





# **Campylobacteriosis Surveillance 2012-2016**

Rhode Island Department of Health

Division of Preparedness, Response, Infectious  
Disease and Emergency Medical Services

Center for Acute Infectious Disease Epidemiology



# About Campylobacteriosis

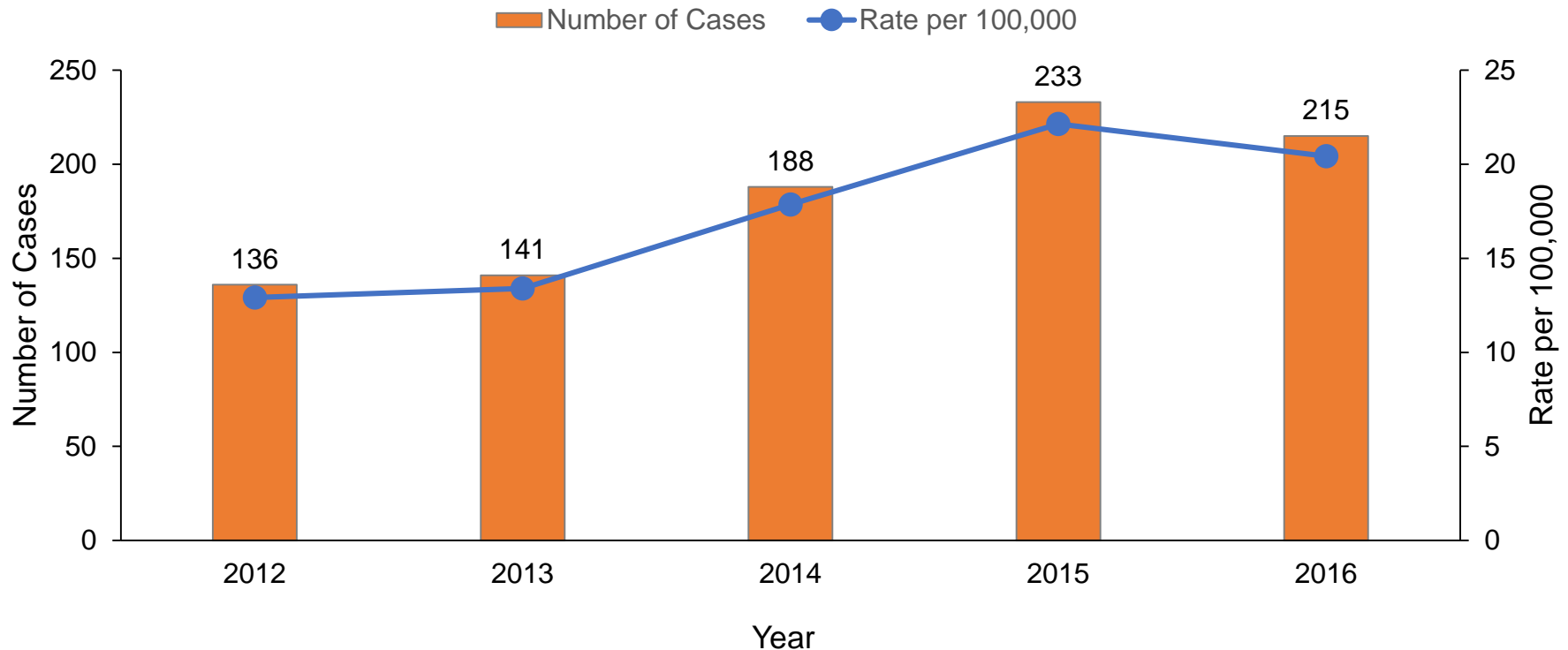
- Campylobacteriosis is a bacterial disease most often contracted by consuming undercooked meat (especially poultry), unpasteurized dairy products, or other food that has been contaminated with the bacteria; drinking water that has been contaminated with the bacteria; or by direct contact with infected animals.
- Symptoms of campylobacteriosis usually begin 2-5 days after exposure to the bacteria and include diarrhea or bloody diarrhea, fever, abdominal pain, tiredness, nausea, and vomiting. Symptoms may last from a few days to two weeks.
- The case fatality rate of campylobacteriosis is <1%.
- Campylobacteriosis became a nationally notifiable disease in 2015.

