ANNUAL SUMMARY OF REPORTABLE DISEASES 2019

Delaware General Health District

PUBLISHED 02/2020

Delaware General Health District

DISEASE CONTROL AND RESPONSE UNIT

Travis Irvan, MPH Arielle Hieronimus, MPH, CHES® Korin Reed, BSN, RN Abby Crisp Emily Patterson, MPH Nancy Baileys

FOR COMMENTS AND INFORMATION REQUESTS:

Delaware General Health District

Disease Control and Response Unit 1 and 3 West Winter Street P.O. Box 570 Delaware, Ohio 43015 Phone: 740-203-2039 Fax: 740-203-2044

E-mail: Ahieronimus@delawarehealth.org

TABLE OF CONTENTS

| Introduction | 3 |
|--|----|
| List of Reportable Diseases 2019 | 4 |
| Disease Highlights | 5 |
| Disease Prevention Outreach Highlights | 8 |
| Featured Investigation | 9 |
| Reportable Disease Data | 10 |
| Top 10 Most Reported Diseases by Age Group | 11 |
| Reportable Disease Counts | 15 |
| Disease Trends | 18 |
| Outbreaks | 23 |
| Conclusions | 24 |

INTRODUCTION

The 2019 Annual Summary of Reportable Diseases represents an overview of the incidence of suspect, probable, and confirmed reportable disease within the jurisdiction of the Delaware General Health District (DGHD). This report also includes annual highlights (diseases, outreach and outbreaks), the top 10 reported diseases, historical counts of reportable diseases, outbreaks, and disease trends.

Information pertaining to prevention, control, and reporting of diseases can be found in the Infectious Disease Control Manual (IDCM) published by the Ohio Department of Health. The IDCM is based on Communicable Disease Rules 3703-3-01 through 3701-3-31 of the Ohio Administrative Code (OAC). The OAC designates which diseases are to be reported to the local health department and the time frame in which reporting must occur. The list of diseases reportable during the 2019 year is provided on the following page.

Data for this report was acquired through Nightingale Notes (electronic record system of DGHD) and the Ohio Disease Reporting System (ODRS).

LIST OF REPORTABLE DISEASES 2019

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
- Measles
 Meningococcal disease
- Middle East Respiratory
- Syndrome (MERS)
- Influenza A novel virus infection
- 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

infections) by the end of the next business day.

- diseases
- Babesiosis
- Botulism
 - infant
 - wound
- Brucellosis
- Campylobacteriosis
- Candida auris

Class C:

Outbreaks: • Community

Foodborne

- 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)

Report an outbreak, unusual incident or epidemic of other diseases (e.g. histoplasmosis, pediculosis, scabies, staphylococcal

Healthcare-associated

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.

> Department of Health

Institutional

- 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
- · LISLEHUSIS
- Lyme disease
 Malaria
- Meningitis:
 - Aseptic (viral)
 - Bacterial
- Mumps
- Pertussis
- Poliomyelitis (including
- vaccine-associated cases)
- Psittacosis
- Q fever
- Rubella (congenital)
- Salmonella Paratyphi infection
- Salmonella Paratyphi miecti
- Salmonella Typhi infection (typhoid fever)

- SalmonellosisShigellosis
- Spotted Fever Rickettsiosis, including Rocky Mountain spotted fever (RMSF)
- Staphylococcus aureus, with resistance or intermediate resistance to vancomvcin (VRSA, VISA)
- Streptococcal disease, group A, invasive (IGAS)
- Streptococcal disease, group B, in newborn
- Streptococcal toxic shock syndrome (STSS)

Tuberculosis (TB), including

4

multi-drug resistant

tuberculosis (MDR-TB)

- Streptococcus pneumoniae, invasive disease (ISP)
- Syphilis
- Tetanus
 Toxic shock syndrome (TSS)
 Trichinellosis

Varicella

Vibriosis

Waterborne

Zoonotic

Yersiniosis

2019 DISEASE HIGHLIGHTS

PERTUSSIS (WHOOPING COUGH)

Pertussis is a vaccine-preventable disease caused by a bacteria. In 2019, there was an increase of reported cases in Delaware County with nearly half of these reported cases being linked to an outbreak in a school district. When pertussis circulates in the community, there is a chance that a fully vaccinated person, of any age, can catch this disease. However, the infection is usually not as severe if vaccinated. No deaths were reported as a result of illness in 2019.

