Delaware General Health District
Communicable Disease Annual Report

2017

Prepared by:

Delaware General Health District

Disease Prevention Section
Heather Lane, DVM, MPH, DACVPM
Travis Irvan, MPH
Arielle Hieronimus, MPH, CHES
Emily Clark, BSN, RN
Nancy Baileys

For comments and information requests:

Delaware General Health District
Disease Prevention Section
1 and 3 West Winter Street
P.O. Box 570
Delaware, Ohio 43015-0570

Phone: 740-203-2039

Fax: 740-203-2044

E-mail: hlane@delawarehealth.org

Table of Contents

Introduction

The 2017 Communicable Disease Annual Report presents an overview of the incidence of suspect, probable, and confirmed reportable diseases within the jurisdiction of the Delaware General Health District (DGHD). This report also includes communicable disease highlights, outreach highlights, the top 10 reported diseases, disease Critical Indicators (CI), historical counts of reportable diseases (2013-2016), outbreaks, disease trends and future outreach.

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 2017 year is provided on the following page.

Data for this report was acquired through Nightingale Notes (electronic health record system of DGHD) and the Ohio Disease Reporting System (ODRS). Data from Nightingale Notes and ODRS was retrieved on 1/17/2018 and 2/12/2018 respectively.

Diseases Reportable in 2017

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

From the Ohio Administrative Code Chapter 3701-3; Effective September 16, 2016

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
- 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
- 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.

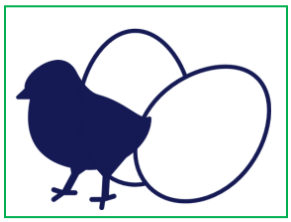
Ohio Department of Health

2017 COMMUNICABLE DISEASE HIGHLIGHTS

Campylobacter Outbreak Linked to Contact with Pet Store Puppies

The Centers for Disease Control (CDC), the United States Department of Agriculture, state and local partners investigated an outbreak of *Campylobacter jejuni* infections linked to puppies at Petland stores. Illnesses occurred among Petland employees and people who either recently purchased a puppy at Petland, visited a Petland store, or live in or visited a home with a puppy sold through Petland. A total of 113 people from 17 states were linked to this outbreak. The Delaware General Health District (DGHD) investigated 4 cases associated with this outbreak.

Don't Play Chicken with Your Health!



As raising backyard flocks becomes more popular, more people are having contact with chickens and ducks – and may not know about the risk of *Salmonella* infection. Live poultry can carry harmful germs and while they may appear healthy, they can still spread the germs to people. In 2017, the United States had the largest number of illness linked to contact with backyard poultry ever recorded by the CDC. There were 1120 cases from 48 states with 249 hospitalizations and 1 death. In Ohio, there were 52 cases linked to this outbreak with 1 case from Delaware County.

Fighting the Flu

This influenza season is notable for the sheer volume of flu widespread across the United States. As of March 3rd, 2018, 119 pediatric deaths were reported across the country. For the 2017-2018 flu season, seven outbreaks of influenza were reported to the DGHD including reports from long-term care facilities and educational institutions. Of those that received the flu shot this season, it reduced their risk of contracting influenza by about one-third. This year's vaccine was more effective at preventing influenza B than influenza A H3N2. Even with low efficacy, the flu vaccine still offers protection and can lessen the severity of the illness. The flu vaccine is the best way to protect yourself from the flu.

2017 OUTREACH HIGHLIGHTS

Healthy Swimming Outreach

In response to the large volume of *Cryptosporidium* cases in Delaware and other Ohio counties in 2016, the DGHD initiated a healthy swimming educational campaign. We visited 7 pools around our community- reaching approximately 1200 individuals- and talked to swimmers about healthy swimming practices. The DGHD also presented at the National Association of County and City Health Officials (NACCHO) conference on, "Ohio's Largest Ever Cryptosporidiosis Outbreak and the Vital Role of Public Health Partnerships."

What is Public Health?

The Disease Prevention Team partnered with several schools in talking to students about public health. Students learned about a variety of topics including herd immunity, the importance of hand washing, the role of local health departments, and different career paths in the public health field.

Hand Washing Outreach

The DGHD went out into classrooms and discussed how germs spread and how we can stop the spread by washing our hands. Over 500 students participated in hands-on activities to learn the importance of hand hygiene.

Poison Prevention

The DGHD participated in safety towns in Delaware and Powell to spread the word on poison prevention. Over 150 children took on the roles of detectives to figure out what is safe and what is poisonous.

2017 Reportable Diseases

Overview

In 2017 the DGHD's Communicable Disease Team conducted 1,414 disease investigations, an increase of 0.4% from the number of investigations conducted in 2016. Of those investigations, 876 were cases of a reportable disease from a person living in the DGHD jurisdiction, a decrease of 7.1% from 2016. The other 538 investigations were either a report of a non-reportable disease, a report classified as "not a case" or a report from an individual who was determined to be living outside of the DGHD jurisdiction and was transferred to another local health department for follow-up.

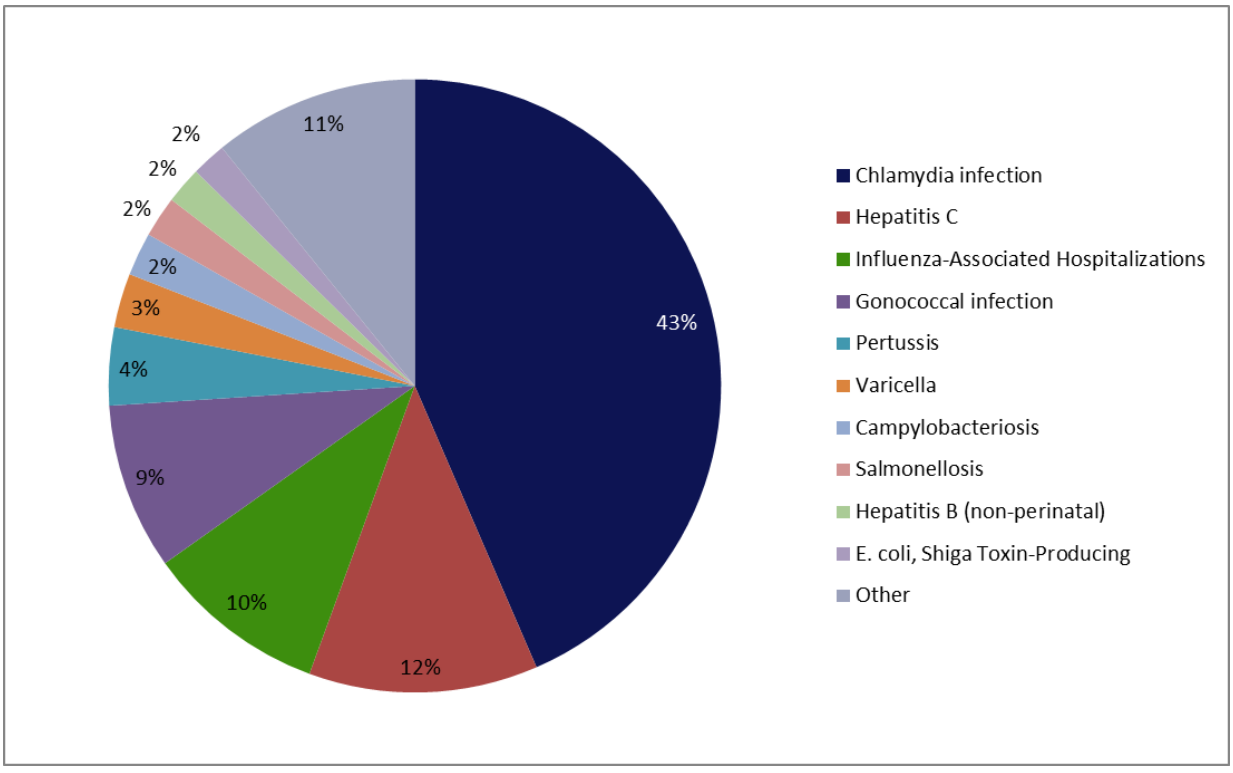
The numbers of disease reports in this summary include all investigations that were classified as confirmed, probable or suspect.

