





# **Campylobacteriosis Surveillance 2011-2015**

Rhode Island Department of Health

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

Center for Acute Infectious Disease Epidemiology



# About Campylobacteriosis

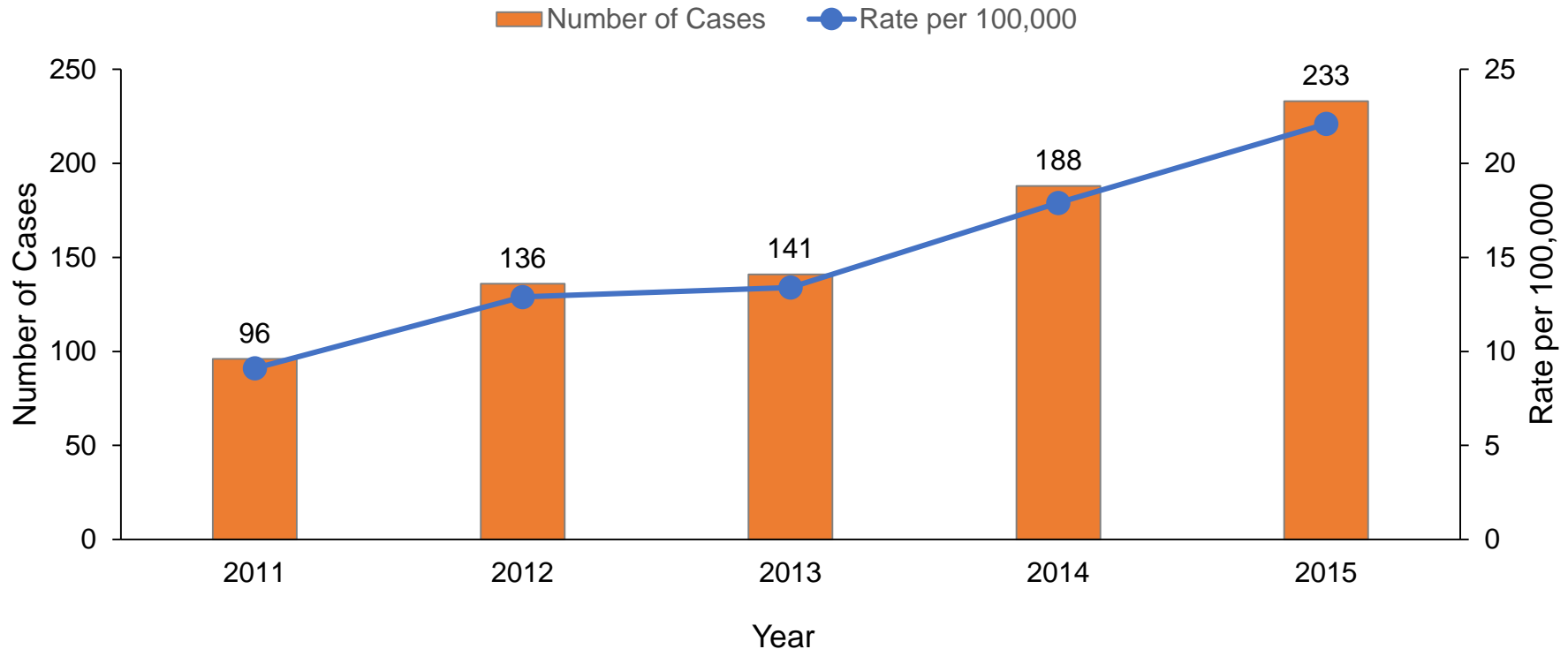
- Campylobacteriosis is a bacterial disease most often contracted by consuming undercooked meat (especially poultry), unpasteurized dairy products, or other food that has been contaminated with the bacteria; drinking water that has been contaminated with the bacteria; or by direct contact with infected 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 less than <math><1\%</math>.
- Campylobacteriosis became a nationally notifiable disease in 2015.

