





Malaria 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 Malaria

- Malaria is a parasitic infection transmitted by the bite of an infected mosquito. Illness is characterized by high fevers, shaking chills, and flu-like symptoms.
- The typical incubation period for malaria is 7-30 days.
- Malaria is not endemic in the United States. Approximately 1,500 travel-associated cases of malaria are diagnosed in the U.S. each year according to CDC.



Data Overview, Malaria

- In 2015, Rhode Island had 16 cases of malaria, with a rate of 1.5 cases per 100,000 people.
- All cases of malaria in Rhode Island are associated with travel to malaria-endemic countries.
- Rhode Island has low case counts of malaria infection. In order to ensure patient privacy, data from 2011-2015 have been combined or averaged for analysis by age group, sex, county, and month of infection.

Reported Cases of Malaria, Rhode Island, 2011-2015

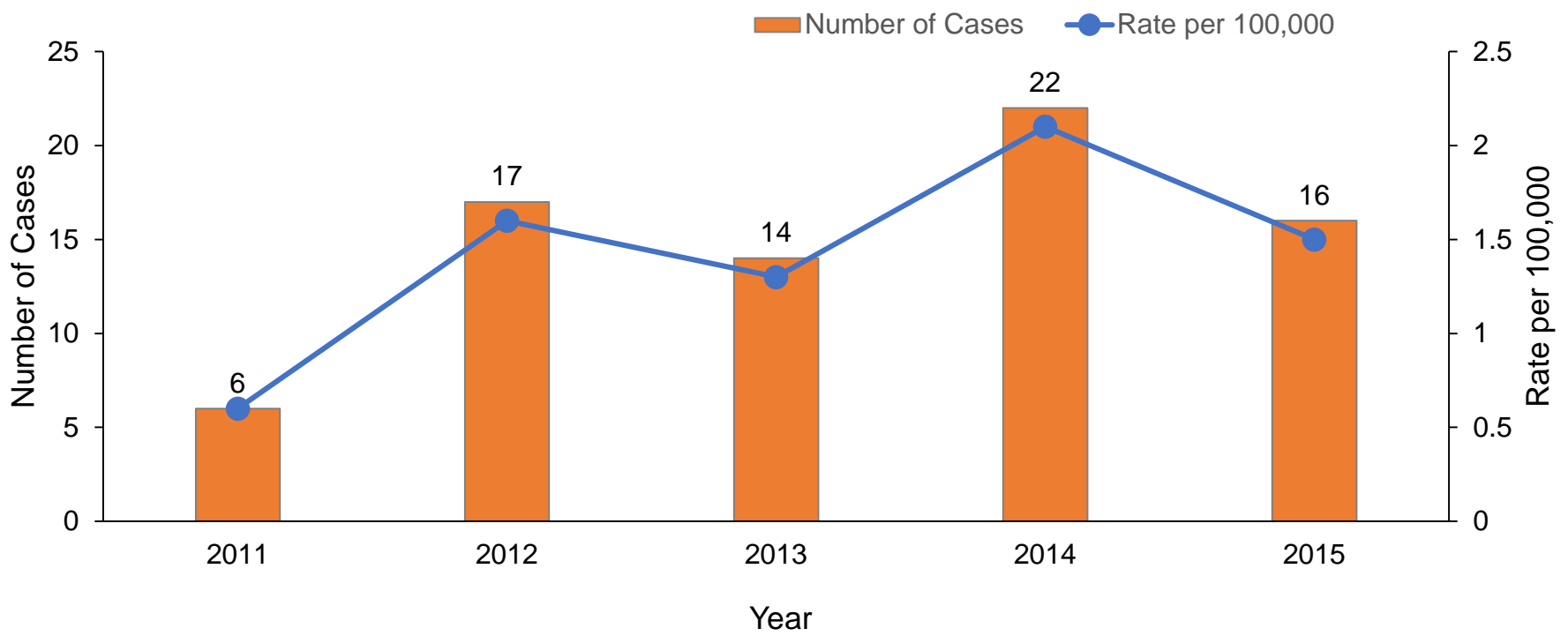


Figure 1: In 2015, Rhode Island had 16 cases of malaria, with a rate of 1.5 cases per 100,000 people. Rhode Island has low numbers of malaria cases, and all of the cases are associated with travel outside of the United States.

