





Malaria 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 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 2017, Rhode Island had 13 cases of malaria, with a rate of 1.2 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 2013-2017 have been combined or averaged for analysis by age group, sex, county, and month of infection.

Reported Cases of Malaria, Rhode Island, 2013-2017

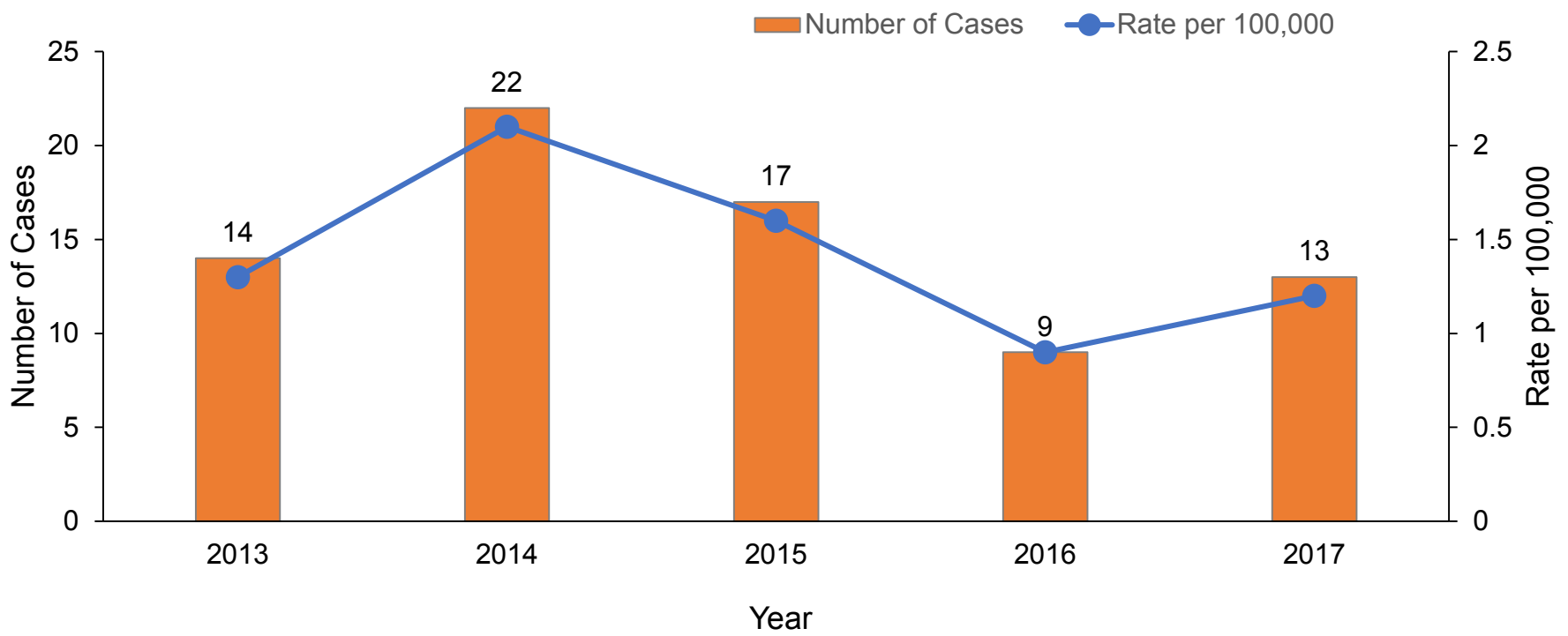


Figure 1: In 2017, Rhode Island had 13 cases of malaria, with a rate of 1.2 cases per 100,000 people. Rhode Island has low numbers of malaria cases, and all of the cases are associated with travel outside of the United States.

