





# **Campylobacteriosis Surveillance 2014-2018**

Rhode Island Department of Health

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

Center for Acute Infectious Disease Epidemiology



# About Campylobacteriosis

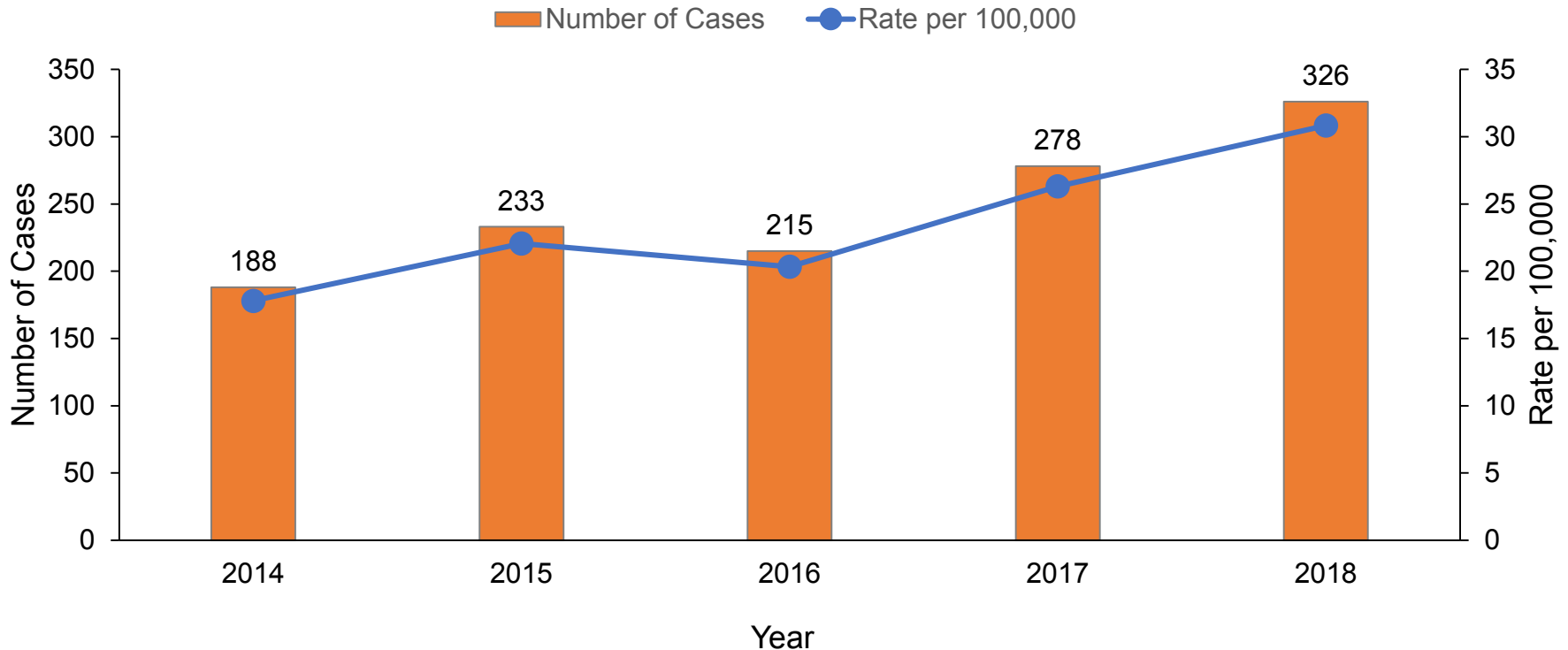
- Campylobacteriosis is a bacterial disease most often contracted by consuming undercooked meat (especially poultry), unpasteurized dairy products, or other food that has been contaminated with the bacteria, drinking water that has been contaminated with the bacteria, or by direct contact with infected 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



