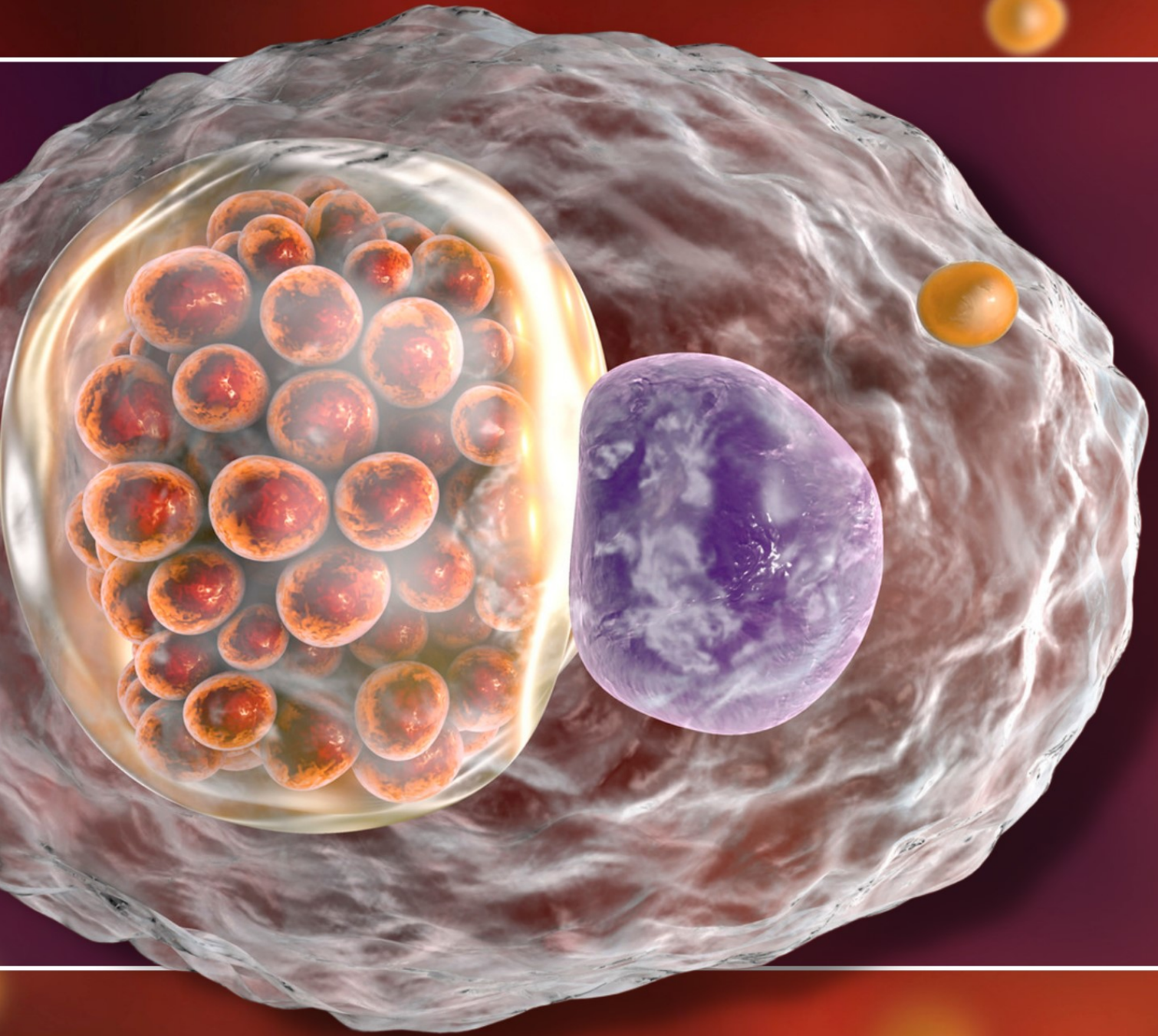


2023 ANNUAL REPORT OF INFECTIOUS DISEASES



Delaware Public Health District

DISEASE CONTROL AND RESPONSE UNIT

Amadou Djigo, MPH
Adam Heydinger, BSN, RN
Alli Comstock, BSN, RN
Lori Kannally, MLHR, BS
James McQuone, BS
Christine Campbell, MPH

FOR COMMENTS AND INFORMATION REQUESTS:

Delaware Public Health District
Disease Control and Response Unit
470 S Sandusky St.
Delaware, Ohio 43015
Phone: 740-368-1700
Fax: 740-203-2044
E-mail: DCRU@delawarehealth.org

Published March 2024

TABLE OF CONTENTS

Introduction	4
Delaware County Demographics.....	5
List of Reportable Diseases 2023	6
Overview of Reportable Diseases	7
Top 10 Most Reported Diseases in 2023 (by Age Group)	8-11
2023 Disease Highlights	12-15
1. Tuberculosis.....	12
2. Respiratory Illnesses.....	13
3. Foodborne Illnesses.....	14
4. Campylobacteriosis.....	15
2023 Disease Trends.....	16-24
2023 Outbreaks.....	25-26
2022 Disease Prevention Outreach.....	27
Conclusions & Recommendations.....	28-30
Appendix	
Appendix A - Reportable Disease Counts.....	31-34

INTRODUCTION

The 2023 Annual Report of Infectious Diseases represents an overview of the prevalence of confirmed, probable, and suspected reportable diseases within the jurisdiction of the Delaware Public Health District (DPHD). This report also includes annual highlights, the top ten reported diseases, historical counts of infectious diseases, outbreaks, and disease trends.

Information pertaining to prevention, control, and reporting of diseases can be found in the Ohio Revised Code Chapter 3701.23, 3707.06 and the Infectious Disease Control Manual (IDCM) published by the Ohio Department of Health. These documents designate which diseases are to be reported to the local health district and the time frame in which reporting must occur. The list of diseases reportable during the 2023 year is provided on page six.

Data for this report was acquired through the electronic record system for the Ohio Department of Health, the Ohio Disease Reporting System (ODRS).

DELAWARE COUNTY DEMOGRAPHICS

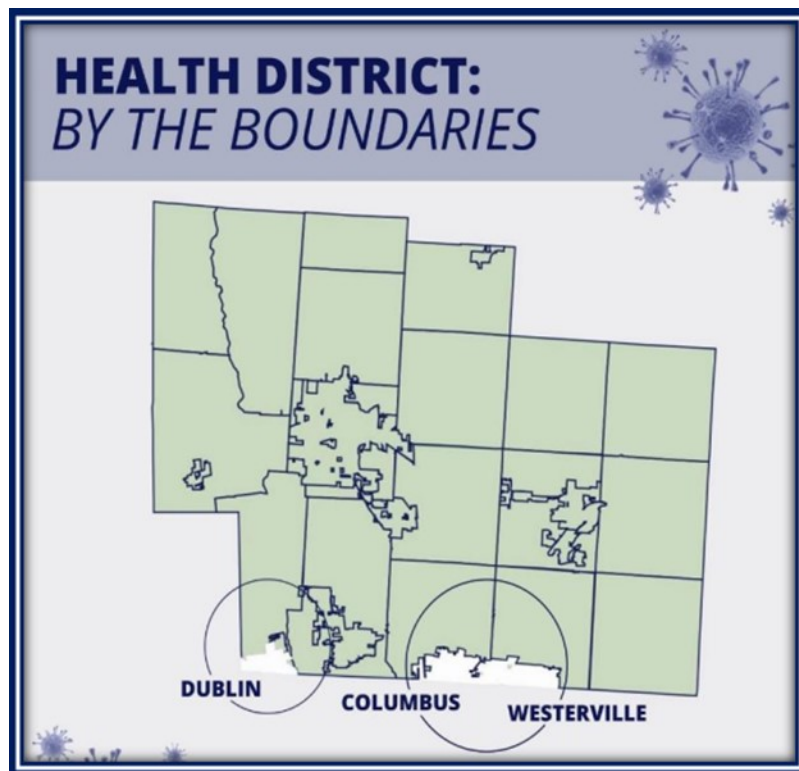
Demographics	Delaware County	State of Ohio
Total Population*:	226,296	11,759,697
DPHD Jurisdiction Population**:	197,525	N/A
Housing units*:	86,478	5,293,356
Median household income (in 2022 dollars)*:	\$123,995	\$66,990
Percent of Population Below Poverty Level*:	4.6%	13.4%
Individuals without Health Insurance under age 65 years*:	4.4%	7.1%
Disabled Population under age 65 years*:	5.5%	10.1%
White*:	83.8%	80.9%
Asian*:	9.0%	2.7%
Black or African American*:	4.6%	13.3%
Hispanic or Latino*:	3.2%	4.5%
Two or More Races*:	2.3%	2.7%

*Based on 2022 United States Census information:

<https://www.census.gov/quickfacts/fact/table/delawarecountyohio,US/PST045223>

**Estimate by Delaware County Regional Planning Commission (DCRPC)

Portions of Delaware County are annexed to Columbus Public Health and Franklin County Public Health, including Dublin, Washington Township, Columbus, and Westerville. If a resident is diagnosed with a reportable disease in one of those jurisdictions, that case would not be included in Delaware Public Health District data.



LIST OF REPORTABLE DISEASES 2023

Know Your ABCs: A Quick Guide to Reportable Infectious Diseases in Ohio From the Ohio Administrative Code Chapter 3701-3; Effective August 1, 2019

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

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
 - Yellow fever
 - Zika virus infection
 - Other arthropod-borne diseases
- Babesiosis
- Botulism
 - infant
 - wound
- Brucellosis
- Campylobacteriosis
- *Candida auris*
- 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* O157: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)
- *Salmonella* Paratyphi infection
- *Salmonella* Typhi infection (typhoid fever)
- 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)
- 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.



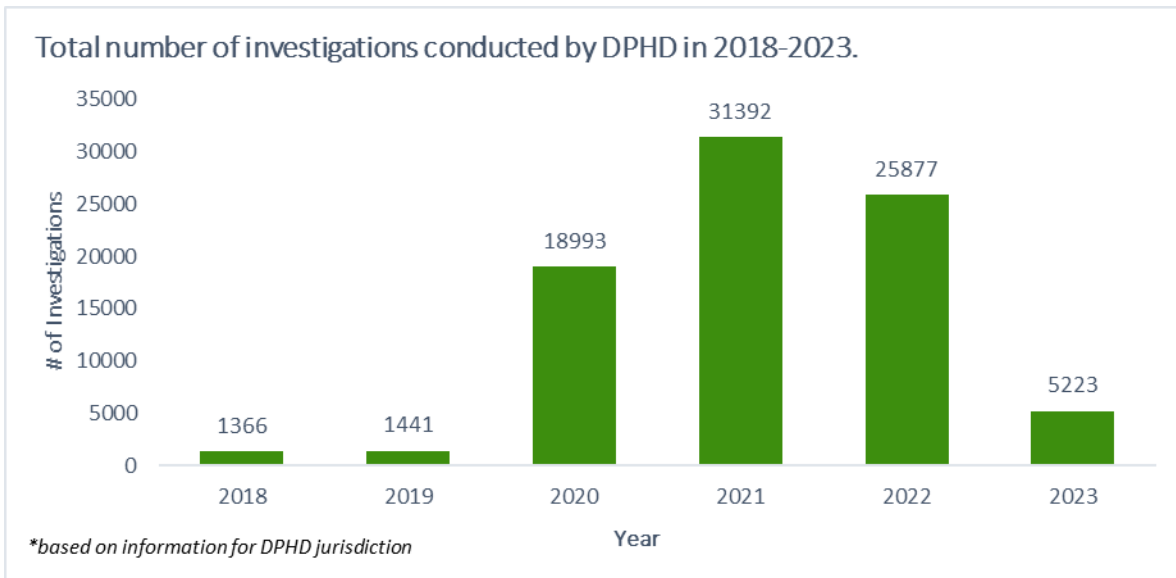
*COVID-19 was declared to be a reportable condition in a Director's Journal Entry on 01/23/20:

https://odh.ohio.gov/wps/wcm/connect/gov/d82ea367-a55a-4792-8c2d-f2743f08f8cc/DJE+2019+nCov+1-23-2020.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_M1HGK0N0J000Q09DDDDM3000-d82ea367-a55a-4792-8c2d-f2743f08f8cc-m.CyWlc

DELAWARE COUNTY 2023 REPORTABLE DISEASES

OVERVIEW

In 2023 the DPHD’s Disease Control and Response Unit conducted 5,223 disease investigations (not including outbreak data), a 79.8% decrease from the number of investigations conducted in 2022. COVID-19 accounted for 4,175 of the total investigations in 2023; a decrease from 16,404 COVID-19 investigations in 2022.