# Data Overview, Campylobacteriosis



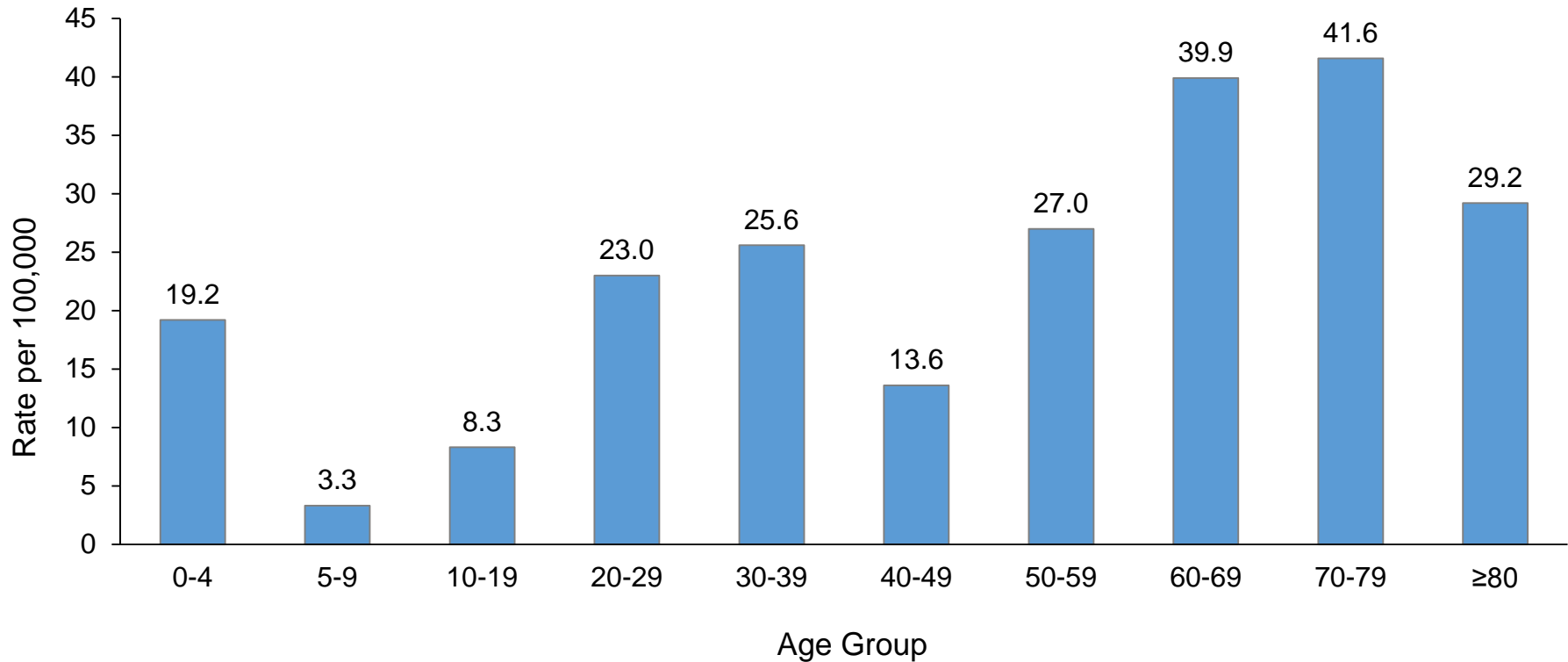
- In 2015, 233 campylobacteriosis cases were reported in Rhode Island, for a rate of 22.1 cases per 100,000 people.
- The number of campylobacteriosis cases has increased each year in Rhode Island from 2011-2015. However, the increase in cases in 2015 may not represent a true increase in disease compared to 2014, as the case definition was modified in 2015 to include individuals diagnosed using non-culture testing methods. Approximately 33% (78) of the 2015 cases were diagnosed using these types of tests and may not have been captured by surveillance in prior years. Continued surveillance will help better understand these trends.
- Reported cases of campylobacteriosis increased sharply during early summer, peaked in June, and declined slowly during fall.
- Older adults were predominately affected by campylobacteriosis in 2015. Illness rates were also higher in males compared to females and among residents of Bristol and Newport counties.

