





# **Shigellosis 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 Shigellosis

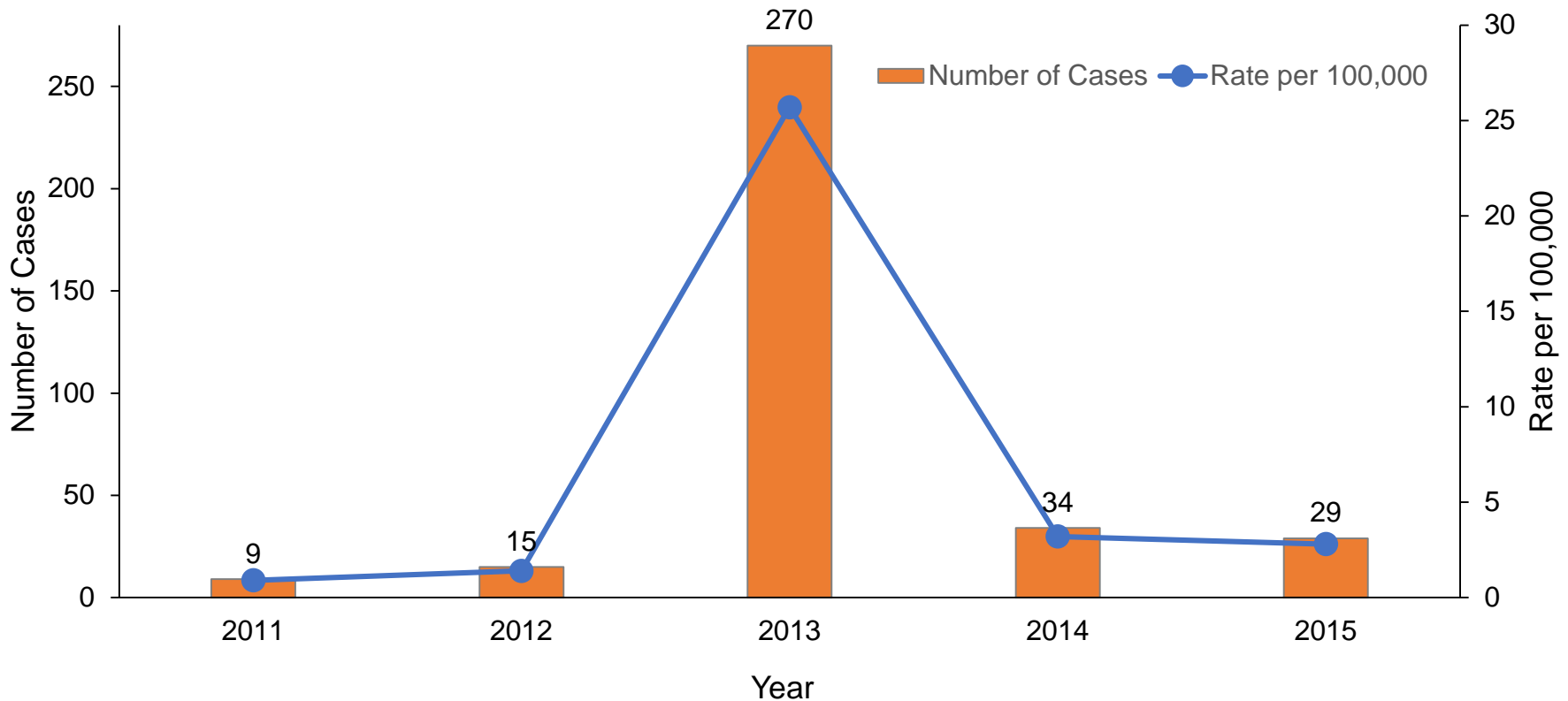
- Shigellosis is an acute, bacterial disease that impacts the digestive system and is caused by various strains of shigella bacteria.
- Shigellosis can be contracted through the fecal-oral route, by eating contaminated food, through contact with recreational water contaminated with fecal matter, and sexual contact.
- Signs and symptoms typically begin 1-2 days after exposure and include loose stools, fever, nausea, toxemia, vomiting, abdominal cramps, urge to evacuate the bowels even when empty, stools containing mucous and blood, and, in younger children, convulsions. Symptoms typically resolve after 5-7 days.
- There are approximately 500,000 shigellosis cases per year in the US.



