





# Giardiasis Surveillance 2012-2016

Rhode Island Department of Health

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

Center for Acute Infectious Disease Epidemiology



# About Giardiasis

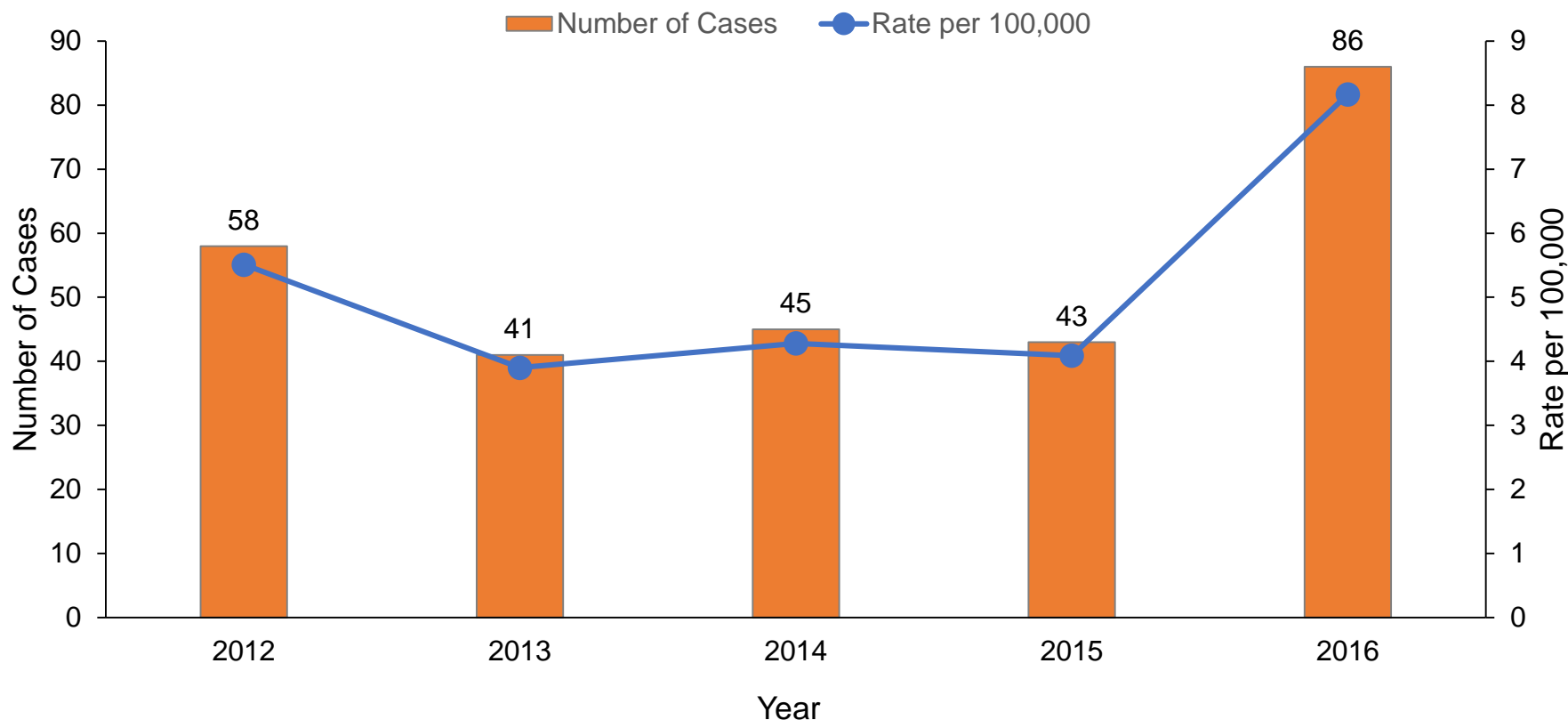
- Giardiasis is a diarrheal disease caused by a microscopic parasite.
- Humans can get giardiasis from drinking or swimming in contaminated water, from eating contaminated food, through fecal-oral transmission, or through anal intercourse.
- Symptoms include acute diarrhea lasting 2-4 weeks; chronic diarrhea; loose, pale, or greasy stools; abdominal cramps; bloating; fatigue; malabsorption; and weight loss. Symptoms typically begin 1-3 weeks after becoming infected.



