





Listeriosis 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 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 reheated 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 2018, 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 2014 to 2018, 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 2014-2018 have been combined or averaged for analysis by age group, sex, county, and month of illness onset.

Reported Cases of Listeriosis, Rhode Island, 2014-2018

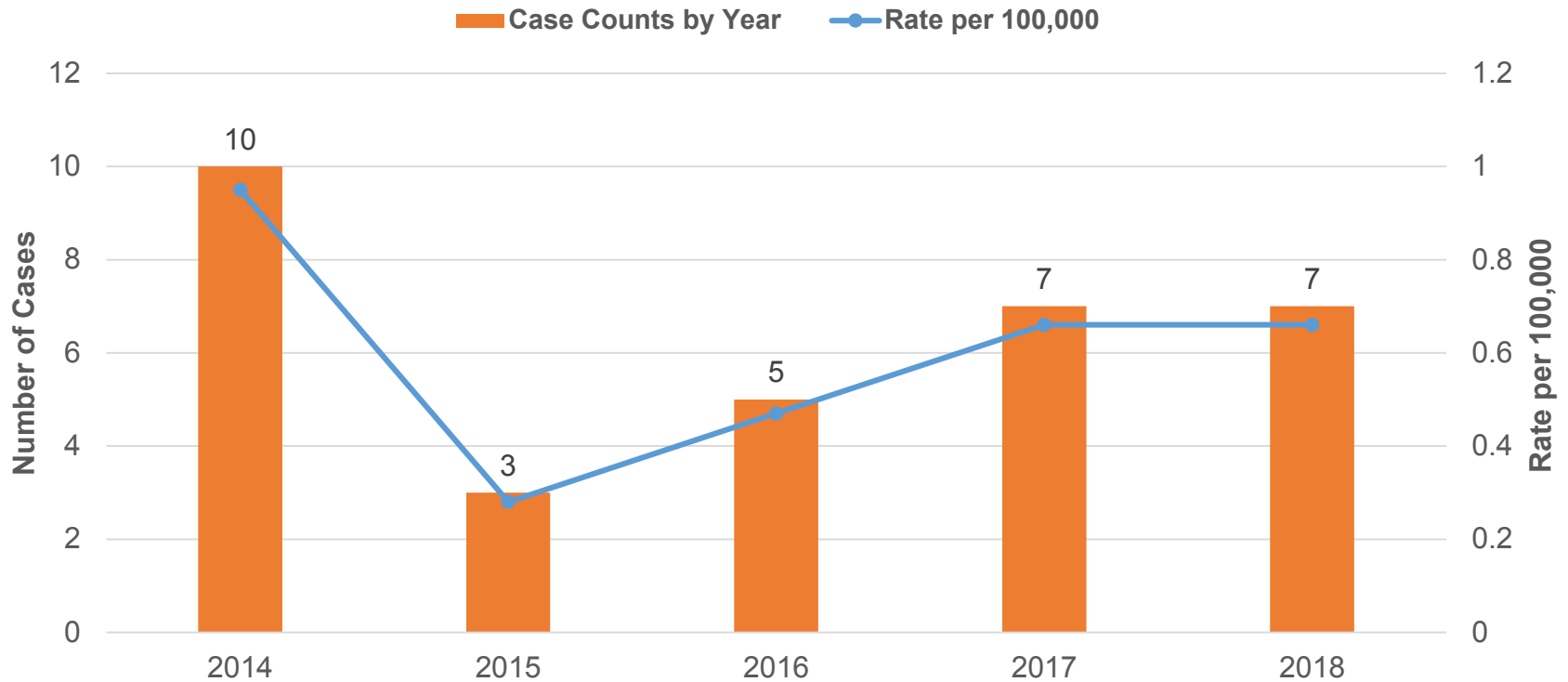


Figure 1: Seven cases of listeriosis were reported in Rhode Island during 2018, for an incidence rate of 0.66 cases per 100,000 people. This rate is higher than the national rate of listeriosis estimated by CDC to be 0.24 cases per 100,000 people. Majority of reported listeriosis cases are sporadic cases, however, in 2014 three of the cases were associated with an outbreak at a restaurant. In 2017, two of the reported cases were a local outbreak with exposure to homemade queso fresco.

