



# Monthly Communicable Disease Surveillance Report

April 2023

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PREVENT. PROMOTE. PROTECT.



# NOTIFIABLE COMMUNICABLE DISEASES

## Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 66

Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=17)
- Chronic Hepatitis B (n=12)
- Streptococcal pneumoniae (invasive) (n=7)
- Campylobacteriosis (n=4)
- Streptococcal, Group A (invasive) (n=4)

## Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 312

Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=117)
- Chronic hepatitis B (n=37)
- Streptococcal Group A (invasive) (n=23)
- Streptococcal, pneumoniae (invasive) (n=17)
- Campylobacteriosis (n=12)
- Salmonellosis (n=12)

## Summary

In April, the overall rates of reported communicable diseases for HCPH increased by 5%. The communicable disease rate for SWOH and Ohio decreased by 2% and 4% respectively. Ohio increased by 11%. (Figure 1). The Ohio rate (18.7) was the highest of the three rates, followed by the SWOH rate (17.8) and the HCPH rate (13.9) (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 Streptococcal, Group A (invasive) 2<sup>nd</sup> and 3<sup>rd</sup> respectively (Table 2). Chronic hepatitis (Hepatitis C and Hepatitis B combined) comprised 49.4% of the total communicable diseases reported during April. Southwest Ohio is currently on pace to have a 6.6% decrease in hepatitis cases over the previous year's average number of cases (183). The rate of chronic hepatitis within Hamilton County for April was 9.6 per 100,000 residents. This rate was higher than the SWOH rate of 8.9 per 100,000 residents.

Streptococcal, Group A (invasive) was the third most frequently reported disease in SWOH (Table 2). Streptococcal, Group A (invasive) cases accounted for 7.4% of the total communicable diseases reported during April. The number of cases of Streptococcal, Group A (invasive) reported for SWOH in April (23) was lower than the number of cases reported in the previous month (25). The rate of Streptococcal, Group A (invasive) within Hamilton County for April was 1.1 per 100,000 residents. This rate was 15% lower than the SWOH rate of 1.3 per 100,000 residents.

Streptococcal, pneumoniae (invasive) was the fourth most frequently reported disease in SWOH (Table 2). Streptococcal, Group A (invasive) cases accounted for 5.4% of the total communicable diseases reported during April. The number of cases of Streptococcal, pneumoniae (invasive) reported for SWOH in April (17) was lower than the number of cases reported in the previous month (25). The rate of Streptococcal, pneumoniae (invasive) within Hamilton County for April was 1.4 per 100,000 residents. This rate was 40% higher than the SWOH rate of 1.0 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, 2023. Data was accessed from the Ohio Disease Reporting System on 4/28/2023

†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 2023 - April 2023

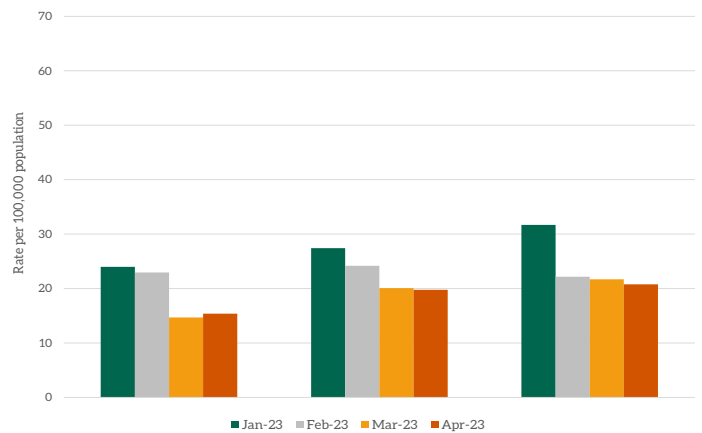


Table 1. Comparison of the Reported Cases of Notifiable Communicable Diseases by Location, April 2023

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	66	13.86	0.74	0.54 - 1.02
SW OHIO	312	17.78	0.95	0.81 - 1.11
OHIO	2,163	18.69	.	.-.

