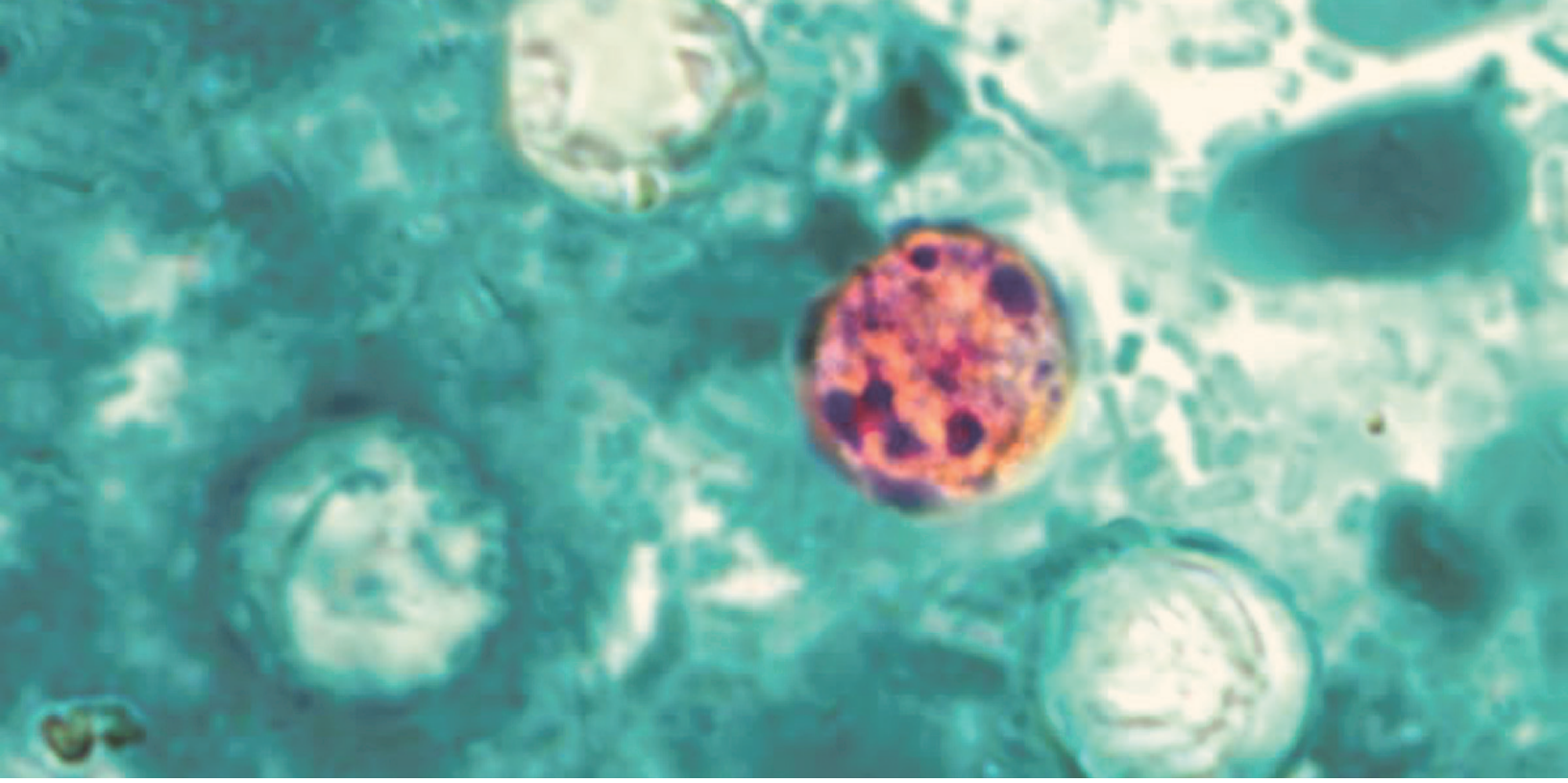

ANNUAL SUMMARY OF

# REPORTABLE DISEASES 2018

Columbus & Franklin County, Ohio

THE CITY OF COLUMBUS
ANDREW J. GINTHER, MAYOR

COLUMBUS PUBLIC HEALTH

Franklin County Public Health

ANNUAL SUMMARY OF

# REPORTABLE DISEASES 2018

## Columbus & Franklin County, Ohio

**Published September 2019**

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*Cover Image: This photomicrograph of a fresh stool sample, which had been prepared using a 10% formalin solution, and stained with modified acid-fast stain, revealed the presence of four Cyclospora cayetanensis oocysts in the field of view. Compared to wet mount preparations, the oocysts are less perfectly round and have a wrinkled appearance due to this method of fixation. Most importantly, the staining is variable among the four oocysts. Image obtained from phil.cdc.gov.*

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# INTRODUCTION

Infectious diseases are illnesses caused by microorganisms, such as bacteria, viruses, parasites and fungi. The route of transmission varies by disease and may include direct contact with contaminated body fluids or excretions, contact with contaminated objects, inhalation of contaminated airborne particles, ingestion of contaminated food or water, or transmission from an animal or vector (i.e., arthropod) carrying the microorganism.

According to Ohio Administrative Code Chapter 3701-3, cases and suspected cases of selected infectious diseases are required to be reported to state and local public health agencies. These "reportable diseases" or "reportable conditions" were determined to be of public health significance in Ohio. Many of these diseases must also be reported to the Centers for Disease Control and Prevention (CDC) as part of national public health surveillance of infectious diseases. Outbreaks of infectious diseases must also be reported to state and local public health agencies in Ohio, even if the individual disease is not classified as a reportable disease.

For over 15 years, Columbus Public Health and Franklin County Public Health have joined forces to make the reporting, tracking and investigation of infectious disease cases easier and more convenient through the centralized Infectious Disease Reporting System (IDRS). This system provides early identification of potential outbreaks and new trends in infectious diseases. Infectious disease staff ensures proper investigation, timely follow-up of case reports, and interventions to prevent additional cases.

The 2018 Annual Summary includes cases of reportable diseases that were diagnosed among residents of Columbus and Franklin County, reported to public health, and found to meet the public health surveillance definition of a confirmed, probable or suspected case. This report also includes data on confirmed and probable infectious disease outbreaks in Columbus and Franklin County. These data do not represent all reportable infectious disease cases or outbreaks that occurred in the community because individuals may not seek medical care for mild or asymptomatic infections, case information (such as exposure history) may be unavailable, and reported cases or clusters of illness may not meet public health surveillance definitions. Surveillance definitions are designed to standardize data collection and reporting across public health jurisdictions and may differ from clinical definitions used in patient management. Public health messaging or media coverage of a particular disease can also influence testing and reporting rates. Data in this summary are considered provisional.

This summary is intended to be a resource for individuals and public health partners concerned about infectious diseases in Columbus and Franklin County. Further information on infectious diseases and reporting procedures may be obtained by contacting Columbus Public Health or Franklin County Public Health or by visiting www.IDRSinfo.org.

## KEY FINDINGS:

- Rates of the following reportable diseases increased annually from 2015 to 2018: campylobacteriosis, gonorrhea, Legionnaires' disease, bacterial meningitis (not *Neisseria meningitidis*), invasive group A streptococcal disease, and tuberculosis.
- A total of 106 confirmed and probable outbreaks were reported, involving 1,210 cases; institutional outbreaks were the most common type (61% of outbreaks), followed by health care-associated (19%).
- The rate of cyclosporiasis in 2018 was nearly three times the rate in 2017, partly related to a multi-state outbreak linked to salads sold at a fast-food chain (see p. 11 for more information).
- The rate of hepatitis A in 2018 was over 11 times the rate in 2017, due to a statewide community outbreak (see p. 12 for more information).

# DEMOGRAPHIC PROFILE OF FRANKLIN COUNTY

## FRANKLIN COUNTY POPULATION, 2018[1]

- The population of Franklin County increased 1.4% from over 1.29 million in 2017 to 1.31 million in 2018.
- 51.1% of Franklin County residents were female, and 48.9% were male.
- 67.1% of Franklin County residents were White; 23.5% were Black or African American; 5.7% were Asian; 0.3% were American Indian or Alaskan Native; 0.1% were Native Hawaiian and Other Pacific Islander; and 3.3% identified as two or more races.
- 5.7% of Franklin County residents were Hispanic or Latino.