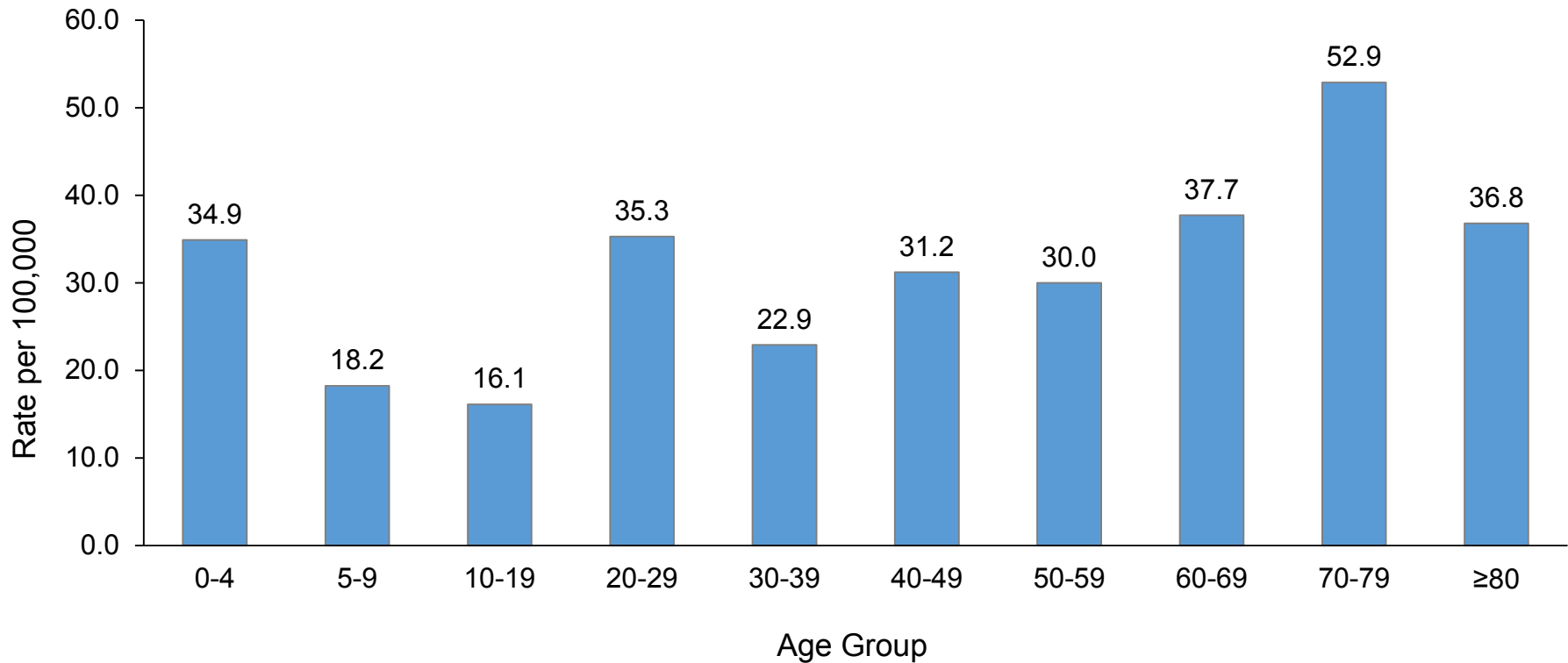
- In 2018, 326 campylobacteriosis cases were reported in Rhode Island, for a rate of 30.8 cases per 100,000 people.
- The number of campylobacteriosis cases has generally increased in Rhode Island from 2014 to 2018; however, this trend may be impacted by changes in testing. The campylobacteriosis case 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 typically peak beginning in June and remain high throughout the summer and early fall.
- Older adults were predominately affected by campylobacteriosis in 2018. Illness rates were also higher in males compared to females, and among residents of Kent County.