Table 2. Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, April 2023

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	.	.	.	.	1	.	.	.	.	.	1
C. auris	3	.	.	.	.	.	.	.	.	.	3
C. auris - Investigation	5	.	.	.	.	.	.	.	.	.	5
CP-CRE	2	.	.	5	.	.	.	.	1	.	8
Campylobacteriosis	7	.	1	2	1	.	1	.	.	.	12
Coccidioidomycosis	2	.	.	.	1	.	.	.	.	.	3
Cryptosporidiosis	2	.	.	1	.	.	.	.	.	.	3
E.Coli (shiga toxin producing)	2	.	.	.	1	.	.	.	.	.	3
Ehrlichiosis/Anaplasmosis	.	1	.	.	.	.	.	.	1	.	2
Giardiasis	3	.	.	2	.	.	.	.	.	.	5
Haemophilus influenzae (invasive)	5	.	.	3	.	.	.	.	1	.	9
Hepatitis A	.	.	.	1	.	.	.	.	.	.	1
Hepatitis B (acute)	.	.	.	.	.	.	.	.	1	.	1
Hepatitis B (chronic)	23	1	.	10	.	1	2	.	.	.	37
Hepatitis C (chronic)	54	4	5	23	15	3	4	9	.	.	117
Hepatitis C - Perinatal Infection	.	.	1	.	.	.	.	.	.	.	1
Influenza-associated hospitalization	3	3	.	2	2	.	.	.	.	.	10
Legionellosis	3	.	.	1	1	.	.	1	.	.	6
Lyme Disease	3	.	.	.	1	.	.	1	.	.	5
Malaria	1	.	.	.	.	.	.	.	.	.	1
Meningitis (aseptic/viral)	2	.	.	2	2	.	1	.	.	.	7
Meningitis (bacterial, not N. meningitidis)	.	.	.	1	.	.	.	.	.	.	1
Pertussis	.	.	.	2	1	.	.	.	.	.	3
Salmonella Typhi	1	.	.	.	.	.	.	.	.	.	1
Salmonellosis	3	.	.	6	.	1	1	1	.	.	12
Shigellosis	3	.	.	.	.	.	.	.	.	.	3
Staphylococcal aureus (VISA)	.	.	.	.	1	.	.	.	.	.	1

Table 2. Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, April 2023, Continued

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Streptococcal pneumoniae (invasive)	11	.	.	1	2	.	1	2	17		
Streptococcal, Group A (invasive)	9	.	1	1	8	.	3	1	23		
Syphilis	3	.	.	1	.	.	.	.	4		
Tuberculosis	3	.	.	.	.	.	.	.	3		
Varicella	.	.	.	2	.	.	.	.	2		
Vibriosis	.	.	.	1	.	.	.	.	1		
Yersiniosis	.	.	.	.	.	.	.	1	1		
<b>Total</b>	<b>153</b>	<b>9</b>	<b>8</b>	<b>67</b>	<b>37</b>	<b>5</b>	<b>13</b>	<b>20</b>	<b>312</b>		

