

Monthly Communicable Disease Surveillance Report

June 2023

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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: 96

Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=25)
- Lyme Disease (n=9)
- Chronic Hepatitis B (n=9)
- CP-CRE (n=7)
- C. auris - investigation (n=6)

Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 416

Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=118)
- Chronic hepatitis B (n=41)
- Lyme Disease (n=40)
- Campylobacteriosis (n=26)
- Salmonellosis (n=19)

Summary

In June, the overall rates of reported communicable diseases for HCPH, SWOH, and Ohio increased by 5%, 12%, and 20% respectively. The Ohio rate (25.1) was the highest of the three rates, followed by the SWOH rate (23.7) and the HCPH rate (20.2) (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 2nd and 3rd respectively (Table 2). Chronic hepatitis (Hepatitis C and Hepatitis B combined) comprised 38.2% of the total communicable diseases reported during June. Southwest Ohio is currently on pace to have a 2.9% decrease in hepatitis cases over the previous year's average number of cases (175). The rate of chronic hepatitis within Hamilton County for June was 9.3 per 100,000 residents. This rate was higher than the SWOH rate of 9.1 per 100,000 residents.

Lyme Disease was the third most frequently reported disease in SWOH (Table 2). Lyme Disease cases accounted for 9.6% of the total communicable diseases reported during June. The number of cases of Lyme Disease reported for SWOH in June (40) was higher than the number of cases reported in the previous month (28). The rate of Lyme Disease within Hamilton County for June was 1.5 per 100,000 residents. This rate was 35% lower than the SWOH rate of 2.3 per 100,000 residents.

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

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	96	20.16	0.91	0.70 - 1.19
SW OHIO	416	23.71	1.01	0.88 - 1.16
OHIO	2,903	25.08	.	.-.

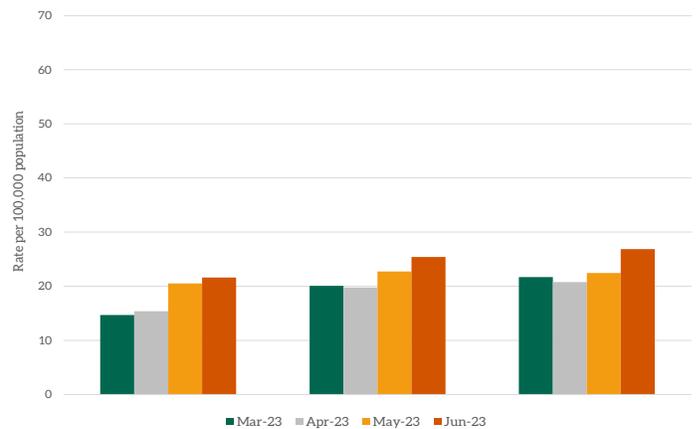
100,000 residents.

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 June 1-28, 2023. Data was accessed from the Ohio Disease Reporting System on 6/29/2023

†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, March 2023 - June 2023



Campylobacteriosis was the fourth most frequently reported disease in SWOH (Table 2). Campylobacteriosis cases accounted for 6.3% of the total communicable diseases reported during June. The number of cases of Campylobacteriosis reported for SWOH in June (26) was higher than the number of cases reported in the previous month (13). The rate of Campylobacteriosis within Hamilton County for June was 0.7 per 100,000 residents. This rate was 50% lower than the SWOH rate of 1.5 per

