





Invasive Group B Streptococcus 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 Invasive Group B Streptococcus



- Invasive Group B Streptococcus (GBS) is a type of bacteria that causes illness in people of all ages.
 - Newborns can be infected during the first week of life (early onset) or from the first week through three months of life (late onset) and experience sepsis, pneumonia, or meningitis.
 - Infections in adults include bacteremia/sepsis, pneumonia, skin and soft-tissue infections, or bone and joint infections.

Data Overview, Invasive Group B Streptococcus



- In 2017, there were 80 cases of invasive Group B Streptococcal disease reported in Rhode Island.
- This represents an incidence rate of 7.6 cases per 100,000 people.
- This is the highest case number and incidence rate in the past five years.
- Part of the reason for the increase is likely due to the introduction of electronic laboratory reporting resulting in improved reporting of disease to the state.
 - It is unknown what other factors, if any, may also be contributing to the increases seen in recent years.

Reported Cases of Invasive Group B Streptococcus, Rhode Island, 2013-2017

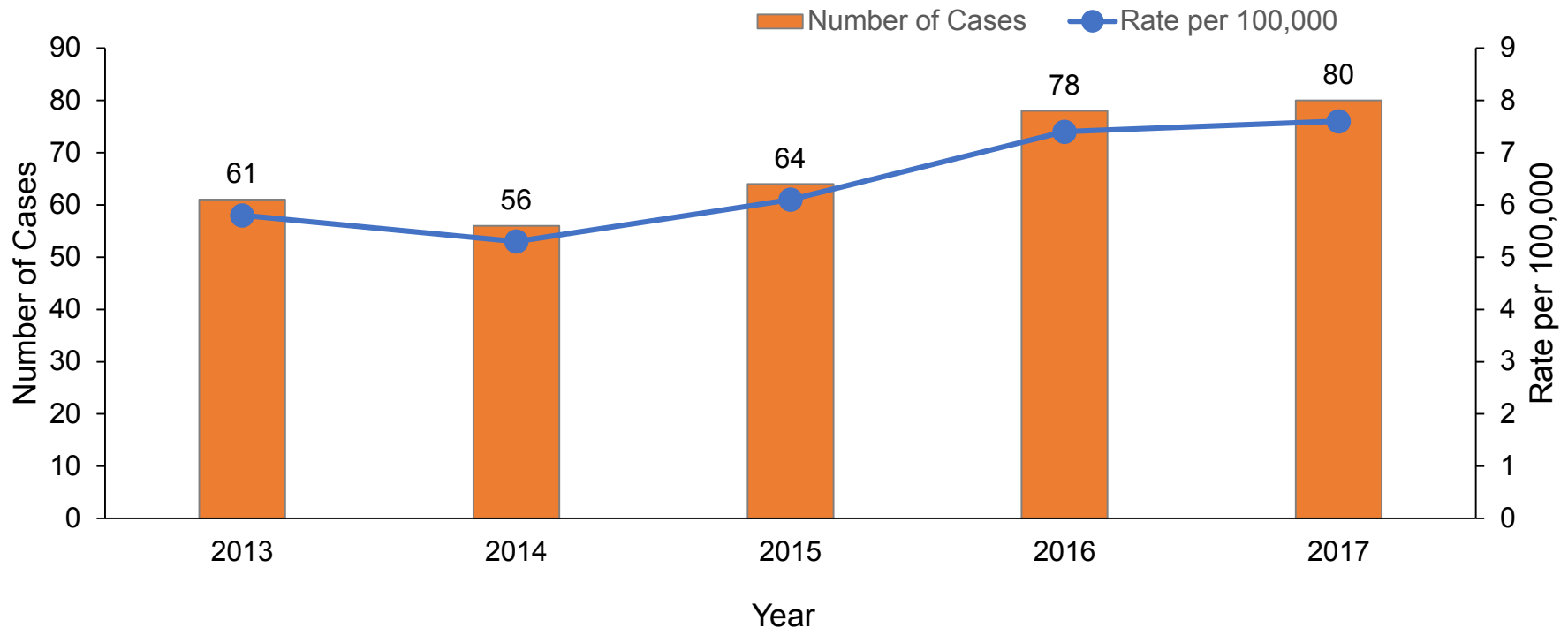


Figure 1: In 2017, 80 cases of invasive Group B Streptococcus disease were reported. This is the highest number of cases reported in the past five years, but is similar to the case count in 2016. The case rate in 2017 was 7.6 cases per 100,000 people.



