

Campylobacter

Campylobacteriosis is a Class C Disease. It must be reported to the state within five business days.

Campylobacter is the most common bacterial cause of diarrheal illness in the United States. It is caused by the bacteria *Campylobacter jejuni* and less commonly, *C. coli*.

Epidemiology

The most common reservoirs for *Campylobacter* are poultry and cattle, with more than half of the raw chicken in the U.S. market containing the bacteria. Water or milk may be a source for sporadic cases or outbreaks. Most cases of campylobacteriosis are associated with handling of raw poultry or eating raw or undercooked poultry meat. A main source of cross-contamination of raw or lightly cooked foods is the use of cutting boards that have not been cleaned thoroughly after cutting poultry or meat.

Other animals (puppies, kittens, other pets, swine, sheep, rodents and birds) can also be infected. Some people acquire their infections from contact with the infected stool of an ill dog or cat. It is estimated that approximately 5% of human cases originate from contact with pets, particularly dogs and cats. In a 1985-published survey carried out in Baton Rouge, Louisiana, the prevalence of *Campylobacter* among cats was estimated at 1%.

The organism is not usually spread from person-to-person, but person-to-person contact can result in illness if the infected person is a small child, or is producing a large volume of diarrhea. Although many cases of *Campylobacter* infection are asymptomatic, symptoms can include diarrhea, abdominal pain, malaise, fever, nausea and vomiting.

Campylobacteriosis is estimated to affect over 1.3 million persons every year, with most cases going undiagnosed or unreported. In 2017, there were approximately 19 cases for each 100,000 persons in the U.S. population are reported to the Centers for Disease Control and Prevention (CDC). In Louisiana, the reported incidence is about 17 cases per 100,000 persons. Virtually all cases occur as isolated, sporadic events, rather than as a part of outbreaks. Although campylobacteriosis does not commonly cause death, it has been estimated that approximately 76 persons with *Campylobacter* infections die each year.

Incidence

Reporting of *Campylobacter* began in Louisiana in 1988. The year with the highest number of reported cases was 2017 (Figures 1 and 2). The recent steep rise in cases is largely due to the increased availability of culture independent diagnostic tests (CIDTs). These new tests allow for easier and more frequent testing, increasing the number of detected cases. However, since these tests are not as reliable as culture tests, the cases are classified as “probable” when they are performed without a confirmatory test. It is likely that the number of detected cases will continue to rise in the coming years as these CIDTs are more frequently used.

