

2021

ANNUAL COMMUNICABLE DISEASE REPORT

LICKING COUNTY HEALTH DEPARTMENT

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LICKING COUNTY, OHIO

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Public Health
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SUMMARY OF EVENTS

The Licking County Health Department (LCHD) continued to respond to the COVID-19 pandemic in 2021 while addressing other reportable diseases throughout the year. Challenges arose during times when high numbers of COVID-19 cases were being reported in Licking County. In 2021, LCHD saw an emergence of reported Lyme disease cases along with Tuberculosis. These diseases will continue to be a priority in 2022.

COVID-19

COVID-19 was the top priority in 2021 being a Class A reportable disease and cases making up over 90% of all communicable diseases reported for the year. LCHD was able to utilize its staff during the first phase of the response (2020–mid 2021) but began utilizing contractors provided by the Ohio Department of Health (ODH) to assist with COVID-19 contact tracing. LCHD also focused heavily on COVID-19 procedures for school districts in the county. The goal of this effort was to keep in-person learning open while rapidly responding to cases, adjusting guidance, evaluating data, and making data driven decisions. In partnership with LCHD, all county school districts were able to keep in-class learning open for the 2021–2022 school year.

LYME DISEASE

LCHD had a record number of reported Lyme disease cases in 2021. Most of the cases have been classified as “suspected” because they do not meet the current definition for a confirmed case. This was primarily due to the fact that all of the testing parameters required to be a confirmed case were not followed. As a result, these cases are still considered “suspected”. LCHD will work with its partners to ensure the necessary testing is completed.

SURGE STAFFING

The COVID-19 pandemic presented many challenges, most of which, public health had never seen before. LCHD developed a surge response plan early during the COVID-19 pandemic and maintained response activities through 2021. LCHD along with state partners identified seasonal trends associated with COVID-19 surge and began to plan for another spike in fall/winter of 2021. LCHD adjusted yet again to another surge model and utilized Public Consulting Group (PCG) for case investigations and contact tracing. LCHD staff were still fully immersed in COVID-19 response activities and the county saw more than double the number of cases in 2021 compared to 2020 (10,153 cases in 2020 vs. 21,684 cases in 2021). LCHD staff consulted with PCG for protocol adjustments to maintain efficient case investigations and contact tracing.

