2022 Communicable Disease Report

Holmes County, OH

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Content

Communicable Disease Overview

Communicable Diseases, or infectious diseases, are caused by either a viruses or bacteria that spread from one person to another through contact with either contaminated surfaces, bodily fluids, blood products, insect bites, or through the air. Currently, the Holmes County Health Department is required to report certain communicable diseases to the state that pose a threat to the community which may lead to outbreaks. Some examples of communicable diseases that are reported to the state include, Covid-19, Pneumonia, Hepatitis B and C, Salmonella, and sexually transmitted infections.

Every year the Holmes County Health Department creates a report which identifies the number of cases for communicable diseases within the county for the previous year. This information then helps the health department, as well as other health agencies within the community, focus their education efforts to reduce the future spread of such diseases. Additionally, it provides the health department with information on whether previous education methods were useful, or if changes are needed, to have a greater beneficial impact on resident health in Holmes County.

Communicable diseases are grouped into four categories, based on the severity of the disease, potential spread of the disease, vaccine status, and mode of transmission.

Class A: Diseases of major public health concern due to the severity of the disease or potential for epidemic spread.

Class B: Diseases of public health concern that need to be reported due to the concern of an epidemic.

Vaccine Preventable: Reportable general infectious disease which a vaccine currently exists to prevent the spread.

Zoonotic Diseases: Reportable general infectious disease which is transmitted from animals to humans.

See Appendix A for a complete list of communicable diseases.

Class C: Includes communicable disease outbreaks, unusual incidence, or epidemics. Class C can be broken down into 6 categories.

Community: Two or more persons with a common exposure experiencing the same or similar symptoms.

Foodborne: Two or more persons experiencing similar symptoms after ingesting food items at the same location

Healthcare Associated: An increase in disease case counts due to being at a hospital, long-term care facility, or receiving a healthcare-associated procedure

Institutional: Two or case counts with similar symptoms and illness with a common exposure at a correctional facility, day care center, group home, or school

Waterborne Illness: Any outbreak in which water is identified as the source of the outbreak.

Zoonotic: Two or more cases of a similar with a similar illness with a common exposure to an animal source

Data Collection and Analysis

The Ohio State Department of Health categorizes communicable diseases into three categories, 1) Class A, includes diseases which pose a major threat on public health due to the severity of the disease, 2) Class B, includes disease which pose a public health concern and need to be monitored, and Class C, includes unusual outbreaks of disease. Every day, health officials identify and report communicable diseases to the local and state health departments, which then take action to address and minimize the health impact within our county and jurisdiction. At the end of each year the public health office collects and analyzes communicable disease data to determine if and what communicable diseases pose the greatest risk within the county, and if intervention methods need to be implemented, or adjusted, based on the rates of communicable diseases within our jurisdiction.

For this report, data on cases was extracted from the Ohio Disease Reporting System (ODRS) on February 6th and 23rd, 2023. ODRS is a secure online database housed by the Ohio Department of Health, which is used to monitor, track, and investigate communicable disease cases reported to the local health departments. Ohio Administrative Code 3701.23. requires health care providers and individuals who provide healthcare services to report, "contagious or infectious diseases, illnesses, health conditions, or unusual infectious agents or biological toxins," that pose a risk to human mortality or disability. Local health departments are mandated by Ohio Revised Code to conduct communicable disease investigation. Cases are assigned a classification status based on the availability of a laboratory confirmed diagnosis or presentation of systems within an incubation period of a known exposure. Cases included in this report were classified as either "Confirmed" (laboratory diagnosis) or "Probable" (symptoms after exposure to a known case) in ODRS, cases identified as a resident of Holmes County, and cases were reported to the Holmes County General Health District

in 2022. The Ohio Infectious Disease Control Manual provides a complete list of notifiable conditions for Ohio. See Appendix A.

During the investigation process, demographic and geographic information was collected about each case. This information is used to analyze the distribution of cases by demographic characteristics such as sex and age within the county. This report lists the number of cases, sex, and age for all notifiable diseases.

The report also provides rates per 100,000 for Holmes County. Rates are calculated by dividing the number of cases by the population and multiplying by 100,000. The population estimate used for Holmes County and Ohio State were published by the U.S. Census Bureau in 2021.

Class A Communicable Diseases

Class A Diseases are a major public health concern due to the severity of the diseases or potential for epidemic spread. The tables below identify all the Class A Diseases in Holmes County for the last five years, which were classified as either "Confirmed" or "Probable" cases. To see the complete list of Class A Diseases, refer to Appendix A.

Tables

Class A: Reportable Conditions	Case Count by Year of Onset				
	2018	2019	2020	2021	2022
Covid-19	N/A	N/A	1,984	2,306	1,407
MIS-C	N/A	N/A	0	1	0
Meningococcal Disease	0	0	2	0	0
Total	0	0	1,986	2,307	1,407

Covid-19: Coronavirus 2019
MIS-C: Multisystem Inflammatory Syndrome in Children
Note: Counts include both confirmed and probable cases diagnosed in Holmes County
Data extracted from ODRS on February 24, 2023.

