
RHODE ISLAND
DEPARTMENT OF HEALTH

Listeriosis Surveillance 2013-2017

Rhode Island Department of Health

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

Center for Acute Infectious Disease Epidemiology

About Listeriosis

- Listeriosis is a serious infection of the bloodstream and/or the meninges caused by eating foods contaminated with the bacterium *Listeria monocytogenes.* The disease primarily affects older adults, pregnant women, newborns, and adults with weakened immune systems. Symptoms typically begin 2-70 days after exposure and vary person to person.
- Symptoms can include headache, stiff neck, confusion, loss of balance, and convulsions in addition to fever and muscle aches. Pregnant women typically experience fever and other non-specific symptoms, such as fatigue and aches. However, infections during pregnancy can lead to miscarriage, stillbirth, premature delivery, or life-threatening infection of the newborn.
- Unpasteurized dairy products and food items that are not re-heated prior to consumption, such as deli meats, have been associated with listeriosis.
- CDC estimates there are approximately 1,600 illnesses and 260 deaths due to listeria each year in the United States.

Data Overview, Listeriosis

- In 2017, 7 cases of listeriosis were reported in Rhode Island for an incidence rate of 0.66 cases per 100,000 people. This is higher than the CDC's estimated annual rate of 0.24 cases of listeriosis per 100,000 people.
- In Rhode Island from 2013 to 2017, the highest rate of listeriosis was observed among older adults ≥80 years old. The rate of listeriosis among females was slightly higher than males, and reports of listeriosis peaked in the August through October months. These findings are all consistent with what has been observed nationally.
- Rhode Island has low case counts of listeriosis. In order to ensure patient privacy, data from 2013-2017 have been combined or averaged for analysis by age group, sex, county, and month of illness onset.