Figure 1: Campylobacter Incidence Rates - Louisiana, 1988-2017

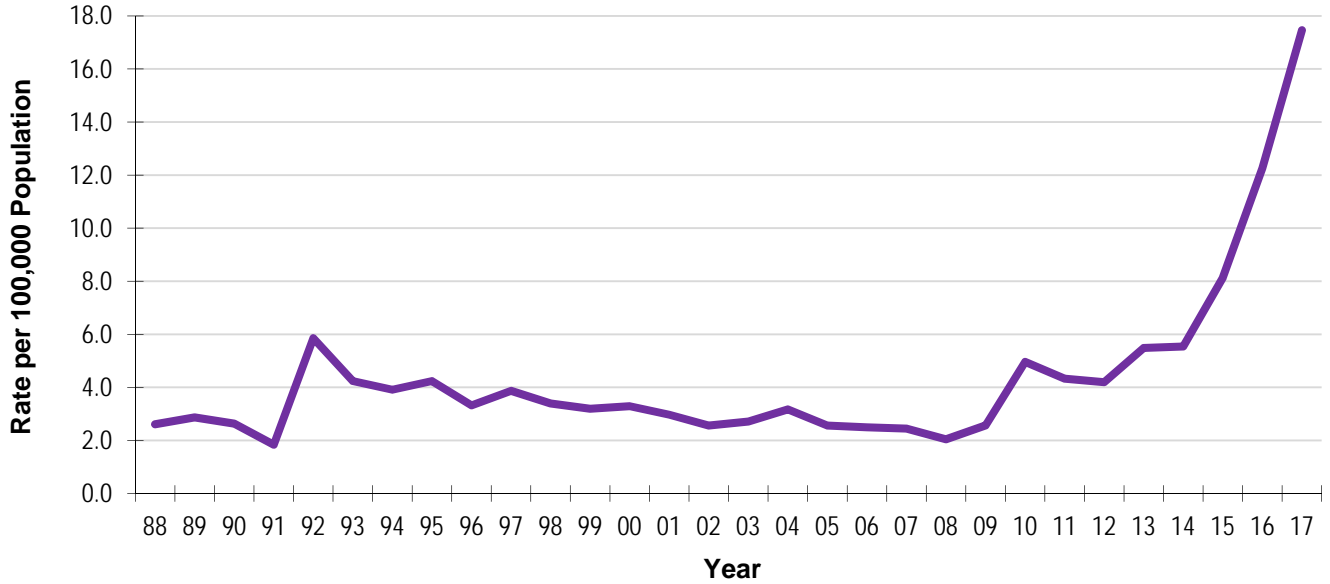
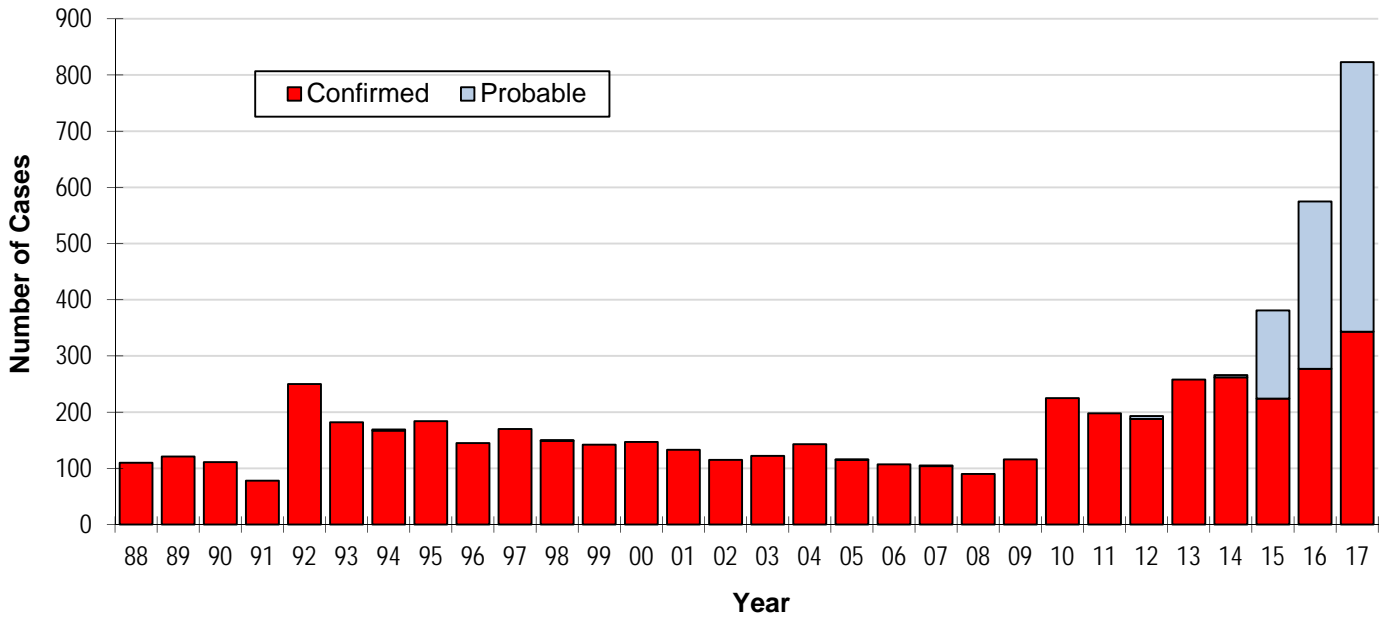
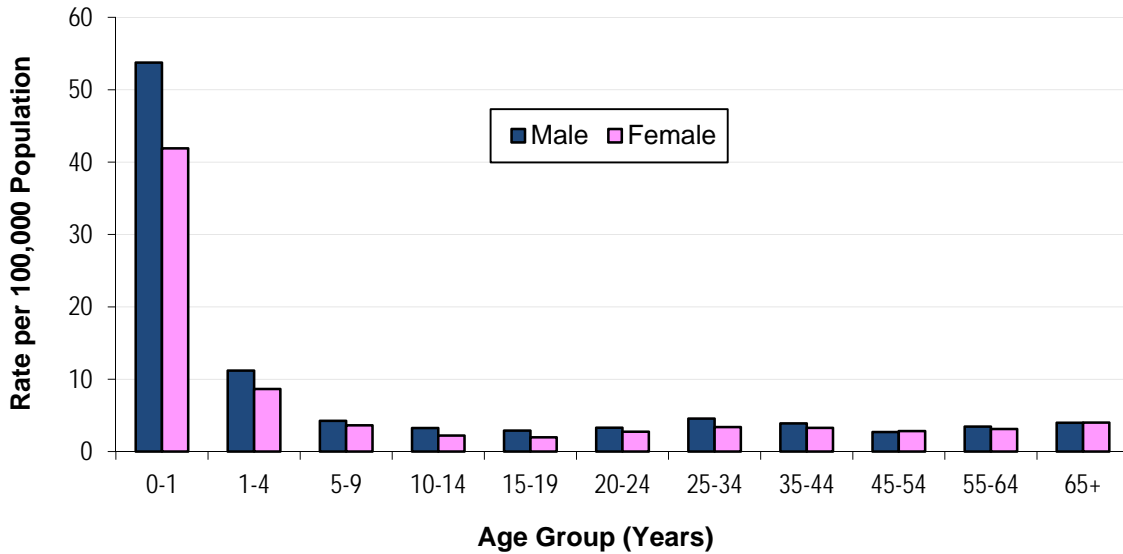