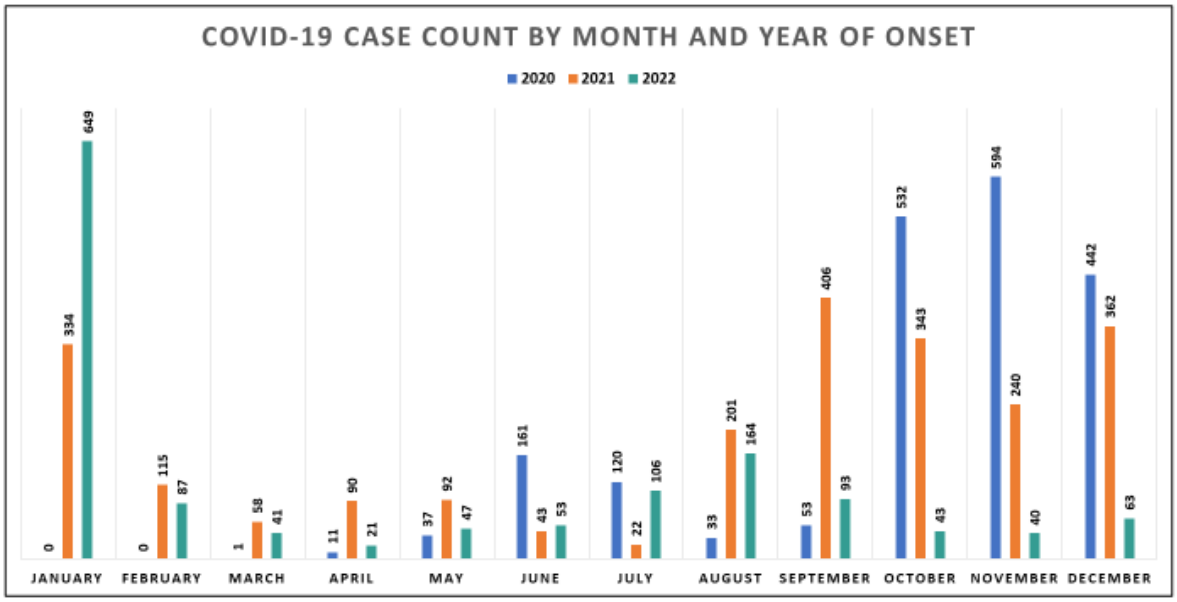
Class A: Reportable Conditions	Incidence Rate per 100,000				
	2018	2019	2020	2021	2022
Covid-19	N/A	N/A	4,513.81	5,246.40	3,178.15
MIS-C	N/A	N/A	0.0	2.28	0.0
Meningococcal Disease	0.0	0.0	4.55	0.0	0.0
Total	0.0	0.0	4,518.36	5,248.68	3,178.15

Covid-19: Coronavirus 2019
MIS-C: Multisystem Inflammatory Syndrome in Children
Note: Counts include both confirmed and probable cases diagnosed in Holmes County
Data extracted from ODRS on February 24, 2023.

- Since 2018, Class A Reportable Conditions have **increased** significantly due to Covid-19.
- Covid-19 accounts for the **highest** case counts (99.9%) and incidence rates (99.9%) in Holmes County in the last five years.

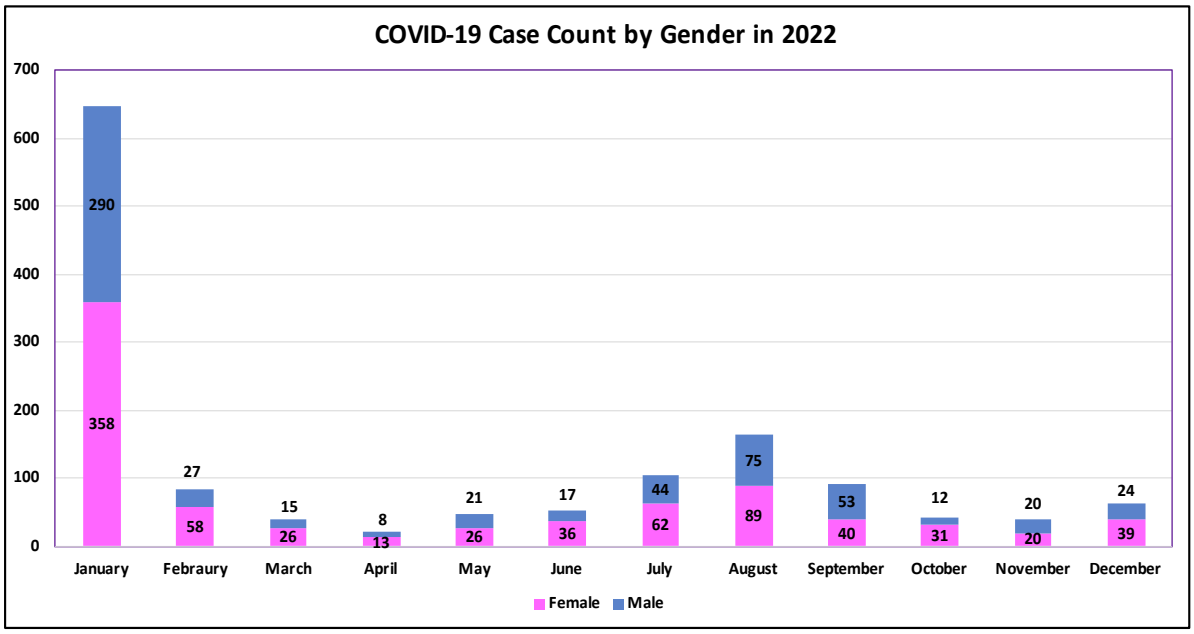
Covid-19

Coronavirus 2019, or Covid-19, is a Class A infectious disease caused by the SARS-CoV-2 virus. Most people infected with the virus will experience mild to moderate respiratory symptoms and recover without requiring medical intervention, however, some people, specifically older adults and those with underlying medical conditions such as cardiovascular disease, diabetes, chronic respiratory disease, or cancer, will become more seriously ill and require medical attention. It is important to know that anyone can get sick with COVID-19 and become seriously ill or die at any age.

