



Monthly Communicable Disease Surveillance Report

December 2024

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NOTIFIABLE COMMUNICABLE DISEASES

Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 152
 Most frequently reported communicable diseases:

- Influenza-associated Hospitalization (n=54)
- Pertussis C (n=23)
- Chronic Hepatitis C (n=22)
- Chronic Hepatitis B (n=9)
- Salmonellosis (n=7)

Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 578
 Most frequently reported communicable diseases:

- Influenza-associated Hospitalization (n=148)
- Chronic Hepatitis C (n=106)
- Pertussis (n=100)
- Chronic Hepatitis B (n=30)
- Invasive Streptococcal pneumoniae (n=23)

Summary

In December, the overall rates of reported communicable diseases for HCPH, SWOH, and Ohio increased by 25%, 16%, and 21%, respectively. The SWOH rate (32.9) was the highest of the three rates, followed by the HCPH rate (31.9) and the Ohio rate (31.5) (Table 1).

Influenza-associated hospitalization was the most reported communicable disease across SWOH, with Chronic Hepatitis C and Pertussis the 2nd- and 3rd-most reported, respectively (Table 2). Chronic Hepatitis B and C cases accounted for 24% of the total communicable diseases reported during December. The number of chronic hepatitis cases seen in Southwest Ohio during December was 8.2% lower than the 12-month average of 149 cases seen between December 2023 and November 2024. The number of chronic hepatitis cases reported in SWOH in December (136) was lower than the number of cases reported in the previous month (155). The rate of chronic hepatitis within Hamilton County for December was 10.1 per 100,000 residents. This rate was higher than the SWOH rate of 7.8 per 100,000 residents.

Influenza-associated hospitalization was the most frequently reported disease in SWOH, accounting for 26% of the total communicable diseases reported during December. The number of influenza-associated hospitalizations reported during

December (148) was much higher than the number of cases reported in the previous month (6); this is expected during flu season. The rate of influenza-associated hospitalizations within Hamilton County for December was 10.1 per 100,000 residents. This rate was lower than the SWOH rate of 8.5 per 100,000 residents.

Pertussis was the third most frequently reported disease in SWOH (Table 2). Pertussis cases accounted for 17.3% of the total communicable diseases reported during December. The number of

Pertussis cases reported in December (100) was greater than the number of cases reported in the previous month (117). The rate of pertussis cases within Hamilton County for December was 3.7 per 100,000 residents. This rate was lower than the SWOH rate of 5.7 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 December 1-31, 2024. Data was accessed from the Ohio Disease Reporting System on 01/02/20245.

†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, September 2024 -December 2024

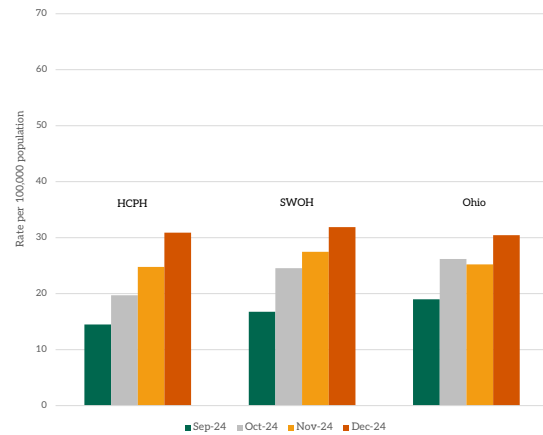


Table 1. Comparison of the Reported Cases of Notifiable Communicable Diseases by Location, December 2024

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	152	31.91	0.98	0.77 - 1.25
SW OHIO	578	32.94	1.09	0.96 - 1.24
OHIO	3,642	31.46	.	. - .