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

Reportable Condition	County										Total	
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren				
C. auris	3	.	.	1	.	.	.	.	.	.	.	4
C. auris - Investigation	11	.	.	3	.	.	.	.	.	.	.	14
CP-CRE	11	.	.	1	3	.	1	.	.	.	.	16
CP-CRE - Investigation	.	.	.	9	1	.	.	.	.	.	.	10
Campylobacteriosis	6	1	2	5	3	3	.	6	.	.	.	26
Coccidioidomycosis	1	.	.	1	.	.	.	.	.	.	.	2
E.Coli (shiga toxin producing)	2	1	.	.	1	1	.	2	.	.	.	7
Ehrlichiosis/Anaplasmosis	2	.	.	.	.	.	.	1	.	.	.	3
Giardiasis	1	.	.	.	1	.	1	.	.	.	.	3
Haemophilus influenzae (invasive)	5	.	.	4	1	.	.	.	.	.	.	10
Hepatitis A	3	.	.	2	.	.	2	.	.	.	.	7
Hepatitis B (acute)	1	.	.	2	.	.	.	.	.	.	.	3
Hepatitis B (chronic)	20	1	2	12	1	.	1	4	.	.	.	41
Hepatitis C (acute)	.	.	.	1	.	.	.	.	.	.	.	1
Hepatitis C (chronic)	55	5	9	23	8	6	5	7	.	.	.	118
Influenza-associated hospitalization	.	.	.	1	.	.	.	.	.	.	.	1
Legionellosis	4	.	.	2	.	.	.	2	.	.	.	8
Lyme Disease	12	7	2	1	10	1	5	2	2	.	.	40
Meningitis (aseptic/viral)	1	.	.	.	1	.	.	.	.	.	.	2
Meningitis (bacterial)	2	.	.	2	1	1	.	.	.	.	.	6
Mpox	1	.	.	.	.	.	.	.	.	.	.	1
Pertussis	.	.	1	.	.	.	.	.	.	.	.	1
Salmonella Typhi	.	.	.	.	.	.	.	1	.	.	.	1
Salmonellosis	4	.	2	4	2	.	3	4	.	.	.	19
Shigellosis	4	.	.	.	1	.	.	.	.	.	.	5
Spotted Fever Rickettsiosis (RMSF)	1	1	.	1	.	.	.	1	.	.	.	4
Streptococcal pneumoniae (invasive)	8	.	.	1	2	2	.	2	.	.	.	15

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	1	.	.	1	1	.	.	.	.	.	3
Brucellosis	1	.	.	.	.	.	.	1	.	.	2
C. auris	33	.	.	3	.	.	.	.	.	.	36
C. auris - Investigation	51	.	2	3	2	.	.	2	.	2	60
CP-CRE	38	5	1	22	8	4	7	5	3	5	90
CP-CRE - Investigation	.	.	.	10	1	1	1	3	.	.	16
Campylobacteriosis	43	4	5	17	15	3	4	14	.	.	105
Coccidioidomycosis	9	.	.	2	2	.	.	.	.	.	13
Cryptosporidiosis	12	.	.	3	.	.	.	7	.	.	22
Dengue	1	.	.	.	.	.	.	.	.	.	1
E.Coli (shiga toxin producing)	15	1	2	3	3	1	.	4	.	.	29
Ehrlichiosis/Anaplasmosis	2	1	.	.	1	.	.	2	.	.	6
Giardiasis	17	.	.	6	3	.	1	4	.	.	31
Haemophilus influenzae (invasive)	47	.	3	13	5	.	2	2	.	.	72
Hepatitis A	12	.	.	9	.	1	6	2	.	.	30
Hepatitis B (acute)	7	.	.	4	.	.	.	1	.	.	12
Hepatitis B (chronic)	119	5	8	68	14	5	7	19	.	.	245
Hepatitis C (acute)	.	.	.	1	1	.	.	.	.	.	2
Hepatitis C (chronic)	357	27	49	162	60	23	29	75	.	.	782
Hepatitis C - Perinatal Infection	.	.	1	1	1	1	.	.	.	.	4
Hepatitis E	2	.	.	.	.	.	.	.	.	.	2
Influenza-associated hospitalization	58	3	12	31	26	2	11	12	.	.	155
Influenza-associated pediatric mortality	.	.	.	.	.	.	.	1	.	.	1
Legionellosis	12	.	.	7	3	.	1	6	.	.	29
Lyme Disease	36	13	7	6	19	2	9	4	.	.	96
MIS-C associated with COVID-19	.	.	.	1	.	.	.	.	.	.	1
Malaria	3	.	.	.	.	.	.	.	.	.	3
Measles	.	.	.	.	.	.	.	1	.	.	1
Meningitis (aseptic/viral)	21	.	.	5	4	.	1	.	.	.	31
Meningitis (bacterial)	5	.	.	4	1	2	1	2	.	.	15

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 June 28, 2023, cases in Ohio and SWOH are decreasing. The SWOH region accounts for 547,368 (15.9%) of confirmed and probable cases in Ohio.

