

# Monthly Communicable Disease Surveillance Report

January 2023

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PREVENT. PROMOTE. PROTECT.



# NOTIFIABLE COMMUNICABLE DISEASES

## Hamilton County Public Health (HCPH) Jurisdiction

Number of Communicable Diseases Reported: 118

Most frequently reported communicable diseases:

- Chronic hepatitis C (n=28)
- Influenza-associated hospitalization (n=22)
- Haemophilus influenzae (invasive) (n=13)
- Chronic hepatitis B (n=10)
- Streptococcal, Group A (invasive) (n=9)

## Southwest Ohio (SWOH)

Number of Communicable Diseases Reported: 497

Most frequently reported communicable diseases:

- Chronic hepatitis C (n=145)
- Influenza-associated hospitalization (n=109)
- Chronic hepatitis B (n=36)
- Streptococcal pneumoniae (n=28)
- Streptococcal, Group A (invasive) (n=25)

## Summary

The overall rates of reported communicable diseases for HCPH, SWOH, and Ohio in January decreased by 52%, 48% and 48% respectively (Figure 1). These rates are pro-rated to 30 days so they can be compared accurately. The Ohio rate (31.7) was the highest of the three rates, and the HCPH rate (23.9) was the lowest. The SWOH rate (27.4) was higher than the HCPH rate and lower than the SWOH rate. (Table 1).

Chronic hepatitis C was the most commonly reported communicable disease across SWOH, with Influenza-associated hospitalization and Chronic hepatitis B 2<sup>nd</sup> and 3<sup>rd</sup> respectively (Table 2). Chronic hepatitis (Hepatitis C and Hepatitis B combined) cases accounted for 36.4% of the total communicable diseases reported during January. Southwest Ohio is currently on pace to have 7.0% fewer hepatitis cases than the previous year's average number of cases (188). The rate of Chronic hepatitis C within Hamilton County for January was 10.5 per 100,000 residents. This rate was 1% higher than the SWOH rate of 10.4 per 100,000 residents.

Influenza-associated hospitalization was the second most frequently reported communicable disease across SWOH. Influenza-associated hospitalization comprised 21.9% of the total communicable diseases reported during January. The number of cases of Influenza-associated hospitalization reported for SWOH in January (109) was lower than the number of cases in the previous month (532). The rate of Influenza-associated hospitalization within Hamilton County for January was 4.9 per 100,000 residents. This rate was 22% lower than the SWOH rate of 6.3 per 100,000 residents.

Streptococcal pneumoniae was the fourth most frequently reported disease in SWOH (Table 2). Streptococcal pneumoniae cases accounted for 5.6% of the total communicable diseases reported during January. The number of cases of Streptococcal pneumoniae reported for SWOH in January (28) was

lower than the number of cases in the previous month (38). The rate of Streptococcal pneumoniae within Hamilton County for January was 1.5 per 100,000 residents. This rate was 7% lower than the SWOH rate of 1.6 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 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 January 1-31, 2023. Data was accessed from the Ohio Disease Reporting System on 2/2/2023.

†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, October 2022 - January 2023

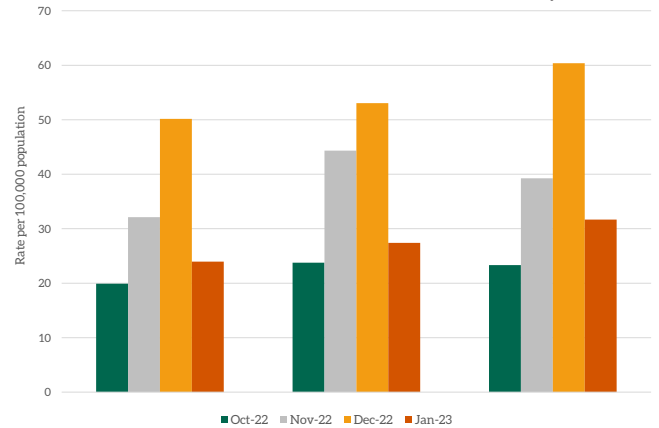


Table 1. Comparison of the Reported Cases of Notifiable Communicable Diseases by Location, January 2023

Location	Number of Reported Cases	Rate per 100,000	Rate Ratio†	Confidence Interval (99%)‡
HCPH	118	24.78	0.76	0.59 - 0.96
SWOH	497	28.32	0.87	0.77 - 0.98
Ohio	3,789	32.73	.	. - .