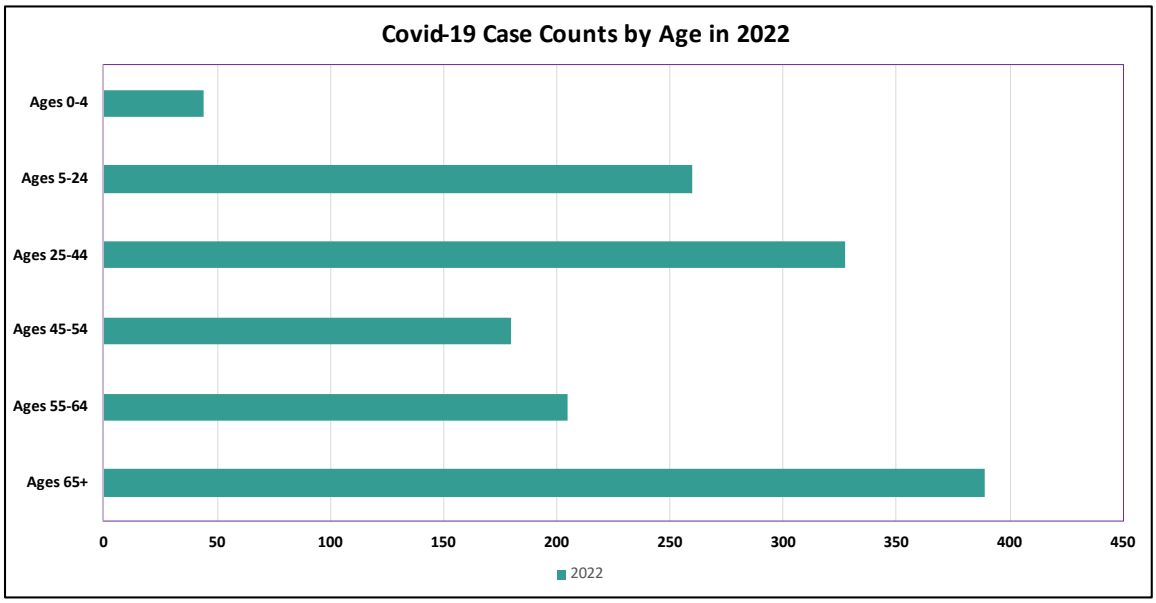


Covid-19: Coronavirus 2019
Note: Counts include both confirmed and probable cases in Holmes County.
Data extracted from ODRS on February 24, 2023.

- The first case of Covid-19 was reported in Holmes County on March 29, 2020.
- In the last three years, 2021 (2,306) had the highest case counts for Covid-19, followed by 2020 with 1,984, and 2022 with 1,407 cases.
- In 2020, most of the cases occurred in the months of October (26.8%), November (29.9%), and December (22.3%).
- In 2021, most of the cases occurred in the months of September (17.6%), October (14.9%), and December (15.7%).
- In 2022, most of the case counts occurred in January (46.1%).



Covid-19: Coronavirus 2019
Note: Counts include both confirmed and probable cases in Holmes County.
Data extracted from ODRS on February 24, 2023.
A total of three cases were excluded due to missing gender information.



Covid-19: Coronavirus 2019
Note: Counts include both confirmed and probable cases in Holmes County.
Data extracted from ODRS on February 24, 2023.

- Females had the highest case counts for Covid-19 with 56.8%.
- Both male (47.9%) and female (44.9%) case counts were highest in the month of January.
- Case counts were highest for individuals 65 and over, with 27.7% of the total cases for 2022.

Tables

Covid-19	Holmes County case count by race in 2022	2022 Incidence rate in Holmes County per 100,000*
White	1,121	2,562
Black or African America	15	12,605
Asian	3	4,687
Hispanic not Latino	0	0
Total	**1,139**	**19,854**

Covid-19: Coronavirus 2019
Note: Counts include both confirmed and probable cases in Holmes County.
Data extracted from ODRS on February 24, 2023.
Counts below 5 should be interpreted with caution.

Covid-19 Comparison between 2021 and 2022	Case count in 2022 (1,407)	Case count in 2021	2022 Incidence Rate per 100,000*	2021 Incidence Rate per 100,000*
White	1,121	1,634	2,562	3,792
Black or African American	15	13	12,605	10,569
Asian	3	3	4,687	4,687
Hispanic not Latino	0	0	0	0
Total	**1,139**	**1,650**	**19,854**	**19,048**

Covid-19: Coronavirus 2019
Note: Counts include both confirmed and probable cases in Holmes County.
Data extracted from ODRS on February 24, 2023.
Counts below 5 should be interpreted with caution.

In 2022,

- Case counts were highest for White with 1,121 out of 1,139 cases, or 98%
- Incidence rates were highest with Blacks or African American with 63%.

Comparison between 2021 and 2022

- Case counts were higher in 2021, with 1,650 cases
- Incidence rates were highest in 2021 and 2022 in Blacks or African Americans.

Class B Communicable Diseases

Class B diseases are a public health concern needing timely response because of the potential for epidemic spread. The tables below identify all the Class B Diseases in Holmes County for the last five years which were classified as either “Confirmed” or “Probable” cases. To see the complete list of Class B Diseases, see Appendix A.

Class B: General Infections	Cases by Year of Onset				
	2018	2019	2020	2021	2022
Botulism	0	0	0	1	0
Campylobacteriosis	8	14	7	8	8
Chlamydia Trachomatis	44	26	36	33	32
Cryptosporidiosis	0	3	0	1	2
Giardiasis	0	0	0	0	2
Gonorrhea	9	7	5	11	6
Haemophilus influenzae**	1	1	0	2	1
Hepatitis B**	2	2	2	4	2
Hepatitis C	10	13	10	7	5
Influenza-associated hospitalization**	34	25	23	2	31
Influenza-associated pediatric mortality**	0	0	0	0	1
La Crosse Disease	3	3	5	2	1
Legionellosis Disease	1	4	1	1	2
Listeriosis	0	0	0	0	1
Lyme Disease	13	46	31	56	70
Meningitis**	1	0	2	1	1
Mumps**	0	0	0	1	0
Pertussis**	7	10	27	4	3
Salmonellosis	2	11	7	1	6
Shigellosis	0	0	0	0	1
Streptococcal Disease, Group A Invasive	1	1	2	1	2
Streptococcus Pneumonia, Invasive Disease	2	5	1	1	6
Varicella**	5	3	0	3	1
Yersiniosis	1	1	0	1	1
Total	**144**	**175**	**159**	**141**	**184**

**Vaccine Preventable Diseases
Note: Counts include both confirmed and probable cases in Holmes County.
Source: Ohio Department of Health as of February 6, 2023.
Counts below 5 should be interpreted with caution.