Table 2. Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, December 2024

Reportable Condition	County										Total	
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren				
Amebiasis	1	.	.	.	.	.	.	.	.	.	.	1
Botulism (Infant)	1	.	.	.	.	.	.	.	.	.	.	1
C. auris	8	.	.	1	1	.	.	.	2	2	.	12
C. auris - Colonization Screening	6	.	.	.	.	.	.	.	2	2	.	8
CPO	1	.	.	4	3	.	1	.	.	.	.	9
CPO - Colonization Screening	1	.	.	.	.	.	.	.	.	.	.	1
Campylobacteriosis	2	.	1	3	3	.	.	.	2	2	.	11
Coccidioidomycosis	2	.	.	.	.	.	.	.	.	.	.	2
Creutzfeldt-Jakob Disease	1	.	.	.	.	.	.	.	.	.	.	1
Cryptosporidiosis	4	.	.	2	.	.	.	.	3	3	.	9
E.Coli (shiga toxin producing)	3	.	.	1	.	.	.	.	2	2	.	6
Ehrlichiosis/Anaplasmosis	1	.	.	.	.	.	.	.	.	.	.	1
Giardiasis	5	.	.	3	.	.	.	.	.	.	.	8
Haemophilus influenzae (invasive)	.	.	.	2	1	.	.	.	.	.	.	3
Hepatitis A	3	.	2	2	.	.	.	.	.	.	.	7
Hepatitis B (acute)	2	.	1	.	1	1	.	.	1	.	.	6
Hepatitis B (chronic)	18	.	1	4	3	1	.	.	3	3	.	30
Hepatitis C (chronic)	63	3	1	22	7	.	3	7	.	.	.	106
Hepatitis C - Perinatal Infection	.	.	.	.	.	1	.	.	.	.	.	1
Influenza-associated hospitalization	81	.	1	18	22	1	2	23	.	.	.	148
Legionnaires' Disease	2	.	.	3	.	.	.	.	.	.	.	5
Leptospirosis	.	.	.	.	.	.	1	.	.	.	.	1
Lyme Disease	2	1	.	.	3	.	.	.	.	.	.	6
Malaria	1	.	.	.	.	.	.	.	.	.	.	1
Measles	.	.	.	.	.	1	.	.	.	.	.	1
Meningitis (aseptic/viral)	2	.	1	4	.	.	.	.	.	.	.	7
Meningitis (bacterial, not N. meningitidis)	2	.	.	.	.	1	.	.	.	.	.	3
Mumps	.	.	1	.	.	.	.	.	1	.	.	2

Table 2. Cases of Notifiable Diseases in Southwest Ohio as Reported in ODRS by County, December 2024, Continued

Reportable Condition	County										Total	
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren				
Pertussis	30	.	.	22	9	.	.	.	39			100
Salmonellosis	11	.	.	3	.	1	.	.	2			17
Shigellosis	2	.	.	.	.	.	.	.	.			2
St. Louis encephalitis virus disease	1	.	.	.	.	.	.	.	.			1
Streptococcal pneumoniae (invasive)	10	.	.	4	5	.	1	3				23
Streptococcal, Group A (invasive)	10	.	.	1	2	.	.	.				13
Streptococcal, Group B (in newborn)	2	.	.	.	.	.	.	.				2
Tuberculosis	2	.	.	.	2	.	.	.				4
Tularemia	.	.	.	.	.	.	1	.				1
Varicella	5	.	.	1	.	.	1	2				9
Vibriosis	.	.	1	.	.	.	.	.				1
Yersiniosis	4	.	1	2	.	.	.	1				8
Total	289	4	11	102	62	7	10	93				578

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	7	.	.	1	.	.	1	.	.	9	
Babesiosis	2	1	.	.	3	.	.	.	.	6
Botulism (Infant)	1	.	.	.	.	1	.	.	.	2
Brucellosis	2	.	.	.	.	.	.	.	.	2
C. auris	78	.	.	9	6	.	.	5	.	98	
C. auris - Colonization Screening	88	.	1	31	22	1	.	23	.	166	
CPO	102	7	5	47	30	7	13	29	.	240	
CPO - Colonization Screening	11	1	.	12	6	.	3	1	.	34	
Campylobacteriosis	67	4	8	43	16	1	9	29	.	177	
Chikungunya virus	3	.	.	.	.	.	.	2	.	5
Coccidioidomycosis	10	.	2	2	1	.	.	3	.	18	
Creutzfeldt-Jakob Disease	6	.	.	2	1	.	.	.	.	9
Cryptosporidiosis	40	1	.	11	7	3	.	9	.	71	
Cyclosporiasis	6	.	.	1	.	.	.	3	.	10	
Dengue	8	.	.	1	.	.	.	.	.	9
E.Coli (shiga toxin producing)	22	1	2	12	6	1	1	8	.	53	
Ehrlichiosis/Anaplasmosis	8	2	1	.	4	.	2	4	.	21	
Giardiasis	35	2	1	10	7	2	.	7	.	64	
Haemophilus influenzae (invasive)	23	.	6	14	10	2	3	8	.	66	
Hepatitis A	30	2	12	12	3	2	2	5	.	68	
Hepatitis B (acute)	23	3	4	4	3	4	1	4	.	46	
Hepatitis B (chronic)	232	10	9	108	17	7	10	57	.	450	
Hepatitis C (acute)	2	1	.	.	3	.	.	.	.	6
Hepatitis C (chronic)	679	47	52	235	89	21	39	140	.	1302	
Hepatitis C - Perinatal Infection	7	2	.	3	2	3	1	.	.	18	
Hepatitis E	1	.	1	.	.	.	.	.	.	2
Influenza-associated hospitalization	760	4	39	336	179	24	35	170	.	1547	
LaCrosse Virus Disease (LCVD)	.	.	.	.	1	1	.	.	.	2
Legionnaires' Disease	22	.	.	14	7	.	.	7	.	50	
Leprosy	.	.	.	.	.	.	.	1	.	1