### TABLE 1: FRANKLIN COUNTY POPULATION BY GENDER, 2018[1]

| GENDER | 2018 | |
|---|---|---|
| | POPULATION | PERCENT |
| Female | 670,214 | 51.1 |
| Male | 640,086 | 48.9 |
| **Total** | **1,310,300** | **100** |

### TABLE 2: FRANKLIN COUNTY POPULATION BY RACE, 2018[1]

| RACE | 2018 | |
|---|---|---|
| | POPULATION | PERCENT |
| American Indian or Alaska Native | 4,058 | 0.3 |
| Asian | 74,342 | 5.7 |
| Black or African American | 308,273 | 23.5 |
| Native Hawaiian and Other Pacific Islander | 762 | 0.1 |
| White | 880,257 | 67.1 |
| Two or more races | 42,608 | 3.3 |
| **Total** | **1,310,300** | **100** |

### TABLE 3: FRANKLIN COUNTY POPULATION BY ETHNICITY, 2018[1]

| ETHNICITY | 2018 | |
|---|---|---|
| | POPULATION | PERCENT |
| Hispanic or Latino | 74,816 | 5.7 |
| Non-Hispanic or Non-Latino | 1,235,484 | 94.3 |
| **Total** | **1,310,300** | **100** |

### TABLE 4: FRANKLIN COUNTY POPULATION BY AGE GROUP, 2018[1]

| AGE (YEARS) | 2018 | |
|---|---|---|
| | POPULATION | PERCENT |
| 0-4 | 92,798 | 7.1 |
| 5-14 | 165,827 | 12.6 |
| 15-24 | 174,549 | 13.3 |
| 25-34 | 240,078 | 18.3 |
| 35-44 | 175,333 | 13.4 |
| 45-54 | 155,417 | 11.9 |
| 55-64 | 148,907 | 11.4 |
| 65-74 | 95,631 | 7.3 |
| 75-84 | 43,590 | 3.3 |
| 85+ | 18,170 | 1.4 |
| **Total** | **1,310,300** | **100** |

## TABLE 5: ENTERIC DISEASES AMONG FRANKLIN COUNTY RESIDENTS, 2015–2018

### ENTERIC DISEASES

| | | 2015 | | | | 2016 | | | | 2017 | | | | 2018 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Population:** | | 1,251,722 | | | | 1,264,518 | | | | 1,291,981 | | | | 1,310,300 | | | |
| | | Confirmed & Probable | | All Statuses | | Confirmed & Probable | | All Statuses | | Confirmed & Probable | | All Statuses | | Confirmed & Probable | | All Statuses | |
| CLASS | DISEASE NAME | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† |
| B | Amebiasis | 3 | 0.2 | 3 | 0.2 | 8 | 0.6 | 8 | 0.6 | 4 | 0.3 | 6 | 0.5 | 1 | 0.1 | 1 | 0.1 |
| A | Botulism, Foodborne | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Campylobacteriosis | 113 | 9.0 | 113 | 9.0 | 172 | 13.6 | 172 | 13.6 | 226 | 17.5 | 226 | 17.5 | 249 | 19.0 | 249 | 19.0 |
| A | Cholera | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Cryptosporidiosis | 75 | 6.0 | 107 | 8.5 | 931 | 73.6 | 958 | 75.8 | 66 | 5.1 | 67 | 5.2 | 69 | 5.3 | 71 | 5.4 |
| B | Cyclosporiasis | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 6 | 0.5 | 6 | 0.5 | 18 | 1.4 | 18 | 1.4 |
| B | *Escherichia coli* O157:H7 and Shiga toxin-producing *E. coli* (STEC) | 51 | 4.1 | 60 | 4.8 | 47 | 3.7 | 83 | 6.6 | 61 | 4.7 | 87 | 6.7 | 105 | 8.0 | 107 | 8.2 |
| B | Giardiasis | 69 | 5.5 | 71 | 5.7 | 90 | 7.1 | 97 | 7.7 | 94 | 7.3 | 98 | 7.6 | 115 | 8.8 | 122 | 9.3 |
| B | Hemolytic uremic syndrome (HUS) | 1 | 0.1 | 1 | 0.1 | 1 | 0.1 | 2 | 0.2 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| B | Hepatitis A* | 6 | 0.5 | 6 | 0.5 | 13 | 1.0 | 19 | 1.5 | 7 | 0.5 | 17 | 1.3 | 175 | 13.4 | 192 | 14.7 |
| B | Hepatitis E* | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 3 | 0.2 | 2 | 0.2 | 6 | 0.5 | 1 | 0.1 | 4 | 0.3 |
| B | Listeriosis | 2 | 0.2 | 3 | 0.2 | 2 | 0.2 | 2 | 0.2 | 3 | 0.2 | 3 | 0.2 | 4 | 0.3 | 4 | 0.3 |
| B | Salmonellosis | 150 | 12.0 | 156 | 12.5 | 185 | 14.6 | 194 | 15.3 | 151 | 11.7 | 151 | 11.7 | 193 | 14.7 | 194 | 14.8 |
| B | Shigellosis | 172 | 13.7 | 176 | 14.1 | 385 | 30.4 | 407 | 32.2 | 218 | 16.9 | 220 | 17.0 | 200 | 15.3 | 201 | 15.3 |
| B | Trichinellosis | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Typhoid fever | 3 | 0.2 | 4 | 0.3 | 3 | 0.2 | 3 | 0.2 | 27 | 2.1 | 31 | 2.4 | 1 | 0.1 | 2 | 0.2 |
| B | Vibriosis | 1 | 0.1 | 1 | 0.1 | 1 | 0.1 | 1 | 0.1 | 6 | 0.5 | 6 | 0.5 | 9 | 0.7 | 9 | 0.7 |
| B | Yersiniosis | 4 | 0.3 | 4 | 0.3 | 5 | 0.4 | 5 | 0.4 | 2 | 0.2 | 10 | 0.8 | 8 | 0.6 | 12 | 0.9 |

† Rate per 100,000 population.

* In Annual Summaries prior to 2016, hepatitis A and hepatitis E were included in the "Hepatitis" disease table.

## TABLE 6: HEPATITIS B & C AMONG FRANKLIN COUNTY RESIDENTS, 2015–2018

| HEPATITIS B & C | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Year:*** | | **2015** | | | | **2016** | | | | **2017** | | | | **2018** | | | |
| ***Population:*** | | **1,251,722** | | | | **1,264,518** | | | | **1,291,981** | | | | **1,310,300** | | | |
| | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | |
| CLASS | DISEASE NAME | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† |
| B | Hepatitis B, acute | 72 | 5.8 | 72 | 5.8 | 73 | 5.8 | 73 | 5.8 | 71 | 5.5 | 71 | 5.5 | 72 | 5.5 | 72 | 5.5 |
| B | Hepatitis B, chronic | 533 | 42.6 | 533 | 42.6 | 464 | 36.7 | 464 | 36.7 | 515 | 39.9 | 515 | 39.9 | 481 | 36.7 | 481 | 36.7 |
| B | Hepatitis B, perinatal | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- | 0 | -- |
| B | Hepatitis C, acute | 2 | 0.2 | 2 | 0.2 | 46 | 3.6 | 46 | 3.6 | 43 | 3.3 | 43 | 3.3 | 57 | 4.4 | 57 | 4.4 |
| B | Hepatitis C, chronic | 1,877 | 149.9 | 1,877 | 149.9 | 2,366 | 187.1 | 2,366 | 187.1 | 2,315 | 179.2 | 2,315 | 179.2 | 1,762 | 134.5 | 1,762 | 134.5 |
| B | Hepatitis C, perinatal | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 7 | 0.4 | 7 | 0.4 |

† Rate per 100,000 population.
-- Population data are not available for children 0–24 months old.
N/A = not a reportable condition during the specified time period.

## TABLE 7: SEXUALLY TRANSMITTED INFECTIONS AMONG FRANKLIN COUNTY RESIDENTS, 2015–2018

| SEXUALLY TRANSMITTED INFECTIONS | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Year:*** | | **2015** | | | | **2016** | | | | **2017** | | | | **2018** | | | |
| ***Population:*** | | **1,251,722** | | | | **1,264,518** | | | | **1,291,981** | | | | **1,310,300** | | | |
| | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | |
| CLASS | DISEASE NAME | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† |
| ^ | HIV/AIDS* | 197 | 15.7 | 197 | 15.7 | 199 | 15.7 | 199 | 15.7 | 238 | 18.4 | 238 | 18.4 | 203 | 15.5 | 203 | 15.5 |
| B | Chancroid | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | *Chlamydia trachomatis* infections | 9,442 | 754.3 | 9,442 | 754.3 | 9,892 | 782.3 | 9,892 | 782.3 | 9,413 | 728.6 | 9,413 | 728.6 | 10,178 | 776.8 | 10,178 | 776.8 |
| B | Gonorrhea *(Neisseria gonorrhoeae)* | 3,264 | 260.8 | 3,264 | 260.8 | 4,276 | 338.2 | 4,276 | 338.2 | 4,447 | 344.2 | 4,447 | 344.2 | 4,935 | 376.6 | 4,935 | 376.6 |
| B | Syphilis, congenital | 7 | 36.7 | 7 | 36.7 | 4 | 21.1 | 4 | 21.1 | 8 | 42.6 | 8 | 42.6 | 7 | 38.3 | 7 | 38.3 |
| B | Syphilis, primary and secondary | 252 | 20.1 | 252 | 20.1 | 278 | 22.0 | 278 | 22.0 | 323 | 25.0 | 323 | 25.0 | 212 | 16.2 | 212 | 16.2 |

† Rate per 100,000 population for all diseases except "syphilis, congenital" which is per 100,000 live births.[2]
^Report on forms and in a manner prescribed by the director, described in Ohio Administrative Code Chapter 3701-3-12.
*Case counts obtained from the Ohio Department of Health (see Technical Notes).