Reported Cases of Listeriosis, Rhode Island, 2013-2017

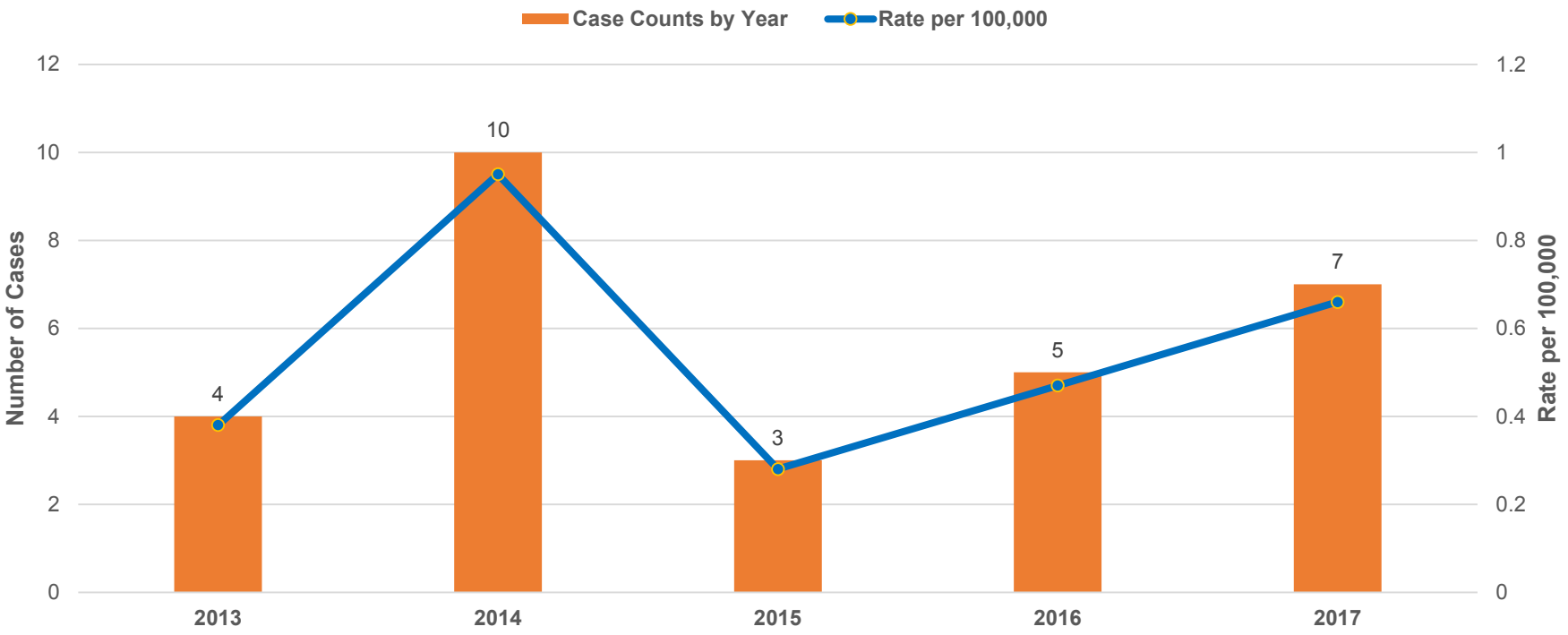

Figure 1: Seven cases of listeriosis were reported in Rhode Island during 2017, for an incidence rate of 0.66 cases per 100,000 people. This rate is slightly higher than the national rate of listeriosis estimated by CDC to be 0.24 cases per 100,000 people. The number of listeriosis reports was consistent with what has been observed in Rhode Island in recent years. 2014 and 2017 had an increase in case counts. Most of the 2014 cases were considered sporadic, while three of the cases were associated with an outbreak at a restaurant. A case from 2013 was also associated with the same outbreak. In 2017, two of the cases were a local outbreak with exposure to homemade queso fresco, which has been linked listeria infections.