# Data Overview, Shigellosis

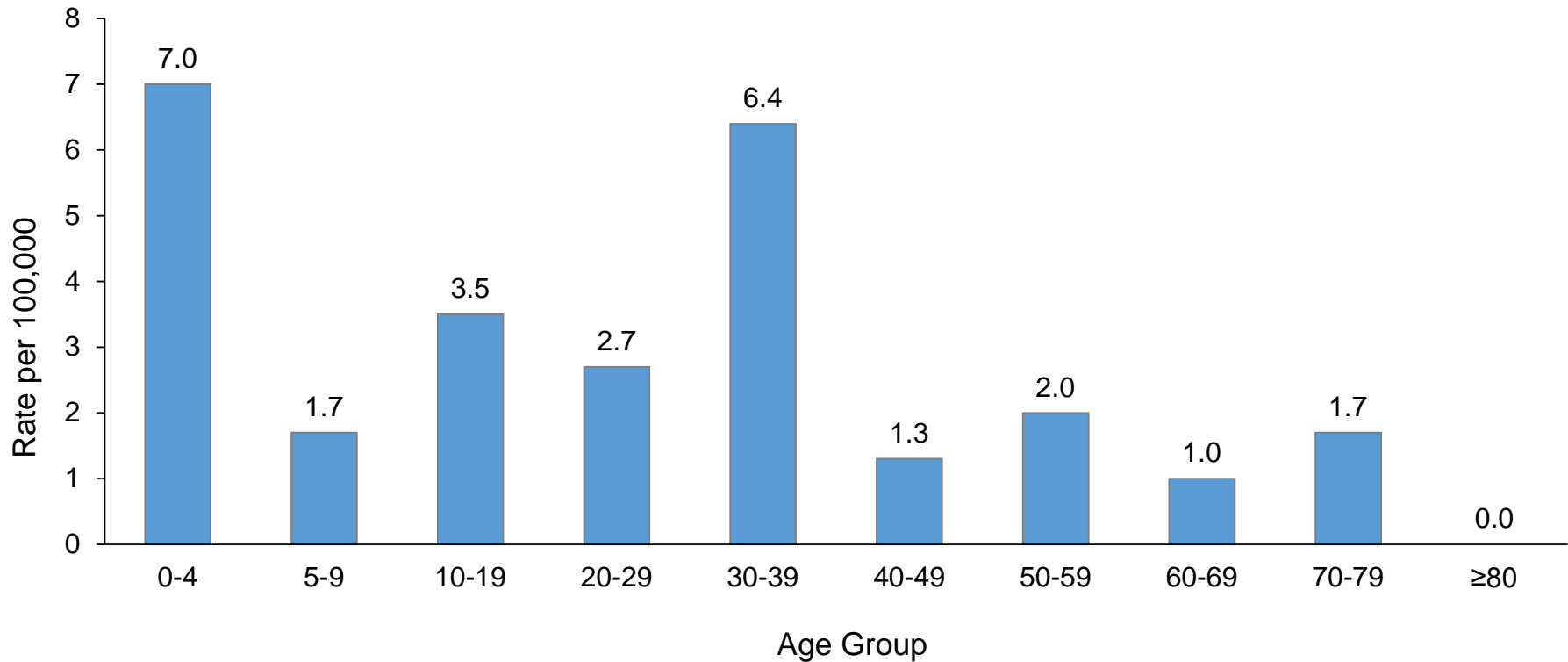
- There were 29 shigellosis cases reported in Rhode Island in 2015, for a rate of 2.8 cases per 100,000 people. Fewer cases were observed in 2015 compared to 2013 and 2014. The high number of cases observed in 2013 is due to an outbreak related to a freshwater lake in Rhode Island.
- Very young children <5 years old and adults 30-39 years old experienced the highest rates of shigellosis in 2015.
- The rate of shigellosis was the same for males and females in 2015.
- Providence County reported the highest rate of shigellosis in 2015.