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

Reportable Condition	County										Total
	Hamilton	Adams	Brown	Butler	Clermont	Clinton	Highland	Warren			
C. auris	9	0	0	0	0	0	0	0	0	0	9
C. auris - Investigation	13	0	0	0	2	0	0	0	0	0	15
CP-CRE	4	1	0	1	1	1	0	1	1	1	9
Campylobacteriosis	8	0	0	3	4	0	0	1	1	1	16
Coccidioidomycosis	1	0	0	0	1	0	0	0	0	0	2
Cryptosporidiosis	3	0	0	1	0	0	0	2	2	2	6
E.Coli (shiga toxin producing)	5	0	0	2	0	0	0	0	0	0	7
Giardiasis	3	0	0	1	0	0	0	1	1	1	5
Haemophilus influenzae (invasive)	17	0	0	1	1	0	0	0	0	0	19
Hepatitis A	1	0	0	1	0	0	1	1	1	1	4
Hepatitis B (acute)	2	0	0	0	0	0	0	0	0	0	2
Hepatitis B (chronic)	19	2	1	9	2	0	2	1	1	1	36
Hepatitis C (chronic)	65	4	12	27	16	4	4	13	13	13	145
Influenza-associated hospitalization	39	0	11	19	19	2	11	8	8	8	109
Legionellosis	0	0	0	0	1	0	0	0	0	0	1
Lyme Disease	2	3	1	0	1	0	1	0	0	0	8
Meningitis (aseptic/viral)	2	0	0	2	0	0	0	0	0	0	4
Meningitis (bacterial)	0	0	0	0	0	0	0	1	1	1	1
Meningococcal disease	1	0	0	0	0	0	0	0	0	0	1
Mumps	0	0	0	1	0	0	0	0	0	0	1
Salmonellosis	1	0	0	5	3	0	0	2	2	2	11
Shigellosis	1	0	0	1	0	0	0	0	0	0	2
Streptococcal pneumoniae (invasive)	12	0	2	5	5	1	0	3	3	3	28
Streptococcal, Group A (invasive)	13	0	0	7	2	0	0	0	0	0	25
Syphilis	16	1	0	4	1	0	0	0	0	0	22
Tuberculosis	3	0	0	0	0	0	0	0	0	0	3
Varicella	3	0	0	2	0	0	1	1	1	1	7
Yersiniosis	1	0	0	2	0	0	0	0	0	0	3
<b>Total</b>	<b>244</b>	<b>11</b>	<b>27</b>	<b>94</b>	<b>59</b>	<b>8</b>	<b>20</b>	<b>38</b>	<b>20</b>	<b>38</b>	<b>501</b>



## 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 pattern of confirmed and probable cases as Ohio. As of January 31, 2023, cases in Ohio and SWOH are decreasing. The SWOH region accounts 531,828 (15.9%) of confirmed and probable cases in Ohio.

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

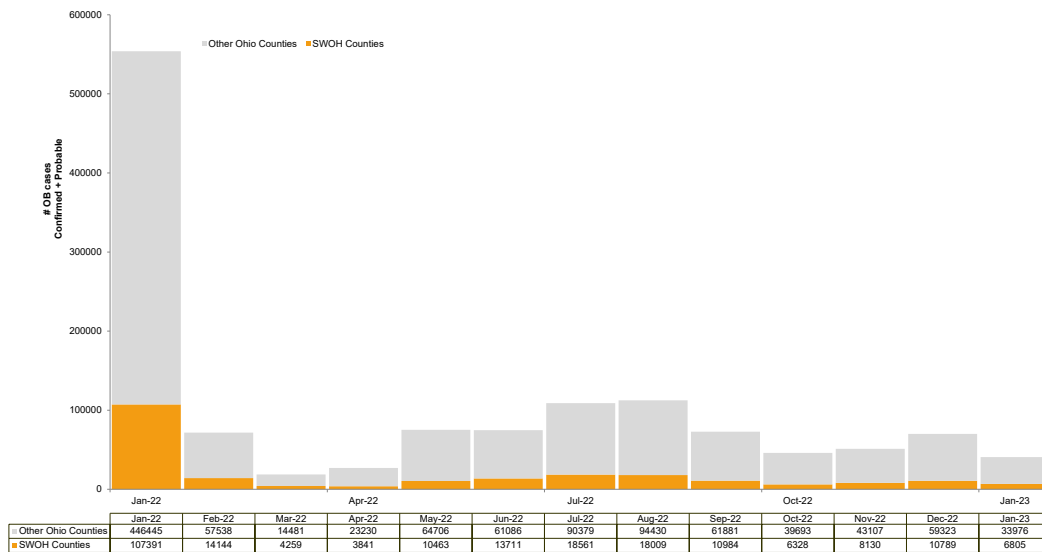
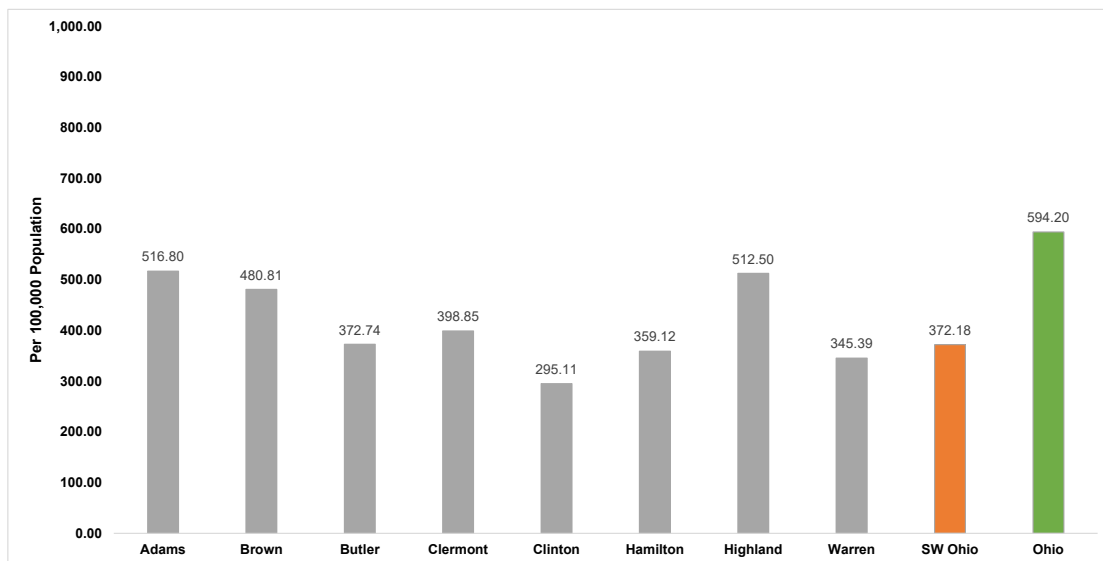