# Reported Cases of Campylobacteriosis, Rhode Island, 2011-2015



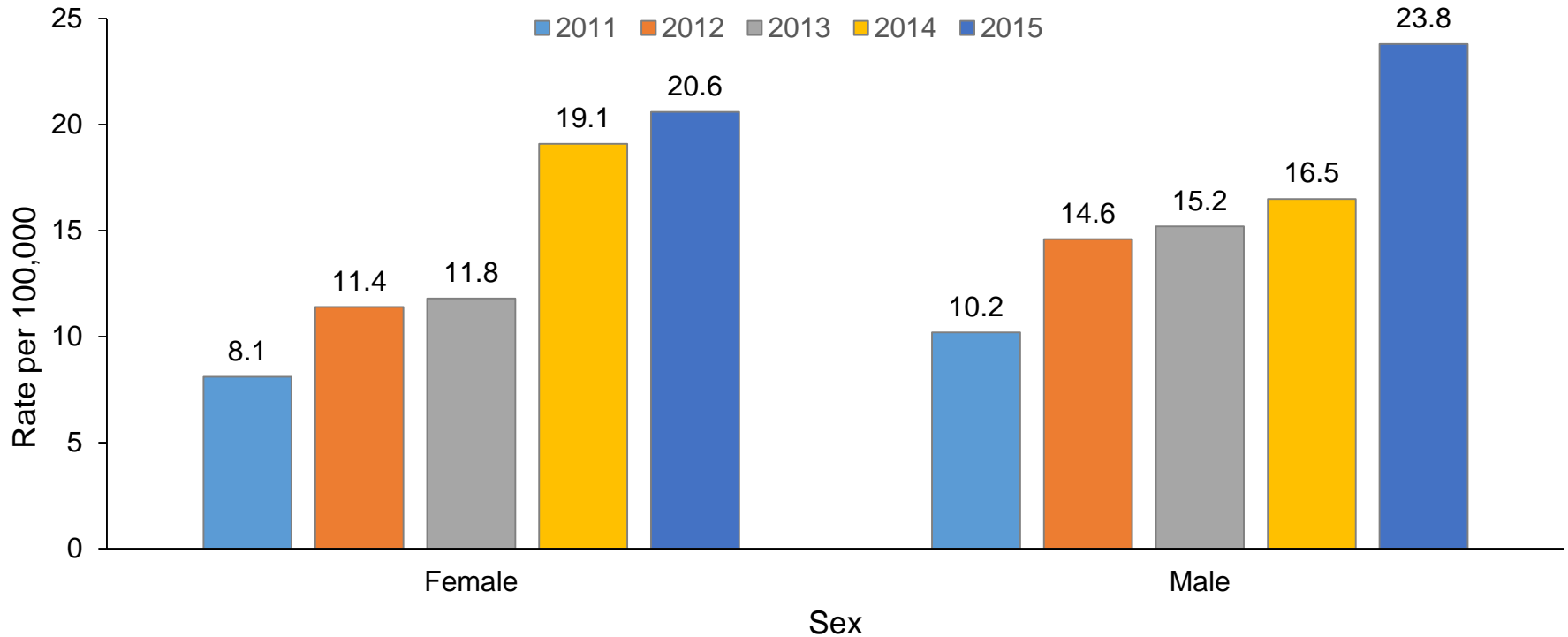
**Figure 1:** The number of reported campylobacteriosis cases in Rhode Island has increased each year from 2011 to 2015. The increase observed from 2014 to 2015 may not represent a true increase as the case definition was modified in 2015 to include individuals diagnosed using non-culture testing methods. Approximately 33% (78) of the 2015 cases were diagnosed using these types of tests and may not have been captured by surveillance in prior years. Continued surveillance is necessary to better understand these trends.

