

Monthly Communicable Disease Surveillance Report

August 2022

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**HAMILTON COUNTY
PUBLIC HEALTH**

PREVENT. PROMOTE. PROTECT.



NOTIFIABLE COMMUNICABLE DISEASES

Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 72

Most frequently reported communicable diseases:

- Chronic hepatitis C (n=22)
- C. auris- Investigation (n=7)
- Lyme Disease (n=7)
- Chronic hepatitis B (n=6)
- Salmonellosis (n=4)

Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 366

Most frequently reported communicable diseases:

- Chronic hepatitis C (n=132)
- Chronic hepatitis B (n=41)
- Campylobacteriosis (n=22)
- Salmonellosis (n=16)
- Lyme Disease (n=15)

Summary

The overall rates of reported communicable diseases for HCPH, SWOH, and Ohio increased in August by 8%, 10%, and 9% respectively. (Figure 1). The Ohio rate (29.4) was the highest of the three rates, followed by the SWOH rate (26.1) and the HCPH rate (18.9) (Table 1). These rates are pro-rated to 30 days so they can be compared accurately.

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 47.3% of the total communicable diseases reported during August. Southwest Ohio is currently on pace to have a 3.1% increase in hepatitis cases over the previous year's average number of cases (210). The rate of chronic hepatitis within Hamilton County for August was 8.8 per 100,000 residents. This rate was 11% lower than the SWOH rate of 9.9 per 100,000 residents.

Campylobacteriosis was the third most frequently reported disease in SWOH (Table 2). Campylobacteriosis cases accounted for 6.0% of the total communicable diseases reported during August. The number of cases of Campylobacteriosis reported for SWOH in August (22) was lower than with the number of cases reported in the previous month (28). The rate of Campylobacteriosis within Hamilton County for August was 0.6 per 100,000 residents. This rate was 51% lower than the SWOH rate of 1.3 per 100,000 residents.

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

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	72	15.12	0.64	0.47 - 0.87
SWOH	366	20.86	0.89	0.77 - 1.02
Ohio	2,726	23.55	.	.-.

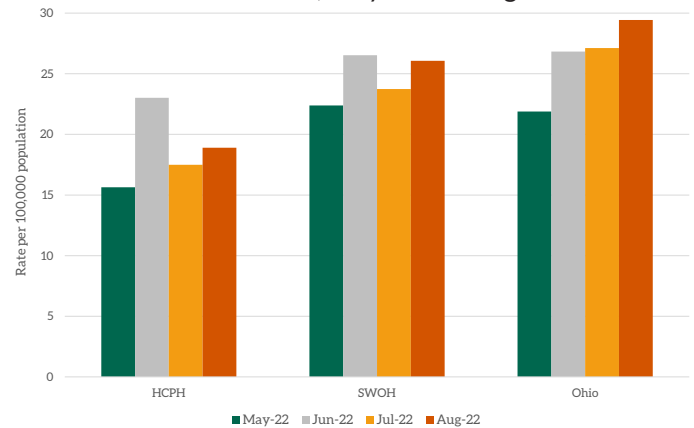
the SWOH rate of 0.9 per 100,000 residents.

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 August 1-24, 2022. Data was accessed from the Ohio Disease Reporting System on 8/25/2022.

†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, May 2022 - August 2022



Salmonellosis was the fourth most frequently reported disease in SWOH (Table 2). Salmonellosis cases accounted for 4.4% of the total communicable diseases reported during August. The number of cases of Salmonellosis reported for SWOH in August (16) was lower than the number of cases reported in the previous month (22). The rate Salmonellosis within Hamilton County for August was 1.2 per 100,000 residents. This rate was 36% higher than