Top 10 Most Reported Diseases
Delaware County in 2017

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

Reportable Disease	Number of Cases	Percent*
Chlamydia infection	381	43.5%
Hepatitis C	106	12.1%
Influenza-Associated Hospitalizations	84	9.6%
Gonococcal infection	77	8.8%
Pertussis	36	4.1%
Varicella	25	2.9%
Campylobacteriosis	20	2.3%
Salmonellosis	19	2.2%
Hepatitis B (non-perinatal)	17	1.9%
E. coli, Shiga Toxin-Producing	16	1.8%

**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 2017

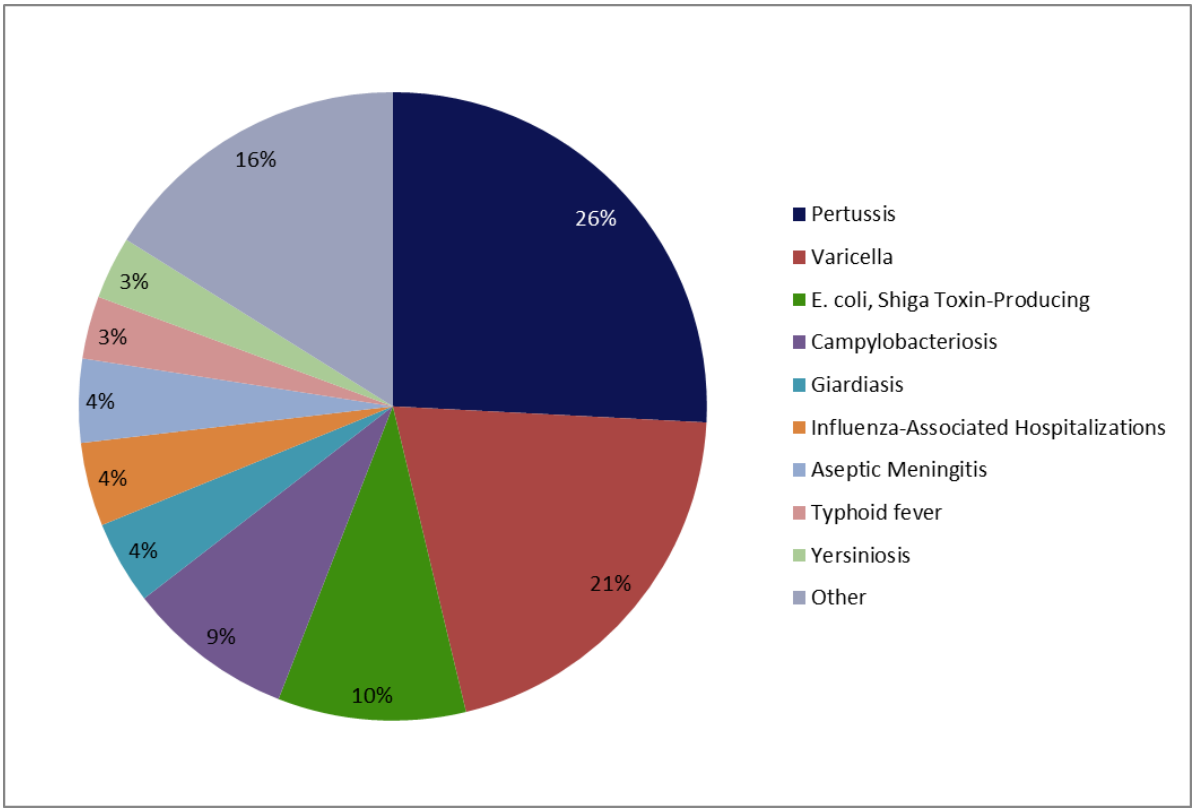
(Only lists diseases designated as reportable in the State of Ohio)

Reportable Disease	Number of Cases	Percent*
Pertussis	24	25.8%
Varicella	19	20.4%
E. coli, Shiga Toxin-Producing	9	9.7%
Campylobacteriosis	8	8.6%
Giardiasis	4	4.3%
Influenza-Associated Hospitalizations	4	4.3%
Aseptic Meningitis	4	4.3%
Typhoid fever	3	3.2%
Yersiniosis	3	3.2%
**	-	-