5-Year Average Rate of Listeriosis, Age Group, Rhode Island, 2014-2018

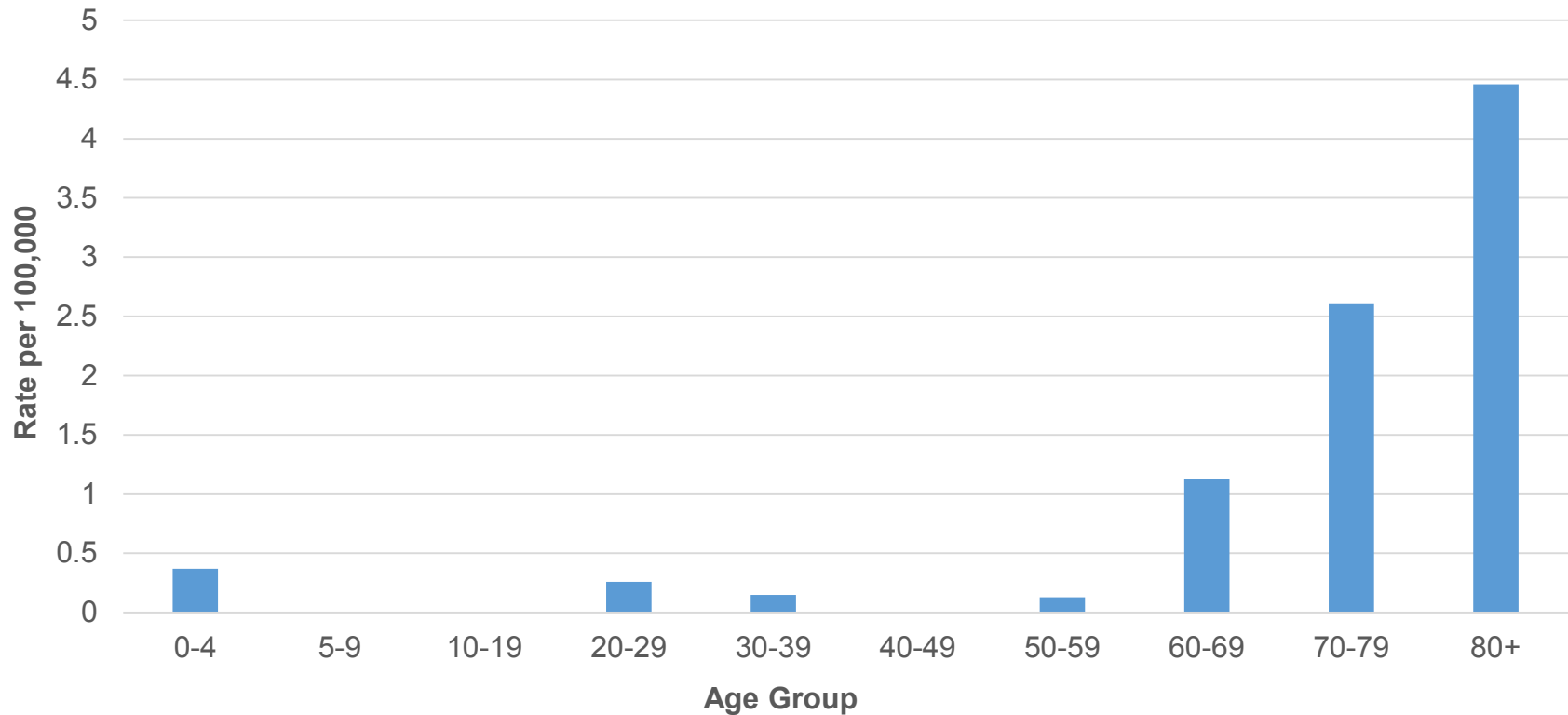


Figure 2: From 2014-2018, the highest incidence rates of listeriosis were observed among adults >60 years old. According to CDC, older adults are at particular risk – more than half of all listeria infections occur in people 65 years and older.