The numbers of disease reports in this summary include all investigations that were classified as confirmed, probable, or suspect. Numbers are subject to change due to jurisdiction changes and when reportable conditions are diagnosed and reported.

Top 10 Most Reported Diseases

All Ages

Delaware County, 2023

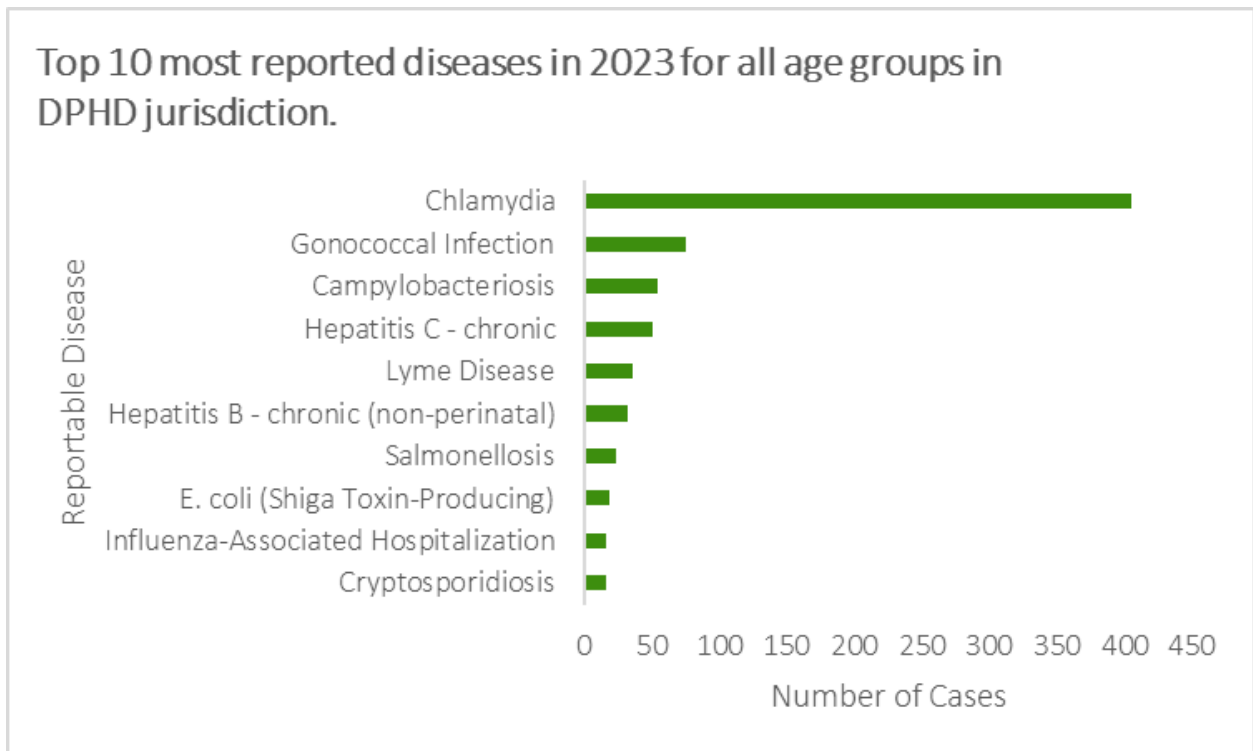
(Only lists diseases designated as reportable in the State of Ohio)

Reportable Disease	Number of Cases	Percent
Chlamydia	405	38.6%
Gonococcal infection	76	7.25%
Campylobacteriosis	54	5.15%
Hepatitis C—chronic	51	4.87%
Lyme Disease	36	3.44%
Hepatitis B-chronic (non-perinatal) (including delta)	32	3.05%
Salmonellosis	24	2.29%
E. coli, Shiga Toxin-Producing	19	1.81%
Influenza-Associated Hospitalization	17	1.62%
Cryptosporidiosis	16	1.53%

*Percent is based on the total number of diseases reported for all ages

*Based on information for DPHD jurisdiction

*Excluding data for COVID-19



Top 10 Most Reported Diseases

Ages 0-14

Delaware County 2023

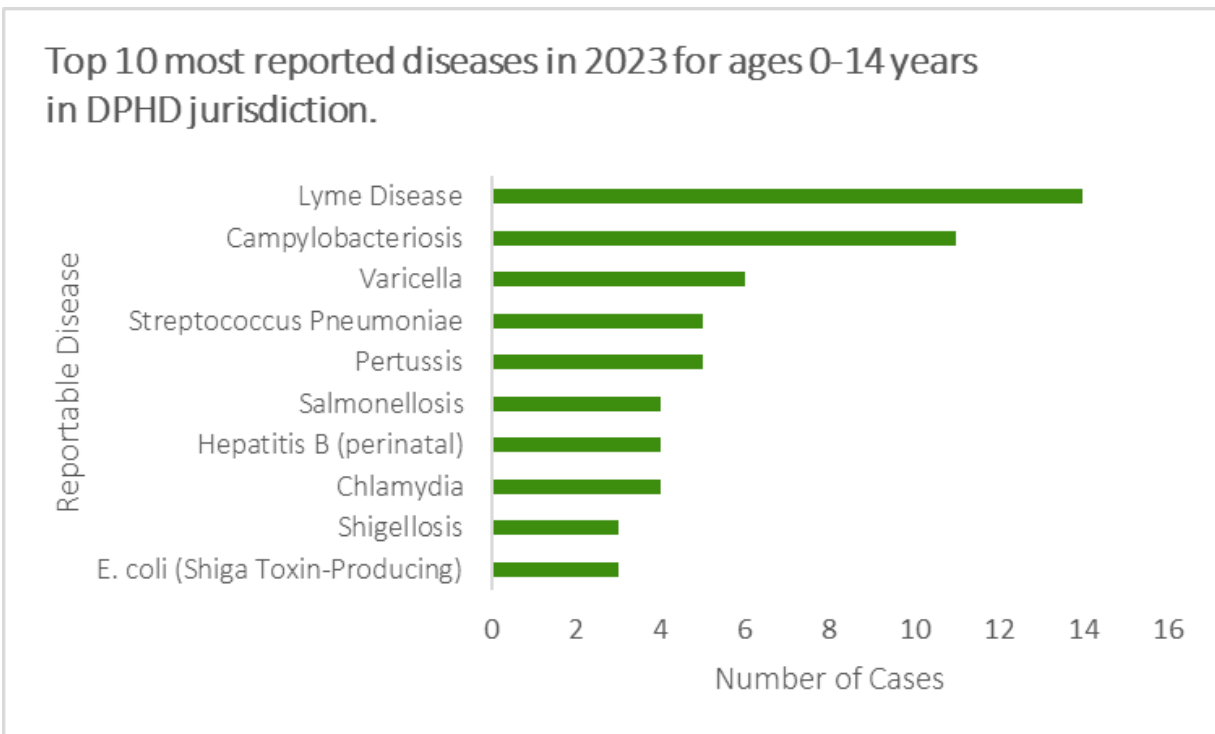
(Only lists diseases designated as reportable in the State of Ohio)

Reportable Disease	Number of Cases	Percent*
Lyme Disease	14	19.44%
Campylobacteriosis	11	15.28%
Varicella	6	8.33%
Streptococcus Pneumoniae (invasive antibiotic resistance unknown or non-resistant)	5	6.94%
Pertussis	5	6.94%
Salmonellosis	4	5.56%
Hepatitis B (perinatal)	4	5.56%
Chlamydia	4	5.56%
Shigellosis	3	4.16%
E. coli, Shiga Toxin-Producing	3	4.16%

*Percent is based on the total number of diseases reported in 0-14-year-olds

*Based on information for DPHD jurisdiction

*Excluding data for COVID-19



Top 10 Most Reported Diseases

Ages 15-64

Delaware County 2023

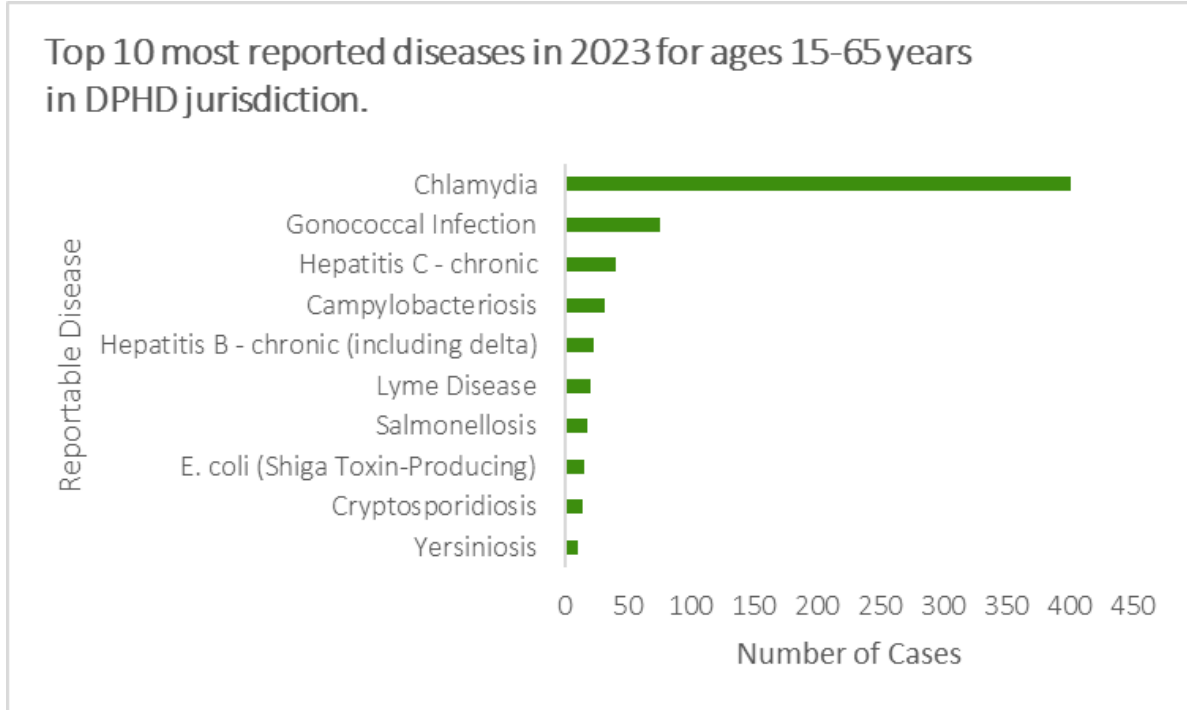
(Only lists diseases designated as reportable in the State of Ohio)

Reportable Disease	Number of Cases	Percent*
Chlamydia	400	54.50%
Gonococcal infection	75	10.22%
Hepatitis C - chronic	41	5.59%
Campylobacteriosis	32	4.36%
Hepatitis B -chronic (including delta)	23	3.13%
Lyme Disease	20	2.72%
Salmonellosis	18	2.45%
E. coli, Shiga Toxin-Producing	15	2.04%
Cryptosporidiosis	14	1.91%
Yersiniosis	10	1.36%

