

# Monthly Communicable Disease Surveillance Report

August 2023

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# NOTIFIABLE COMMUNICABLE DISEASES

## Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 114

Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=23)
- Lyme Disease (n=12)
- Salmonellosis (n=8)
- Chronic Hepatitis B (n=6)
- Campylobacteriosis (n=5)

## Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 547

Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=110)
- Chronic Hepatitis B (n=43)
- Lyme Disease (n=42)
- Salmonellosis (n=31)
- CP-CRE - Investigation (n=25)

## Summary

In August, the overall rates of reported communicable diseases for HCPH and SWOH increased by 6% and 2% respectively. Ohio rates decreased by 11%. The Ohio rate (35) was the highest of the three rates, followed by the SWOH rate (31.1) and the HCPH rate (24) (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 Lyme Disease 2<sup>nd</sup> and 3<sup>rd</sup> respectively (Table 2). Chronic Hepatitis (Hepatitis C and Hepatitis B combined) comprised 34.2% of the total communicable diseases reported during August. Southwest Ohio is currently on pace to have a 10.8% decrease in hepatitis cases over the previous year's average number of cases (172). The rate of chronic hepatitis within Hamilton County for August was 8.7 per 100,000 residents. This rate was lower than the SWOH rate of 8.8 per 100,000 residents.

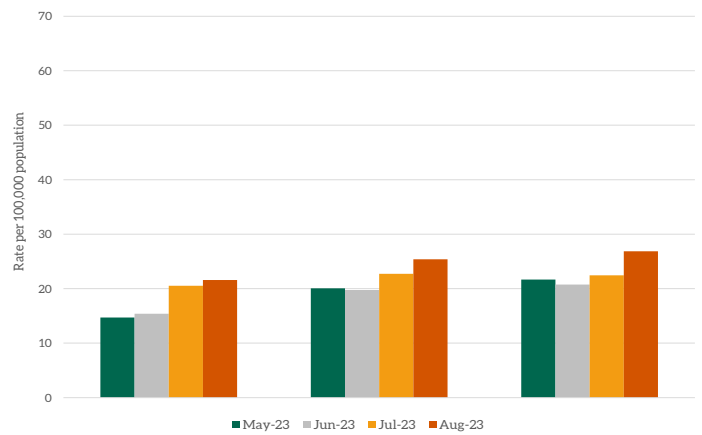
Lyme Disease was the third most frequently reported disease in SWOH (Table 2). Lyme Disease cases accounted for 9.4% of the total communicable diseases reported during August. The number of cases of Lyme Disease reported for SWOH in August (42) was lower than the number of cases reported in the previous month (47). The rate of Lyme Disease within Hamilton County for August was 2.0 per 100,000 residents. This rate was 17% lower than the SWOH rate of 2.4 per 100,000 residents.

**Table 1. Comparison of the Reported Cases of Notifiable Communicable Diseases by Location, August 2023**

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	114	23.94	0.68	0.54 - 0.87
SW OHIO	547	31.17	0.89	0.79 - 1.00
OHIO	4,048	34.97	.	.-.

Salmonellosis was the fourth most frequently reported disease in SWOH (Table 2). Salmonellosis cases accounted for 6.9% of the total communicable diseases reported during August. The number of cases of Salmonellosis reported for SWOH in August (31) was higher than the number of cases reported in the previous month (27). The rate of Salmonellosis within Hamilton County for August was 1.4 per 100,000 residents. This rate was 23% lower than the SWOH rate of 1.8 per 100,000 residents.

**Figure 1. 30-Day Rates of Reported Communicable Diseases in Ohio, Southwest Ohio, and Hamilton County Public Health Jurisdiction, May 2023 - August 2023**



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 1-30 2023. Data was accessed from the Ohio Disease Reporting System on 8/31/2023