# Reported Cases of Campylobacteriosis, Rhode Island, 2014-2018



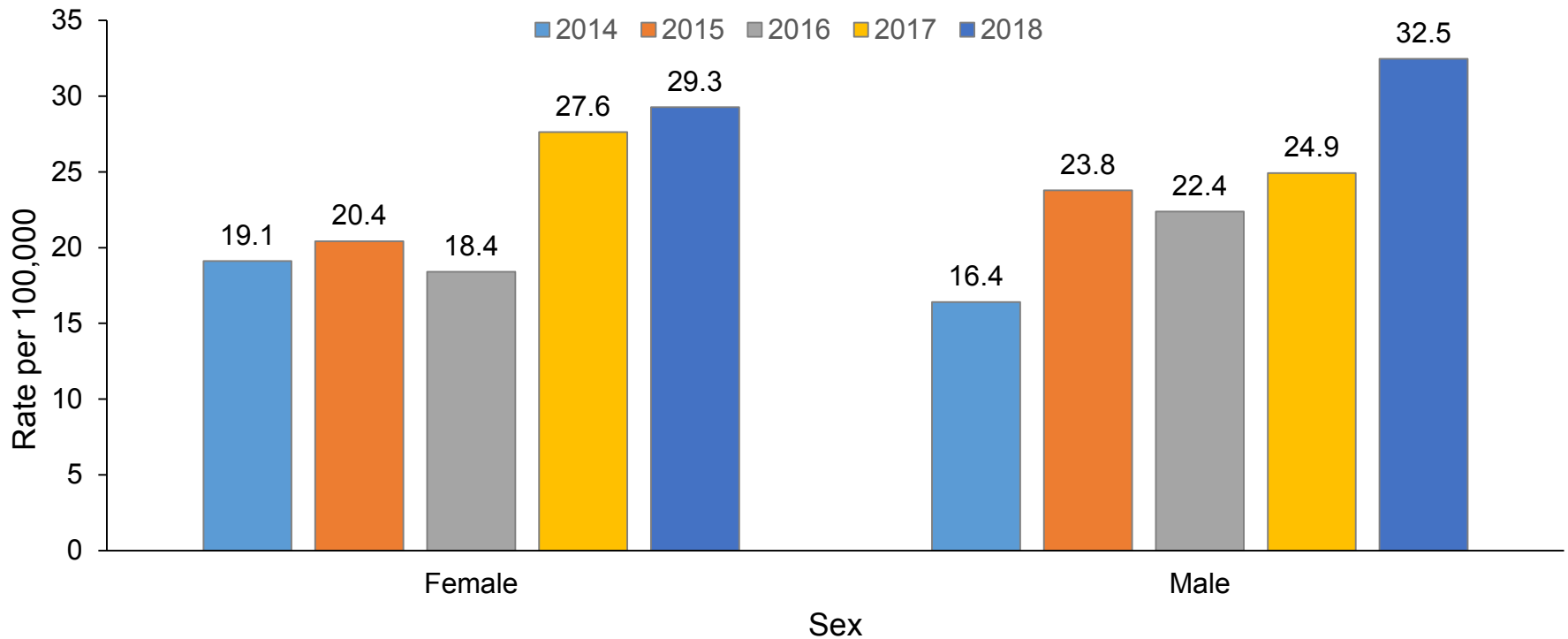
**Figure 1:** The number of reported campylobacteriosis cases in Rhode Island has generally increased from 2014 to 2018. The increasing use of non-culture testing methods may affect the observed trends in incidence. In 2015, the campylobacteriosis case definition was modified to include individuals diagnosed using non-culture testing methods; thus continued surveillance is necessary to better understand these trends.