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

***Cryptosporidiosis, Lyme disease, Salmonellosis and Strep group B (newborn) all had 2 cases reported*

Pertussis, varicella and influenza are vaccine preventable diseases

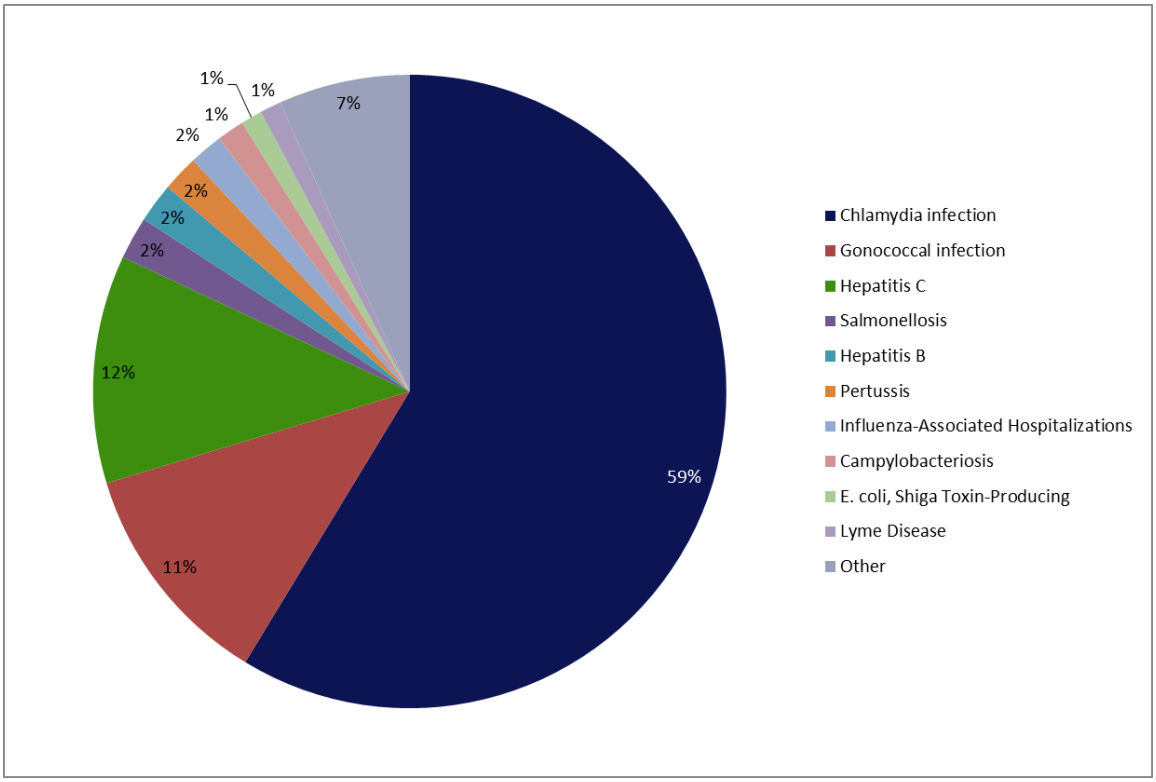


Top 10 Most Reported Diseases
15-59 years of age
Delaware County in 2017

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

Reportable Disease	Number of Cases	Percent*
Chlamydia infection	378	58.7%
Gonococcal infection	75	11.6%
Hepatitis C	75	11.6%
Salmonellosis	14	2.2%
Hepatitis B	13	2.0%
Pertussis	12	1.9%
Influenza-Associated Hospitalizations	11	1.7%
Campylobacteriosis	9	1.4%
E. coli, Shiga Toxin-Producing	7	1.1%
Lyme Disease	7	1.1%

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



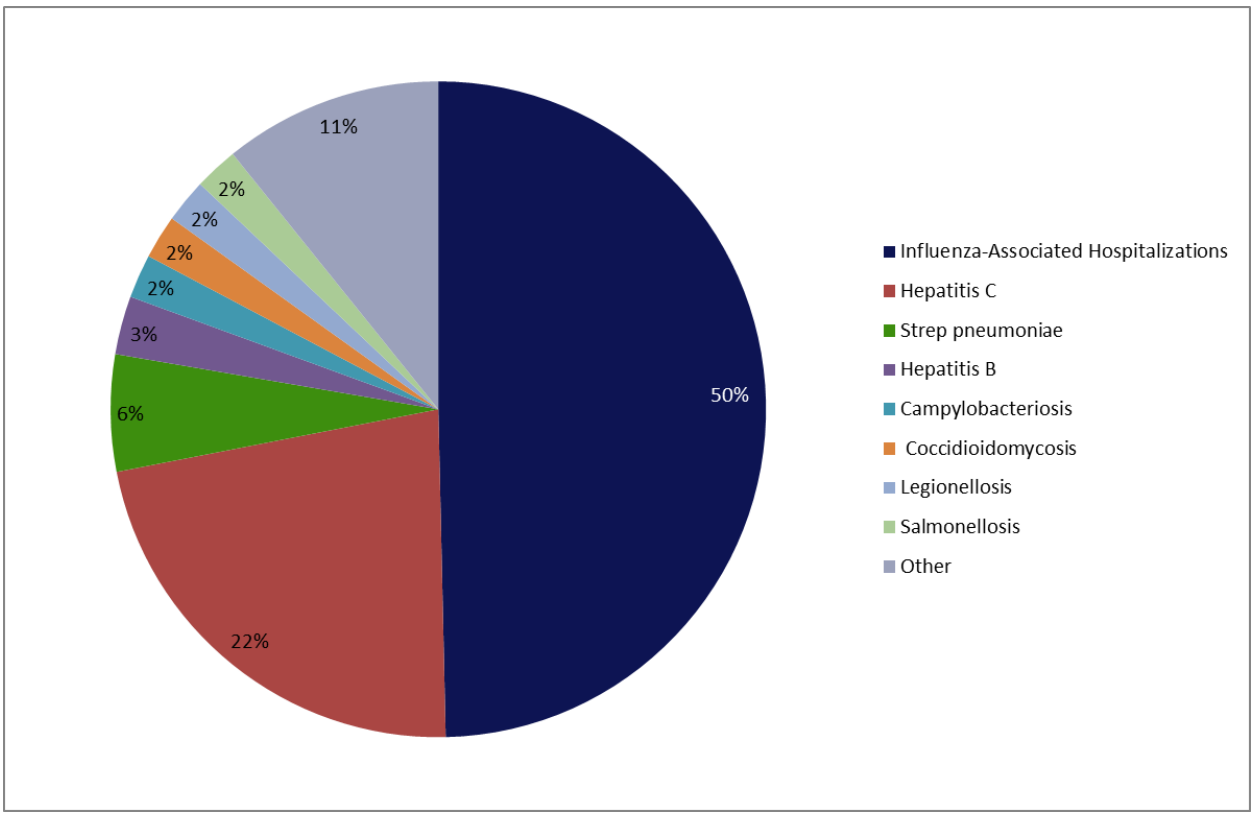
Top 10 Most Reported Diseases
60+ years of age
Delaware County in 2017

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

Reportable Disease	Number of Cases	Percent*
Influenza-Associated Hospitalizations	69	49.6%
Hepatitis C	31	22.3%
Strep pneumoniae	8	5.8%
Hepatitis B	4	2.9%
Campylobacteriosis	3	2.2%
Coccidioidomycosis	3	2.2%
Legionellosis	3	2.2%
Salmonellosis	3	2.2%
**	-	-

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

*** Chlamydia, Giardiasis, Gonococcal infection and Strep group A all had 2 cases reported*



Disease Critical Indicators (CI):

The number of each reportable disease in 2017 was compared to the CI for each disease. The numbers of enteric, vaccine preventable, and vector-borne diseases were also compared to the overall CI for each category. The CI is a calculated number that is used to determine when the number of cases reported exceeds a disease threshold. It is used as a way to identify when a particular disease has increased significantly. The CI is calculated using communicable disease data from 2006 -2016. The formula for a CI is: (3rd Quartile + 1.5*(3rd Quartile - 1st Quartile) +1).

Individual diseases above their CI values:

The following diseases were identified as being above their CI values in 2017. A summary of each disease is provided on the following pages.

Reportable Disease	Number of 2017 Cases	Critical Indicator
Coccidioidomycosis	5	3.5
E.coli, Shiga toxin-producing	16	14.38
Influenza-Associated Hospitalizations	84	71
Typhoid Fever	5	3.5

Summary of Disease Categories

2017 case numbers for selected categories of reportable diseases were not found to be above their critical indicators.

Disease Category	Number of 2017 Cases	Critical Indicator
Enteric	82	113.75
Vaccine Preventable	175	310.5
Vector-borne	13	21.125

One of the goals of the Health District is to reduce the number of enteric, vaccine preventable and vector-borne diseases. Vaccine preventable and vector-borne diseases did increase from 2016 to 2017, but both categories remained below their critical indicators. Vaccine preventable diseases increased beyond their historical 5-year average (2012-2016 average = 158.8). Vector-borne diseases increased beyond their 5-year historical average (2012-2016 average = 8); this increase can be attributed to an increase in the number of Lyme disease cases. Enteric diseases decreased from 2016 to 2017, in large part due to the 2016 statewide outbreak of *Cryptosporidium*. Enteric diseases also remained below their 5-year historical average (2012-2016 average = 96.4).