The pertussis outbreak in the school district began in early October and continued through the end of the year. Throughout the outbreak, there was a lag time between symptom onset and diagnosis/treatment. This lag allowed for students to be at school while contagious and potentially increase spread of the disease. A health alert was sent out to physicians in the area to educate on the increase and encourage testing and treatment. The school sent out a letter to the district addressing the increase, encouraging seeking medical attention if symptomatic, and reminding staff, students, and parents of exclusion policy. As illustrated in the figure below, the letters sent out to the school district and the health alerts to area physicians may have encouraged individuals to seek medical care earlier.

| | Before School District Letter Sent | After School District Letter Sent | Percent Change | |
|---|---------------------------------------|--------------------------------------|----------------|--|
| Average # of Days between Symptom Onset and Diagnosis | 17.4 | 8.9 | 48.9% Decrease | |
| | Before Health Alert Sent | After Health Alert Sent | | |
| Average # of Days between Symptom Onset and Diagnosis | 13.1 | 10.1 | 22.9% Decrease | |

Since the early 1980s, there has been an overall trend of an increase in reported pertussis cases. Pertussis is cyclic in nature, with peaks in disease ever 3 to 5 years. However, for the past few decades, peaks got higher and overall case counts went up. Potential reasons for this national increase over the past several years include; increased awareness, improved diagnostic tests, better reporting, increased circulation of the bacteria, and waning immunity. The bacteria that causes pertussis are always changing at a genetic level. Research is underway to determine if any of the recent changes may contribute to the increase in disease. When it comes to waning immunity, it seems that the acellular pertussis vaccine (DTaP and Tdap) used now may not protect for as long as the whole cell vaccine (DTP) doctors used previously (The Ohio Department of Health, 2019).

| DELAWARE COUNTY | |
|------------------------|----------------------|
| 2019 Number of cases*: | 114 |
| % of cases linked to | 45.6% |
| outbreak: | |
| EPIDEMIOLOGY: | |
| Infectious Agent: | Bordatella Pertussis |

| Symptoms: | Congestion, fever, coughing fits, vomiting during or after coughing fits |
|-----------------------|--|
| Source: | Only found in humans |
| Mode of Transmission: | Person to person |
| Incubation Period: | 4 to 21 days |
| Prevention: | Get vaccinated Prophylactic antibiotics are recommended for close contacts Practice good hygiene such as covering coughs/sneezes, wash your hands often with soap and water, and stay home if you are ill. |

*Suspect, probable and confirmed cases

Reference: <u>https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/Vaccine-Preventable-Diseases/resources/Pertussis</u>

CYCLOSPORIASIS

Cyclospora cayetanensis is a single-cell parasite which causes an intestinal infection called *cyclosporiasis*. *Cyclospora* is spread by people ingesting something, such as water or food, which was contaminated with infected stool. For example, outbreaks of *cyclosporiasis* have been linked to various types of fresh produce. *Cyclospora* needs time (days or weeks) after being passed in a bowel movement to become infectious for another person. Therefore, it is unlikely that *Cyclospora* is passed directly from one person to another.