# Rate of Campylobacteriosis, Age Group, Rhode Island, 2018



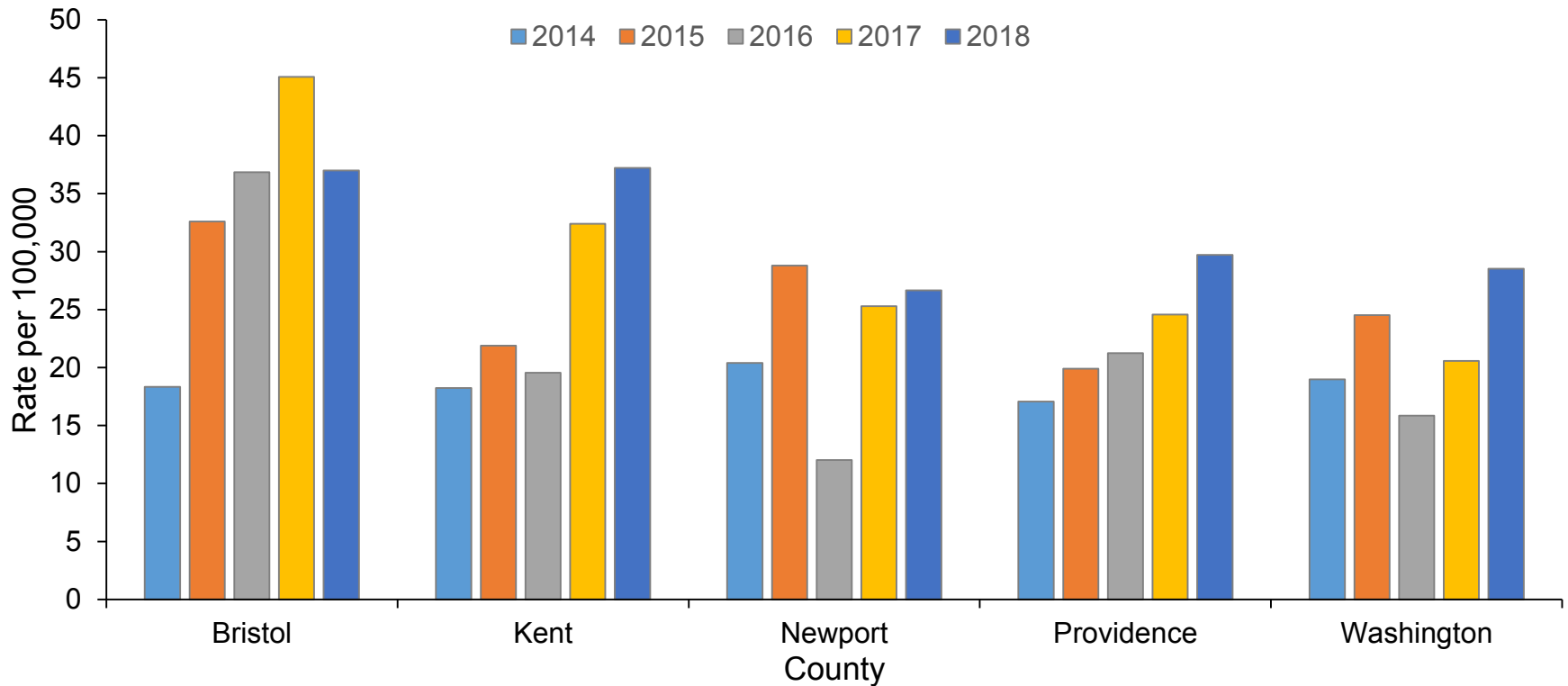
**Figure 2:** In 2018, the highest rates of campylobacteriosis were observed among older adults. Elevated rates were also observed among adults 20-29 years old and children less than 5 years old.

# Rate of Campylobacteriosis, Gender and Year, Rhode Island, 2014-2018



**Figure 3:** The rate of campylobacteriosis was slightly higher among males compared to females in 2018. This follows the general trend of prior years, where the rates were higher among males in 3 of the past 5 years.