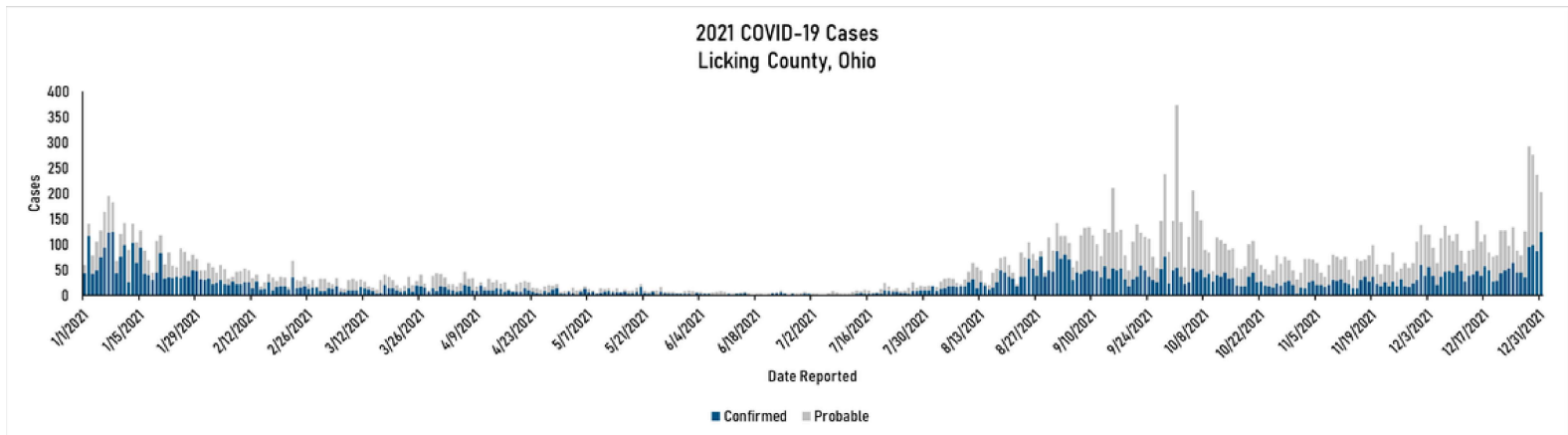
PERFORMANCE MANAGEMENT

As a result of the COVID-19 pandemic, LCHD has revised and updated its infectious disease investigation procedures. The department's staff is working to streamline its processes regarding all reportable diseases. Moving forward in 2022, LCHD will be able to more efficiently investigate infectious disease reports in Licking County.

COVID-19

COVID-19

LCHD was able to confirm some seasonal trends with COVID-19 as a result of the data collected in 2021. The first pool of data at the start of the COVID-19 pandemic peaked between November and December of 2020. A similar pattern was observed with a peak in cases between December 2021 and January 2022. In 2020 and 2021, COVID-19 cases started to increase in late summer and continued to increase as temperatures declined. As temperatures declined, people were inside and in close contact more, resulting in more infections.



COVID-19 DEATHS