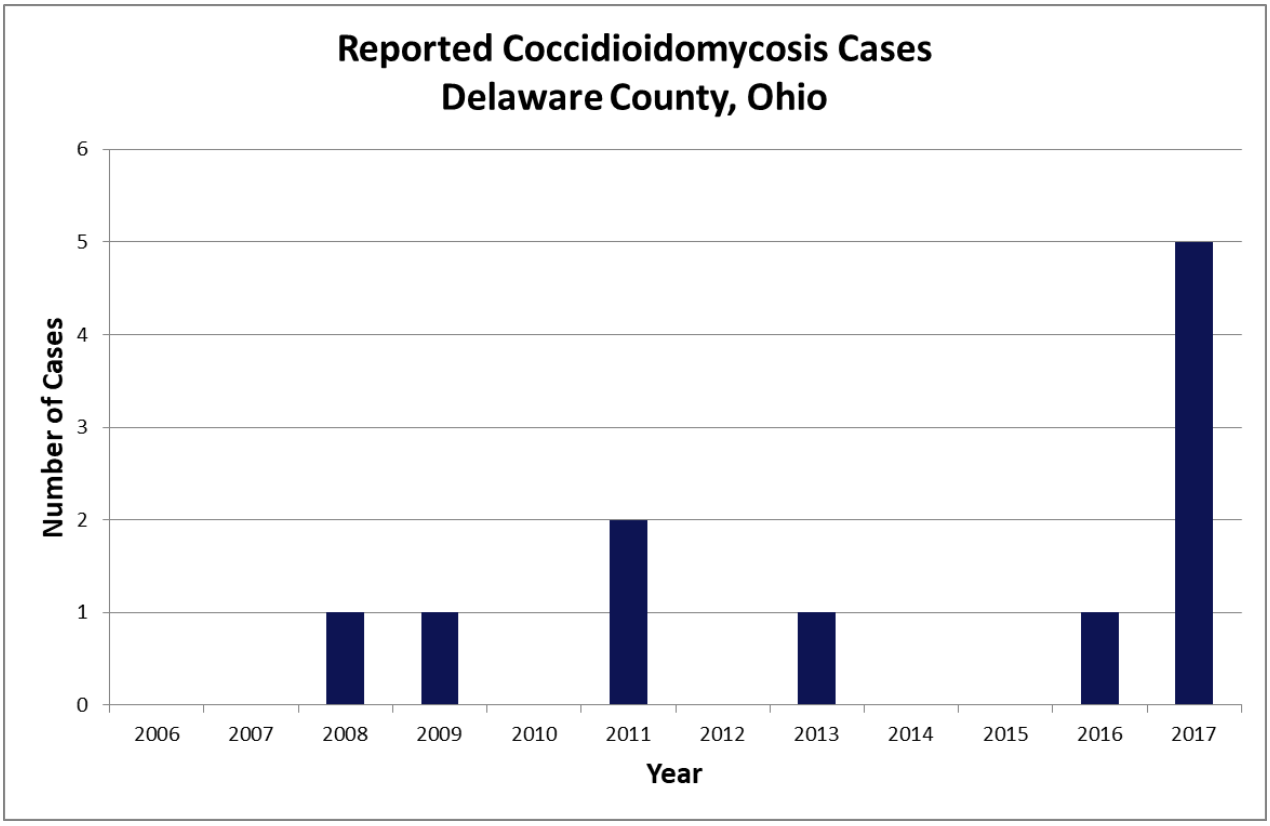
Enteric diseases included: campylobacteriosis, cryptosporidiosis, *E. coli* (Shiga toxin-producing), giardiasis, salmonellosis, shigellosis, typhoid fever, vibriosis, yersiniosis. Vaccine preventable diseases included: Influenza-associated hospitalizations and pediatric deaths, mumps, pertussis, *strep pneumo*, varicella, Hep A, Hep B perinatal, Hep B, Meningococcal disease, *heamophilis influenza*. Vector-borne diseases included: Chikungunya, LaCrosse, Lyme, Malaria, Rocky Mt Spotted Fever, West Nile, Zika.

Coccidioidomycosis

Coccidioidomycosis, also known as Valley Fever, is caused by the fungus *Coccidioides*. This fungus primarily lives in soil in the southwestern United States as well as parts of Mexico and Central and South America. People get sick from breathing in the microscopic fungus, although most that are exposed don't have any symptoms. Most people that become ill get better on their own within weeks to months, but some do need antifungal medication. More information can be found on the CDC Valley Fever (Coccidioidomycosis) website page.

5 cases of coccidioidomycosis were reported in Delaware County in 2017. Cases were classified as confirmed (4) and suspected (1). Case ages ranged from 29-68 years at time of diagnosis with a mean age of 53.4 years and a median age of 60 years. 60% of the cases were male. 80% of cases had a history of travel to the western United States or Central American countries. All cases were white, Non-Hispanic/Non-Latino.

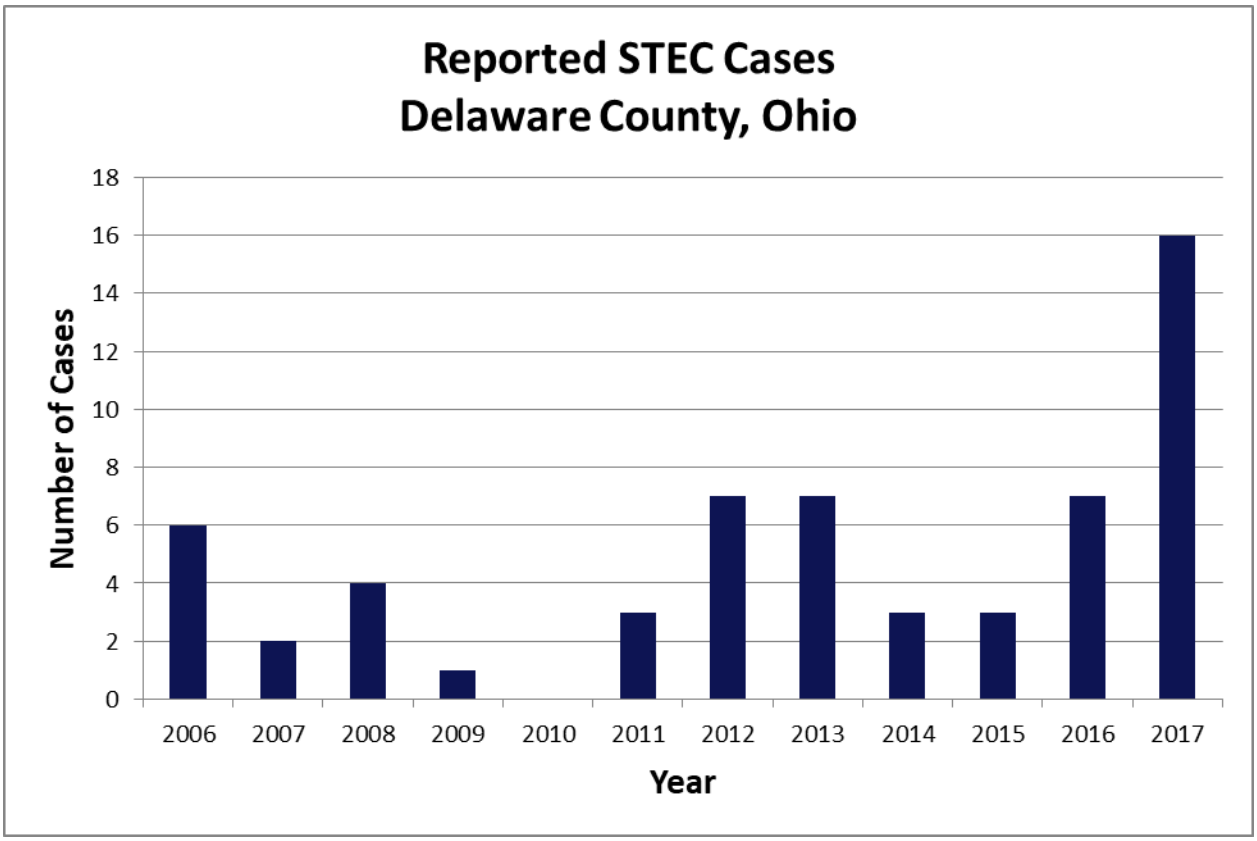
The DGHD Communicable Disease Team worked to identify the cause of increased case numbers; however, no exact reason could be determined. It is possible that the increase is due to a change in laboratory testing protocols, an increase in testing by physicians, an increase of exposures and/or an increase of immunocompromised individuals.