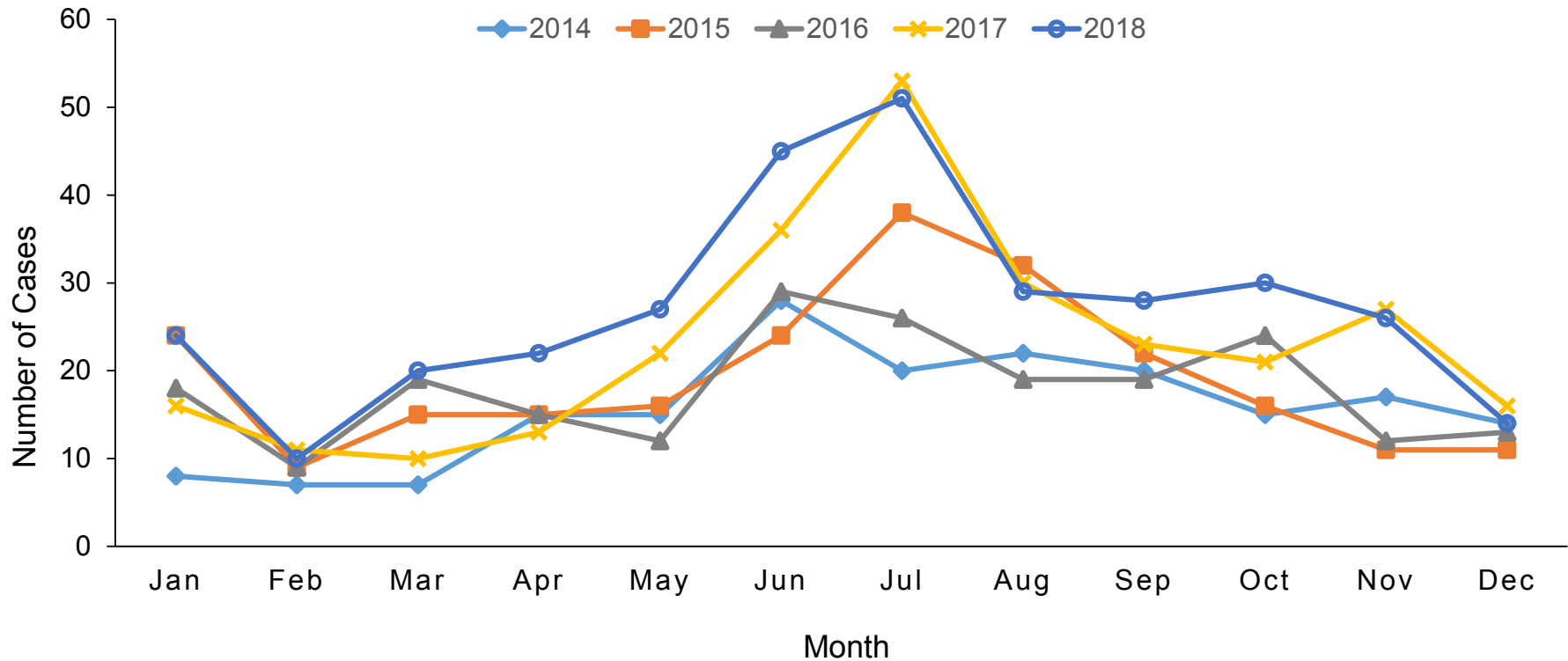
# Rate of Campylobacteriosis, County and Year, Rhode Island, 2014-2018



**Figure 4:** From 2014-2018, the highest rate of campylobacteriosis has typically been observed among residents of Bristol County. In 2018, similarly high rates of campylobacteriosis were observed among residents of Bristol County (37.0 cases per 100,000 people) and residents of Kent County (37.2 cases per 100,000 people).