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Botulism (Infant)	.	.	.	.	1	.	.	.	.	1
C. auris	4	.	.	.	.	.	.	.	.	4
C. auris - Investigation	8	1	.	.	2	.	.	.	.	11
Campylobacteriosis	5	1	2	6	5	.	1	2	2	22	
Coccidioidomycosis	2	.	.	.	.	.	.	1	.	3
Creutzfeldt-Jakob Disease	1	.	.	.	.	.	.	.	.	1
Cryptosporidiosis	2	1	.	1	.	.	.	1	.	5	
Cyclosporiasis	.	.	.	1	1	.	.	.	.	2
E.Coli (shiga toxin producing)	5	.	1	3	2	.	.	2	.	13	
Ehrlichiosis/Anaplasmosis	1	.	.	.	.	.	.	.	.	1
Giardiasis	3	.	1	.	1	.	1	.	.	6	
Haemophilus influenzae (invasive)	2	.	.	1	.	.	.	.	.	3
Hepatitis A	2	.	.	1	.	.	.	6	.	9	
Hepatitis B (acute)	2	1	.	.	.	.	.	.	.	3
Hepatitis B (chronic)	16	.	.	10	4	3	2	6	.	41	
Hepatitis C (acute)	2	.	.	.	.	.	.	.	.	2
Hepatitis C (chronic)	55	2	14	24	13	4	3	17	.	132	
Hepatitis E	1	.	.	.	.	.	.	.	.	1
Influenza-associated hospitalization	2	.	.	1	.	.	.	.	.	3
Legionellosis	2	.	.	2	.	.	.	.	.	4
Listeriosis	1	.	.	.	1	.	.	.	.	2
Lyme Disease	9	2	.	.	2	.	1	1	.	15	
Meningitis (aseptic/viral)	4	.	.	.	4	.	.	.	.	8
Meningitis (bacterial)	2	.	.	.	.	.	.	.	.	2
Monkeypox	10	.	.	2	.	.	.	.	.	12
Mumps	1	.	.	.	1	.	.	.	.	2
Salmonellosis	10	.	1	3	1	.	.	1	.	16	
Shigellosis	1	.	.	1	1	.	.	1	.	4	
Spotted Fever Rickettsiosis	.	.	.	.	1	.	1	.	.	2
Streptococcal pneumoniae (invasive)	4	.	.	1	.	.	.	.	.	5

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	2	0	0	1	0	0	0	0	2	5	
Babesiosis	1	0	0	0	0	0	0	0	0	1	
Botulism (Infant)	2	0	0	0	1	0	0	0	0	3	
C. auris	30	0	1	0	1	0	1	0	0	33	
C. auris - Investigation	55	1	0	0	3	0	0	0	0	59	
CP-CRE	21	0	4	7	5	2	5	6	6	50	
Campylobacteriosis	67	3	12	34	19	6	2	21	21	164	
Chikungunya virus	0	0	0	1	0	0	0	0	0	1	
Coccidioidomycosis	6	0	2	2	1	0	0	2	2	13	
Creutzfeldt-Jakob Disease	4	0	0	0	0	0	0	0	0	4	
Cryptosporidiosis	4	2	0	4	1	1	0	4	4	16	
Cyclosporiasis	0	0	0	1	1	0	0	0	0	2	
Dengue	1	0	0	1	0	0	0	0	0	2	
E.Coli (shiga toxin producing)	19	1	1	13	6	0	1	9	9	50	
Ehrlichiosis/Anaplasmosis	1	1	0	0	0	0	0	2	2	4	
Giardiasis	20	0	1	6	4	0	2	7	7	40	
Haemophilus influenzae (invasive)	14	0	0	6	2	0	0	2	2	24	
Hemolytic uremic syndrome (HUS)	0	0	0	0	0	0	0	1	1	1	
Hepatitis A	16	3	2	4	2	4	4	17	17	52	
Hepatitis B (acute)	9	1	1	1	3	8	1	1	1	25	
Hepatitis B (chronic)	148	17	13	107	21	11	24	58	58	399	
Hepatitis C (acute)	5	0	0	0	0	0	0	1	1	6	
Hepatitis C (chronic)	491	27	63	286	112	31	38	158	158	1206	
Hepatitis C - Perinatal Infection	0	0	0	0	1	0	0	0	0	1	
Hepatitis E	1	0	0	1	0	0	0	0	0	2	
Influenza-associated hospitalization	101	1	11	54	37	5	17	33	33	259	
Legionellosis	12	0	1	14	3	1	0	7	7	38	
Listeriosis	1	0	0	0	1	0	0	0	0	2	
Lyme Disease	40	13	6	4	29	1	15	13	13	121	