Rate of Invasive Group B Streptococcus, Age Group, Rhode Island, 2017

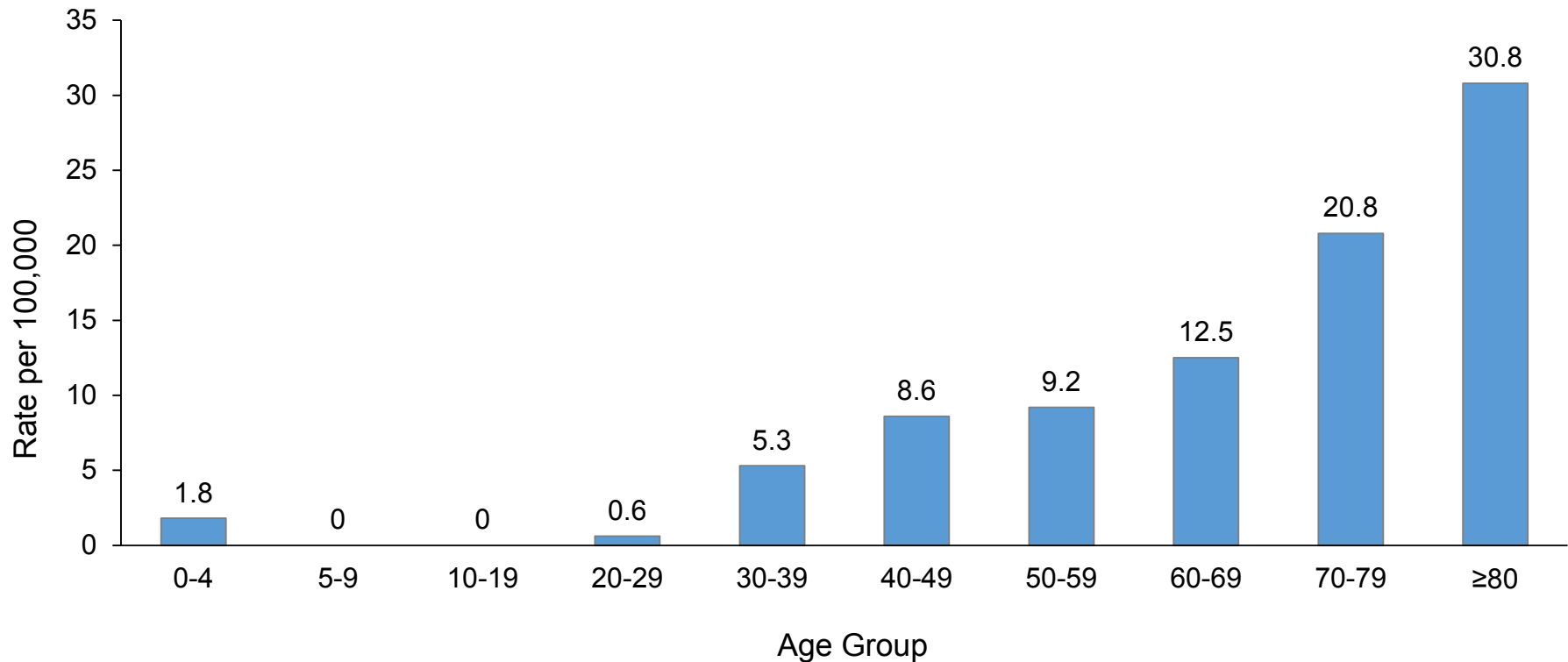


Figure 2: In 2017, the highest rates of disease occurred in adults 60 and older with those 80 and older having the highest rate (30.8 cases per 100,000 people). In 2017, there was one reported case of newborn invasive Group B Streptococcal disease in a child three months of age or younger.