***E. coli*, Shiga toxin-producing (STEC)**

Eschericia coli (abbreviated *E. coli*) are a type of bacteria that can be found in food, the environment and in the intestines of animals and people. Although there are many types of harmless *E. coli*, Shiga toxin-producing *E.coli* (STEC) can cause disease. Some STEC infections can be mild, however, others can be life threatening. The symptoms of an STEC infection often include very bad stomach cramps, diarrhea (often bloody) and vomiting. It is commonly spread by eating raw or undercooked meat, cross contamination when cooking, drinking unpasteurized milk and exposure to other people ill with an STEC. More information can be found on the CDC Shiga Toxin-Producing E.coli & Food Safety website page.

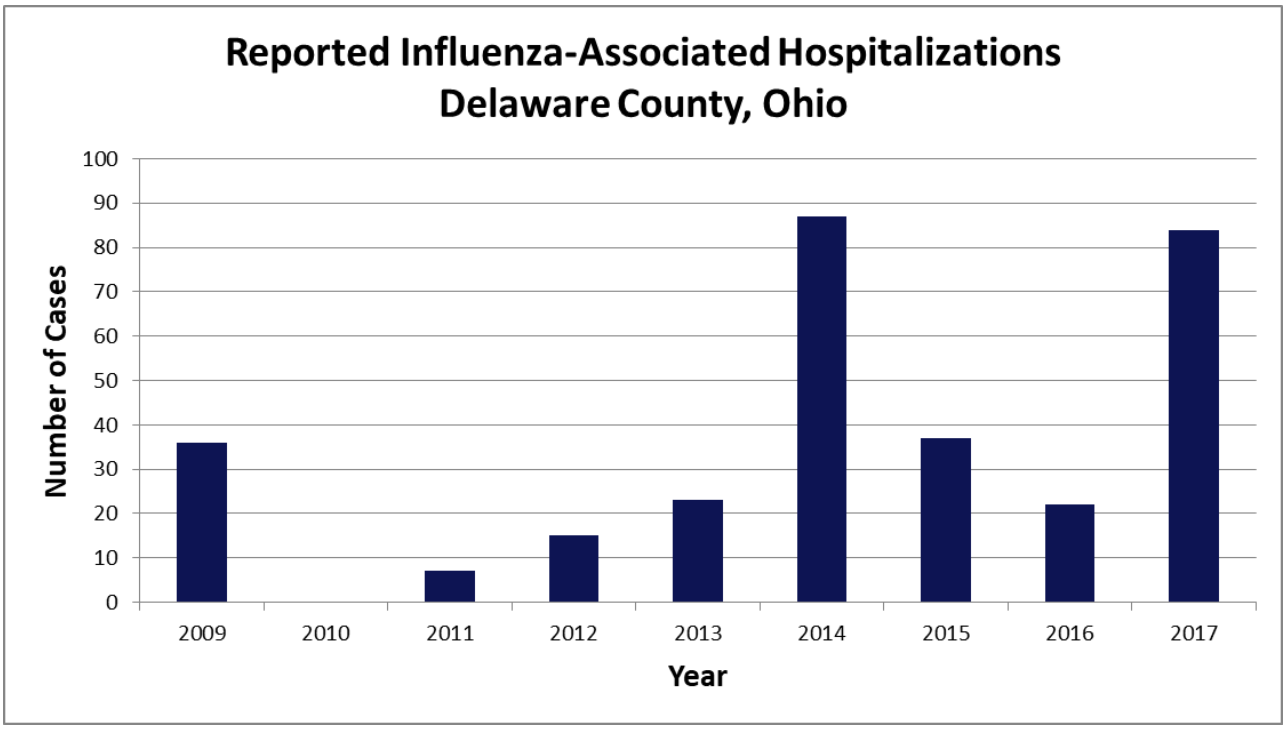
16 cases of Shiga toxin-producing *E.coli* were reported in Delaware County in 2017. Cases were classified as confirmed (10), probable (5) and suspected (1). Case ages ranged from 1-40 years at time of diagnosis with a mean age of 16 years and a median age of 14 years. 62.5% of the cases were female. Of those with a known race, 6.7% were black and 93.3% were white. Of those with a known ethnicity, 7.1% were Hispanic or Latino and 92.9% were Non-Hispanic or Non-Latino.



Influenza-Associated Hospitalizations

Influenza, also known as the flu, is a contagious respiratory illness causes by the influenza virus. Flu cases range from mild to severe. Severe cases can have serious outcomes such as hospitalization or even death. Some individuals are at greater risk of developing serious flu complications. Those at greater risk include older people, younger children, and people with certain health conditions. It is recommended that all individuals 6 months and older get vaccinated annually with the seasonal flu vaccine. In addition, frequent handwashing and staying home when sick are effective strategies to prevent the spread of flu. More information can be found on the CDC Influenza (Flu) website page.

The 2017-2018 influenza season was severe across the United States as well as Delaware County. During the 2017 portion of the season, 84 influenza-associated hospitalizations were reported in Delaware County. All cases were classified as confirmed. Case ages ranged from 6-96 years at time of diagnosis with a mean age of 69 years and a median age of 73 years. 60.7% of the cases were female. Of those with a known race, 100% of cases were white. Of those with a known ethnicity1.5% were Hispanic or Latino and 98.5% were Non-Hispanic or Non-Latino.



