





Invasive Group B Streptococcus 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 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 2016, there were 78 cases of invasive Group B Streptococcal disease reported in Rhode Island.
- This represents an incidence rate of 7.4 cases per 100,000 people.
- This is the highest case number and incidence rate in the past five years.
- For 2012-2015, case counts and incidence rates remained fairly consistent.
- It is unknown what contributed to this year's increased case count.
 - The 60-69 age group case count was nearly double its average count over the past five years.

Reported Cases of Invasive Group B Streptococcus, Rhode Island, 2012-2016

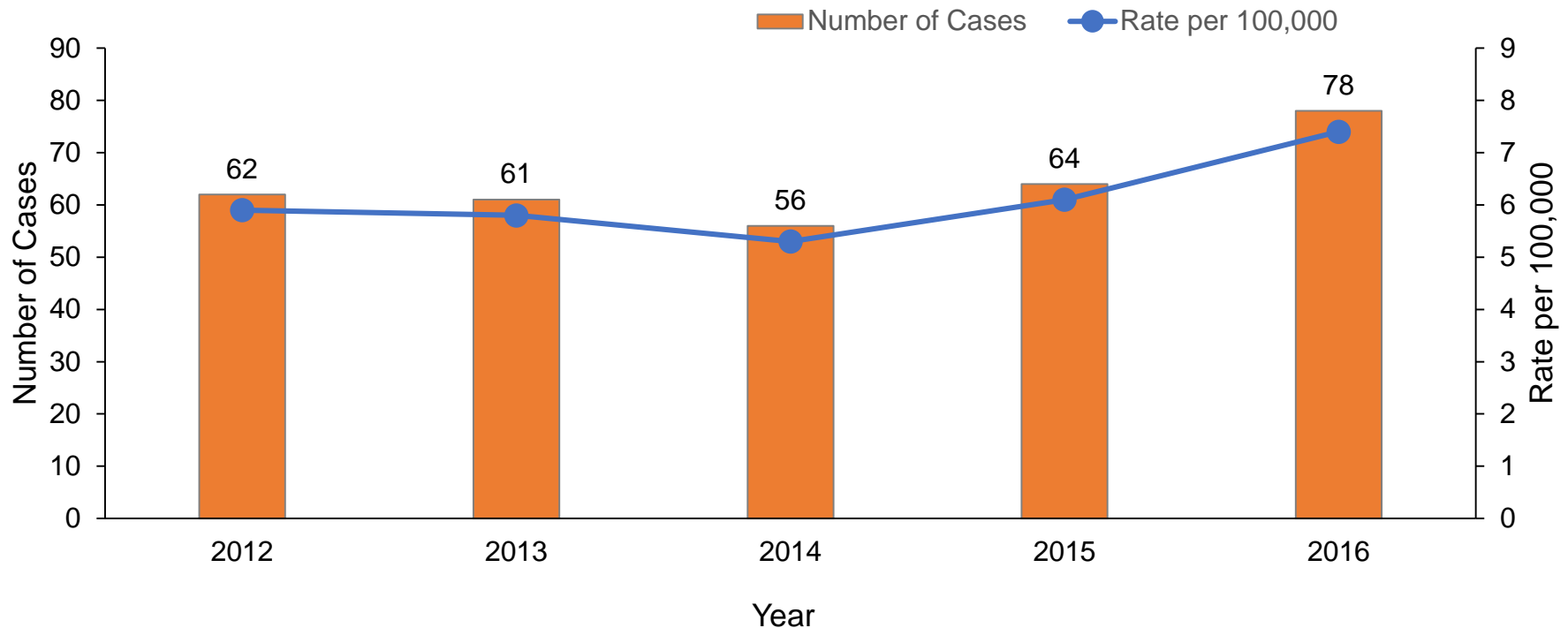


Figure 1: In 2016, 78 cases of invasive Group B Streptococcus disease were reported. This is the highest number of cases reported in the past five years. The case rate in 2016 was 7.4 cases per 100,000 people.