# Data Overview, Campylobacteriosis



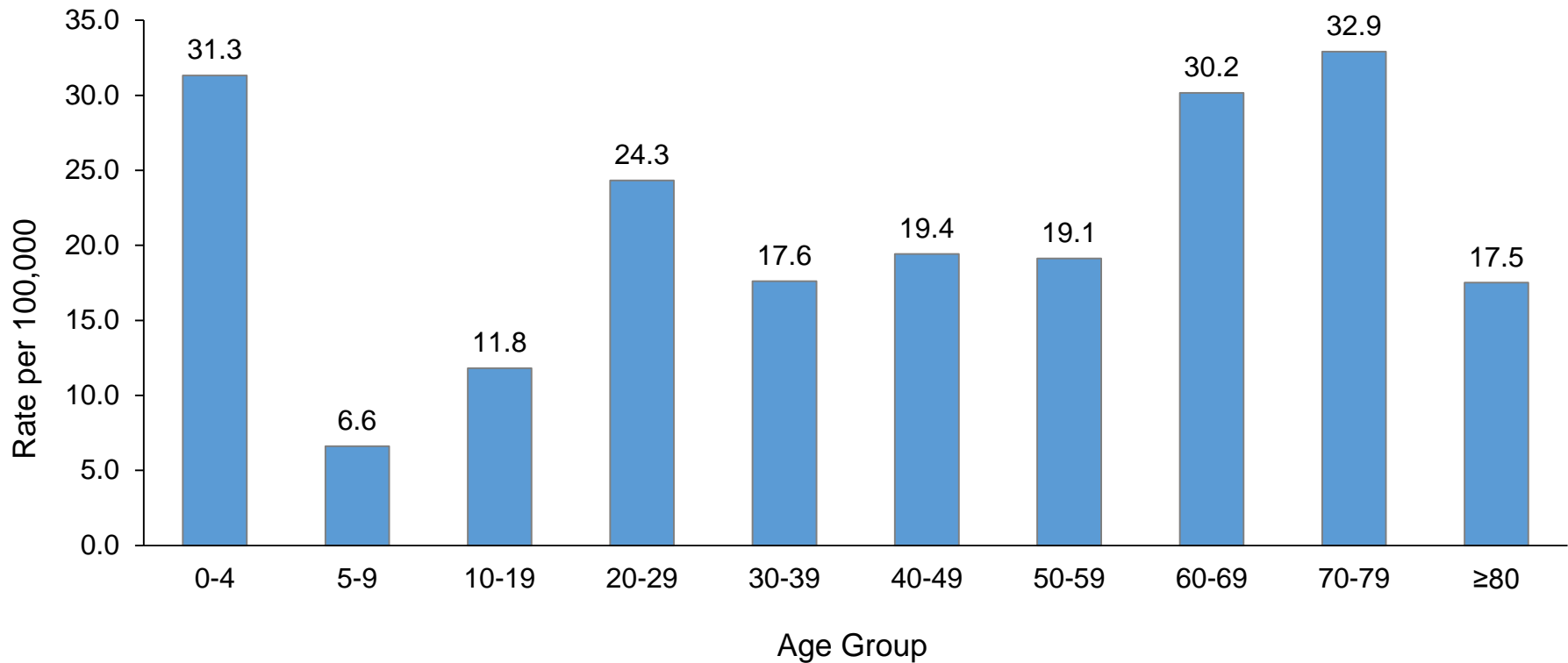
- In 2016, 215 campylobacteriosis cases were reported in Rhode Island, for a rate of 20.4 cases per 100,000 people.
- The number of campylobacteriosis cases has generally increased in Rhode Island from 2012 to 2016; however, this trend may be impacted by changes in testing. The campylobacteriosis case definition was modified in 2015 to include individuals diagnosed using non-culture testing methods; thus continued surveillance is necessary to better understand trends over time.
- Reported cases of campylobacteriosis peaked beginning in June and remained high throughout the summer and early fall.
- Older adults and children younger than 5 years old were predominately affected by campylobacteriosis in 2016. Illness rates were also higher in males compared to females and among residents of Bristol and Providence counties.