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Leptospirosis	.	.	.	.	.	.	1	.	.	.	1
Listeriosis	1	.	.	.	.	.	.	.	.	.	1
Lyme Disease	63	25	17	24	69	3	20	18			239
Malaria	17	.	.	3	.	.	.	.	.	.	20
Measles	1	.	.	6	3	3	4	9			26
Meningitis (aseptic/viral)	44	1	7	28	13	1	1	15			110
Meningitis (bacterial, not N. meningitidis)	34	.	1	13	6	1	1	7			63
Meningococcal disease	1	.	.	3	.	.	.	.	.	.	4
Mpox	4	.	.	.	.	.	.	.	.	.	4
Mumps	13	1	1	2	2	1	.	2			22
Pertussis	130	4	15	90	47	2	5	151			444
Q fever (acute)	.	.	1	.	1	.	.	.	.	.	2
Rubella (not congenital)	1	.	.	.	.	.	1	.			2
Salmonella Paratyphi Infection	1	.	.	1	.	.	.	.			2
Salmonella Typhi	3	.	.	3	.	.	.	1			7
Salmonellosis	94	6	5	35	17	2	5	27			191
Shigellosis	43	.	1	12	2	.	.	5			63
Spotted Fever Rickettsiosis (including Rocky Mountain spotted fever (RMSF))	4	5	2	.	5	1	5	2			24
St. Louis encephalitis virus disease	1	.	.	.	.	.	1	.			2
Streptococcal pneumoniae (invasive)	81	2	5	42	18	3	5	19			175
Streptococcal, Group A (invasive)	80	3	1	38	22	1	2	21			168
Streptococcal, Group B (in newborn)	7	.	.	.	2	1	.	2			12
Tetanus	.	.	.	1	.	.	.	.			1
Tuberculosis	28	.	.	13	2	.	1	4			48
Tularemia	1	.	.	.	.	.	1	2			4
Varicella	37	2	1	22	3	3	3	16			87
Vibriosis	6	.	1	2	1	.	.	.			10
West Nile virus infection (WNV)	3	.	.	.	.	.	.	.			3
Yersiniosis	22	.	1	4	5	.	.	5			37
Total	2995	137	202	1250	641	102	176	821			6324

SYNDROMIC SURVEILLANCE

Emergency Department Visits

Number of EpiCenter alerts received: 34

Types of EpiCenter alerts:

- Infectious Disease Symptoms (n=24)
- Syndromic Symptoms (n=10)

The alerts received for Hamilton County from December 1 - December 31 are partially summarized in Table 5 below. EpiCenter generates more alerts during the winter respiratory disease season, so not all alerts are shown in the table. Six of the anomalies received in EpiCenter were dispositioned as Not a Health Event, and 3 were dispositioned as seasonal illness. At the time of this report, twenty-five anomaly investigations are still active. There were ten syndromic alerts in December. The syndromic surveillance charts for Gastrointestinal, Constitutional, and Respiratory ED visits are shown in Figures 6, 7, and 8, respectively.

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

Anomaly Classifier	Event Date	Alert Category	Analysis Method	Aggregated By	Actual Value	Predicted Value	Threshold Value	Final Disposition
Fever	12/31/2024	Infectious Disease	Cusum EMA	Home Location	71	49.61	55.80	Active
Constitutional	12/31/2024	Syndromic	Cusum EMA	Facility Location	156	123.55	144.79	Active
Cough	12/31/2024	Infectious Disease	Cusum EMA	Home Location	96	71.40	92.28	Active
Respiratory	12/31/2024	Syndromic	Cusum EMA	Home Location	229	175.87	188.31	Active
Cough	12/30/2024	Infectious Disease	Cusum EMA	Facility Location	105	77.83	93.66	Active
Nausea	12/30/2024	Infectious Disease	Cusum EMA	Home Location	39	25.68	28.86	Active
Respiratory	12/30/2024	Syndromic	Cusum EMA	Home Location	214	166.91	211.21	Active
Constitutional	12/29/2024	Syndromic	Cusum EMA	Home Location	125	93.53	115.20	Active
Congestion	12/29/2024	Infectious Disease	Recursive Least Squares	Facility Location	12	3.79	11.02	Active
Respiratory	12/29/2024	Syndromic	Cusum EMA	Facility Location	231	188.47	227.72	Active
Gastrointestinal	12/28/2024	Syndromic	Cusum EMA	Home Location	191	147.32	180.55	Active
Diarrhea - Not Watery/Bloody	12/28/2024	Infectious Disease	Cusum EMA	Facility Location	25	20.28	23.28	Active
Fever	12/28/2024	Infectious Disease	Cusum EMA	Home Location	61	40.46	45.44	Active
Cough	12/28/2024	Infectious Disease	Cusum EMA	Home Location	87	55.02	75.35	Active
Constitutional	12/27/2024	Syndromic	Cusum EMA	Facility Location	146	99.91	139.19	Active