Rate of Malaria, by Age Group, Rhode Island, 2011-2015

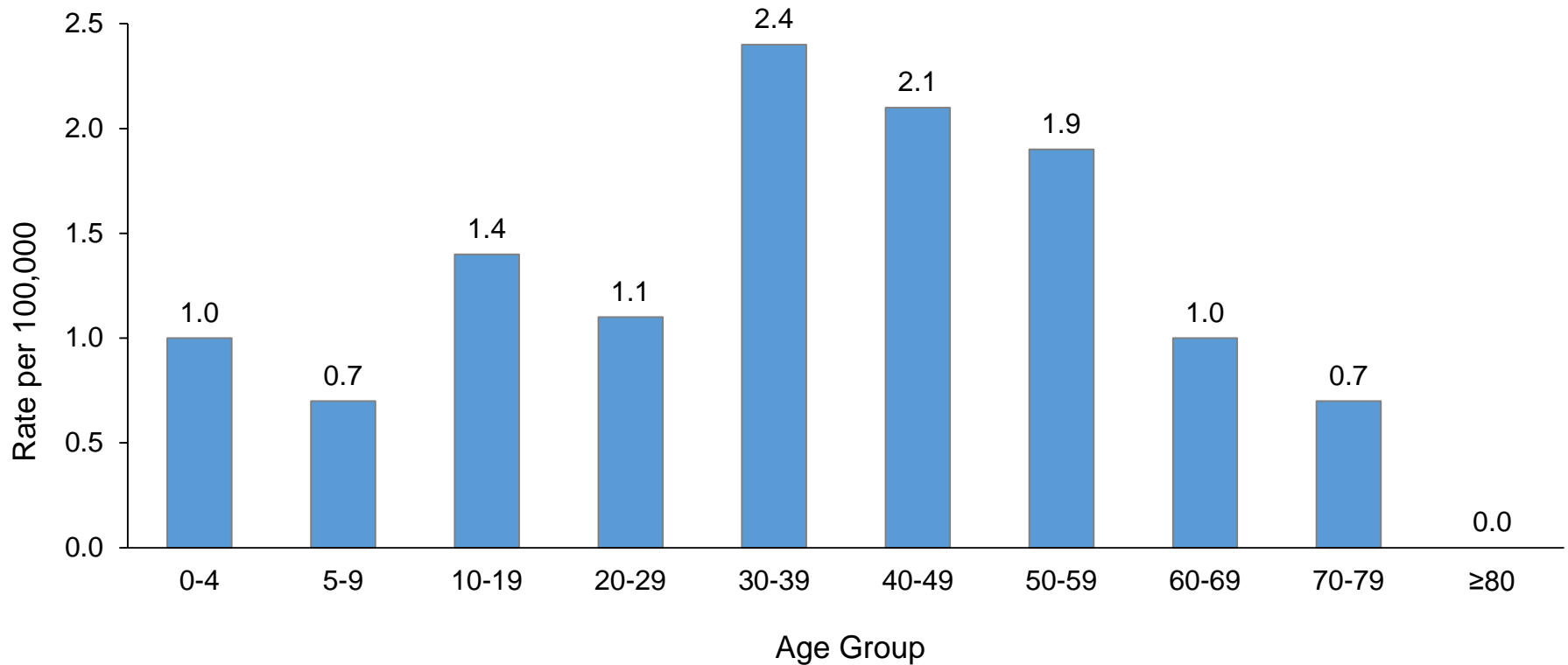


Figure 2: Adults 30-59 years old had the highest five-year average rates of malaria, compared to other age groups.