# Data Overview, Giardiasis

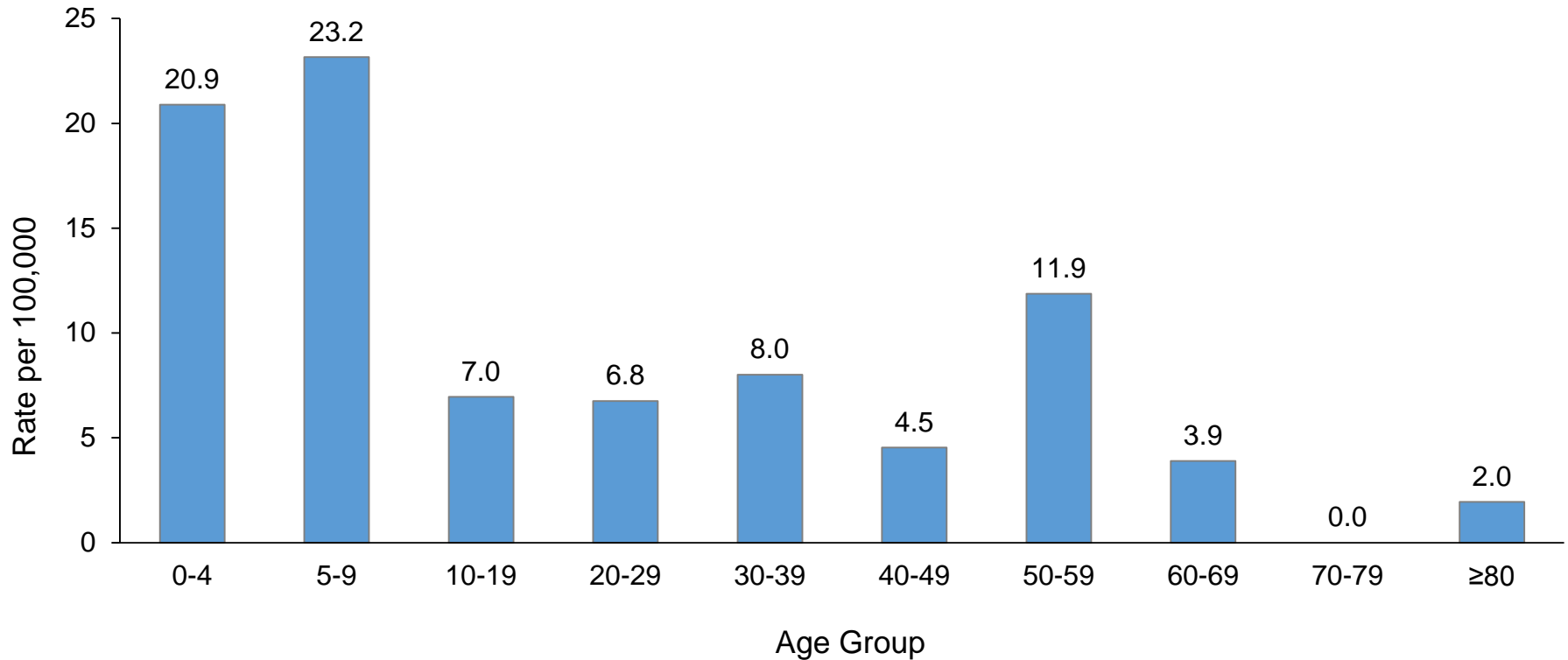
- 86 cases of giardiasis were reported in Rhode Island in 2016, for a rate of 8.2 cases per 100,000 people. Compared to 2012-2015, the highest number of giardiasis cases were observed in Rhode Island in 2016.
- In 2016, rates of giardiasis in Rhode Island were highest among young children less than 5 years old, children 5-9 years old, and adults 50-59 years old.
- As observed in prior years, the rate of giardiasis was observed to be higher among males compared to females.
- The highest rate of giardiasis was observed in Bristol County in 2015.
- In 2016, the number of cases of giardiasis in Rhode Island peaked in August.