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

Reportable Condition	County											Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren				
MIS-C associated with COVID-19	8	1	0	6	0	0	0	0	2			17
Malaria	1	0	0	1	0	0	0	0	0			2
Meningitis (aseptic/viral)	21	0	1	4	8	1	3	8				46
Meningitis (bacterial)	9	0	1	7	1	2	0	4				24
Meningococcal disease	1	0	0	0	0	0	0	0				1
Monkeypox	12	0	0	2	0	0	0	0				14
Mumps	1	1	0	0	1	0	0	1				4
Pertussis	8	0	1	6	2	0	1	1				19
Q fever (acute)	0	0	0	0	0	0	0	1				1
Q fever (chronic)	1	0	0	0	0	0	0	0				1
Rubella (not congenital)	0	0	0	0	1	0	0	0				1
Salmonella Typhi	0	0	0	0	1	0	0	0				1
Salmonellosis	46	4	3	23	17	3	5	15				116
Shigellosis	17	0	0	5	1	0	0	3				26
Spotted Fever Rickettsiosis	6	4	3	1	5	2	4	2				27
St. Louis encephalitis virus disease	0	0	0	1	0	0	0	0				1
Streptococcal pneumoniae (invasive)	50	0	1	25	8	4	6	9				103
Streptococcal, Group A (invasive)	41	0	1	24	13	1	2	10				92
Streptococcal, Group B (in newborn)	4	0	0	0	0	1	0	0				5
Syphilis	121	0	1	25	6	2	1	5				161
Tuberculosis	15	1	1	7	2	2	0	3				31
Typhus fever	0	0	0	1	0	0	0	0				1
Varicella	18	0	0	7	1	0	2	8				36
Vibriosis	0	0	0	2	0	0	0	3				5
West Nile virus infection (WNV)	0	0	0	1	0	0	0	0				1
Yersiniosis	4	0	0	1	0	0	0	2				7
Total	1455	81	131	696	320	88	134	421				3326

Table 4. YTD Cases of Notifiable Diseases in Hamilton County, August 2022

Reportable Disease	August 2021	YTD 2021	August 2022	YTD 2022	Reportable Disease	August 2021	YTD 2021	August 2022	YTD 2022
Amebiasis	0	1	0	2	Listeriosis	2	5	1	1
Babesiosis	0	0	0	1	Lyme Disease	9	38	9	40
Botulism (Infant)	0	0	0	2	MIS-C associated with COVID-19	0	21	0	8
Brucellosis	1	1	0	0	Malaria	1	6	0	1
C. auris	3	5	4	30	Meningitis (aseptic/viral)	0	23	4	21
C. auris - Investigation	0	0	8	55	Meningitis (bacterial)	3	15	2	9
CP-CRE	2	16	0	11	Meningococcal disease	1	2	0	1
Campylobacteriosis	11	50	5	67	Monkeypox	0	0	10	12
Coccidioidomycosis	1	6	2	6	Mumps	0	1	1	1
Creutzfeldt-Jakob Disease	0	3	1	4	Pertussis	0	2	0	8
Cryptosporidiosis	3	6	2	4	Psittacosis	0	1	0	0
Cyclosporiasis	0	3	0	0	Q fever (acute)	0	1	0	0
E.Coli (shiga toxin producing)	3	19	5	19	Q fever (chronic)	0	0	0	1
Ehrlichiosis/Anaplasmosis	0	2	1	1	Salmonellosis	9	38	10	46
Giardiasis	4	41	3	20	Shigellosis	1	12	1	17
Haemophilus influenzae (invasive)	0	8	2	14	Spotted Fever Rickettsiosis	3	11	0	6
Hantavirus	0	1	0	0	Staphylococcal aureus (VISA)	0	1	0	0
Hepatitis A	2	31	2	16	Streptococcal pneumoniae (invasive)	3	30	4	50
Hepatitis B (acute)	0	3	2	9	Streptococcal, Group A (invasive)	5	30	7	41
Hepatitis B (chronic)	25	200	16	148	Streptococcal, Group B (in newborn)	1	2	0	4
Hepatitis C (acute)	0	6	2	5	Syphilis	29	202	6	121
Hepatitis C (chronic)	80	641	55	491	Tuberculosis	0	26	0	15
Hepatitis C - Perinatal Infection	0	4	0	0	Typhus fever	1	1	0	0
Hepatitis E	0	0	1	1	Varicella	1	16	0	18
Influenza-associated hospitalization	0	7	2	101	Vibriosis	0	3	0	0
Legionellosis	1	16	2	12	Yersiniosis	0	2	0	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, Ohio experienced a rapid increase from November, 2021 through January, 2022. In April, May, and July, 2022 Ohio experienced increasing cases. The Southwest Ohio (SWOH) counties recognize the same pattern of confirmed and probable cases as Ohio through August 2022. As of August 24, 2022, cases in Ohio and SWOH are decreasing. The SWOH counties account for 484,405 confirmed and probable cases.