Figure 2: Campylobacter Cases: Confirmed and Probable – Louisiana, 1988-2017



The age group distribution is similar to that of most enteric diseases, with the highest rates in infants and young children (Figure 3).

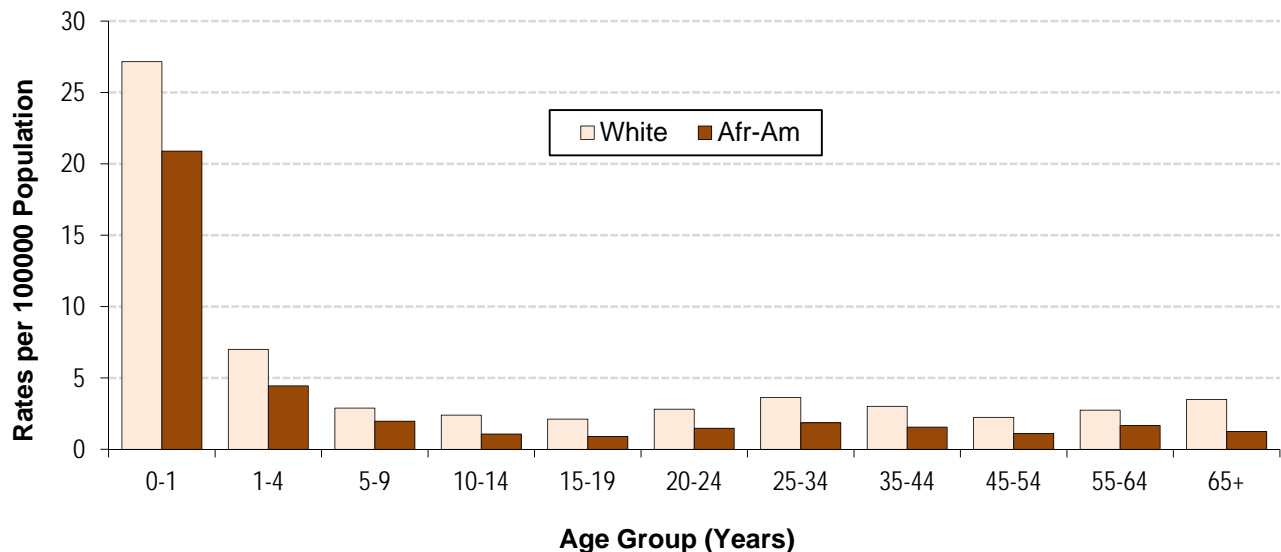
Figure 3: Campylobacter incidence rates by gender and age - Louisiana, 1988-2017



The highest rates are observed among infants, an age group that is not thought of as routinely being exposed to poultry meat. These cases result from cross-contamination when infants are fed. High infant rates are partially attributable to reporting bias, i.e., infants with diarrhea are more likely to be brought to medical care and more likely to have stool cultures done than older children or adults. A slight increase in rates is also seen among the elderly.