# Reported Cases of Giardiasis, Rhode Island, 2012-2016



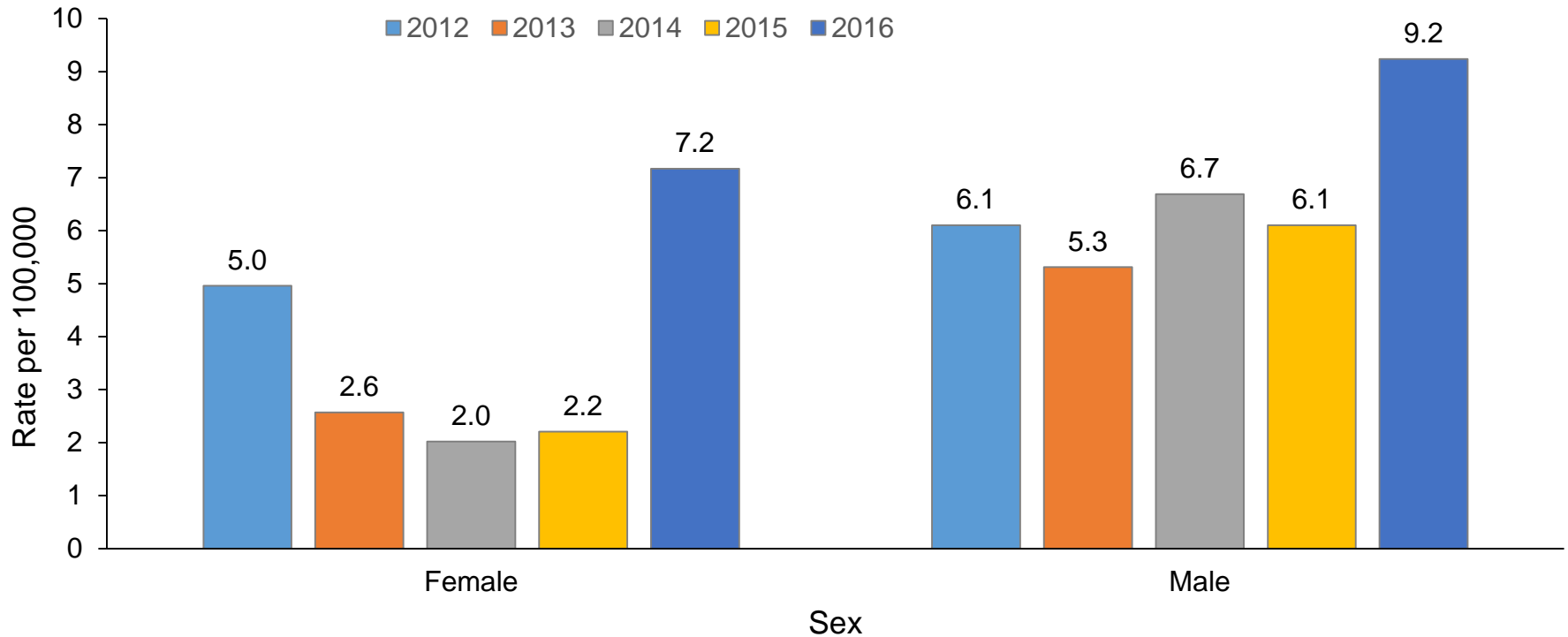
**Figure 1:** The highest number of giardiasis cases were reported in Rhode Island in 2016 compared to 2012 through 2015. Rhode Island's rate of giardiasis in 2016 was 8.2 cases per 100,000 people. The increasing use of non-culture/rapid testing methods may explain the increase observed in 2016; continued surveillance will help to better understand these trends.