5-Year Rate of Malaria, by Age Group, Rhode Island, 2013-2017

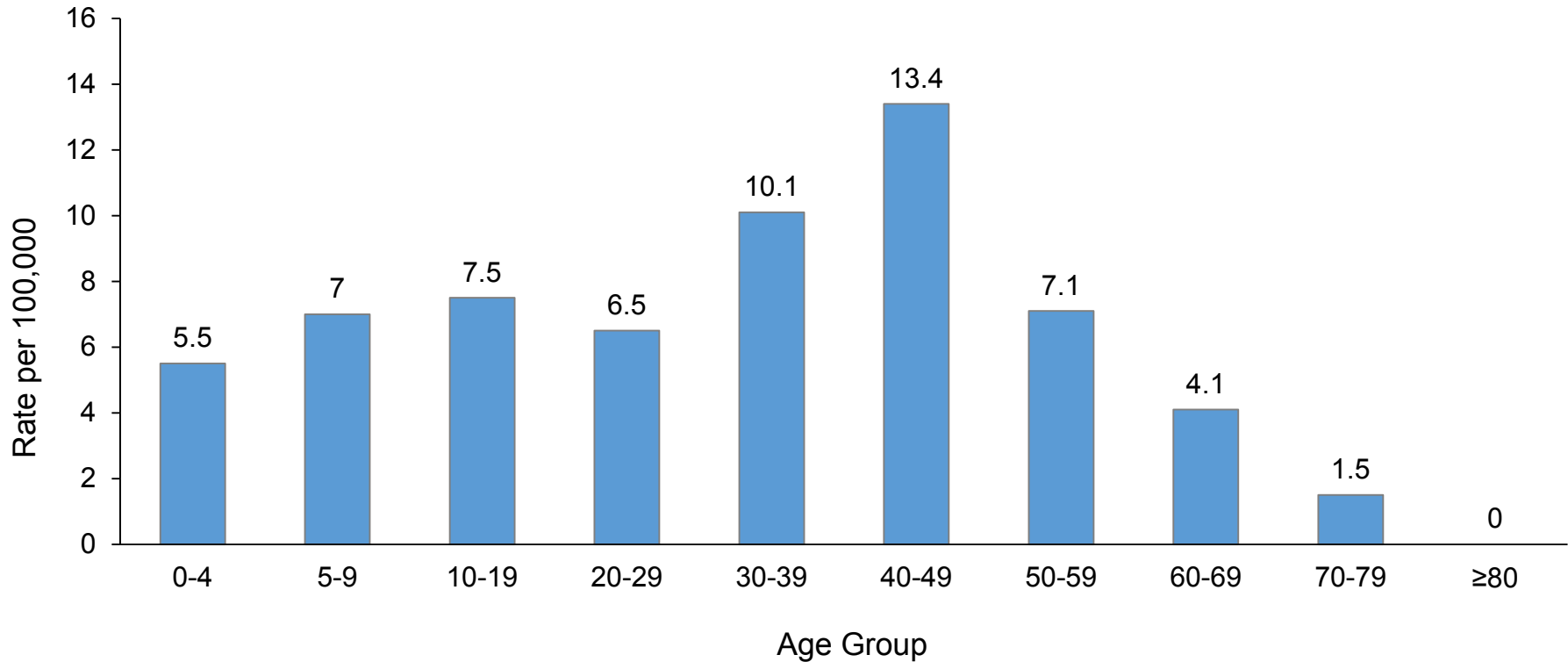


Figure 2: Adults 30-49 years old had the highest five-year incidence rates of malaria, compared to other age groups.