Rate of Invasive Group B Streptococcus, Gender and Year, Rhode Island, 2013-2017

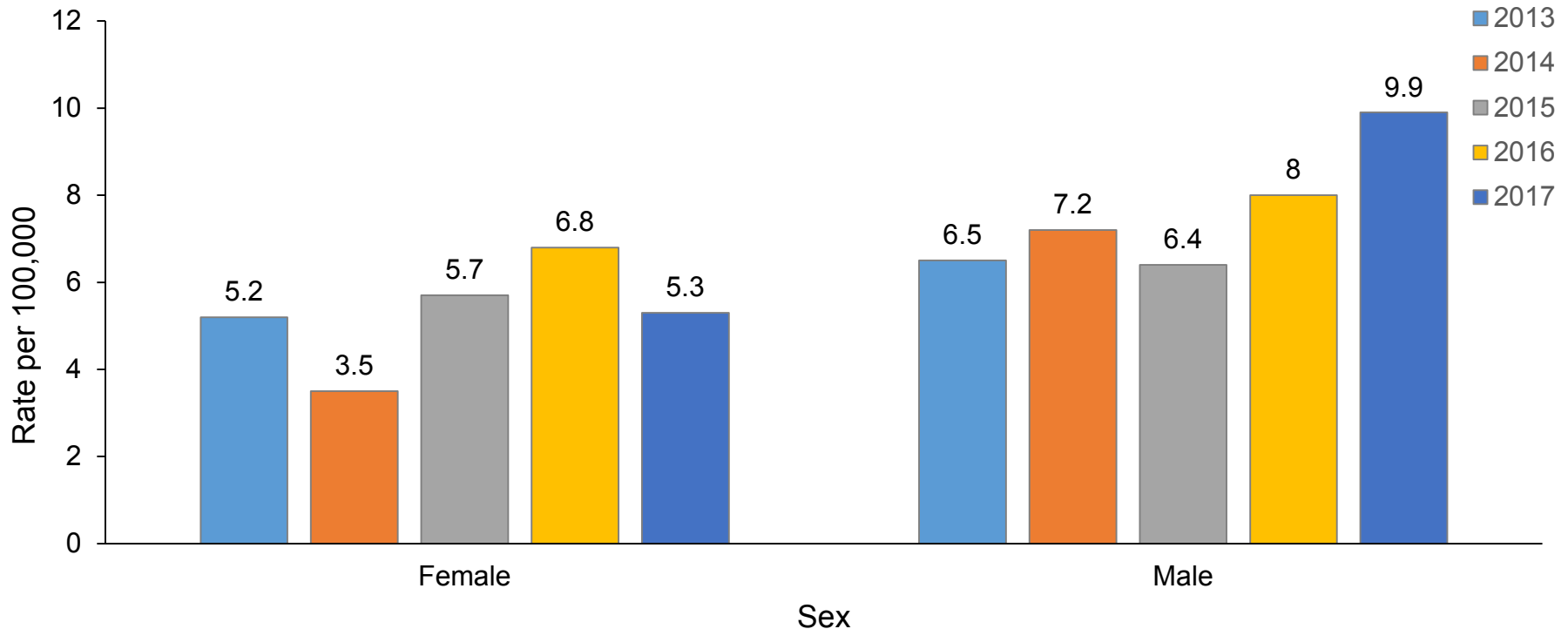


Figure 3: In Rhode Island, invasive Group B Streptococcus disease occurs at higher rates in men than in women. The rate of infection has been consistently higher among men than among women in the last five years. In 2017, rates in men were higher than they had been in the previous four years.