Rate of Invasive Group B Streptococcus, Age Group, Rhode Island, 2016

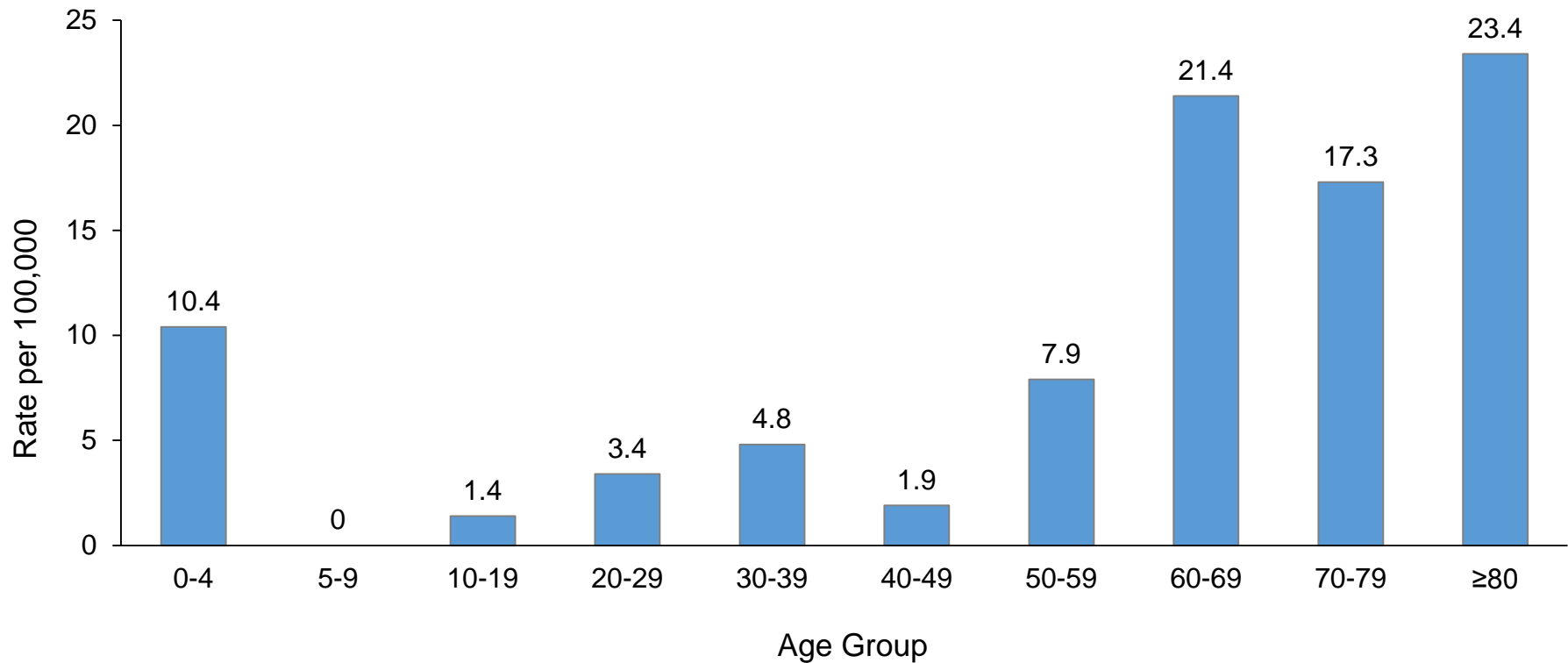


Figure 2: In 2016, the highest rates of disease occurred in adults 50 and older with those 80 and older having the highest rate (23.4 cases per 100,000 people). In 2016, there were five reported cases of newborn invasive Group B Streptococcal disease in children three months of age or younger.