5-Year Rate of Malaria, by Gender, Rhode Island, 2013-2017

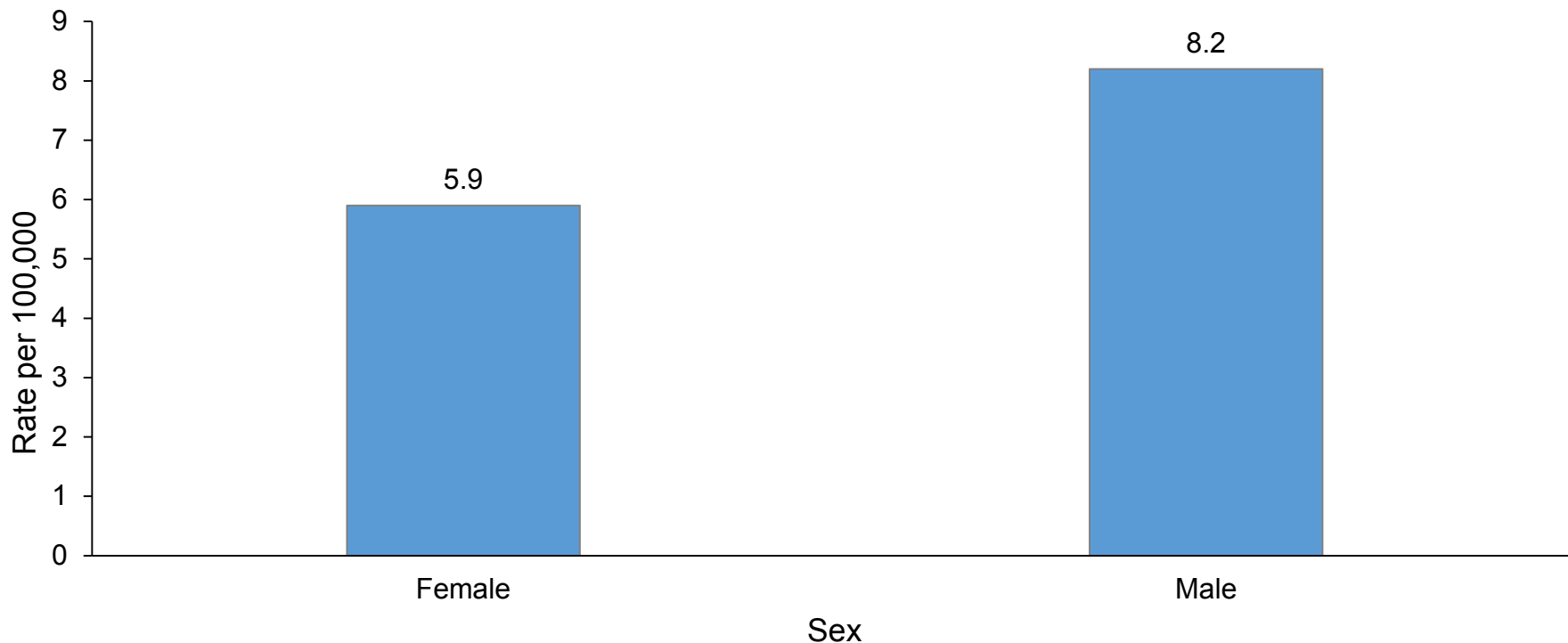


Figure 3. The five-year incidence rate of malaria in Rhode Island was higher in males (8.2 cases per 100,000 people) than in females (5.9 cases per 100,000 people) from 2013-2017.