Rate of Invasive Group B Streptococcus, County and Year, Rhode Island, 2013-2017

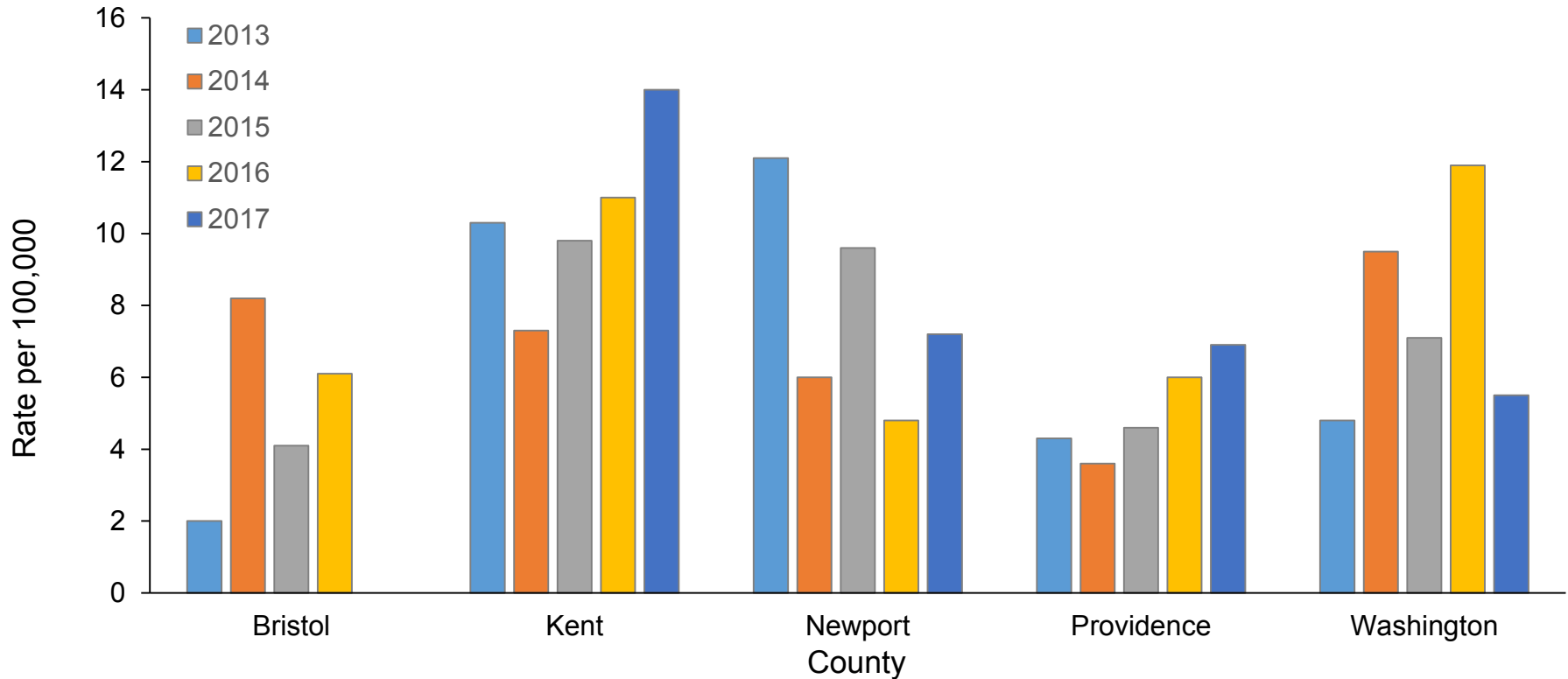


Figure 4: In 2017, the highest rate of invasive Group B Streptococcus cases was in Kent County (14.0 cases per 100,000 people). The highest average rate during the five-year period (2013-2017) was in Kent County (10.5 cases per 100,000 people).

Reported Cases of Invasive Group B Streptococcus, Month and Year, Rhode Island, 2013-2017

