

Monthly Communicable Disease Surveillance Report

July 2023

CJ Crawford, MPH, Epidemiologist



**HAMILTON COUNTY
PUBLIC HEALTH**

PREVENT. PROMOTE. PROTECT.



NOTIFIABLE COMMUNICABLE DISEASES

Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 108

Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=23)
- Chronic Hepatitis B (n=12)
- Syphilis (n=11)
- Campylobacteriosis (n=10)
- Lyme Disease (n=7)
- Salmonellosis (n=7)

Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 537

Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=125)
- Syphilis (n=84)
- Lyme Disease (n=47)
- Chronic Hepatitis B (n=43)
- Campylobacteriosis (n=33)

Summary

In July, the overall rates of reported communicable diseases for HCPH, SWOH, and Ohio increased by 2%, 17%, and 41% respectively. The Ohio rate (39.2) was the highest of the three rates, followed by the SWOH rate (30.6) and the HCPH rate (22.7) (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 Syphilis and Lyme Disease 2nd and 3rd respectively (Table 2). Chronic hepatitis (Hepatitis C and Hepatitis B combined) comprised 31.3% of the total communicable diseases reported during July. Southwest Ohio is currently on pace to have a 3.9% increase in hepatitis cases over the previous year's average number of cases (173). The rate of chronic hepatitis within Hamilton County for July was 10.5 per 100,000 residents. This rate was higher than the SWOH rate of 9.7 per 100,000 residents.

Syphilis was the second most frequently reported disease in SWOH (Table 2). Syphilis cases accounted for 15.6% of the total communicable diseases reported during July. The number of cases of Syphilis reported for SWOH in July (84) was higher than the number of cases reported in the previous month (15). The rate of Syphilis within Hamilton County for July was 7.4 per 100,000 residents. This rate was 52% higher than the SWOH rate of 4.8 per 100,000 residents.

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

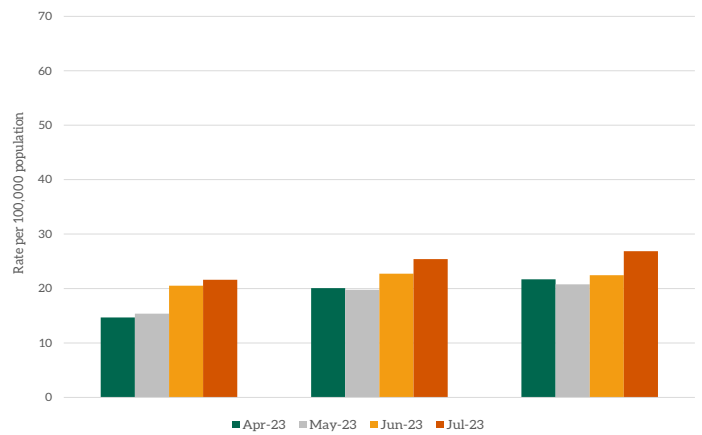
Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	108	22.68	0.58	0.45 - 0.74
SW OHIO	537	30.60	0.78	0.69 - 0.88
OHIO	4,534	39.17	.	.-.

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 July 1-31, 2023. Data was accessed from the Ohio Disease Reporting System on 8/03/2023

†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, April 2023 - July 2023



Lyme Disease was the third most frequently reported disease in SWOH (Table 2). Lyme Disease cases accounted for 8.8% of the total communicable diseases reported during July. The number of cases of Lyme Disease reported for SWOH in July (47) was higher than the number of cases reported in the previous month (26). The rate of Lyme Disease within Hamilton County for July was 1.6 per 100,000 residents. This rate was 40% lower than the SWOH rate of 2.7 per 100,000 residents.

