





Malaria 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 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 2018, Rhode Island had 12 cases of malaria, with a rate of 1.1 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 2014-2018 have been combined or averaged for analysis by age group, sex, county, and month of infection.

Reported Cases of Malaria, Rhode Island, 2014-2018

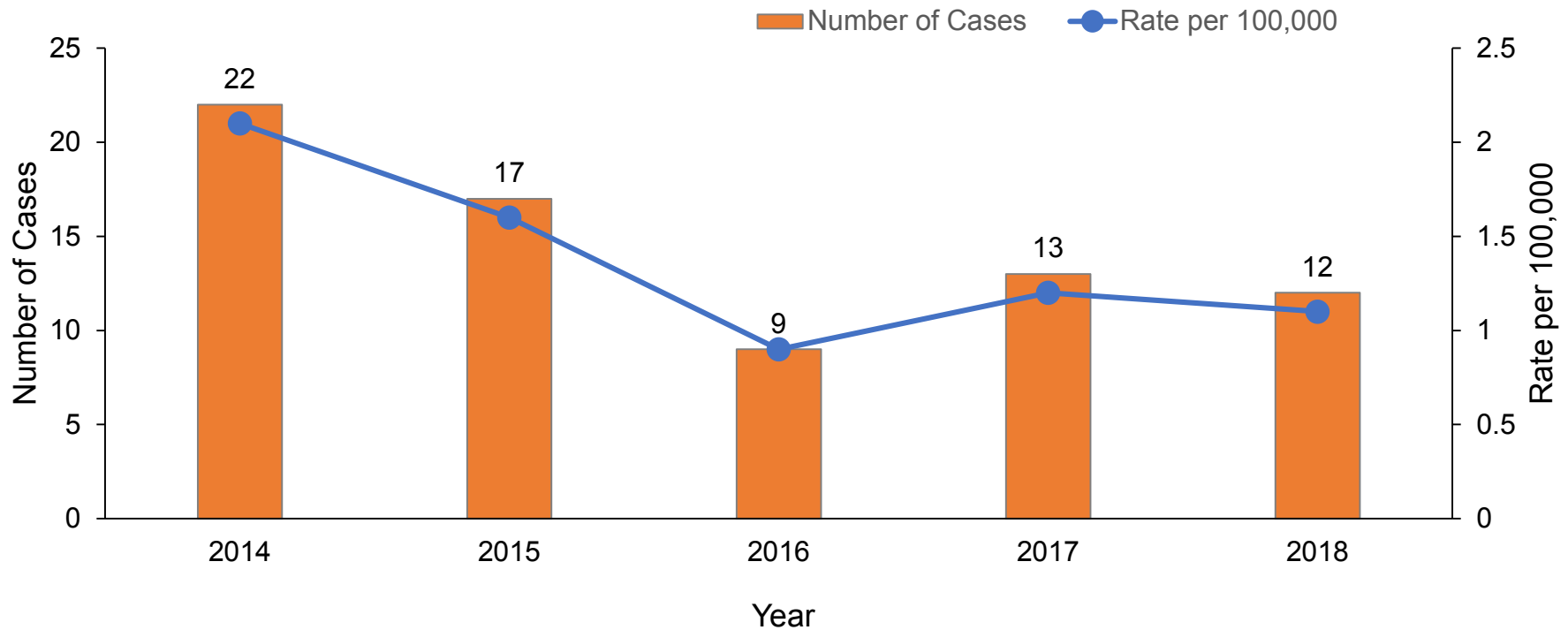


Figure 1: In 2018, Rhode Island had 12 cases of malaria, with a rate of 1.1 cases per 100,000 people. Rhode Island has low numbers of malaria cases, and all of the cases are associated with travel outside of the United States.