The CDC reports that the overall number of domestically acquired cases reported to date for May-August 2019 is higher than the number of cases reported for the same period in 2017 and 2018. The CDC suggests that changes in diagnostic tests could be the reason for an increase in cases. There was also a multi-state outbreak of Cyclospora infections linked to fresh basil from June to September 2019. Ohio had 3 cases linked to this outbreak. None of these cases resided in Delaware County.

| DELAWARE COUNTY | |
|------------------------|---|
| 2019 Number of cases*: | 18 |
| EPIDEMIOLOGY: | |
| Infectious Agent: | Cyclospora cayetanensis |
| Symptoms: | Watery diarrhea, loss of appetite, weight loss, cramping, |
| | bloating, increased gas |
| Source: | Humans |
| Mode of Transmission: | By ingestion of food or water contaminated with oocysts |
| Incubation Period: | 2-14 days |
| Prevention: | Avoiding water or food that may be contaminated with stool |
| | may help prevent <i>Cyclospora</i> infection. People who have |
| | previously been infected with Cyclospora can become |
| | infected again. |

*Suspect, probable, and confirmed cases

Reference: https://www.cdc.gov/parasites/cyclosporiasis/outbreaks/2019/a-050119/index.html

LEGIONNAIRES' DISEASE

Legionellosis, which includes Legionnaires' (LEE-juh-nares) disease and Pontiac fever, is a respiratory disease caused by a type of bacteria called *Legionella*. After *Legionella* grows and multiplies in a building water system, people can become infected if they breathe in contaminated droplets. Less than 5% of people become ill with Legionnaires' Disease when exposed to the source of *Legionella*.

Nationally, the number of cases reported to the Centers for Disease Control and Prevention (CDC) has been on the rise since 2000. However, because Legionnaires' disease is likely underdiagnosed, this number may underestimate the true incidence. It is unclear whether this increase represents artifact (due to increased awareness and testing), increased susceptibility of the population, increased *Legionella* in the environment, or some combination of factors.

| DELAWARE COUNTY | |
|------------------------|---|
| 2019 Number of cases*: | 12 |
| EPIDEMIOLOGY: | |
| Infectious Agent: | Legionella spp. |
| Symptoms: | Cough, shortness of breath, fever, muscle aches, and |
| | headache |
| Source: | Legionella bacteria grow well in warm water such as hot |
| | tubs, cooling towers, hot water tanks, air conditioning |
| | systems in buildings, etc. |
| Mode of Transmission: | Airborne, most commonly through inhalation of aerosolized |
| | contaminated water |
| Incubation Period: | 2 to 10 days |
| Prevention: | Ensure building water systems are properly maintained in |
| | order to reduce the risk of <i>Legionella</i> growth and spread |

LEGIONELLA CAN LIVE & GROWN IN BIOFILM



2019 DISEASE PREVENTION OUTREACH HIGHLIGHTS

In 2019, the Disease Control and Response Unit conducted 72 outreach events reaching nearly 2,886 people in order to reduce the incidence of communicable disease and promote healthy behaviors. These outreaches range from talking with students about germs and handwashing to training individuals in our community on how to use Narcan and providing them with Narcan kits. Over the last three years, outreach events have increased throughout the county. In 2019, the DGHD implemented 3 new outreaches to better serve the community; emergency preparedness outreach, STI educational packets, and perinatal hepatitis B outreaches to healthcare providers.



HIGHLIGHT: Y-Club After School Programming Hand Washing Heroes Outreach

During 2019, a partnership between Y-Clubs throughout Delaware County allowed DGHD to increase the number of Hand Washing Heroes events during the school year. Hand Washing Heroes has been adapted to be appropriate for audiences ranging in ages from 5 to 10 years of age in one group setting. From October 2019 through December 2019, 241 students in seven schools were able to benefit from the events.



2019 FEATURED INVESTIGATION

LEGIONNAIRES' DISEASE

In 2019, the Delaware General Health District (DGHD) was notified of a case of Legionnaires' Disease residing at a long-term care facility. Upon learning that the case had not left the facility during the incubation period, and investigation of the facility was initiated. With the complex nature of Legionnaires' Disease, this investigation utilized expertise in the infectious disease, emergency preparedness, communications, and environmental health fields.