Rate of Invasive Group B Streptococcus, Gender and Year, Rhode Island, 2012-2016

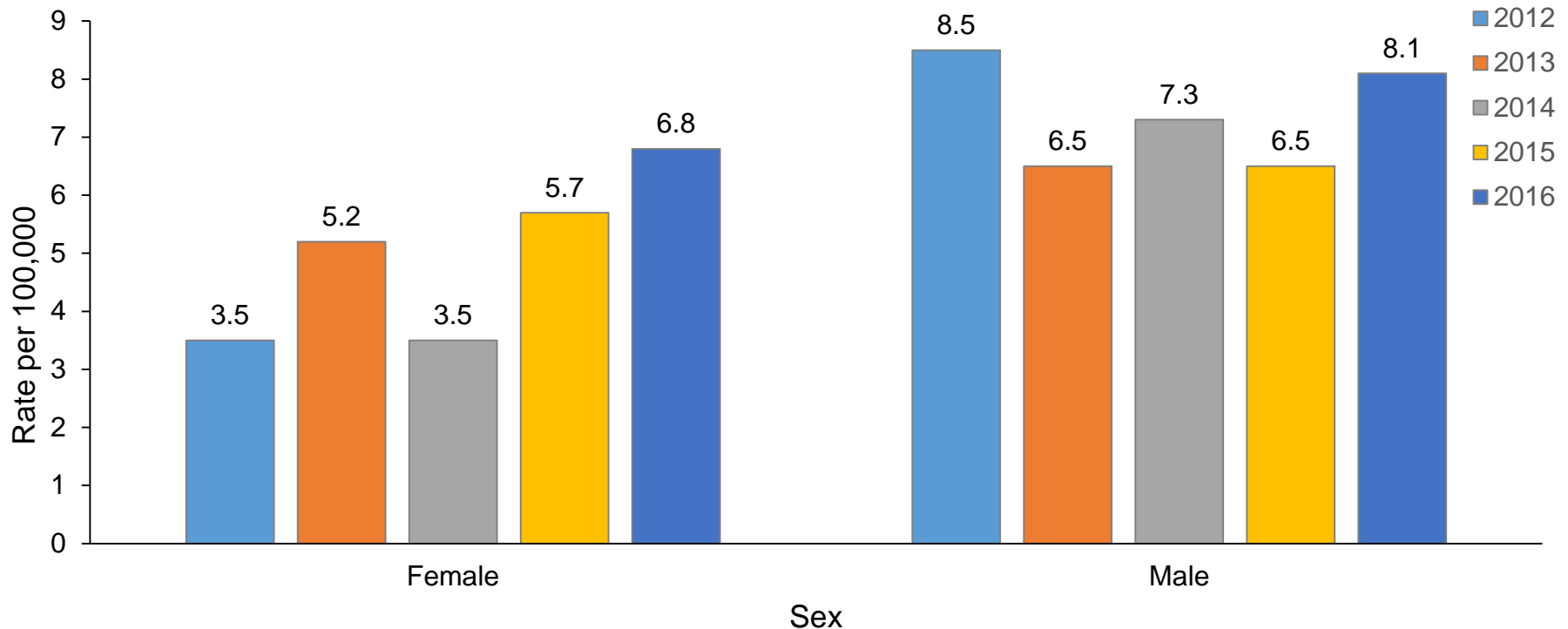


Figure 3: In Rhode Island, invasive Group B Streptococcus disease affects men more than women. The rate of infection has been consistently higher among men than among women in the last five years. In 2016, rates in women were higher than they had been in the previous four years.