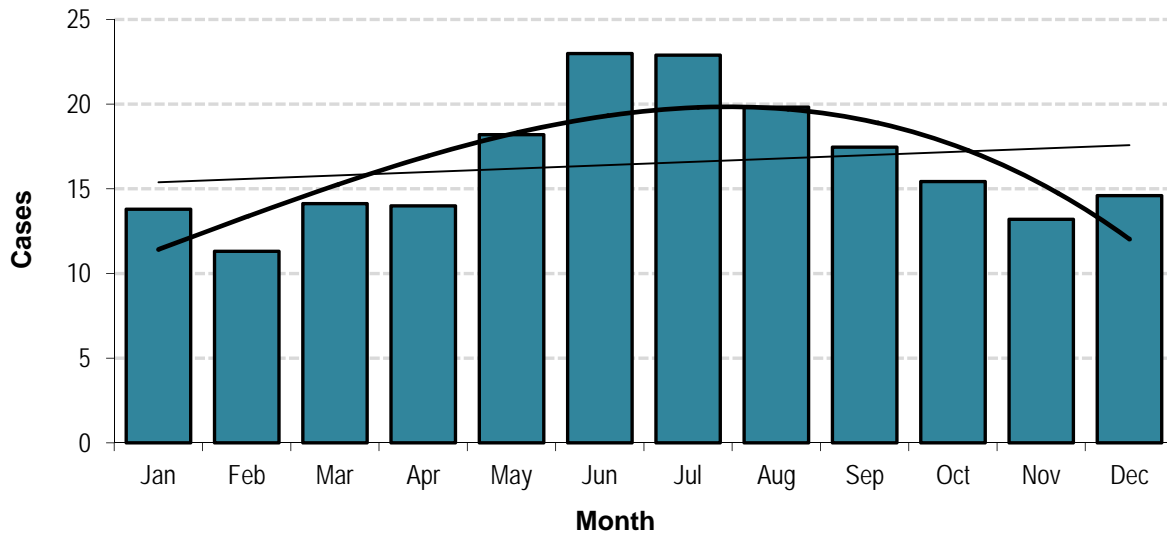
The distribution by race and age shows higher rates among Whites than among African-Americans in most age groups, particularly among infants younger than one year-old (Figure 4).

Figure 4: Campylobacter incidence rates by race and age - Louisiana, 1988-2017



Campylobacter has a clear seasonal distribution, with an increased number of cases reported during the summer months (Figure 5).

Figure 5: *Campylobacter* average annual cases by seasonal distribution - Louisiana, 1988-2017



The geographical distribution of *Campylobacter* in Louisiana reflects the reporting of *Campylobacter* cases and not the true distribution of cases (Table).

Table: *Campylobacter* average annual incidence rates by parish - Louisiana, 1988-2017

Region	Parish	Rate 1988-2017	Region	Parish	Rate 1988-2017
1	Jefferson	3.05	6	Concordia	1.11
	Orleans	3.50		Grant	5.87
	Plaquemines	1.88		La Salle	3.06
	St. Bernard	2.08		Rapides	5.48
2	Ascension	4.27	7	Vernon	2.63
	E. Baton Rouge	5.01		Winn	2.56
	E. Feliciana	4.03		Bienville	1.27
	Iberville	2.88		Bossier	3.68
	Pointe Coupee	2.28		Caddo	2.45
	W. Baton Rouge	3.95		Claiborne	1.15
	W. Feliciana	2.50		De Soto	1.27
3	Assumption	4.27	8	Natchitoches	2.06
	Lafourche	3.44		Red River	4.16
	St. Charles	2.15		Sabine	2.21
	St. James	1.84		Webster	2.89
	St. John	2.25		Caldwell	6.42
	St. Mary	2.35		E. Carroll	2.24
	Terrebonne	10.75		Franklin	3.49
4	Acadia	6.13	9	Jackson	5.40
	Evangeline	5.95		Lincoln	1.66
	Iberia	9.45		Madison	0.78
	Lafayette	8.47		Morehouse	4.08
	St. Landry	7.58		Ouachita	3.79
	St. Martin	6.51		Richland	3.32
	Vermilion	7.46		Tensas	1.04
5	Allen	3.40	9	Union	3.72
	Beauregard	3.48		W. Carroll	5.11
	Calcasieu	4.98		Livingston	6.73
	Cameron	1.98		St. Helena	4.12
	Jefferson Davis	11.26		St. Tammany	4.21
6	Avoyelles	3.20	9	Tangipahoa	4.49
	Catahoula	4.83		Washington	6.01