In 2021, death certificate records for Licking County residents totaled 271 COVID-19 deaths. The average age of documented deaths was 72.6 years old – below the state's average life expectancy of 76.9 years. Additional COVID-19 death details below:

2021 COVID-19 Cases Licking County, OH				
Month	Suspected	Probable	Confirmed	Deaths
January	78	1,120	1,676	38
February	9	472	490	14
March	2	457	363	8
April	2	333	277	6
May	3	148	144	13
June	0	67	50	4
July	0	197	149	3
August	3	675	1,106	7
September	14	2,814	2,550	41
October	5	1,400	882	43
November	2	1,235	787	42
December	0	2,303	1,871	52
TOTAL	118	11,221	10,345	271

COVID-19 Age Breakdown Deaths		
Age Group	Death Count	Percent
0-10	0	0.0%
11-20	0	0.0%
21-30	2	0.7%
31-40	1	0.4%
41-50	12	4.4%
51-60	45	16.6%
61-70	57	21.0%
71-80	68	25.1%
80+	86	31.7%
TOTAL	271	

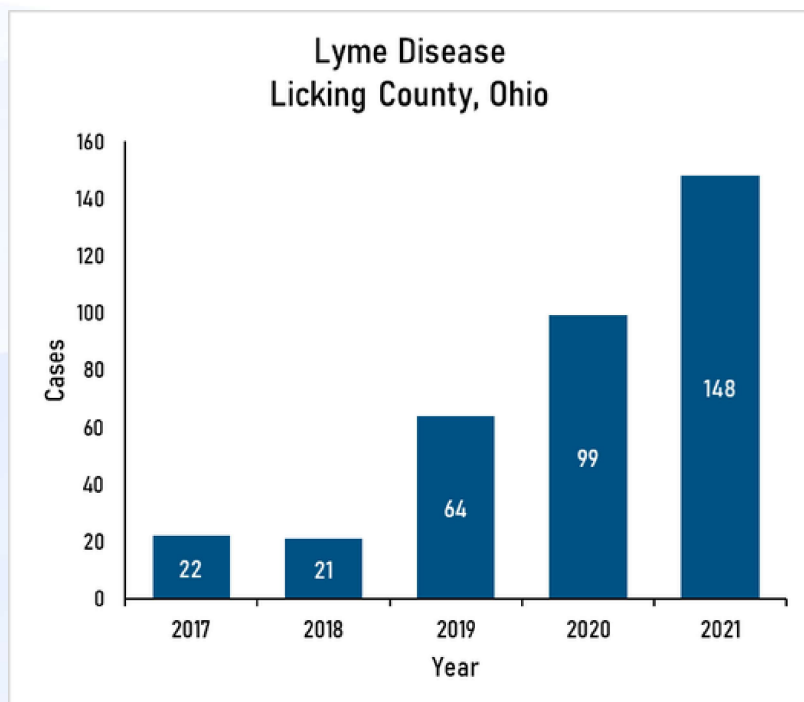
COVID-19 Gender Breakdown Deaths				
Male		Female		Total
Count	Percent	Count	Percent	
150	55.4%	121	44.6%	271