Rate of Malaria, by Gender, Rhode Island, 2011-2015

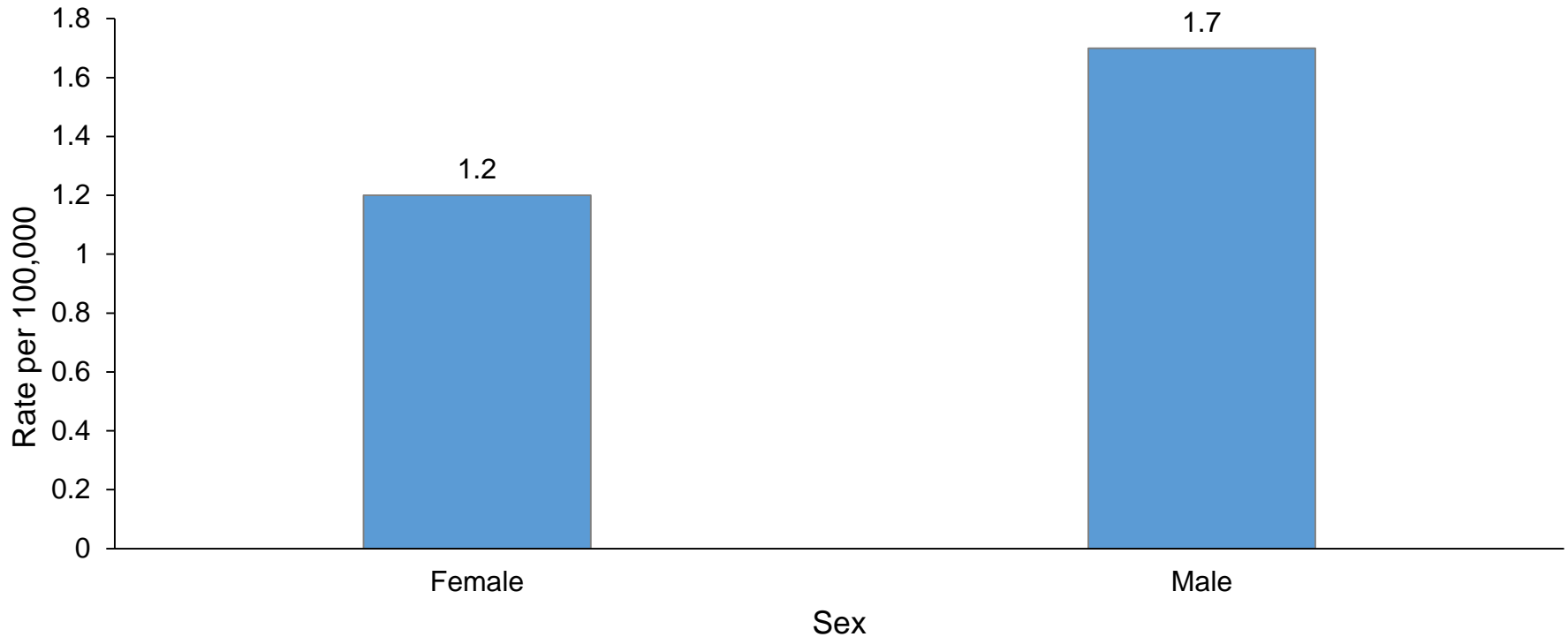


Figure 3. The five-year average rate of malaria in Rhode Island was slightly higher in males (1.7 cases per 100,000 people) than in females (1.2 cases per 100,000 people).