According to the Centers for Disease Control and Prevention (CDC), outbreaks of Legionnaires' disease are most often associated with large or complex water systems, like those found in hospitals, long-term care facilities, hotels and cruise ships. Legionella can grow in water heaters, water filters, showerheads and hoses, centrally installed misters/atomizers/humidifiers,



medical equipment such as CPAP machines, and aerators. Investigation activities included collecting a detailed activity history for the case, conducting active surveillance for additional cases, conducting environmental exposure assessments, collecting samples from air conditioning units and hot water tanks, and multiple conference calls to ensure communication among all the participating agencies and organizations.

Key lessons:

- The importance of maintaining building water systems. All hot water tanks should have permits and be installed by a licensed plumber. Having a DGHD certified plumbing inspector onsite for the environmental assessments helped identify and correct hazards quickly.
- Water management plans should be practical and detailed including how to maintain good hygiene practices while under water restrictions.
- Risk communication during a significant public health event with staff, residents, and families of the residents is important to disseminate accurate and timely information. Signage on the doors of the facility can help inform others about their risk and steps they can take to minimize exposure.

While the investigation did not definitively conclude a source of the illnesses, the environmental and plumbing corrections implemented better protect the health and safety of residents, staff, and visitors.

DELAWARE COUNTY 2019 REPORTABLE DISEASES

OVERVIEW

In 2019 the DGHD's Disease Control and Response Unit conducted 1,441 disease investigations (not including outbreak data), an increase of 5.2% from the number of investigations conducted in 2018. The increase in investigations since 2017 may be due to a multitude of factors including; Delaware county population growth, better reporting, increases in disease/illness, and/or an increase in laboratory testing.



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 in 2019

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

| Reportable Disease | Number of Cases | Percent* |
|--------------------------------------|-----------------|----------|
| Chlamydia infection | 396 | 40.33 |
| Pertussis | 115 | 11.71 |
| Gonococcal infection | 80 | 8.15 |
| Influenza-associated Hospitalization | 73 | 7.43 |
| Hepatitis C- Chronic | 56 | 5.70 |
| Campylobacteriosis | 31 | 3.16 |
| Hepatitis B- chronic (non-perinatal) | 28 | 2.85 |
| Salmonella | 28 | 2.85 |
| Cyclosporiasis | 18 | 1.83 |
| E.coli, Shiga Toxin-Producing | 17 | 1.73 |
| Other | 140 | 14.21 |

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



Top 10 Most Reported Diseases

0-14 years of age

Delaware County in 2019

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

| Reportable Disease | Number of Cases | Percent* |
|--|-------------------|----------|
| Pertussis | 63 | 54.78 |
| Influenza-Associated Hospitalizations | 8 | 6.96 |
| Salmonella | 8 | 6.96 |
| E.coli, Shiga Toxin-Producing | 4 | 3.48 |
| Streptococcus Pneumoniae | 4 | 3.48 |
| Varicella | 4 | 3.48 |
| Campylobacteriosis | 3 | 2.61 |
| Cryptosporidiosis | 3 | 2.61 |
| Lyme Disease | 3 | 2.61 |
| Aseptic Meningitis | 3 | 2.61 |
| Other | 12 | 10.4 |
| *Percent is based on the total number of diseases reported | in 0-14 vear olds | |



Varicella, pertussis, and influenza are vaccine preventable diseases

Top 10 Most Reported Diseases

15-59 years of age

Delaware County in 2019

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

| Reportable Disease | Number of Cases | Percent* |
|---------------------------------------|-----------------|----------|
| Chlamydia infection | 395 | 53.38 |
| Gonococcal infection | 77 | 10.41 |
| Pertussis | 50 | 6.76 |
| Hepatitis C- Chronic | 40 | 5.41 |
| Hepatitis B | 22 | 2.97 |
| Influenza-Associated Hospitalizations | 19 | 2.57 |
| Campylobacteriosis | 16 | 2.16 |
| Cyclosporiasis | 14 | 1.89 |
| Hepatitis A | 12 | 1.62 |
| Salmonella | 12 | 1.62 |
| Other | 83 | 11.26 |

