



Monthly Communicable Disease Surveillance Report

April 2022

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: 90

Most frequently reported communicable diseases:

- Influenza-associated hospitalization (n=27)
- Chronic hepatitis C (n=23)
- Chronic hepatitis B (n=7)
- Campylobacteriosis (n=6)
- E. Coli (shiga toxin producing) (n=3)

Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 456

Most frequently reported communicable diseases:

- Chronic hepatitis C (n=163)
- Influenza-associated hospitalization (n=96)
- Chronic hepatitis B (n=56)
- Streptococcal pneumoniae (n=19)
- Campylobacteriosis (n=15)

Summary

The overall rates of reported communicable diseases for HCPH, SWOH, and Ohio increased in April by 17%, 17%, and 64% respectively (Figure 1). These rates are pro-rated to 30 days so they can be compared accurately. The SWOH rate (28.9) was the highest of the three rates, and the HCPH rate (21.0) was the lowest. The Ohio rate (26.5) was higher than the HCPH rate and lower than the SWOH rate. (Table 1).

Chronic hepatitis C was the most commonly reported communicable disease across SWOH, with Influenza-associated hospitalization and chronic hepatitis B 2nd and 3rd respectively (Table 2). Chronic hepatitis (Hepatitis C and Hepatitis B combined) comprised 48.0% of the total communicable diseases reported during April. Southwest Ohio is currently on pace to have 10.9% more hepatitis cases than the previous year's average number of cases (220). The rate of chronic hepatitis within Hamilton County for April was 10.3 per 100,000 residents. This rate was 18% lower than the SWOH rate of 12.6 per 100,000 residents.

Influenza-associated hospitalization was the second most frequently reported disease in SWOH (Table 2). Influenza-associated hospitalization cases accounted for 21.1% of the total communicable diseases reported during April. The number of cases of Influenza-associated hospitalization reported for SWOH in April (96) was higher than the number of cases in the previous month (39). The rate of Influenza-associated hospitalization within Hamilton County for April was 5.5 per 100,000 residents. This rate was the same as the SWOH rate of 5.5 per 100,000 residents.

Streptococcal pneumoniae was the fourth most frequently reported disease in SWOH (Table 2). Streptococcal pneumoniae cases accounted for 4.2% of the total communicable diseases reported during April. The number of cases of Streptococcal pneumoniae reported for SWOH in April (19) was higher than the number of cases in the previous

month (10). The rate of Streptococcal pneumoniae within Hamilton County for April was 1.5 per 100,000 residents. This rate was higher than the SWOH rate of 1.1 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 April 1-27, 2022. Data was accessed from the Ohio Disease Reporting System on 4/28/2022.

†Ratio of local rate to the Ohio rate.

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

Figure 1. 30-Day Rates of Reported Communicable Diseases in Ohio, Southwest Ohio, and Hamilton County Public Health Jurisdiction, January 2022 - April 2022

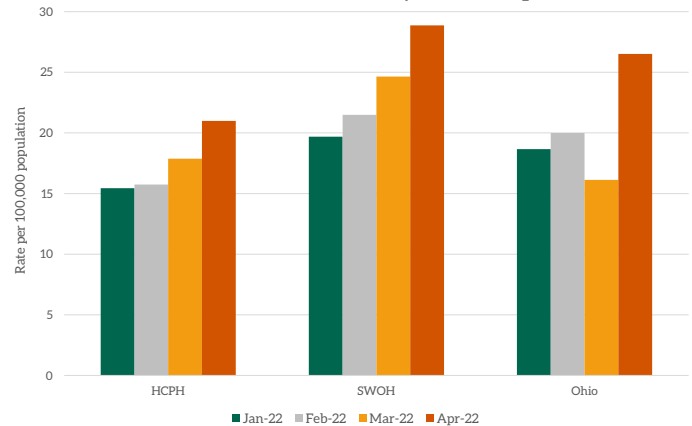


Table 1. Comparison of the Reported Cases of Notifiable Communicable Diseases by Location, April 2022

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	90	18.90	0.79	0.60 - 1.04
SWOH	456	25.99	1.09	0.96 - 1.24
Ohio	2,762	23.86	.	.-.

