

# Monthly Communicable Disease Surveillance Report

December 2021

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PREVENT. PROMOTE. PROTECT.



# NOTIFIABLE COMMUNICABLE DISEASES

## Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 80

Most frequently reported communicable diseases:

- Chronic hepatitis C (n=25)
- Chronic hepatitis B (n=13)
- Influenza-associated hospitalization (n=10)
- Meningitis (aseptic/viral) (n=4)
- Tuberculosis (n=4)

## Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 412

Most frequently reported communicable diseases:

- Chronic hepatitis C (n=142)
- Influenza-associated hospitalization (n=62)
- Chronic hepatitis B (n=58)
- Campylobacteriosis (n=14)
- Streptococcal pneumoniae (n=13)

## Summary

The overall rates of reported communicable diseases for HCPH, SWOH, and Ohio increased in December by 27%, 30%, and 14% respectively (Figure 1). These rates are pro-rated to 30 days so they can be compared accurately. The SWOH rate (22.7) was the highest of the three rates, and the HCPH rate (16.3) was the lowest. The Ohio rate (19.6) 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 2<sup>nd</sup> and 3<sup>rd</sup> respectively (Table 2). Chronic hepatitis (Hepatitis C and Hepatitis B combined) comprised 48.5% of the total communicable diseases reported during December. Southwest Ohio is currently on pace to have 14.8% less hepatitis cases than the previous year's average number of cases (227). The rate of chronic hepatitis within Hamilton County for December was 10.8 per 100,000 residents. This rate was 6% lower than the SWOH rate of 11.5 per 100,000 residents.

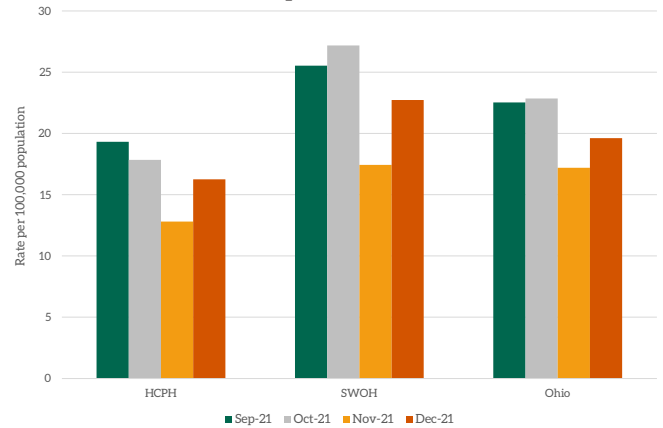
Influenza-associated hospitalization was the second most frequently reported disease in SWOH (Table 2). Influenza-associated hospitalization cases accounted for 15.0% of the total communicable diseases reported during December. The number of cases of Influenza-associated hospitalization reported for SWOH in December (62) was higher than the number of cases in the previous month (16). The rate of Influenza-associated hospitalization within Hamilton County for December was 3.1 per 100,000 residents. This rate was lower than the SWOH rate of 3.6 per 100,000 residents.

Campylobacteriosis was the fourth most frequently reported disease in SWOH (Table 2). Campylobacteriosis cases accounted for 3.4% of the total communicable diseases reported during December. The number of cases of Campylobacteriosis reported for SWOH in December (14) was lower than the number of cases in the previous month (22). The rate of Campylobacteriosis within Hamilton County for November was 0.6 per 100,000 residents. This rate was lower than the SWOH rate of 0.8 per 100,000 residents.

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

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio <sup>†</sup>	Confidence Interval (99%) <sup>‡</sup>
HCPH	80	16.80	0.83	0.62 - 1.11
SWOH	412	23.48	1.16	1.01 - 1.33
Ohio	2,347	20.27	.	.-.

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



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 December 1-31, 2021. Data was accessed from the Ohio Disease Reporting System on 1/4/2022.

<sup>†</sup>Ratio of local rate to the Ohio rate.