## TABLE 8: VACCINE-PREVENTABLE DISEASES AMONG FRANKLIN COUNTY RESIDENTS, 2015–2018

| VACCINE-PREVENTABLE DISEASES | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ***Year:*** | **2015** | | | | **2016** | | | | **2017** | | | | **2018** | | | |
| | ***Population:*** | **1,251,722** | | | | **1,264,518** | | | | **1,291,981** | | | | **1,310,300** | | | |
| | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | |
| CLASS | DISEASE NAME | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† |
| A | Diphtheria | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | *Haemophilus influenzae* (invasive disease) | 12 | 1.0 | 12 | 1.0 | 10 | 0.8 | 10 | 0.8 | 22 | 1.7 | 22 | 1.7 | 25 | 1.9 | 26 | 2.0 |
| B | Influenza-associated hospitalization | 639 | 51.0 | 641 | 51.2 | 288 | 22.8 | 290 | 23.0 | 784 | 60.7 | 785 | 60.8 | 1,103 | 84.2 | 1,104 | 84.3 |
| B | Influenza-associated pediatric mortality | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| A | Measles | 1 | 0.1 | 2 | 0.2 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| A | Meningococcal disease | 4 | 0.3 | 4 | 0.3 | 1 | 0.1 | 1 | 0.1 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| B | Mumps | 6 | 0.5 | 21 | 1.7 | 2 | 0.2 | 14 | 1.1 | 8 | 0.6 | 8 | 0.6 | 0 | 0.0 | 7 | 0.5 |
| B | Pertussis | 230 | 18.4 | 332 | 26.5 | 372 | 29.4 | 535 | 42.3 | 277 | 21.4 | 393 | 30.4 | 134 | 10.2 | 174 | 13.3 |
| B | Poliomyelitis (including vaccine-associated cases) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Rubella, congenital | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| A | Rubella, not congenital | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 |
| B | *Streptococcus pneumoniae,* invasive disease (ISP)* | 105 | 8.4 | 106 | 8.5 | 119 | 9.4 | 121 | 9.6 | 161 | 12.5 | 167 | 12.9 | 132 | 10.1 | 133 | 10.2 |
| B | Tetanus | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Varicella | 56 | 4.5 | 63 | 5.0 | 69 | 5.5 | 78 | 6.2 | 50 | 3.9 | 54 | 4.2 | 81 | 6.2 | 85 | 6.5 |

† Rate per 100,000 population.

* In Annual Summaries prior to 2016, *Streptococcus pneumoniae*, invasive disease, was included in the "Other reportable diseases" table.

## TABLE 9: VECTORBORNE AND ZOONOTIC DISEASES AMONG FRANKLIN COUNTY RESIDENTS, 2015–2018

### VECTORBORNE AND ZOONOTIC DISEASES

| | | 2015 | | | | 2016 | | | | 2017 | | | | 2018 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Population:*** | | **1,251,722** | | | | **1,264,518** | | | | **1,291,981** | | | | **1,310,300** | | | |
| | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | |
| CLASS | DISEASE NAME | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† |
| B | Babesiosis | 0 | 0.0 | 1 | 0.1 | 0 | 0.0 | 1 | 0.1 | 0 | 0.0 | 5 | 0.4 | 0 | 0.0 | 3 | 0.2 |
| B | Brucellosis | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 5 | 0.4 | 0 | 0.0 | 0 | 0.0 |
| B | Chikungunya | 4 | 0.3 | 4 | 0.3 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| B | Dengue | 2 | 0.2 | 2 | 0.2 | 2 | 0.2 | 2 | 0.2 | 2 | 0.2 | 3 | 0.2 | 2 | 0.2 | 2 | 0.2 |
| B | Eastern equine encephalitis virus disease | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Ehrlichiosis/Anaplasmosis | 1 | 0.1 | 3 | 0.2 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| B | Hantavirus | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | La Crosse virus disease (other California serogroup virus disease) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.2 | 2 | 0.2 |
| B | Leptospirosis | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 | 1 | 0.1 | 1 | 0.1 |
| B | Lyme disease | 21 | 1.7 | 44 | 3.5 | 19 | 1.5 | 51 | 4.0 | 16 | 1.2 | 76 | 5.9 | 16 | 1.2 | 42 | 3.2 |
| B | Malaria | 17 | 1.4 | 19 | 1.5 | 28 | 2.2 | 28 | 2.2 | 23 | 1.8 | 23 | 1.8 | 29 | 2.2 | 29 | 2.2 |
| B | Other arthropod-borne disease* | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 |
| A | Plague | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Powassan virus disease | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Psittacosis | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| B | Q fever | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| A | Rabies, human | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Spotted fever rickettsiosis, including Rocky Mountain spotted fever (RMSF) | 1 | 0.1 | 4 | 0.3 | 2 | 0.2 | 6 | 0.5 | 5 | 0.4 | 9 | 0.7 | 2 | 0.2 | 11 | 0.8 |
| B | St. Louis encephalitis virus disease | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| A | Tularemia | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| A | Viral hemorrhagic fever (VHF) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | West Nile virus infection | 7 | 0.6 | 7 | 0.6 | 2 | 0.2 | 3 | 0.2 | 1 | 0.1 | 1 | 0.1 | 2 | 0.2 | 3 | 0.2 |
| B | Western equine encephalitis virus disease | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| A | Yellow fever | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Zika virus infection | N/A | N/A | N/A | N/A | 14 | 1.1 | 16 | 1.3 | 2 | 0.2 | 4 | 0.3 | 0 | 0.0 | 0 | 0.0 |

† Rate per 100,000 population.
*Includes cases of arthropod-borne disease that did not belong to an individual disease category during the reporting period.
N/A = not a reportable condition.

## TABLE 10: OTHER REPORTABLE INFECTIOUS DISEASES AMONG FRANKLIN COUNTY RESIDENTS, 2015–2018

| OTHER REPORTABLE INFECTIOUS DISEASES | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Year:*** | | **2015** | | | | **2016** | | | | **2017** | | | | **2018** | | | |
| ***Population:*** | | **1,251,722** | | | | **1,264,518** | | | | **1,291,981** | | | | **1,310,300** | | | |
| | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | |
| CLASS | DISEASE NAME | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† |
| A | Anthrax | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| A | Any unexpected pattern of cases, deaths or disease | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Botulism, infant | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 |
| B | Botulism, wound | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Coccidioidomycosis | 4 | 0.3 | 9 | 0.7 | 2 | 0.2 | 6 | 0.5 | 7 | 0.5 | 22 | 1.7 | 5 | 0.4 | 13 | 1.0 |
| B | Carbapenemase-producing carbapenem-resistant *Enterobacteriaceae* (CP-CRE) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 24 | 1.8 | 25 | 1.9 |
| B | Creutzfeldt-Jakob disease | 0 | 0.0 | 1 | 0.1 | 2 | 0.2 | 2 | 0.2 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| A | Influenza A- novel virus infection | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Legionnaires' disease | 97 | 7.7 | 97 | 7.7 | 106 | 8.4 | 111 | 8.8 | 129 | 10.0 | 129 | 10.0 | 213 | 16.3 | 213 | 16.3 |
| B | Leprosy (Hansen's disease) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.2 | 2 | 0.2 | 0 | 0.0 | 0 | 0.0 |
| B | Meningitis, aseptic (viral) | 83 | 6.6 | 86 | 6.9 | 85 | 6.7 | 86 | 6.8 | 32 | 2.5 | 32 | 2.5 | 89 | 6.8 | 89 | 6.8 |
| B | Meningitis, bacterial (not *N. meningitidis*) | 8 | 0.6 | 9 | 0.7 | 11 | 0.9 | 12 | 0.9 | 17 | 1.3 | 18 | 1.4 | 18 | 1.4 | 21 | 1.6 |
| A | Middle East Respiratory Syndrome (MERS) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| A | Severe acute respiratory syndrome (SARS) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| A | Smallpox | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | *Staphylococcus aureus,* with resistance or intermediate resistance to vancomycin (VRSA, VISA) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |

*Table continued on next page.*

## TABLE 10: OTHER REPORTABLE DISEASES AMONG FRANKLIN COUNTY RESIDENTS, 2015–2018, *continued*

| OTHER REPORTABLE DISEASES | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Year:*** | | **2015** | | | | **2016** | | | | **2017** | | | | **2018** | | | |
| ***Population:*** | | **1,251,722** | | | | **1,264,518** | | | | **1,291,981** | | | | **1,310,300** | | | |
| | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | | **Confirmed & Probable** | | **All Statuses** | |
| CLASS | DISEASE NAME | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† | # of Cases | Case Rate† |
| B | Streptococcal disease, group A, invasive (IGAS) | 47 | 3.8 | 47 | 3.8 | 51 | 4.0 | 55 | 4.3 | 103 | 8.0 | 107 | 8.3 | 135 | 10.3 | 141 | 10.8 |
| B | Streptococcal disease, group B, in newborn | 17 | 0.9 | 17 | 0.9 | 12 | 0.6 | 12 | 0.6 | 8 | 0.4 | 8 | 0.4 | 10 | 0.5 | 10 | 0.5 |
| B | Streptococcal toxic shock syndrome (STSS) | 3 | 0.2 | 3 | 0.2 | 5 | 0.4 | 5 | 0.4 | 5 | 0.4 | 5 | 0.4 | 21 | 1.6 | 21 | 1.6 |
| B | Toxic shock syndrome (TSS) | 0 | 0.0 | 0 | 0.0 | 1 | 0.1 | 1 | 0.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| B | Tuberculosis (TB), including multi-drug resistant TB (MDR-TB) | 40 | 3.2 | 40 | 3.2 | 50 | 4.0 | 50 | 4.0 | 53 | 4.1 | 53 | 4.1 | 78 | 6.0 | 78 | 6.0 |

† Rate per 100,000 population for all diseases except "streptococcal disease, group B, in newborn," which is per 1,000 live births.[2]

N/A = not a reportable condition.

# DEATHS ASSOCIATED WITH DISEASE

In 2018, a total of 61 deaths occurred among confirmed and probable cases of reportable diseases in Franklin County. Eight of these deaths were associated with multiple reportable diseases. Influenza-associated hospitalization was associated with the most deaths (n=20), followed by Legionnaires' disease (n=9), and invasive group A streptococcal disease (n=8). The greatest number of deaths occurred among individuals aged 65 years and older. Three deaths occurred among cases less than 18 years old.

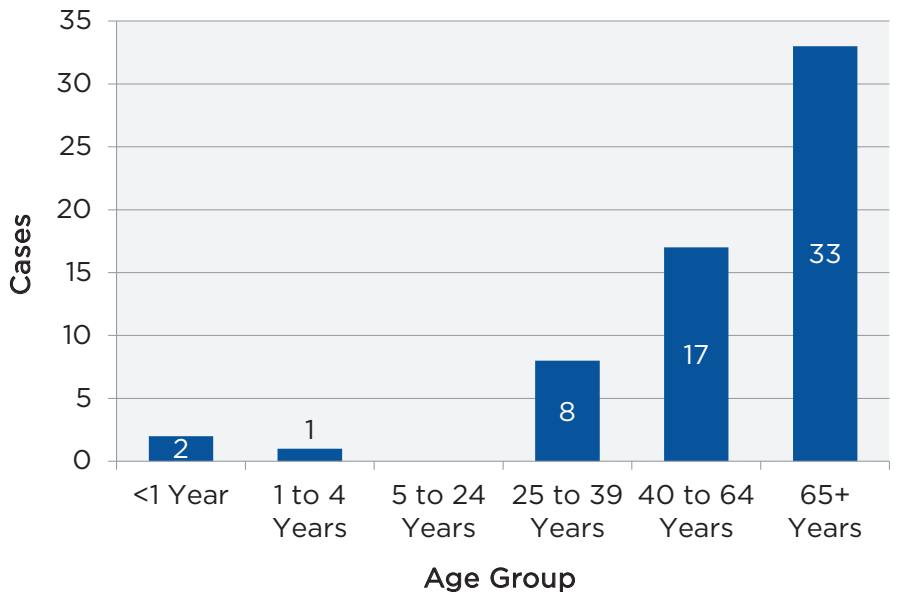
Death data were obtained from the Ohio Disease Reporting System (ODRS) and are subject to several limitations. A death is only captured in the ODRS record if the person dies during the course of a case or outbreak investigation. If a person dies after the investigation has ended, the record is not necessarily updated. Therefore, the number of deaths reported in Table 11 may underestimate the true number of deaths that occurred among reportable disease cases. Furthermore, investigators do not determine whether a reportable disease contributed to an individual's death. It is not possible to determine the true cause(s) of death without additional information from death or medical records.

## TABLE 11: NUMBER OF DEATHS* AMONG CONFIRMED AND PROBABLE CASES OF REPORTABLE DISEASE, EXCLUDING SEXUALLY TRANSMITTED INFECTIONS, FRANKLIN COUNTY, 2018

| REPORTABLE DISEASE | DEATHS* |
|---|---|
| Campylobacteriosis | 1 |
| Carbapenemase-producing carbapenem-resistant *Enterobacteriaceae* (CP-CRE) | 2 |
| Cryptosporidiosis | 1 |
| *Haemophilus influenzae* (invasive disease) | 2 |
| Hepatitis A | 1 |
| Hepatitis B, chronic | 4 |
| Hepatitis C, chronic | 5 |
| Influenza-associated hospitalization | 20 |
| Legionnaires' disease | 9 |
| Listeriosis | 1 |
| Meningitis, aseptic (viral) | 1 |
| Meningitis, bacterial (not *N. meningitidis*) | 2 |
| Salmonellosis | 1 |
| Streptococcal disease, group A, invasive (IGAS) | 8 |
| *Streptococcus pneumoniae,* invasive disease (ISP) | 5 |
| Streptococcal toxic shock syndrome (STSS) | 6 |
| Tuberculosis | 1 |

**The number of deaths is specific to the reportable disease category. In total, 61 deaths were identified; eight were associated with multiple reportable diseases and are represented more than once in this table.*

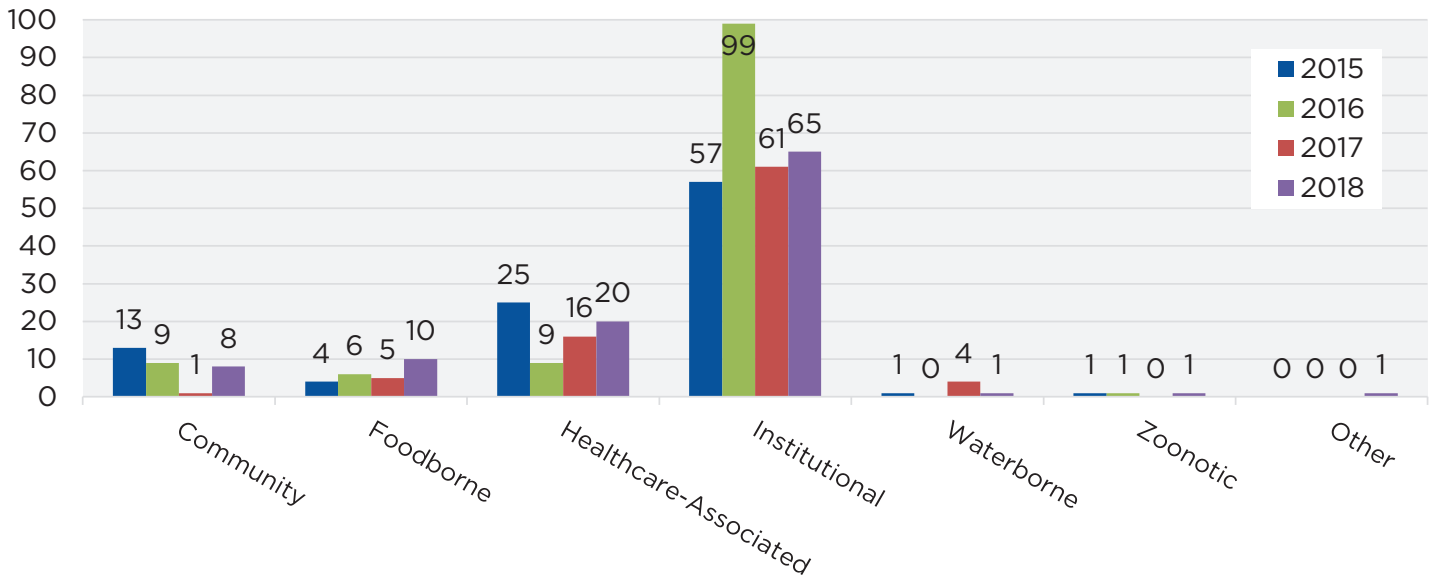
## AGE DISTRIBUTION OF DEATHS AMONG CONFIRMED AND PROBABLE CASES OF REPORTABLE DISEASE, 2018 (N=61)



# OUTBREAKS IN FRANKLIN COUNTY

According to Ohio Administrative Code 3701-3, outbreaks, unusual incidence or epidemics of infectious diseases must be reported to state and local public health agencies. Outbreaks are Class C-reportable conditions categorized by the setting or mode of transmission: community, foodborne, healthcare-associated, institutional, waterborne, zoonotic and other.[3] Franklin County Public Health (FCPH) and Columbus Public Health (CPH) may identify an outbreak through reportable disease case investigation, review of surveillance data, or report from an individual or institution. CPH and FCPH investigate outbreaks and implement prevention measures to help stop the spread of illness. Prevention measures can include, but are not limited to: increased surveillance for additional cases, laboratory testing, vaccination, post-exposure prophylaxis, exclusion of ill persons from a particular setting and/or notification of individuals who may have been exposed.