*Percent is based on the total number of diseases reported in 15-59 year olds



Top 10 Most Reported Diseases

60+ years of age

Delaware County in 2019 (Only lists diseases designated as reportable in the State of Ohio)

| Reportable Disease | Number of Cases | Percent* |
|---------------------------------------|-----------------|----------|
| Influenza-Associated Hospitalizations | 46 | 36.22 |
| Hepatitis C - Chronic | 16 | 12.60 |
| Campylobacteriosis | 12 | 9.45 |
| Salmonellosis | 8 | 6.30 |
| Legionellosis | 7 | 5.51 |
| Hepatitis B | 6 | 4.72 |
| Cyclosporiasis | 4 | 3.15 |
| Streptococcus Pneumoniae | 4 | 3.15 |
| ** | | |
| Other | 15 | 11.81 |

*Percent is based on the total number of diseases reported in 60+ year olds

** E. coli - Shiga-toxin producing, Gonococcal infection, and Lyme Disease all had three cases reported



REPORTABLE DISEASE COUNTS 2015-2019

| ENTERIC DISEASES | | | | | | |
|--------------------------------|------|------|------|------|------|--|
| Reportable disease | 2015 | 2016 | 2017 | 2018 | 2019 | |
| Campylobacteriosis | 19 | 27 | 20 | 38 | 31 | |
| Cryptosporidiosis | 10 | 150 | 6 | 12 | 13 | |
| Cyclosporiasis | - | - | - | 6 | 18 | |
| E. coli, Shiga toxin-producing | 3 | 7 | 16 | 13 | 17 | |
| Giardiasis | 2 | 11 | 8 | 9 | 12 | |
| Salmonellosis | 21 | 25 | 19 | 25 | 28 | |
| Salmonella Typhi | - | - | - | - | 1 | |
| Shigellosis | 1 | 11 | 1 | 2 | 5 | |
| Typhoid fever | 1 | 0 | 5 | 0 | 0 | |
| Vibriosis (not cholera) | 0 | 0 | 2 | 0 | 1 | |
| Yersiniosis | 0 | 1 | 5 | 1 | 4 | |
| TOTAL | 57 | 232 | 82 | 106 | 130 | |

| HEPATITIS | | | | | | |
|---|-----|-----|-----|-----|-----|--|
| Reportable disease 2015 2016 2019 2018 2019 | | | | | | |
| Hepatitis A | 0 | 0 | 0 | 5 | 12 | |
| Hepatitis B, Perinatal | 0 | 0 | 0 | 3 | 2 | |
| Hepatitis B Non-Perinatal | 41 | 36 | 17 | 21 | 30 | |
| Hepatitis C Perinatal | - | - | - | 1 | 1 | |
| Hepatitis C Non-Perinatal | 91 | 98 | 106 | 87 | 58 | |
| TOTAL | 130 | 130 | 123 | 117 | 103 | |

| SEXUALLY TRANSMITTED INFECTIONS | | | | | | | |
|---------------------------------|------|------|------|------|------|--|--|
| Reportable disease | 2015 | 2016 | 2017 | 2018 | 2019 | | |
| Chlamydia infection | 366 | 363 | 381 | 367 | 396 | | |
| Gonococcal infection | 66 | 72 | 77 | 83 | 80 | | |
| Syphilis | 7 | 8 | 14 | 17 | 14 | | |
| TOTAL | 439 | 443 | 472 | 467 | 490 | | |

HIV/AIDS information can be found at ODH HIV/AIDS Surveillance Data

| TUBERCULOSIS | | | | | | | |
|---|---|---|---|---|---|--|--|
| Reportable disease 2015 2016 2017 2018 2019 | | | | | | | |
| Tuberculosis | 1 | 1 | 2 | 2 | 2 | | |

| VACCINE PREVENTABLE | | | | | | |
|---|----|----|----|----|----|--|
| Reportable disease 2015 2016 2017 2018 2019 | | | | | | |
| Haemophilis influenza | 1 | 0 | 0 | 2 | 1 | |
| Influenza-associated hospitalization | 37 | 22 | 84 | 94 | 73 | |
| Influenza-associated pediatric deaths | 0 | 0 | 0 | 0 | 0 | |