# Reported Cases of Campylobacteriosis, Rhode Island, 2012-2016



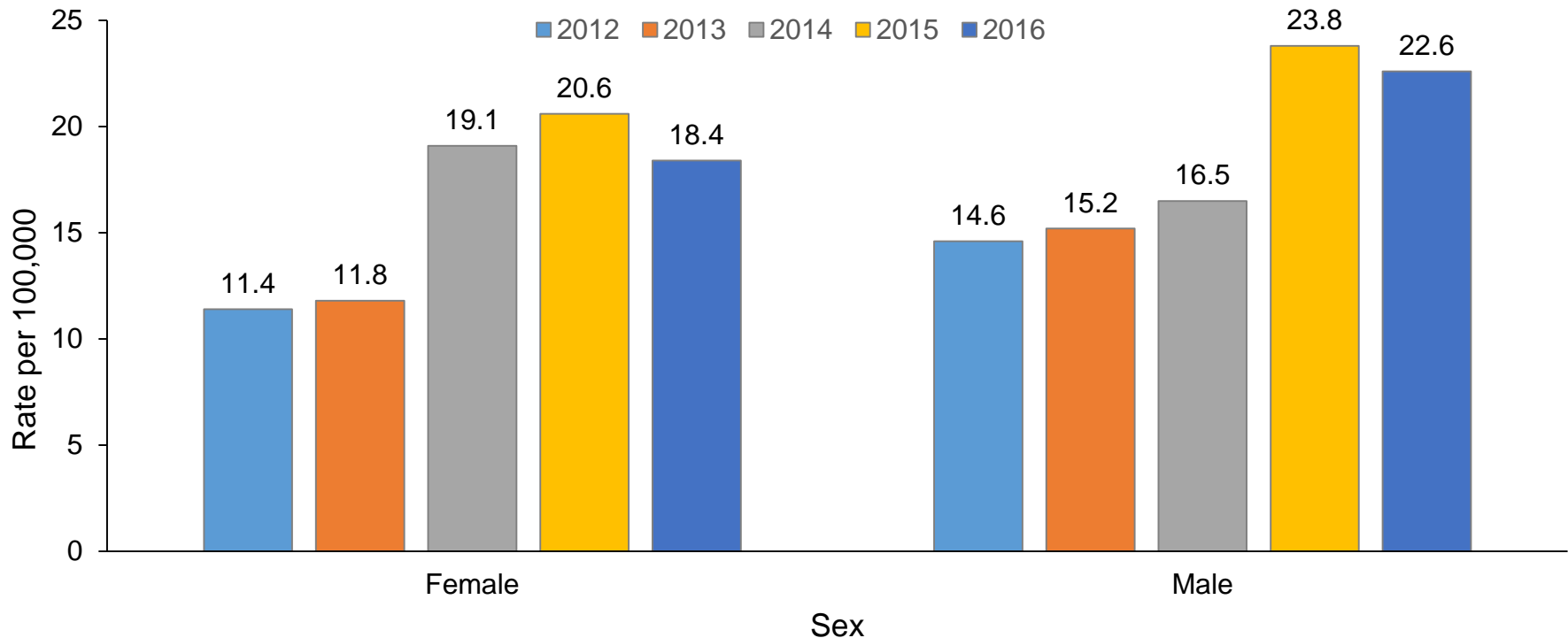
**Figure 1:** The number of reported campylobacteriosis cases in Rhode Island has generally increased from 2012 to 2016. The increasing use of non-culture testing methods may affect the observed trends in incidence. In 2015, the campylobacteriosis case definition was modified to include individuals diagnosed using non-culture testing methods; thus continued surveillance is necessary to better understand these trends.