## NUMBER OF CONFIRMED AND PROBABLE OUTBREAKS REPORTED BY YEAR, FRANKLIN COUNTY, 2015-2018




## TABLE 12: NUMBER OF CONFIRMED AND PROBABLE OUTBREAKS, MOST COMMON SETTING, AND MOST COMMON ETIOLOGY, BY TYPE OF OUTBREAK, FRANKLIN COUNTY, 2018

| OUTBREAK TYPE | NUMBER OF OUTBREAKS | MOST COMMON SETTING | MOST COMMON ETIOLOGY |
|---|---|---|---|
| Community | 8 | Household | *Bordetella pertussis* (3) |
| Foodborne | 10 | Restaurant | *Norovirus* (6) |
| Healthcare-associated | 20 | Long-term care facility | *Influenza virus* (15) |
| Institutional | 65 | Childcare center | Hand, foot and mouth disease (12) |
| Waterborne | 1 | Unknown | *Legionella pneumophila* (1) |
| Zoonotic | 1 | Veterinary clinic | *Cryptosporidium parvum, Salmonella* (1) |
| Other | 1 | Household | *Norovirus* (1) |

In Columbus and Franklin County in 2018:

- A total of 106 confirmed and probable outbreaks were reported; institutional outbreaks were the most common type (61% of outbreaks), followed by health care-associated (19%).
- Overall, childcare centers were the most common setting with 34 outbreaks (32%), and *Norovirus* was the most common etiology with 20 outbreaks (19%).
- The largest outbreak was caused by *Norovirus* and involved 57 cases.
- In total, 1,210 cases were associated with an outbreak.

DISEASE SPOTLIGHT:

# CYCLOSPORIASIS

| CYCLOSPORIASIS | | 2018 |
|---|---|---|
| Number of Cases | | 18 |
| Rate* | *Overall* | 1.4 |
| | *Female* | 1.8 |
| | *Male* | 0.9 |
| Age of cases (in years) | *Mean* | 47 |
| | *Median* | 47 |
| | *Range* | 13-68 |

* Rate per 100,000 population

## LOCAL FACTS:

In Columbus and Franklin County in 2018:

- The cyclosporiasis rate among women was twice the rate among men.
- The cyclosporiasis rate was highest among persons 40-64 years old; 61% of cases occurred in this age group.
- Five cases were associated with a multi-state outbreak linked to salads sold at a fast-food chain. Multiple cyclosporiasis clusters and outbreaks were identified in the United States in 2018.[4]

## EPIDEMIOLOGY[3, 4, 5]

**Infectious Agent:** *Cyclospora cayetanensis,* a single-cell coccidian parasite.

**Case Definition:** Please see the Ohio Infectious Disease Control Manual.

**Mode of Transmission:** By ingestion of food or water contaminated with oocysts. Infected persons excrete the oocyst stage of *Cyclospora* in their feces. *Cyclospora cayetanensis* oocysts are excreted unsporulated (non-infective); they usually require at least one week under laboratory conditions to sporulate (become infective). Therefore, direct person-to-person transmission is unlikely to occur.

**Incubation Period:** Two days to >2 weeks (with an average of seven days) after ingestion of infective oocysts.

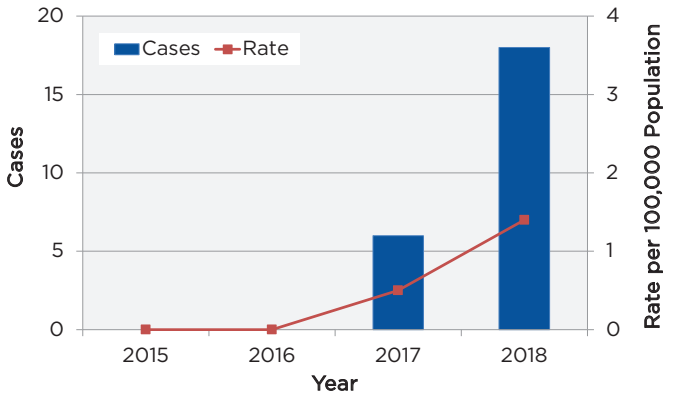
**Symptoms:** Watery diarrhea (most common), loss of appetite, weight loss, cramping, bloating, increased gas, nausea and fatigue. Other symptoms that may occur but are less common include vomiting and low-grade fever.

**Treatment:** Recommended treatment is a seven-day course of the antibiotic trimethoprim-sulfamethoxazole (TMP/SMX). No highly effective alternative antibiotic regimen has been identified yet for patients who do not respond to standard treatment or who have a sulfa allergy. Most people with healthy immune systems will recover without treatment.

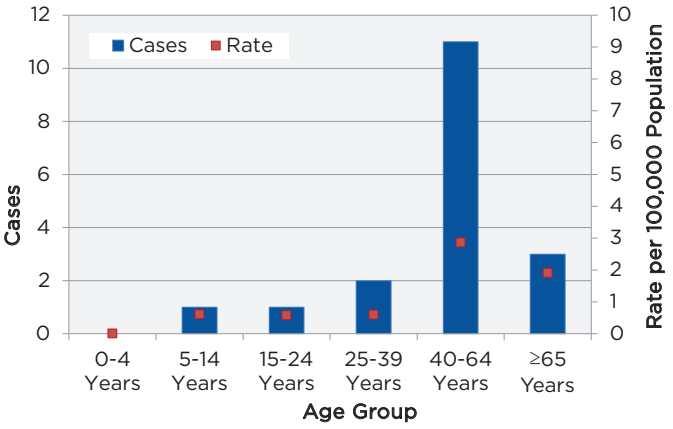
**Prevention:** Avoiding water or food that may be contaminated with stool may help prevent *Cyclospora* infection. People who have previously been infected with *Cyclospora* can become infected again.

*Case counts and rates include confirmed and probable cases.*

## CYCLOSPORIASIS CASES AND RATES, FRANKLIN COUNTY, 2015-2018




## CYCLOSPORIASIS CASES AND RATES BY AGE GROUP, FRANKLIN COUNTY, 2018



DISEASE SPOTLIGHT:

# HEPATITIS A

| HEPATITIS A | | 2018 |
|---|---|---|
| Number of Cases | | 175 |
| Rate* | *Overall* | 13.4 |
| | *Female* | 11.8 |
| | *Male* | 15.0 |
| Age of cases (in years) | *Mean* | 40 |
| | *Median* | 38 |
| | *Range* | 7-80 |

* Rate per 100,000 population

## LOCAL FACTS:

In Columbus and Franklin County in 2018:

- The rate of hepatitis A was highest among persons 25-39 years old; 50% of cases occurred in this age group.
- Hepatitis A rates in Franklin County increased dramatically in 2018 due to a statewide community outbreak that has continued into 2019. High-risk populations in this outbreak include: persons who use drugs, persons experiencing unstable housing or homelessness, persons who are currently or recently incarcerated, men who have sex with men, and persons with chronic liver disease including cirrhosis, hepatitis B or hepatitis C.[5]

Franklin County Public Health and Columbus Public Health continue to investigate Hepatitis A cases linked to Ohio's statewide outbreak. For up-to-date information, please visit the Columbus Public Health website or the Ohio Department of Health website.

## EPIDEMIOLOGY[3]

**Infectious agents:** Hepatitis A virus (HAV), a single-stranded RNA virus.

**Case Definition:** Please see the Ohio Infectious Disease Control Manual.

**Mode of Transmission:** Hepatitis A is usually spread when a person ingests fecal matter—even in microscopic amounts—from contact with objects, food or drinks contaminated by the stool of an infected person. The most common modes of transmission are close personal contact with infected persons, sex among men who have sex with men, and behaviors associated with drug use.