*Percent is based on the total number of diseases reported in 15-64-year-olds

*Based on information for DPHD jurisdiction

*Excluding data for COVID-19



Top 10 Most Reported Diseases

Ages 65+

Delaware County 2023

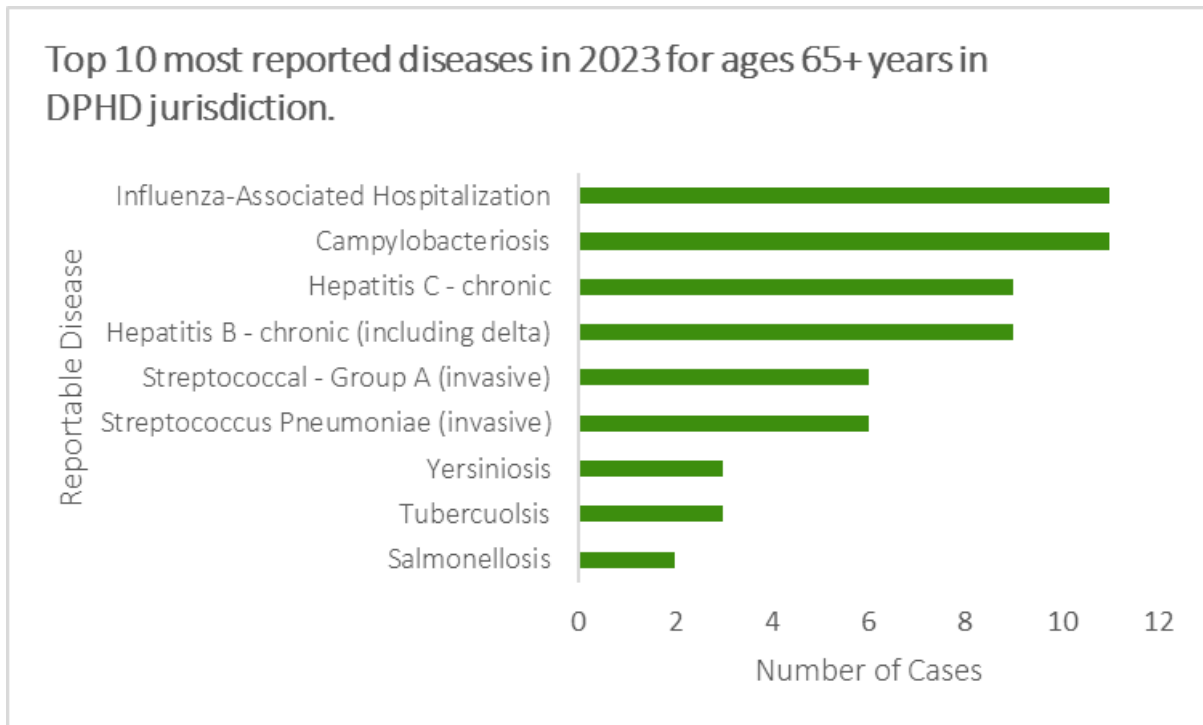
(Only lists diseases designated as reportable in the State of Ohio)

Reportable Disease	Number of Cases	Percent*
Influenza-Associated Hospitalization	11	13.58%
Campylobacteriosis	11	13.58%
Hepatitis C - chronic	9	11.11%
Hepatitis B - chronic (including delta)	9	11.11%
Streptococcal – Group A (invasive)	6	7.41%
CPO	6	7.41%
Streptococcus Pneumoniae (invasive)	6	7.41%
Yersiniosis	3	3.70%
Tuberculosis	3	3.70%
Salmonellosis	2	2.47%

*Percent is based on the total number of diseases reported in 65+ year-olds

* Based on information for DPHD jurisdiction

*Excluding data for COVID-19



2023 DISEASE HIGHLIGHTS

TUBERCULOSIS

Tuberculosis (TB) is a disease caused by the bacteria *Mycobacterium tuberculosis*. Typically, the disease affects the lungs. However, multiple organ systems can become infected, including the kidneys, liver, lymph nodes, brain, and spine. Each county is required to maintain a tuberculosis control unit. DPHD monitors TB activity in Delaware County, conducts immigrant investigations, provides screenings, coordinates care and treatment for individuals infected, and completes directly observed therapy (the practice of actively monitoring treatment) for individuals undergoing treatment. When a case is identified, DPHD makes contact to assist with their care. This can result in providing necessities, coordinating healthcare, and testing others who have been exposed to the disease. All efforts are aimed at curing the ill individual and helping make sure others in the community do not become sick with tuberculosis.

Public Health follow up for tuberculosis can be divided into the categories of active case management and immigrant investigations. Active case management requires local health districts to closely monitor cases of active, infectious tuberculosis and coordinate isolation, contact investigation, and case treatment as the situation dictates. Immigrant investigation is a process which involves following up on individuals who are identified during their immigration screening to have a high potential for having active, infectious TB disease. Follow up for these cases includes repeating testing and referral to a local provider for evaluation.

DPHD has seen an increase in both active cases of tuberculosis and immigrant investigations when compared to previous years. For 2022, DPHD reported two cases of TB, while in 2023, five cases were reported. DPHD coordinated eight immigrant investigations in 2022, compared to 11 in 2023. Many factors contribute to the rise in cases in the last several years. One speculation to the increase is that case counts are returning to pre-pandemic levels. During the COVID-19 pandemic, tuberculosis reporting and disease management decreased as resources and efforts focused on the pandemic. Rising case counts could also be attributed to population growth in Delaware County. Despite increased TB activity, DPHD continues to manage active cases and work with local providers to insure the well-being of residents and to maintain the protection of the public.

RESPIRATORY ILLNESSES

DPHD monitors and routinely collects data on respiratory illnesses as part of the disease investigation process. Respiratory illnesses commonly increase starting in the fall and remain elevated throughout the winter season. Perchance, because people are congregating indoors, increasing the likelihood of spreading these types of illnesses. The respiratory illnesses of particular interest to the Health District during 2023 are COVID-19 and Influenza-Associated Hospitalizations.

COVID-19

As the pandemic ended and the shift away from COVID-19 full scale response occurred, DPHD worked to demobilize its COVID-19 operations in early 2023. DPHD still routinely monitors for outbreaks in vulnerable settings such as schools, daycares, and long-term care facilities, and works with these facilities during outbreaks to help mitigate the spread of COVID-19. At the beginning of the school year, DPHD worked closely with K-12 schools and Early Care and Education programs to revise COVID-19 protocols and reporting requirements. These measures helped schools maintain safe, in-person learning throughout the year, and shifted the focus on reporting measures towards monitoring all common respiratory illnesses. DPHD also collaborated with long-term care facilities to provide current COVID-19 guidance and help mitigate the spread of illness.

The current case rate is not at an alarming level compared to state and federal data, and the vaccination rate in the DPHD jurisdiction remains high.

Influenza-Associated Hospitalizations

In 2023 DPHD saw 17 reported Influenza-Associated Hospitalizations, which is far less than the previous year. However, at the time of this report, the Health District has already surpassed the total number of reported cases from 2023 with 26 cases so far in 2024, and current influenza activity is still very high. While flu viruses can be detected year-round in the United States, and the exact timing and duration of flu activity can vary, higher activity is most common during fall and winter months (October – May). Often, flu activity peaks between December and February, although significant activity can last as late as May.

To help prevent the spread of respiratory illnesses, the Health District encourages staying home if sick, seeking medical treatment when necessary, getting vaccinated, practicing respiratory hygiene etiquette (e.g. using an elbow or tissue to cover coughs and sneezes), frequent handwashing with soap and water for at least 20 seconds, and regularly cleaning and disinfecting high touch surfaces.

FOODBORNE ILLNESSES

Foodborne illnesses pose a significant public health concern impacting individuals and communities across the DPHD jurisdiction. Among the various pathogens that cause foodborne illnesses, *E. coli* and *Salmonella* stand out as major contributors.

Escherichia coli:

Escherichia coli, commonly known as *E. coli*, is a bacterium that can cause a range of illnesses, from mild gastrointestinal discomfort to severe infections. The most common source of *E. coli* infections is contaminated food, particularly undercooked ground beef, unpasteurized milk, and fresh produce.

Symptoms of *E. coli* infection include:

- Abdominal cramps
- Diarrhea (often bloody)
- Vomiting

In severe cases, it can lead to kidney failure, especially in young children and the elderly. The incidence of *E. coli* infections vary geographically and can be influenced by factors such as food handling practices, sanitation standards, and public health surveillance systems.

Salmonella:

Salmonella is another common bacterium that causes foodborne illnesses. It can be found in a wide range of foods which include:

- Poultry
- Eggs
- Meat
- Raw fruits and vegetables

Contamination usually occurs during food production or processing. *Salmonella* infection, also known as salmonellosis, presents with symptoms such as diarrhea, fever, and abdominal cramps. While most cases resolve on their own within a week, severe infections may require medical attention, especially in vulnerable populations.

E. coli and *Salmonella* remain significant public health concerns in the Health District with the potential to cause widespread illness and outbreaks. DCRU investigated 19 confirmed cases of *E. coli* and 24 confirmed cases of *Salmonella* in 2023. Through comprehensive prevention strategies, including education, surveillance, inspections, and partnerships, DPHD is committed to minimizing the impact of foodborne illnesses by enhancing food safety practices and promoting awareness.

CAMPYLOBACTERIOSIS

Campylobacteriosis (Campy) is a significant public health concern in the Health District. This bacterial infection, caused by the *Campylobacter* bacteria, is a leading cause of bacterial gastroenteritis in the United States. For 2023, Campy was the third most reported disease in DPHD jurisdiction.

Campy is primarily transmitted through the consumption of contaminated food, especially undercooked poultry, unpasteurized milk, and contaminated water. It can also be spread through contact with the feces of infected animals or individuals.

Symptoms of Campylobacteriosis include diarrhea, abdominal pain, fever, and nausea. In severe cases, it can lead to complications such as dehydration, bloodstream infections, and, rarely, Guillain-Barré syndrome.

To reduce the risk of Campylobacteriosis, it is important to practice good hygiene, such as washing hands thoroughly with soap and water, especially after handling raw meat or interacting with animals. Properly cooking food, particularly poultry, and avoiding the consumption of unpasteurized milk or contaminated water are also key preventive measures.