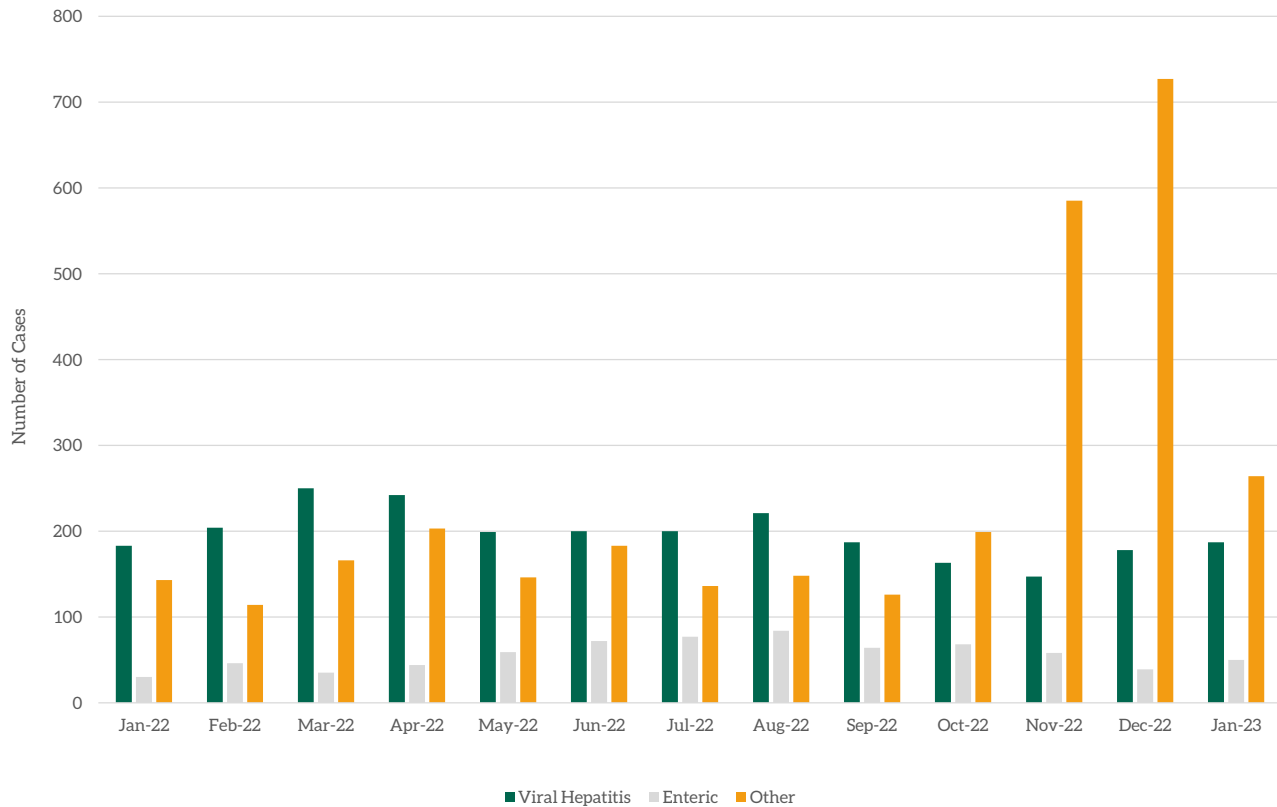
Figure 3. Rate of Confirmed and Probable Cases of COVID-19 in Ohio and Southwest Ohio Counties, January 1, 2023 - January 31, 2023