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Babesiosis	·	·	·	·	·	·	1	·	·	·	1
Botulism (Infant)	1	·	·	·	·	·	·	·	·	·	1
C. auris	6	·	·	1	·	1	·	·	·	·	8
C. auris - Investigation	17	·	·	·	·	·	·	·	·	·	17
CP-CRE	7	·	·	4	·	·	·	2	·	·	13
CP-CRE - Investigation	·	·	·	2	·	·	16	2	·	·	20
Campylobacteriosis	14	4	1	2	5	·	4	3	·	·	33
Coccidioidomycosis	1	·	·	·	·	·	·	·	·	·	1
Cryptosporidiosis	·	·	·	1	·	·	·	·	·	·	1
Cyclosporiasis	3	·	·	2	·	·	·	·	·	·	5
E.Coli (shiga toxin producing)	3	1	·	1	1	·	·	1	·	·	7
Ehrlichiosis/Anaplasmosis	·	·	·	·	·	·	·	1	·	·	1
Giardiasis	3	·	·	·	·	·	·	1	·	·	4
Haemophilus influenzae (invasive)	5	·	3	·	·	·	·	·	·	·	8
Hepatitis A	5	·	·	2	·	·	1	·	·	·	8
Hepatitis B (acute)	·	·	·	·	1	·	·	·	·	·	1
Hepatitis B (chronic)	21	4	·	13	·	2	1	2	·	·	43
Hepatitis C (chronic)	63	7	4	22	13	1	3	12	·	·	125
Hepatitis C - Perinatal Infection	1	·	·	·	·	·	·	·	·	·	1
Influenza-associated hospitalization	2	·	·	·	·	·	·	·	·	·	2
Legionellosis	2	·	·	1	·	·	·	·	·	·	3
Lyme Disease	13	4	4	6	9	·	4	7	·	·	47
Malaria	3	·	·	2	·	·	·	·	·	·	5
Meningitis (aseptic/viral)	1	·	·	1	4	·	1	2	·	·	9
Meningitis (bacterial)	2	1	·	2	·	·	1	1	·	·	7
Mumps	2	·	·	·	2	·	·	·	·	·	4
Pertussis	·	·	·	1	·	·	1	·	·	·	2
Q fever (acute)	1	·	·	·	·	·	·	·	·	·	1
Salmonellosis	12	1	·	9	3	1	·	1	·	·	27
Shigellosis	2	·	·	2	1	·	·	·	·	·	6
Rocky Mountain spotted fever (RMSF)	1	2	1	·	·	·	2	2	·	·	8

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	1	.	.	1	1	.	.	.	.	.	3
Babesiosis	.	.	.	.	.	.	1	.	.	.	1
Botulism (Infant)	1	.	.	.	.	.	.	.	.	.	1
Brucellosis	1	.	.	.	.	.	.	1	.	.	2
C. auris	40	.	.	4	.	1	.	.	.	.	45
C. auris - Investigation	67	.	2	3	2	.	.	2	.	2	76
CP-CRE	53	6	1	26	8	4	9	8	8	8	115
CP-CRE - Investigation	.	.	.	13	.	1	17	5	.	.	36
Campylobacteriosis	58	8	6	19	20	3	9	17	17	17	140
Chikungunya virus	.	.	.	1	.	.	.	.	.	.	1
Coccidioidomycosis	10	.	.	3	2	.	.	.	.	.	15
Cryptosporidiosis	12	.	.	4	.	.	.	8	.	8	24
Cyclosporiasis	3	.	.	2	.	.	.	.	.	.	5
Dengue	1	.	.	.	.	.	.	.	.	.	1
E.Coli (shiga toxin producing)	18	2	2	4	4	1	.	5	.	5	36
Ehrlichiosis/Anaplasmosis	2	1	.	.	1	.	.	3	.	3	7
Giardiasis	21	.	.	6	3	.	1	5	.	5	36
Haemophilus influenzae (invasive)	54	.	6	14	5	.	2	2	.	2	83
Hepatitis A	17	.	.	12	.	1	7	2	.	2	39
Hepatitis B (acute)	7	.	.	3	1	.	.	1	.	1	12
Hepatitis B (chronic)	144	11	8	80	14	7	8	21	.	21	293
Hepatitis C (acute)	.	.	.	1	1	.	.	.	.	.	2
Hepatitis C (chronic)	417	34	53	186	73	24	32	88	.	88	907
Hepatitis C - Perinatal Infection	1	.	1	1	1	1	.	.	.	.	5
Hepatitis E	2	.	.	.	.	.	.	.	.	.	2
Influenza-associated hospitalization	60	3	12	32	26	2	11	12	12	12	158
Influenza-associated pediatric mortality	.	.	.	.	.	.	.	1	1	1	1
Legionellosis	13	.	.	8	3	.	1	6	.	6	31
Lyme Disease	49	17	12	12	27	2	13	11	.	11	143
MIS-C associated with COVID-19	.	.	.	1	.	.	.	.	.	.	1