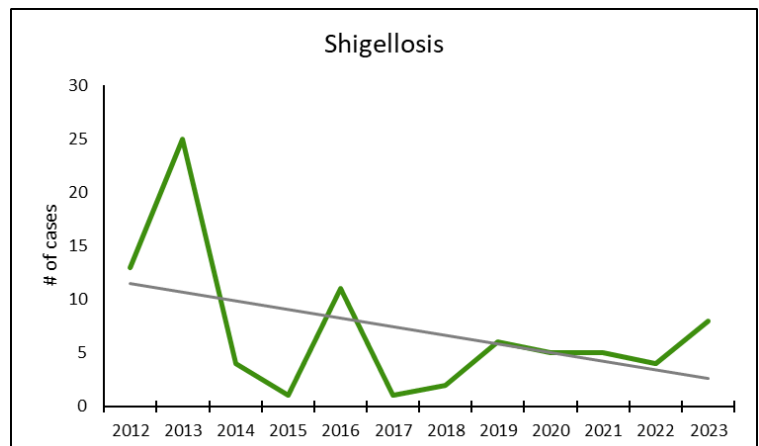
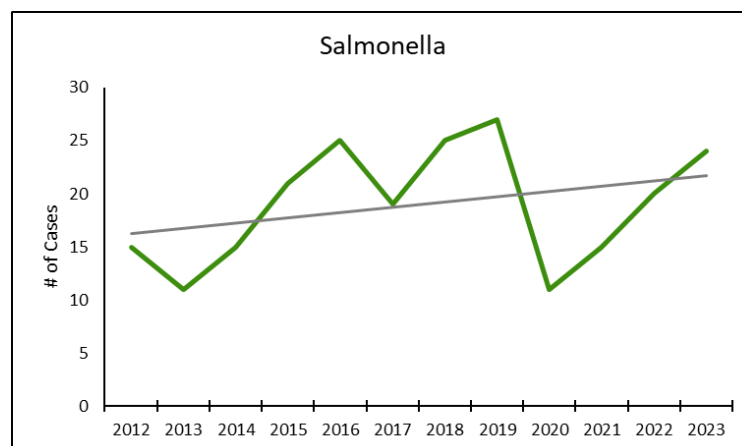
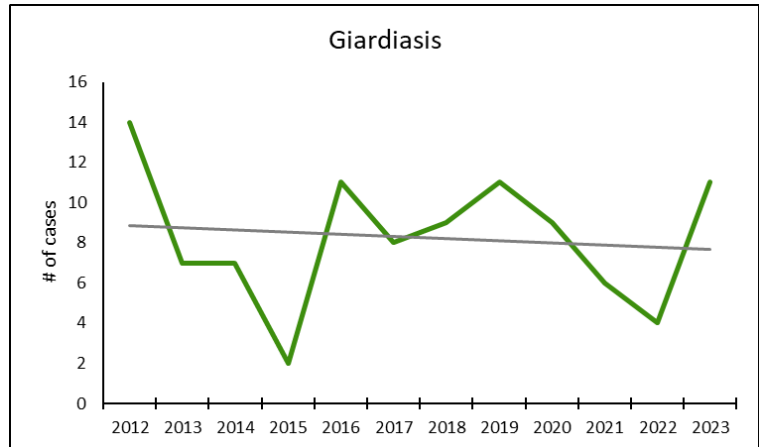
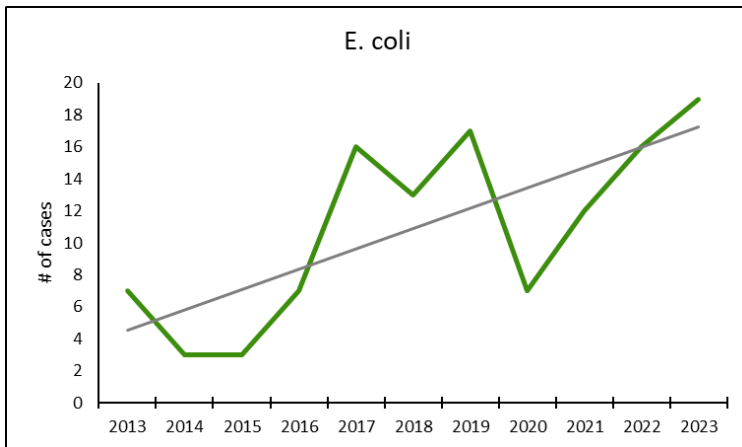
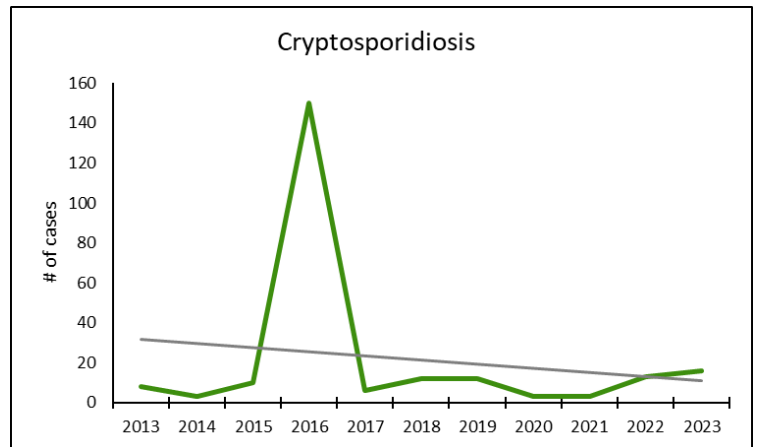
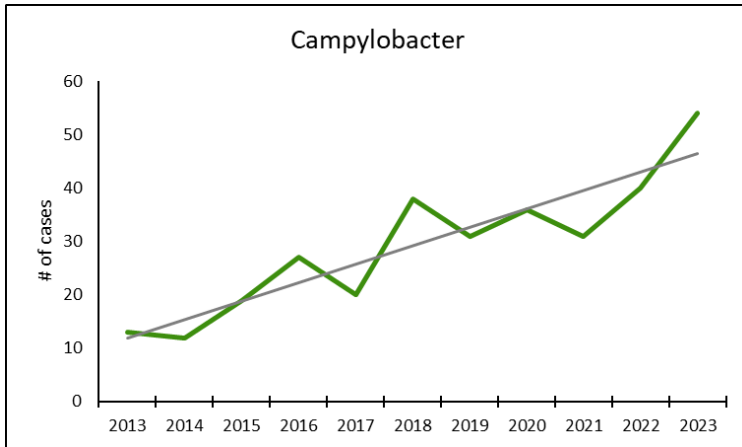
The CDC estimates *Campylobacter* infection affects more than 1.5 million U.S residents every year. The Delaware Public Health District worked with 54 Delaware County residents who tested positive for Campylobacteriosis in 2023. Efforts included monitoring and investigating cases, promoting safe food handling practices, and providing educational resources to the community.

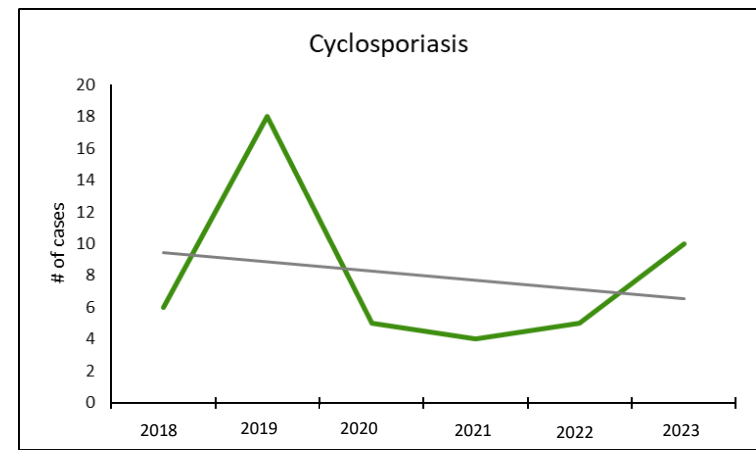
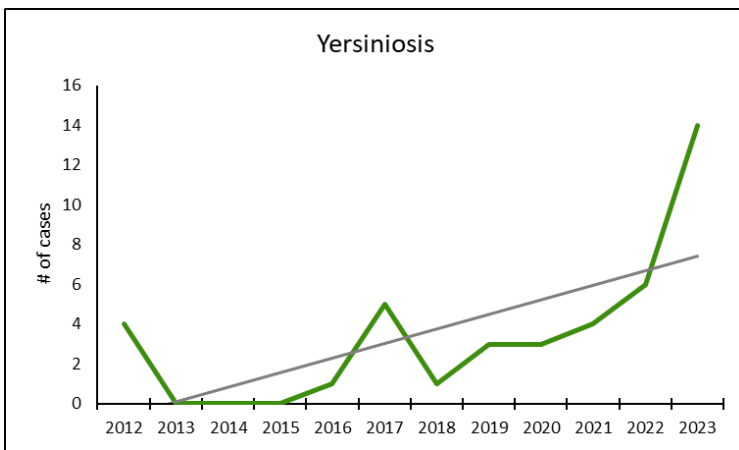
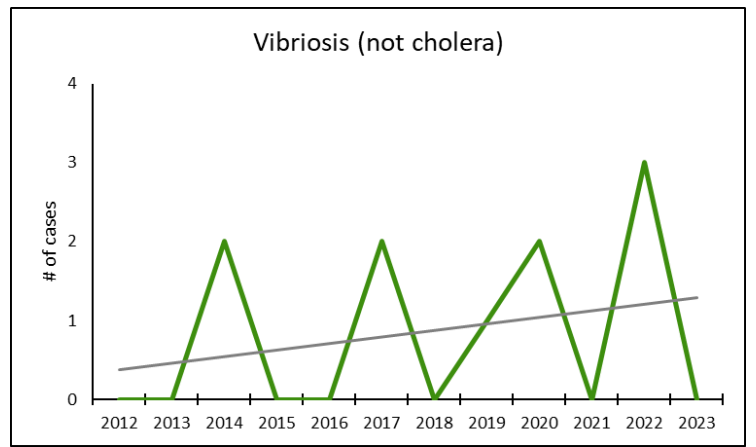
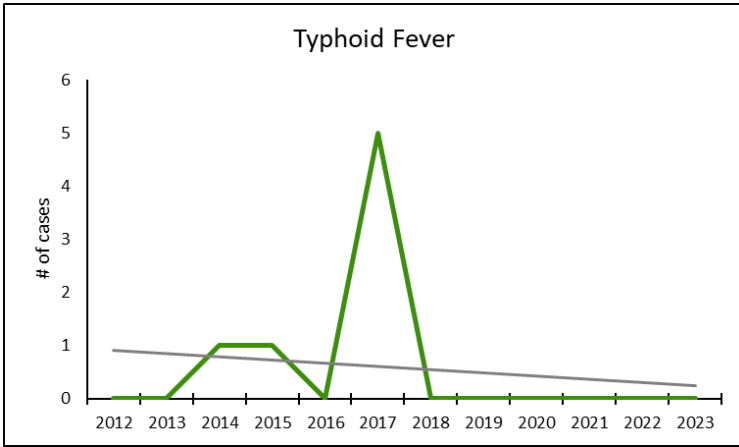
2023 DISEASE TRENDS

The following graphs show selected reportable diseases that have been positively or negatively trending over the past several years.

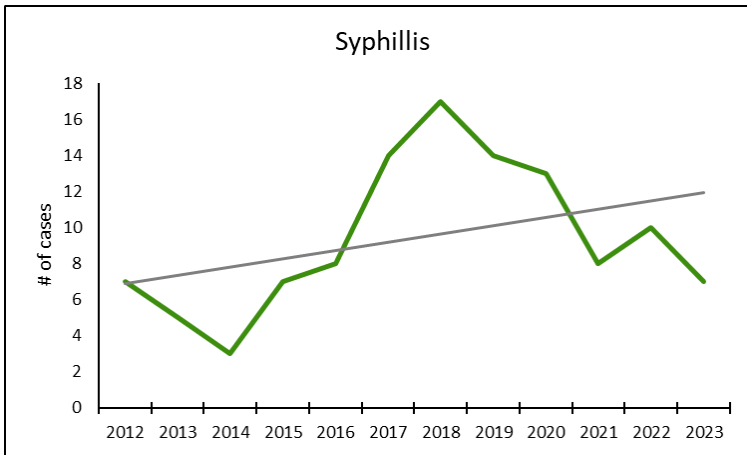
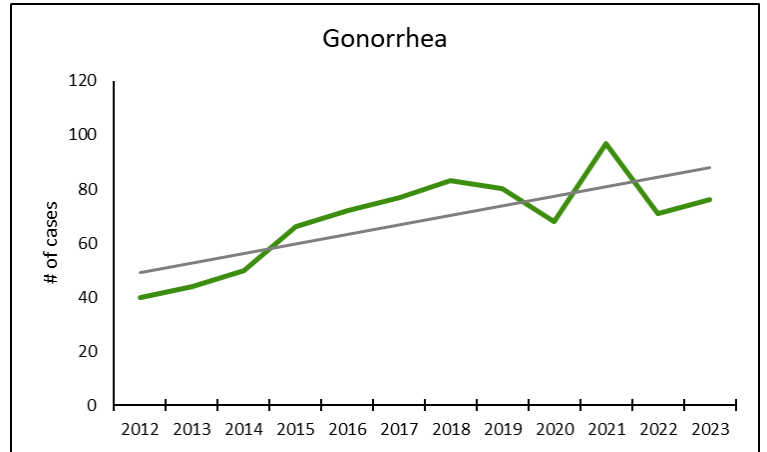
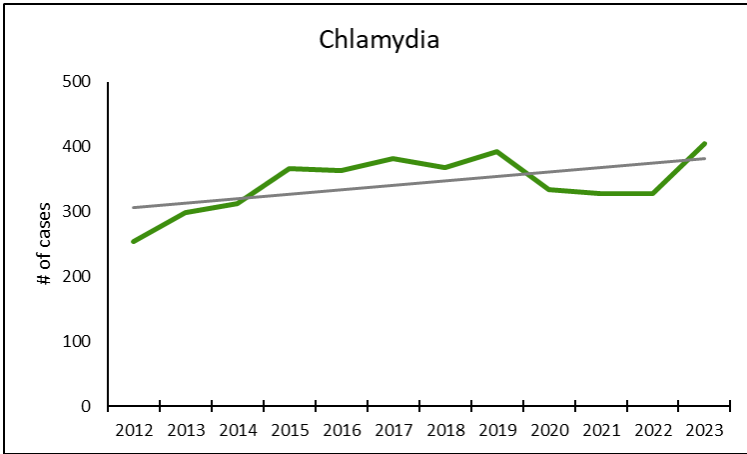
ENTERIC DISEASES

Please note: Some reportable diseases may not be included as they have been reportable for less than three years or if there was insufficient data to indicate a trend.