5-Year Rate of Malaria, by Age Group, Rhode Island, 2014-2018

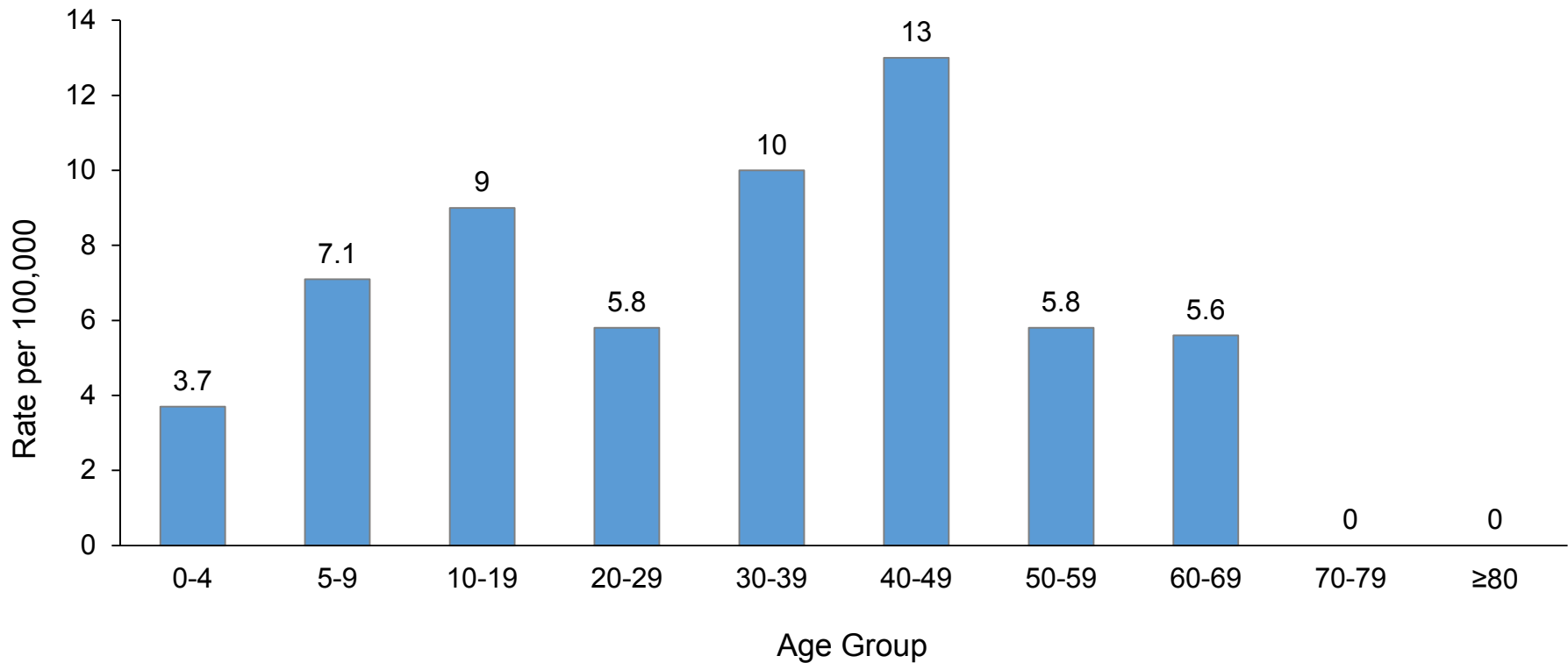


Figure 2: Adults 30-49 years old had the highest five-year incidence rates of malaria, compared to other age groups.