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



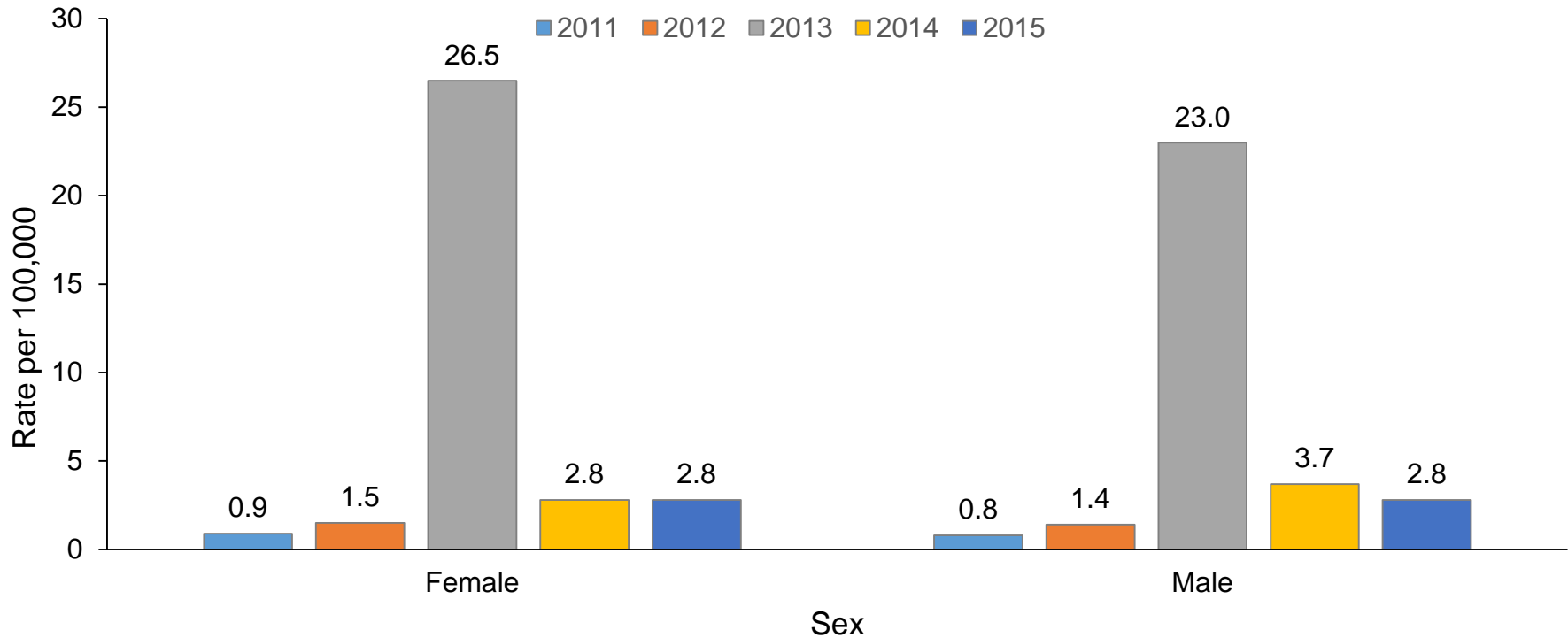
**Figure 1:** Fewer cases of shigellosis were reported in Rhode Island in 2015 compared to 2013 and 2014. The significant increase in cases reported in 2013 was due to an outbreak related to a freshwater lake in Rhode Island.

# Rate of Shigellosis, by Age Group, Rhode Island, 2015



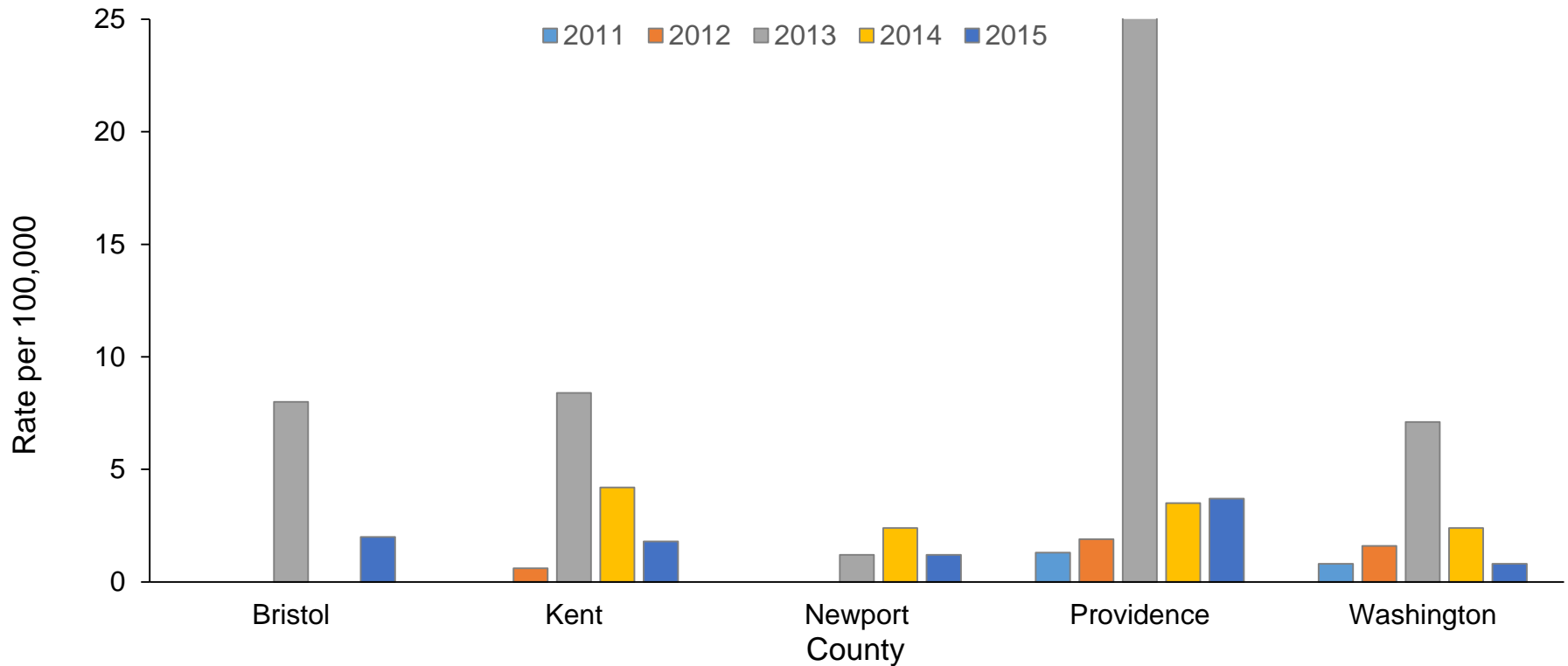
**Figure 2:** The highest rate of shigellosis in 2015 was observed among children <5 years old (7.0 cases per 100,000 people), followed by adults 30-39 years old (6.4 cases per 100,000 people).