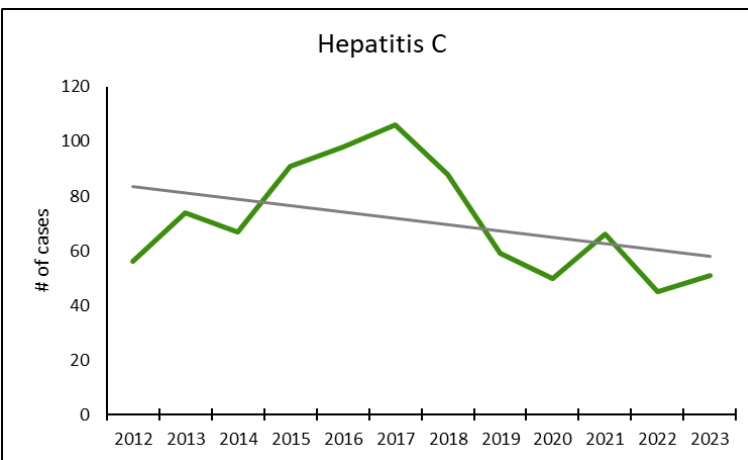
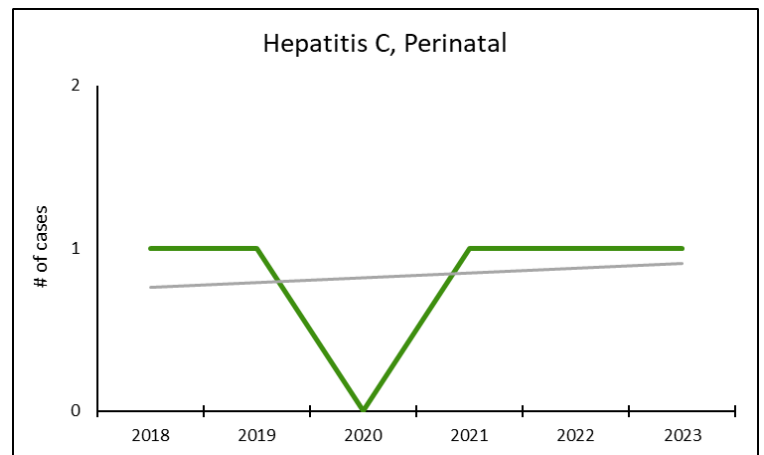
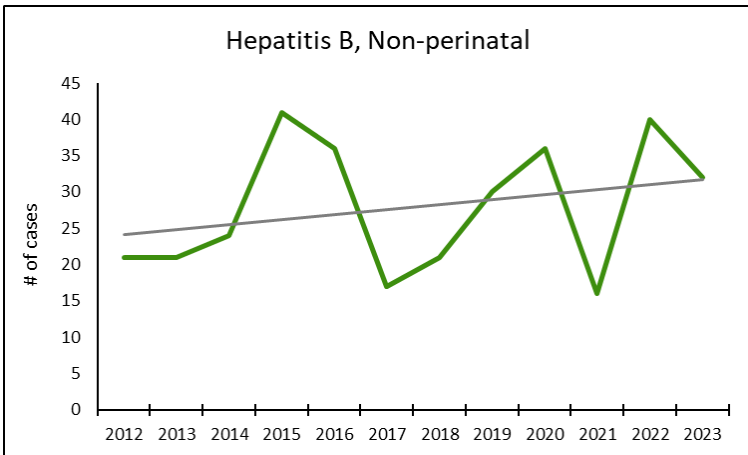
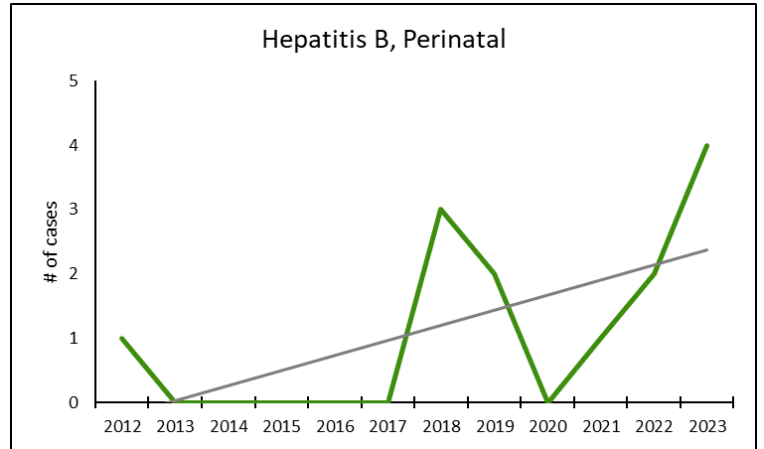
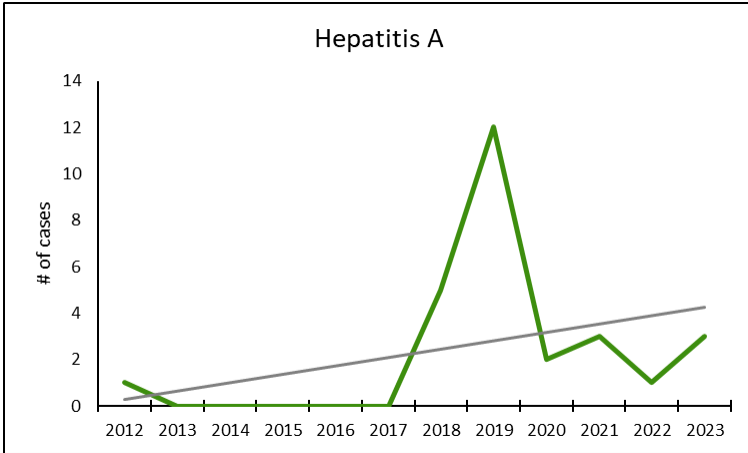




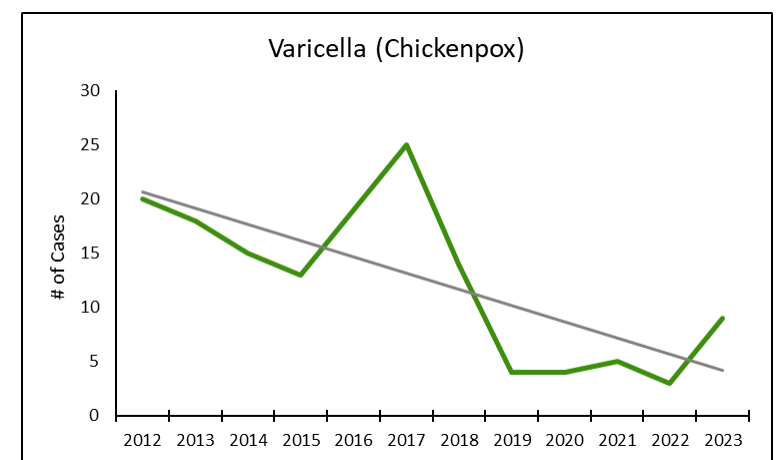
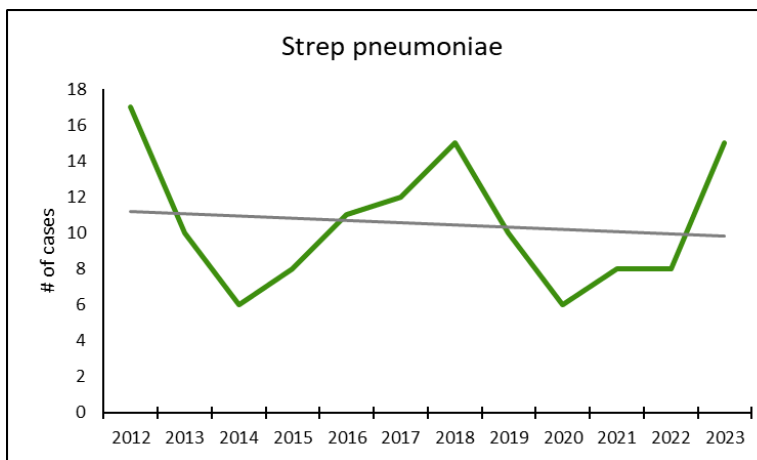
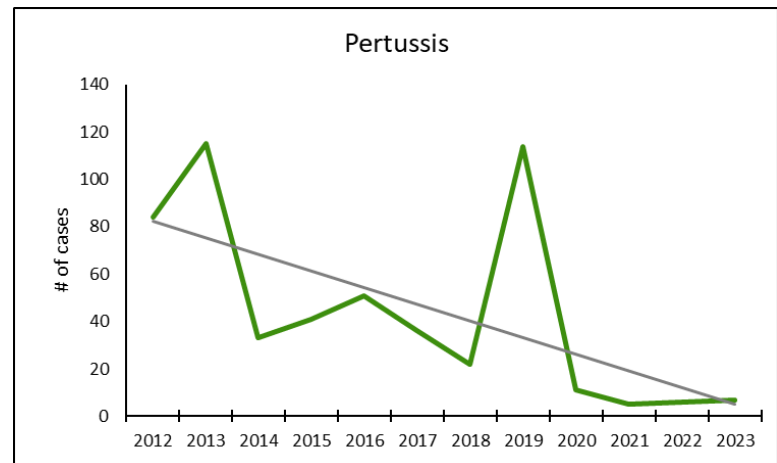
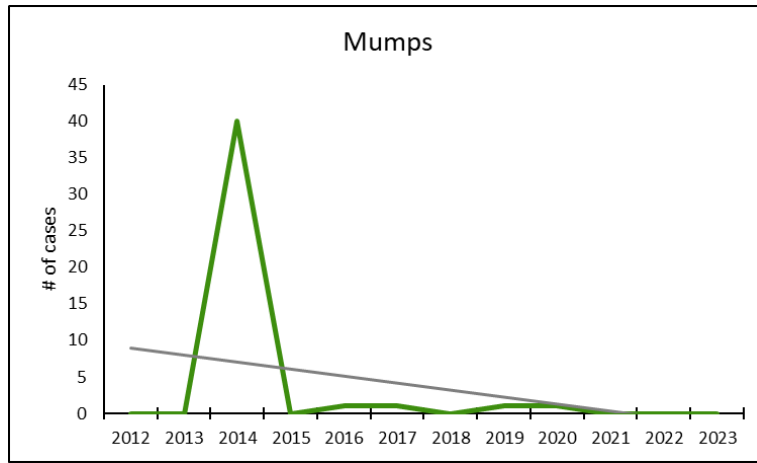
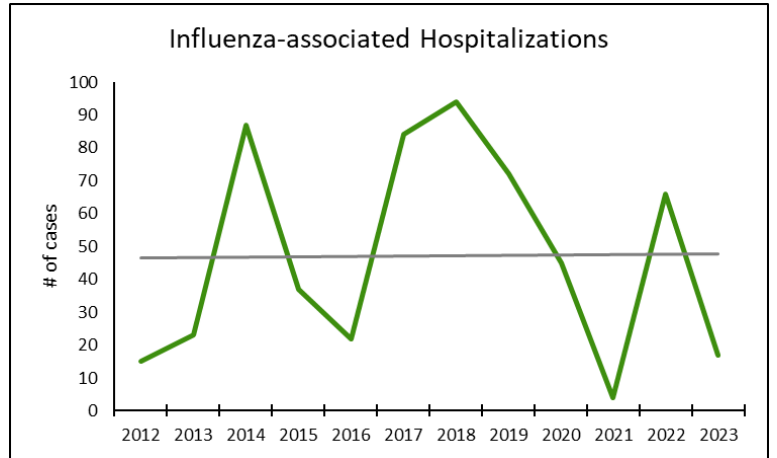
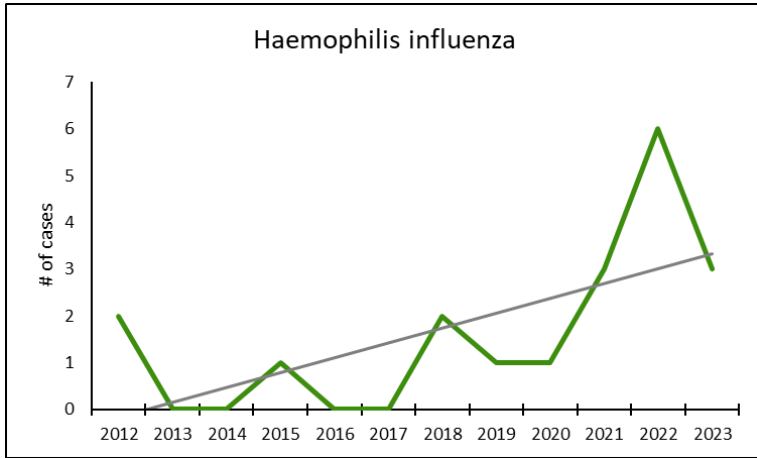
SEXUALLY TRANSMITTED INFECTIONS