| VACCINE PREVENTABLE DISEASE CONT'D | 2015 | 2016 | 2017 | 2018 | 2019 |
|------------------------------------|------|------|------|------|------|
| Measles | 0 | 0 | 0 | 0 | 1 |
| Meningococcal disease | 0 | 0 | 0 | 0 | 0 |
| Mumps | 0 | 1 | 1 | 0 | 1 |
| Pertussis | 41 | 51 | 36 | 22 | 115 |
| Strep pneumoniae, invasive | 8 | 11 | 12 | 15 | 10 |
| Varicella | 13 | 19 | 25 | 14 | 4 |
| TOTAL | 100 | 104 | 158 | 147 | 205 |

| VECTOR-BORNE | | | | | | | | |
|---|---|---|----|----|----|--|--|--|
| Reportable disease 2015 2016 2017 2018 2019 | | | | | | | | |
| Chikungunya | 0 | 0 | 0 | 0 | 1 | | | |
| LaCrosse virus | 1 | 0 | 1 | 0 | 0 | | | |
| Lyme disease | 4 | 2 | 10 | 11 | 15 | | | |
| Malaria | 0 | 0 | 1 | 1 | 0 | | | |
| Rocky Mountain Spotted Fever | 0 | 0 | 1 | 0 | 0 | | | |
| St Louis encephalitis | 0 | 0 | 0 | 1 | 0 | | | |
| West Nile Virus | 0 | 0 | 0 | 0 | 0 | | | |
| Zika Virus | - | 1 | 0 | 0 | 0 | | | |
| Other Arthropod-borne Disease | - | - | - | - | 1 | | | |
| TOTAL | 5 | 3 | 13 | 13 | 17 | | | |

| OTHER REPORTABLE CONDITIONS | | | | | | |
|---|------|------|------|------|------|--|
| Reportable Disease | 2015 | 2016 | 2017 | 2018 | 2019 | |
| Botulism – infant | 1 | 0 | 0 | 0 | 0 | |
| Brucellosis | 0 | 0 | 0 | 0 | 1 | |
| Coccidioidomycosis | 0 | 1 | 5 | 1 | 1 | |
| CP-CRE* | - | - | - | 1 | 1 | |
| Hemolytic Uremic Syndrome (HUS) | 0 | 1 | 0 | 0 | 0 | |
| Legionellosis - Legionnaires' Disease | 5 | 3 | 6 | 16 | 12 | |
| Leptospirosis | 0 | 0 | 0 | 0 | 0 | |
| Listeriosis | 0 | 0 | 0 | 1 | 0 | |
| Meningitis (aseptic/viral) | 6 | 3 | 5 | 7 | 6 | |
| Meningitis (bacterial) | 0 | 2 | 1 | 1 | 0 | |
| Streptococcal - Group A -invasive | 5 6 | | 7 | 5 | 11 | |
| Streptococcal - Group B - in newborn | 1 | 0 | 2 | 0 | 1 | |
| Streptococcal Toxic Shock Syndrome (STSS) | 0 | 0 | 0 | 0 | 0 | |
| Tularemia | 0 | 0 | 0 1 | _ | 0 | |
| TOTAL | 17 | 15 | 26 3 | 3 | 33 | |