Class B: General Infections	Incidence Rates per 100,000* (44,271)				
	2018	2019	2020	2021	2022
Botulism	0.0	0.0	0.0	2.3	0.0
Campylobacteriosis	18.2	31.9	15.9	18.2	18.1
Chlamydia Trachomatis	100.3	59.2	81.9	75.1	72.3
Cryptosporidiosis	0.0	6.8	0.0	2.3	4.5
Giardiasis	0.0	0.0	0.0	0.0	4.5
Gonorrhea	20.5	15.9	11.4	25.0	13.6
Haemophilus influenzae**	2.3	2.3	0.0	4.6	2.3
Hepatitis B**	4.6	4.6	4.6	9.1	4.5
Hepatitis C	22.8	29.6	22.8	15.9	11.3
Influenza-associated hospitalization**	77.5	56.9	52.3	4.6	70.0
Influenza-associated pediatric mortality**	0.0	0.0	0.0	0.0	2.3
La Crosse Disease	6.8	6.8	11.4	4.6	2.3
Legionellosis Disease	2.3	9.1	2.3	2.3	4.5
Listeria	0.0	0.0	0.0	0.0	2.3
Lyme Disease	29.6	104.8	70.5	127.4	158.1
Meningitis**	2.3	0.0	4.6	2.3	2.3
Mumps**	0.0	0.0	0.0	2.3	0.0
Pertussis**	16.0	22.8	61.4	9.1	6.8
Salmonellosis	4.6	25.1	16.0	2.3	13.6
Shigellosis	0.0	0.0	0.0	0.0	2.3
Streptococcal Disease, Group A Invasive	2.3	2.3	4.6	2.3	4.5
Streptococcus Pneumonia, Invasive Disease	4.6	11.4	2.3	2.3	13.6
Varicella**	11.4	6.8	0.0	6.8	2.3
Yersiniosis	2.3	2.3	0.0	2.3	2.3
Total	**328.4**	**398.6**	**362.0**	**321.1**	**416.0**

**Vaccine Preventable Diseases
Note: Counts include both confirmed and probable cases in Holmes County.
Source: Ohio Department of Health as of February 6, 2023.
Counts below 5 should be interpreted with caution.

- In the last 5 years, class B general infections have **increased**.
- Lyme Disease, Chlamydia Trachomatis, and Influenza-associated hospitalizations account for **most** of the general infections.

Class B General Infection	2022 Case Counts by Gender		2022 Incidence Rate per 100,000	
	Female	**Male**	**Female 21,914**	**Male 22,357**
Campylobacteriosis	3	5	13.7	22.4
Chlamydia Infection	23	9	105.0	40.3
Cryptosporidiosis	1	1	4.6	4.5
Giardiasis	0	2	0.0	8.9
Gonococcal infection	2	4	9.1	17.9
Haemophilus influenzae**	1	0	4.6	0.0
Hepatitis B	1	1	4.6	4.5
Hepatitis C	2	3	9.1	13.4
Influenza-associated hospitalization**	11	20	50.2	89.5
Influenza-associated pediatric mortality**	1	0	4.6	0.0
Legionellosis	1	1	4.6	4.5
Listeriosis	1	0	4.6	0.0
Lyme Disease	27	43	123.2	192.3
Meningitis**	1	0	4.6	0.0
Pertussis**	1	2	4.6	8.9
Salmonellosis	3	3	13.7	13.4
Shigellosis	1	0	4.6	0.0
Streptococcal - Group A -invasive	1	1	4.6	4.5
Streptococcus pneumoniae - invasive antibiotic resistance unknown or non-resistant	2	4	9.1	17.9
Varicella**	1	0	4.6	0.0
Yersiniosis	1	0	4.6	0.0
Total	**85**	**99**	**383.8**	**442.9**

**Vaccine Preventable Diseases
Note: Counts include both confirmed and probable cases in Holmes County.
Source: Ohio Department of Health as of February 6, 2023.
Counts below 5 should be interpreted with caution.

Rank	Female 2022	Male 2022
#1	Lyme Disease	Lyme Disease
#2	Chlamydia Trachomatis	Influenza-associated hospitalizations
#3	Influenza-associated hospitalizations	Chlamydia Infections

- Males account for a majority, 54% or 99 out of 184, of the general infections.
- For both males and females, Lyme Disease, Chlamydia Trachomatis, and Influenza-associated hospitalizations were the most common general infections for both genders.

Class B General Infections	2022 Case Counts by Race				
	White	Hispanic	African American or Black	Asian	Unknown
Campylobacteriosis	6	0	0	0	2
Chlamydia Trachomatis	18	0	1	0	13
Cryptosporidiosis	2	0	0	0	0
Giardiasis	0	0	0	0	2
Gonorrhea	3	0	1	0	2
Haemophilus influenzae**	1	0	0	0	0
Hepatitis B**	1	0	0	0	1
Hepatitis C	3	0	0	0	2
Influenza-associated hospitalization**	24	0	0	0	7
Influenza-associated pediatric mortality**	0	0	0	0	1
Legionellosis	1	0	0	0	1
Listeria	1	0	0	0	0
Lyme Disease	16	0	0	0	55
Meningitis**	1	0	0	0	0
Pertussis**	2	0	0	0	1
Salmonellosis	4	0	0	0	2
Shigellosis	0	0	0	0	1
Streptococcal Disease, Group A Invasive	2	0	0	0	0
Streptococcus pneumoniae - invasive antibiotic resistance unknown or non-resistant	3	0	1	0	2
Varicella**	1	0	0	0	0
Yersiniosis	1	0	0	0	0
Totals	**90**	**0**	**2**	**0**	**92**

**Vaccine Preventable Diseases
Note: Counts include both confirmed and probable cases in Holmes County. Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

- Individuals with an unknown race accounted for 50% or majority of cases, while Whites represent 48% of cases, and Blacks or African Americans account for 2% of cases.

