

Monthly Communicable Disease Surveillance Report

December 2023

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NOTIFIABLE COMMUNICABLE DISEASES

Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 84
 Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=26)
- Streptococcus pneumoniae (invasive) (n=18)
- Influenza-associated hospitalization (n=6)
- Haemophilus influenzae (n=5)
- Chronic Hepatitis B(n=4)

Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 443
 Most frequently reported communicable diseases:

- Chronic Hepatitis C (n=114)
- Influenza-associated hospitalization (n=77)
- Streptococcus pneumoniae (n=41)
- Pertussis (n=37)
- Chronic Hepatitis B (n=26)

Summary

In December, the overall rates of reported communicable diseases for HCPH, SWOH, and Ohio increased by 7%, 22%, and 23% respectively. The Ohio rate (27.3) was the highest of the three rates, followed by the SWOH rate (27.0) and the HCPH rate (18.9) (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 Influenza-associated hospitalization, and streptococcus pneumoniae 2nd and 3rd respectively (Table 2). Chronic Hepatitis (Hepatitis C and Hepatitis B combined) comprised 31.6% of the total communicable diseases reported during December. Southwest Ohio is currently on pace to have a 7.6% decrease in hepatitis cases over the previous year's average number of cases (162). The rate of chronic hepatitis within Hamilton County for December was 9.7 per 100,000 residents. This rate was higher than the SWOH rate of 8.0 per 100,000 residents.

Streptococcus pneumoniae was the third most frequently reported disease in SWOH (Table 2). Streptococcus pneumoniae cases accounted for 9.3% of the total communicable diseases reported during December. The number of cases of Streptococcus pneumoniae reported for SWOH in December (41) was higher than the number of cases reported in the previous month (21). The rate of Streptococcus pneumoniae within Hamilton County for December was 2.9 per 100,000 residents. This rate was 22% higher than the SWOH rate of 2.4 per 100,000 residents.

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Pertussis was the fourth most frequently reported disease in SWOH (Table 2). Pertussis cases accounted for 8.4% of the total communicable diseases reported during December. The number of Pertussis cases reported for SWOH in December (37) was higher than the number of cases reported in the previous month (21). There were no cases of Pertussis within Hamilton County for December. The SWOH rate for

Figure 1. 30-Day Rates of Reported Communicable Diseases in Ohio, Southwest Ohio, and Hamilton County Public Health Jurisdiction, September 2023 - December 2023

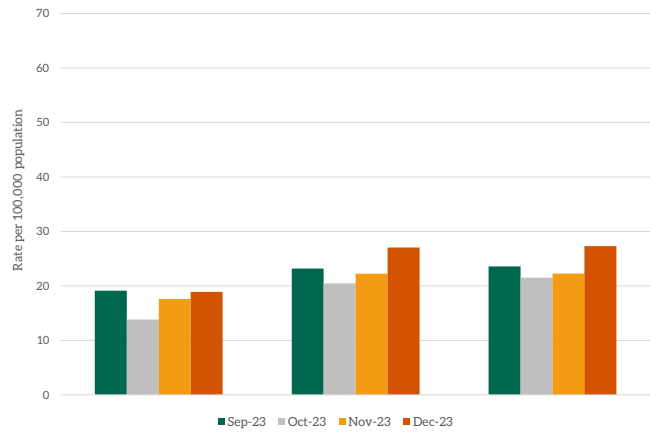


Table 1. Comparison of the Reported Cases of Notifiable Communicable Diseases by Location, December 2023

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	84	17.64	0.69	0.62 - 1.05
SW OHIO	443	25.25	0.99	0.97 - 1.25
OHIO	2,949	25.48	.	.-.

pertussis was 2.1 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, 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 1-28 2023. Data was accessed from the Ohio Disease Reporting System on 12/28/2023