5-Year Rate of Malaria, by County and Year, Rhode Island, 2013-2017

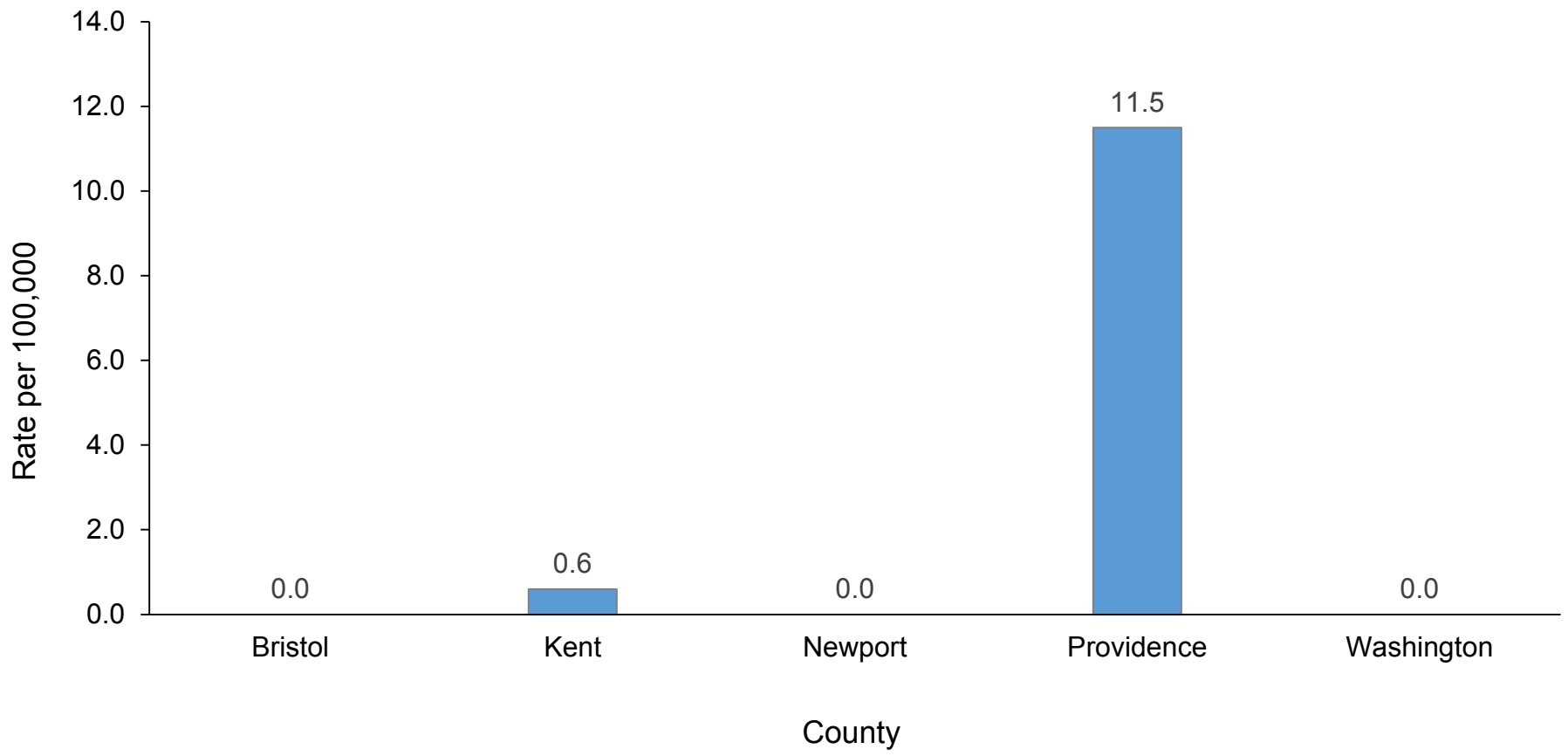


Figure 4: Between 2013 and 2017, 97% of malaria cases in Rhode Island occurred in residents of Providence County. Kent County was the only other county where residents were diagnosed with malaria during this time period.

