



Monthly Communicable Disease Surveillance Report

April 2024

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NOTIFIABLE COMMUNICABLE DISEASES

Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 99
 Most frequently reported communicable diseases:

- Influenza-associated Hospitalization (n=30)
- Chronic Hepatitis C (n=28)
- Salmonellosis (n=6)
- Chronic Hepatitis B (n=5)
- CPO (n=4)

Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 459
 Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=131)
- Influenza-associated hospitalization (n=89)
- Chronic Hepatitis B (n=35)
- CPO (n=21)
- Salmonellosis (n=18)

Summary

In April, the overall rates of reported communicable diseases for HCPH decreased by 49%. SWOH and Ohio decreased by 35% and 26% respectively. The Ohio rate (28.6) was the highest of the three rates, followed by the SWOH rate (26.2) and the HCPH rate (20.8) (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 Influenza-associated hospitalization and chronic hepatitis B 2nd and 3rd respectively (Table 2). chronic hepatitis B and C cases accounted for 36% of the total communicable diseases reported during April. Southwest Ohio is currently on pace for a 6.9% increase in chronic hepatitis over the previous year's average of 155 cases. The number of chronic hepatitis cases reported for SWOH in April (166) was higher than the number of cases reported in the previous month (149). The rate of chronic hepatitis within Hamilton County for April was 9.7 per 100,000 residents. This rate was higher than the SWOH rate of 9.5 per 100,000 residents.

Influenza-associated hospitalizations was the second most frequently reported disease in SWOH, accounting for 19% of the total communicable diseases reported during April. The number of influenza-associated hospitalizations reported during

Figure 1. 30-Day Rates of Reported Communicable Diseases in Ohio, Southwest Ohio, and Hamilton County Public Health Jurisdiction, January 2024 - April 2024

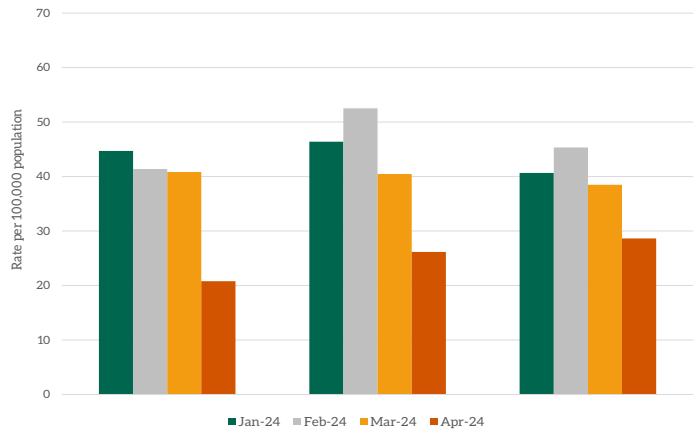


Table 1. Comparison of the Reported Cases of Notifiable Communicable Diseases by Location, April 2024

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	99	20.79	0.73	0.56 - 0.94
SW OHIO	459	26.16	0.91	0.80 - 1.04
OHIO	3,314	28.63	.	.-.

April (89) was lower than the number of cases reported in the previous month (300). The rate of influenza-associated hospitalizations within Hamilton County for April was 4.7 per 100,000 residents. This rate was lower than the SWOH rate of 5.1 per 100,000 residents.

Carbapenemase-Producing Organisms (CPOs) were the fourth most frequently reported disease in SWOH (Table 2). CPO cases accounted for 4.6% of the total communicable diseases reported during April. The number of CPO cases reported for SWOH in April (21) was higher than the number of cases reported in the previous month (11). The rate of CPO cases within Hamilton County for April was 0.6 per 100,000 residents. This rate is lower than the SWOH rate of 1.2 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, gonorrhea, HIV, and syphilis 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 1-30 2024. Data was accessed from the Ohio Disease Reporting System on 5/2/2024