Overall, the SWOH rate is higher than the Ohio rate (Figure 3). The SWOH region accounts for 16.0 percent of Ohio cases. Brown County has the highest rate of the 8 SWOH counties, followed by Adams County and Clermont County. Currently all eight 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, August 2021 - August, 2022

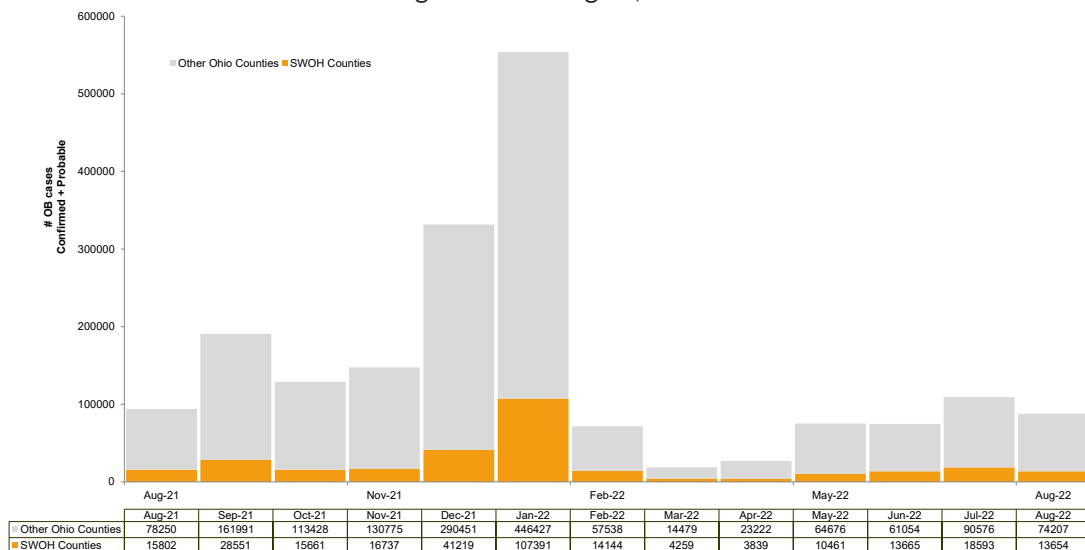
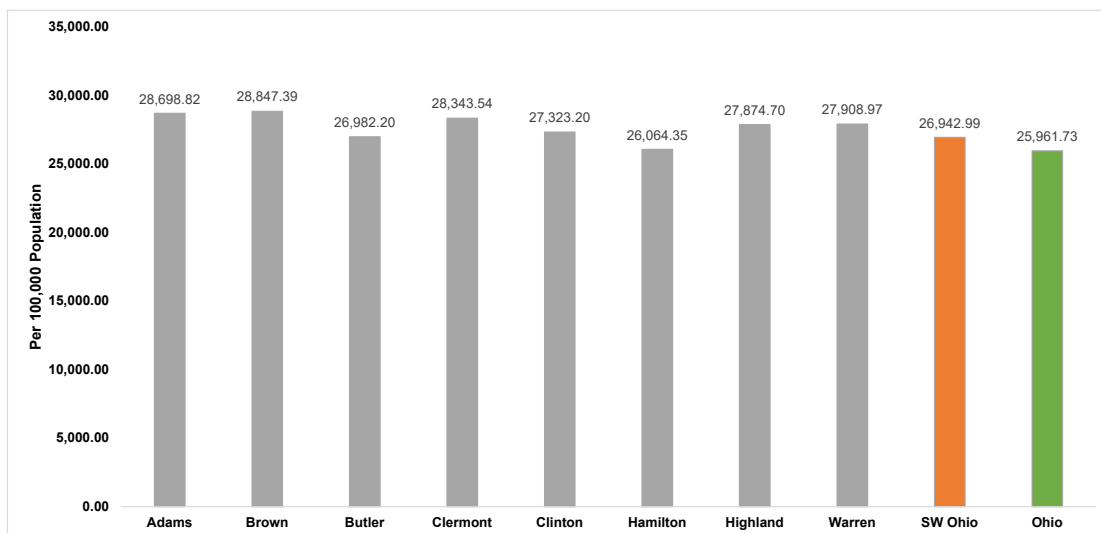