5-Year Average Rate of Listeriosis, Gender, Rhode Island, 2014-2018

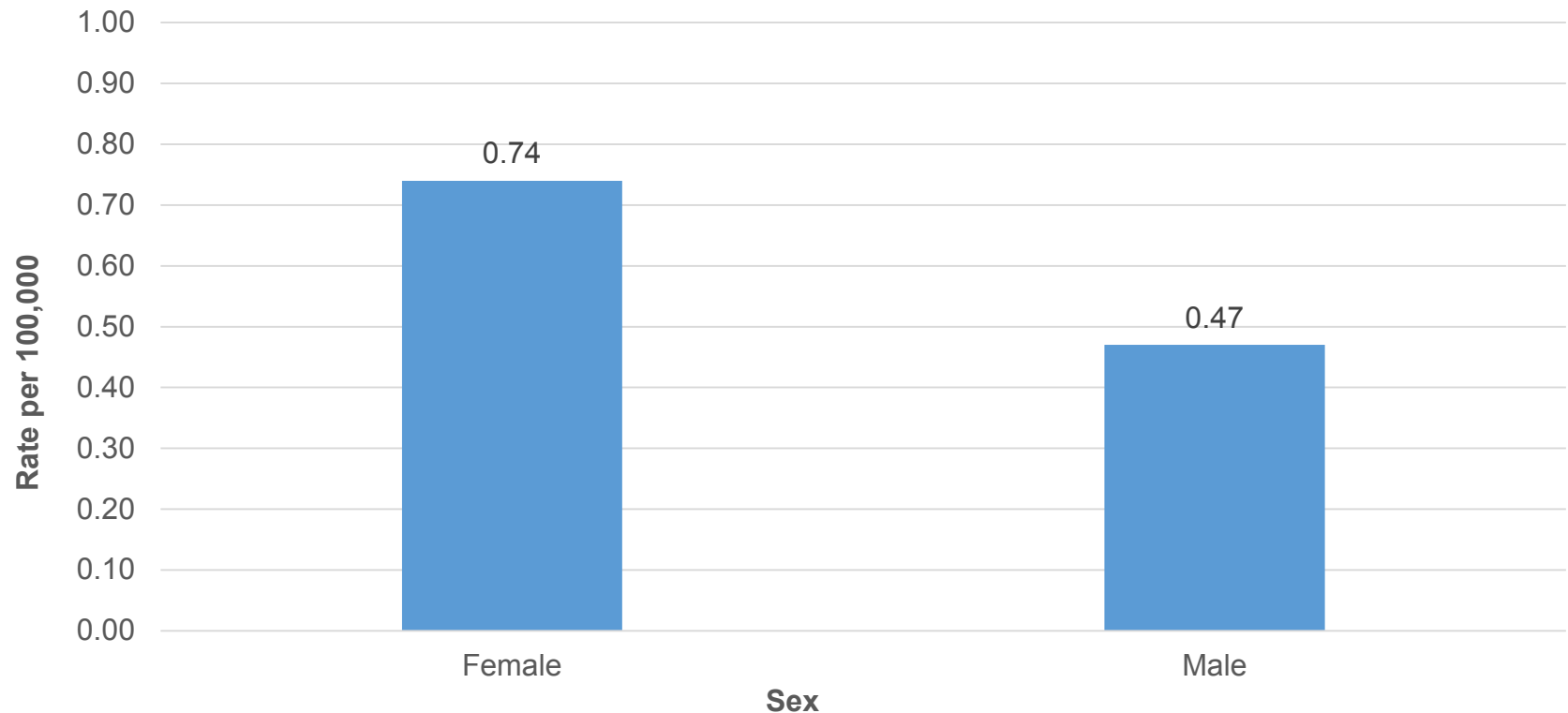


Figure 3. The 5-year average rate of listeriosis in Rhode Island is higher in females than males. The CDC reports a national incidence rate higher in males with a rate of 0.30 cases per 100,000 people for males and a rate of 0.18 cases per 100,000 people for females.