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	·	·	·	·	1	·	·	·	·	·	1
Brucellosis	·	·	·	·	·	·	·	·	1	·	1
C. auris	22	·	·	1	·	·	·	·	·	·	23
C. auris - Investigation	29	·	1	·	2	·	·	·	2	·	34
CP-CRE	20	4	1	11	1	2	2	2	2	·	43
CP-CRE - Investigation	·	·	·	·	·	·	1	·	·	·	1
Campylobacteriosis	30	3	2	9	10	·	3	5	·	·	62
Coccidioidomycosis	6	·	·	·	2	·	·	·	·	·	8
Cryptosporidiosis	7	·	·	2	·	·	·	6	·	·	15
Dengue	1	·	·	·	·	·	·	·	·	·	1
E.Coli (shiga toxin producing)	9	·	·	3	1	·	·	1	·	·	14
Ehrlichiosis/Anaplasmosis	·	1	·	·	·	·	·	1	·	·	2
Giardiasis	12	·	·	5	1	·	·	3	·	·	21
Haemophilus influenzae (invasive)	31	·	3	7	3	·	2	2	·	·	48
Hepatitis A	8	·	·	4	·	1	4	2	·	·	19
Hepatitis B (acute)	5	·	·	·	·	·	·	1	·	·	6
Hepatitis B (chronic)	83	4	4	44	9	5	6	11	·	·	166
Hepatitis C (acute)	·	·	·	·	1	·	·	·	·	·	1
Hepatitis C (chronic)	239	17	30	115	47	14	18	54	·	·	534
Hepatitis C - Perinatal Infection	·	·	1	·	1	1	·	·	·	·	3
Hepatitis E	1	·	·	·	·	·	·	·	·	·	1
Influenza-associated hospitalization	56	3	12	29	26	2	11	11	·	·	150
Influenza-associated pediatric mortality	·	·	·	·	·	·	·	1	·	·	1
Legionellosis	7	·	·	4	3	·	1	4	·	·	19
Lyme Disease	13	4	2	4	4	·	1	2	·	·	30
MIS-C associated with COVID-19	·	·	·	1	·	·	·	·	·	·	1
Malaria	3	·	·	·	·	·	·	·	·	·	3
Meningitis (aseptic/viral)	15	·	·	4	2	·	1	·	·	·	22
Meningitis (bacterial)	2	·	·	2	·	1	·	1	·	·	6
Meningococcal disease	1	·	·	·	·	·	·	1	·	·	2

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Monkeypox	1	.	.	.	.	.	.	.	.	.	1
Mumps	.	.	.	1	1	.	.	.	.	.	2
Pertussis	.	.	.	3	1	.	1	1	.	.	6
Q fever (acute)	.	.	.	1	.	.	.	.	.	.	1
Salmonella Typhi	1	.	.	.	.	.	.	.	.	.	1
Salmonellosis	13	.	2	15	8	1	1	5	.	.	45
Shigellosis	11	.	.	1	2	.	.	.	.	.	14
Spotted Fever Rickettsiosis (RMSF)	.	.	.	.	.	.	1	.	.	.	1
Staphylococcal aureus (VISA)	.	.	.	.	1	.	.	.	.	.	1
Streptococcal pneumoniae (invasive)	49	.	6	13	15	2	3	8	.	.	96
Streptococcal toxic shock syndrome (STSS)	1	.	.	.	.	.	.	1	.	.	2
Streptococcal, Group A (invasive)	51	1	4	17	13	.	5	10	.	.	101
Streptococcal, Group B (in newborn)	2	.	.	.	.	.	.	.	.	.	2
Syphilis	69	1	1	15	3	2	1	1	1	.	93
Tuberculosis	9	.	.	2	.	.	1	1	1	.	13
Varicella	5	.	.	5	2	1	2	2	.	.	17
Vibriosis	1	.	.	1	.	.	.	.	.	.	2
West Nile virus infection (WNV)	1	.	.	.	.	.	.	.	.	.	1
Yersiniosis	5	.	.	3	1	.	.	1	.	.	10
<b>Total</b>	<b>819</b>	<b>38</b>	<b>69</b>	<b>322</b>	<b>161</b>	<b>32</b>	<b>65</b>	<b>141</b>			<b>1647</b>