Rate of Malaria, by County and Year, Rhode Island, 2011-2015

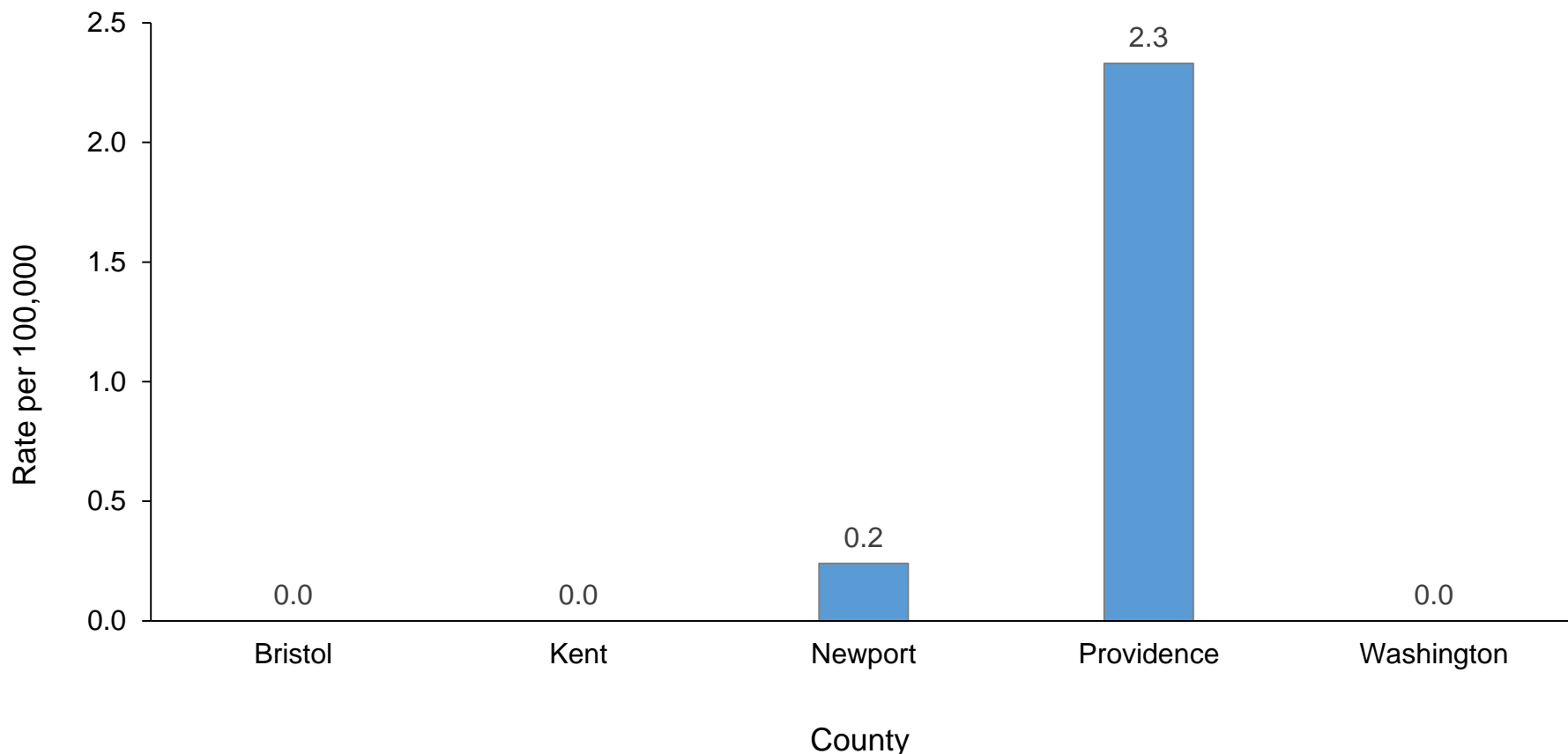


Figure 4: Between 2011 and 2015, 97% of malaria cases in Rhode Island occurred in residents of Providence County. Newport County was the only other county where residents were diagnosed with malaria during this time period.