5-Year Average Rate of Listeriosis, Age Group, Rhode Island, 2013-2017

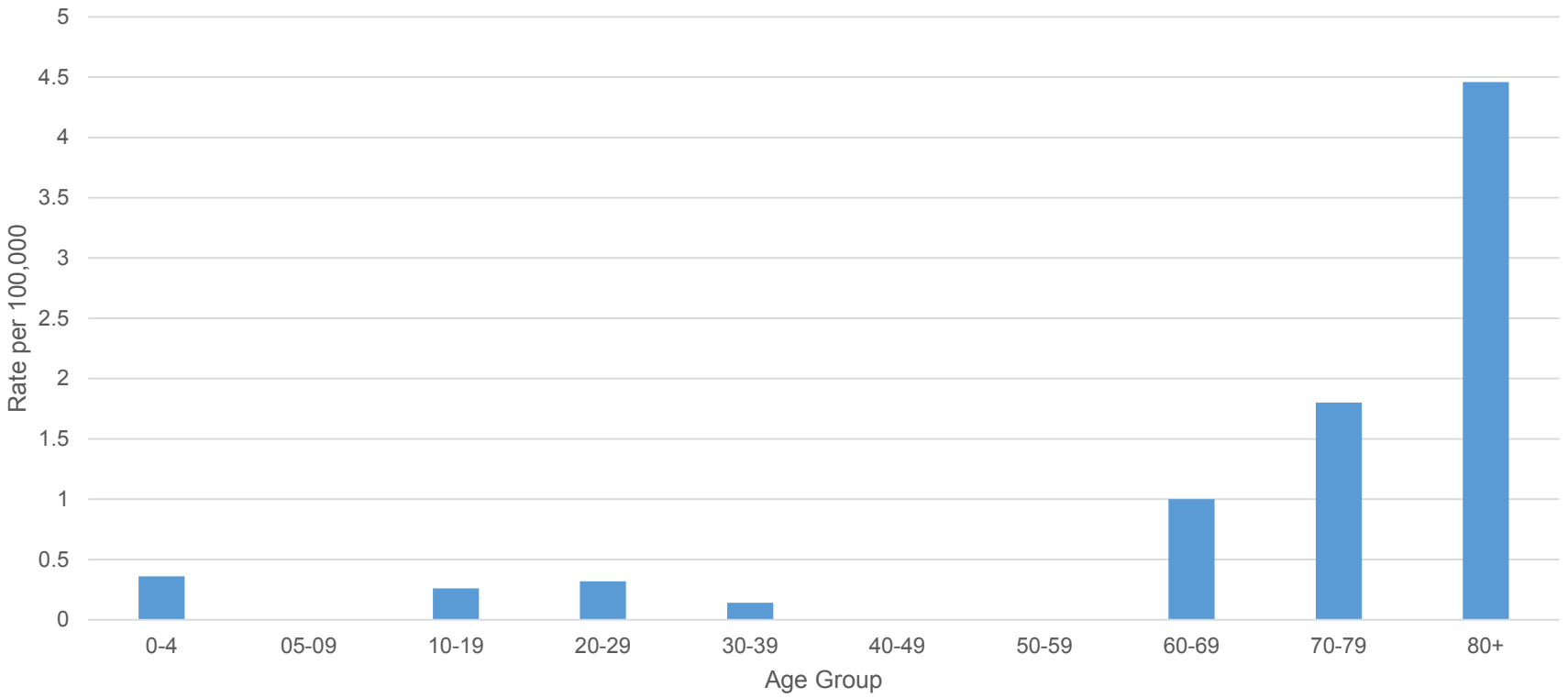

Figure 2: From 2013-2017, the highest incidence rates of listeriosis were observed among adults >60 years old. These age groups tend to be most susceptible to listeria. According to CDC, older adults are at particular risk – more than half of all Listeria infections occur in people 65 and older.