<sup>‡</sup>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, December 2021

Reportable Condition	County										Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren			
C. auris	.	.	.	.	.	9	.	.	.	9	
C. auris - Investigation	.	.	.	.	.	6	.	.	.	6	
Campylobacteriosis	.	2	4	1	.	5	.	2	.	14	
Coccidioidomycosis	.	.	.	.	.	1	.	.	.	1	
Creutzfeldt-Jakob Disease	.	.	.	.	.	2	.	1	.	3	
E.Coli (shiga toxin producing)	.	.	1	.	.	3	.	.	.	4	
Giardiasis	.	1	1	1	.	4	.	4	.	11	
Haemophilus influenzae (invasive)	1	.	2	1	.	3	.	.	.	7	
Hepatitis A	.	.	2	1	.	3	.	1	.	7	
Hepatitis B (acute)	.	.	1	.	.	1	.	.	.	2	
Hepatitis B (chronic)	.	.	21	3	1	23	2	8	.	58	
Hepatitis C (chronic)	.	8	33	13	2	64	4	18	.	142	
Influenza-associated hospitalization	.	.	15	6	1	25	1	14	.	62	
Legionellosis	.	.	1	1	1	.	.	.	.	3	
Lyme Disease	.	.	1	1	.	3	.	1	.	6	
MIS-C associated with COVID-19	.	.	1	.	.	3	.	1	.	5	
Meningitis (aseptic/viral)	.	.	.	1	.	5	1	.	.	7	
Meningitis (bacterial)	.	.	2	.	.	1	.	.	.	3	
Pertussis	.	.	1	.	.	1	.	.	.	2	
Salmonellosis	.	.	1	.	.	4	.	.	.	5	
Shigellosis	.	.	1	.	.	1	.	.	.	2	
Spotted Fever Rickettsiosis (including RMSF)	1	.	.	.	.	1	.	.	.	2	
Streptococcal pneumoniae (invasive)	.	1	4	3	.	3	.	2	.	13	
Streptococcal, Group A (invasive)	.	.	5	1	.	4	.	1	.	11	
Syphilis	.	.	1	1	.	5	.	.	.	7	
Toxic shock syndrome (TSS)	.	.	1	.	.	.	.	.	.	1	
Tuberculosis	.	1	3	.	.	6	2	1	.	13	
Varicella	.	.	1	.	.	2	.	1	.	4	
Yersiniosis	.	.	.	1	.	1	.	.	.	2	
<b>Total</b>	<b>2</b>	<b>13</b>	<b>103</b>	<b>35</b>	<b>5</b>	<b>189</b>	<b>10</b>	<b>55</b>	<b>10</b>	<b>412</b>	

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

Reportable Condition	County										Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren			
Amebiasis	0	0	1	2	0	1	0	0	0	0	4
Brucellosis	0	0	2	0	0	1	0	0	0	0	3
C. auris	0	0	0	0	0	26	0	0	0	0	26
C. auris - Investigation	0	0	0	0	0	51	0	0	0	0	51
CP-CRE	5	2	14	4	4	25	5	8	8	67	
Campylobacteriosis	3	11	35	31	8	73	14	27	27	202	
Coccidioidomycosis	1	1	3	3	0	9	0	8	8	25	
Creutzfeldt-Jakob Disease	0	0	1	1	0	5	0	1	1	8	
Cryptosporidiosis	1	1	5	5	1	9	2	1	1	25	
Cyclosporiasis	0	0	0	0	0	3	0	1	1	4	
Dengue	0	0	1	0	0	0	0	0	0	1	
E.Coli (shiga toxin producing)	1	1	15	10	0	31	2	3	3	63	
Ehrlichiosis/Anaplasmosis	1	0	1	1	0	2	0	0	0	5	
Giardiasis	1	2	19	18	0	57	4	14	14	115	
Haemophilus influenzae (invasive)	1	0	7	4	0	20	0	0	0	32	
Hantavirus	0	0	0	0	0	1	0	0	0	1	
Hemolytic uremic syndrome (HUS)	0	0	1	2	0	1	0	0	0	4	
Hepatitis A	4	3	42	3	1	52	3	22	22	130	
Hepatitis B (acute)	0	0	4	4	0	6	0	1	1	15	
Hepatitis B (chronic)	19	15	156	22	16	293	24	88	88	633	
Hepatitis C (acute)	0	0	4	3	0	6	0	2	2	15	
Hepatitis C (chronic)	54	97	441	233	54	912	60	189	189	2040	
Hepatitis C - Perinatal Infection	0	1	1	3	1	4	1	1	1	12	
Hepatitis E	0	0	0	0	1	1	0	0	0	2	
Influenza-associated hospitalization	1	0	20	10	2	41	1	24	24	99	
Legionellosis	2	1	10	8	3	26	1	12	12	63	
Listeriosis	0	0	0	1	0	6	0	2	2	9	
Lyme Disease	12	4	5	32	0	62	5	14	14	134	
MIS-C associated with COVID-19	0	2	16	7	0	31	0	14	14	70	