†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, August 2023

Reportable Condition	County										Total	
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren				
Amebiasis	2	.	.	.	.	.	.	.	.	.	.	2
Babesiosis	1	.	.	.	.	.	.	.	.	.	.	1
C. auris	8	.	.	1	1	.	.	.	.	.	.	10
C. auris - Investigation	9	.	.	7	.	.	.	.	.	1	.	17
CP-CRE	2	.	.	1	.	1	.	.	.	2	.	6
CP-CRE - Investigation	.	.	.	16	.	.	.	6	.	3	.	25
Campylobacteriosis	8	1	.	6	5	.	.	1	.	1	.	22
Coccidioidomycosis	1	1	.	.	.	.	.	.	.	.	.	2
Creutzfeldt-Jakob Disease	.	.	.	.	1	.	.	.	.	.	.	1
Cryptosporidiosis	11	.	.	4	2	.	.	1	.	1	.	19
Cyclosporiasis	.	.	.	.	1	.	.	.	.	3	.	4
E.Coli (shiga toxin producing)	5	.	1	1	2	.	.	.	.	.	.	9
Ehrlichiosis/Anaplasmosis	.	.	.	.	.	1	.	.	.	1	.	2
Giardiasis	1	.	.	4	.	.	.	.	.	1	.	6
Haemophilus influenzae (invasive)	6	.	.	.	1	.	.	1	.	1	.	9
Hepatitis A	6	2	.	3	.	.	.	.	.	1	.	12
Hepatitis B (acute)	.	.	.	2	1	.	.	.	.	.	.	3
Hepatitis B (chronic)	15	1	4	14	3	1	1	1	4	.	.	43
Hepatitis C (acute)	.	.	.	1	.	.	.	.	.	.	.	1
Hepatitis C (chronic)	55	2	3	23	13	.	1	1	13	.	.	110
Hepatitis C - Perinatal Infection	.	.	1	.	.	.	.	.	.	.	.	1
Influenza-associated hospitalization	.	.	.	1	.	.	.	1	.	.	.	2
Legionellosis	2	.	.	1	.	1	.	2	1	.	.	7
Listeriosis	.	1	.	.	.	.	.	.	.	.	.	1
Lyme Disease	16	6	2	5	10	.	1	2	.	.	.	42
MIS-C associated with COVID-19	1	.	.	.	.	.	.	.	.	.	.	1
Malaria	.	.	.	1	.	.	.	.	.	.	.	1
Meningitis (aseptic/viral)	2	.	.	.	1	1	1	1	.	.	.	5
Meningitis (bacterial)	3	.	.	1	2	.	.	.	.	.	.	6
Mumps	1	.	.	.	.	.	.	.	.	.	.	1
Pertussis	1	1	.	.	.	.	.	1	.	.	.	3



Table 3. YTD Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, August 2023

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	3	.	.	1	1	.	.	.	.	5	
Babesiosis	1	.	.	.	.	.	1	.	.	2	
Botulism (Infant)	1	.	.	.	.	.	.	.	.	1	
Brucellosis	1	.	.	.	.	.	.	1	.	2	
C. auris	48	.	.	5	1	1	.	.	.	55	
C. auris - Investigation	76	.	2	10	2	.	.	3	.	93	
CP-CRE	62	6	1	27	8	7	11	10	.	132	
CP-CRE - Investigation	.	.	.	29	.	1	23	8	.	61	
Campylobacteriosis	66	9	6	25	25	3	10	18	.	162	
Coccidioidomycosis	11	1	.	3	2	.	.	.	.	17	
Creutzfeldt-Jakob Disease	.	.	.	.	1	.	.	.	.	1	
Cryptosporidiosis	23	.	.	8	2	.	1	9	.	43	
Cyclosporiasis	3	.	.	2	1	.	.	3	.	9	
Dengue	1	.	.	.	1	.	.	.	.	2	
E.Coli (shiga toxin producing)	23	2	3	5	6	1	.	5	.	45	
Ehrlichiosis/Anaplasmosis	2	1	.	.	1	1	.	4	.	9	
Giardiasis	22	.	.	10	3	.	1	6	.	42	
Haemophilus influenzae (invasive)	60	.	6	14	6	.	3	3	.	92	
Hepatitis A	23	2	.	15	.	1	7	3	.	51	
Hepatitis B (acute)	7	.	.	5	2	.	.	1	.	15	
Hepatitis B (chronic)	159	12	12	94	17	8	9	25	.	336	
Hepatitis C (acute)	.	.	.	2	1	.	.	.	.	3	
Hepatitis C (chronic)	473	37	55	210	84	24	34	101	.	1018	
Hepatitis C - Perinatal Infection	1	.	2	1	1	1	.	.	.	6	
Hepatitis E	2	.	.	.	.	.	.	.	.	2	
Influenza-associated hospitalization	60	3	12	33	26	2	12	12	.	160	
Influenza-associated pediatric mortality	.	.	.	.	.	.	.	1	.	1	
Legionellosis	15	.	.	9	3	1	3	7	.	38	
Listeriosis	.	1	.	.	.	.	.	.	.	1	
Lyme Disease	61	23	14	17	38	2	14	13	.	182	