# Rate of Campylobacteriosis, Age Group, Rhode Island, 2016



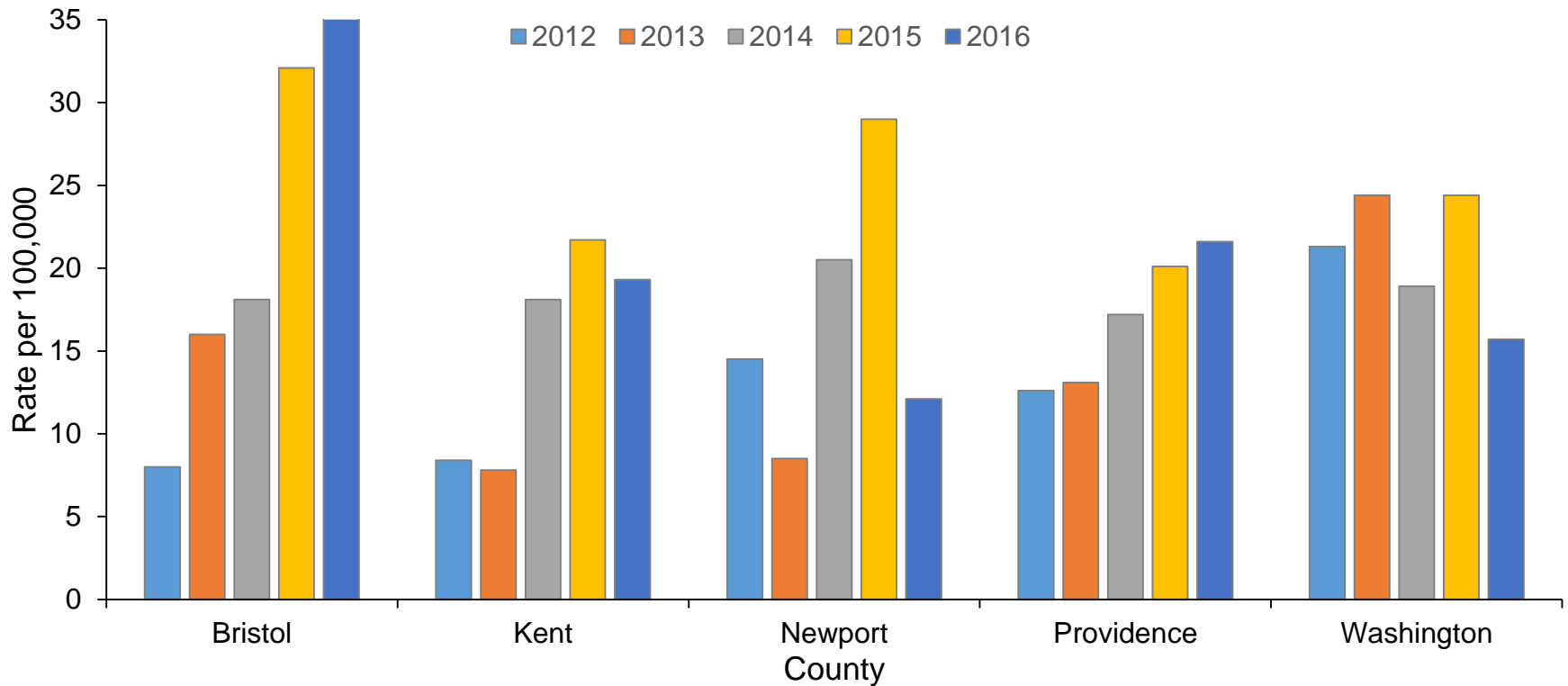
**Figure 2:** Older adults and children less than 5 years old were predominantly affected by campylobacteriosis in 2016. The rate per 100,000 people was lowest among children 5-9 years old, followed by individuals 10-19 years old.

# Rate of Campylobacteriosis, Gender and Year, Rhode Island, 2012-2016



**Figure 3:** The rate of campylobacteriosis was higher among males compared to females in 2016. This follows the trend of prior years, with the exception of 2014 when the rate of campylobacteriosis was higher among females.