Figure 3. Rate of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, March 9, 2020 - August 24, 2022



NOTES: This data is provisional and subject to change when additional information is gained. Outbreak confirmed positive cases between March 9, 2020 and August 24, 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 August 25, 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, August 2021 - August 2022*

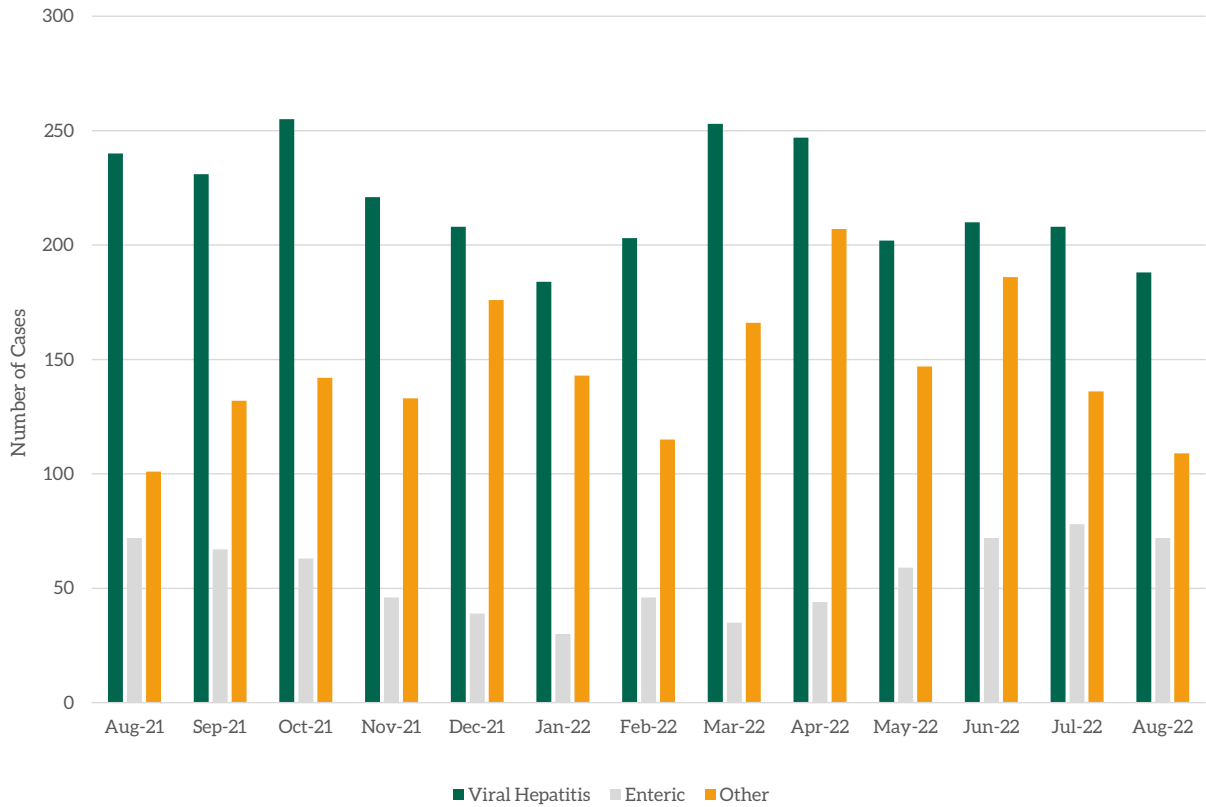
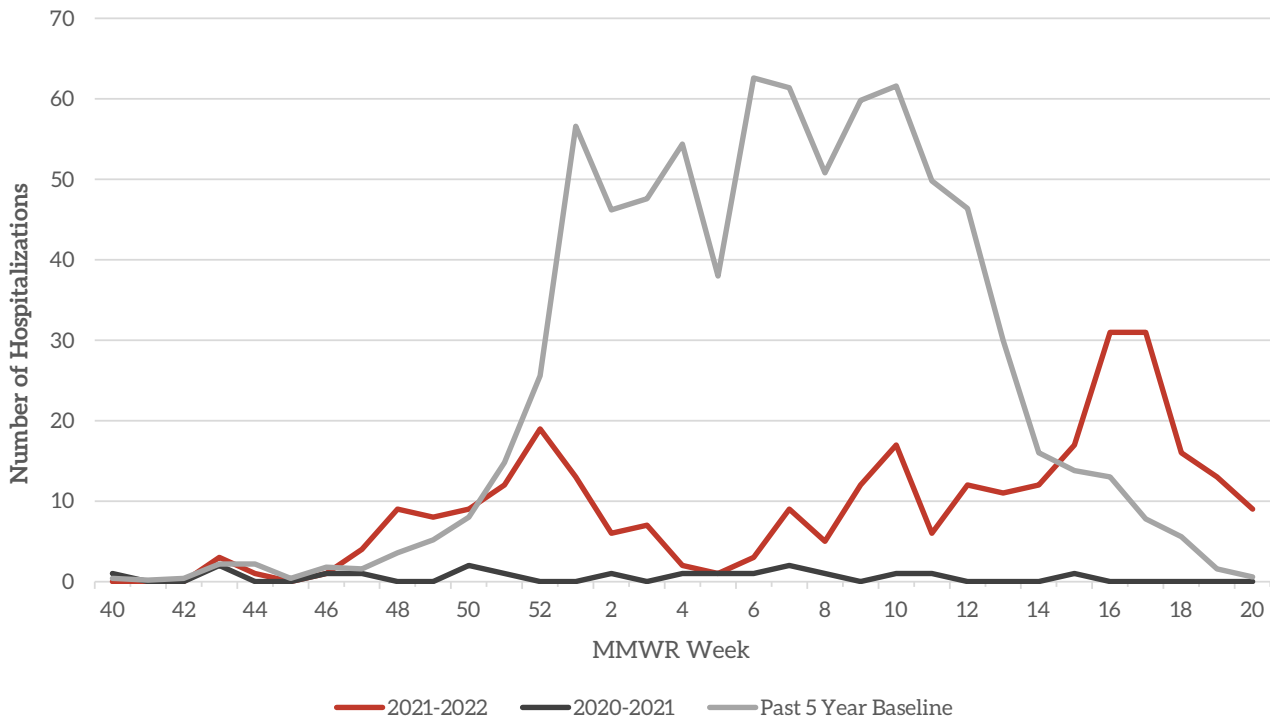