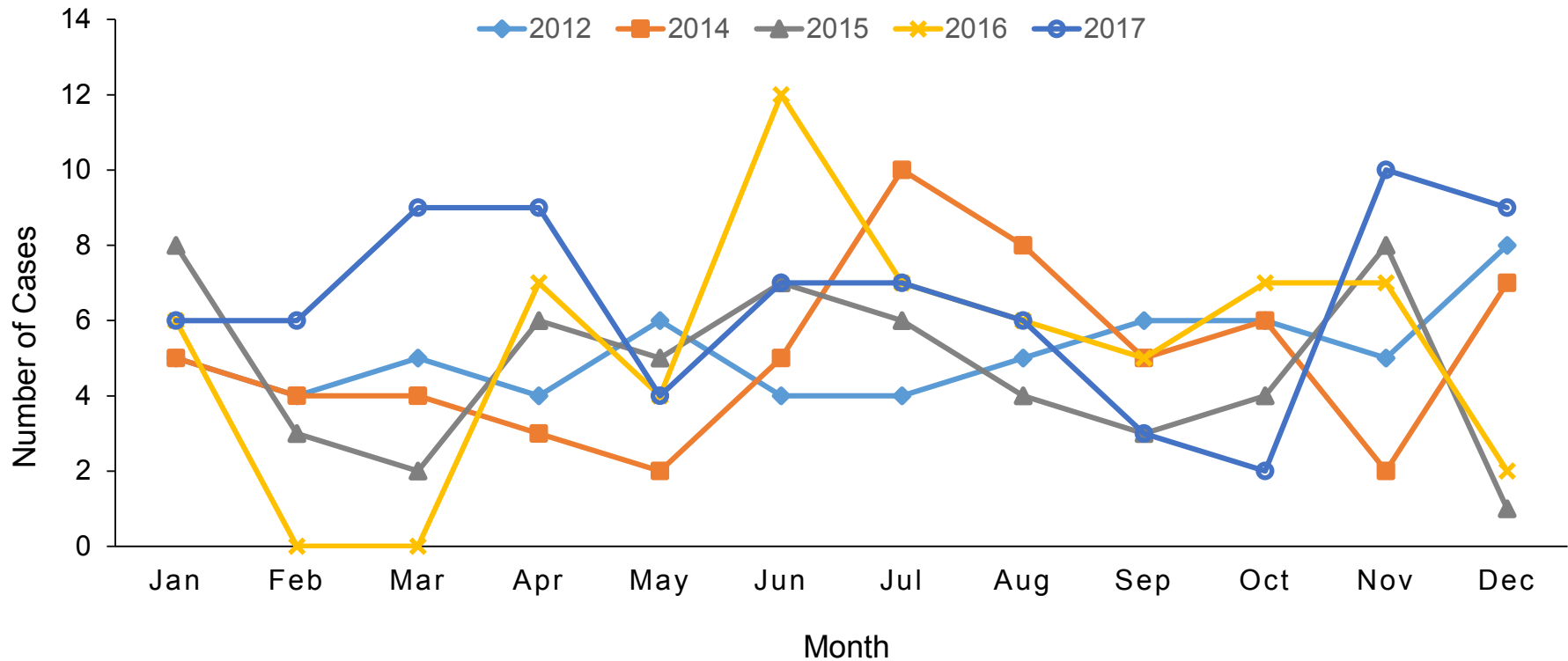


Figure 5: Invasive Group B Streptococcal disease occurs year-round with no trends in seasonality.

Invasive Group B Streptococcus Frequency and Rates by Year, Rhode Island, 2013-2017



Table 1. Frequency by Year

	2013	2014	2015	2016	2017
Number of Cases	61	56	64	78	80

Table 2. Rate by Year

	2013	2014	2015	2016	2017
Rate per 100,000	5.8	5.3	6.1	7.4	7.6

Invasive Group B Streptococcus Frequency, Age Group and Year, Rhode Island, 2013-2017



Table 3. Frequency by Age Group and Year

	2013	2014	2015	2016	2017
0-4	4	5	4	6	1
5-9	0	0	0	0	0
10-19	0	0	0	2	0
20-29	1	0	3	5	1
30-39	2	0	2	6	7
40-49	3	4	2	3	11
50-59	9	12	15	12	14
60-69	15	10	10	22	16
70-79	13	12	12	10	15
≥80	14	13	16	12	15
Total	61	56	64	78	80

Invasive Group B Streptococcus Rates, Age Group and Year, Rhode Island, 2013-2017



Table 4. Rate by Age Group and Year

	2013	2014	2015	2016	2017
0-4	7.3	9.1	7.3	11.0	1.8
5-9	0.0	0.0	0.0	0.0	0.0
10-19	0.0	0.0	0.0	1.5	0.0
20-29	0.7	0.0	1.9	3.2	0.6
30-39	1.6	0.0	1.6	4.6	5.3
40-49	2.1	2.9	1.5	2.3	8.6
50-59	5.7	7.6	9.6	7.7	9.2
60-69	13.2	8.5	8.2	17.5	12.5
70-79	21.0	18.8	18.3	14.8	20.8
≥80	27.7	25.9	32.4	24.5	30.8

Invasive Group B Streptococcus Frequency and Rates, Gender and Year, Rhode Island, 2013-2017



Table 5. Frequency by Sex and Year

	2013	2014	2015	2016	2017
Female	28	19	31	37	29
Male	33	37	33	41	51
Total	61	56	64	78	80

Table 6. Rate by Sex and Year

	2013	2014	2015	2016	2017
Female	5.2	3.5	5.7	6.8	5.3
Male	6.5	7.2	6.4	8.0	9.9

Invasive Group B Streptococcus Frequency, County and Year, Rhode Island, 2013-2017



Table 7. Frequency by County and Year

	2013	2014	2015	2016	2017
Bristol	1	4	2	3	0
Kent	17	12	16	18	23
Newport	10	5	8	4	6
Providence	27	23	29	38	44
Washington	6	12	9	15	7
All	61	56	64	78	80

Invasive Group B Streptococcus Rates by County and Year, Rhode Island, 2013-2017



Table 8. Rate by County and Year

	2013	2014	2015	2016	2017
Bristol	2.0	8.2	4.1	6.1	0.0
Kent	10.3	7.3	9.8	11.0	14.0
Newport	12.1	6.0	9.6	4.8	7.2
Providence	4.3	3.6	4.6	6.0	6.9
Washington	4.8	9.5	7.1	11.9	5.6

Invasive Group B Streptococcus Frequency, Month and Year, Rhode Island, 2013-2017



Table 9. Frequency by Month and Year

	2013	2014	2015	2016	2017
Jan	5	8	6	6	5
Feb	4	3	0	6	2
Mar	4	2	0	9	5
Apr	3	5	8	9	3
May	2	5	4	4	6
Jun	5	7	12	7	7
Jul	10	6	7	6	10
Aug	8	4	6	7	8
Sep	5	3	5	3	6
Oct	6	4	7	2	9
Nov	2	7	7	10	11
Dec	7	2	2	9	8
All	61	56	64	78	80



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.