†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, December 2023

Reportable Condition	County										Total	
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren				
Babesiosis	2	.	.	.	.	.	.	.	.	.	.	2
C. auris	3	.	.	.	.	.	.	.	.	.	1	4
C. auris - Colonization Screening	1	.	.	3	.	.	.	.	.	.	2	6
Campylobacteriosis	2	.	2	6	.	.	2	.	.	.	.	12
Coccidioidomycosis	1	.	.	.	.	.	.	.	.	.	.	1
CPO	6	1	1	1	.	1	.	.	.	.	.	10
CPO - Colonization Screening	.	.	.	.	.	.	2	.	.	.	.	2
Cryptosporidiosis	.	.	.	1	1	.	.	.	.	.	.	2
E.Coli (shiga toxin producing)	1	.	.	1	.	.	2	.	.	.	.	4
Giardiasis	1	.	.	2	1	.	.	.	.	1	.	5
Haemophilus influenzae (invasive disease)	5	.	1	1	4	.	.	.	.	2	.	13
Hepatitis A	1	.	.	1	.	.	1	.	.	.	.	3
Hepatitis B (Perinatal)	.	.	.	2	1	.	.	.	.	1	.	4
Hepatitis B (acute)	2	.	.	.	.	.	.	.	.	.	.	2
Hepatitis B (chronic)	11	1	1	7	.	.	.	.	.	.	6	26
Hepatitis C (acute)	1	.	.	1	.	.	.	.	.	.	.	2
Hepatitis C (chronic)	67	5	1	21	8	4	1	7	.	.	.	114
Hepatitis C - Perinatal Infection	.	.	.	.	.	1	.	1	.	.	.	2
Influenza-associated hospitalization	27	1	1	21	13	.	2	12	.	.	.	77
Influenza-associated pediatric mortality	.	.	.	.	1	.	.	.	.	.	.	1
Legionellosis	2	.	.	.	.	.	.	.	.	.	.	2
Lyme Disease	3	.	5	3	6	.	.	2	.	.	.	19
Malaria	1	.	.	1	1	.	.	.	.	.	.	3
Meningitis (viral)	5	.	.	1	1	.	.	2	.	.	.	9
Mpox	4	.	.	.	.	.	.	.	.	.	.	4
Pertussis	.	.	1	2	.	.	.	34	.	.	.	37
Salmonellosis	2	.	.	2	1	.	.	1	.	.	1	6
Shigellosis	1	.	.	.	.	.	.	.	.	.	.	1
Spotted Fever Rickettsiosis (RMSF)	1	.	.	.	.	.	.	.	.	.	.	1
Streptococcal, Group A (invasive)	8	1	.	5	1	1	1	1	1	1	2	19

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

Reportable Condition	County									Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren		
Streptococcal, Group B (in newborn)	·	·	·	·	1	·	·	·	·	1
Streptococcal pneumoniae (invasive)	23	·	2	6	6	1	·	3	·	41
Tuberculosis	3	·	·	·	·	·	·	·	·	3
Varicella	1	1	·	1	·	·	·	·	·	3
Vibriosis	1	·	·	·	·	·	·	·	·	1
West Nile virus infection (WNV)	·	·	·	·	·	·	·	1	·	1
Total	186	10	15	89	46	8	11	78	443	

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Amebiasis	3	.	1	1	1	.	.	.	1	.	7
Babesiosis	3	.	.	.	.	.	1	.	.	.	4
Botulism (Infant)	1	.	.	.	.	.	.	.	.	.	1
Brucellosis	1	.	.	2	.	.	.	.	1	.	4
C. auris	72	.	.	8	1	.	.	.	3	.	84
C. auris - Colonization Screening	110	.	2	25	6	.	.	.	5	.	148
CPO	106	11	5	42	16	9	14	18	11	.	221
CPO - Colonization Screening	.	.	.	53	2	1	25	11	.	.	92
Campylobacteriosis	83	9	14	49	34	4	19	33	.	.	245
Chikungunya virus	1	.	.	.	.	.	.	.	.	.	1
Coccidioidomycosis	15	1	.	4	3	.	.	.	.	.	23
Creutzfeldt-Jakob Disease	.	.	.	.	2	.	1	.	.	.	3
Cryptosporidiosis	38	.	.	7	3	.	1	12	.	.	61
Cyclosporiasis	3	.	.	3	1	.	.	3	.	.	10
Dengue	2	.	.	.	1	.	.	.	.	.	3
E.Coli (shiga toxin producing)	29	3	4	17	7	1	2	8	.	.	71
Ehrlichiosis/Anaplasmosis	5	1	.	.	1	1	.	5	.	.	13
Giardiasis	35	1	1	15	5	.	2	10	.	.	69
Haemophilus influenzae (invasive)	70	1	8	19	12	.	3	6	.	.	119
Hemolytic uremic syndrome (HUS)	.	.	.	1	.	.	.	.	.	.	1
Hepatitis A	29	5	.	23	1	1	8	3	.	.	70
Hepatitis B (acute)	11	.	1	4	1	.	.	1	.	.	18
Hepatitis B (chronic)	232	13	17	125	24	11	12	52	.	.	486
Hepatitis C (acute)	1	.	.	3	2	.	.	.	.	.	6
Hepatitis C (chronic)	675	52	68	282	124	33	43	150	.	.	1427
Hepatitis C - Perinatal Infection	2	.	2	1	1	2	.	3	.	.	11
Hepatitis E	2	.	1	.	.	1	.	.	.	.	4
Influenza-associated hospitalization	101	4	13	63	41	2	15	27	.	.	266
Influenza-associated pediatric mortality	.	.	.	.	1	.	.	1	.	.	2