Table 2. Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, April 2022

Reportable Condition	County										Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren			
Amebiasis	1	1
C. auris	.	1	.	.	.	3	4
C. auris - Investigation	11	11
CP-CRE	.	2	.	.	.	1	3
Campylobacteriosis	.	3	4	1	.	7	15
Coccidioidomycosis	1	1
Cryptosporidiosis	.	.	1	1
E.Coli (shiga toxin producing)	.	.	3	.	.	3	6
Ehrlichiosis/Anaplasmosis	1	1
Giardiasis	.	.	1	.	.	1	2
Hepatitis A	4	1	3	8		
Hepatitis B (acute)	.	.	1	1	.	1	.	1	4		
Hepatitis B (chronic)	2	2	17	3	1	21	3	7	56		
Hepatitis C (acute)	1	.	.	.	.	1	.	.	2	
Hepatitis C (chronic)	4	6	49	17	4	62	5	16	163		
Influenza-associated hospitalization	.	3	17	15	1	44	9	7	96		
Legionellosis	.	.	2	1	.	1	.	.	4		
Lyme Disease	.	.	.	1	.	2	.	.	3		
Meningitis (aseptic/viral)	.	.	.	1	.	.	1	1	3		
Meningitis (bacterial)	.	1	.	.	.	1	.	1	3		
Pertussis	1	.	.	1		
Q fever (acute)	1	1		
Salmonellosis	.	.	4	.	.	4	3	.	11		
Shigellosis	3	.	.	3		
Spotted Fever Rickettsiosis	.	.	.	2	.	.	.	.	2	
Streptococcal pneumoniae (invasive)	.	.	2	2	.	12	.	3	19		
Streptococcal, Group A (invasive)	.	.	3	2	.	5	1	3	14		
Syphilis	.	.	1	.	.	6	.	1	8		
Tuberculosis	.	.	2	.	.	.	.	.	2	
Varicella	.	.	1	.	.	4	1	2	8		
Total	7	18	108	46	6	199	24	48	456		

Table 3. YTD Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, January - April 2022

Reportable Condition	County										Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren			
Amebiasis	0	0	1	0	0	2	0	0	0	0	3
Babesiosis	0	0	0	0	0	1	0	0	0	0	1
Botulism (Infant)	0	0	0	0	0	1	0	0	0	0	1
C. auris	0	1	0	0	0	21	1	0	0	0	23
C. auris - Investigation	0	0	0	0	0	26	0	0	0	0	26
CP-CRE	0	2	5	0	1	14	4	5	5	5	31
Campylobacteriosis	0	3	14	9	2	28	0	9	0	0	65
Chikungunya virus	0	0	1	0	0	0	0	0	0	0	1
Coccidioidomycosis	0	0	2	0	0	1	0	0	0	1	4
Creutzfeldt-Jakob Disease	0	0	0	0	0	2	0	0	0	0	2
Cryptosporidiosis	0	0	2	0	1	1	0	0	0	0	4
E.Coli (shiga toxin producing)	0	0	4	3	0	6	0	2	0	2	15
Ehrlichiosis/Anaplasmosis	0	0	0	0	0	0	0	0	0	1	1
Giardiasis	0	0	2	1	0	7	1	5	1	5	16
Haemophilus influenzae (invasive)	0	0	2	1	0	2	0	1	0	1	6
Hemolytic uremic syndrome (HUS)	0	0	0	0	0	0	0	0	0	1	1
Hepatitis A	1	2	2	0	2	8	1	8	1	8	24
Hepatitis B (acute)	0	1	1	3	5	7	0	1	0	1	18
Hepatitis B (chronic)	10	8	56	8	5	81	9	26	26	203	
Hepatitis C (acute)	1	0	0	0	0	3	0	0	0	4	
Hepatitis C (chronic)	8	27	151	56	15	261	21	81	81	620	
Hepatitis C - Perinatal Infection	0	0	0	1	0	0	0	0	0	1	
Hepatitis E	0	0	1	0	0	0	0	0	0	1	
Influenza-associated hospitalization	1	5	44	29	3	79	15	19	19	195	
Legionellosis	0	0	6	2	0	2	0	5	5	15	
Lyme Disease	1	0	0	7	1	8	0	5	5	22	
MIS-C associated with COVID-19	0	0	4	0	0	7	0	3	3	14	
Meningitis (aseptic/viral)	0	0	2	4	0	4	1	4	4	15	
Meningitis (bacterial)	0	1	4	0	2	2	0	4	4	13	