LYME DISEASE

LCHD recorded an all-time high number of cases of Lyme disease in 2021. Attempts were made to complete the extensive follow-ups for determining case classification status, but COVID-19 prevented progress and most cases remained listed as “suspected” (78.4% of cases were classified as suspected cases).

For cases to meet the "confirmed" case definition, the following need to be met:

- 1 **DIAGNOSED ERYTHEMA MIGRANS (BULL'S-EYE RASH)**
- 2 **LABORATORY EVIDENCE OF INFECTION WITH A TWO-TIERED TESTING METHODOLOGY**
- 3 **CLINICAL CRITERIA FOR SYMPTOMS DEPENDENT ON STAGE OF DISEASE (ACUTE VS. CHRONIC)**
- 4 **CLINICAL DIAGNOSIS OF LYME DISEASE**



Lyme disease is caused by an infection with a bacterium called ***Borrelia burgdorferi***. In Ohio, ***B. burgdorferi*** is transmitted to humans through the bite of an infected blacklegged tick (deer tick), ***Ixodes scapularis***. In most cases, the tick must be attached for 36 to 48 hours or more before the Lyme disease bacterium can be transmitted to a person.

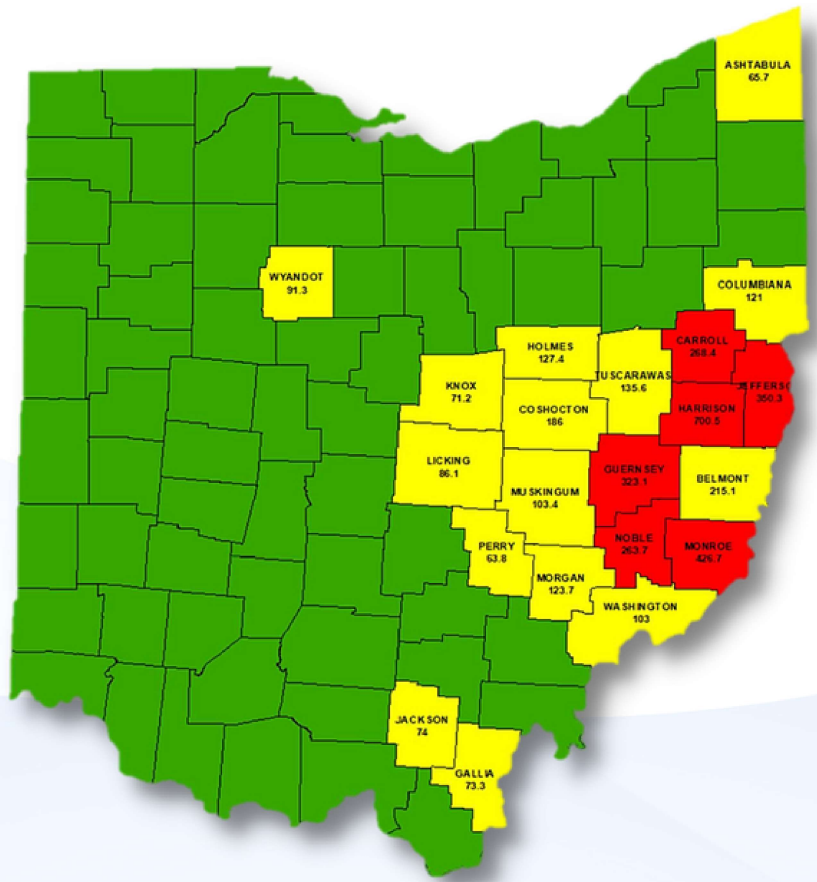
LYME DISEASE

In comparison to the entire state, Licking County ranked 16th based on incidence case rate per 100,000 persons. Licking County is part of a western spread of Lyme disease across Ohio. Wyandot County appears to be a bit of an outlier with Licking County being one of the westernmost counties in the top tier for Lyme disease case rates.