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



**Figure 3:** The rate of reported shigellosis cases was the same for both males and females in 2015 (2.8 cases per 100,000 persons).

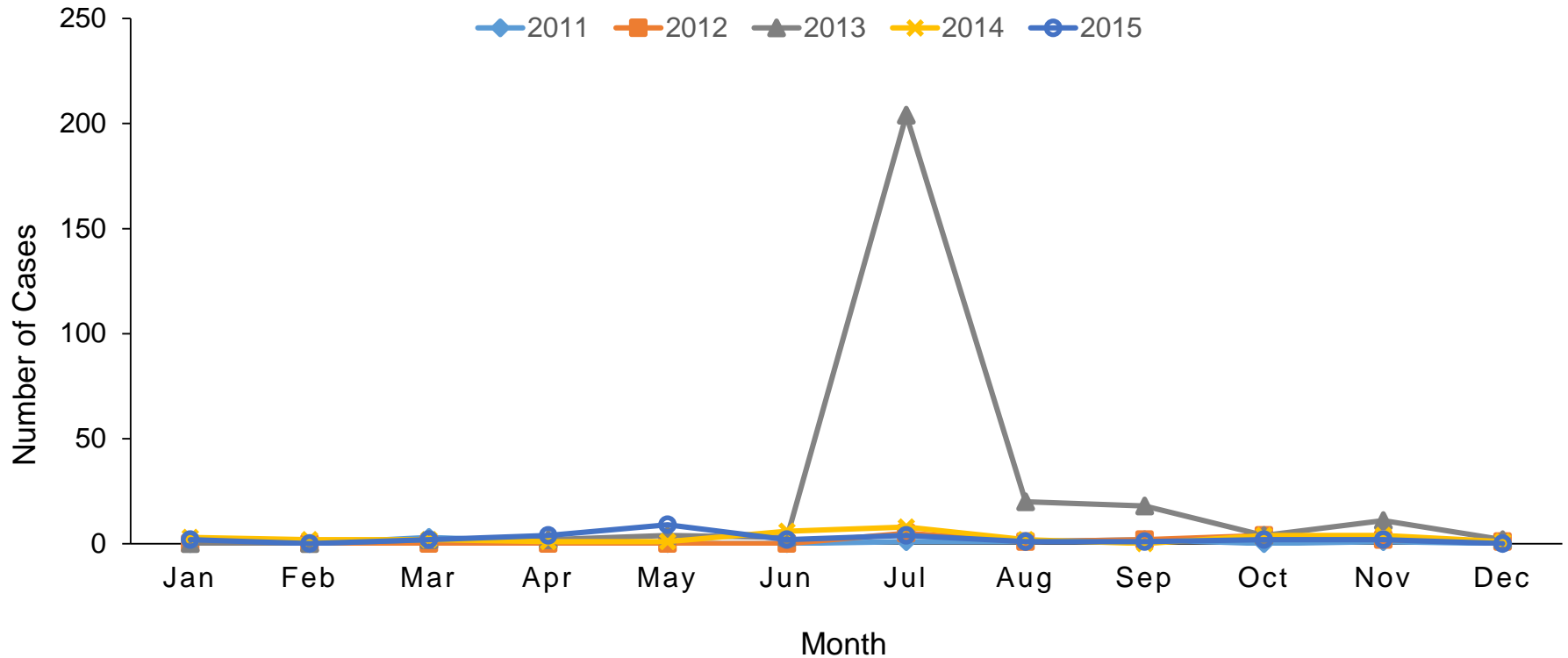
# Rate of Shigellosis, County and Year, Rhode Island, 2011-2015