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

Reportable Condition	County											Total		
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren						
Malaria	6	.	.	2	8
Measles	1	1
Meningitis (aseptic/viral)	23	.	.	6	8	.	2	2	2	2	2	2	41	
Meningitis (bacterial)	7	1	.	6	1	2	2	3	2	2	3	3	22	
Meningococcal disease	1	.	.	.	.	.	.	1	.	.	.	.	2
Mpox	2	.	.	.	.	.	.	.	.	.	.	.	2
Mumps	3	.	.	1	3	.	.	.	.	.	.	.	7
Pertussis	.	.	1	4	4	.	3	1	3	1	1	1	13	
Q fever (acute)	1	1	.	1	.	.	.	.	.	.	.	.	3
Salmonella Typhi	1	.	.	.	.	.	.	1	.	.	.	1	2
Salmonellosis	43	3	4	35	18	3	4	13	4	13	13	13	123	
Shigellosis	21	.	.	5	4	1	.	1	.	1	1	1	32	
Spotted Fever Rickettsiosis (RMSF)	2	4	1	1	1	.	4	3	4	3	3	3	16	
Staphylococcus aureus (VISA)	.	.	.	.	1	.	.	.	.	.	.	.	1
Streptococcal pneumoniae (invasive)	82	.	8	21	20	4	3	12	3	12	12	12	150	
Streptococcal toxic shock syndrome (STSS)	2	.	.	.	.	.	.	1	.	1	1	1	3
Streptococcal, Group A (invasive)	75	1	6	32	20	.	7	23	7	23	23	23	164	
Streptococcal, Group B (in newborn)	6	.	6	.	.	.	.	.	.	.	.	.	6
Syphilis	390	2	6	87	19	2	4	24	4	24	24	24	534	
Tuberculosis	10	.	.	3	.	.	1	1	1	1	1	1	15	
Tularemia	.	.	.	.	.	.	.	1	.	1	1	1	1
Varicella	11	.	.	6	2	2	4	3	4	3	3	3	28	
Vibriosis	3	.	.	3	.	.	.	.	.	.	.	.	6
Yersiniosis	14	.	.	4	3	.	.	1	.	1	1	1	22	
Total	1755	94	129	653	296	61	145	290	145	61	290	145	290	3423