LCHD is working on a new process to collect Lyme disease information and will work with county healthcare providers to achieve this goal. The intent is to collect all the necessary information for evaluation and work to identify disease in the acute phase of infection. If detected early, treatment outcomes for Lyme disease are positive.

2021 Top 20 Ohio Counties for Lyme Disease by Incidence Rate			
Rank	County	Cases	Rate
1	Harrison	106	700.5
2	Monroe	59	426.7
3	Jefferson	231	350.3
4	Guernsey	126	323.1
5	Carroll	73	268.4
6	Noble	38	263.7
7	Belmont	145	215.1
8	Coshocton	68	186.0
9	Tuscarawas	125	135.6
10	Holmes	56	127.4
11	Morgan	18	123.7
12	Columbiana	124	121.0
13	Muskingum	89	103.4
14	Washington	62	103.0
15	Wyandot	20	91.3
16	Licking	148	84.4
17	Jackson	24	74.0
18	Gallia	22	73.3
19	Knox	44	71.2
20	Ashtabula	64	65.7

*Rates are per 100,000 persons



For more information about Lyme disease in Ohio, [click here](#) or scan the QR code with your smartphone.

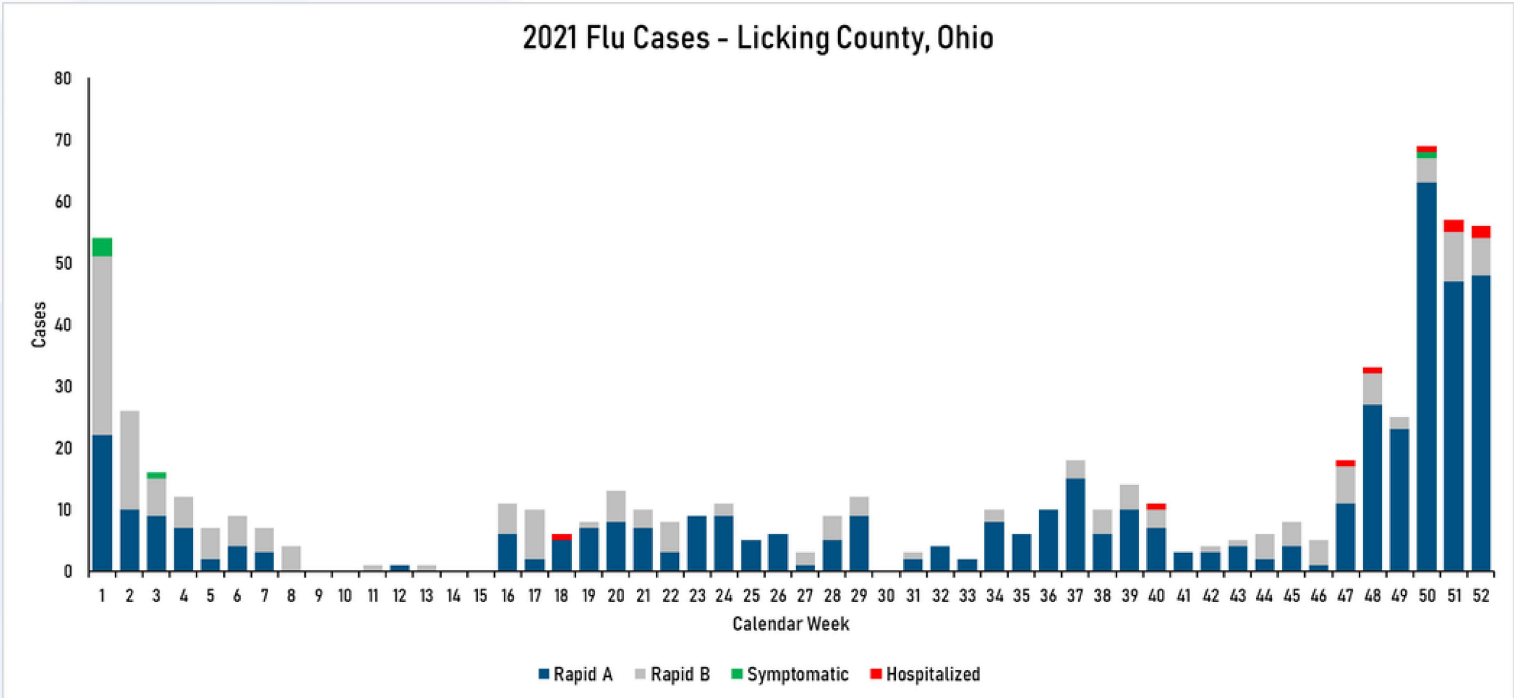
INFLUENZA

LCHD continues to collect data through its Influenza Reporting Information System (IRIS). At current, LCHD has over ten years of flu data which is used to forecast upcoming seasons and establish thresholds. The data are also used to detect “abnormal” cases beyond thresholds or outside of the traditional flu season.

Flu activity remained “low” during 2021 and cases were identified through rapid diagnostic testing. During the COVID-19 pandemic, the past two flu seasons have resulted in low activity. Rapid A’s accounted for 71.1% of all reported cases of flu in 2021.