# Rate of Giardiasis, Age Group, Rhode Island, 2016



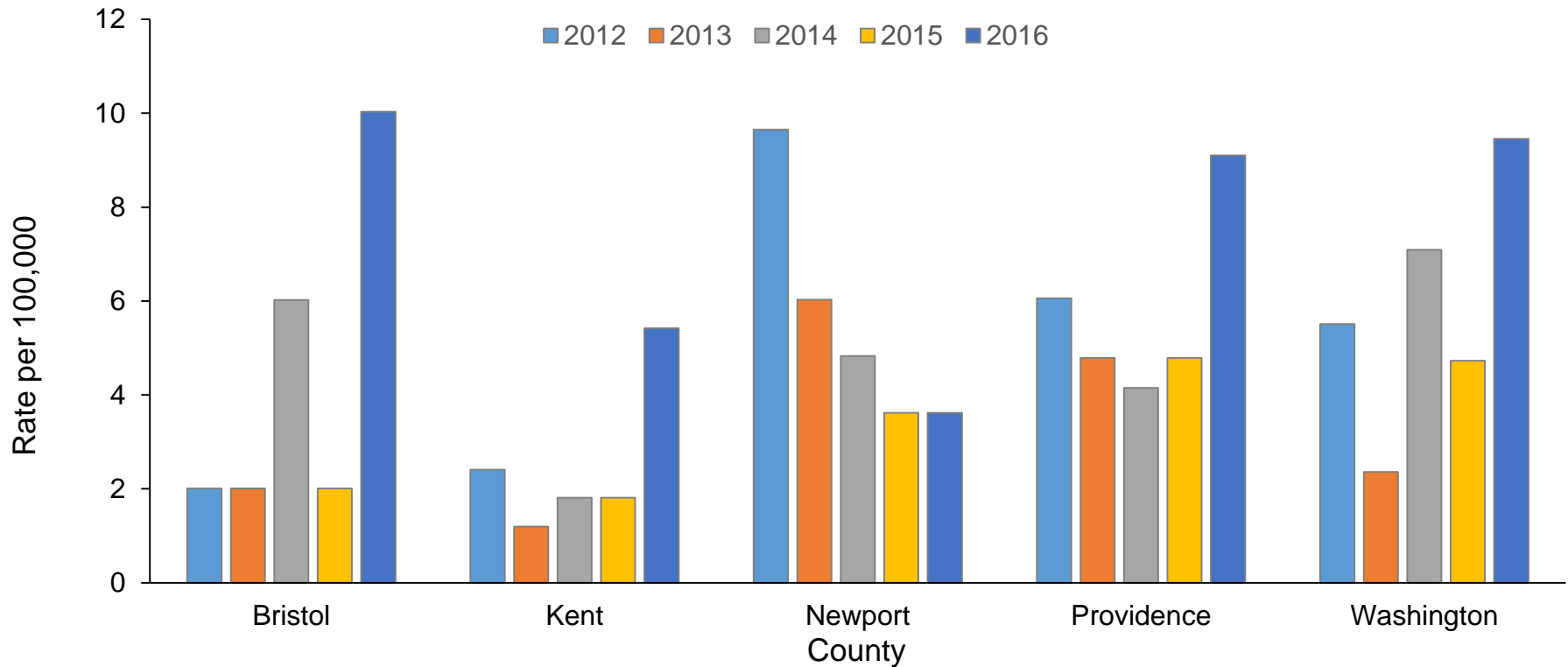
**Figure 2:** In 2016, the highest rates of giardiasis were observed among young children less than 5 years old, children 5-9 years old, and adults 50-59 years old.

# Rate of Giardiasis, Gender and Year, Rhode Island, 2012-2016



**Figure 3:** As observed in prior years, a higher rate of giardiasis in Rhode Island was observed among males compared to females in 2016.