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

Reportable Condition	County											Total
	Adams	Brown	Butler	Clermont	Clinton	Hamilton	Highland	Warren				
Malaria	0	0	1	0	0	8	0	0	0	0	0	9
Meningitis (aseptic/viral)	0	1	15	8	0	36	1	0	0	0	0	70
Meningitis (bacterial)	0	0	3	1	1	22	0	0	0	0	0	30
Meningococcal disease	1	0	0	1	0	2	0	0	0	0	0	4
Mumps	0	0	1	0	0	2	0	0	0	0	0	3
Pertussis	2	0	7	6	0	4	0	0	0	0	3	22
Psittacosis	0	0	0	0	0	2	0	0	0	0	0	2
Q fever (acute)	1	0	0	0	0	1	0	0	0	0	0	2
Salmonella Typhi	0	0	2	0	0	0	0	0	0	0	0	2
Salmonellosis	1	6	26	26	4	65	6	0	0	0	17	151
Shigellosis	0	0	3	2	0	18	1	0	0	0	3	27
Spotted Fever Rickettsiosis (including RMSF)	3	3	1	5	0	13	1	0	0	0	3	29
Staphylococcal aureus (VISA)	0	0	1	0	0	1	0	0	0	0	0	2
Streptococcal pneumoniae (invasive)	2	6	34	14	11	47	4	0	0	0	16	134
Streptococcal, Group A (invasive)	1	1	36	14	3	46	0	0	0	0	19	120
Streptococcal, Group B (in newborn)	0	0	0	0	0	4	1	0	0	0	1	6
Syphilis	7	4	69	17	5	270	5	0	0	0	16	393
Toxic shock syndrome (TSS)	0	0	1	0	0	0	0	0	0	0	0	1
Trichinellosis	1	0	0	0	0	0	0	0	0	0	0	1
Tuberculosis	0	1	11	4	1	38	5	0	0	0	5	65
Typhus fever	0	0	0	0	0	1	0	0	0	0	0	1
Varicella	1	2	9	2	0	22	3	0	0	0	5	44
Vibriosis	0	0	2	1	0	5	0	0	0	0	1	9
West Nile virus infection (WNV)	0	0	0	0	0	1	0	0	0	0	0	1
Yersiniosis	0	0	1	3	0	4	0	0	0	0	2	10
<b>Total</b>	<b>126</b>	<b>165</b>	<b>1027</b>	<b>511</b>	<b>116</b>	<b>2367</b>	<b>149</b>	<b>535</b>	<b>149</b>	<b>535</b>	<b>4996</b>	