Table 4. YTD Cases of Notifiable Diseases in Hamilton County⁸, July 2023

Reportable Disease	July 2022	YTD 2022	July 2023	YTD 2023	Reportable Disease	July 2022	YTD 2022	July 2023	YTD 2023
Amebiasis	.	2	.	1	Lyme Disease	7	31	13	49
Babesiosis	.	1	.	.	MIS-C associated with COVID-19	.	8	.	.
Botulism (Infant)	.	2	1	1	Malaria	1	1	3	6
Brucellosis	.	.	.	1	Meningitis (aseptic/viral)	4	17	1	23
C. auris	3	26	6	40	Meningitis (bacterial)	3	7	2	7
C. auris - Investigation	9	45	17	67	Meningococcal disease	.	1	.	1
CP-CRE	2	15	7	40	Mpox	2	2	.	2
Campylobacteriosis	11	62	14	58	Mumps	.	.	2	3
Coccidioidomycosis	1	4	1	10	Pertussis	.	8	.	.
Creutzfeldt-Jakob Disease	.	3	.	.	Q fever (acute)	.	.	1	1
Cryptosporidiosis	.	2	.	12	Q fever (chronic)	.	1	.	.
Cyclosporiasis	.	.	3	3	Salmonella Typhi	.	.	.	1
E.Coli (shiga toxin producing)	3	14	3	18	Salmonellosis	9	36	12	43
Ehrlichiosis/Anaplasmosis	.	.	.	2	Shigellosis	2	16	2	21
Giardiasis	2	17	3	21	Spotted Fever Rickettsiosis (RMSF)	2	6	1	2
Haemophilus influenzae (invasive)	.	12	5	54	Streptococcal pneumoniae (invasive)	3	46	10	82
Hepatitis A	2	14	5	17	Streptococcal toxic shock syndrome (STSS)	.	.	.	2
Hepatitis B (acute)	1	5	.	7	Streptococcal, Group A (invasive)	2	34	6	75
Hepatitis B (chronic)	8	134	21	144	Streptococcal, Group B (in newborn)	.	4	2	6
Hepatitis C (acute)	1	7	.	.	Syphilis	59	214	59	390
Hepatitis C (chronic)	61	427	63	417	Tuberculosis	2	13	.	10
Hepatitis C - Perinatal Infection	.	.	1	1	Varicella	.	18	2	11
Hepatitis E	.	.	.	2	Vibriosis	.	.	2	3
Influenza-associated hospitalization	1	99	2	60	Yersiniosis	2	4	2	14
Legionellosis	2	10	2	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 July 31, 2023, cases in Ohio and SWOH are increasing. The SWOH region accounts for 548,859 (15.9%) of confirmed and probable cases in Ohio.

In July 2023, the SWOH rate was lower than the Ohio rate (Figure 3). Warren County had the highest rate of the 8 SWOH counties, followed by Clermont County and Adams County. All 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, July 2022 - July 2023