Table 3. YTD Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, August 2023, Continued

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
MIS-C associated with COVID-19	1	.	.	1	.	.	.	.	.	.	2
Malaria	6	.	.	3	.	.	.	.	.	.	9
Measles	.	.	.	.	.	.	.	1	.	.	1
Meningitis (aseptic/viral)	25	.	.	6	9	1	3	2	2	3	46
Meningitis (bacterial)	10	1	.	7	3	2	2	3	3	3	28
Meningococcal disease	1	.	.	.	.	.	.	1	.	.	2
Monkeypox	2	.	.	.	.	.	.	.	.	.	2
Mumps	4	.	.	1	3	.	.	.	.	.	8
Pertussis	1	1	1	4	4	.	4	1	1	1	16
Q fever (acute)	1	1	.	2	.	.	.	.	.	.	4
Salmonella Typhi	1	.	.	1	.	.	.	2	.	.	4
Salmonellosis	54	4	4	39	22	4	5	22	22	22	154
Shigellosis	24	.	.	7	5	1	.	1	1	1	38
Spotted Fever Rickettsiosis (RMSF)	4	5	1	1	1	.	4	4	4	4	20
Staphylococcal aureus (VISA)	.	.	.	.	1	.	.	.	.	.	1
Streptococcal pneumoniae (invasive)	88	.	9	23	21	5	3	12	12	12	161
Streptococcal toxic shock syndrome (STSS)	2	.	.	.	.	.	.	1	1	1	3
Streptococcal, Group A (invasive)	78	1	6	32	23	.	7	23	23	23	170
Streptococcal, Group B (in newborn)	6	.	.	.	.	.	.	.	.	.	6
Syphilis	279	2	3	57	14	2	4	14	14	14	375
Tuberculosis	9	.	.	3	.	1	1	1	1	1	15
Tularemia	2	.	.	.	.	.	.	1	1	1	3
Varicella	14	.	.	7	2	1	4	4	4	4	32
Vibriosis	4	.	.	3	.	.	.	.	.	.	7
West Nile virus infection (WNV)	2	.	.	.	.	.	.	.	.	.	2
Yersiniosis	16	1	.	4	3	.	.	1	1	1	25
<b>Total</b>	<b>1838</b>	<b>113</b>	<b>137</b>	<b>726</b>	<b>343</b>	<b>70</b>	<b>166</b>	<b>327</b>	<b>166</b>	<b>327</b>	<b>3720</b>

Table 4. YTD Cases of Notifiable Diseases in Hamilton County<sup>8</sup>, August 2023

Reportable Disease	August 2022	YTD 2022	August 2023	YTD 2023	Reportable Disease	August 2022	YTD 2022	August 2023	YTD 2023
Amebiasis	.	2	2	3	Lyme Disease	12	43	16	61
Babesiosis	.	1	1	1	MIS-C associated with COVID-19 (call health department immediately)	.	8	1	1
Botulism (Infant)	.	2	.	1	Malaria	.	1	.	6
Brucellosis	.	.	.	1	Meningitis (aseptic/viral)	4	21	2	25
C. auris	3	30	8	48	Meningitis (bacterial, not N. meningitidis)	2	9	3	10
C. auris - Investigation	9	54	9	76	Meningococcal disease	.	1	.	1
CP-CRE	.	16	2	45	Monkeypox	13	15	.	2
Campylobacteriosis	5	67	8	66	Mumps	1	1	1	4
Coccidioidomycosis	2	6	1	11	Pertussis	.	8	1	1
Creutzfeldt-Jakob Disease	1	4	.	.	Q fever (acute)	.	.	.	1
Cryptosporidiosis	2	4	11	23	Q fever (chronic)	.	1	.	.
Cyclosporiasis	.	.	.	3	Salmonella Typhi	.	.	.	1
E.Coli (shiga toxin producing)	5	19	5	23	Salmonellosis	12	48	11	54
Ehrlichiosis/Anaplasmosis	1	1	.	2	Shigellosis	1	17	3	24
Giardiasis	3	20	1	22	Spotted Fever Rickettsiosis (including Rocky Mountain spotted fever (RMSF))	.	6	2	4
Haemophilus influenzae (invasive)	3	15	6	60	Streptococcal pneumoniae (invasive)	5	51	6	88
Hepatitis A	2	16	6	23	Streptococcal toxic shock syndrome (STSS)	.	.	.	2
Hepatitis B (acute)	2	7	.	7	Streptococcal, Group A (invasive)	8	42	3	78
Hepatitis B (chronic)	18	152	15	159	Streptococcal, Group B (in newborn)	.	4	.	6
Hepatitis C (acute)	2	8	.	.	Syphilis	55	356	.	279
Hepatitis C (chronic)	71	498	55	473	Tuberculosis	1	14	1	9
Hepatitis C - Perinatal Infection	.	.	.	1	Tularemia	.	.	2	2
Hepatitis E	1	1	.	2	Varicella	2	20	3	14
Influenza-associated hospitalization	3	102	.	60	Vibriosis	1	1	1	4
Legionellosis	2	12	2	15	Yersiniosis	.	4	2	16
Listeriosis	1	1	.	.					