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

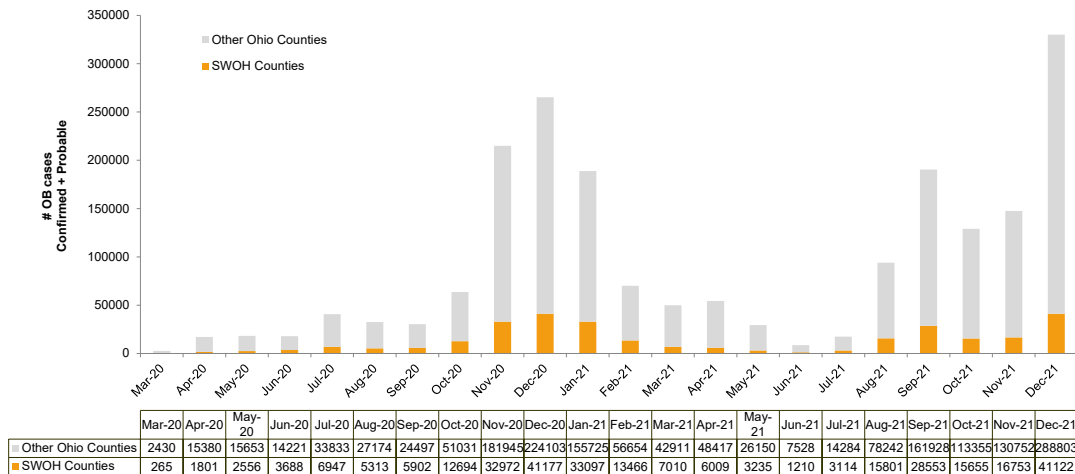
Reportable Disease	December 2020	YTD 2020	December 2021	YTD 2021	Reportable Disease	December 2020	YTD 2020	December 2021	YTD 2021
Amebiasis	1	3	0	1	Legionellosis	2	26	0	26
Botulism (Infant)	0	2	0	0	Leptospirosis	0	1	0	0
Brucellosis	0	1	0	1	Listeriosis	1	3	0	6
C. auris	0	1	9	26	Lyme Disease	3	40	3	62
C. auris - Investigation	0	0	6	51	MIS-C associated with COVID-19	0	6	3	31
CP-CRE	2	15	0	19	Malaria	0	2	0	8
CP-CRE - Investigation	0	1	0	0	Meningitis (aseptic/viral)	1	37	5	36
Campylobacteriosis	11	80	5	73	Meningitis (bacterial)	0	19	1	22
Coccidioidomycosis	1	11	1	9	Meningococcal disease	0	0	0	2
Creutzfeldt-Jakob Disease	0	2	2	5	Mumps	0	0	0	2
Cryptosporidiosis	0	12	0	9	Pertussis	0	73	1	4
Cyclosporiasis	0	4	0	3	Psittacosis	0	1	0	2
Dengue	0	1	0	0	Q fever (acute)	1	2	0	1
E.Coli (shiga toxin producing)	1	18	3	31	Q fever (chronic)	0	1	0	0
Ehrlichiosis/Anaplasmosis	0	4	0	2	Salmonellosis	4	90	4	65
Giardiasis	1	30	4	57	Shigellosis	2	13	1	18
Haemophilus influenzae (invasive)	2	21	3	20	Spotted Fever Rickettsiosis (including RMSF)	0	7	1	13
Hantavirus	0	0	0	1	Staphylococcal aureus (VISA)	0	0	0	1
Hemolytic uremic syndrome (HUS)	0	1	0	1	Streptococcal pneumoniae (invasive)	3	65	3	47
Hepatitis A	3	66	3	52	Streptococcal, Group A (invasive)	2	62	4	46
Hepatitis B (acute)	0	9	1	6	Streptococcal, Group B (in newborn)	1	6	0	4
Hepatitis B (chronic)	26	273	23	293	Syphilis	19	204	5	270
Hepatitis C (acute)	0	15	0	6	Toxic shock syndrome (TSS)	0	1	0	0
Hepatitis C (chronic)	80	932	64	912	Tuberculosis	0	16	6	38
Hepatitis C - Perinatal Infection	0	5	0	4	Typhus fever	0	1	0	1
Hepatitis E	0	0	0	1	Varicella	1	16	2	22
Influenza-associated hospitalization	2	706	25	41	Vibriosis	0	3	0	5
LaCrosse Virus Disease (LCVD)	0	1	0	0	Yersiniosis	0	7	1	4