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

Reportable Disease	April 2022	YTD 2022	April 2023	YTD 2023	Reportable Disease	April 2022	YTD 2022	April 2023	YTD 2023
Amebiasis	1	2	.	.	MIS-C associated with COVID-19 (call health department immediately)	.	7	.	.
Babesiosis	.	1	.	.	Malaria	.	.	1	3
Botulism (Infant)	.	1	.	.	Meningitis (aseptic/viral)	1	5	2	15
C. auris	4	22	3	22	Meningitis (bacterial, not N. meningitidis)	2	3	.	2
C. auris - Investigation	9	23	5	29	Meningococcal disease	.	1	.	1
CP-CRE	1	11	2	16	Monkeypox	.	.	.	1
Campylobacteriosis	8	29	7	30	Pertussis	1	4	.	.
Coccidioidomycosis	.	1	2	6	Q fever (chronic)	.	1	.	.
Creutzfeldt-Jakob Disease	.	2	.	.	Salmonella Typhi	.	.	1	1
Cryptosporidiosis	.	1	2	7	Salmonellosis	4	10	3	13
E.Coli (shiga toxin producing)	3	6	2	9	Shigellosis	3	9	3	11
Giardiasis	2	8	3	12	Spotted Fever Rickettsiosis (including Rocky Mountain spotted fever (RMSF))	.	1	.	.
Haemophilus influenzae (invasive)	2	4	5	31	Streptococcal pneumoniae (invasive)	15	30	11	49
Hepatitis A	4	8	.	8	Streptococcal toxic shock syndrome (STSS)	.	.	.	1
Hepatitis B (acute)	.	3	.	5	Streptococcal, Group A (invasive)	6	19	9	51
Hepatitis B (chronic)	25	87	23	83	Streptococcal, Group B (in newborn)	.	2	.	2
Hepatitis C (acute)	2	6	.	.	Syphilis - unknown duration or late	11	56	3	69
Hepatitis C (chronic)	66	263	54	239	Tuberculosis	2	5	3	9
Hepatitis E	.	.	.	1	Varicella	4	15	.	5
Influenza-associated hospitalization	42	77	3	56	Vibriosis	.	.	.	1
Legionellosis	1	2	3	7	Yersiniosis	.	1	.	5
Lyme Disease	2	8	3	13					

\*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 patten of confirmed and probable cases as Ohio. As of April 27, 2023, cases in Ohio and SWOH are decreasing. The SWOH region accounts for 543,215 (15.9%) of confirmed and probable cases in Ohio.

In April 2023, the SWOH rate was lower than the Ohio rate (Figure 3). Highland County had the highest rate of the 8 SWOH counties, followed by Adams County and Warren County. Six of the eight SWOH county rates were lower than the Ohio rate.

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

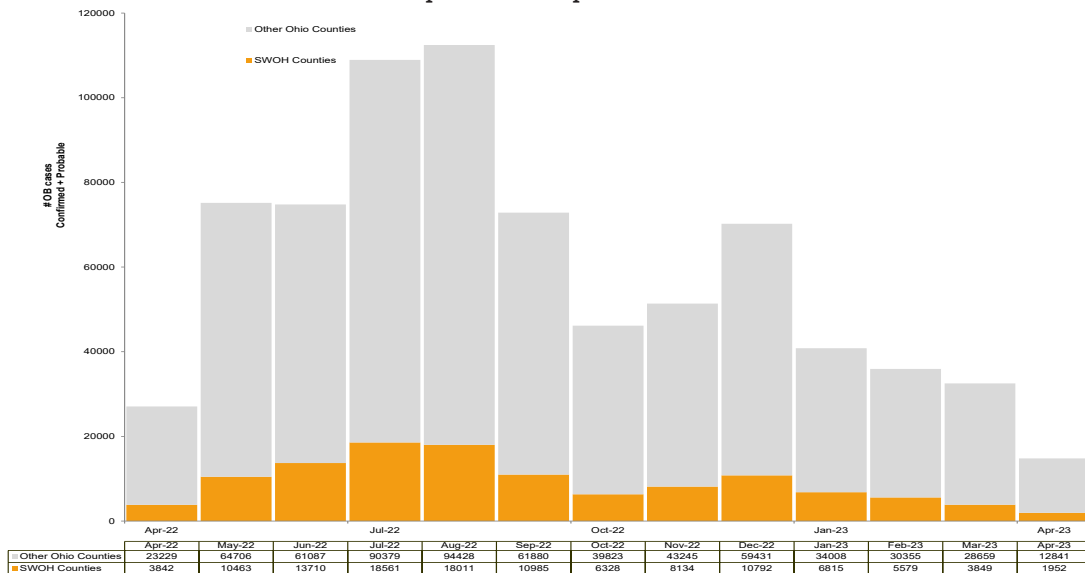
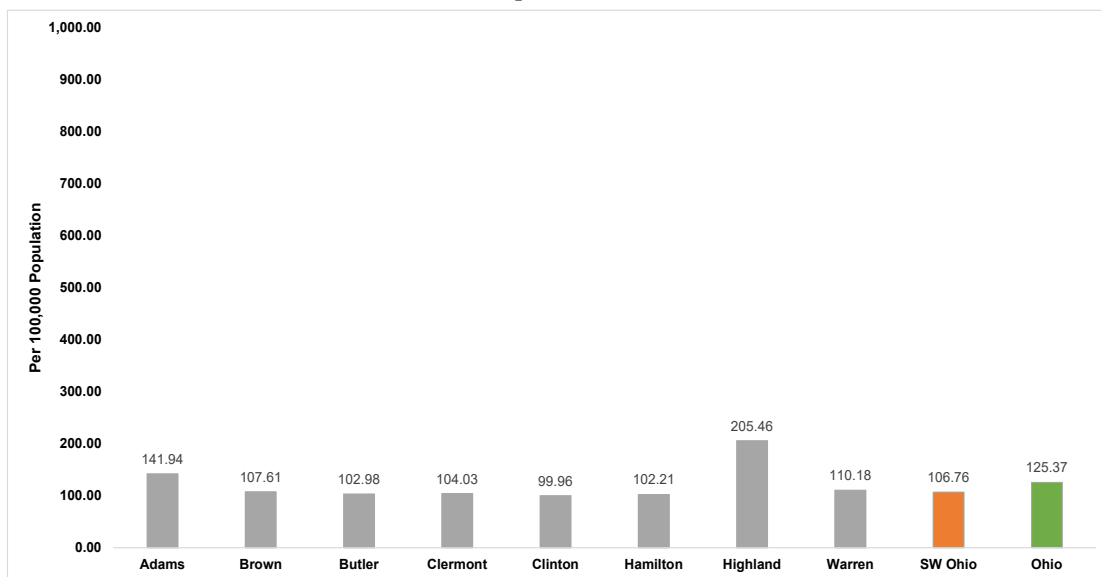