5-Year Average Rate of Listeriosis, Gender, Rhode Island, 2013-2017

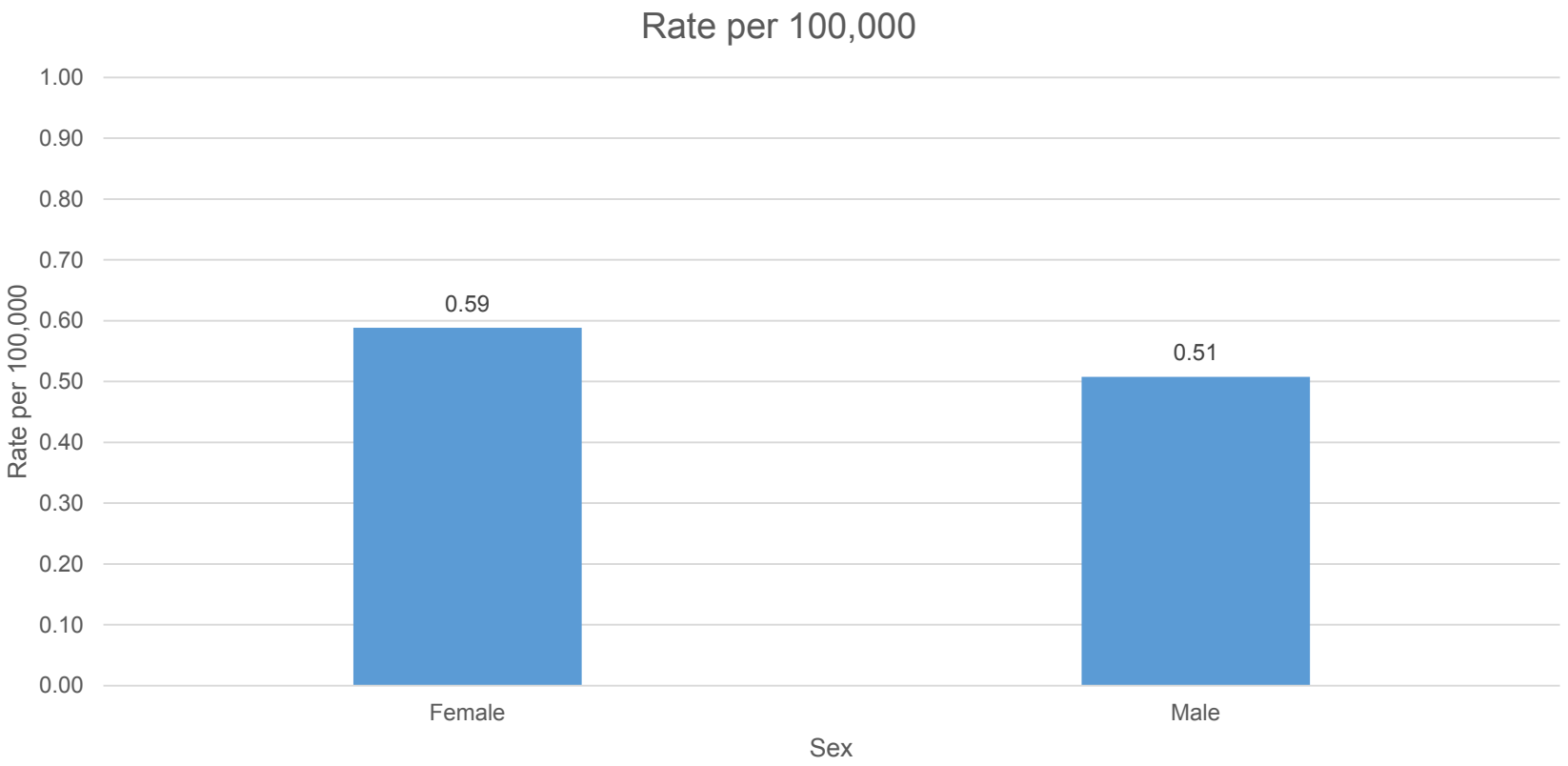

Figure 3. The 5-year average rate of listeriosis in Rhode Island was observed to be similar between males and females. This finding is consistent with recent national data, where similar rates of listeriosis have been observed between sexes.