†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, April 2024

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	1	.	.	1	.	.	.	.	.	.	2
Brucellosis	1	.	.	.	.	.	.	.	.	.	1
C. auris	7	.	.	.	1	.	.	.	.	.	8
C. auris - Colonization	5	.	.	.	4	.	.	.	.	.	9
CPO	5	.	1	2	4	2	4	3			21
CPO - Colonization	1	.	.	3	.	.	.	.	.	.	4
Campylobacteriosis	2	.	.	2	.	.	1	2			7
Cryptosporidiosis	1	.	.	3	.	.	.	1			5
E.Coli (shiga toxin producing)	.	1	.	1	.	1	.	1			4
Ehrlichiosis/Anaplasmosis	1	.	.	.	1	.	.	.	.	.	2
Giardiasis	6	.	.	.	1	.	.	2			9
Haemophilus influenzae (invasive)	2	.	.	.	.	.	.	1			3
Hepatitis A	4	.	.	1	.	.	1	.			6
Hepatitis B (acute)	3	.	.	1	.	.	.	.			4
Hepatitis B (chronic)	12	1	.	9	3	.	.	10			35
Hepatitis C (chronic)	66	5	6	23	10	2	2	17			131
Hepatitis C - Perinatal Infection	2	.	.	.	1	.	.	.			3
Influenza-associated hospitalization	38	.	1	24	9	2	1	14			89
Legionnaires' Disease	1	.	.	.	1	.	.	.			2
Lyme Disease	5	1	.	3	3	1	1	2			16
Measles	.	.	.	.	.	2	1	.			3
Meningitis (aseptic/viral)	1	.	1	2	.	.	.	2			6
Meningitis (bacterial)	2	.	.	.	.	.	.	1			3
Meningococcal disease	.	.	.	1	.	.	.	.			1
Mumps	2	.	.	.	.	1	.	1			4
Pertussis	2	1	.	2	.	.	.	3			8
Rubella (not congenital)	1	.	.	.	.	.	.	.			1
Salmonellosis	13	.	.	4	1	.	.	.			18
Shigellosis	1	.	.	1	.	.	.	2			4
Spotted Fever Rickettsiosis (RMSF)	.	.	.	.	1	.	.	.			1

Table 3. YTD Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, April 2024

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	2	.	.	1	.	.	1	.	.	.	4
Babesiosis	1	.	.	.	1	.	.	.	.	.	2
Brucellosis	2	.	.	.	.	.	.	.	.	.	2
C. auris	27	.	.	2	2	.	.	.	.	.	31
C. auris - Colonization	27	.	1	6	4	.	.	1	.	.	39
CPO	30	3	3	13	7	5	8	12	.	.	81
CPO - Colonization	2	.	.	7	.	.	3	.	.	.	12
Campylobacteriosis	15	.	.	9	5	.	3	6	.	.	38
Chikungunya virus	1	.	.	.	.	.	.	.	.	.	1
Coccidioidomycosis	3	.	1	2	.	.	.	1	.	.	7
Creutzfeldt-Jakob Disease	2	.	.	1	1	.	.	.	.	.	4
Cryptosporidiosis	3	.	.	4	1	.	.	1	.	.	9
Dengue	5	.	.	1	.	.	.	.	.	.	6
E.Coli (shiga toxin producing)	3	1	.	3	1	1	1	1	1	.	11
Ehrlichiosis/Anaplasmosis	3	.	.	.	3	.	.	1	.	.	7
Giardiasis	11	.	.	2	4	1	.	3	.	.	21
Haemophilus influenzae (invasive)	10	.	5	8	1	1	2	4	.	.	31
Hepatitis A	16	1	2	2	.	.	1	3	.	.	25
Hepatitis B (acute)	7	1	1	1	2	.	.	.	.	.	12
Hepatitis B (chronic)	83	6	1	39	6	5	5	29	.	.	174
Hepatitis C (chronic)	227	21	24	84	32	8	17	49	.	.	462
Hepatitis C - Perinatal Infection	5	.	.	1	1	1	1	.	.	.	9
Hepatitis E	.	.	1	.	.	.	.	.	.	.	1
Influenza-associated hospitalization	658	4	39	300	153	23	32	141	.	.	1350
LaCrosse Virus Disease (LCVD)	.	.	.	.	1	.	.	.	.	.	1
Legionnaires' Disease	5	.	.	.	1	.	.	.	.	.	6
Lyme Disease	13	1	3	9	9	1	2	3	.	.	41
Malaria	6	.	.	2	.	.	.	.	.	.	8
Measles	1	.	.	5	3	3	4	7	.	.	23
Meningitis (aseptic/viral)	8	.	1	7	1	1	.	5	.	.	23