In June 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 Clermont County and Warren 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, June 2022 - June 2023

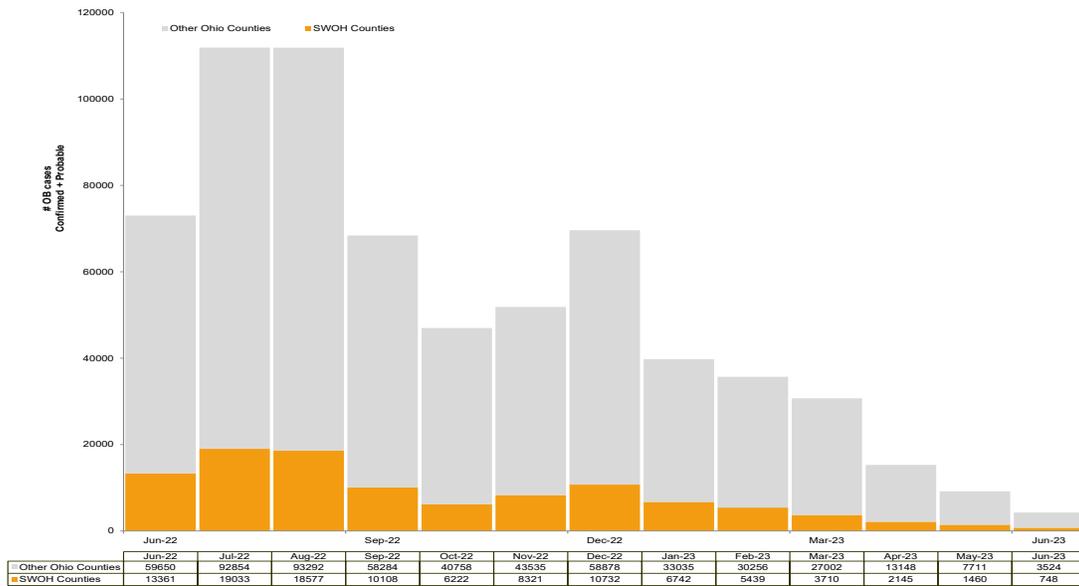
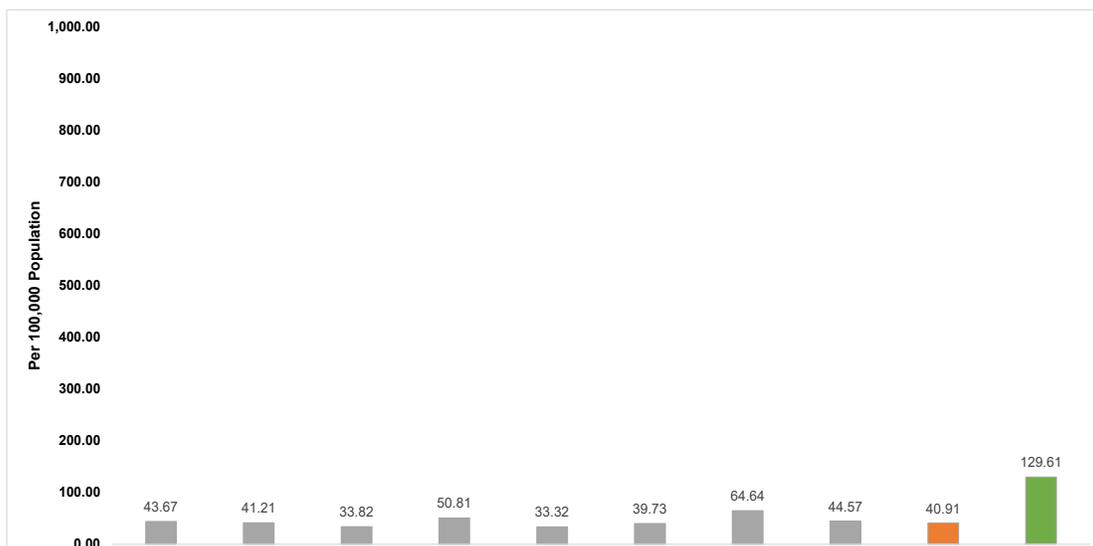
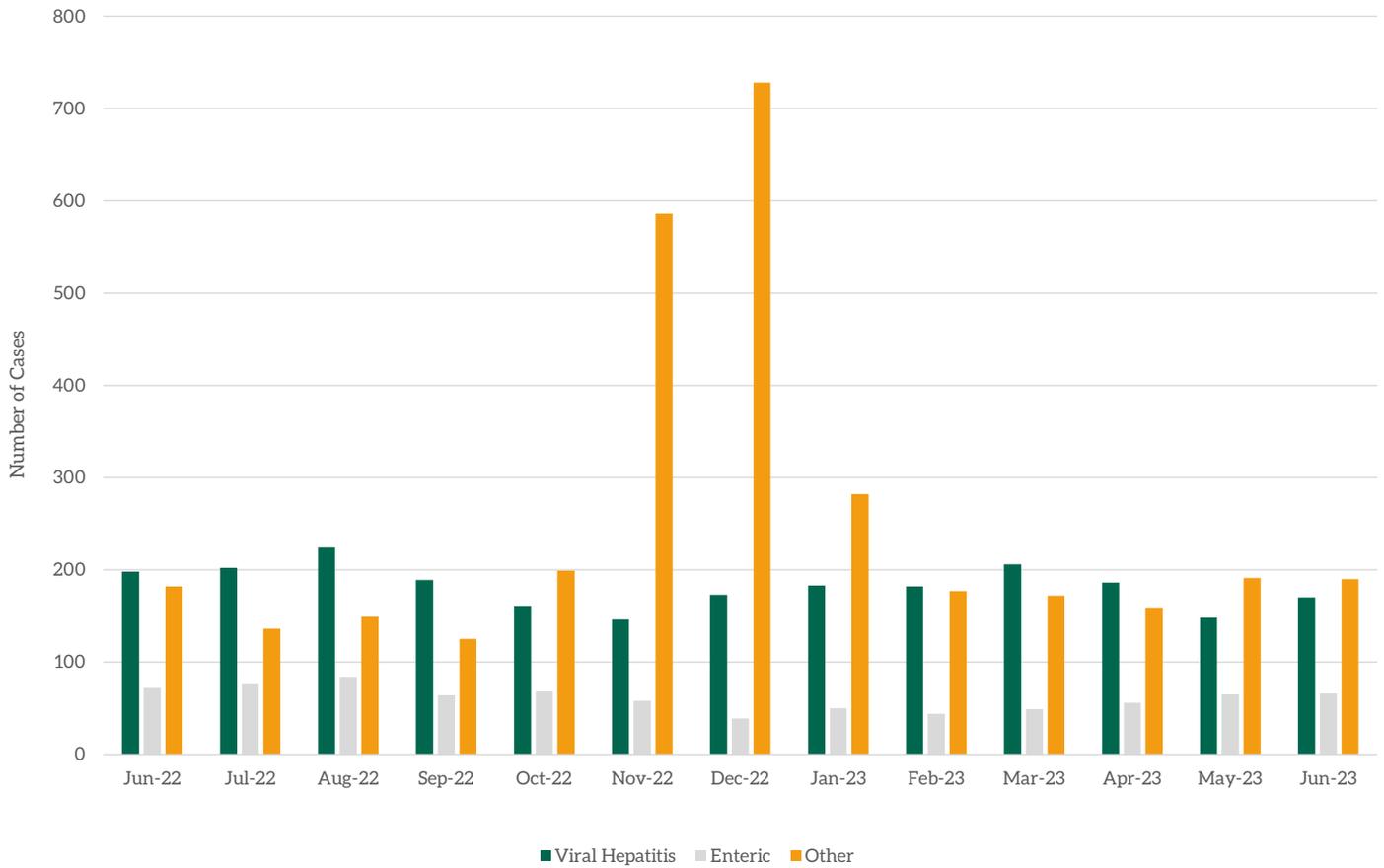