## SARS-CoV-2 (COVID-19) Outbreak

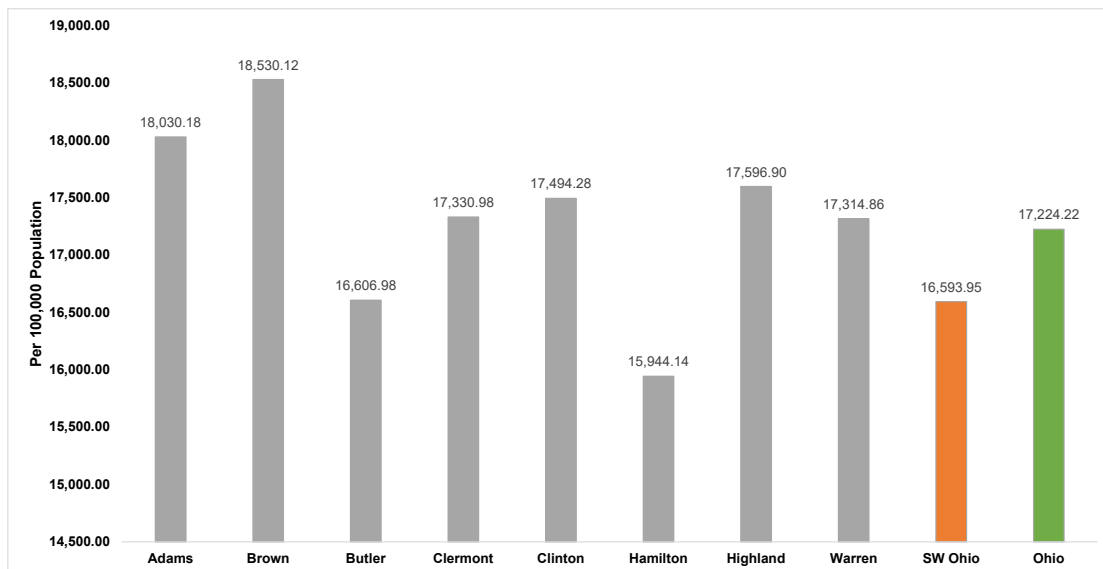
Chinese Health Officials identified the novel coronavirus, now known as SARS-CoV-2 or COVID-19, in December, 2019. Due to rapid global spread of disease, the World Health Organization declared COVID-19 a pandemic March 11, 2020. The United States identified its first case of COVID-19 January 21, 2020 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, cases increased again in November and December, 2021. The Southwest Ohio (SWOH) counties recognize the same pattern of confirmed and probable cases as Ohio through December 2021 with the exception of April 2021, when SWOH continued to experience a decline in cases. As of December 31, 2021 the SWOH counties account for 298,340 confirmed and probable cases (Figure 2).

Overall, the SWOH rate is lower than the Ohio rate (Figure 3). The SWOH region accounts for 14.8 percent of Ohio cases. Brown County has the highest rate of the 8 SWOH counties, followed by Adams County and Highland County. Currently the Hamilton County and Butler County rates are 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 - December 31, 2021**



**Figure 3. Rate of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, March 9, 2020 - December 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 December 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 January 4, 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, December 2020 - December 2021\*