Table 3. YTD Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, January - April 2022, Continued

Reportable Condition	County										Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren			
Meningococcal disease	0	0	0	0	0	1	0	0	0	0	1
Mumps	1	0	0	0	0	0	0	0	0	0	1
Pertussis	0	0	2	1	0	4	0	0	1	1	8
Q fever (acute)	0	0	0	0	0	0	0	0	1	1	1
Q fever (chronic)	0	0	0	0	0	1	0	0	0	0	1
Salmonella Typhi	0	0	0	1	0	0	0	0	0	0	1
Salmonellosis	2	0	9	3	2	10	3	3	4	4	33
Shigellosis	0	0	1	0	0	9	0	0	0	0	10
Spotted Fever Rickettsiosis	1	1	0	4	0	1	1	1	1	1	9
St. Louis encephalitis virus disease	0	0	1	0	0	0	0	0	0	0	1
Streptococcal pneumoniae (invasive)	0	1	15	6	4	27	4	4	6	6	63
Streptococcal, Group A (invasive)	0	1	17	7	0	18	2	2	5	5	50
Streptococcal, Group B (in newborn)	0	0	0	0	0	2	0	0	0	0	2
Syphilis	0	0	8	2	1	49	0	0	4	4	64
Tuberculosis	0	0	3	1	0	3	0	0	2	2	9
Varicella	0	0	3	0	0	15	1	1	5	5	24
West Nile virus infection (WNV)	0	0	1	0	0	0	0	0	0	0	1
Yersiniosis	0	0	0	0	0	1	0	0	1	1	2
Total	26	53	364	149	44	715	64	211	64	211	1626

Table 4. YTD Cases of Notifiable Diseases in Hamilton County, January - April 2022

Reportable Disease	April 2021	YTD 2021	April 2022	YTD 2022	Reportable Disease	April 2021	YTD 2021	April 2022	YTD 2022
Amebiasis	0	0	1	2	Lyme Disease	2	14	2	8
Babesiosis	0	0	0	1	MIS-C associated with COVID-19	2	20	0	7
Botulism (Infant)	0	0	0	1	Malaria	0	5	0	0
C. auris	0	0	3	21	Meningitis (aseptic/viral)	3	13	0	4
C. auris - Investigation	0	0	11	26	Meningitis (bacterial)	1	5	1	2
CP-CRE	0	8	1	8	Meningococcal disease	0	1	0	1
Campylobacteriosis	4	11	7	28	Pertussis	0	1	1	4
Coccidioidomycosis	0	1	0	1	Psittacosis	0	1	0	0
Creutzfeldt-Jakob Disease	1	2	0	2	Q fever (chronic)	0	0	0	1
Cryptosporidiosis	0	1	0	1	Salmonellosis	5	15	4	10
E.Coli (shiga toxin producing)	3	5	3	6	Shigellosis	2	6	3	9
Giardiasis	11	27	1	7	Spotted Fever Rickettsiosis	0	4	0	1
Haemophilus influenzae (invasive)	0	3	0	2	Staphylococcal aureus	0	1	0	0
Hepatitis A	5	22	4	8	Streptococcal pneumoniae (invasive)	8	16	12	27
Hepatitis B (acute)	1	2	1	7	Streptococcal, Group A (invasive)	3	19	5	18
Hepatitis B (chronic)	35	109	21	81	Streptococcal, Group B (in newborn)	1	1	0	2
Hepatitis C (acute)	1	5	1	3	Syphilis	26	85	6	49
Hepatitis C (chronic)	77	306	62	261	Tuberculosis	4	14	0	3
Hepatitis C - Perinatal Infection	0	3	0	0	Varicella	3	9	4	15
Influenza-associated hospitalization	1	6	44	79	Vibriosis	1	2	0	0
Legionellosis	2	4	1	2	Yersiniosis	0	0	0	1