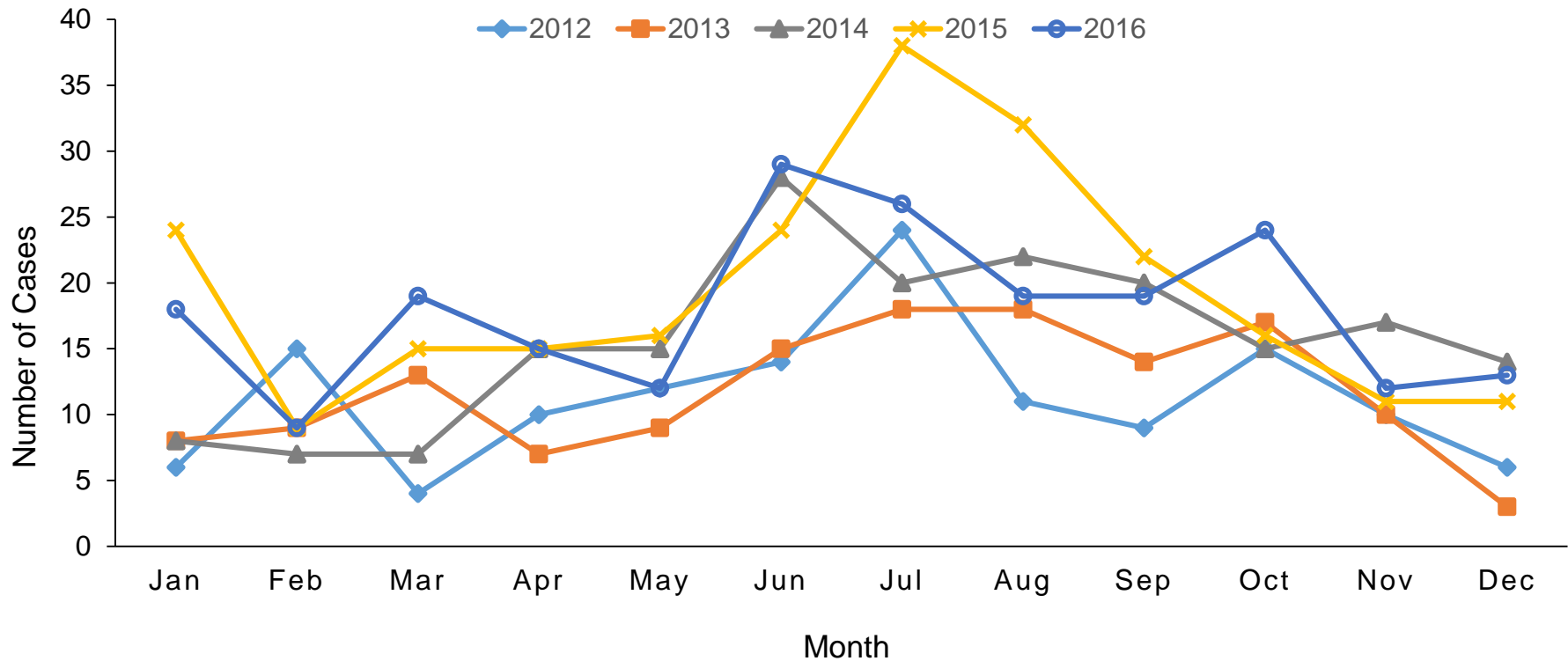
# Rate of Campylobacteriosis, County and Year, Rhode Island, 2012-2016



**Figure 4:** In 2016, the rate of campylobacteriosis was highest among residents of Bristol County (36.1 cases per 100,000 people), followed by residents of Providence County (21.6 cases per 100,000 people). The rate has consistently increased each year from 2012 to 2016 in these two counties.



# Reported Cases of Campylobacteriosis, Month and Year, Rhode Island, 2012-2016



**Figure 5:** Over time, the number of reported campylobacteriosis cases in Rhode Island tend to peak during the summer months and remain high through the early fall. This trend is consistent with national level data for campylobacteriosis.