Rate of Invasive Group B Streptococcus, County and Year, Rhode Island, 2012-2016

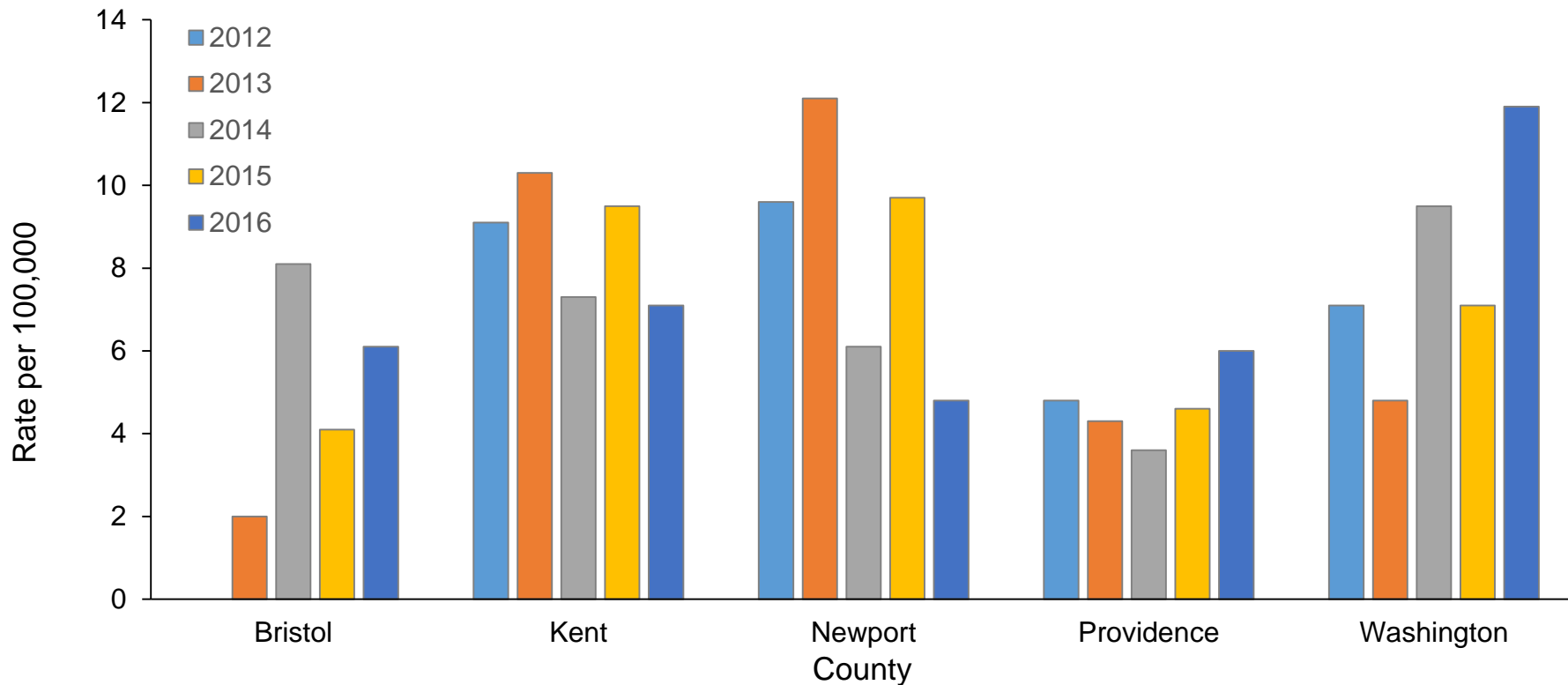


Figure 4: In 2016, the highest rate of invasive Group B Streptococcus cases was in Washington County (11.9 cases per 100,000 people). The highest average rate during the five-year period (2011-2015) was in Kent County (8.7 cases per 100,000 people).

Reported Cases of Invasive Group B Streptococcus, Month and Year, Rhode Island, 2012-2016