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. After remaining steady through May and June, 2020, Ohio experienced a spike in confirmed and probable cases in July, 2020. After a decrease in cases through August and September, 2020, Ohio experienced a significant spike in November and December, 2020. Cases began to decrease in January, 2021 and continued to decline through June, 2021, with the exception of a slight increase in cases in April, 2021. From July through September 2021 Ohio experienced an increase in confirmed and probable cases. After a decline in October 2021, Ohio experienced a rapid increase from November, 2021 through January, 2022. The Southwest Ohio (SWOH) counties recognize the same pattern of confirmed and probable cases as Ohio through April 2022 with the exception of April 2021, when SWOH continued to experience a decline in cases. As of April 27, 2022 the SWOH counties account for 427,440 confirmed and probable cases (Figure 2).

Overall, the SWOH rate is higher than the Ohio rate (Figure 3). The SWOH region accounts for 15.9 percent of Ohio cases. Brown County has the highest rate of the 8 SWOH counties, followed by Adams County and Clermont County. Currently the Hamilton County rate is less than that of Ohio, while all other counties in the SWOH region have rates that are higher than the Ohio rate.

Figure 2. Number of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, March 9, 2020 - April 2022

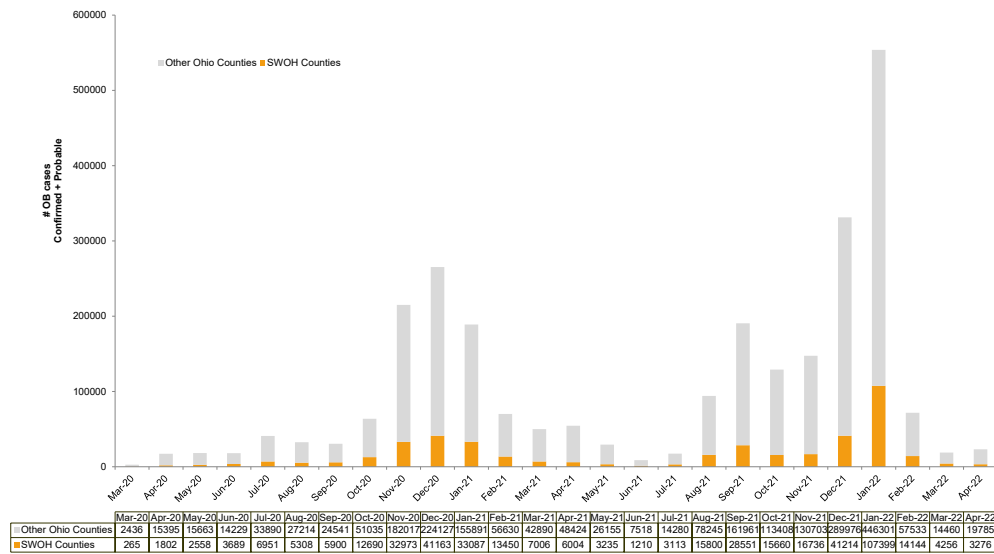
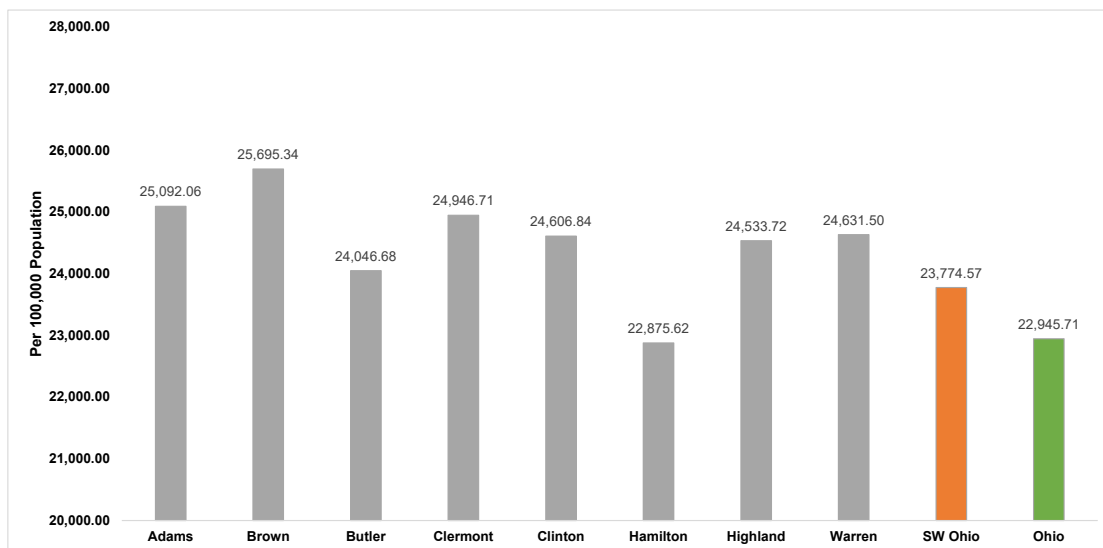