Figure 5. Confirmed Influenza-associated Hospitalizations, 2020-2021 Season - 2021-2022 Season†



*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.

SYNDROMIC SURVEILLANCE

Emergency Department Visits

Number of EpiCenter alerts received: 8

Types of EpiCenter alerts:

- Infectious Disease Symptoms (n=7)
- Syndromic Symptoms (n=1)

The alerts received for Hamilton County for August 1 - August 24 are summarized in Table 5 below. Five of the anomalies received in EpiCenter were dispositioned as not a health event. Constitutional, respiratory, and gastrointestinal related syndromic hospital visits are presented for the entire month for Hamilton County in Figures 6, 7, and 8 respectively.

Table 5. Emergency Department Visit Anomalies for Hamilton County, August 2022

Anomaly Classifier	Event Date	Alert Category	Analysis Method	Aggregated By	Actual Value	Predicted Value	Threshold Value	Final Disposition
Vision	8/24/2022	Infectious Disease	Recursive Least Squares	Home Location	15	6.9	14.8	Active
Fever	8/22/2022	Infectious Disease	Recursive Least Squares	Facility Location	116	75.1	112.4	Active
Constitutional	8/11/2022	Syndromic	Recursive Least Squares	Home Location	132	99.1	131.9	COVID-19 related
Eyes	8/8/2022	Infectious Disease	Cusum EMA	Home Location	26	9.3	26.0	Not a health event
Eyes	8/8/2022	Infectious Disease	Exponential Moving Average	Home Location	25	8.9	24.1	Not a health event
Eyes	8/8/2022	Infectious Disease	Recursive Least Squares	Home Location	25	8.5	21.8	Not a health event
Eyes	8/8/2022	Infectious Disease	Recursive Least Squares	Facility Location	32	13.1	28.6	Not a health event
Eyes	8/8/2022	Infectious Disease	Exponential Moving Average	Facility Location	27	13.0	26.9	Not a health event