5-Year Rate of Malaria, by Gender, Rhode Island, 2014-2018

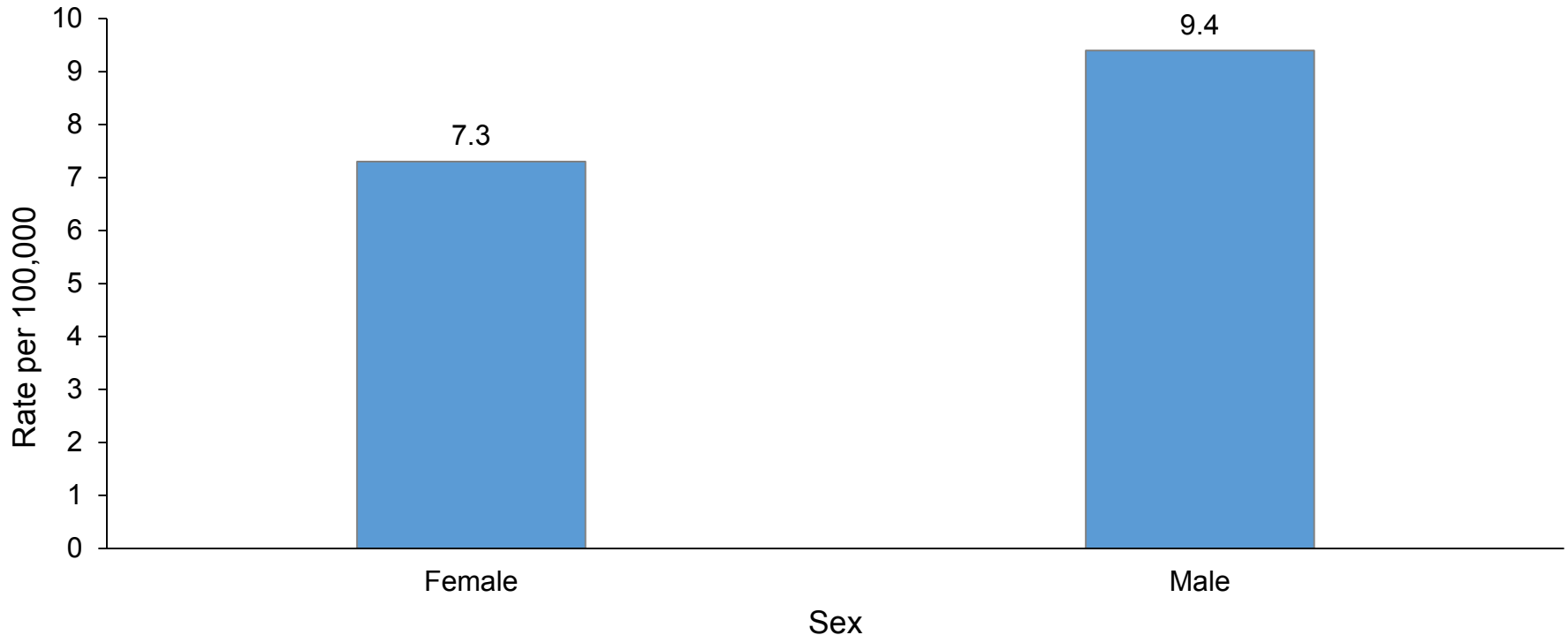


Figure 3. The five-year incidence rate of malaria in Rhode Island was higher in males (9.4 cases per 100,000 people) than in females (7.3 cases per 100,000 people) from 2014-2018.