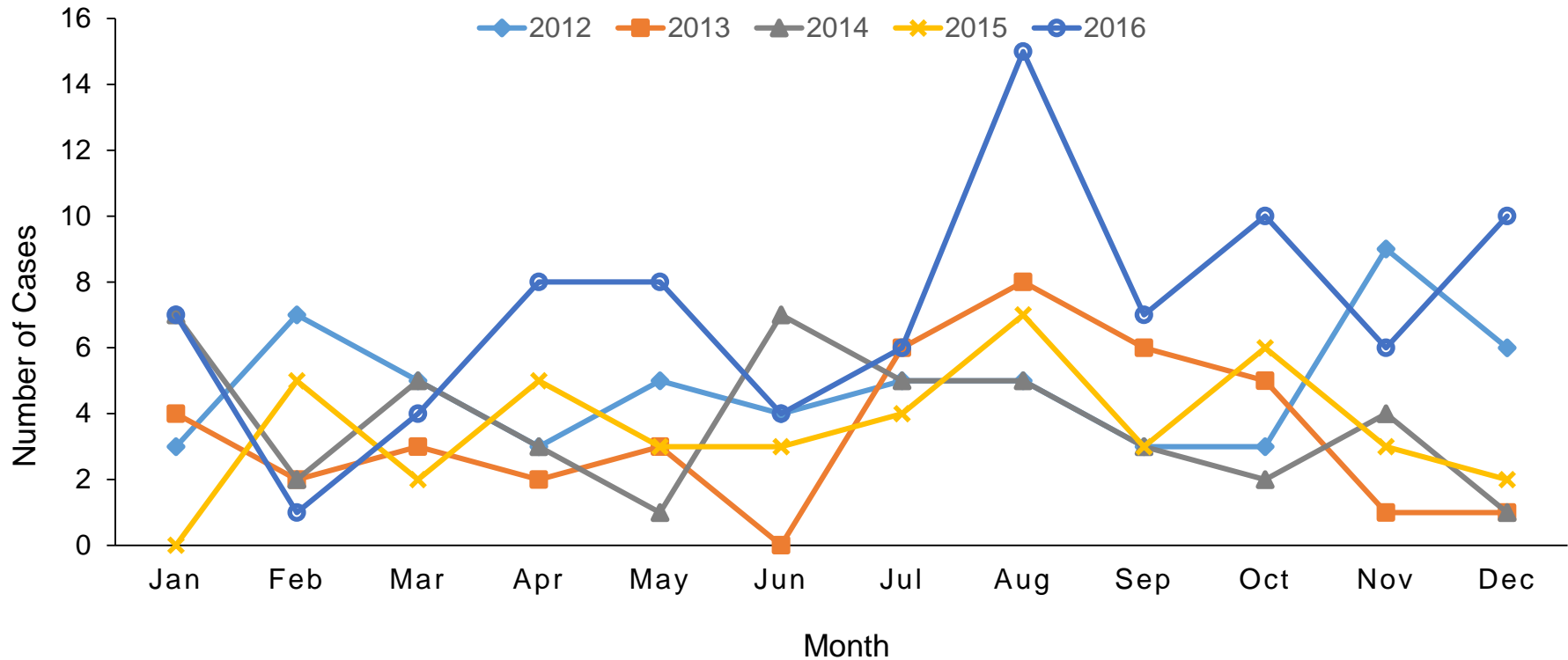
# Rate of Giardiasis, County and Year, Rhode Island, 2012-2016



**Figure 4:** The rate of giardiasis reported in Rhode Island during 2016 was observed to be highest among residents of Bristol County (10.0 cases per 100,000 people), followed by Washington County (9.5 cases per 100,000 people), and Providence County (9.1 cases per 100,000 people).



# Reported Cases of Giardiasis, Month and Year, Rhode Island, 2012-2016



**Figure 5:** Giardiasis is most commonly observed during early summer through early fall. In 2016, the number giardiasis cases reported in Rhode Island followed this general trend and spiked during the month of August.