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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
Listeriosis	.	1	.	1	.	.	.	.	.	.	2
Lyme Disease	78	32	20	23	55	2	19	18			247
MIS-C associated with COVID-19	.	.	.	1	.	.	.	.	.	.	1
Malaria	9	.	.	4	1	.	.	1			15
Measles	.	.	.	.	.	.	.	1			1
Meningitis (viral)	39	1	2	11	16	2	3	5			79
Meningitis (bacterial)	13	1	.	10	5	2	2	4			37
Meningococcal disease - Neisseria meningitidis	3	.	.	.	.	.	.	2			5
Mpox	9	.	.	.	.	.	.	.			9
Mumps	3	.	.	1	3	.	.	1			8
Pertussis	5	1	2	12	4	1	4	71			100
Q fever (acute)	1	1	.	2	.	.	.	.			4
Rubella (not congenital)	1	.	.	.	.	.	.	.			1
Salmonella Paratyphi Infection	.	.	.	1	.	.	.	1			2
Salmonella Typhi	2	.	.	1	.	.	.	2			5
Salmonellosis	73	4	4	55	28	5	7	27			203
Shigellosis	30	.	.	7	6	1	1	3			48
Spotted Fever Rickettsiosis (RMSF)	7	6	2	1	3	1	4	4			28
Staphylococcal aureus (VISA)	.	.	.	.	1	.	.	.			1
Streptococcal pneumoniae (invasive)	132	.	14	43	31	12	3	22			257
Streptococcal toxic shock syndrome (STSS)	2	.	.	.	.	.	.	1			3
Streptococcal, Group A (invasive)	99	2	6	43	28	2	10	26			216
Streptococcal, Group B (in newborn)	7	.	.	1	1	.	.	.			9
Toxic shock syndrome (TSS)	.	.	.	.	1	.	.	.			1
Tuberculosis	20	.	.	8	.	.	1	3			32
Tularemia	2	.	.	.	.	.	.	1			3
Varicella	28	1	1	21	4	1	5	6			67
Vibriosis	5	.	.	3	1	.	.	3			12
West Nile virus infection (WNV)	2	.	.	1	.	.	1	.			4
Yersiniosis	17	1	.	4	5	.	.	3			30

SYNDROMIC SURVEILLANCE

Emergency Department Visits

Number of EpiCenter alerts received: 16

Types of EpiCenter alerts:

- Infectious Disease Symptoms (n=12)
- Syndromic Symptoms (n=4)

The alerts received for Hamilton County from December 1 - December 28 are summarized in Table 5 below. Seven of the anomalies received in EpiCenter were dispositioned as Indeterminate. Eleven investigations are still active. The syndromic anomalies 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, December 2023

Anomaly Classifier	Event Date	Alert Category	Analysis Method	Aggregated By	Actual Value	Predicted Value	Threshold Value	Final Disposition
Fever	12/28/2023	Infectious Disease	Cusum EMA	Facility Location	65	42.1	50.2	Active
Constitutional	12/28/2023	Syndromic	Recursive Least Squares	Facility Location	132	85.0	112.9	Active
Fever	12/27/2023	Infectious Disease	Cusum EMA	Home Location	49	37.3	47.3	Active
Respiratory	12/27/2023	Syndromic	Cusum EMA	Facility Location	185	144.1	174.8	Active
Cough	12/27/2023	Infectious Disease	Cusum EMA	Facility Location	85	52.2	84.1	Active
Congestion	12/24/2023	Infectious Disease	Cusum EMA	Home Location	10	5.3	9.8	Active
Hemorrhaging	12/24/2023	Infectious Disease	Recursive Least Squares	Facility Location	27	13.7	26.9	Active
Vision	12/21/2023	Infectious Disease	Cusum EMA	Home Location	13	6.7	12.5	Active
Congestion	12/19/2023	Infectious Disease	Cusum EMA	Home Location	10	4.2	9.0	Active
Paralysis	12/14/2023	Infectious Disease	Recursive Least Squares	Home Location	18	8.7	15.5	Indeterminate
Botulinic	12/8/2023	Syndromic	Cusum EMA	Facility Location	17	12.4	15.3	Indeterminate
Vision	12/8/2023	Infectious Disease	Cusum EMA	Facility Location	16	10.9	15.3	Indeterminate
Botulinic	12/7/2023	Syndromic	Recursive Least Squares	Facility Location	22	9.4	21.7	Indeterminate
Vision	12/7/2023	Infectious Disease	Cusum EMA	Home Location	18	7.6	16.8	Indeterminate
Vision	12/7/2023	Infectious Disease	Exponential Moving Average	Facility Location	19	8.8	18.8	Indeterminate
Vision	12/7/2023	Infectious Disease	Exponential Moving Average	Home Location	16	7.7	15.5	Indeterminate