5- Year Rate of Malaria, by County and Year, Rhode Island, 2014-2018

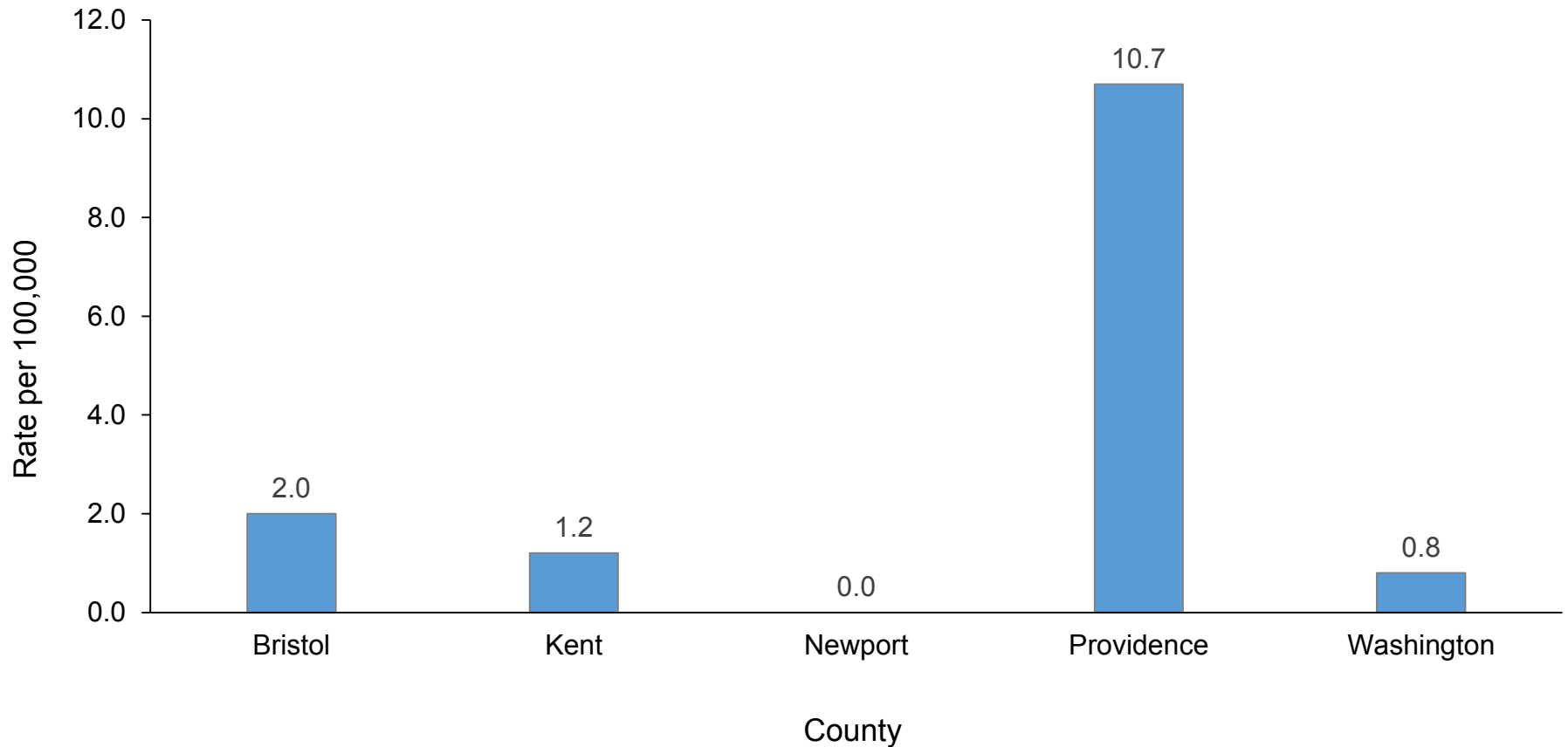


Figure 4: Between 2014 and 2018, 94% of malaria cases in Rhode Island occurred in residents of Providence County.