Figure 3. Rate of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, June 2023



NOTES: This data is provisional and subject to change when additional information is gained. Outbreak confirmed positive cases between March 9, 2020 and June 28, 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 June 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, June 2022 - June 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: 6

Types of EpiCenter alerts:

- Infectious Disease Symptoms (n=6)
- Syndromic Symptoms (n=0)

The alerts received for Hamilton County for June 1 - June 28 are summarized in Table 5 below. Four of the anomalies received in EpiCenter were dispositioned as Not a health event and three anomalies were dispositioned as Seasonal Illness - GI. 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, June 2023

Anomaly Classifier	Event Date	Alert Category	Analysis Method	Aggregated By	Actual Value	Predicted Value	Threshold Value	Final Disposition
Paralysis	6/27/2023	Infectious Disease	Recursive Least Squares	Facility Location	27	14.2	25.2	Not a health event
Paralysis	6/27/2023	Infectious Disease	Recursive Least Squares	Home Location	23	10.6	21.1	Not a health event
Diarrhea - Not Watery/Bloody	6/21/2023	Infectious Disease	Exponential Moving Average	Home Location	24	12.4	22.7	Seasonal Illness - GI
Diarrhea - Not Watery/Bloody	6/21/2023	Infectious Disease	Cusum EMA	Home Location	22	12.4	21.1	Seasonal Illness - GI
Gastrointestinal	6/21/2023	Infectious Disease	Recursive Least Squares	Facility Location	226	166.3	225.7	Seasonal Illness - GI
Edema	6/17/2023	Infectious Disease	Exponential Moving Average	Facility Location	48	28.6	46.4	Not a health event
Hemorrhaging	6/4/2023	Infectious Disease	Recursive Least Squares	Home Location	27	16.4	25.3	Not a health event

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

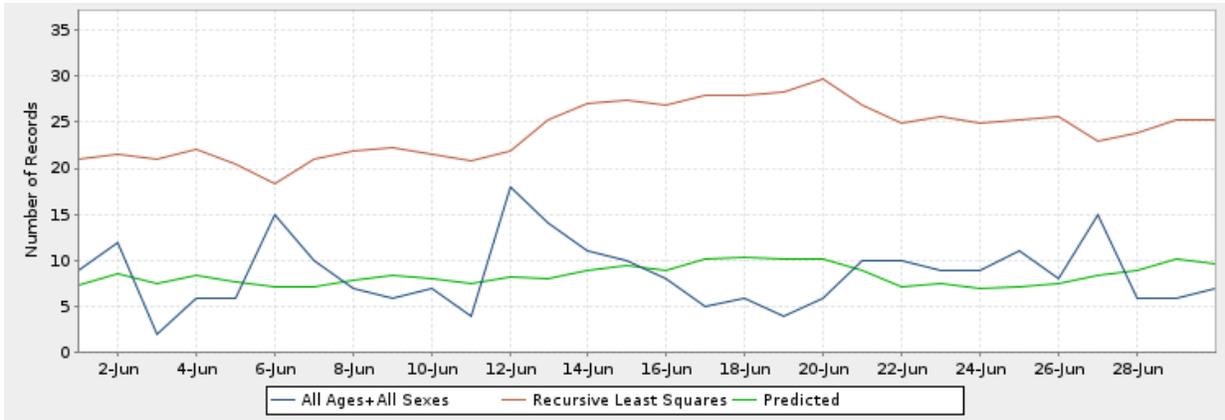


Figure 7. Constitutional-related ED Visits, Hamilton County, Ohio, June 2023

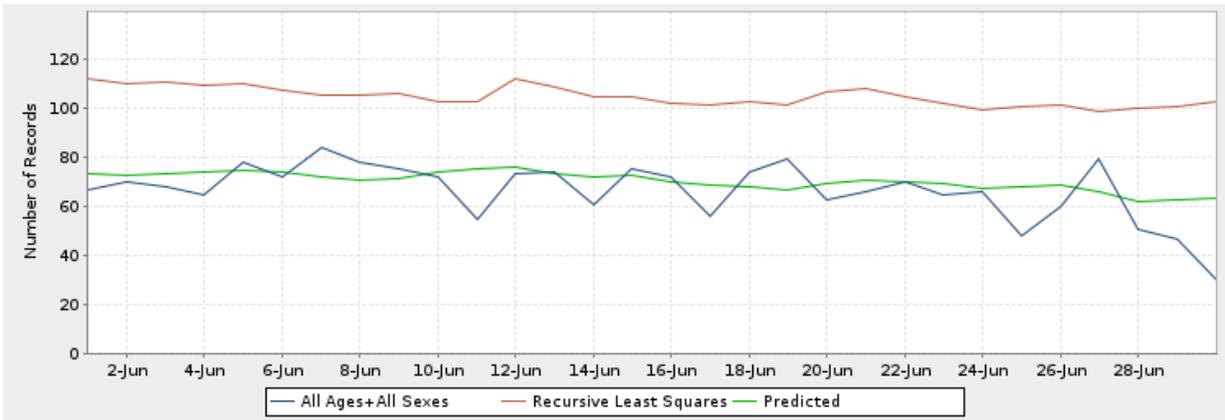


Figure 8. Respiratory-related ED Visits, Hamilton County, Ohio, June 2023