Figure 6. Constitutional-related ED Visits, Hamilton County, Ohio, August 2022

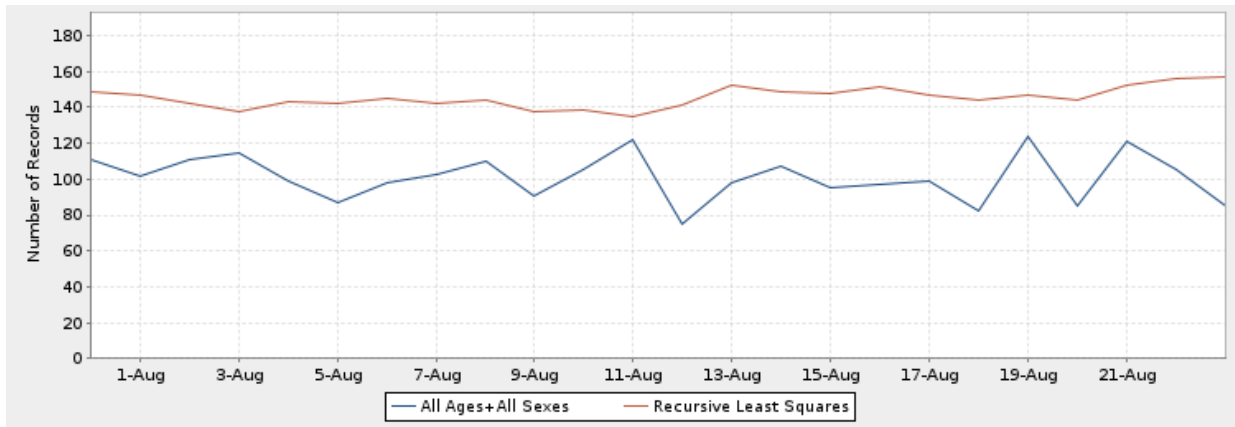


Figure 7. Respiratory-related ED Visits, Hamilton County, Ohio, August 2022

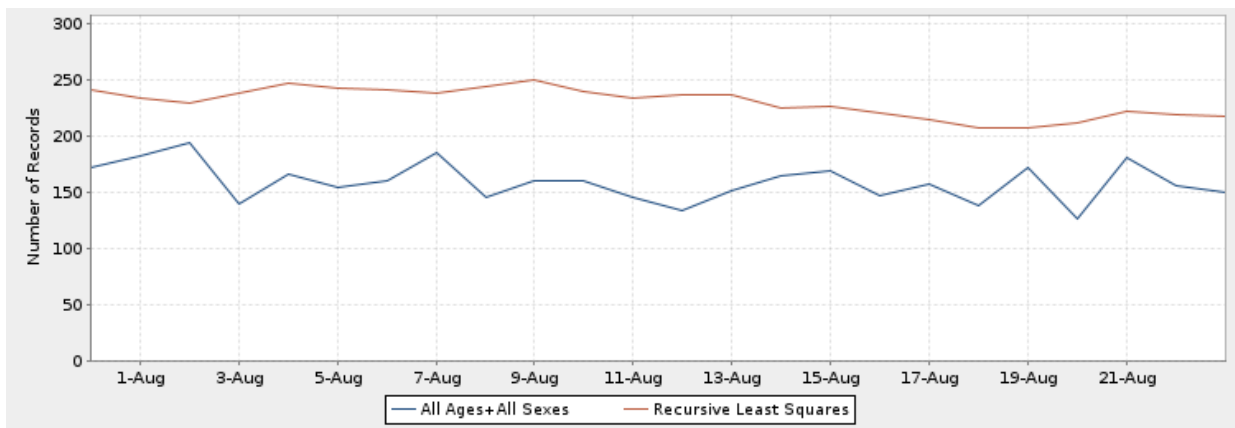


Figure 8. Gastrointestinal-related ED Visits, Hamilton County, Ohio, August 2022