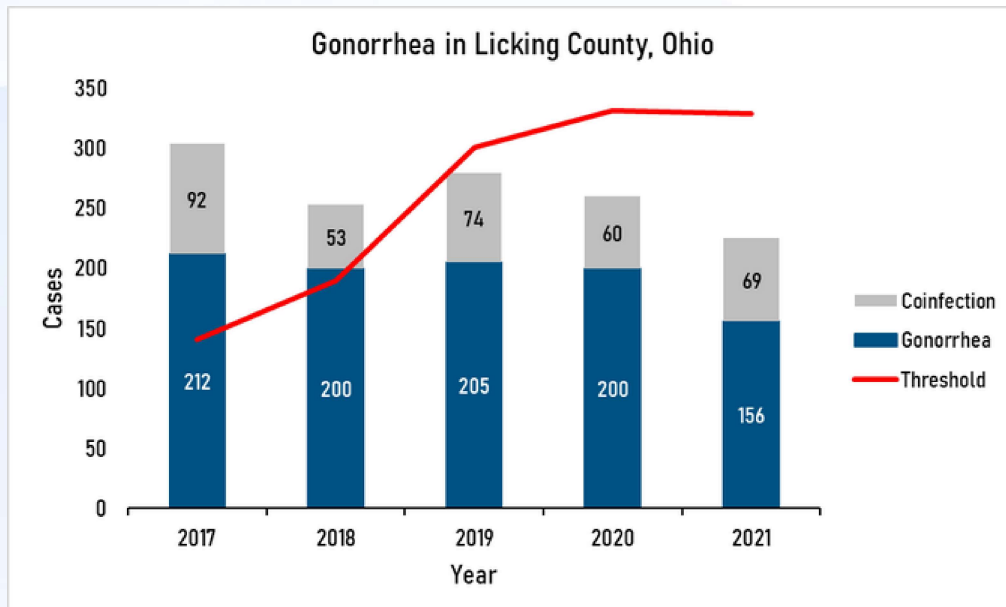
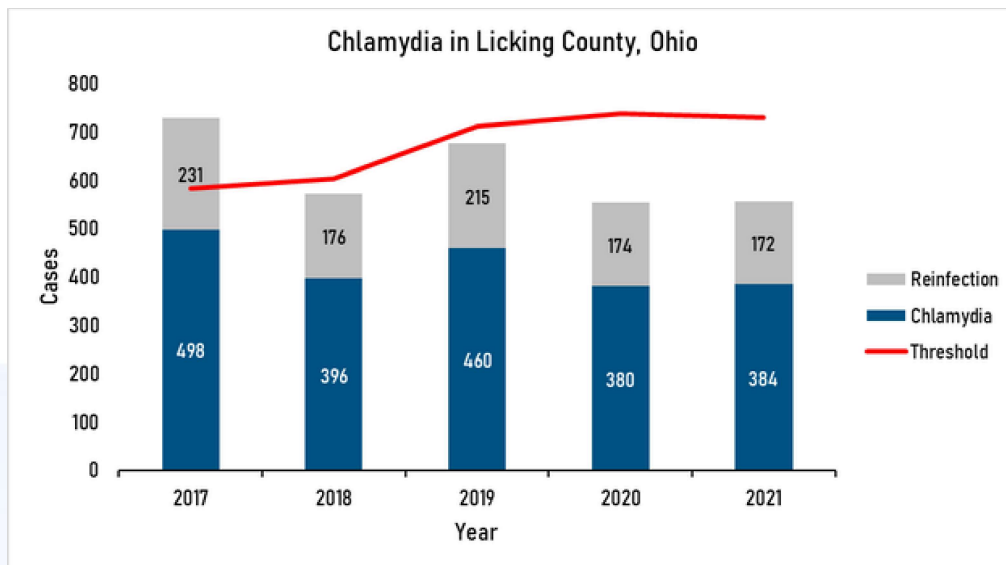
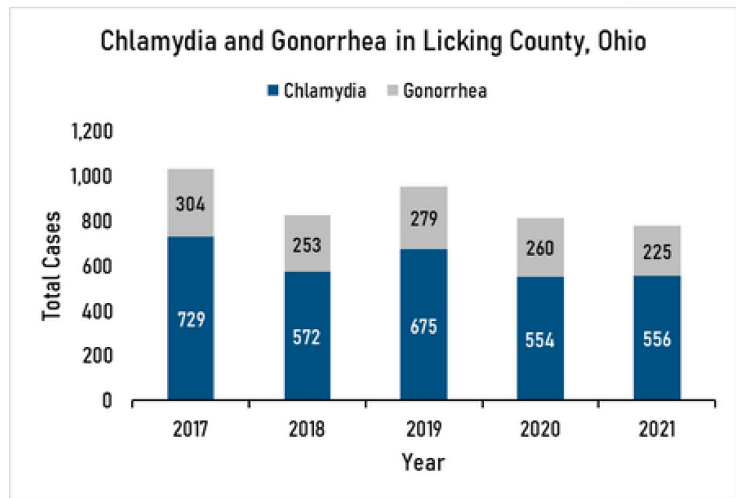
LCHD will continue to collect data and post information online for situational awareness.

2021 Flu Cases - Licking County, Ohio				
Type	Rapid A	Rapid B	Symptomatic	Hospitalized
TOTAL	446	176	5	9



SEXUALLY TRANSMITTED INFECTIONS (STIs)

Chlamydia and Gonorrhea continue to be two of the top reportable diseases, other than COVID-19, in Licking County. Chlamydia reinfections were at 30.9% and Gonorrhea coinfections (with Chlamydia) were at 30.7%. These two data elements are important to note as LCHD works to raise awareness about partner notifications and proper treatment.