5-Year Average Rate of Listeriosis, by County, Rhode Island, 2014-2018

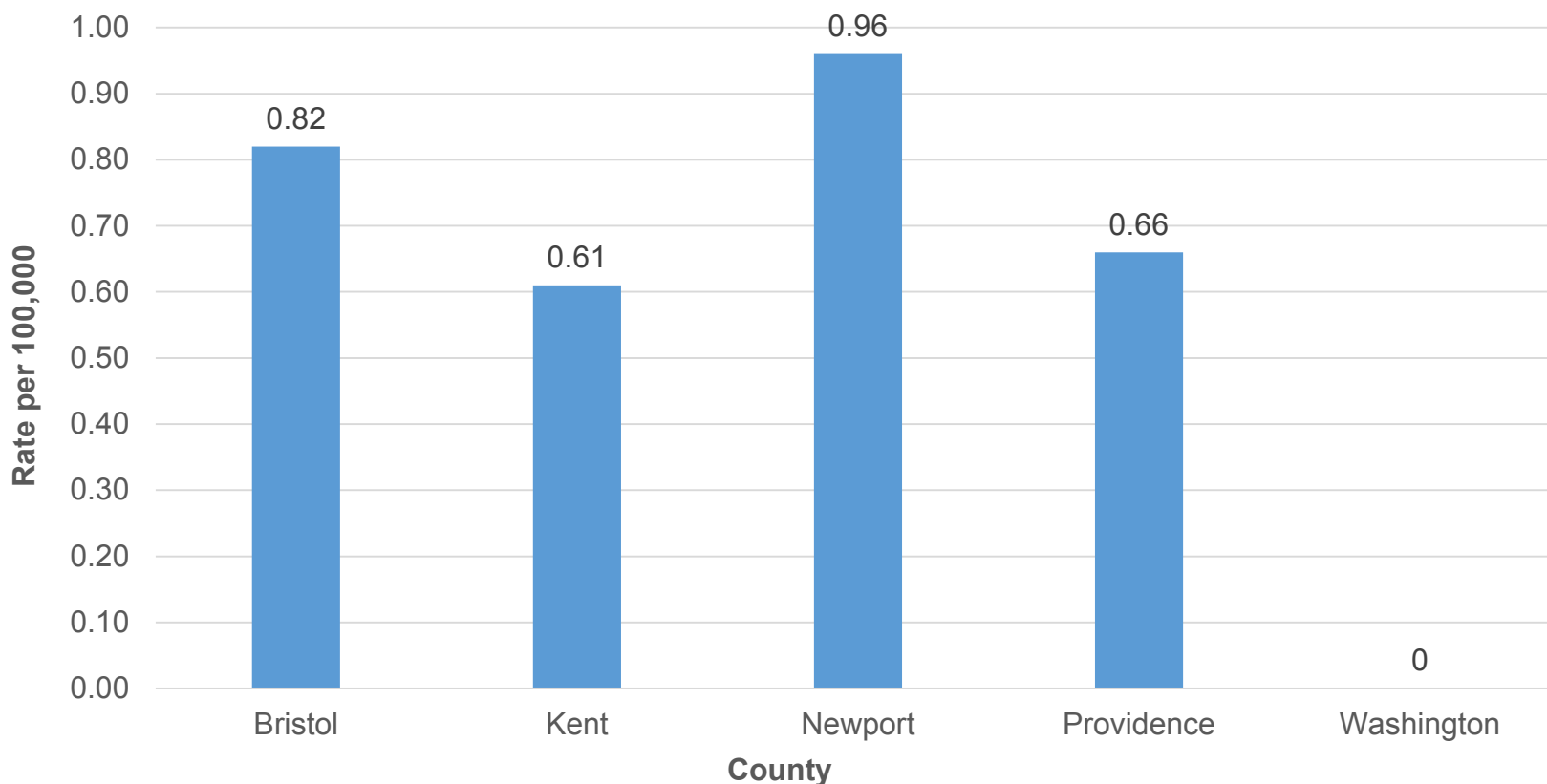


Figure 4: From 2014-2018, the incidence rate of listeriosis was highest in Newport and Bristol counties, followed by Providence and Kent Counties, respectively. No listeriosis cases were reported in Washington county.