SYNDROMIC SURVEILLANCE

Emergency Department Visits

Number of EpiCenter alerts received: 13

Types of EpiCenter alerts:

- Infectious Disease Symptoms (n=13)
- Syndromic Symptoms (n=0)

The alerts received for Hamilton County from April 1 - April 30 are summarized in Table 5 below. Four of the anomalies received in EpiCenter were dispositioned as Indeterminate. Two anomalies were dispositioned as seasonal illness (ILI/Respiratory). At the time of this report seven anomaly investigations are still active. There were no syndromic anomalies in Hamilton County for the month of April. Constitutional, Respiratory, and Rash syndrome charts are shown in Figures 6, 7, and 8 respectively.

Table 5. Emergency Department Visit Anomalies for Hamilton County, April 2024

Anomaly Classifier	Event Date	Alert Category	Analysis Method	Aggregated By	Actual Value	Predicted Value	Threshold Value	Final Disposition
Exacerbation	4/28/2024	Infectious Disease	Recursive Least Squares	Facility Location	13	4.80	12.66	Active
Exacerbation	4/28/2024	Infectious Disease	Cusum EMA	Facility Location	12	5.56	11.54	Active
Exacerbation	4/28/2024	Infectious Disease	Exponential Moving Average	Facility Location	12	5.56	11.66	Active
Exacerbation	4/27/2024	Infectious Disease	Recursive Least Squares	Facility Location	11	4.26	10.11	Active
Shock	4/25/2024	Infectious Disease	Exponential Moving Average	Facility Location	12	4.22	11.85	Active
Edema	4/18/2024	Infectious Disease	Cusum EMA	Home Location	35	26.28	29.74	Active
Edema	4/14/2024	Infectious Disease	Cusum EMA	Home Location	35	22.39	34.81	Active
Congestion	4/11/2024	Infectious Disease	Recursive Least Squares	Facility Location	16	4.18	12.94	Seasonal Illness - ILI/Respiratory
Congestion	4/11/2024	Infectious Disease	Exponential Moving Average	Facility Location	16	5.17	14.26	Seasonal Illness - ILI/Respiratory
Rash	4/9/2024	Infectious Disease	Cusum EMA	Facility Location	58	29.32	56.83	Indeterminate
Rash	4/9/2024	Infectious Disease	Exponential Moving Average	Facility Location	58	29.50	53.65	Indeterminate
Rash	4/8/2024	Infectious Disease	Recursive Least Squares	Facility Location	56	31.23	51.40	Indeterminate
Shock	4/2/2024	Infectious Disease	Recursive Least Squares	Facility Location	10	4.42	9.93	Indeterminate