Class B General Infections	2022 Cases by Age									
	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65+
Campylobacteriosis	3	0	1	0	1	1	0	0	2	0
Chlamydia Trachomatis	0	0	0	3	19	7	2	1	0	0
Cryptosporidiosis	1	0	1	0	0	0	0	0	0	0
Giardiasis	1	0	0	0	0	0	0	0	1	0
Gonorrhea	0	0	0	0	3	2	0	1	0	0
Haemophilus influenzae**	1	0	0	0	0	0	0	0	0	0
Hepatitis B**	0	0	0	0	0	0	1	0	0	1
Hepatitis C	0	0	0	0	0	2	2	0	1	0
Influenza-associated hospitalization**	5	0	0	0	0	1	2	2	1	20
Influenza-associated pediatric mortality**	0	1	0	0	0	0	0	0	0	0
Legionellosis	0	0	0	0	0	0	0	0	0	2
Listeria	0	0	0	0	0	0	0	0	0	1
Lyme Disease	2	10	2	7	2	11	11	3	11	11
Meningitis**	1	0	0	0	0	0	0	0	0	0
Pertussis**	1	1	1	0	0	0	0	0	0	0
Salmonellosis	1	0	3	1	0	1	0	0	0	0
Shigellosis	0	0	0	0	0	0	0	1	0	0
Streptococcal Disease, Group A Invasive	0	0	1	0	0	0	0	0	0	1
Streptococcus pneumoniae - invasive antibiotic resistance unknown or non-resistant	1	0	0	0	0	1	1	0	0	3
Varicella**	0	1	0	0	0	0	0	0	0	0
Yersiniosis	0	0	0	0	0	0	0	1	0	0
Total	**17**	**13**	**9**	**11**	**25**	**26**	**19**	**9**	**16**	**39**

**Vaccine Preventable Diseases
Note: Counts include both confirmed and probable cases in Holmes County.
Source: Ohio Department of Health as of February 6, 2023.
Counts below 5 should be interpreted with caution.

- For children and adolescents, between the ages of 0 and 19, case counts were highest for Lyme Disease with 42% of cases.
- For young adults, between the ages 20 and 34, case counts were highest for chlamydia trachomatis with 51% of cases.
- For adults, between the ages of 35 and 64, case counts were highest for Lyme Disease with 56.8% of cases.
- For older adults, 65 years and older, case counts were highest for Influenza-associated hospitalizations with 51.3% of cases.
- Overall, young adults, between the ages of 20 and 34, had the most (28%) of Class B General Infections.

Class B General Infections	2022 Incidence Rate* by Age Group									
	0-4 (3,581)	5-9 (3,898)	10-14 (3,758)	15-19 (3,749)	20-24 (3,094)	25-34 (5,664)	35-44 (4,805)	45-54 (4,677)	55-64 (4,939)	65+ (6,001)
Campylobacteriosis	83.8	0.0	26.6	0.0	32.3	17.7	0.0	0.0	40.5	0.0
Chlamydia Trachomatis	0.0	0.0	0.0	80.0	614.1	123.6	41.6	21.4	0.0	0.0
Cryptosporidiosis	27.9	0.0	26.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Giardiasis	27.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.2	0.0
Gonorrhea	0.0	0.0	0.0	0.0	97.0	35.3	0.0	21.4	0.0	0.0
Haemophilus influenzae**	27.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatitis B**	0.0	0.0	0.0	0.0	0.0	0.0	20.8	0.0	0.0	16.7
Hepatitis C	0.0	0.0	0.0	0.0	0.0	35.3	41.6	0.0	20.2	0.0
Influenza-associated hospitalization**	139.6	0.0	0.0	0.0	0.0	17.7	41.6	42.8	20.2	333.3
Influenza-associated pediatric mortality**	27.9	25.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Legionellosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3
Listeria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7
Lyme Disease	55.8	256.5	53.2	186.7	64.6	194.2	228.9	64.1	222.7	183.3
Meningitis**	27.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pertussis**	27.9	25.7	26.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Salmonellosis	27.9	0.0	79.8	26.7	0.0	17.7	0.0	0.0	0.0	0.0
Shigellosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0
Streptococcal Disease, Group A Invasive	0.0	0.0	26.6	0.0	0.0	0.0	0.0	0.0	0.0	16.7
Streptococcus pneumoniae - invasive antibiotic	27.9	0.0	0.0	0.0	0.0	17.7	20.8	0.0	0.0	50.0

resistance unknown or non-resistant										
Varicella**	0.0	25.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yersiniosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0
Total	**502.4**	**333.6**	**239.4**	**293.4**	**808.0**	**441.5**	**395.3**	**192.5**	**101.1**	**650.0**

**Vaccine Preventable Diseases
Note: Counts include both confirmed and probable cases in Holmes County. Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

- Incidence rates were highest in individuals between the ages of 20 and 24.

Hepatitis

Overview

Hepatitis is a Class B Reportable Condition which leads to an inflammation of the liver, a vital organ that processes nutrients, filters the blood, and fights infections. When the liver is inflamed, or damaged, its function can be adversely affected. There are five main viral classifications for Hepatitis, which includes, A, B, C, D, and E. A different virus is responsible for each type of viral hepatitis. Currently, there are two vaccine-preventable hepatis infections, Hepatitis A and B. The tables below includes all confirmed and probable cases among Holmes County residents.

Tables

Hepatitis	Case Count by Year of Onset				
	2018	2019	2020	2021	2022
Hepatitis A**	1	2	1	0	0
Hepatitis B**	2	2	2	4	2
Hepatitis C	10	13	10	7	5
Total	13	17	13	11	7

**Vaccine Preventable Disease
Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

Hepatitis	Incidence Rate per 100,000 by Year				
	2018	2019	2020	2021	2022
Hepatitis A**	2.3	4.7	2.3	0.0	0.0
Hepatitis B**	4.6	4.7	4.7	9.1	4.5
Hepatitis C	22.8	29.6	22.8	15.9	11.3
Total	29.7	39.0	29.8	25.0	15.8

**Vaccine Preventable Disease
Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

- In the last five years, case counts **decreased** by 46.2% and incidence rates **decreased** by 46.8%.
- Hepatitis C accounted for the **highest** number of case counts (71.4%) and incidence rates (71.5%).
- Hepatitis C case counts are **most** found in males, between the ages if 25 and 44.

Information on Hepatitis C

Hepatitis C

Hepatitis C is a viral infection that causes inflammation of the liver that can lead to serious liver damage. Hepatitis C, or HCV, spreads through contaminated blood and is often spread when individuals share needles. Once a person is infected the viral infection can lay dormant for many years before the symptoms will present.

Symptoms include:

- Bleed Easily
- Bruise Easily
- Fatigue
- Poor Appetite
- Yellow Discoloration of Eyes and Skin
- Dark-colored urine
- Fluid buildup in abdomen
- Leg swelling
- Weight loss

Food and Waterborne Illnesses

Overview

Food and waterborne illnesses, or diarrheal diseases, have become a growing concern across the US in recent years. As temperatures rise and fall, foodborne and waterborne illnesses are more common in areas of warmers temperature. Individual contract a diarrheal disease by ingesting food or water that have been contaminated by a pathogen which is then ingested by an individual. Both children and older adults are at the greatest risk in experiencing more severe symptoms. Currently there are several reportable food or

waterborne illnesses which includes, Campylobacteriosis, Cryptosporidiosis, Giardiasis, E. Coli, Listeria, Salmonella, and Yersiniosis.