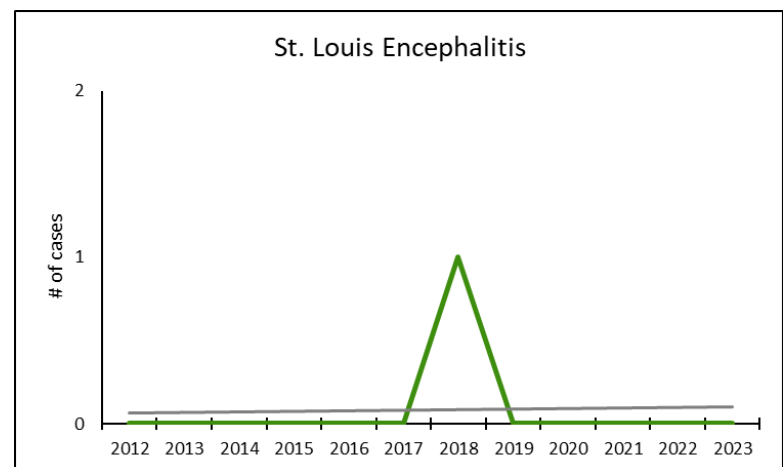
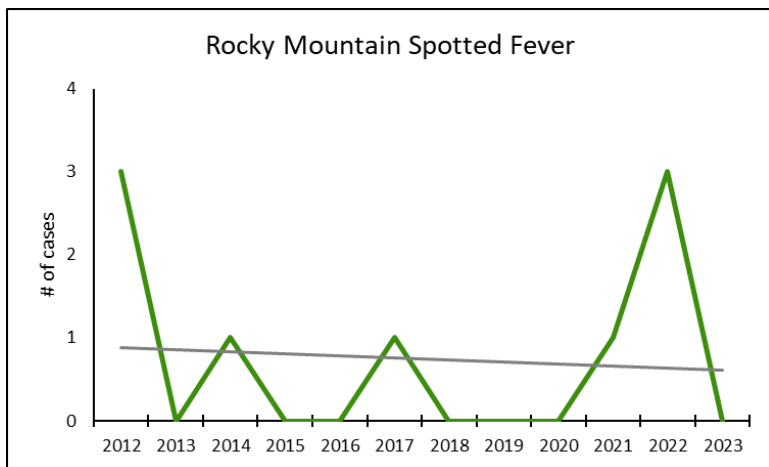
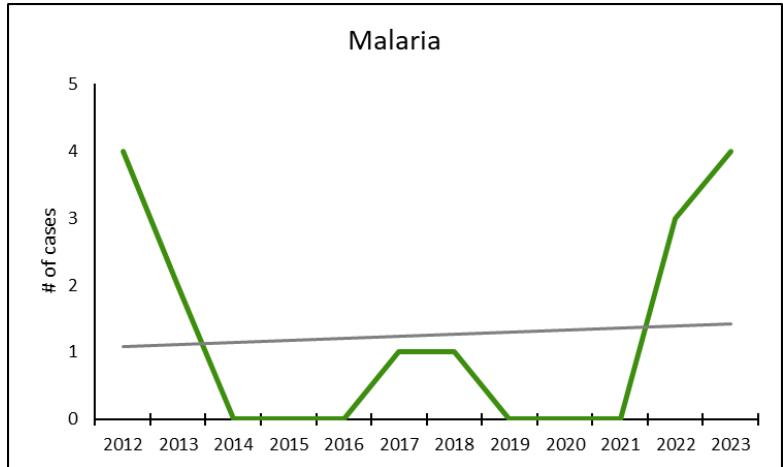
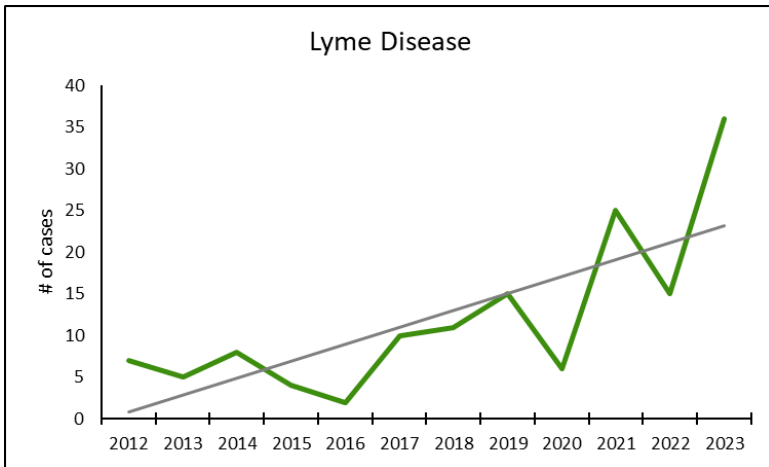
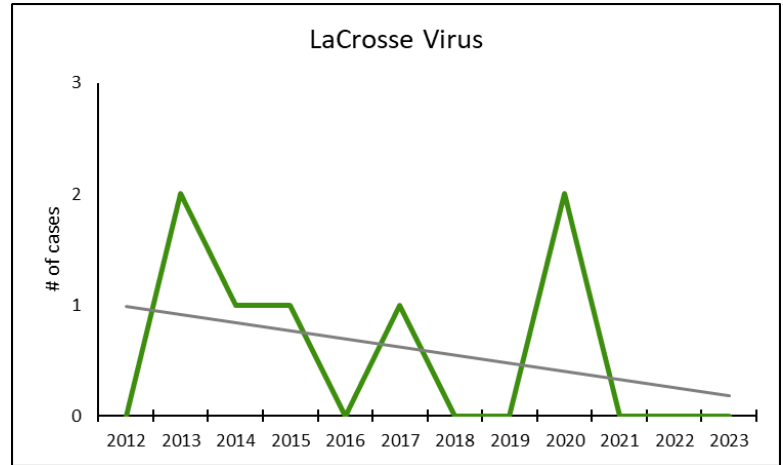
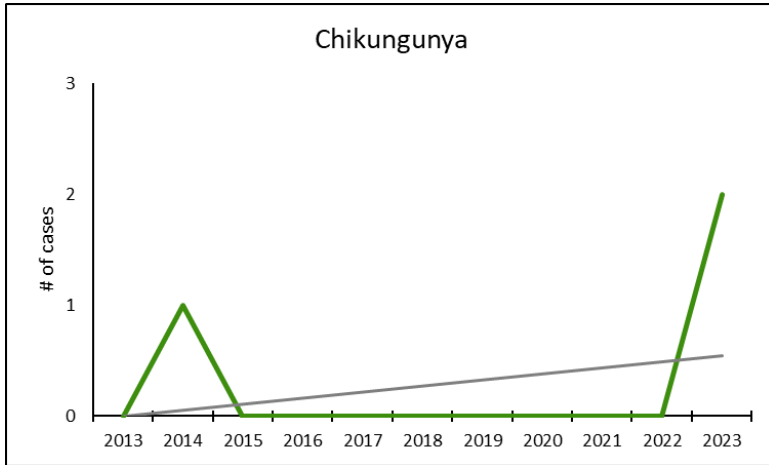
HEPATITIS DISEASES