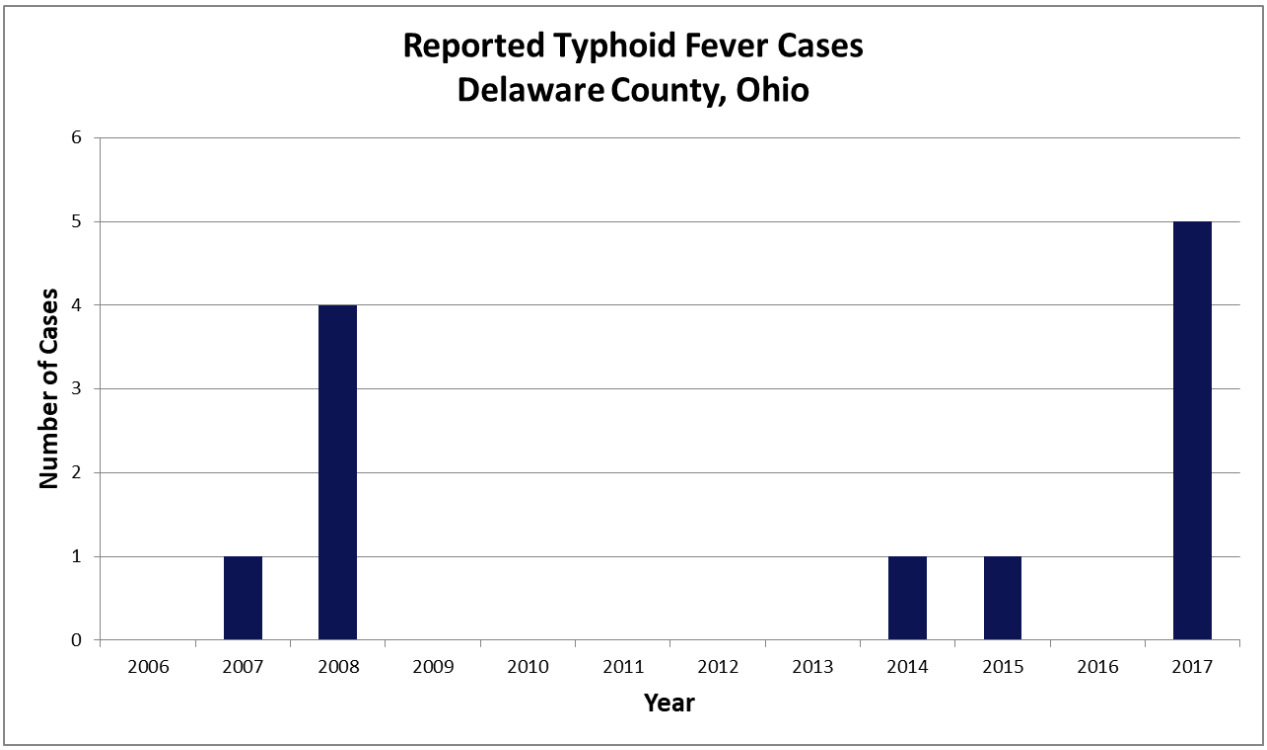
**Influenza-associated hospitalizations were not reportable prior to 2009*

Typhoid Fever

Typhoid fever is caused by the bacterium *Salmonella* Typhi. It can cause life threatening illnesses. Most cases in the United States are acquired while traveling internationally. This particular type of *salmonella* only lives in humans. Not all that are infected show symptoms, however, both ill and non-ill individuals (carriers) can shed the bacteria in their feces. People can become infected by eating food or drinking beverages that have been handled by someone who is shedding the bacteria, or by drinking contaminated water. Because of this, typhoid fever is most commonly seen in the developing world where handwashing is less frequent and water is often contaminated with sewage. More information can be found on the CDC Typhoid Fever website page.

5 cases of typhoid fever were reported in Delaware County in 2017. Cases were classified as confirmed (3) and probable (2). Case ages ranged from 5-43 years at time of diagnosis with a mean age of 21 years and a median age of 10 years. 80% of the cases were female. Of those with a known race, 33.3% were Asian, 33.3% were black and 33.3% were white. Of those with a known ethnicity, 100% were Non-Hispanic or Non-Latino.

4 of the 5 cases were linked to a multicounty outbreak that occurred in the fall of 2017. A total of 28 individuals became ill after eating food prepared for an event in Franklin County.



Reportable Disease Counts 2013-2017

ENTERIC DISEASES					
Reportable disease	**2013**	**2014**	**2015**	**2016**	**2017**
Campylobacteriosis	13	12	19	27	20
Cryptosporidiosis	8	3	10	150	6
E. coli, Shiga toxin-producing	7	3	3	7	16
Giardiasis	7	7	2	11	8
Salmonellosis	11	15	21	25	19
Shigellosis	25	4	1	11	1
Typhoid fever	0	1	1	0	5
Vibriosis (not cholera)	0	2	0	0	2
Yersiniosis	0	0	0	1	5
TOTAL	**71**	**47**	**57**	**232**	**82**

HEPATITIS					
Reportable disease	**2013**	**2014**	**2015**	**2016**	**2017**
Hepatitis A	0	0	0	0	0
Hepatitis B , Perinatal	0	0	0	0	0
Hepatitis B, Non-Perinatal	21	24	39	32	17
Hepatitis C	74	67	91	98	106
TOTAL	**95**	**91**	**130**	**130**	**123**

SEXUALLY TRANSMITTED INFECTIONS					
Reportable disease	**2013**	**2014**	**2015**	**2016**	**2017**
Chlamydia infection	299	312	366	363	381
Gonococcal infection	44	50	66	72	77
Syphilis	5	3	7	8	14
TOTAL	**348**	**365**	**439**	**443**	**472**

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

TUBERCULOSIS					
Reportable disease	**2013**	**2014**	**2015**	**2016**	**2017**
Tuberculosis	0	0	1	1	2

VACCINE PREVENTABLE					
Reportable disease	**2013**	**2014**	**2015**	**2016**	**2017**
Haemophilis influenza	0	0	1	0	0
Influenza-associated hospitalization	23	87	37	22	84
Influenza-associated pediatric deaths	0	0	0	0	0
Meningococcal disease	0	0	0	0	0
Mumps	0	40	0	1	1
Pertussis	115	33	41	51	36
Strep pneumoniae, invasive	10	6	8	11	12
Varicella	18	15	13	19	25
TOTAL	**166**	**181**	**100**	**104**	**158**

VECTOR-BORNE					
Reportable disease	**2013**	**2014**	**2015**	**2016**	**2017**
Chikungunya	-	1	0	0	0
LaCrosse virus	2	1	1	0	1
Lyme disease	5	8	4	2	10
Malaria	2	0	0	0	1
Rocky Mountain Spotted Fever	0	1	0	0	1
West Nile	0	0	0	0	0
Zika	-	-	-	1	0
TOTAL	**9**	**11**	**5**	**3**	**13**