# Rate of Campylobacteriosis, Age Group, Rhode Island, 2015



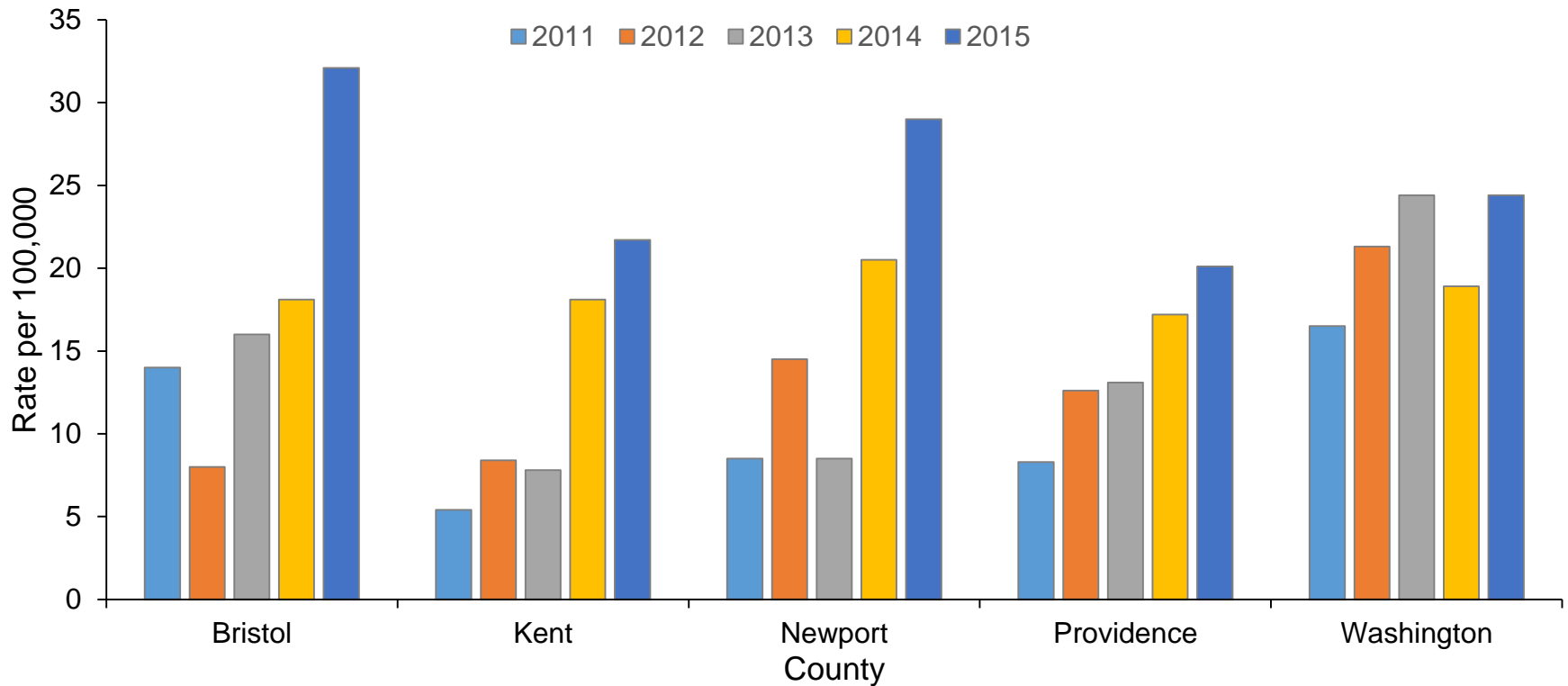
**Figure 2:** Older adults were predominantly affected by campylobacteriosis in 2015. The rate per 100,000 people was lowest among children 5-9 years old, followed by individuals 10-19 years old.