5-Year Cumulative Cases of Listeriosis, by Month, Rhode Island, 2014-2018

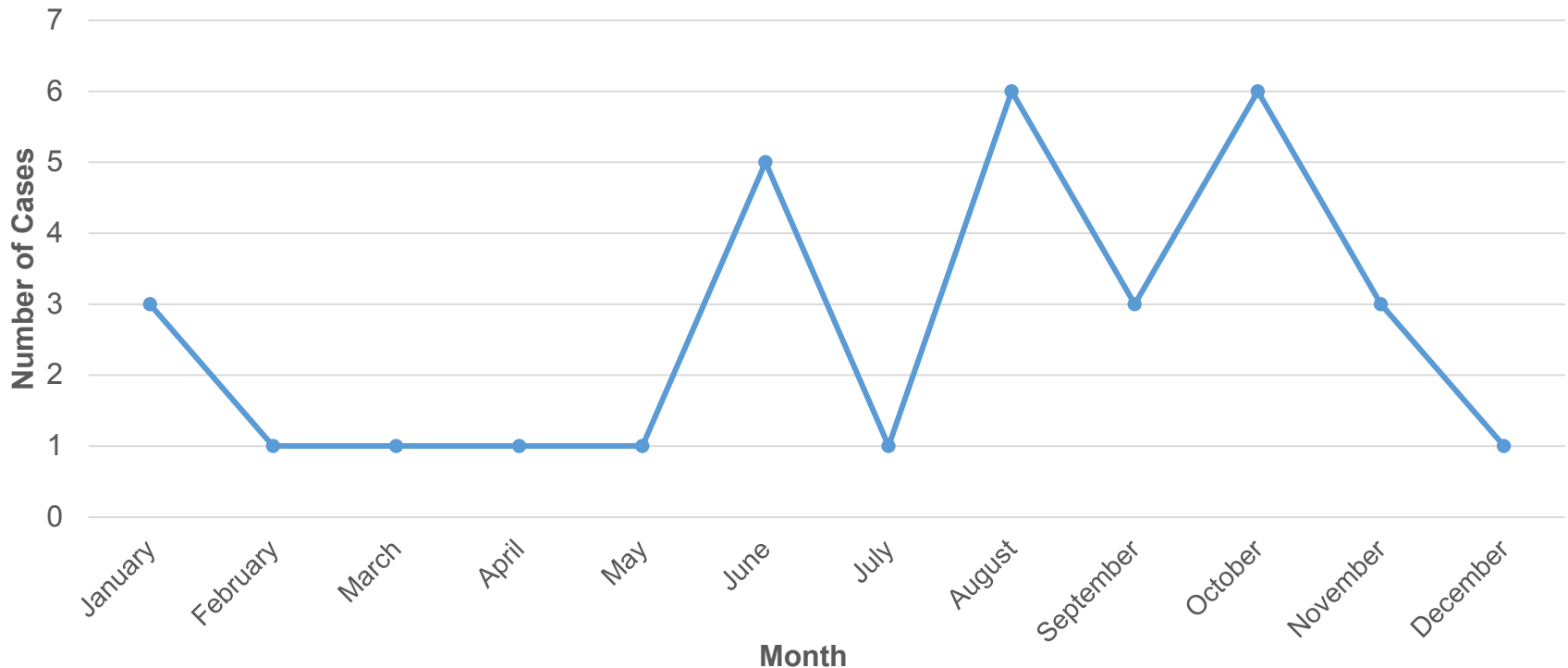


Figure 5: From 2014-2018, the majority of listeriosis cases occurred in late summer, which is consistent with observations of monthly case counts nationally.

Listeriosis Frequency and Rates by Year, Rhode Island, 2014-2018



Table 1. Frequency by Year

	2014	2015	2016	2017	2018
Number of Cases	10	3	5	7	7

Table 2. Rate by Year

	2014	2015	2016	2017	2018
Rate per 100,000	1.0	0.3	0.5	0.7	0.6

5-Year Cumulative Listeriosis Frequency, by Age Group, Rhode Island, 2014-2018



Table 3. 5-Year Cumulative Frequency by Age Group

	2014-2018
0-4	1
5-9	0
10-19	0
20-29	2
30-39	1
40-49	0
50-59	1
60-69	7
70-79	9
≥80	11

5-Year Average Listeriosis Rates, by Age Group, Rhode Island, 2014-2018



Table 4. 5-Year Average Rate by Age Group

	2014-2018
0-4	0.4
5-9	0.0
10-19	0.0
20-29	0.3
30-39	0.2
40-49	0.0
50-59	0.1
60-69	1.1
70-79	2.6
≥80	4.5

5-Year Cumulative Listeriosis Frequency and Average Rates, by Gender, Rhode Island, 2014-2018



Table 5. 5-Year Cumulative Frequency by Sex	
	2014-2018
Female	20
Male	12
Total	32

Table 6. 5-Year Cumulative Rate by Sex	
	2014-2018
Female	0.7
Male	0.5

5-Year Cumulative Listeriosis Frequency, by County, Rhode Island, 2014-2018



Table 7. 5-Year Cumulative Frequency by County	
	2014-2018
Bristol	2
Kent	5
Newport	4
Providence	21
Washington	0
All	32

5-Year Average Listeriosis Rates, by County, Rhode Island, 2014-2018



Table 8. 5-Year Average Rate by County	
	2014-2018
Bristol	0.8
Kent	0.6
Newport	1.0
Providence	0.7
Washington	0.0

5-Year Cumulative Listeriosis Frequency, Month, Rhode Island, 2014-2018



Table 9. 5-Year Cumulative Frequency by Month

	2014-2018
Jan	3
Feb	1
Mar	1
Apr	1
May	1
Jun	5
Jul	1
Aug	6
Sep	3
Oct	6
Nov	3
Dec	1
All	32



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/listeria/index.html>