Figure 6. Constitutional-related ED Visits, Hamilton County, Ohio, December 2023

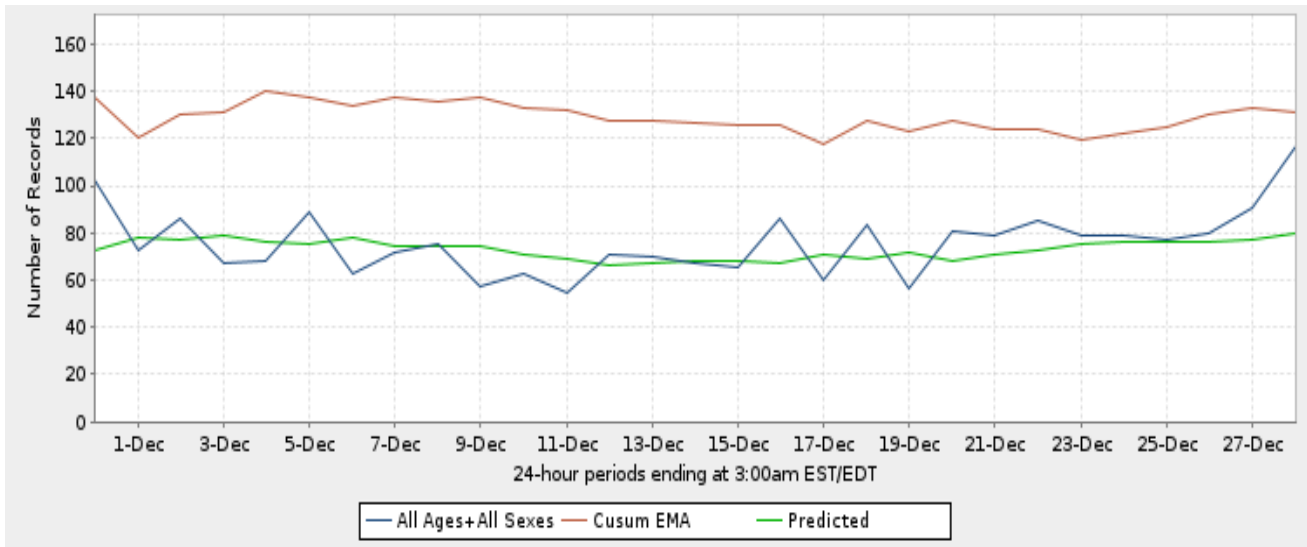


Figure 7. Respiratory-related ED Visits, Hamilton County, Ohio, December 2023

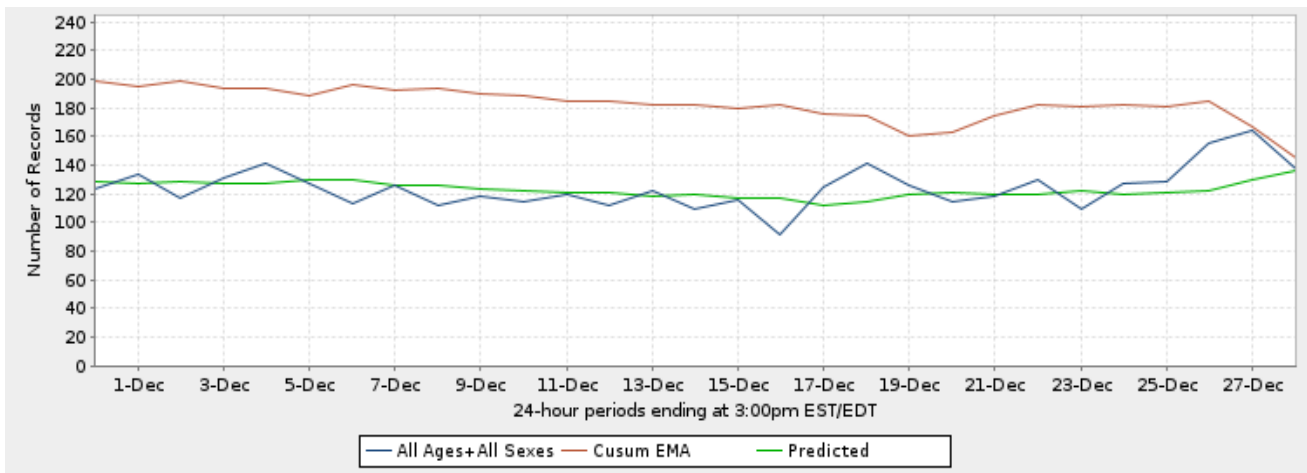


Figure 8. Botulinic-related ED Visits, Hamilton County, Ohio, December 2023