TOP REPORTABLE DISEASES

2021 Top Reportable Diseases Licking County, Ohio					
Class A	Licking County		Ohio		Licking County 5 Year Average Rate
	Cases	Rate	Cases	Rate	
COVID-19	21,684	12,146.6	1,351,620	11,454.9	3,566.8
Sexually Transmitted Infections (STIs)	Licking County		Ohio		Licking County 5 Year Average Rate
	Cases	Rate	Cases	Rate	
Chlamydia	556	311.5	57,454	486.9	347.6
Gonorrhea	225	126.0	28,500	241.5	151.0
Influenza Cases	Licking County		Ohio		Licking County 5 Year Average Rate
	Cases	Rate	Cases	Rate	
Influenza (IRIS)	628	351.8	N/A		1,673.0
Influenza-associated hospitalization	6	3.4	472	4.0	50.1
Vector-Borne Diseases	Licking County		Ohio		Licking County 5 Year Average Rate
	Cases	Rate	Cases	Rate	
Lyme Disease	148	82.9	3,085	26.1	41.9
Hepatitis	Licking County		Ohio		Licking County 5 Year Average Rate
	Cases	Rate	Cases	Rate	
Hepatitis A	4	2.2	634	5.4	9.7
Hepatitis B (including delta) - acute	7	3.9	145	1.2	2.2
Hepatitis B (including delta) - chronic	30	16.8	3,759	31.9	20.5
Hepatitis B - Perinatal Infection	1	0.6	172	1.5	0.4
Hepatitis C - acute	6	3.4	145	1.2	3.6
Hepatitis C - chronic	118	66.1	12,406	105.1	80.0
Hepatitis E	2	1.1	16	0.1	0.3
Enteric Diseases	Licking County		Ohio		Licking County 5 Year Average Rate
	Cases	Rate	Cases	Rate	
Campylobacteriosis	36	20.2	2,026	17.2	20.0
Salmonellosis	25	14.0	1,252	10.6	12.5
E. coli, Shiga Toxin Producing (O157:H7, Not O157, Unknown Serotype)	10	5.6	478	4.1	4.4
Waterborne Diseases	Licking County		Ohio		Licking County 5 Year Average Rate
	Cases	Rate	Cases	Rate	
Giardiasis	6	3.4	562	4.8	4.9
Cryptosporidiosis	6	3.4	406	3.4	3.5

*Rates are per 100,000 persons

*Licking County population: 178,519 (Source: 2020 US Decennial Census)

*Ohio population: 11,799,448 (Source: 2020 US Decennial Census)

TOP REPORTABLE DISEASES

COVID-19 cases more than doubled in 2021 compared to 2020. There was a 124.6% increase in cases and the primary reason for this was the Delta variant becoming the dominant strain. Data suggest the Delta variant is more transmissible than the previously dominant Alpha variant. A surge in cases followed a similar seasonal trend as they did in 2020 which occurred around the Christmas holiday. The highest single number of cases reported in one day for 2021 occurred on December 28, 2021, with 292 cases (94 confirmed, 198 probable).

Sexually transmitted infections (STIs) including Chlamydia and Gonorrhea remained stable in comparison to previous years. Compared to 2020, a very slight increase of 0.4% was noted for Chlamydia cases and a decrease of 13.5% for Gonorrhea cases. A change in Gonorrhea treatment occurred in 2021. Now, the recommended treatment course only requires a single dose (500 mg) of intramuscular ceftriaxone.

Lyme disease reports continued to climb and there was a 49.5% increase in cases in 2021 compared to 2020. Most cases remain "suspected" and may not be true cases fitting the Lyme disease "confirmed" case definition. Reports contain some type of positive diagnostic test information, but true "confirmed" cases must have a two-tiered approach to testing along with the presentation of specific symptoms depending on the stage of disease.

Campylobacter cases increased by 20% compared to 2020. Common animal exposures include poultry, cattle, and puppies. Most cases are acquired due to consumption of contaminated food (especially chicken) and water.

Salmonella cases were up 8.7% compared to 2020. Common animal exposures include dogs, cats, and reptiles. Raw meats, milk and eggshells can become contaminated with Salmonella. Raw produce can become contaminated from raw meat juices, animal feces, or infected food handlers.

TOP REPORTABLE DISEASES - REGIONAL COMPARISON

The top reportable diseases reported in Licking County were compared to other counties within the Central Ohio region. For comparisons, incidence rates were converted to per 100,000 to account for population differences between counties.