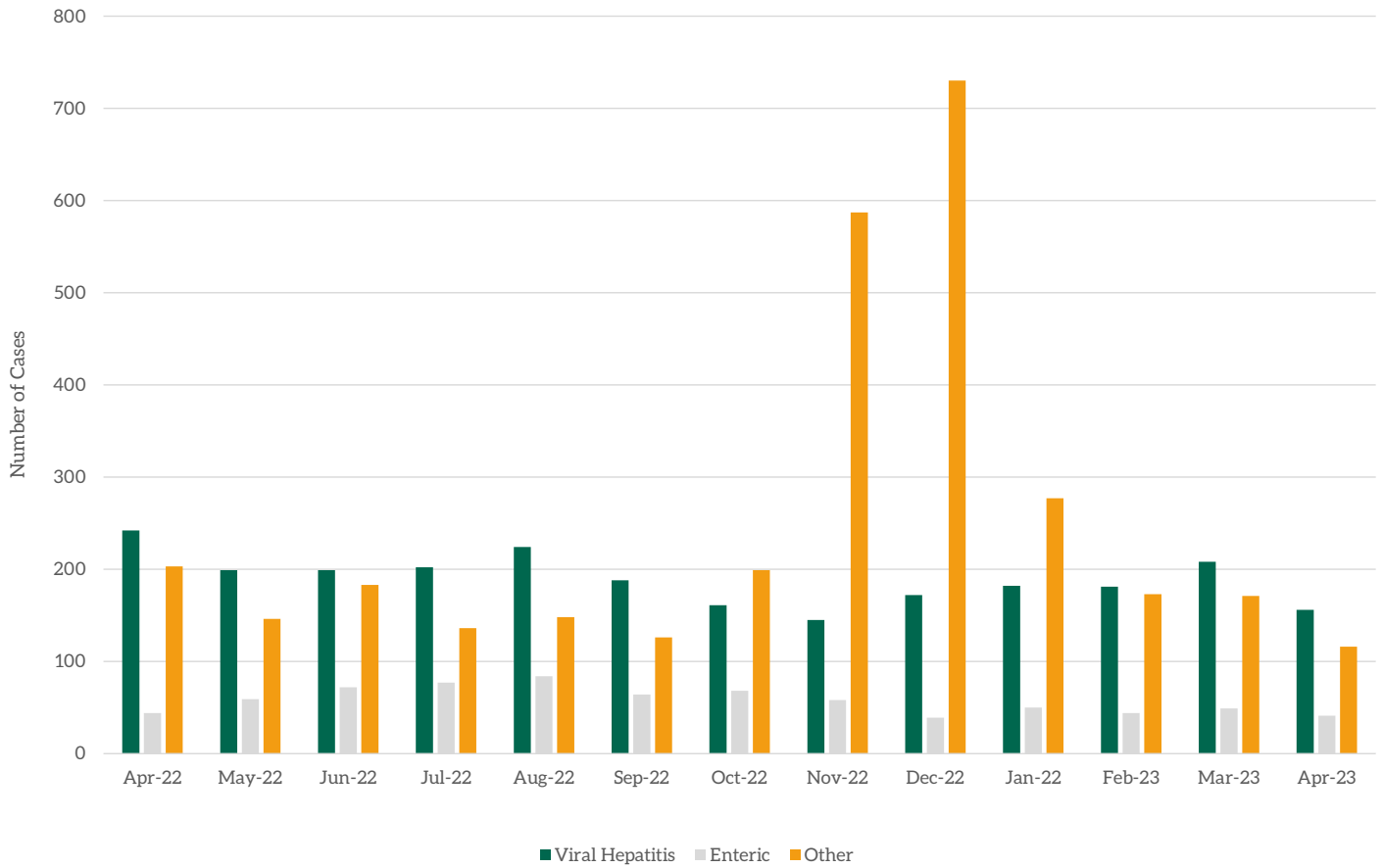
Figure 3. Rate of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, April 2023