# Campylobacteriosis Frequency and Rates by Year, Rhode Island, 2012-2016



**Table 1. Frequency by Year**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Number of Cases</b>	136	141	188	233	215

**Table 2. Rate by Year**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Rate per 100,000</b>	12.9	13.4	17.9	22.1	20.4

# Campylobacteriosis Frequency, Age Group and Year, Rhode Island, 2012-2016



**Table 3. Frequency by Age Group and Year**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>0-4</b>	12	7	10	11	18
<b>5-9</b>	3	3	2	2	4
<b>10-19</b>	13	10	14	12	17
<b>20-29</b>	18	21	34	34	36
<b>30-39</b>	21	15	26	32	22
<b>40-49</b>	18	14	18	21	30
<b>50-59</b>	21	35	30	41	29
<b>60-69</b>	15	23	28	41	31
<b>70-79</b>	10	4	14	24	19
<b>≥80</b>	5	9	12	15	9
<b>Total</b>	136	141	188	233	215

# Campylobacteriosis Rates, Age Group and Year, Rhode Island, 2012-2016



**Table 4. Rate by Age Group and Year**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>0-4</b>	20.9	12.2	17.4	19.2	31.3
<b>5-9</b>	5.0	5.0	3.3	3.3	6.6
<b>10-19</b>	9.0	7.0	9.7	8.3	11.8
<b>20-29</b>	12.2	14.2	23.0	23.0	24.3
<b>30-39</b>	16.8	12.0	20.8	25.6	17.6
<b>40-49</b>	11.7	9.1	11.7	13.6	19.4
<b>50-59</b>	13.8	23.1	19.8	27.0	19.1
<b>60-69</b>	14.6	22.4	27.3	39.9	30.2
<b>70-79</b>	17.3	6.9	24.3	41.6	32.9
<b>≥80</b>	9.7	17.5	23.4	29.2	17.5

# Campylobacteriosis Frequency and Rates, Gender and Year, Rhode Island, 2012-2016



**Table 5. Frequency by Sex and Year**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Female</b>	62	64	104	112	100
<b>Male</b>	74	77	84	121	115
<b>Total</b>	136	141	188	233	215

**Table 6. Rate by Sex and Year**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Female</b>	11.4	11.8	19.1	20.6	18.4
<b>Male</b>	14.6	15.2	16.5	23.8	22.6

# Campylobacteriosis Frequency, County and Year, Rhode Island, 2012-2016



**Table 7. Frequency by County and Year**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Bristol</b>	4	8	9	16	18
<b>Kent</b>	14	13	30	36	32
<b>Newport</b>	12	7	17	24	10
<b>Providence</b>	79	82	108	126	135
<b>Washington</b>	27	31	24	31	20
<b>All</b>	136	141	188	233	215

# Campylobacteriosis Rates by County and Year, Rhode Island, 2012-2016



**Table 8. Rate by County and Year**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Bristol</b>	8.0	16.0	18.1	32.1	36.1
<b>Kent</b>	8.4	7.8	18.1	21.7	19.3
<b>Newport</b>	14.5	8.5	20.5	29.0	12.1
<b>Providence</b>	12.6	13.1	17.2	20.1	21.5
<b>Washington</b>	21.3	24.4	18.9	24.4	15.7

# Campylobacteriosis Frequency, Month and Year, Rhode Island, 2012-2016



**Table 9. Frequency by Month and Year**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Jan</b>	6	8	8	24	18
<b>Feb</b>	15	9	7	9	9
<b>Mar</b>	4	13	7	15	19
<b>Apr</b>	10	7	15	15	15
<b>May</b>	12	9	15	16	12
<b>Jun</b>	14	15	28	24	29
<b>Jul</b>	24	18	20	38	26
<b>Aug</b>	11	18	22	32	19
<b>Sep</b>	9	14	20	22	19
<b>Oct</b>	15	17	15	16	24
<b>Nov</b>	10	10	17	11	12
<b>Dec</b>	6	3	14	11	13
<b>All</b>	136	141	188	233	215





# Notes on Data

- Case counts include patients classified as confirmed and probable cases.
- “Event Date” (used to classify cases by month and year) is generated based on the availability of data in the following order:
  1. Illness onset date
  2. Specimen collection date
  3. Date of report to public health agency
- Rate is calculated per 100,000 population. The population denominator is based on 2010 US Census Population.



# References

- <https://www.cdc.gov/foodsafety/diseases/campylobacter/>