Tables

Food and Waterborne Illnesses	Case Count by Year of Onset				
	2018	2019	2020	2021	2022
Campylobacteriosis	8	14	7	8	8
Cryptosporidiosis	0	3	0	1	2
Giardiasis	0	0	0	0	2
Listeria	0	0	0	0	1
Salmonellosis	2	11	7	1	6
Shigellosis	0	0	0	0	1
Yersiniosis	1	1	0	1	1
Total	**11**	**29**	**14**	**11**	**20**

**Vaccine Preventable Disease
Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

Food and Waterborne Illnesses	Incidence Rate per 100,000 by Year				
	2018	2019	2020	2021	2022
Campylobacteriosis	18.2	31.9	15.9	18.2	18.1
Cryptosporidiosis	0.0	6.8	0.0	2.3	4.5
Giardiasis	0.0	0.0	0.0	0.0	4.5
Listeria	0.0	0.0	0.0	0.0	2.3
Salmonellosis	4.6	25.1	16.0	2.3	13.6
Shigellosis	0.0	0.0	0.0	0.0	2.3
Yersiniosis	2.3	2.3	0.0	2.3	2.3
Total	**25.1**	**66.1**	**31.9**	**25.1**	**47.7**

**Vaccine Preventable Disease
Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

- Campylobacteriosis (38%) and Salmonellosis (29%) account for **most** of the food and waterborne illnesses in 2022
- Campylobacteriosis is **most** common in males, between the ages of 0 to 4.
- In the last five years, there has been a 90.0% **increase** in the incidence rates for food and waterborne illnesses.

Information on Campylobacteriosis

CAMPYLOBACTERIOSIS

Campylobacter Jejuni is the bacteria known for causing Campylobacteriosis. Campylobacteriosis is a foodborne illnesses, which is contracted by 1) eating undercooked/raw poultry or seafood, 2) drinking raw or unpasteurized milk or cheese, or 3) drinking contaminated water. Once exposed to Campylobacteria symptoms will develop within 2 to 5 days. Although most will recover from Campylobacteriosis on their own, a FEW individuals will need antibiotic treatment.

Symptoms include:

- Diarrhea, often bloody
- Fever
- Abdominal cramps
- Vomiting

Sexually Transmitted Infections

Overview

Sexually transmitted infections, or STI's, are infections that can be contracted through any type of sexual contact involving the mouth, anus, vagina or penis. Another name for a STI is a sexually transmitted diseases, or STD. The most common symptoms associated with a STI include, burning, itching, or discharge from the genital region. Some individuals who have a STI are asymptomatic or have no symptoms, however, if untreated it can lead to blindness, infertility, birth defects, transmission from mother to unborn child, and neurologic impairment. Most individuals who contract a STIs and seek treatment can be cured. Thus, it is recommended that sexually active individuals get routine screening. There are several STI's which are reportable to the state, which includes, Chlamydia Trachomatis, and Gonorrhea.

Tables

Sexually Transmitted Infections	Case Count by Year of Onset				
	2018	**2019**	**2020**	**2021**	**2022**
Chlamydia Trachomatis	44	26	36	33	32
Gonorrhea	9	7	5	11	6
Total	**53**	**33**	**41**	**44**	**38**

Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

Sexually Transmitted Infections	Incidence Rate per 100,000 by Year				
	2018	2019	2020	2021	2022
Chlamydia Trachomatis	100.3	59.2	81.9	75.1	72.3
Gonorrhea	20.5	15.9	11.4	25.0	13.6
Total	**120.8**	**75.1**	**93.3**	**100.1**	**85.9**

Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

- Chlamydia Trachomatis accounts for the **most** sexually transmitted diseases, or 84%, of STIs in the county.
- Chlamydia Trachomatis case counts are **highest** among females, between the ages of 20-34.
- Overall, incidence rates for sexually transmitted infections have **decreased** by 28.6% since 2018.

Information on Chlamydia Trachomatis

Chlamydia Trachomatis

Chlamydia Trachomatis is the most common sexually transmitted infection, which is caused by chlamydia trachomatis bacterium. It is transmitted from one individual to another during vaginal, anal, and or anal sex. Additionally, pregnant women may spread chlamydia to their unborn child during the delivery, which can lead to pneumonia and an eye infection in their newborn child. Early-stages of chlamydia typically includes few or minimal signs and symptoms. Thus, routine screening is recommended for individuals who are sexually active.

Symptoms include:

- Pain when urinating
- Vaginal discharge in women
- Discharge from the penis in men
- Pain during sexual intercourse
- Bleeding between periods after sexual intercourse
- Testicular pain in men

Vaccine Preventable Infections

Overview

Vaccinations are one of the best ways to protect your child's health. Diseases that were once common, like measles, mumps, rubella, varicella, tetanus, and pertussis, both in this country and around the world, can now be prevented by a vaccine. Additionally, vaccines protect both the individual who is vaccinated and others around them who are unable to get vaccinated themselves, thereby preventing the deaths and long-term impact of several debilitating effects, such as long-term paralysis, disabilities, and death. Currently there are several vaccine preventable diseases which are reportable to the state, which includes, influenza, meningitis, mumps, pertussis, and varicella.