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, 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 April 28, 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, April 2022 - April 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: 15**

Types of EpiCenter alerts:

- Infectious Disease Symptoms (n=14)
- Syndromic Symptoms (n=1)

The alerts received for Hamilton County for April 1 - April 27 are summarized in Table 5 below. Five of the anomalies received in EpiCenter were dispositioned as Not a health event, one anomaly was dispositioned as Indeterminate, and one alert was dispositioned as Seasonal Illness - ILI/Respiratory. Botulinic , constitutional, and respiratory 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, April 2023

Anomaly Classifier	Event Date	Alert Category	Analysis Method	Aggregated By	Actual Value	Predicted Value	Threshold Value	Final Disposition
Vomiting	4/24/2023	Infectious Disease	Exponential Moving Average	Facility Location	93	59.7	91.7	Active
Exacerbation	4/22/2023	Infectious Disease	Cusum EMA	Home Location	17	10.4	14.4	Active
Exacerbation	4/20/2023	Infectious Disease	Cusum EMA	Home Location	17	9.0	13.9	Active
Neurological	4/20/2023	Syndromic	Recursive Least Squares	Facility Location	229	163.2	210.7	Active
Exacerbation	4/20/2023	Infectious Disease	Exponential Moving Average	Facility Location	21	7.8	19.8	Active
Ear, Nose, Throat	4/18/2023	Infectious Disease	Recursive Least Squares	Home Location	64	42.0	59.7	Active
Hemorrhaging	4/18/2023	Infectious Disease	Recursive Least Squares	Home Location	28	13.3	25.0	Active
Hemorrhaging	4/18/2023	Infectious Disease	Recursive Least Squares	Facility Location	36	20.0	31.7	Active
Eyes	4/16/2023	Infectious Disease	Recursive Least Squares	Facility Location	17	10.0	16.7	Not a health event
Exacerbation	4/12/2023	Infectious Disease	Recursive Least Squares	Facility Location	17	6.5	17.0	Seasonal Illness - ILI/Respiratory
Vomiting	4/5/2023	Infectious Disease	Recursive Least Squares	Home Location	74	52.7	68.8	Indeterminate
Lymphadenitis	4/5/2023	Infectious Disease	Exponential Moving Average	Home Location	12	3.0	11.2	Not a health event
Lymphadenitis	4/5/2023	Infectious Disease	Exponential Moving Average	Facility Location	13	3.4	10.4	Not a health event
Lymphadenitis	4/5/2023	Infectious Disease	Recursive Least Squares	Home Location	10	3.0	9.8	Not a health event
Lymphadenitis	4/5/2023	Infectious Disease	Recursive Least Squares	Facility Location	10	3.5	9.6	Not a health event