\*Year to date totals for cases within the Hamilton County Public Health jurisdiction

## 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 2022 Ohio experienced increasing cases from April to July and from October to December. The Southwest Ohio (SWOH) counties recognize the same pattern of confirmed and probable cases as Ohio. As of August 30, 2023, cases in Ohio and SWOH are increasing. The SWOH region accounts for 553,061 (15.9%) of confirmed and probable cases in Ohio.

In August 2023, the SWOH rate was higher than the Ohio rate (Figure 3). Highland County had the highest rate of the 8 SWOH counties, followed by Adams County and Brown County. All SWOH county rates were higher than the Ohio rate.

Figure 2. Number of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, August 2022 - August 2023

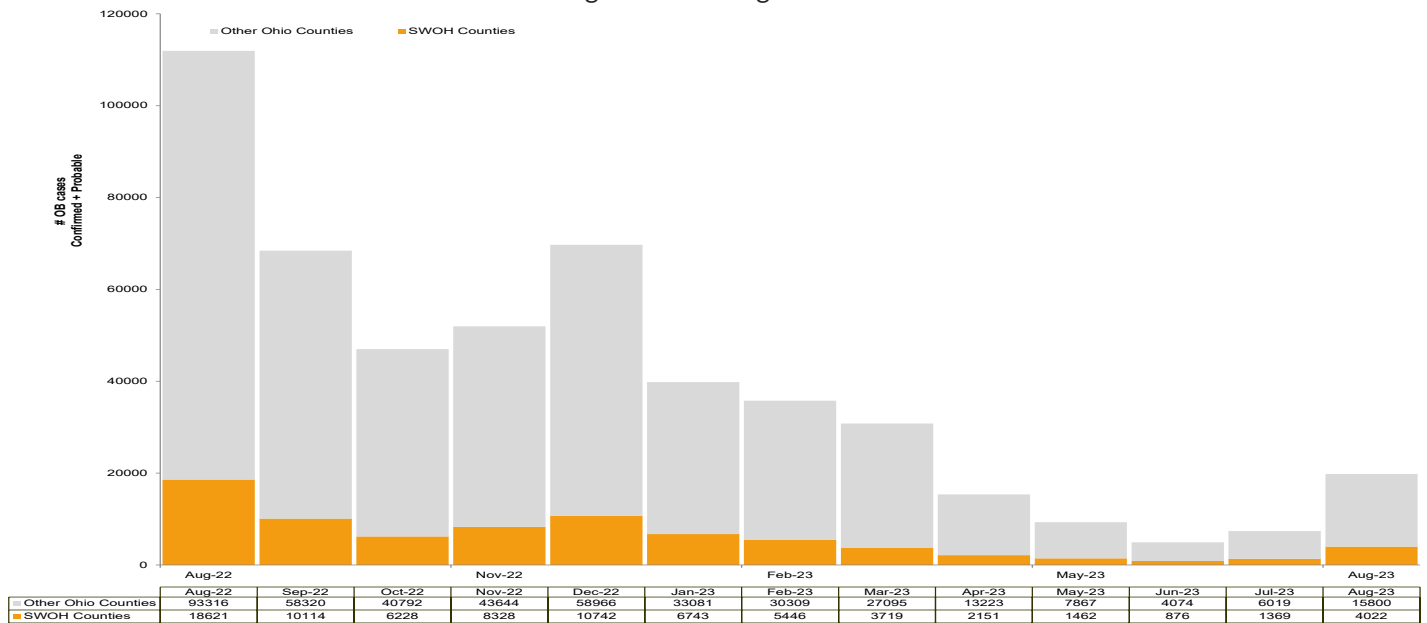
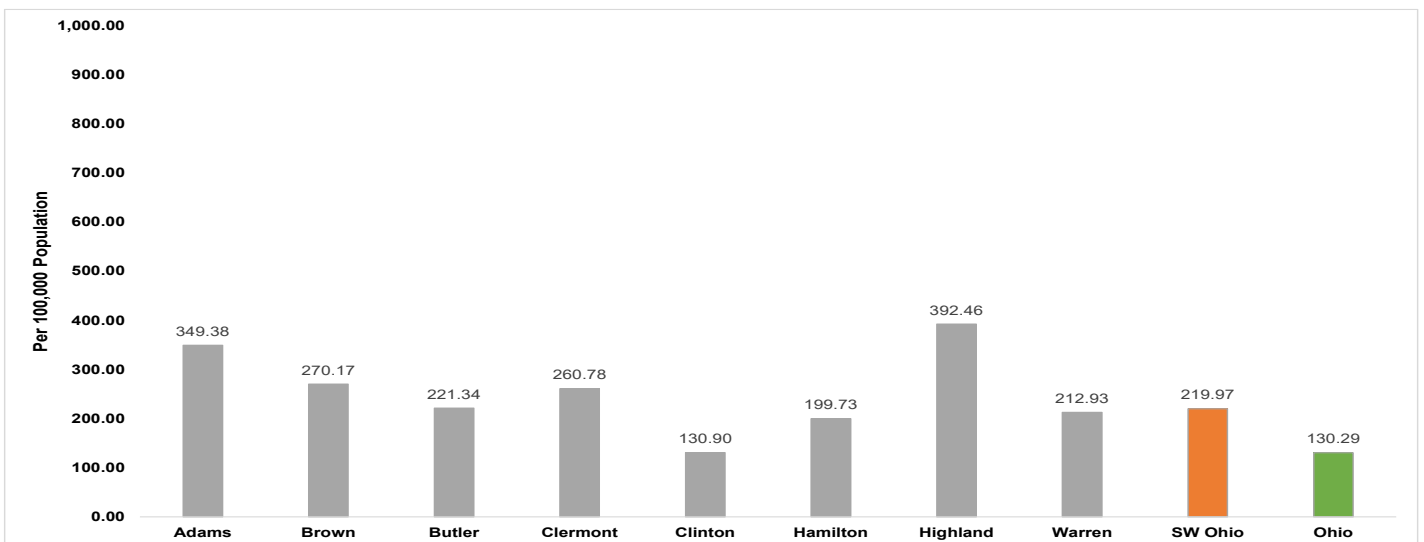


Figure 3. Rate of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, August 2023