Tables

Vaccine Preventable Diseases	Case Count by Year of Onset				
	2018	2019	2020	2021	2022
Haemophilus influenzae**	1	1	0	2	1
Influenza-associated hospitalization**	34	25	23	2	31
Influenza-associated pediatric mortality**	0	0	0	0	1
Meningitis**	1	0	2	1	1
Pertussis**	7	10	27	4	3
Varicella**	5	3	0	3	1
Total	**48**	**39**	**52**	**12**	**38**

**Vaccine Preventable Disease
Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

Vaccine Preventable Diseases	Incidence Rate per 100,000** by Year				
	2018	2019	2020	2021	2022
Haemophilus influenzae**	2.3	2.3	0.0	4.6	2.3
Influenza-associated hospitalization**	77.5	56.9	52.3	4.6	70.0
Influenza-associated	0.0	0.0	0.0	0.0	2.3

pediatric mortality**					
Meningitis**	2.3	0.0	4.6	2.3	2.3
Pertussis**	16.0	22.8	61.4	9.1	6.8
Varicella**	11.4	6.8	0.0	6.8	2.3
Total	**109.4**	**88.8**	**118.3**	**27.4**	**86.0**

**Vaccine Preventable Disease
Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

- Influenza-associated hospitalizations accounted for the **most**, 81.6%, of the vaccine preventable cases.
- Influenza-associated hospitalizations are **most** found in males, aged 65 years and older.
- Total incidence rates have **decreased** by 21.4% since 2018.

Information on Influenza-associated hospitalizations

Influenza-associated Hospitalizations

Influenza, or the flu, is a contagious respiratory condition that infects the nose, throat, and sometimes the lungs. Symptoms can be mild to serious, and at times, can lead to death. Individuals at the highest risk of experiencing more serious symptoms include individuals 65 years and older, young children, and those with underlying medical conditions that effect the immune system and lungs. The best way to prevent the flu is to get a flu vaccine every year.

Symptoms include:

- Fever or chills
- Cough
- Sore throat
- Runny nose
- Body aches
- Headache
- Fatigue
- May experience vomiting or diarrhea, more common in children than adults

Vector-borne Diseases

Overview

Vector-borne diseases are caused by an infection that is transmitted to humans by animals typically during the blood-feeding process done by an arthropod, such as a tick, mosquito, or flea. Once infected individuals will experience a multitude of symptoms which affect them neurologically and physically and can ultimately lead to death in some cases. Arthropods are affected by temperature changes and are more commonly found in areas of warmer temperatures. Currently the state monitors several vector-borne diseases which include, Lyme disease, dengue fever, zika virus, and yellow fever.

Tables

Vector-borne Diseases	Case Count by Year of Onset				
	2018	**2019**	**2020**	**2021**	**2022**
La Crosse Virus	3	3	5	2	1
Lyme Disease	13	46	31	56	70
Total	**16**	**49**	**36**	**58**	**71**

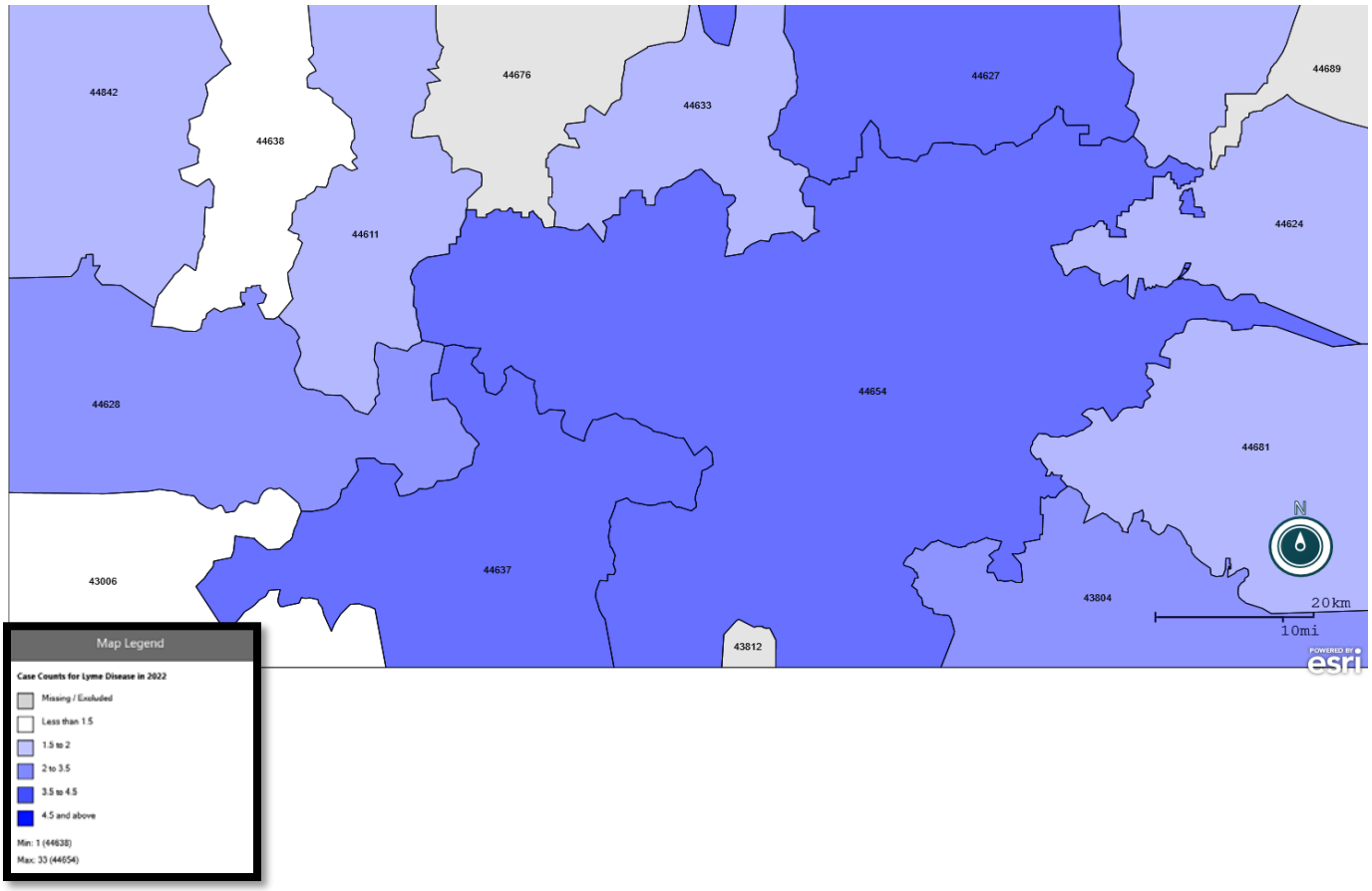
Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

Vector-borne Disease	Incidence Rates per 100,000 by Year				
	2018	**2019**	**2020**	**2021**	**2022**
La Crosse Virus	6.8	6.8	11.4	4.6	2.3
Lyme Disease	29.6	104.8	70.5	127.4	158.1
Total	**36.4**	**111.6**	**81.9**	**132.0**	**160.4**

Note: Counts include both confirmed and probable cases in Holmes County.
Counts below 5 should be interpreted with caution.
Source: Ohio Department of Health as of February 6, 2023.