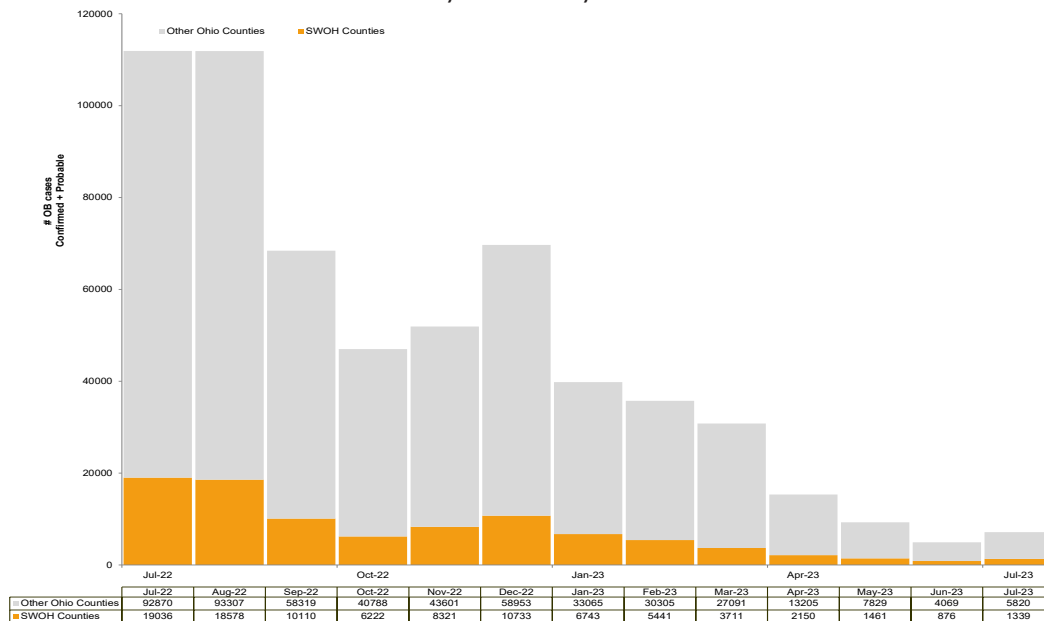
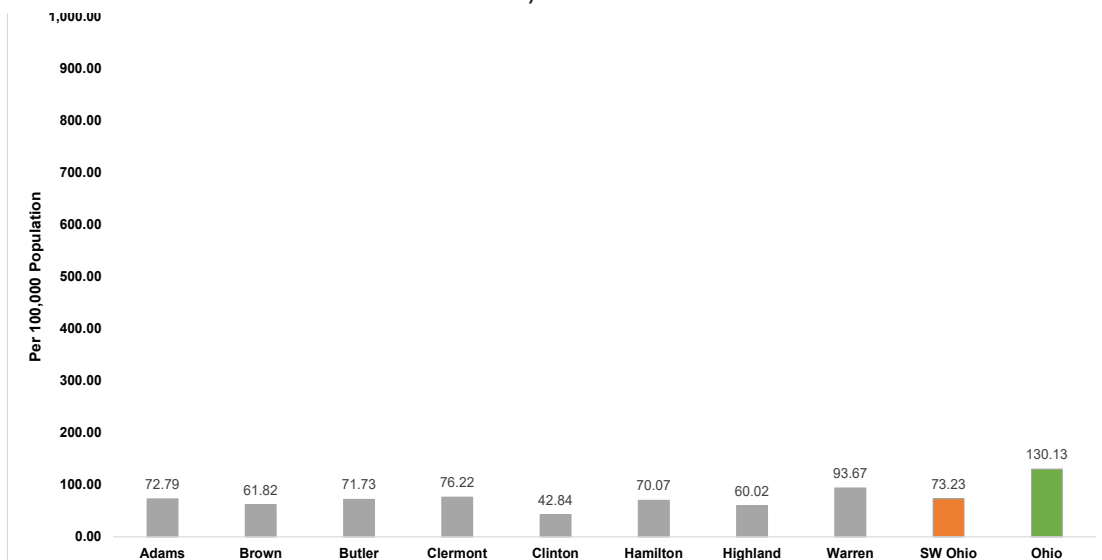
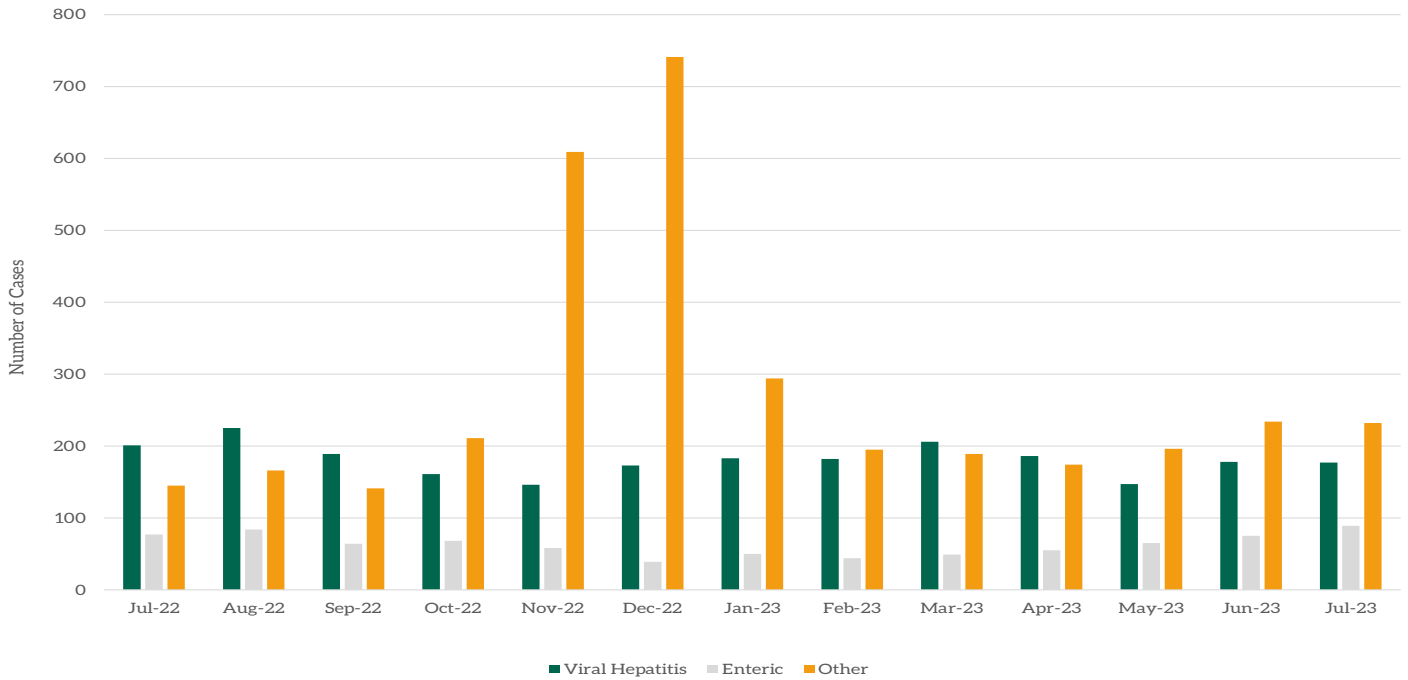