Reported Cases of Malaria, by Month, Rhode Island, 2013-2017

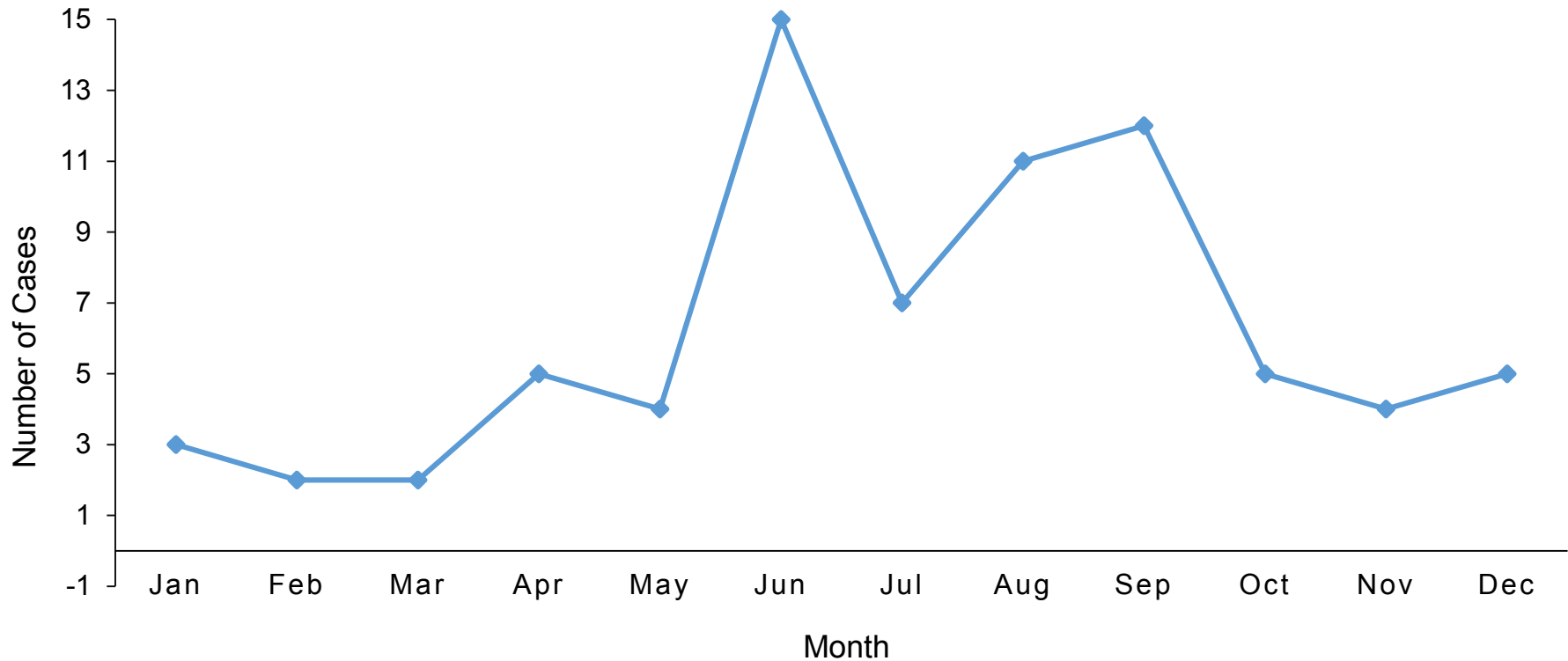


Figure 5: Malaria cases in Rhode Island tend to occur at higher levels in the summer months, which is when many Rhode Islanders travel to malaria-endemic countries.

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



Table 1. Frequency by Year

	2013	2014	2015	2016	2017
Number of Cases	14	22	17	9	13

Table 2. Rate by Year

	2013	2014	2015	2016	2017
Rate per 100,000	1.3	2.1	1.6	0.9	1.2



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

Table 3. 5-Year Cumulative Frequency by Age Group	
	2013-2017
0-4	3
5-9	4
10-19	10
20-29	10
30-39	13
40-49	18
50-59	11
60-69	5
70-79	1
≥80	0

5-Year Malaria Rates, by Age, Rhode Island, 2013-2017



Table 4. 5-Year Rate by Age Group	
	2013-2017
0-4	5.5
5-9	7.0
10-19	7.5
20-29	6.5
30-39	10.1
40-49	13.4
50-59	7.1
60-69	4.1
70-79	1.5
≥80	0.0

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



Table 5. 5-Year Cumulative Frequency by Sex

	2013-2017
Female	32
Male	42
Unknown	1
Total	75

Table 6. 5-Year Rate by Sex

	2013-2017
Female	5.9
Male	8.2

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



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

	2013-2017
Bristol	0
Kent	1
Newport	0
Providence	73
Washington	0
Unknown	1
All	75

5-Year Malaria Rates by County, Rhode Island, 2013-2017



Table 8. 5-Year Rate by County	
	2013-2017
Bristol	0.0
Kent	0.6
Newport	0.0
Providence	11.5
Washington	0.0

5-Year Cumulative Malaria Frequency, by Month, Rhode Island, 2013-2017



Table 9. 5-Year Cumulative Frequency by Month

	2013-2017
Jan	3
Feb	2
Mar	2
Apr	5
May	4
Jun	15
Jul	7
Aug	11
Sep	12
Oct	5
Nov	4
Dec	5
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.
- 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/malaria/about/index.html>