# Rate of Campylobacteriosis, Gender and Year, Rhode Island, 2011-2015



**Figure 3:** The rate of campylobacteriosis was higher among males compared to females in 2015. This follows the trend of prior years, with the exception of 2014 when the rate of campylobacteriosis was higher among females.

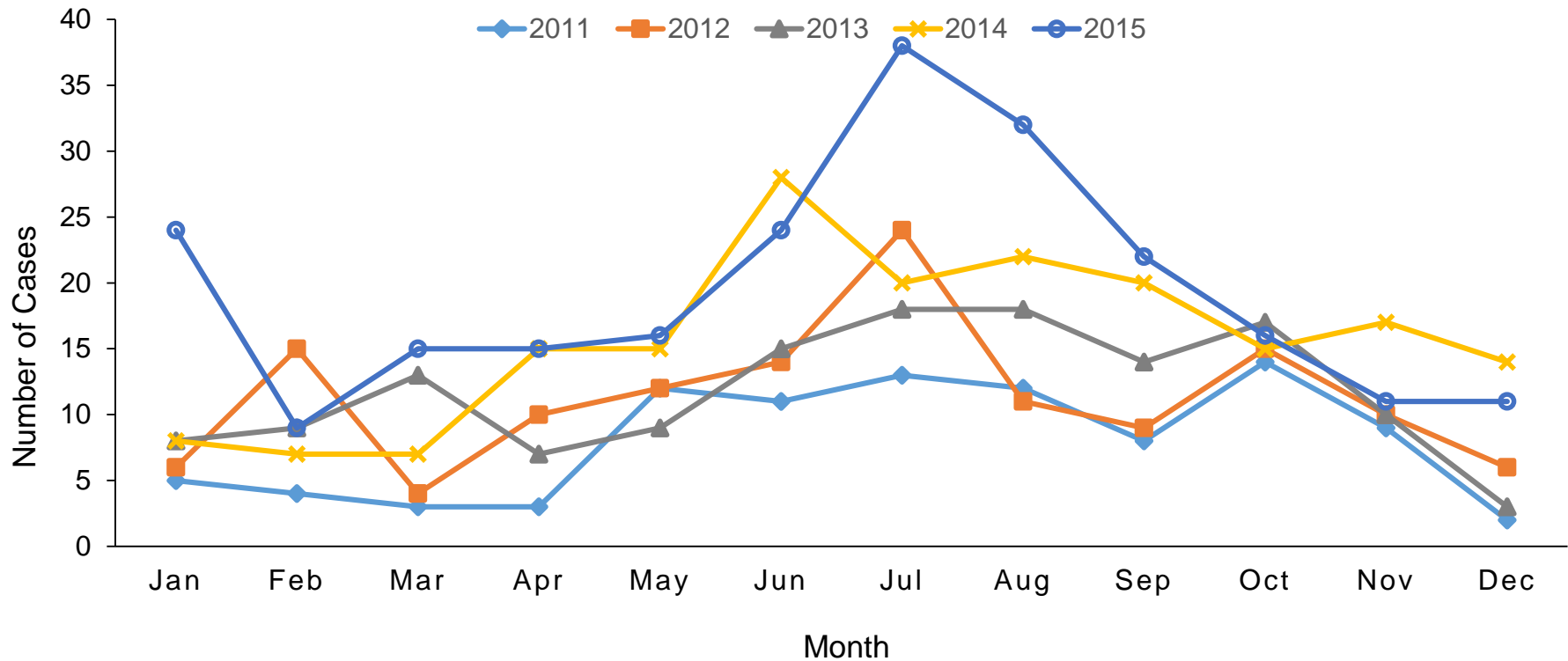
# Rate of Campylobacteriosis, County and Year, Rhode Island, 2011-2015



**Figure 4:** In 2015, the rate of campylobacteriosis was highest among residents of Bristol County (32.1 cases per 100,000 people), followed by residents of Newport County (29.0 cases per 100,000 people). The greatest rate increases from 2014 to 2015 were also observed in these two counties.