**Incubation Period:** Fifteen to 50 days, with an average of 28 days

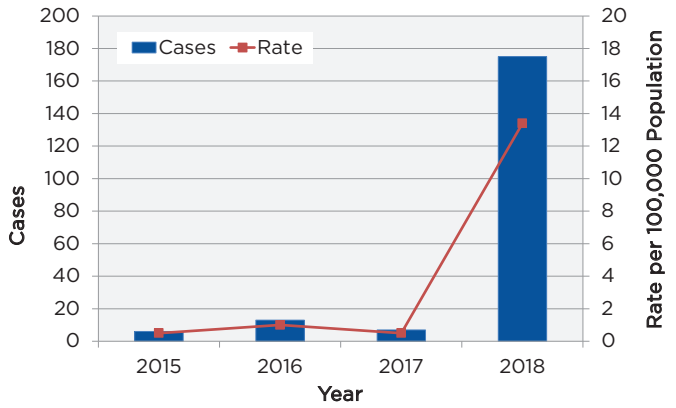
**Symptoms:** Hepatitis A characteristically has an abrupt onset. Symptoms can include fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, abdominal discomfort, dark urine, clay-colored stools and jaundice. Many infections are mild and without jaundice. Infected children, particularly infants and toddlers, are frequently asymptomatic. Illness can last 1-2 weeks or, rarely, several months. The fatality rate is less than 0.1%.

**Treatment:** There is no specific treatment for hepatitis A infections. Ill individuals should seek health care and follow the guidance of a physician.

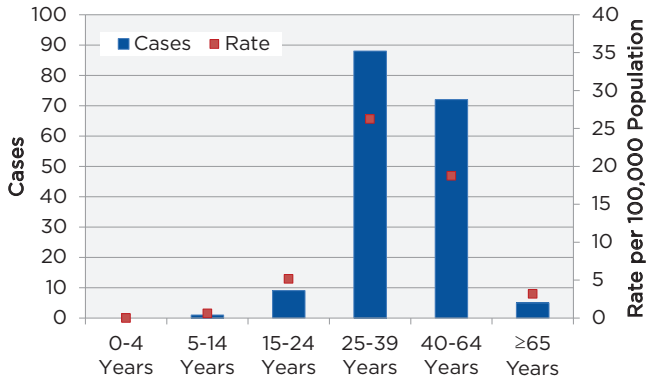
**Prevention:** Hepatitis A vaccine is the best way to prevent HAV infection. The vaccine is licensed for use in persons 12 months of age and older. The hepatitis A vaccine is given as two shots, six months apart. Protection begins approximately 2-4 weeks after the first injections. The second injection results in long-term protection. In certain situations, hepatitis A immune globulin (IG) can be given to provide short-term immunity. Hepatitis A can also be prevented by washing hands with soap and water, especially after using the bathroom or changing a diaper and before preparing food.

*Case counts and rates include confirmed and probable cases.*

## HEPATITIS A CASES AND RATES, FRANKLIN COUNTY, 2015-2018




## HEPATITIS A CASES AND RATES BY AGE GROUP, FRANKLIN COUNTY, 2018



DISEASE SPOTLIGHT:

# INFLUENZA-ASSOCIATED HOSPITALIZATION

| INFLUENZA-ASSOCIATED HOSPITALIZATION | | 2018 |
|---|---|---|
| Number of Cases | | 1,103 |
| Rate* | *Overall* | 84.2 |
| | *Female* | 93.4 |
| | *Male* | 74.2 |
| Age of cases (in years) | *Mean* | 61 |
| | *Median* | 66 |
| | *Range* | 0–100 |

* Rate per 100,000 population

## LOCAL FACTS:

In Columbus and Franklin County in 2018:

- 53% of influenza-associated hospitalizations occurred among those 65 years or older; 4% occurred among children under the age of 5 years old.
- Nineteen influenza outbreaks were reported; 15 occurred in health care-associated settings, such as long-term care facilities, and four occurred in institutional settings, such as childcare centers.

## EPIDEMIOLOGY[3]

**Infectious Agents:** Influenza (flu) viruses A, B and C. Recent influenza A viruses that have circulated among humans include H1N1 and H3N2.

**Case Definition:** Please see the Ohio Infectious Disease Control Manual.

**Mode of Transmission:** Direct person-to-person contact through droplet spread or via articles recently contaminated with respiratory secretions. When a person who has the flu coughs or sneezes, the virus can enter the nose, throat or lungs of another person and multiply, causing symptoms of influenza.

**Incubation Period:** One to four days, with an average of two days.

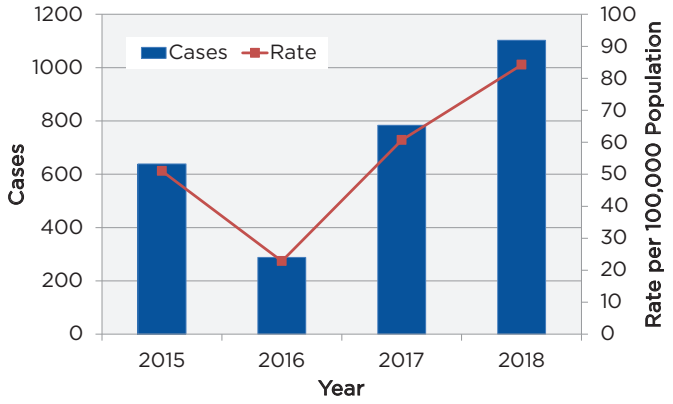
**Symptoms:** Symptoms most commonly include sudden onset of body aches, fever and respiratory symptoms such as cough, sore throat or runny nose. Most people who get influenza will recover in 1-2 weeks, but some people will develop life-threatening complications.

**Treatment:** Influenza is caused by a virus, so antibiotics do not work. Recommended treatment includes rest, drinking plenty of liquids, avoiding using alcohol and tobacco, and taking medication to relieve symptoms. An influenza antiviral medication can reduce illness severity and shorten the duration of symptoms when the medication is started within the first two days of illness onset.

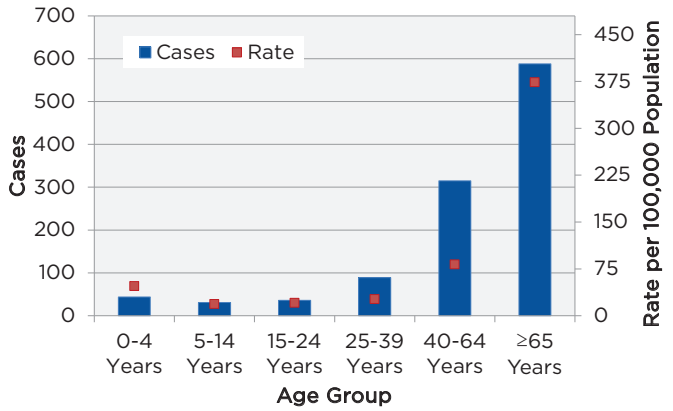
**Prevention:** The best way to prevent influenza is to get an annual flu vaccine, especially for persons at high risk for serious complications. Proper handwashing, respiratory hygiene (covering coughs and sneezes), staying home when sick and avoiding ill people are other ways to prevent the spread of flu.

*Case counts and rates include confirmed and probable cases.*

## INFLUENZA-ASSOCIATED HOSPITALIZATION CASES AND RATES, FRANKLIN COUNTY, 2015-2018




## INFLUENZA-ASSOCIATED HOSPITALIZATION CASES AND RATES BY AGE GROUP, FRANKLIN COUNTY, 2018



FEATURED OUTBREAK INVESTIGATION:

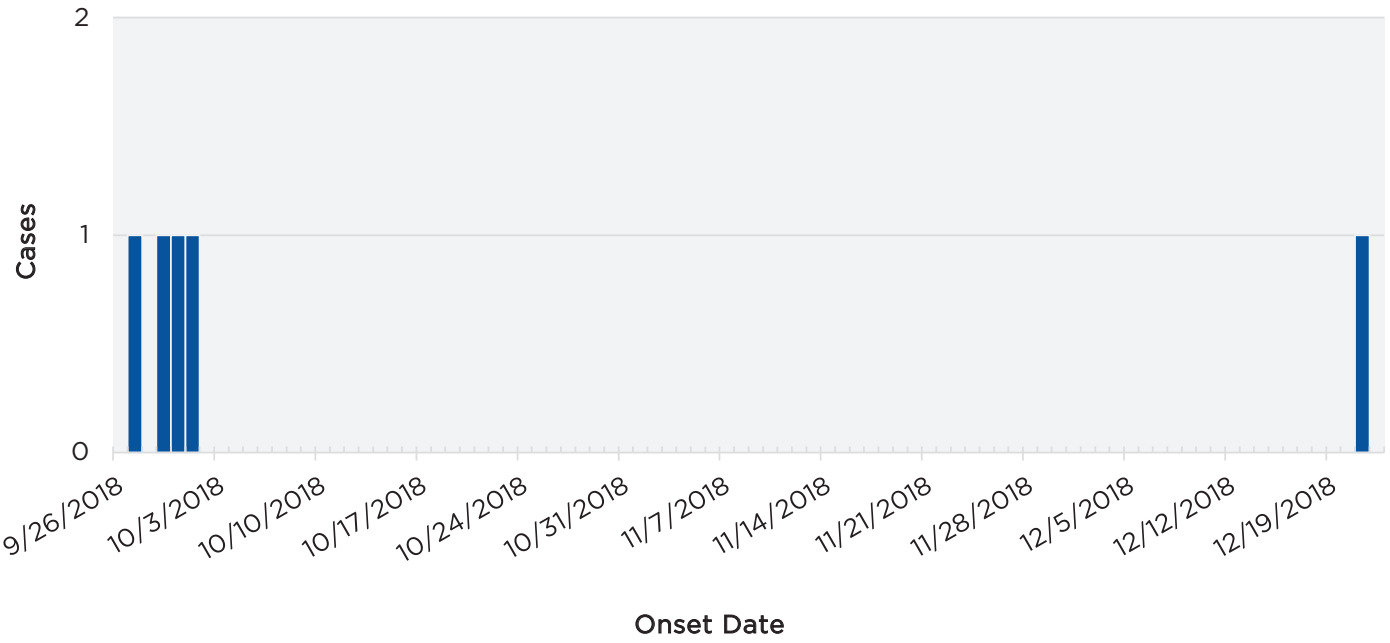
# SALMONELLOSIS ASSOCIATED WITH A RESTAURANT