Reported Cases of Malaria, by Month, Rhode Island, 2014-2018

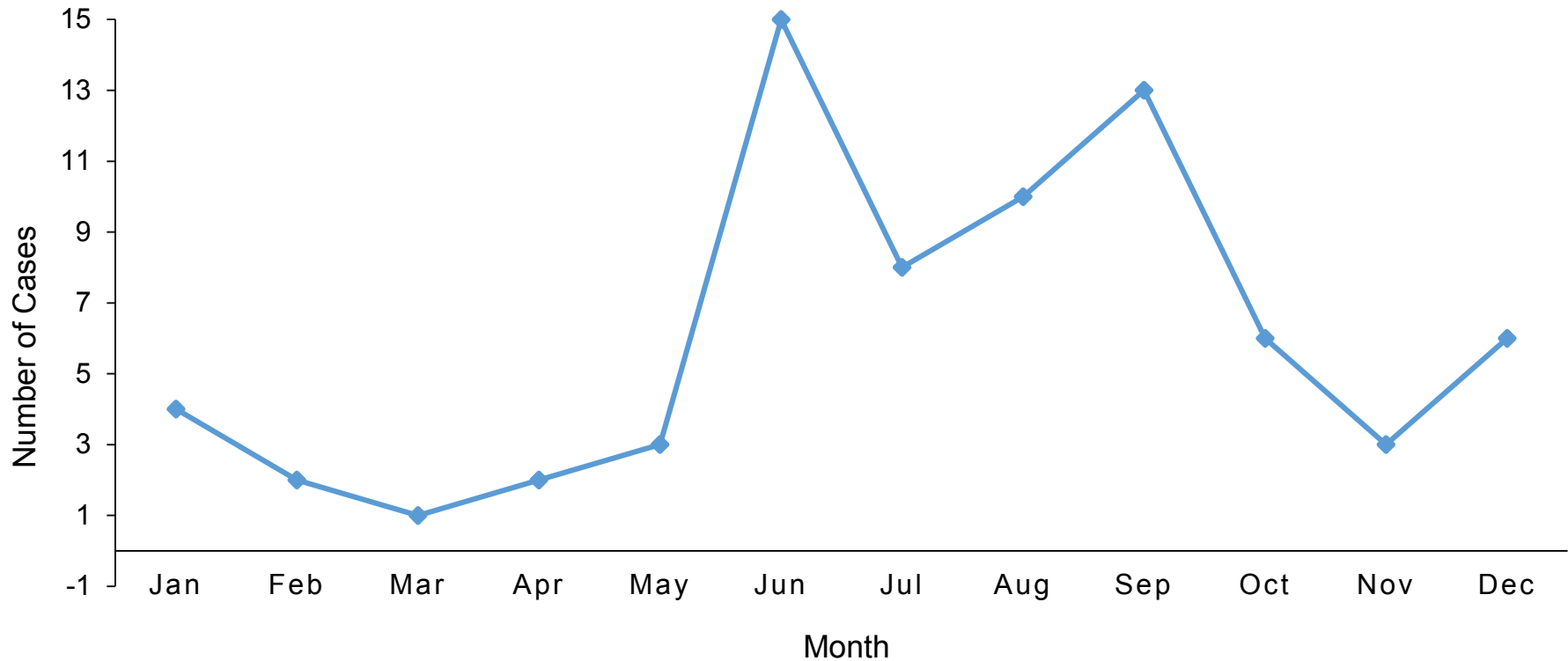


Figure 5: Malaria cases in Rhode Island tend to occur at higher levels in the summer months, which is when many Rhode Islanders travel to malaria-endemic countries.

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



Table 1. Frequency by Year

	2014	2015	2016	2017	2018
Number of Cases	22	17	9	13	12

Table 2. Rate by Year

	2014	2015	2016	2017	2018
Rate per 100,000	2.1	1.6	0.9	1.2	1.1

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



**Table 3. 5-Year Cumulative
Frequency by Age Group**

	2014-2018
0-4	2
5-9	4
10-19	12
20-29	9
30-39	13
40-49	17
50-59	9
60-69	7
70-79	0
≥80	0

5-Year Malaria Rates, by Age, Rhode Island, 2014-2018



Table 4. 5-Year Rate by Age Group	
	2014-2018
0-4	3.7
5-9	7.1
10-19	9.0
20-29	5.8
30-39	10.0
40-49	13.0
50-59	5.8
60-69	5.6
70-79	0.0
≥80	0.0

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



Table 5. 5-Year Cumulative Frequency by Sex

	2014-2018
Female	33
Male	40
Total	73

Table 6. 5-Year Rate by Sex

	2014-2018
Female	7.3
Male	9.4

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



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

	2014-2018
Bristol	1
Kent	2
Newport	0
Providence	68
Washington	1
Unknown	1
All	73

5-Year Malaria Rates by County, Rhode Island, 2014-2018



Table 8. 5-Year Rate by County	
	2014-2018
Bristol	2.0
Kent	1.2
Newport	0.0
Providence	10.7
Washington	0.8

5-Year Cumulative Malaria Frequency, by Month, Rhode Island, 2014-2018



Table 9. 5-Year Cumulative Frequency by Month

	2014-2018
Jan	4
Feb	2
Mar	1
Apr	2
May	3
Jun	15
Jul	8
Aug	10
Sep	13
Oct	6
Nov	3
Dec	6
All	73



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/malaria/about/index.html>