# Reported Cases of Campylobacteriosis, Month and Year, Rhode Island, 2011-2015



**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, 2011-2015



**Table 1. Frequency by Year**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Number of Cases</b>	96	136	141	188	233

**Table 2. Rate by Year**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Rate per 100,000</b>	9.1	12.9	13.4	17.9	22.1

# Campylobacteriosis Frequency, Age Group and Year, Rhode Island, 2011-2015



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

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>0-4</b>	4	12	7	10	11
<b>5-9</b>	5	3	3	2	2
<b>10-19</b>	9	13	10	14	12
<b>20-29</b>	9	18	21	34	34
<b>30-39</b>	8	21	15	26	32
<b>40-49</b>	17	18	14	18	21
<b>50-59</b>	19	21	35	30	41
<b>60-69</b>	14	15	23	28	41
<b>70-79</b>	8	10	4	14	24
<b>≥80</b>	3	5	9	12	15
<b>Total</b>	96	136	141	188	233

# Campylobacteriosis Rates, Age Group and Year, Rhode Island, 2011-2015



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

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>0-4</b>	7.0	20.9	12.2	17.4	19.2
<b>5-9</b>	8.3	5.0	5.0	3.3	3.3
<b>10-19</b>	6.3	9.0	7.0	9.7	8.3
<b>20-29</b>	6.1	12.2	14.2	23.0	23.0
<b>30-39</b>	6.4	16.8	12.0	20.8	25.6
<b>40-49</b>	11.0	11.7	9.1	11.7	13.6
<b>50-59</b>	12.5	13.8	23.1	19.8	27.0
<b>60-69</b>	13.6	14.6	22.4	27.3	39.9
<b>70-79</b>	13.9	17.3	6.9	24.3	41.6
<b>≥80</b>	5.8	9.7	17.5	23.4	29.2

# Campylobacteriosis Frequency and Rates, Gender and Year, Rhode Island, 2011-2015



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

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Female</b>	44	62	64	104	112
<b>Male</b>	52	74	77	84	121
<b>Total</b>	96	136	141	188	233

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

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Female</b>	8.1	11.4	11.8	19.1	20.6
<b>Male</b>	10.2	14.6	15.2	16.5	23.8

# Campylobacteriosis Frequency, County and Year, Rhode Island, 2011-2015



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

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Bristol</b>	7	4	8	9	16
<b>Kent</b>	9	14	13	30	36
<b>Newport</b>	7	12	7	17	24
<b>Providence</b>	52	79	82	108	126
<b>Washington</b>	21	27	31	24	31
<b>All</b>	96	136	141	188	233

# Campylobacteriosis Rates by County and Year, Rhode Island, 2011-2015



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

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Bristol</b>	14.0	8.0	16.0	18.1	32.1
<b>Kent</b>	5.4	8.4	7.8	18.1	21.7
<b>Newport</b>	8.5	14.5	8.5	20.5	29.0
<b>Providence</b>	8.3	12.6	13.1	17.2	20.1
<b>Washington</b>	16.5	21.3	24.4	18.9	24.4

# Campylobacteriosis Frequency, Month and Year, Rhode Island, 2011-2015



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

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Jan</b>	5	6	8	8	24
<b>Feb</b>	4	15	9	7	9
<b>Mar</b>	3	4	13	7	15
<b>Apr</b>	3	10	7	15	15
<b>May</b>	12	12	9	15	16
<b>Jun</b>	11	14	15	28	24
<b>Jul</b>	13	24	18	20	38
<b>Aug</b>	12	11	18	22	32
<b>Sep</b>	8	9	14	20	22
<b>Oct</b>	14	15	17	15	16
<b>Nov</b>	9	10	10	17	11
<b>Dec</b>	2	6	3	14	11
<b>All</b>	96	136	141	188	233





# 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/>