From October to December 2018, Franklin County Public Health (FCPH) investigated a foodborne outbreak of *Salmonella* Miami associated with Restaurant A in Upper Arlington, Ohio. Restaurant A has locations throughout Central Ohio and in several other states; all outbreak-linked cases of *Salmonella* reported consuming food from only the Upper Arlington location. Initial public health interventions included an environmental health investigation of the facility's food handling practices. In January 2019, an additional *Salmonella* case was identified and linked to the fall 2018 outbreak. Under the guidance of the Ohio Department of Health (ODH), a recommendation was made to restaurant management that all staff undergo testing for *Salmonella*. Testing was initiated after the fifth case was identified due to a lack of any other suspected source. It was hypothesized that a staff member could have been unknowingly re-introducing *Salmonella* into the restaurant. Of the 30 employees tested, one (3%) was positive for *Salmonella*, and 29 (97%) were negative. The individual that tested positive for *Salmonella* was not positive for *Salmonella* Miami, and ODH was unable to determine the exact serotype.

In total, four patrons and one staff member were diagnosed with *Salmonella* Miami after consuming food from Restaurant A. Three (60%) cases were female, and two (40%) were male. Case ages ranged from 7 years to 55 years, with a mean age of 40 years. Two cases (40%) were hospitalized. During the investigation, there was no single food that was identified, and FCPH was unable to determine the source of illness.

Salmonellosis is most commonly an acute illness characterized by diarrhea, abdominal cramps, fever, and sometimes vomiting. Infection may progress from gastroenteritis to septicemia or a focal infection (e.g., cholecystitis, meningitis). Animals and humans are the reservoir of *Salmonella*. Domestic or wild animals may be infected, including livestock, poultry and pets. Water and food, including meats, milk, shell eggs and raw produce, may be contaminated with *Salmonella* from animals or their waste. Food may also become contaminated by infected food handlers.[3]

## OUTBREAK-ASSOCIATED SALMONELLA MIAMI CASES, BY ONSET DATE - SEPTEMBER 27, 2018 - DECEMBER 21, 2018



FEATURED OUTBREAK INVESTIGATION:

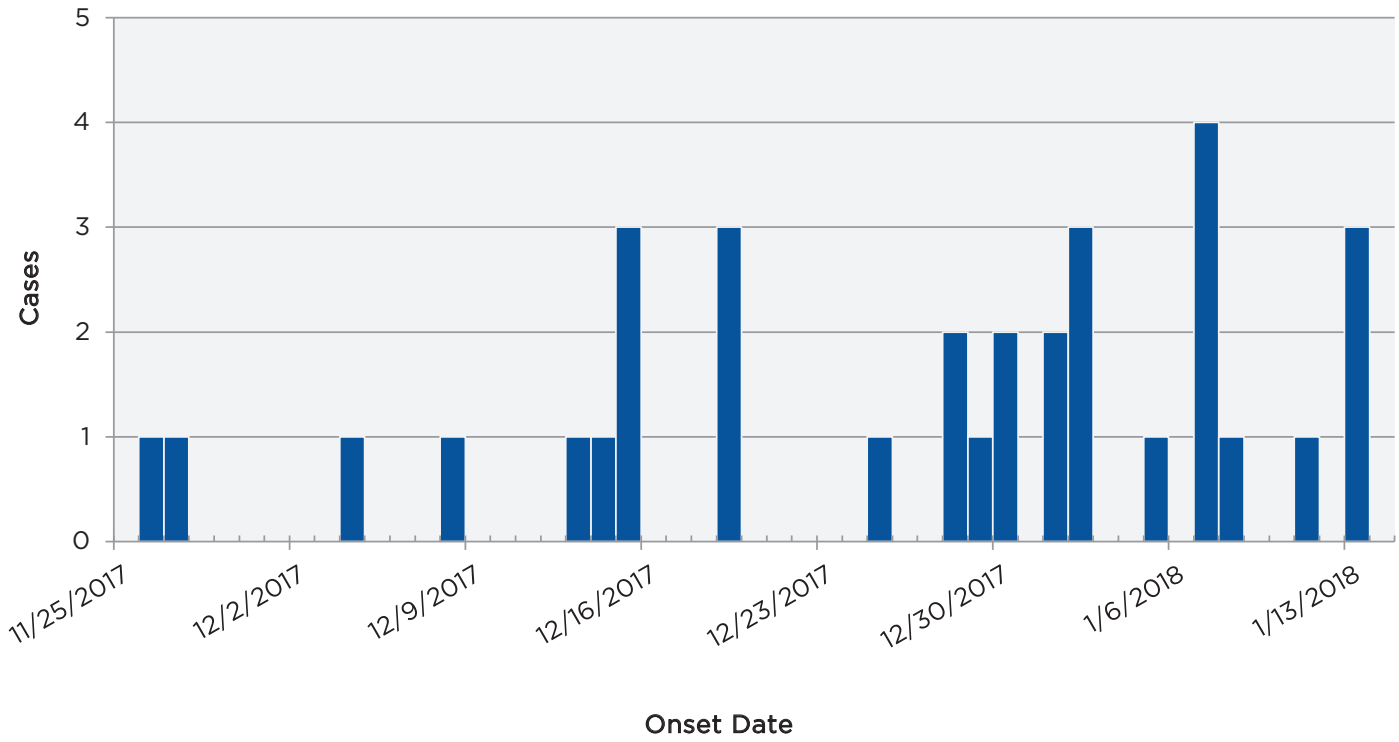
# VARICELLA IN AN EASTERN EUROPEAN COMMUNITY

In early January 2018, Columbus Public Health (CPH) investigated a reported varicella (chickenpox) case and identified a cluster involving four family members. Upon further investigation of household and social contacts, additional cases were identified. All cases were part of an Eastern European community residing in suburbs west of Columbus. CPH implemented public health interventions, including education about prevention of further cases through vaccination of contacts, enhanced hand hygiene, respiratory etiquette and prompt exclusion of cases from school, childcare and public settings until one week after rash onset or until all lesions were dry.

A total of 33 varicella cases, including 32 confirmed cases and one probable case, were associated with this outbreak. Of these 33 cases, 14 (42%) were female, and 19 (58%) were male. Case ages ranged from 4 months to 11 years old, with a mean age of 5 years. Of the 31 cases with varicella vaccination history reported, 29 (94%) were unvaccinated. Two unvaccinated cases were too young for routine varicella vaccination (less than 1 year old).

Varicella is an illness with acute onset of generalized papulovesicular rash without other apparent cause. Humans are the only source of infection. Worldwide, most cases of varicella occur in children 5-10 years of age. Varicella occurs most often during late winter and early spring. The vast majority of people contract the disease during childhood. Cases in adults are often severe. The best method to prevent the spread of varicella is to get vaccinated, especially for persons at high risk for serious complications. Someone with varicella should remain home until one week after the rash began or until the legions become dry and crusted and should avoid exposing others who may be susceptible. Proper handwashing, respiratory hygiene (covering coughs and sneezes), staying home when sick and avoiding ill people are other ways to prevent the spread of varicella.[3]

## OUTBREAK-ASSOCIATED VARICELLA CASES, BY ONSET DATE - NOVEMBER 26, 2017 - JANUARY 13, 2018



# TIMELINESS OF DISEASE REPORTING

As part of reportable disease surveillance, Columbus Public Health (CPH) and Franklin County Public Health (FCPH) monitor and work to improve timeliness of disease reports and completeness of reportable disease records. While CPH and FCPH continually work to improve data completeness through internal processes and procedures, timeliness largely depends on recognition and rapid reporting of cases by healthcare providers and laboratories.