Figure 3. Rate of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, July 2023



NOTES: This data is provisional and subject to change when additional information is gained. Outbreak confirmed positive cases between March 9, 2020 and July 31, 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 03, 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, July 2022 - July 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: 10

Types of EpiCenter alerts:

- Infectious Disease Symptoms (n=9)
- Syndromic Symptoms (n=1)

The alerts received for Hamilton County for July 1 - July 31 are summarized in Table 5 below. Five of the anomalies received in EpiCenter were dispositioned as Not a health event and three anomalies were dispositioned as Seasonal Illness - GI. One EpiCenter anomaly is still under investigation. Botulinic , constitutional, 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, July 2023

Anomaly Classifier	Event Date	Alert Category	Analysis Method	Aggregated By	Actual Value	Predicted Value	Threshold Value	Final Disposition
Lymphadenitis	7/28/2023	Infectious Disease	Recursive Least Squares	Home Location	11	3.9	9.2	Active
Vomiting	7/27/2023	Infectious Disease	Cusum EMA	Home Location	60	45.1	58.7	Seasonal Illness - GI
Nausea	7/26/2023	Infectious Disease	Recursive Least Squares	Facility Location	50	28.8	47.0	Seasonal Illness - GI
Shock	7/19/2023	Infectious Disease	Cusum EMA	Facility Location	12	6.2	10.8	Not a health event
Vision	7/13/2023	Infectious Disease	Recursive Least Squares	Home Location	14	6.3	12.7	Not a health event
Botulinic	7/13/2023	Syndromic	Recursive Least Squares	Home Location	15	6.8	14.8	Not a health event
Fever	7/10/2023	Infectious Disease	Recursive Least Squares	Home Location	41	24.0	38.8	Not a health event
Diarrhea - Watery/Bloody	7/7/2023	Infectious Disease	Recursive Least Squares	Facility Location	10	3.0	9.5	Seasonal Illness - GI
Congestion	7/6/2023	Infectious Disease	Cusum EMA	Facility Location	15	6.9	14.4	Not a health event
Rash	7/6/2023	Infectious Disease	Recursive Least Squares	Home Location	60	33.6	53.4	Not a health event