- Lyme disease represents 98.6% of vector-borne illnesses in the county.
- A **majority** of Lyme Disease cases occurred in adult males, between the ages of 35 and 64 years of age.
- Incidence rates for Lyme Disease have **increased** by 340.7% since 2018.

Map of Lyme Disease Cases in 2022



Information on Lyme Disease

Lyme Disease

Lyme disease is a caused by a bacteria, which is transmitted to humans by a deer tick. A tick most commonly bites individuals when they are walking or working in grassy or wooded locations. If a tick bite is left untreated, it can lead to more serious symptoms.

Symptoms include:

- Early stage
  - Bull's eye or solid patch rash, two inches in diameter
  - Fever and chills
  - Headache
  - Fatigue
  - Stiff neck
  - Muscle and joint pain
  - Swollen glands
- Long-term
  - Severe fatigue
  - Stiff aching neck
  - Tingling and numbness in arms and legs
  - Facial paralysis

Appendix A

Know Your ABCs: A Quick Guide to Reportable Infectious Diseases in Ohio

From the Ohio Administrative Code Chapter 3701-3; Effective March 22, 2018

Class A:
Diseases of major public health concern because of the severity of disease or potential for epidemic spread – report immediately via telephone upon recognition that a case, a suspected case, or a positive laboratory result exists.

- Anthrax
- Botulism, foodborne
- Cholera
- Diphtheria
- Influenza A – novel virus infection
- Measles
- Meningococcal disease
- Middle East Respiratory Syndrome (MERS)
- Plague
- Rabies, human
- Rubella (not congenital)
- Severe acute respiratory syndrome (SARS)
- Smallpox
- Tularemia
- Viral hemorrhagic fever (VHF), including Ebola virus disease, Lassa fever, Marburg hemorrhagic fever, and Crimean-Congo hemorrhagic fever
- Yellow fever

Any unexpected pattern of cases, suspected cases, deaths or increased incidence of any other disease of major public health concern, because of the severity of disease or potential for epidemic spread, which may indicate a newly recognized infectious agent, outbreak, epidemic, related public health hazard or act of bioterrorism.

Class B:
Disease of public health concern needing timely response because of potential for epidemic spread – report by the end of the next business day after the existence of a case, a suspected case, or a positive laboratory result is known.

- Amebiasis
- Arboviral neuroinvasive and non-neuroinvasive disease:
  - Chikungunya virus infection
  - Eastern equine encephalitis virus disease
  - LaCrosse virus disease (other California serogroup virus disease)
  - Powassan virus disease
  - St. Louis encephalitis virus disease
  - West Nile virus infection
  - Western equine encephalitis virus disease
  - Zika virus infection
  - Other arthropod-borne diseases
- Babesiosis
- Botulism
  - infant
  - wound
- Brucellosis
- Campylobacteriosis
- Carbapenemase-producing carbapenem-resistant Enterobacteriaceae (CP-CRE)
  - CP-CRE *Enterobacter* spp.
  - CP-CRE *Escherichia coli*
  - CP-CRE *Klebsiella* spp.
  - CP-CRE other
- Chancroid
- *Chlamydia trachomatis* infections
- Coccidioidomycosis
- Creutzfeldt-Jakob disease (CJD)
- Cryptosporidiosis
- Cyclosporiasis
- Dengue
- *E. coli* 0157:H7 and Shiga toxin-producing *E. coli* (STEC)
- Ehrlichiosis/anaplasmosis
- Giardiasis
- Gonorrhea (*Neisseria gonorrhoeae*)
- *Haemophilus influenzae* (invasive disease)
- Hantavirus
- Hemolytic uremic syndrome (HUS)
- Hepatitis A
- Hepatitis B (non-perinatal)
- Hepatitis B (perinatal)
- Hepatitis C (non-perinatal)
- Hepatitis C (perinatal)
- Hepatitis D (delta hepatitis)
- Hepatitis E
- Influenza-associated hospitalization
- Influenza-associated pediatric mortality
- Legionnaires' disease
- Leprosy (Hansen disease)
- Leptospirosis
- Listeriosis
- Lyme disease
- Malaria
- Meningitis:
  - Aseptic (viral)
  - Bacterial
- Mumps
- Pertussis
- Poliomyelitis (including vaccine-associated cases)
- Psittacosis
- Q fever
- Rubella (congenital)
- Salmonellosis
- Shigellosis
- Spotted Fever Rickettsiosis, including Rocky Mountain spotted fever (RMSF)
- *Staphylococcus aureus*, with resistance or intermediate resistance to vancomycin (VRSA, VISA)
- Streptococcal disease, group A, invasive (IGAS)
- Streptococcal disease, group B, in newborn
- Streptococcal toxic shock syndrome (STSS)
- *Streptococcus pneumoniae*, invasive disease (ISP)
- Syphilis
- Tetanus
- Toxic shock syndrome (TSS)
- Trichinellosis
- Tuberculosis (TB), including multi-drug resistant tuberculosis (MDR-TB)
- Typhoid fever
- Varicella
- Vibriosis
- Yersiniosis

Class C:
Report an outbreak, unusual incident or epidemic of other diseases (e.g. histoplasmosis, pediculosis, scabies, staphylococcal infections) by the end of the next business day.

Outbreaks:
- Community
- Foodborne
- Healthcare-associated
- Institutional
- Waterborne
- Zoonotic

NOTE:
Cases of AIDS (acquired immune deficiency syndrome), AIDS-related conditions, HIV (human immunodeficiency virus) infection, perinatal exposure to HIV, all CD4 T-lymphocyte counts and all tests used to diagnose HIV must be reported on forms and in a manner prescribed by the Director.

Ohio Department of Health

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