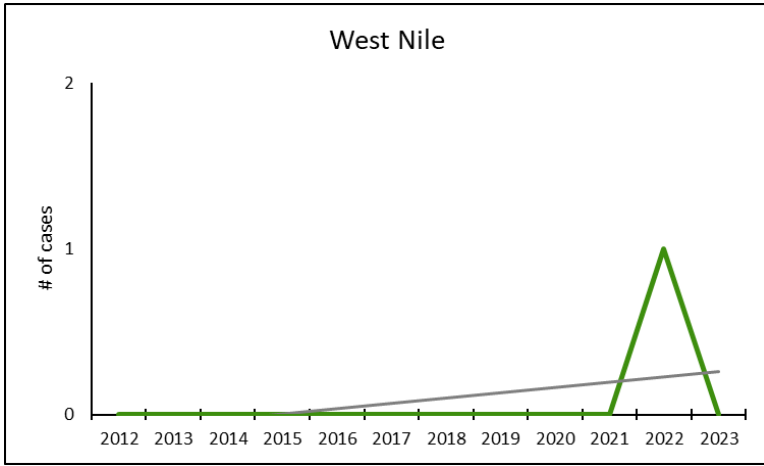
VACCINE PREVENTABLE DISEASES



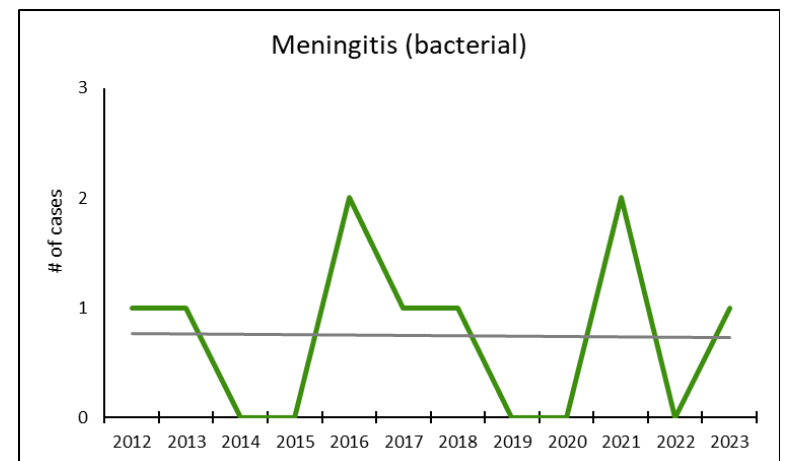
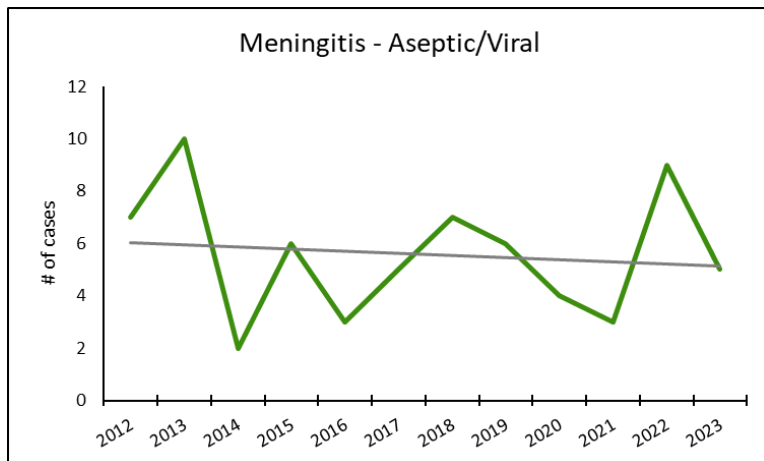
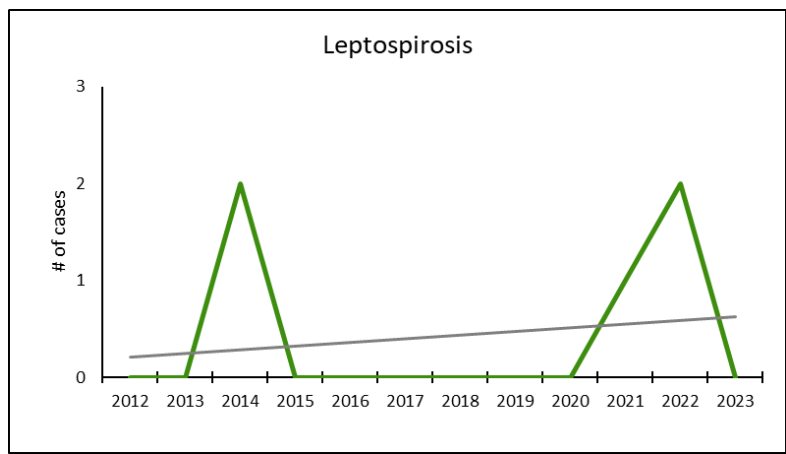
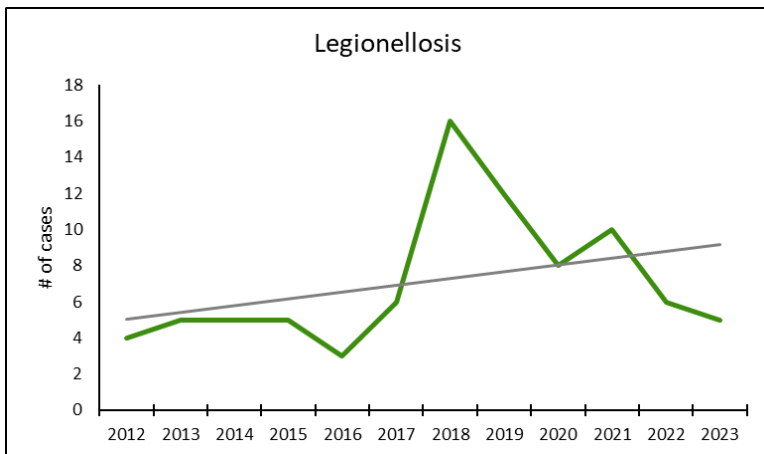
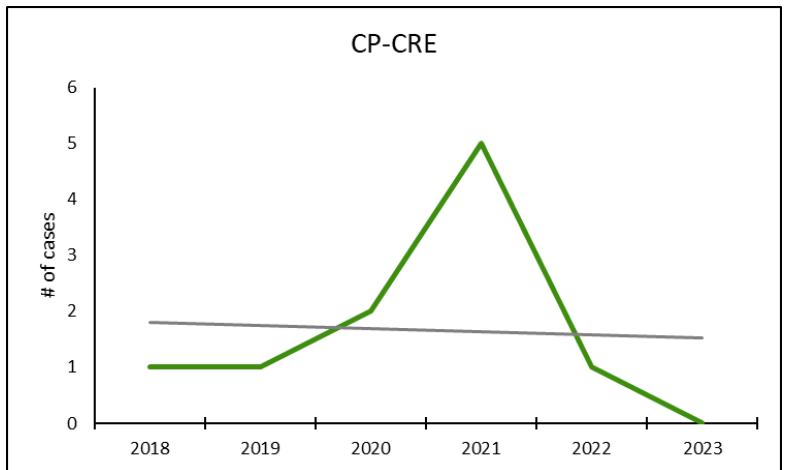
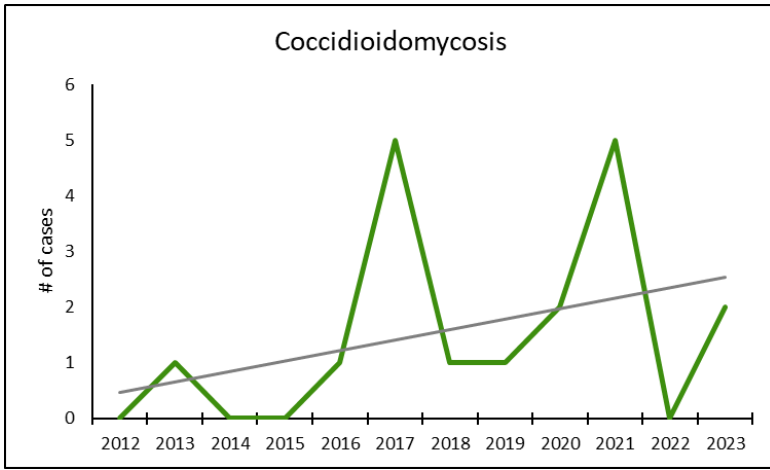
ZOONOTIC DISEASES

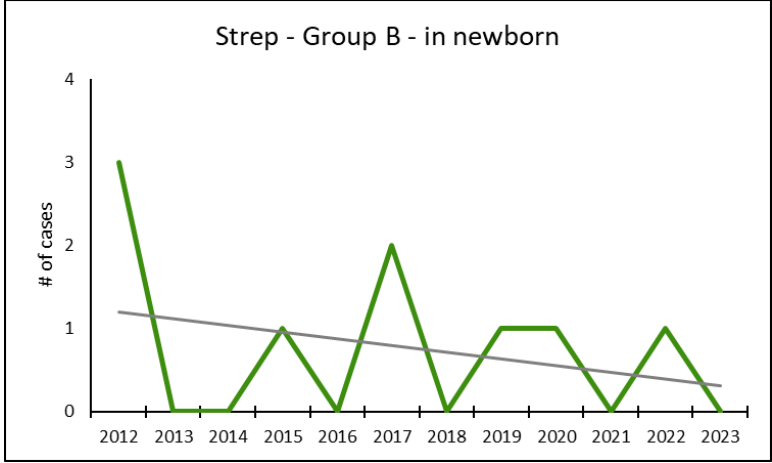
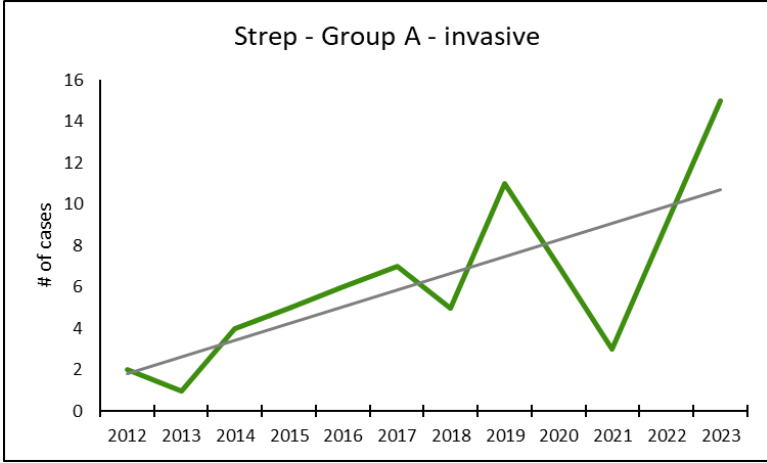


West Nile



OTHER DISEASE TRENDS





2023 OUTBREAKS

Outbreaks can be caused by many different microorganisms (viruses, bacteria, fungi), microbes, and chemicals. An outbreak is defined as the occurrence of two or more cases of a similar illness with a common link. However, one case of certain diseases can be considered an outbreak when the disease has a very high mortality or morbidity rate. An outbreak is determined based on circumstances and the agent involved or suspected to be involved. When an outbreak is discovered, the DPHD initiates an investigation to confirm the agent (if possible), gather information to better define the outbreak and recommend prevention/control measures to protect more people from becoming ill. In total, 21 outbreaks were investigated by DPHD in 2023. Suspect, probable, and confirmed outbreaks are included in the data below. If the outbreak occurred in Delaware County, all individuals linked to the outbreak are reflected in the 'Number of people ill' column below, even if the individual does not reside in Delaware County.

YEAR	2019	2020	2021	2022	2023
NUMBER OF OUTBREAKS INVESTIGATED	19	51	41	26	21

2023 Outbreak type	Agent	Number of people ill*
Gastrointestinal	Norovirus	47
Gastrointestinal	Norovirus	11
Gastrointestinal	Escherichia coli	34
Dermatologic	Conjunctivitis	14
Respiratory	Influenza	4
Respiratory	Streptococcus	12
Respiratory	Streptococcus	11
Respiratory	Streptococcus	21
Respiratory	COVID-19	6
Respiratory	COVID-19	19
Respiratory	COVID-19	5
Respiratory	COVID-19	20
Respiratory	COVID-19	5
Respiratory	COVID-19	15
Respiratory	COVID-19	12
Respiratory	COVID-19	8
Respiratory	COVID-19	13
Respiratory	COVID-19	14
Respiratory	COVID-19	41
Respiratory	COVID-19	19
Respiratory	COVID-19	16

*Number of people ill are subject to change as some outbreaks have carried over into 2024 or have pending information.

*Data pulled from ODRS.

2023 OUTBREAK HIGHLIGHT

The Health District spent a month investigating a suspect outbreak that occurred at a facility in Delaware County, Ohio in the summer of 2023. Two groups of individuals attended the facility: Group A and Group B. Group A had 19 people who reported symptoms matching the case definition and Group B had 15 people who reported symptoms matching the case definition.

After gathering symptom and illness onset data from affected individuals, it was determined that the causative agent had an incubation period of 8-48 hours with a duration of 2-4 days. Stool sample results indicated two suspect agents, Enteroaggregative *Escherichia coli* (EAEC) and *Yersinia*. Based on all the information gathered, EAEC was most likely the causative agent of this outbreak. This is because EAEC has symptoms and onset/duration time consistent with the findings from the investigation. Likely, this illness was present in an individual prior to their arrival at the facility and was spread through direct and indirect contact via the fecal-oral route.

The Health District recommends practicing proper hygiene, especially handwashing, to help prevent illnesses like *Escherichia coli*. This includes washing hands thoroughly for at least 20 seconds with soap and water frequently throughout the day, especially during food preparation, after eating, and after using the bathroom. Also, ensuring that meats are cooked properly and to the correct temperature will kill harmful bacteria that could cause illness. When preparing food, do not cross-contaminate. Thoroughly wash hands, cutting boards, counters, utensils, and anything else raw meat has touched to further prevent potential illness.

2023 DISEASE PREVENTION OUTREACH

The Disease Control and Response Unit has recognized the pressing need for disease prevention and outreach in the area of sexually transmitted infections (STIs). STIs, particularly Chlamydia and Gonorrhea, have been in Delaware County's top five infectious diseases each year for the past several years. To address this reoccurrence, DPHD initiated a more intensive outreach program targeting high school students. Outreach included presenting information and resources about STIs in order to raise awareness and promote responsible sexual health practices among the younger population. The information was presented to 18 classes in the Olentangy Local School District in 2023, with future presentations already scheduled for 2024.