# Reported Cases of Campylobacteriosis, Month and Year, Rhode Island, 2014-2018



**Figure 5:** Over time, the number of reported campylobacteriosis cases in Rhode Island tends 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, 2014-2018



**Table 1. Frequency by Year**

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Number of Cases</b>	188	233	215	278	326

**Table 2. Rate by Year**

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Rate per 100,000</b>	17.8	22.1	20.3	26.3	30.8

# Campylobacteriosis Frequency, Age Group and Year, Rhode Island, 2014-2018



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

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>0-4</b>	10	11	18	19	19
<b>5-9</b>	2	2	4	3	10
<b>10-19</b>	14	12	17	14	21
<b>20-29</b>	34	34	36	35	54
<b>30-39</b>	26	32	22	29	31
<b>40-49</b>	18	21	30	31	39
<b>50-59</b>	30	41	29	43	45
<b>60-69</b>	28	41	31	50	49
<b>70-79</b>	14	24	19	34	40
<b>≥80</b>	12	15	9	20	18
<b>Total</b>	188	233	215	278	326

# Campylobacteriosis Rates, Age Group and Year, Rhode Island, 2014-2018



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

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>0-4</b>	18.2	20.1	32.9	34.9	34.9
<b>5-9</b>	3.5	3.5	7.1	5.4	18.2
<b>10-19</b>	10.3	9.0	12.8	10.6	16.1
<b>20-29</b>	22.0	21.9	23.2	22.7	35.3
<b>30-39</b>	20.6	25.0	16.9	21.9	22.9
<b>40-49</b>	13.0	15.7	23.0	24.4	31.2
<b>50-59</b>	19.1	26.2	18.7	28.2	30.0
<b>60-69</b>	23.8	33.7	24.7	39.3	37.7
<b>70-79</b>	22.0	36.6	28.1	47.1	52.9
<b>≥80</b>	23.9	30.4	18.4	40.9	36.8

# Campylobacteriosis Frequency and Rates, Gender and Year, Rhode Island, 2014-2018



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

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Female</b>	104	111	100	150	159
<b>Male</b>	84	122	115	128	167
<b>Total</b>	188	233	215	278	326

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

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Female</b>	19.1	20.4	18.4	27.6	29.3
<b>Male</b>	16.4	23.8	22.4	24.9	32.5

# Campylobacteriosis Frequency, County and Year, Rhode Island, 2014-2018



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

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Bristol</b>	9	16	18	22	18
<b>Kent</b>	30	36	32	53	61
<b>Newport</b>	17	24	10	21	22
<b>Providence</b>	108	126	135	156	189
<b>Washington</b>	24	31	20	26	36
<b>All</b>	188	233	215	278	326

# Campylobacteriosis Rates by County and Year, Rhode Island, 2014-2018



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

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Bristol</b>	18.3	32.6	36.8	45.1	37.0
<b>Kent</b>	18.2	21.9	19.6	32.4	37.2
<b>Newport</b>	20.4	28.8	12.0	25.3	26.7
<b>Providence</b>	17.1	19.9	21.3	24.6	29.7
<b>Washington</b>	19.0	24.5	15.9	20.6	28.5

# Campylobacteriosis Frequency, Month and Year, Rhode Island, 2014-2018



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

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Jan</b>	8	24	18	16	24
<b>Feb</b>	7	9	9	11	10
<b>Mar</b>	7	15	19	10	20
<b>Apr</b>	15	15	15	13	22
<b>May</b>	15	16	12	22	27
<b>Jun</b>	28	24	29	36	45
<b>Jul</b>	20	38	26	53	51
<b>Aug</b>	22	32	19	30	29
<b>Sep</b>	20	22	19	23	28
<b>Oct</b>	15	16	24	21	30
<b>Nov</b>	17	11	12	27	26
<b>Dec</b>	14	11	13	16	14
<b>All</b>	188	233	215	278	326





# 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.
- Population denominators are based on the Annual Estimates of the Resident Population: April 1, 2010-July 1, 2018, U.S. Census Bureau.



# References

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