Figure 6. Constitutional-related ED Visits, Hamilton County, Ohio, April 2024

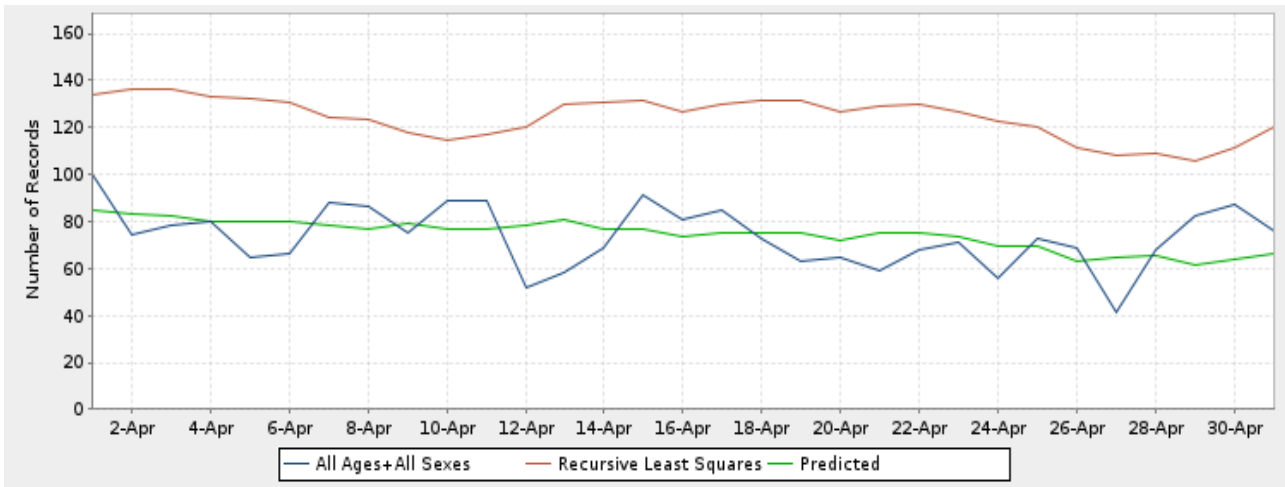


Figure 7. Respiratory-related ED Visits, Hamilton County, Ohio, April 2024

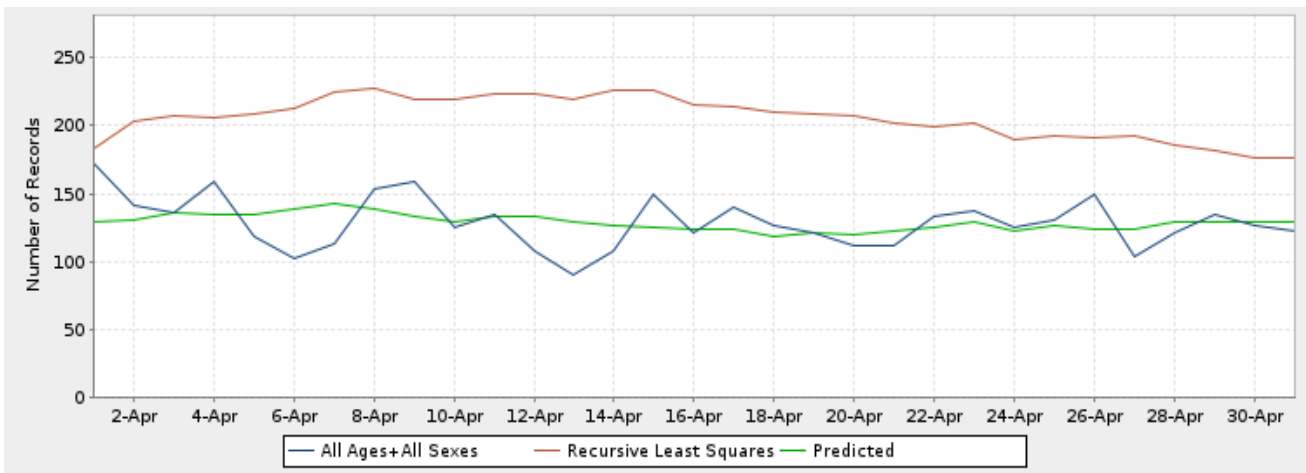


Figure 8. Rash-related ED Visits, Hamilton County, Ohio, April 2024