Figure 6. Neurologic-related ED Visits, Hamilton County, Ohio, April 2023

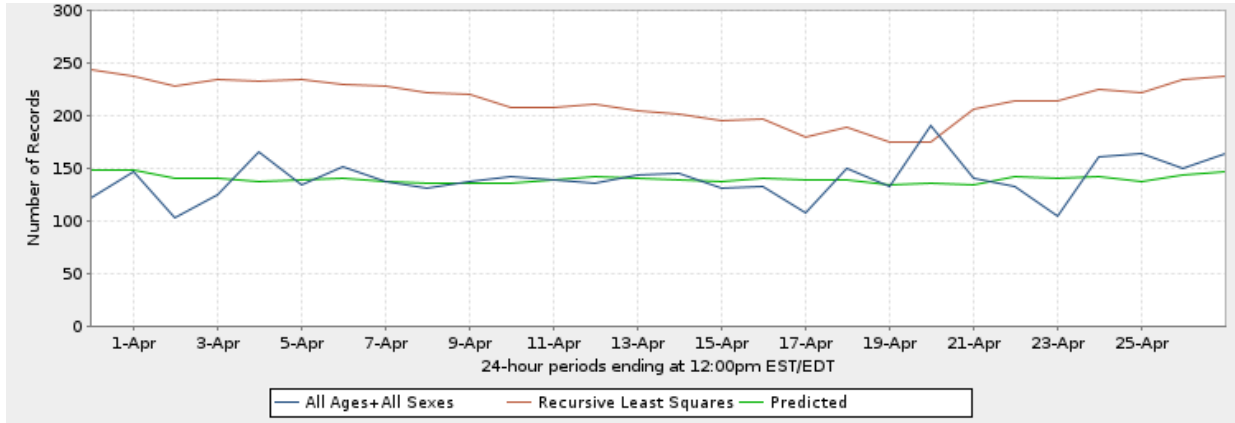


Figure 7. Constitutional-related ED Visits, Hamilton County, Ohio, April 2023

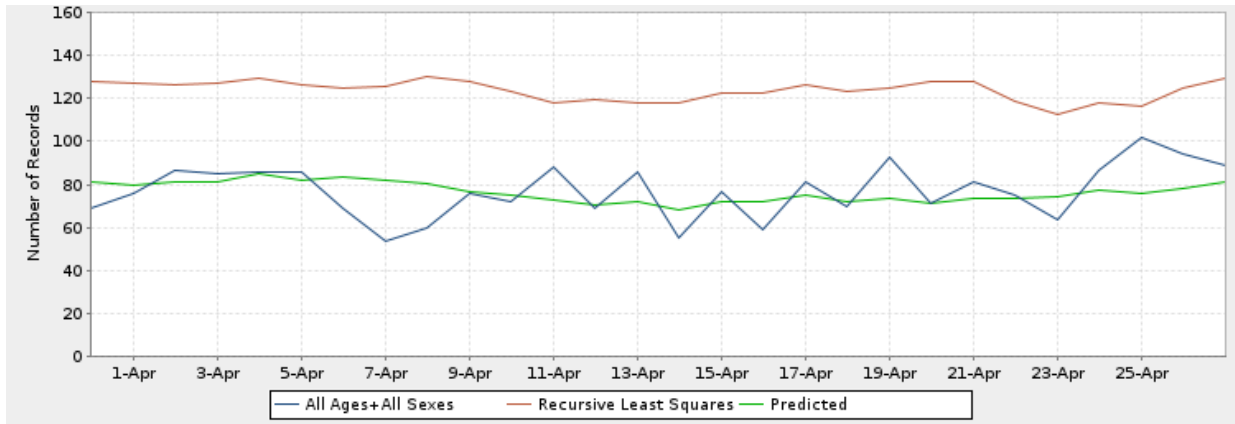


Figure 8. Respiratory-related ED Visits, Hamilton County, Ohio, April 2023