Timely infectious disease reporting enables public health agencies to track disease occurrence and implement appropriate interventions for disease prevention. Timeliness requirements vary based on the communicability and severity of the disease. In Ohio, Class A diseases are required to be reported immediately via telephone upon recognition that a case, a suspected case, or a positive laboratory result exists. Class B diseases are required to be reported by the end of the next business day after the existence of a case, a suspected case or a positive laboratory result is known.[3]

In this analysis, a case's reporting lag time was defined as the time between the diagnosis date and the date of report to the local health department. Some cases are identified through laboratory testing instead of healthcare provider diagnosis. If diagnosis date was missing or occurred after the date of report to the local health department, a proxy date was used. These dates were obtained from case records in the Ohio Disease Reporting System (ODRS).

Table 13 lists selected diseases and their corresponding case counts, median and mean lag times, and proportion of cases missing diagnosis date. Median and mean lag time values should be less than one business day for Class A diseases (immediately reportable) and less than two business days for Class B diseases (reportable by end of next business day). Values that meet the lag time goal are shown in green; values that do not meet the goal are shown in red.

Regular monitoring of timeliness data helps to address two key issues: late reporters and missing data. If specific reporters are found to be contributing to longer lag times, data will be shared with the reporter, challenges to timely reporting will be identified and addressed, and closer monitoring of reports will follow. Addressing missing or incorrect dates will improve data accuracy and aid in implementing appropriate interventions.

In addition to quality improvement efforts of CPH and FCPH, the Ohio Department of Health and the Association of Ohio Health Commissioners publish a public health quality indicators report including timeliness and completeness data for selected reportable diseases. For more information on ODH public health quality indicators and to view the reports, please visit: https://odh.ohio.gov/wps/portal/gov/odh/about-us/local-health-departments/accreditation/2018-public-health-quality-indicators-report.

TABLE 13: REPORTING LAG TIME* FOR CONFIRMED & PROBABLE CASES OF SELECTED REPORTABLE DISEASES, FRANKLIN COUNTY, 2018

| REPORTABLE CONDITION | Reporting Requirement | 2018 | | | |
|---|---|---|---|---|---|
| | | Confirmed & Probable Cases | Median Lag Time (business days) | Mean Lag Time (business days) | % of Cases Missing Diagnosis Date |
| *E. coli O157:H7* and Shiga toxin-producing *E. coli* (STEC) | By end of next business day | 105 | 1.0 | 1.3 | 0.0% |
| Hepatitis A | By end of next business day | 175 | 1.0 | 1.5 | 0.0% |
| Listeriosis | By end of next business day | 4 | 1.0 | 0.8 | 0.0% |
| Measles | Immediately | 0 | N/A | N/A | N/A |
| Meningococcal disease | Immediately | 0 | N/A | N/A | N/A |
| Mumps | By end of next business day | 0 | N/A | N/A | N/A |
| Pertussis | By end of next business day | 134 | 1.0 | 1.6 | 5.2% |
| Rubella | Immediately | 0 | N/A | N/A | N/A |
| Salmonellosis | By end of next business day | 193 | 1.0 | 1.2 | 2.1% |

**Reporting lag time = Difference between the diagnosis date** and the date the case was reported to the local health department*

***If blank, "Diagnosis Date" defaulted to the following ODRS date fields (in order): specimen collection date, laboratory result date, onset date, date reported to Ohio Department of Health, created date. If a date occurred after the date of report to the local health department, the diagnosis date defaulted to the next proxy.*

# TECHNICAL NOTES

Ohio Administrative Codes 3701-3-02, 3701-3-05 and 3701-3-12 require that communicable diseases be reported to local health departments.

## TABLES OF DISEASE COUNTS AND RATES

Reportable disease data are likely to underestimate true disease occurrence. For a case to be included in this report, a disease must have been diagnosed among a resident of Columbus or Franklin County, reported to public health, met the public health surveillance case definition, and been recorded in the Ohio Disease Reporting System (ODRS) at the time of data analysis. Data in this report are considered provisional.

| DISEASE COUNTS AND RATES | DATA ARE CURRENT AS OF: |
|---|---|
| Chlamydia, gonorrhea and syphilis | March 31, 2019 |
| HIV/AIDS data from the Ohio Department of Health | June 30, 2019 |
| All other reportable conditions | May 19, 2019 |

**"All Statuses"** includes confirmed, probable and suspected cases.

**"Year"** refers to the case event date in ODRS for sexually transmitted infections; the date the case was counted for hepatitis B, hepatitis C and tuberculosis; and the date the case record was created in ODRS for all other conditions. For outbreaks, "year" is the year that the outbreak record was created in ODRS.

**"Event Date"** is calculated automatically in ODRS. For sexually transmitted infections, event date is the earliest specimen collection date. If specimen collection date is blank, event date is the earliest of the following dates: illness onset date, diagnosis date, date reported to the local health department, date reported to the Ohio Department of Health (ODH).

**Counts of newly diagnosed HIV/AIDS cases** were obtained from the ODH HIV/AIDS Surveillance Program. Diagnoses of HIV infection include persons with a diagnosis of HIV infection (not AIDS), a diagnosis of HIV infection and a later AIDS diagnosis, and concurrent diagnoses of HIV infection and AIDS. Yearly HIV case counts include all reported cases diagnosed in a given year.

## CASE AND OUTBREAK CLASSIFICATIONS

Case definitions for nationally notifiable diseases are determined by the Council of State and Territorial Epidemiologists in conjunction with the Centers for Disease Control and Prevention (CDC). Definitions are published in the *Morbidity and Mortality Weekly Report* and posted to CDC's National Notifiable Diseases Surveillance System website.[6] In Ohio, case and outbreak definitions can be found in Section 3 of the Infectious Disease Control Manual.[3] More information on reportable diseases and reporting procedures in Columbus and Franklin County can be found at www.IDRSinfo.org.

## REPORTABLE DISEASE CLASS DEFINITIONS[3]

Reportable diseases in Ohio are grouped by class. Class definitions in 2018 were as follows:

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

**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.

**Class C:** Outbreak, unusual incidence or epidemic of other infectious diseases. Report by the end of the next business day.

*Technical Notes continued on next page.*

## REPORTABLE DISEASE CHANGES IN OHIO IN 2018

The following changes took effect on March 22, 2018:
Additions: Carbapenemase-producing carbapenem-resistant *Enterobacteriaceae* (CP-CRE); hepatitis C, perinatal

## CASE DEFINITION CHANGES FOR NATIONALLY NOTIFIABLE DISEASES IN 2018[6]

Anthrax; carbapenemase-producing carbapenem-resistant *Enterobacteriaceae* (CP-CRE); hepatitis C, perinatal; Shiga toxin-producing *Escherichia coli* (STEC); syphilis

## PERINATAL HEPATITIS B REPORTING

In Annual Summaries prior to 2016, perinatal hepatitis B data included all case statuses (confirmed, probable and suspected) reported by year that the case was created in ODRS. For consistency with surveillance data reported by ODH and CDC, perinatal hepatitis B data in Annual Summaries since 2016 include confirmed cases only, reported according to the date the case was counted by CDC.

## REPORTING SYSTEMS

Most disease cases in this summary were reported through the Infectious Disease Reporting System (IDRS, a joint effort between Columbus Public Health Department and the Franklin County Public Health). Cases of sexually transmitted infections, HIV/AIDS and tuberculosis have separate reporting systems.

The Ohio Disease Reporting System (ODRS)[7] was developed as a web-based system to make disease reporting more timely and efficient for disease reporters (e.g. hospitals, laboratories and physicians) and to improve communication about infectious disease cases between disease reporters, local health departments and ODH. Currently, ODH, local health departments and infection preventionists have the ability to enter and update case and laboratory reports in ODRS. The system uses patient address to determine the correct local health jurisdiction to receive the report for follow-up and investigation. In addition, some laboratories have the ability to electronically upload batches of reports from their databases into ODRS via Electronic Laboratory Reporting (ELR), minimizing paperwork and data re-entry. If a disease report is inadvertently assigned to an incorrect health jurisdiction, the health department receiving the report can re-direct it to the correct jurisdiction. Updates to information can be made to the record in the database, and all fields in the ODH and CDC reporting forms are included in ODRS.

## JURISDICTION

Each case is reported based on the address of residence, and each jurisdictional boundary is determined by tax district. Franklin County Public Health and Columbus Public Health jurisdictions have boundaries that include parts of other counties, such as Delaware, Fairfield, Licking or Union. Cases represented in the tables may live in one of these neighboring counties. If a case lives in a neighboring county but is served by Franklin County Public Health or Columbus Public Health, the case would not be represented in Franklin County population estimates listed in the Demographic Profile in this report. Listed below are jurisdictions that Franklin County Public Health or Columbus Public Health serve that may be located in part of another county:

- Canal Winchester (Fairfield)
- Columbus (Delaware, Fairfield)
- Dublin (Delaware, Union)
- New Albany (Licking)
- Pickerington (Fairfield)
- Reynoldsburg (Fairfield, Licking)
- Westerville (Delaware)

## PAST REPORTS

Previous CPH–FCPH Annual Summaries of Reportable Diseases are available at idrsinfo.org/data.

# REFERENCES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