIs (i.e., Chlamydia, Gonorrhea, and Syphilis) are excluded from the analysis. Diseases are assigned to mutually exclusive categories, this means that disease cases are NOT included in more than one category shown in Figure 4. All cases are assigned to one of the categories.