NOTES: This data is provisional and subject to change when additional information is gained. Outbreak confirmed positive cases between March 9, 2020 and January 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 February 2, 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, January 2022 - January 2023\*



## SYNDROMIC SURVEILLANCE

### Emergency Department Visits

**Number of EpiCenter alerts received: 8**

Types of EpiCenter alerts:

- Infectious Disease Symptoms (n=8)
- Syndromic Symptoms (n=0)

Three anomalies received in EpiCenter were dispositioned as not a health event, while one anomaly was dispositioned as Seasonal Illness. The alerts received for Hamilton County for January 1 - January 31 are summarized in Table 5 (page 8). Constitutional and respiratory related syndromic hospital visits are presented for the entire month for Hamilton County in Figures 6 and 7 respectively (page 8).

\*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.

Table 5. Emergency Department Visit Anomalies for Hamilton County, January 2023

Anomaly Classifier	Event Date	Alert Category	Analysis Method	Aggregated By	Actual Value	Predicted Value	Threshold Value	Final Disposition
Congestion	1/31/2023	Infectious Disease	Exponential Moving Average	Home Location	10	2.6	9.5	Active
Congestion	1/31/2023	Infectious Disease	Recursive Least Squares	Home Location	10	2.2	8.2	Active
Diarrhea - Watery/Bloody	1/19/2023	Infectious Disease	Cusum EMA	Facility Location	10	3.5	8.8	Active
Diarrhea - Watery/Bloody	1/18/2023	Infectious Disease	Recursive Least Squares	Facility Location	10	2.4	9.1	Active
Rash	1/17/2023	Infectious Disease	Recursive Least Squares	Facility Location	50	29.6	48.2	Not a health event
Exacerbation	1/11/2023	Infectious Disease	Exponential Moving Average	Home Location	16	5.4	15.9	Not a health event
Exacerbation	1/11/2023	Infectious Disease	Recursive Least Squares	Home Location	16	6.1	15.5	Not a health event
Congestion	1/6/2023	Infectious Disease	Cusum EMA	Facility Location	12	7.3	10.5	Seasonal Illness - ILI/Respiratory

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

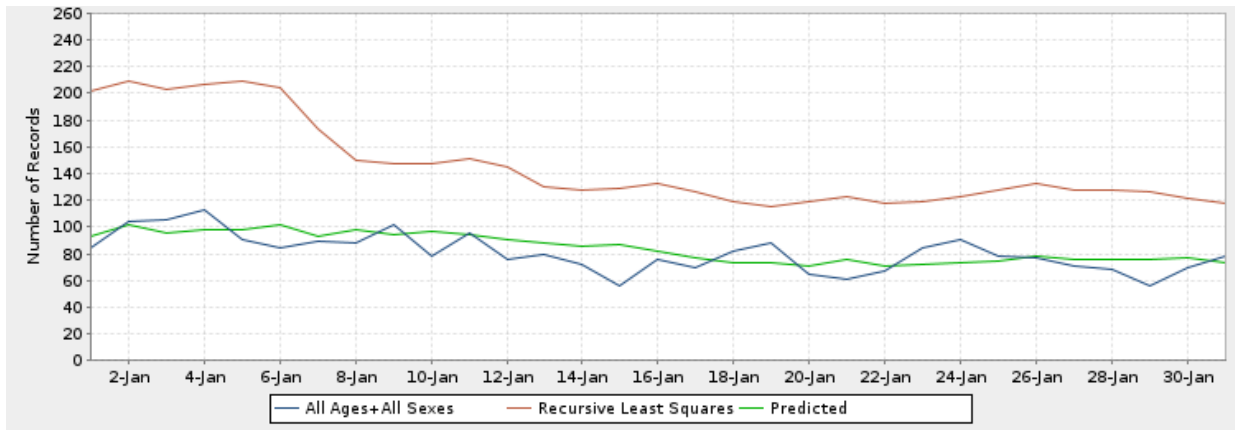


Figure 7. Respiratory-related ED Visits, Hamilton County, Ohio, January 2023