- indicates that disease was not reportable during coinciding year

OTHER REPORTABLE CONDITIONS					
Reportable Disease	**2013**	**2014**	**2015**	**2016**	**2017**
Botulism – infant	0	0	1	0	0
Coccidioidomycosis	1	0	0	1	5
Hemolytic Uremic Syndrome (HUS)	0	0	0	1	0
Legionellosis - Legionnaires' Disease	5	5	5	3	6
Leptospirosis	0	2	0	0	0
Listeriosis	1	0	0	0	0
Meningitis (aseptic/viral)	10	2	6	3	5
Meningitis (bacterial)	1	0	0	2	1
Streptococcal - Group A -invasive	1	4	5	6	7
Streptococcal - Group B - in newborn	0	0	1	0	2
Streptococcal Toxic Shock Syndrome (STSS)	0	1	0	0	0
TOTAL	**18**	**11**	**17**	**15**	**26**

Reportable Diseases not Reported in Delaware County 2013-2017

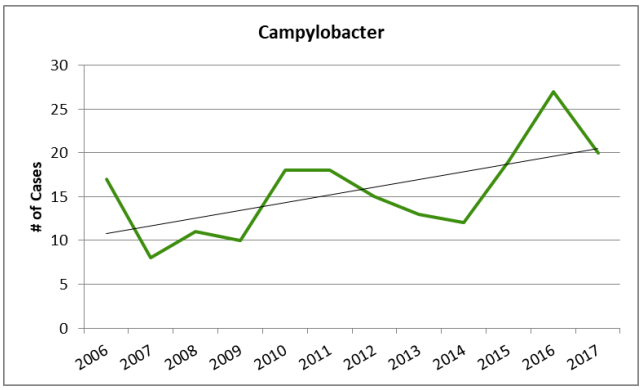
Amebiasis
Anthrax
Babesiosis
Botulism- foodborne
Botulism- wound
Brucellosis
Chancroid
Cholera
Creutzfeldt-Jakob disease
Cyclosporiasis
Dengue
Diphtheria
Eastern equine encephalitis
Ehrlichiosis/anaplasmosis
Hantavirus
Hepatitis A
Hepatitis B (perinatal)
Hepatitis D (delta hepatitis)
Hepatitis E
Influenza - associated pediatric mortality
Influenza A - novel virus
Leprosy (Hansen's disease)
Measles
Meningococcal disease
Middle East respiratory syndrome (MERS)
Plague
Poliomyelitis
Powassan virus disease
Psittacosis
Q fever
Rabies (human)
Rubella (congenital)
Rubella (not congenital)
Severe acute respiratory syndrome (SARS)
Smallpox
St. Louis encephalitis virus
Staphylococcus aureus (with resistance or intermediate resistance to vancomycin)
Tetanus
Toxic Shock Syndrome
Trichinellosis
Tularemia
Viral hemorrhagic fevers
West Nile virus infection
Western equine encephalitis virus
Yellow fever

Disease Trends

The following is a list of selected diseases and how they have been trending over the past several years. Although the population of Delaware County has been increasing, the diseases listed below that show an increase have exceeded the population increase. For example, the population increase from 2010 – 2016 is estimated to be 12%; however the increase of chlamydia cases during this timeframe was approximately 76%.

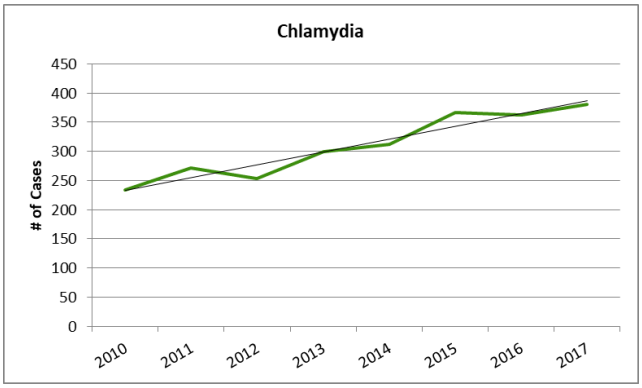
Campylobacteriosis

Despite a slight decline in 2017, the number of campylobacter cases has been increasing overall. A steady increase can be seen from 2015-2017. DGHD did investigate 4 cases linked to the nationwide pet store puppy outbreak.



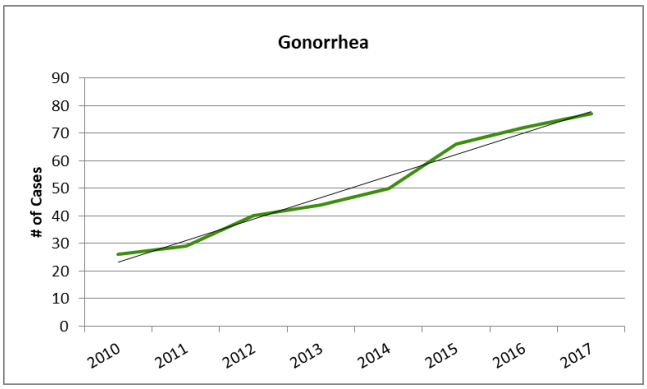
Chlamydia

Like several other sexually transmitted infections, chlamydia has been steadily increasing. This disease trend has been seen in the state of Ohio as well as nationally.



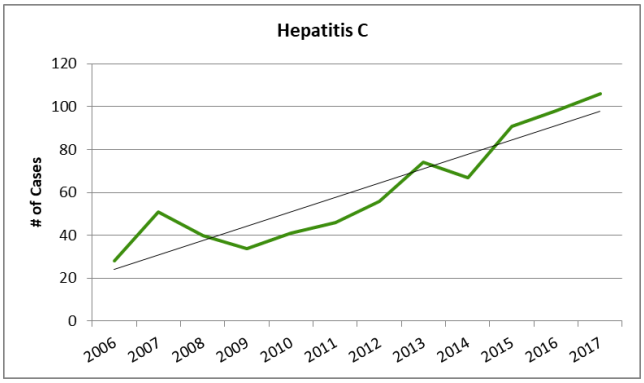
Gonorrhea

Like several other sexually transmitted infections, gonorrhea has been steadily increasing. This disease trend has been seen in the state of Ohio as well as nationally.



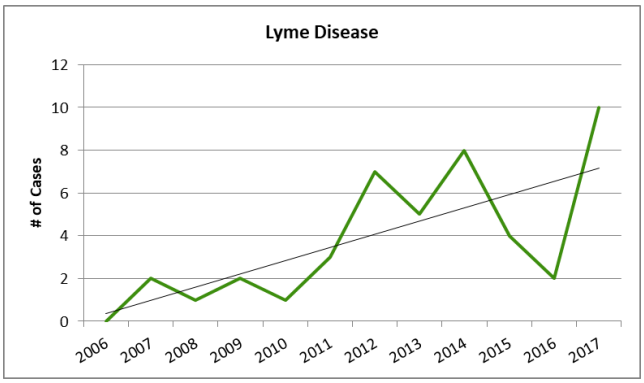
Hepatitis C

Like several other sexually transmitted infections, Hepatitis C has been steadily increasing. This disease trend has been seen in the state of Ohio as well as nationally. The rise of Hepatitis C cases is thought to be precipitated by the increase use of needle sharing with the current drug epidemic.