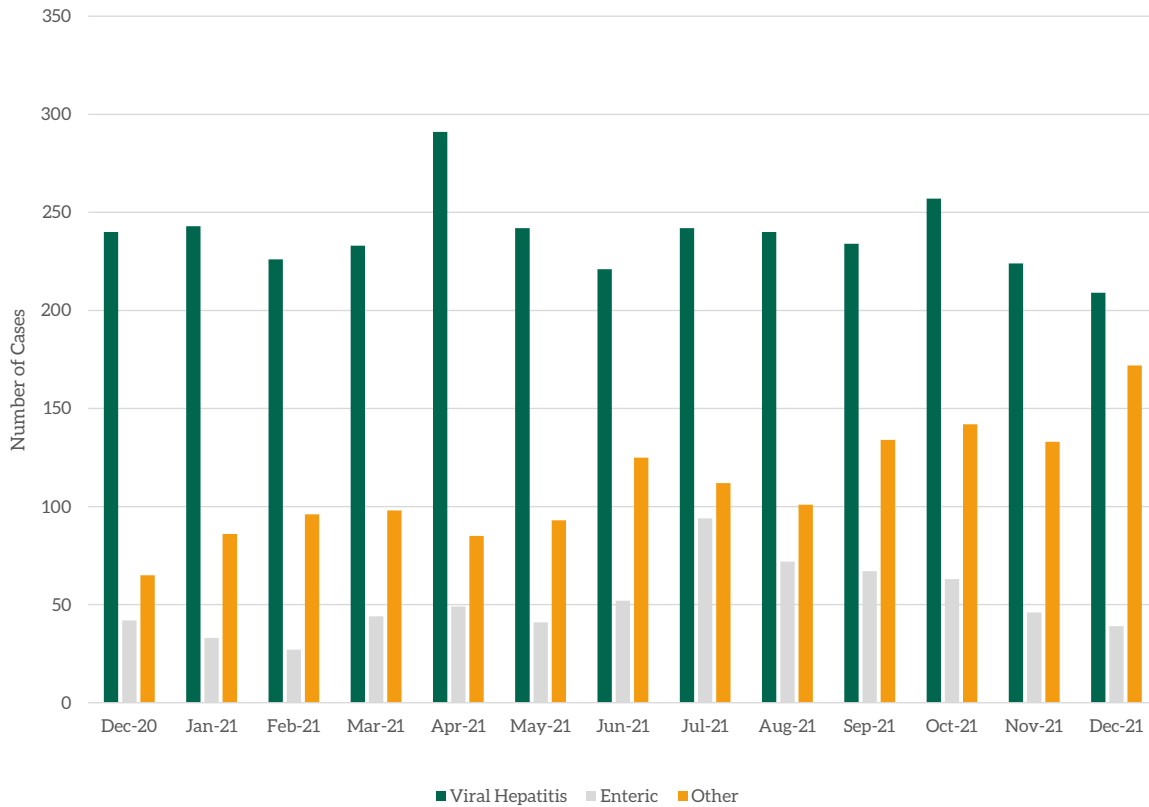
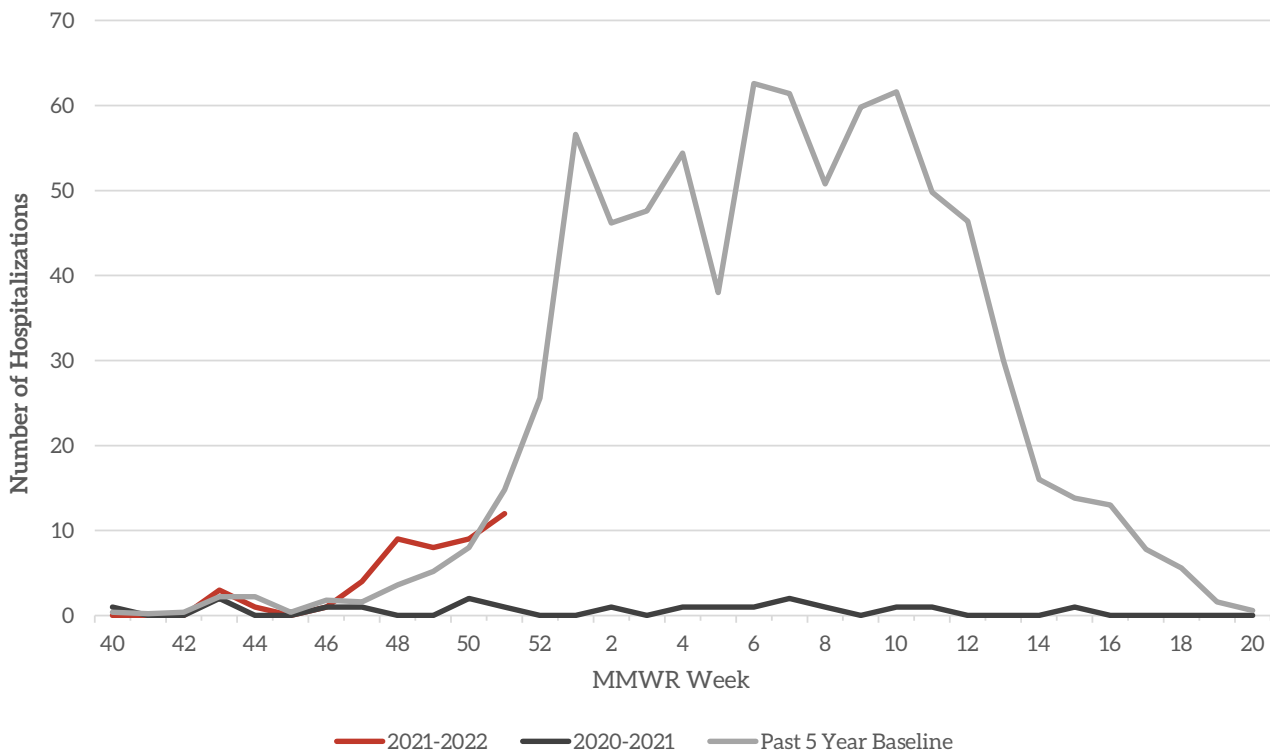


Figure 5. Confirmed Influenza-associated Hospitalizations, 2021-2022 Season†



\*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.