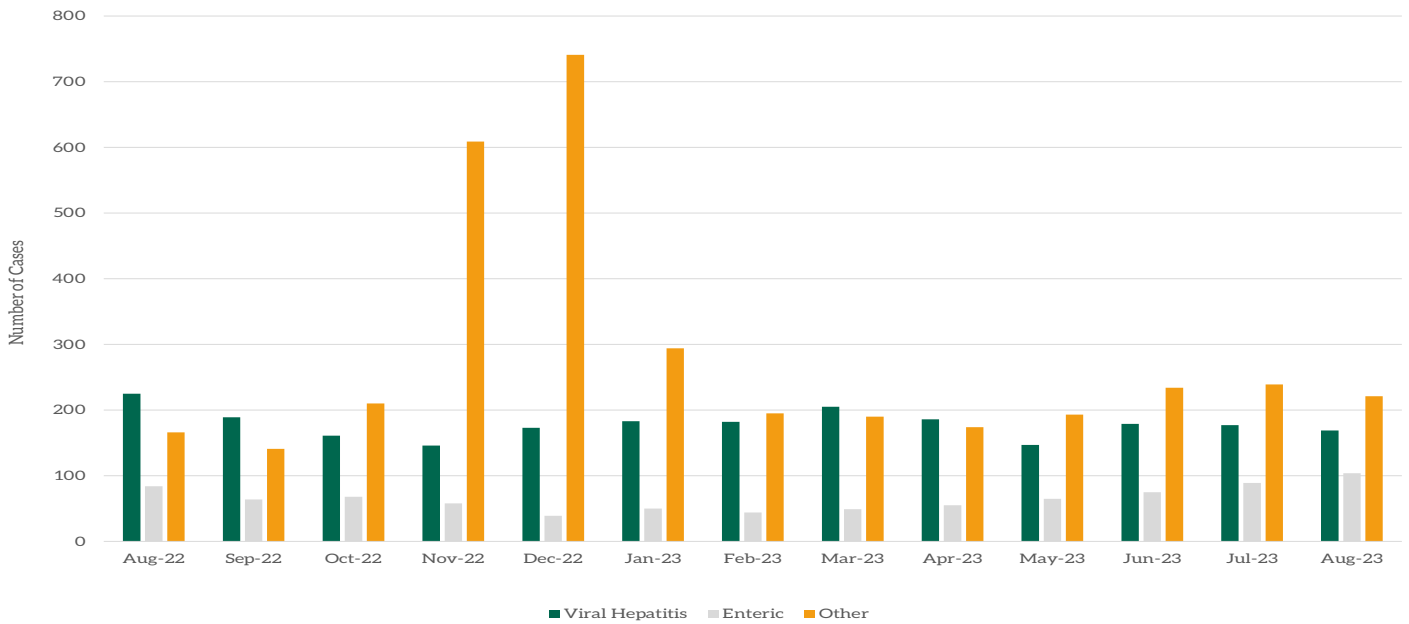


NOTES: This data is provisional and subject to change when additional information is gained. Outbreak confirmed positive cases between March 9, 2020 and August 30, 2023 were used for analysis. Cases were selected based on address at diagnosis. Confirmed and probable cases determined by date reported to local health department.

Source: Ohio Department of Health, Ohio Disease Reporting System. Data reported as of August 31, 2023. 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 2022 - August 2023\*



\*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.

# SYNDROMIC SURVEILLANCE

## Emergency Department Visits

**Number of EpiCenter alerts received: 17**

Types of EpiCenter alerts:

- Infectious Disease Symptoms (n=14)
- Syndromic Symptoms (n=3)

The alerts received for Hamilton County for August 1 - August 30 are summarized in Table 5 below. Two of the anomalies received in EpiCenter were dispositioned as Not a health event, two anomalies were dispositioned as Seasonal Illness, one GI and one ILI. Twelve EpiCenter anomalies are still under investigation. The syndromic anomalies 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 2023

Anomaly Classifier	Event Date	Alert Category	Analysis Method	Aggregated By	Actual Value	Predicted Value	Threshold Value	Final Disposition
Ear, Nose, Throat	8/31/2023	Infectious Disease	Cusum EMA	Facility Location	71	45.0	62.1	Active
Ear, Nose, Throat	8/31/2023	Infectious Disease	Exponential Moving Average	Home Location	66	40.1	65.5	Active
Ear, Nose, Throat	8/30/2023	Infectious Disease	Recursive Least Squares	Home Location	61	37.9	60.0	Active
Respiratory	8/30/2023	Syndromic	Cusum EMA	Home Location	182	135.9	164.5	Active
Cough	8/30/2023	Infectious Disease	Cusum EMA	Home Location	50	30.3	44.3	Active
Cough	8/30/2023	Infectious Disease	Recursive Least Squares	Home Location	51	28.1	49.3	Active
Exacerbation	8/30/2023	Infectious Disease	Cusum EMA	Home Location	17	10.5	13.3	Active
Ear, Nose, Throat	8/30/2023	Infectious Disease	Recursive Least Squares	Facility Location	66	40.0	64.0	Active
Respiratory	8/30/2023	Syndromic	Cusum EMA	Facility Location	191	156.9	166.3	Active
Cough	8/30/2023	Infectious Disease	Cusum EMA	Facility Location	56	33.1	41.8	Active
Eyes	8/30/2023	Infectious Disease	Recursive Least Squares	Home Location	17	9.1	15.1	Active
Gastrointestinal	8/28/2023	Syndromic	Recursive Least Squares	Home Location	209	152.0	186.6	Active
Cough	8/20/2023	Infectious Disease	Recursive Least Squares	Facility Location	46	24.0	43.4	Seasonal Illness - ILI/Respiratory
Diarrhea - Not Watery/Bloody	8/20/2023	Infectious Disease	Recursive Least Squares	Home Location	16	8.7	14.1	Seasonal Illness - GI
Paralysis	8/14/2023	Infectious Disease	Recursive Least Squares	Home Location	21	9.3	18.7	Not a health event
Exacerbation	8/9/2023	Infectious Disease	Recursive Least Squares	Home Location	14	4.3	12.1	Not a health event