# Giardiasis Frequency and Rates by Year, Rhode Island, 2012-2016



**Table 1. Frequency by Year**

	2012	2013	2014	2015	2016
<b>Number of Cases</b>	58	41	45	43	86

**Table 2. Rate by Year**

	2012	2013	2014	2015	2016
<b>Rate per 100,000</b>	5.5	3.9	4.3	4.1	8.2

# Giardiasis Frequency, Age Group and Year, Rhode Island, 2012-2016



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

	2012	2013	2014	2015	2016
<b>0-4</b>	6	2	0	3	12
<b>5-9</b>	4	3	0	1	14
<b>10-19</b>	8	5	5	4	10
<b>20-29</b>	7	12	8	6	10
<b>30-39</b>	8	4	10	7	10
<b>40-49</b>	12	4	11	4	7
<b>50-59</b>	8	5	4	9	18
<b>60-69</b>	3	5	2	6	4
<b>70-79</b>	2	1	1	1	0
<b>≥80</b>	0	0	4	2	1
<b>Total</b>	58	41	45	43	86

# Giardiasis Rates, Age Group and Year, Rhode Island, 2012-2016



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

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>0-4</b>	10.4	3.5	0.0	5.2	20.9
<b>5-9</b>	6.6	5.0	0.0	1.7	23.2
<b>10-19</b>	5.6	3.5	3.5	2.8	7.0
<b>20-29</b>	4.7	8.1	5.4	4.1	6.8
<b>30-39</b>	6.4	3.2	8.0	5.6	8.0
<b>40-49</b>	7.8	2.6	7.1	2.6	4.5
<b>50-59</b>	5.3	3.3	2.6	5.9	11.9
<b>60-69</b>	2.9	4.9	2.0	5.8	3.9
<b>70-79</b>	3.5	1.7	1.7	1.7	0.0
<b>≥80</b>	0.0	0.0	7.8	3.9	2.0

# Giardiasis Frequency and Rates, Gender and Year, Rhode Island, 2012-2016



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

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Female</b>	27	14	11	12	39
<b>Male</b>	31	27	34	31	47
<b>Total</b>	58	41	45	43	86

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

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Female</b>	5.0	2.6	2.0	2.2	7.2
<b>Male</b>	6.1	5.3	6.7	6.1	9.2

# Giardiasis Frequency, County and Year, Rhode Island, 2012-2016



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

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Bristol</b>	1	1	3	1	5
<b>Kent</b>	4	2	3	3	9
<b>Newport</b>	8	5	4	3	3
<b>Providence</b>	38	30	26	30	57
<b>Washington</b>	7	3	9	6	12
<b>All</b>	58	41	45	43	86

# Giardiasis Rates by County and Year, Rhode Island, 2012-2016



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

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Bristol</b>	2.0	2.0	1.8	2.0	10.0
<b>Kent</b>	2.4	1.2	4.8	1.8	5.4
<b>Newport</b>	9.7	6.0	4.2	3.6	3.6
<b>Providence</b>	6.1	4.8	7.1	4.8	9.1
<b>Washington</b>	5.5	2.4	2.0	4.7	9.5

# Giardiasis Frequency, Month and Year, Rhode Island, 2012-2016



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

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Jan</b>	3	4	7	0	7
<b>Feb</b>	7	2	2	5	1
<b>Mar</b>	5	3	5	2	4
<b>Apr</b>	3	2	3	5	8
<b>May</b>	5	3	1	3	8
<b>Jun</b>	4	0	7	3	4
<b>Jul</b>	5	6	5	4	6
<b>Aug</b>	5	8	5	7	15
<b>Sep</b>	3	6	3	3	7
<b>Oct</b>	3	5	2	6	10
<b>Nov</b>	9	1	4	3	6
<b>Dec</b>	6	1	1	2	10
<b>All</b>	58	41	45	43	86





# 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/parasites/giardia/general-info.html>