Figure 6. Botulinic-related ED Visits, Hamilton County, Ohio, July 2023

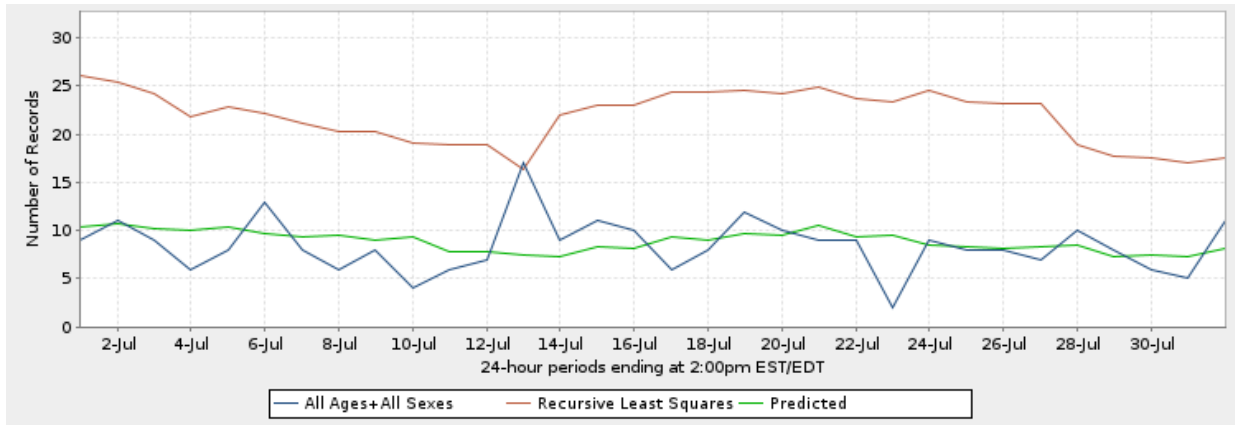


Figure 7. Constitutional-related ED Visits, Hamilton County, Ohio, July 2023

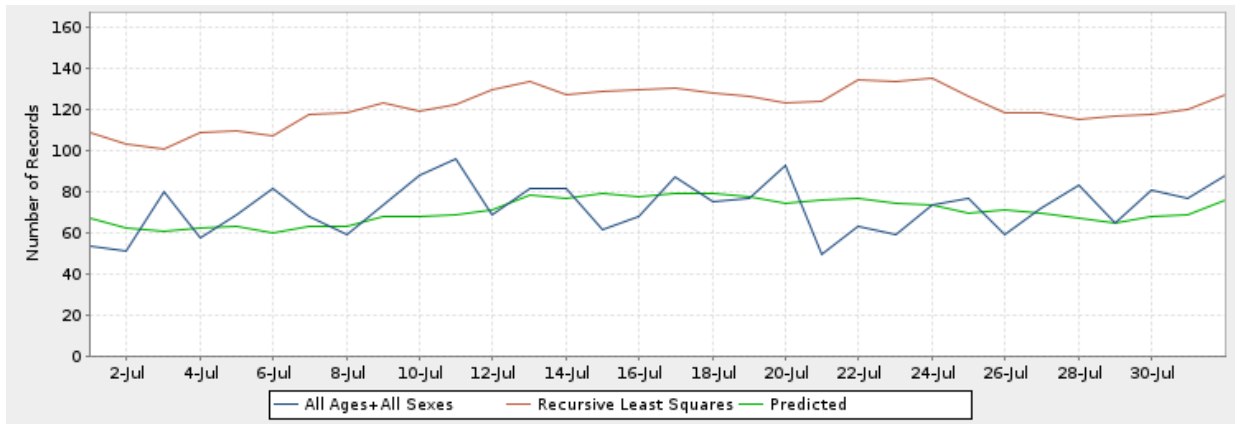


Figure 8. Gastrointestinal-related ED Visits, Hamilton County, Ohio, July 2023