Figure 6. Respiratory-related ED Visits, Hamilton County, Ohio, August 2023

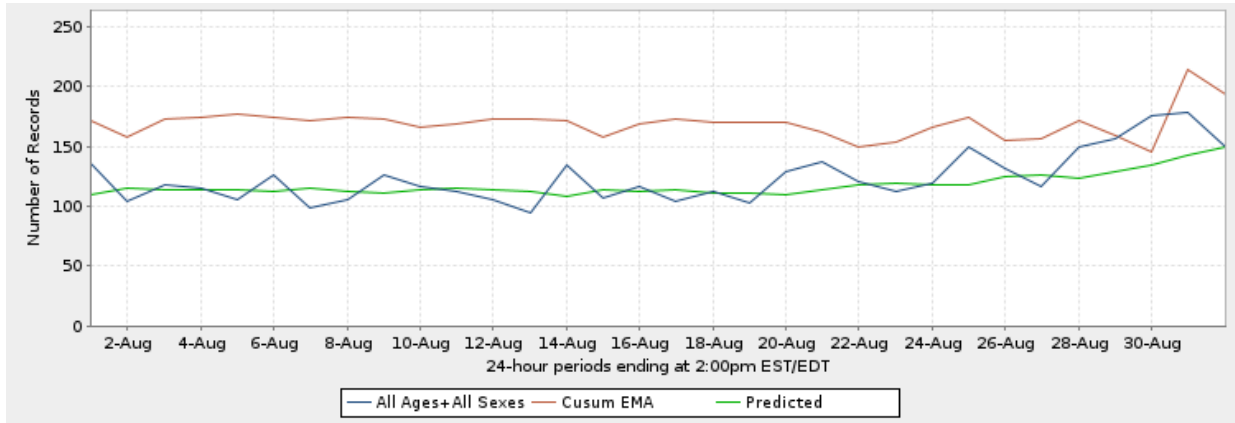


Figure 7. Gastrointestinal-related ED Visits, Hamilton County, Ohio, August 2023

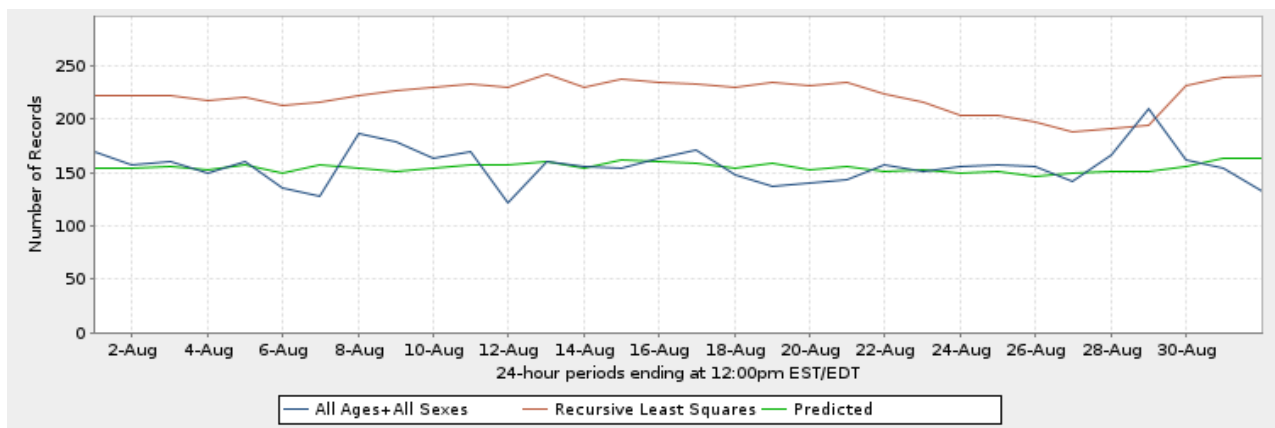


Figure 8. Constitutional-related ED Visits, Hamilton County, Ohio, August 2023