**Figure 4:** In 2015, Providence County reported the highest rate of shigellosis (3.7 cases per 100,000 people) and Washington County reported the lowest rate of shigellosis (0.8 cases per 100,000 people).



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



**Figure 5:** During 2015, the number of shigellosis cases reported remained fairly constant throughout the year, however a spike in cases was observed during the month of May.

# Shigellosis 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>	9	15	270	34	29

**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>	0.9	1.4	25.7	3.2	2.8

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



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

	2011	2012	2013	2014	2015
<b>0-4</b>	1	0	62	4	4
<b>5-9</b>	1	0	72	0	1
<b>10-19</b>	2	2	54	1	5
<b>20-29</b>	1	3	35	7	4
<b>30-39</b>	0	2	19	5	8
<b>40-49</b>	2	4	11	5	2
<b>50-59</b>	1	3	8	6	3
<b>60-69</b>	0	0	4	3	1
<b>70-79</b>	1	1	2	0	1
<b>≥80</b>	0	0	3	3	0
<b>Total</b>	9	15	270	34	29

# Shigellosis Rates, by 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>	1.7	0.0	107.9	7.0	7.0
<b>5-9</b>	1.7	0.0	119.1	0.0	1.7
<b>10-19</b>	1.4	1.4	37.5	0.7	3.5
<b>20-29</b>	0.7	2.0	23.7	4.7	2.7
<b>30-39</b>	0.0	1.6	15.2	4.0	6.4
<b>40-49</b>	1.3	2.6	7.1	3.2	1.3
<b>50-59</b>	0.7	2.0	5.3	4.0	2.0
<b>60-69</b>	0.0	0.0	3.9	2.9	1.0
<b>70-79</b>	1.7	1.7	3.5	0.0	1.7
<b>≥80</b>	0.0	0.0	5.8	5.8	0.0

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



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

	2011	2012	2013	2014	2015
<b>Female</b>	5	8	144	15	15
<b>Male</b>	4	7	117	19	14
<b>Total</b>	9	15	270	34	29

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

	2011	2012	2013	2014	2015
<b>Female</b>	0.9	1.5	26.5	2.8	2.8
<b>Male</b>	0.8	1.4	23.0	3.7	2.8

# Shigellosis Frequency, by 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>	0	0	4	0	1
<b>Kent</b>	0	1	14	7	3
<b>Newport</b>	0	0	1	2	1
<b>Providence</b>	8	12	242	22	23
<b>Washington</b>	1	2	9	3	1
<b>All</b>	9	15	270	34	29

# Shigellosis 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>	0.0	0.0	8.0	0.0	2.0
<b>Kent</b>	0.0	0.6	8.4	4.2	1.8
<b>Newport</b>	0.0	0.0	1.2	2.4	1.2
<b>Providence</b>	1.3	1.9	38.6	3.5	3.7
<b>Washington</b>	0.8	1.6	7.1	2.4	0.8

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



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

	2011	2012	2013	2014	2015
<b>Jan</b>	0	0	0	3	2
<b>Feb</b>	0	0	0	2	0
<b>Mar</b>	3	0	2	2	2
<b>Apr</b>	1	0	2	1	4
<b>May</b>	0	0	4	1	9
<b>Jun</b>	0	0	3	6	2
<b>Jul</b>	1	5	204	8	4
<b>Aug</b>	1	1	20	2	1
<b>Sep</b>	2	2	18	0	1
<b>Oct</b>	0	4	4	4	2
<b>Nov</b>	1	2	11	4	2
<b>Dec</b>	0	1	2	1	0
<b>All</b>	9	15	270	34	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. The population denominator is based on 2010 US Census Population.



# References

- <https://www.cdc.gov/shigella/>