5-Year Average Rate of Listeriosis, by County, Rhode Island, 2013-2017

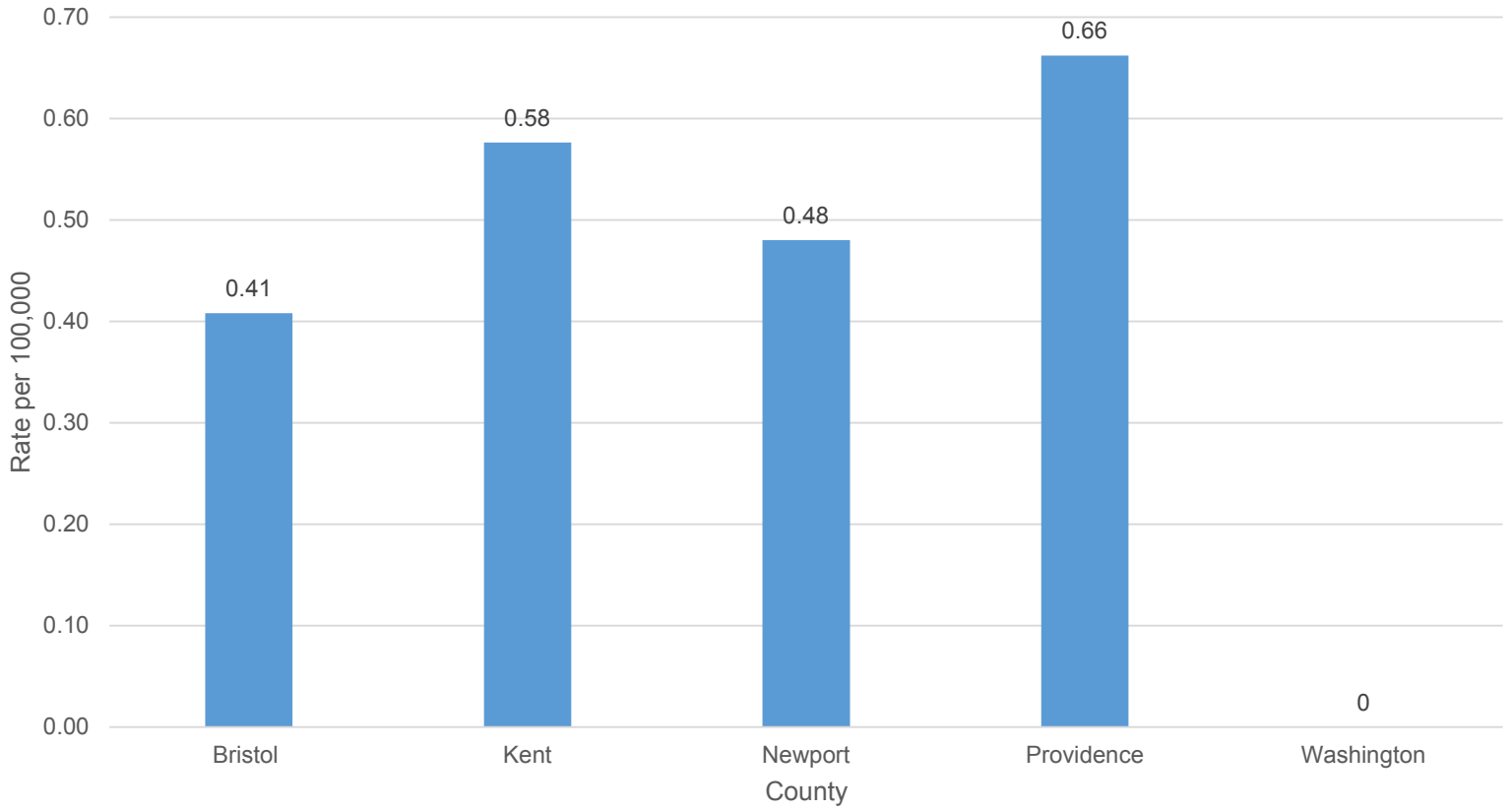

Figure 4: From 2013-2017, the incidence rate of listeriosis was highest in Providence and Kent counties, followed by Newport and Bristol Counties, respectfully. No listeriosis cases were reported in Washington county.