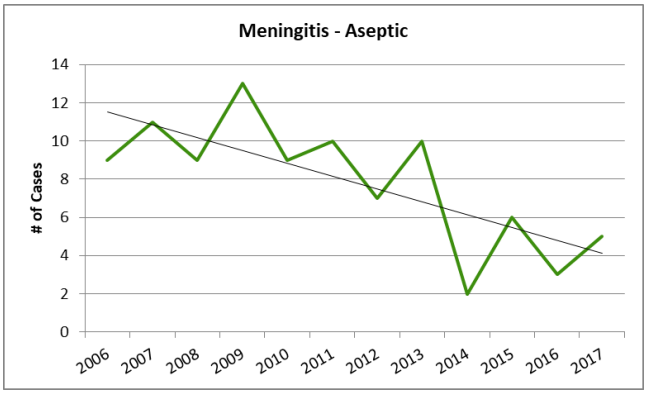
Lyme Disease

Despite a slight decline in 2016, the number of Lyme disease cases has been increasing overall. The state of Ohio, as well as several surrounding states, is seeing an increase in Lyme disease cases and increasing populations of the blacklegged ticks – the disease vector.



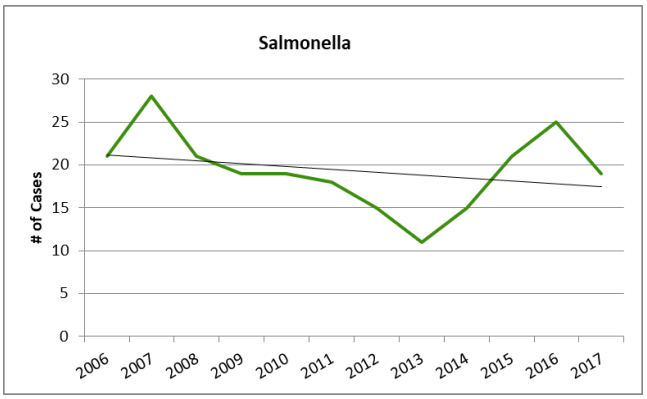
Meningitis - Aseptic

Aseptic meningitis has been on an overall decline. There is no known reason for this decrease.



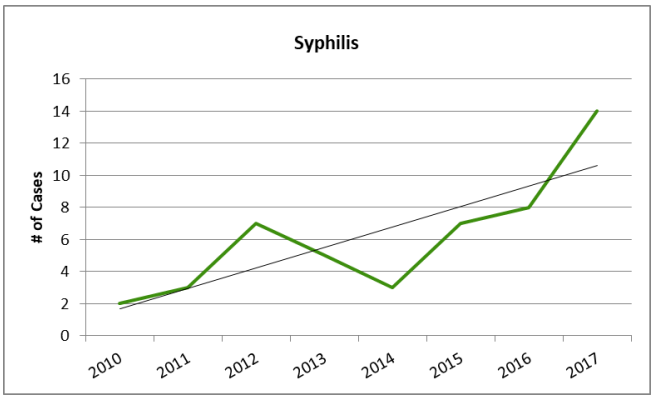
Salmonellosis

Overall, cases of salmonella have been on the decline; however a marked increase can be seen from 2013 to 2016. The DGHD has investigated multiple cases linked to backyard poultry and worked throughout the community in 2017 to spread prevention messages for backyard poultry owners and those interested in purchasing chicks.



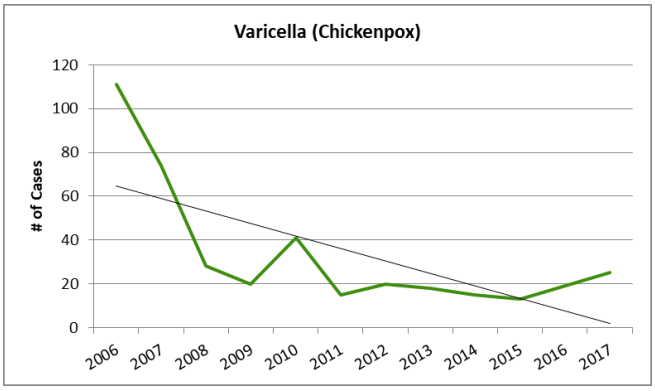
Syphilis

Like several other sexually transmitted infections, syphilis has been steadily increasing. This disease trend has been seen in the state of Ohio as well as nationally.



Varicella (Chickenpox)

Due to mandatory vaccination, implemented in 2006-2007, cases of varicella have been decreasing. Although many children develop a mild illness, chickenpox can be serious, especially in babies, adults and people with weakened immune systems.



2017 Outbreaks

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 the occurrence of two or more cases of a similar illness with a common link. If an outbreak is determined, DGHD initiates an outbreak investigation to confirm the agent (if possible), collect information to better define the outbreak and recommend prevention/control measures.

Outbreak type	Agent	Number of people ill
Cluster	Varicella-Zoster virus	6
Community	Norovirus	12
	Varicella-Zoster virus	4
Foodborne	Clostridium perfringens	2
	Unknown	3
	Unknown	2
	Unknown	5
Healthcare-Associated	Influenza virus	23
Institutional	Bordetella pertussis	3
	Coxsackie virus	17
	Coxsackie virus	17
	Escherichia coli	4
	Hand, foot, mouth disease	3
	Norovirus	44
	Norovirus	17
	Parainfluenza virus	16
	Unknown	34

Future Prevention and Outreach

In response to the increase of certain diseases, the DGHD works to spread prevention messages and educate the community and its stakeholders to better prepare for and prevent illness within the county.

In 2017, coccidioidomycosis, *E.coli* (Shiga toxin-producing), influenza-associated hospitalizations and Typhoid fever were above their Critical Indicator (CI) values. With the increase of Typhoid fever being due to a localized event in Franklin County, specific disease prevention efforts for this illness will not be pursued. However, efforts to prevent coccidioidomycosis, *E.coli* (Shiga toxin-producing) and Influenza-associated hospitalizations will be pursued.

Coccidioidomycosis: In 2018, efforts will be made to educate the community and stakeholders on fungal diseases. Education focused on diagnostic testing and interpretation for physicians will be prioritized. In addition, DGHD will continue to search for trends and identify the causes of these trends through the state reporting system and contact with other local health departments and the state health department.

***E.coli* (Shiga toxin-producing)**: In 2018, hand washing classes will continue for students and staff throughout Delaware County. Through its partnerships, the DGHD will send updated information to schools and daycares through the School & Daycare Weekly Disease Report. Through the Environmental Health Division, the DGHD will also provide education on proper food handing.

Influenza-associated hospitalizations: In 2018, DGHD flu vaccine clinics will be advertised and held both at the Health District and throughout the community. Weekly Friday Flu updates were created and sent to community members and stakeholders during the 2017-2018 season. Weekly Friday Flu updates will again be utilized and distributed during the 2018-2019 flu season with an early emphasis on vaccine prevention. Hand washing training will also help spread the prevention message both before and throughout the season.

Additional diseases identified as public health concerns to Delaware County will be addressed throughout the year.

In addition to the above diseases, the DGHD will work to identify health disparities that may be present. Identified disparities will be used as indicators to community needs and the DGHD will work to improve health equity based on these needs.

The DGHD will continue to dedicate efforts to prevention, education and outreach.