Figure 3. Rate of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, March 9, 2020 - April 2022



NOTES: This data is provisional and subject to change when additional information is gained. Outbreak confirmed positive cases between March 9, 2020 and April 27, 2022 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 April 28, 2022. 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, April 2021 - April 2022*

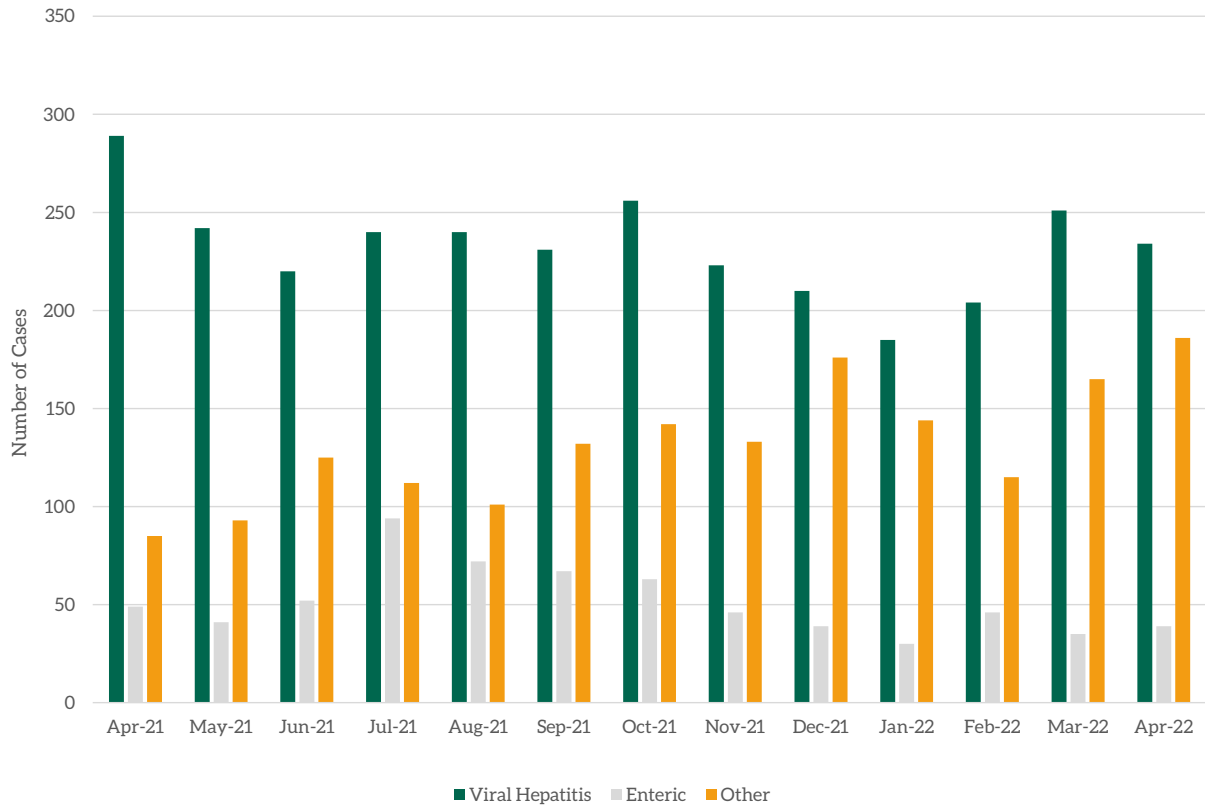
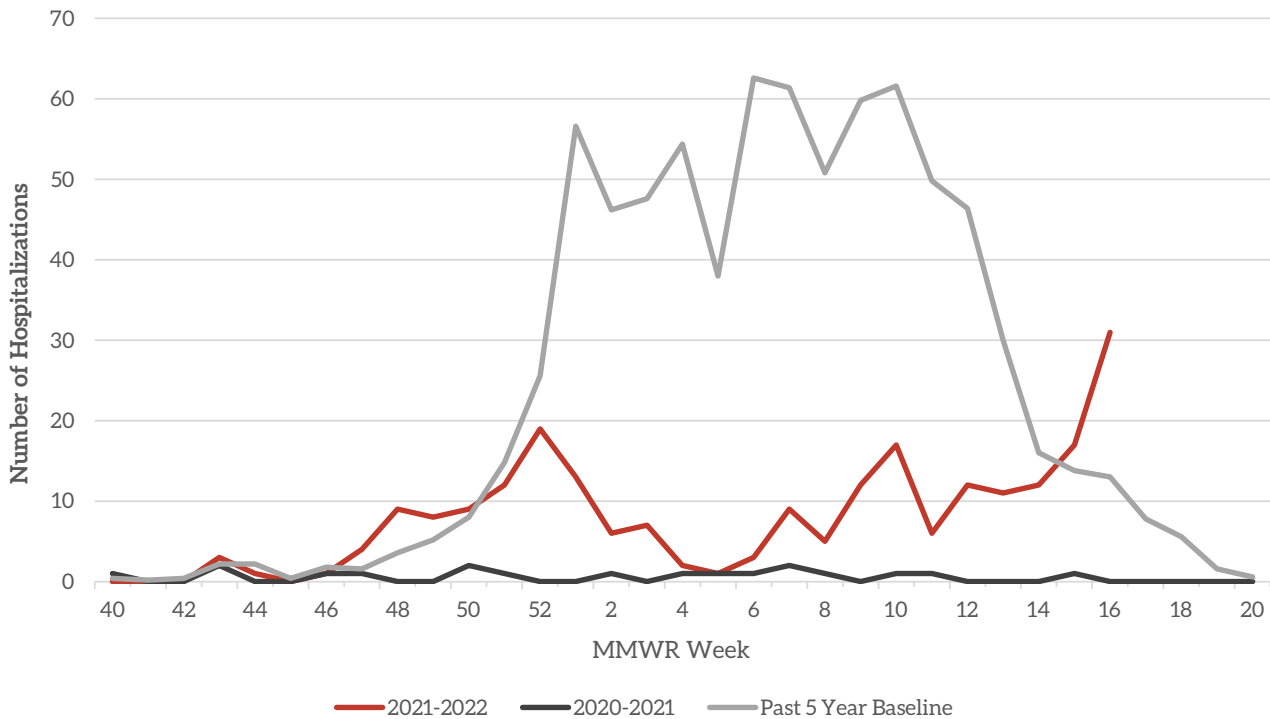


Figure 5. Confirmed Influenza-associated Hospitalizations, 2021-2022 Season†



*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.

†Influenza-associated hospitalizations are reported to ODH from local health departments and hospitals by direct entry into the Ohio Disease Reporting System (ODRS). Hospitalizations can be used as an indicator of the severity of illness during a particular influenza season. This condition became reportable in 2009. The 2020-2021 influenza season has been omitted from the five-year baseline average due to abnormal counts reported during the COVID-19 pandemic. A 5-year average including data from the 2015-2016 season through the 2019-2020 season is shown. The 2020-2021 season is plotted for reference.