5-Year Cumulative Cases of Listeriosis, by Month, Rhode Island, 2013-2017

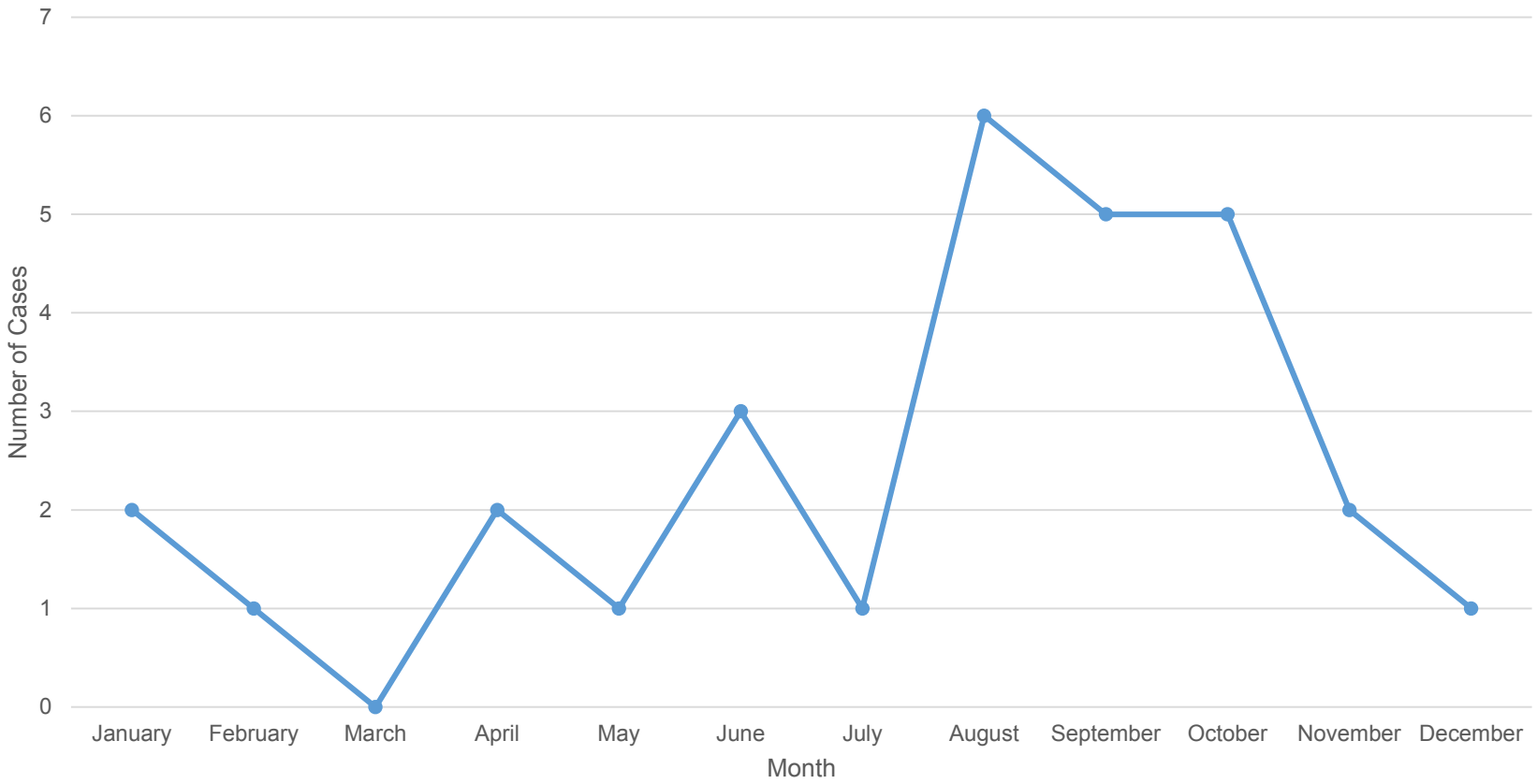

Figure 5: From 2013-2017, the majority of listeriosis cases occurred in late summer, which is consistent with observations of monthly counts nationally.

Listeriosis Frequency and Rates by Year, Rhode Island, 2013-2017

Table 1. Frequency by Year					
	2013	**2014**	**2015**	**2016**	**2017**
Number of Cases	4	10	3	5	7

Table 2. Rate by Year					
	2013	**2014**	**2015**	**2016**	**2017**
Rate per 100,000	0.4	1.0	0.3	0.5	0.7

5-Year Cumulative Listeriosis Frequency, by Age Group, Rhode Island, 2013-2017

Table 3. 5-Year Cumulative Frequency by Age Group	
	2013-2017
0-4	1
5-9	0
10-19	0
20-29	2
30-39	2
40-49	0
50-59	1
60-69	6
70-79	6
≥80	11

5-Year Average Listeriosis Rates, by Age Group, Rhode Island, 2013-2017

Table 4. 5-Year Average Rate by Age Group	
	2013-2017
0-4	0.4
5-9	0.0
10-19	0.3
20-29	0.3
30-39	0.1
40-49	0.0
50-59	0.0
60-69	1.0
70-79	1.8
≥80	4.5

5-Year Cumulative Listeriosis Frequency and Average Rates, by Gender, Rhode Island, 2013-2017

Table 5. 5-Year Cumulative Frequency by Sex	
	2013-2017
Female	16
Male	13
Total	29

Table 6. 5-Year Cumulative Rate by Sex	
	2013-2017
Female	0.6
Male	0.5

5-Year Cumulative Listeriosis Frequency, by County, Rhode Island, 2013-2017

Table 7. 5-Year Cumulative Frequency by County	
	2013-2017
Bristol	1
Kent	5
Newport	2
Providence	21
Washington	0
All	29

5-Year Average Listeriosis Rates, by County, Rhode Island, 2013-2017

Table 8. 5-Year Average Rate by County	
	2013-2017
Bristol	0.4
Kent	0.6
Newport	0.5
Providence	0.7
Washington	0.0

5-Year Cumulative Listeriosis Frequency, Month, Rhode Island, 2013-2017

Table 9. 5-Year Cumulative Frequency by Month	
	2013-2017
Jan	2
Feb	1
Mar	0
Apr	2
May	1
Jun	3
Jul	1
Aug	6
Sep	5
Oct	5
Nov	2
Dec	1
All	29

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, 2017, U.S. Census Bureau.

References

- https://www.cdc.gov/listeria/index.html
- http://www.cdc.gov/foodnet/reports/index.html