Reported Cases of Malaria, by Month, Rhode Island, 2011-2015

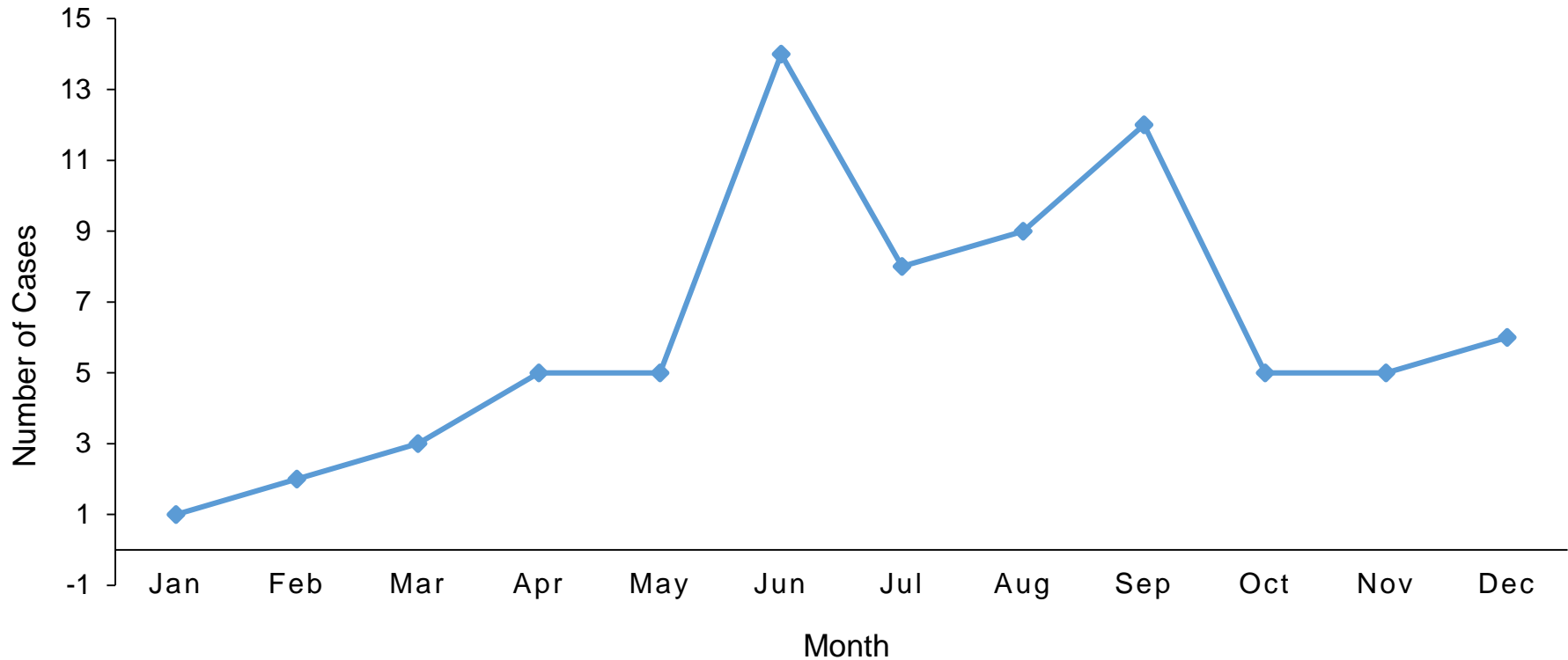


Figure 5: Malaria cases in Rhode Island tend to occur at higher levels in the summer months, which is when many Rhode Islanders travel to malaria-endemic countries.

Malaria Frequency and Rates by Year, Rhode Island, 2011-2015



Table 1. Frequency by Year

	2011	2012	2013	2014	2015
Number of Cases	6	17	14	22	16

Table 2. Rate by Year

	2011	2012	2013	2014	2015
Rate per 100,000	0.6	1.6	1.3	2.1	1.5

5-Year Cumulative Malaria Frequency, by Age Group and Year, Rhode Island, 2011-2015



Table 3. 5-Year Cumulative Frequency by Age Group and Year	
	2011-2015
0-4	3
5-9	2
10-19	10
20-29	8
30-39	15
40-49	16
50-59	14
60-69	5
70-79	2
≥80	0

5-Year Average Malaria Rates, by Age Group and Year, Rhode Island, 2011-2015



Table 4. 5-Year Average Rate by Age Group and Year	
	2011-2015
0-4	1.0
5-9	0.7
10-19	1.4
20-29	1.1
30-39	2.4
40-49	2.1
50-59	1.9
60-69	1.0
70-79	0.7
≥80	0.0

5-Year Cumulative Malaria Frequency and Average Rates, by Gender and Year, Rhode Island, 2011-2015



Table 5. 5-Year Cumulative Frequency by Sex and Year

	2011-2015
Female	32
Male	42
Unknown	1
Total	75

Table 6. 5-Year Average Rate by Sex and Year

	2011-2015
Female	1.2
Male	1.7

5-Year Cumulative Malaria Frequency, by County and Year, Rhode Island, 2011-2015



Table 7. 5-Year Cumulative Frequency by County and Year

	2011-2015
Bristol	0
Kent	0
Newport	1
Providence	73
Washington	0
Unknown	1
All	75

5-Year Average Malaria Rates by County and Year, Rhode Island, 2011-2015



Table 8. 5-Year Average Rate by County and Year

	2011-2015
Bristol	0.0
Kent	0.0
Newport	0.2
Providence	2.3
Washington	0.0
Unknown	0.0

5-Year Cumulative Malaria Frequency, by Month and Year, Rhode Island, 2011-2015



Table 9. 5-Year Cumulative Frequency by Month and Year	
	2011-2015
Jan	1
Feb	2
Mar	3
Apr	5
May	5
Jun	14
Jul	8
Aug	9
Sep	12
Oct	5
Nov	5
Dec	6
All	75



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/malaria/about/index.html>