Figure 6. Gastrointestinal-related ED Visits, Hamilton County, Ohio, December 2024

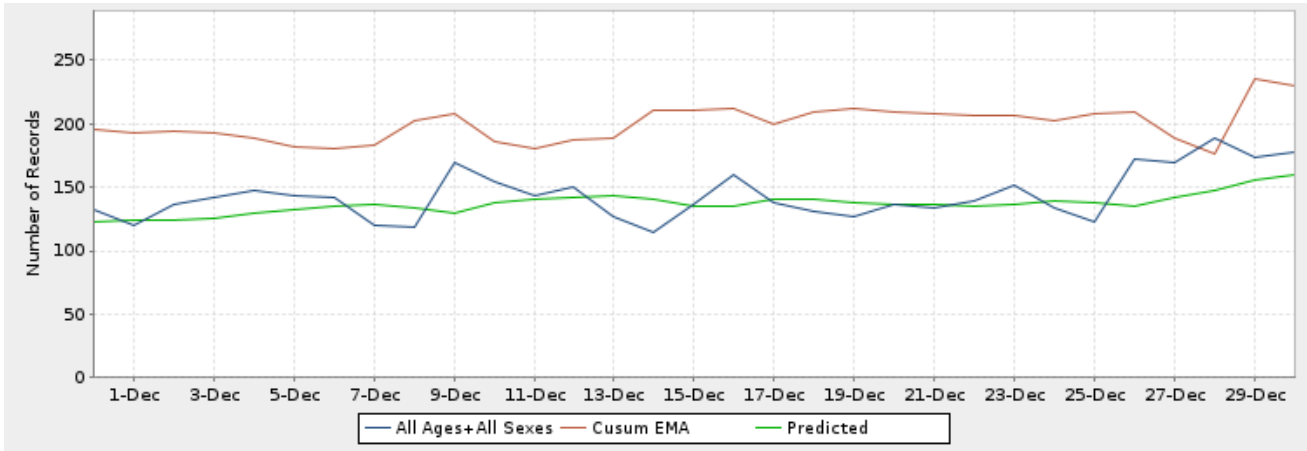


Figure 7. Constitutional-related ED Visits, Hamilton County, Ohio, December 2024

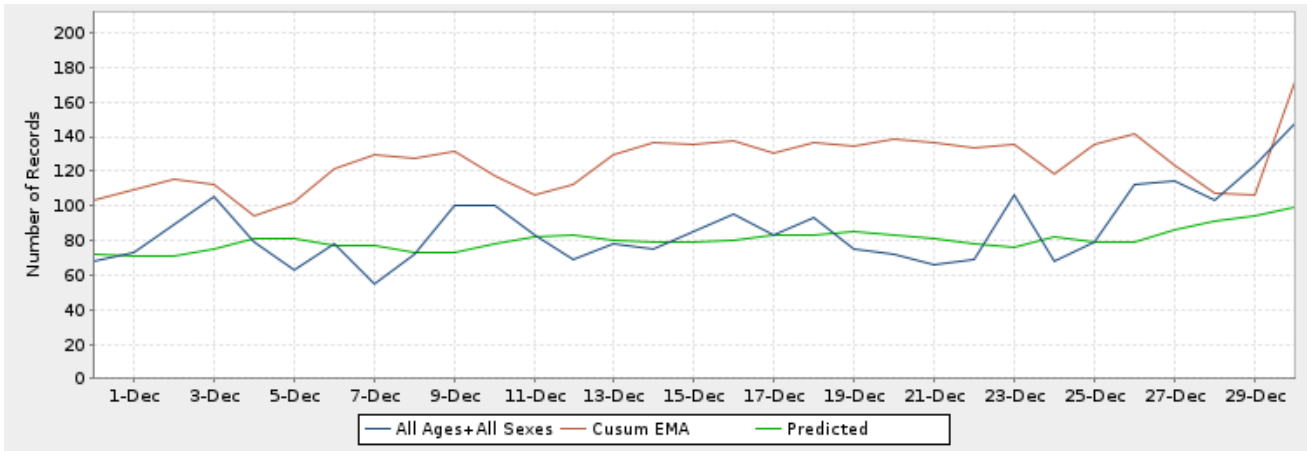


Figure 8. Respiratory-related ED Visits, Hamilton County, Ohio, December 2024