When ranked by incidence rates, Licking County ranked 4th highest for Chlamydia, 2nd highest for Gonorrhea, 11th for chronic Hepatitis C, 7th highest for Campylobacteriosis, 10th highest for chronic Hepatitis B, and 5th highest for Salmonellosis.

Within the Central Ohio region, Licking County had the highest incidence rate for Lyme disease. Lyme disease cases are increasing in Ohio as the range of blacklegged tick populations continues to expand to the west in the state. It is anticipated that additional Central Ohio counties will see an increase in Lyme disease cases over the next few years.

Top Reportable Diseases in Licking County in Comparison to Central Region Counties

Central Region Counties	Chlamydia		Gonorrhea		Lyme Disease		Hepatitis C - chronic		Campylobacteriosis		Hepatitis B - chronic		Salmonellosis	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Crawford	93	221.3	22	52.3	0	0.0	20	47.6	5	11.9	11	26.2	1	2.4
Delaware	335	156.5	99	46.2	27	12.6	65	30.4	31	14.5	16	7.5	16	7.5
Fairfield	340	213.9	91	57.3	37	23.3	105	66.1	24	15.1	27	17.0	8	5.0
Fayette	100	345.4	25	86.4	0	0.0	27	93.3	21	72.5	6	20.7	5	17.3
Franklin	9146	690.9	4815	363.7	123	9.3	1099	83.0	225	17.0	490	37.0	151	11.4
Hardin	74	241.1	9	29.3	2	6.5	39	127.1	7	22.8	17	55.4	4	13.0
Knox	132	210.5	22	35.1	43	68.6	35	55.8	18	28.7	4	6.4	5	8.0
Licking	556	311.5	225	126.0	148	82.9	118	66.1	36	20.2	30	16.8	25	14.0
Logan	118	255.7	28	60.7	4	8.7	38	82.3	9	19.5	6	13.0	5	10.8
Madison	115	262.4	38	86.7	7	16.0	74	168.9	4	9.1	16	36.5	4	9.1
Marion	285	436.1	77	117.8	6	9.2	114	174.4	20	30.6	29	44.4	15	23.0
Morrow	75	214.6	7	20.0	5	14.3	24	68.7	15	42.9	5	14.3	8	22.9
Pickaway	135	230.6	41	70.0	9	15.4	361	616.7	11	18.8	25	42.7	6	10.2
Union	177	281.9	45	71.7	10	15.9	150	238.9	12	19.1	28	44.6	7	11.1
Wyandot	49	223.7	4	18.3	0	0.0	15	68.5	7	32.0	1	4.6	6	27.4

*Rates are per 100,000 persons

CONCLUSIONS

At the time of this report (August 2022), LCHD is seeing a very similar trend in reportable diseases when comparing 2021 to 2022. COVID-19 cases are accounting for over 90% of all diseases and Lyme disease is ranking just behind STIs.

LCHD continues to manage and monitor data related to COVID-19. Staff have just finalized guidance for the upcoming 2022-2023 academic school year for K-12. Contact tracing is going to cease for the school year and districts will not be required to report cases to LCHD. LCHD will monitor the Ohio Disease Reporting System (ODRS) and upload self-administered reports received through the department's website for COVID-19 tracking. The data will be reviewed on a daily basis and if any abnormalities are identified, a prompt evaluation with the school will take place. LCHD expects to see some seasonal spikes based on two years' worth of data and coordination will occur to raise awareness amongst the schools and community.

LCHD is working to address increased reports of Lyme disease and determine the case classification of each report. LCHD is testing a new process to obtain clinical information from diagnosing providers. Discussions are taking place throughout the state as other counties are seeing increased reports. Ohio is listed as a "low incidence" state but due to the recent emergence of cases, the incidence classification may change.

Reports of Tuberculosis also increased at the tail end of 2021 and into 2022. LCHD is investigating these cases and working on solutions for staffing to complete all necessary follow-up items for the management of these cases.