- Indicates that disease was not reportable during coinciding year

 ${}^{*} Carbapenemase-producing\ carbapenem-resistant\ Enterobacteriaceae$

REPORTABLE DISEASES: 0 CASES IN DELAWARE COUNTY 2019

| Amebiasis | Plague |
|--|---|
| Anthrax | Poliomyelitis |
| Botulism- foodborne | Powassan virus disease |
| Botulism- wound or infant | Psittacosis |
| Candida Auris | Q fever |
| Chancroid | Rabies (human) |
| Chikungunya | Rubella (congenital) |
| Cholera | Rubella (not congenital) |
| Creutzfeldt-Jakob disease | Salmonella Paratyphi |
| Dengue | Severe acute respiratory syndrome (SARS) |
| Diphtheria | Smallpox |
| Eastern equine encephalitis | Spotted fever rickettsiosis |
| Ehrlichiosis/anaplasmosis | St Louis Encephalitis |
| Hantavirus | Staphylococcus aureus (with resistance or |
| Hemolytic uremic syndrome | intermediate resistance to vancomycin) |
| Hepatitis D (delta hepatitis) | Streptococcal toxic shock syndrome |
| Hepatitis E | Tetanus |
| Influenza - associated pediatric mortality | Toxic shock syndrome |
| Influenza A - novel virus | Trichinellosis |
| LaCrosse virus | Tularemia |
| Leprosy (Hansen's disease) | Typhoid fever |
| Leptospirosis | Viral hemorrhagic fevers |
| Listeriosis | West Nile virus infection |
| Malaria | Western equine encephalitis virus |
| Meningitis (bacterial) | Yellow fever |
| Meningococcal disease | Zika virus |
| Middle East respiratory syndrome (MERS) | |

2019 DISEASE TRENDS

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

ENTERIC DISEASES

*Some reportable diseases may not be included as they have been reportable for less than 3 years or if there was insufficient data to indicate a trend.







HEPATITIS DISEASES



Vibriosis (not cholera) 2.5 1.5 0.5

SEXUALLY TRANSMITTED DISEASES





VACCINE PREVENTABLE DISEASES







VECTOR-BORNE DISEASES



OTHER DISEASE TRENDS



2019 OUTBREAKS

The DGHD routinely conducts follow up on reported illnesses. An outbreak is determined based on circumstances and the agent involved or suspected to be involved. Only one case of a Class A disease is needed to be considered an outbreak. Otherwise, the definition of an outbreak is typically the occurrence of two or more cases of a similar illness with a common link. If an outbreak is determined, the DGHD initiates an outbreak investigation to confirm the agent (if possible), collect information to better define the outbreak and recommend prevention/control measures. The DGHD investigated 19 outbreaks in 2019. Suspect, probable, and confirmed outbreaks are included in the data below. Delaware county cases included in nation-wide outbreaks are not included in this data.

| YEAR | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------|------|------|------|------|------|
| NUMBER OF | | | | | |
| OUTBREAKS | 6 | 9 | 16 | 22 | 19 |
| INVESTIGATED | | | | | |

| 2019 Outbreak type | Agent | Number of people ill |
|-----------------------|--------------------------------------|----------------------|
| | Norovirus | 15 |
| | Norovirus | 3 |
| Foodborno | Norovirus | 2 |
| roouborne | Norovirus | 2 |
| | Unknown | 4 |
| | Unknown | 5 |
| Healthcare Associated | Influenza virus | 7 |
| Healthcare-Associated | Legionella | 23 |
| | Influenza Virus | 63 |
| | Norovirus | 31 |
| | Respiratory Syncytial Virus (RSV) | 10 |
| | Salmonella | 11 |
| Institutional | Bordatella Pertussis | 6 |
| | Bordatella Pertussis | 52 |
| | Coxsackie Virus | 11 |
| | Unknown, Gastrointestinal | 14 |
| | Unknown, Respiratory | 5 |
| | Conjunctivitis | 53 |
| Waterborne | Pseudomonas aeruginosa | 4 |

CONCLUSIONS

This report serves to describe communicable disease data and trends from 2019. The data from this report is used to drive future communicable disease investigations, planning of resources, policy development, training, and education. The number of disease investigations has increased over the past 5 years. This increase may be due to a multitude of factors including; Delaware county population growth, better reporting, increases in disease/illness, and/or an increase in laboratory testing. To accommodate for this increase, the Disease Control and response Unit added an additional epidemiologist to the team and expanded outreach efforts to better protect the health of the community.

In 2019, cases of pertussis were the highest recorded since 2013 in Delaware County. In addition, there was heightened awareness nationally and locally regarding diseases such as measles and Legionnaires' Disease. The DGHD increased preparation efforts for those diseases in response to increased concern.