In October 2023, DCRU also initiated an enhanced response effort for STIs with an emphasis on follow-up care for those who have tested positive. These efforts provide support and guidance to these individuals through phone calls, office visits, and mailed letters. Since implementation of these enhanced efforts, 100% of STI cases have been reached out to. The ultimate goal of improving STI response is to create a healthier community by preventing the spread of STIs and ensuring the well-being of all residents.

Also this year, DCRU began to offer CPR and Stop-The-Bleed trainings to staff and community members to spread awareness and provide the community with lifesaving knowledge and skills. Although these trainings do not target communicable diseases specifically, they fall under the umbrella of preventative health. In 2023, DCRU offered seven CPR courses and ten Stop-The-Bleed courses.

Health Occupations Students of America (HOSA) is a student led organization designed to empower future health professionals. This year, DCRU partnered with a local group of HOSA students and served as their mentor. DCRU offered several trainings, including CPR, Stop-The-Bleed, and Bloodborne pathogen, as well as facilitated shadowing opportunities within DPHD and with other local healthcare agencies. The group of students created a portfolio of their experiences and went on to win the local, regional, and international competitions.

CONCLUSIONS AND RECOMMENDATIONS

This report serves to describe communicable disease data and trends from 2023 for the Delaware Public Health District. The data from this report is used to drive future communicable disease investigations, planning of resources, policy development, training, and education. Even though the total number of disease investigations decreased from 2022, the number of Chlamydia and Gonococcal Infections, chronic Hepatitis C, Campylobacteriosis, *Salmonella*, *E. coli*, and Lyme Disease case investigations increased in 2023. This could be due to factors such as population characteristics, reporting, changes in case definitions, and/or laboratory testing practices.

SEXUALLY TRANSMITTED INFECTIONS

STIs have consistently ranked among the top five infectious diseases in Delaware County. This may be attributed to a combination of limited outreach and resources during the COVID-19 pandemic, as well as a rise in the population of Delaware County. The pandemic disrupted routine healthcare services and educational programs, leading to reduced access to STI testing, prevention, and treatment services.

To address the consistently high number of STIs, it is crucial for DPHD to implement effective strategies and interventions. Increasing outreach efforts targeting underserved populations and providing them with information about STI prevention, testing, and treatment options is important. Utilization of community-based programs, educational campaigns, and partnerships with local organizations are also vital components for success. Another strategy could include the allocation of more resources toward STI clinics and testing, as none are offered currently. By enhancing the availability and accessibility of STI testing, individuals will have greater opportunities to get tested regularly and receive timely treatment if needed.

Prioritizing comprehensive sex education programs within schools and other community settings will allow DPHD to provide accurate, evidence-based information to these populations. Topics could include STIs, contraception, and safe-sex practices. With this information, young individuals can make informed decisions to protect themselves and reduce the risk of contracting and transmitting STIs.

Fostering collaborations with local healthcare providers, community organizations, and advocacy groups is essential for successful reduction of STI rates within the community. Working together, combining resources, and having a coordinated approach to address factors such as stigma, regular testing, and prompt treatment, will hopefully lead to a decrease in STI rates in the future.

TUBERCULOSIS & IMMIGRANT INVESTIGATIONS

Compared to data from the last five years, the DPHD saw an increase in both active TB cases and immigrant investigations in 2023. There were five active cases of TB reported and the Health District completed 11 immigrant investigations this year. Many factors contribute to the rise in cases for 2023. The COVID-19 pandemic impacted reporting for all communicable diseases. Case counts during the pandemic years dropped as healthcare and public health efforts focused on the pandemic response. Latent Tuberculosis (LTBI) that was undertreated during the pandemic could now be presenting as active, infectious cases. Another factor that cannot be ignored is the population growth in Delaware County in recent years. As people move into the county from TB endemic countries, it only makes sense to see an increase in TB case counts and immigrant investigations.

DPHD has updated internal policy regarding follow up of immigrant investigations due to the increased number of cases. Utilizing DPHD's new facility, the Health District is able to offer a one-time consultation with clients prior to referring them for follow-up testing and evaluation. This allows investigations to start in a private, secure environment where clients can familiarize themselves with DPHD staff and ask questions related to the process.

Enhanced efforts have recently been made by the Health District to strengthen communication between infectious disease providers in the area. These efforts have been successful and have facilitated improved lines of communication. Hopefully, these improved relationships will have a positive impact on the number of cases in upcoming years that have previously been due to underreporting. Despite increased TB activity, DPHD continues to manage active cases and work with local providers to ensure the well-being of residents and to maintain the protection of the public.

RESPIRATORY ILLNESSES

Respiratory illness reporting remained high in 2023. Respiratory illness activity tends to increase during the fall and winter months (October – May). The Health District encourages continued efforts to vaccinate eligible clients against influenza, SARS-CoV-2, RSV, and pneumococcal disease. DPHD recommends that individuals use general strategies to guard against respiratory infections (e.g., vaccines, staying home when ill, getting tested and medical care as needed, increasing ventilation, hand hygiene, and wearing masks as appropriate).

FOODBORNE ILLNESSES

Foodborne illnesses were among the top ten most reported diseases again for 2023. The Health District saw an increase in *Salmonella* and *E. coli* cases this year, with 24 reported *Salmonella* cases and 19 reported *E. coli* cases. This is the highest number of cases for each illness since 2019. DPHD intends to address this through a consistent, timely response to incoming foodborne illness complaints. Response includes thorough interviews and follow-up with cases, inspections, as well as providing education and information to prevent illness in the future.

LYME DISEASE

Although Lyme Disease was not highlighted in this report, it is worth noting that the number of reported cases more than doubled from 2022 (15 cases in 2022 and 36 cases in 2023). It was also the most reported disease for the 0-14 years age group in 2023. Lyme disease is transmitted to humans via the bite of an infected black legged tick and is caused by the *Borrelia burgdorferi* bacteria. Common symptoms include muscle and joint aches, fatigue, fever, headache, and chills. Often, a rash will appear at the location of the bite and spread across the affected area, giving that area a “bullseye” appearance.

Preventative measures taken by the Health District to target Lyme disease within the community include surveillance and response to disease occurrence. DPHD recommends utilizing the acronym **TICKS** to aid with protection – Treat clothing or skin with repellants; Inspect yourself, clothing, and gear for ticks; Clean

and disinfect any area where a tick was removed; **Keep** record of the date the tick was removed; and **Shower** or wash off as soon as possible after coming indoors. Other preventative measures include wearing light colored clothing, walking in the center of trails to avoid heavy vegetation, frequently mowing areas of high grass, and checking pets after being outdoors.



*Image of *Ixodes scapularis* (blacklegged tick) life stages taken from CDC website <https://www.cdc.gov/ticks/gallery/index.html>

APPENDIX A

DPHD REPORTABLE DISEASE COUNTS 2019-2023

ENTERIC DISEASES					
Reportable disease	2019	2020	2021	2022	2023
Campylobacteriosis	31	36	31	40	54
Cryptosporidiosis	13	3	3	13	16
Cyclosporiasis	18	7	4	5	10
E. coli, Shiga toxin-producing	17	7	12	16	19
Giardiasis	12	9	6	4	11
Salmonellosis	28	11	15	15	24
Salmonella Typhi	1	0	1	0	0
Shigellosis	5	5	5	4	8
Typhoid fever	0	0	0	0	0
Vibriosis (not cholera)	1	2	0	3	0
Yersiniosis	4	3	4	6	14
TOTAL	130	83	81	111	156

HEPATITIS					
Reportable disease	2019	2020	2021	2022	2023
Hepatitis A	12	2	3	1	3
Hepatitis B, Perinatal	2	0	1	2	4
Hepatitis B Non-Perinatal	30	36	16	40	32
Hepatitis C Perinatal	1	0	0	1	1
Hepatitis C Non-Perinatal	58	49	49	45	51
TOTAL	103	87	69	89	91

SEXUALLY TRANSMITTED INFECTIONS					
Reportable disease	2019	2020	2021	2022	2023
Chlamydia infection	396	334	327	328	405
Gonococcal infection	80	68	97	71	76
Syphilis	14	13	8	10	7
TOTAL	490	415	432	409	488

HIV/AIDS information can be found at [ODH HIV/AIDS Surveillance Data](#)

TUBERCULOSIS					
Reportable disease	2019	2020	2021	2022	2023
Tuberculosis	2	0	1	2	5

VACCINE PREVENTABLE					
Reportable disease	2019	2020	2021	2022	2023
COVID-19	-	10,522	18,381	20,579	4,175
Haemophilis influenza	1	1	1	6	3
Influenza-associated hospitalization	73	45	3	66	17
Influenza-associated pediatric deaths	0	0	0	0	0
Measles	1	0	0	0	1
Meningococcal disease	0	0	0	0	0
Mumps	1	1	0	0	0
Pertussis	115	11	5	6	7
Strep pneumoniae, invasive	10	6	8	8	15
Varicella	4	4	5	3	9
TOTAL	205	68*	22*	89*	52*

*Totals do not include COVID-19 cases

ZOO NOTIC					
Reportable disease	2019	2020	2021	2022	2023
Anaplasmosis	1	0	0	1	2
Babesiosis	2	0	0	0	1
Chikungunya	1	0	0	0	2
LaCrosse virus	0	2	0	0	0
Lyme disease	15	6	25	15	36
Malaria	0	0	0	3	4
Rocky Mountain Spotted Fever	0	0	1	3	0
St Louis encephalitis	0	0	0	0	0
West Nile	0	0	0	1	0
Zika	0	0	0	0	0
Other Arthropod-borne Disease	1	1	0	0	0
TOTAL	19	9	26	23	45

OTHER REPORTABLE DISEASES

Reportable Disease	2019	2020	2021	2022	2023
Botulism – infant	0	0	0	0	0
Brucellosis	1	0	0	1	0
Coccidioidomycosis	1	2	5	0	2
CP-CRE*	1	2	5	1	0
Hemolytic Uremic Syndrome (HUS)	0	0	0	0	0
Legionellosis - Legionnaires' Disease	12	8	10	6	5
Leptospirosis	0	0	1	2	0
Listeriosis	0	0	0	0	0
Meningitis (aseptic/viral)	6	4	3	9	5
Meningitis (bacterial)	0	0	2	0	1
Streptococcal - Group A -invasive	7	3	9	15	15
Streptococcal - Group B - in newborn	1	0	1	0	0
Streptococcal Toxic Shock Syndrome (STSS)	0	0	0	0	0
Tularemia	0	0	0	0	0
TOTAL	24	29	29	28	28

REPORTABLE DISEASES: 0 CASES IN DELAWARE COUNTY 2023

Anthrax	LaCrosse Virus	Tetanus
Botulism (foodborne)	Listeriosis	Toxic Shock Syndrome
Botulism (wound or infant)	Meningococcal Disease	Trichinellosis
Candida Auris	Middle East Respiratory Syndrome (MERS)	Tularemia
Chancroid	Plague	Typhoid Fever
Cholera	Poliomyelitis	Viral Hemorrhagic Fevers
Creutzfeldt-Jakob Disease	Powassan Virus Disease	Western Equine Encephalitis Virus
Diphtheria	Q Fever	Yellow Fever
Eastern Equine Encephalitis	Rabies (human)	Zika Virus
Hantavirus	Rubella (congenital)	
Hemolytic Uremic Syndrome	Rubella (not congenital)	
Hepatitis D (delta hepatitis)	Salmonella Paratyphi	
Hepatitis E	Severe Acute Respiratory Syndrome (SARS)	
Influenza-Associated Pediatric Mortality	Smallpox	
	St. Louis Encephalitis	
	Staphylococcus Aureus	
	Streptococcal Toxic Shock Syndrome	