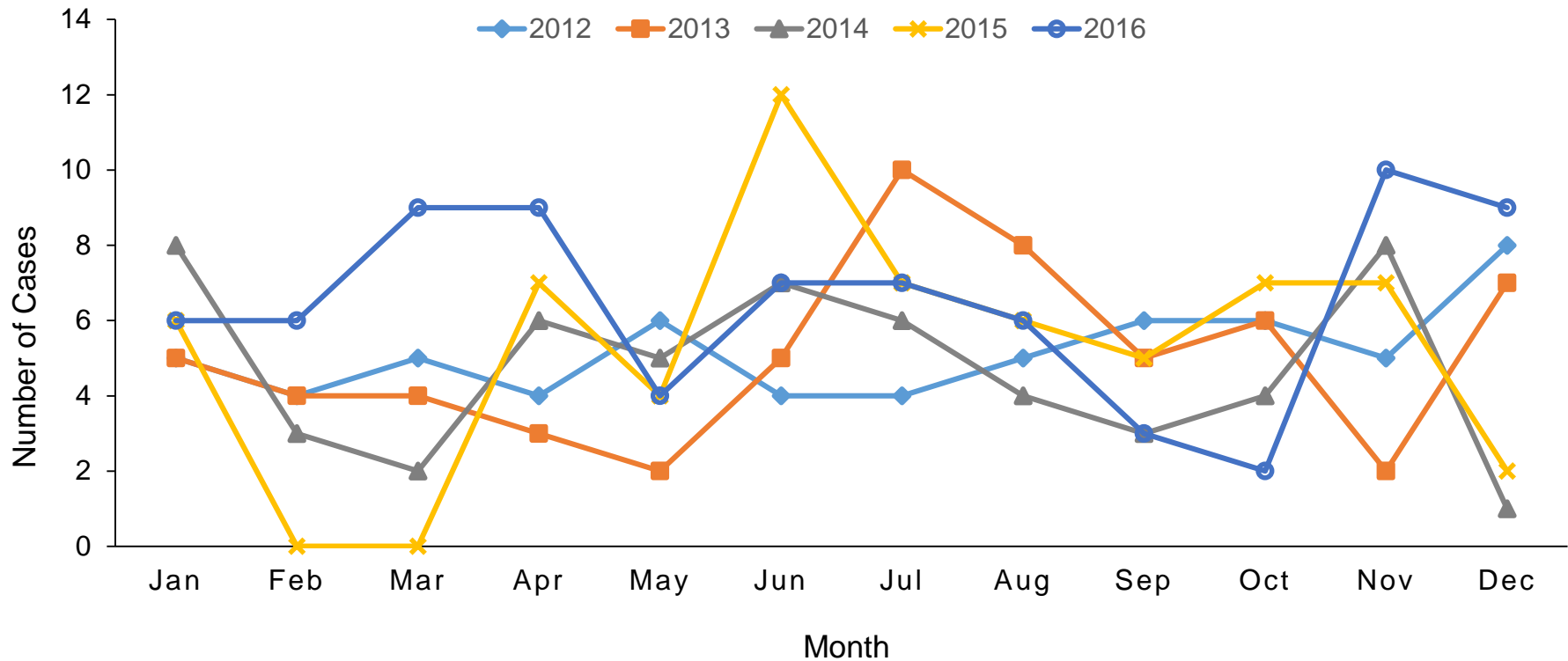


Figure 5: Invasive Group B Streptococcal disease occurs year-round with no trends in seasonality.

Invasive Group B Streptococcus Frequency and Rates by Year, Rhode Island, 2012-2016



Table 1. Frequency by Year

	2012	2013	2014	2015	2016
Number of Cases	62	61	56	64	78

Table 2. Rate by Year

	2012	2013	2014	2015	2016
Rate per 100,000	5.9	5.8	5.3	6.1	7.4

Invasive Group B Streptococcus Frequency, Age Group and Year, Rhode Island, 2011-2015



Table 3. Frequency by Age Group and Year

	2012	2013	2014	2015	2016
0-4	3	4	5	4	6
5-9	0	0	0	0	0
10-19	1	0	0	0	2
20-29	3	1	0	3	5
30-39	3	2	0	2	6
40-49	6	3	4	2	3
50-59	14	9	12	15	12
60-69	11	15	10	10	22
70-79	9	13	12	12	10
≥80	12	14	13	16	12
Total	62	61	56	64	78

Invasive Group B Streptococcus Rates, Age Group and Year, Rhode Island, 2012-2016



Table 4. Rate by Age Group and Year

	2012	2013	2014	2015	2016
0-4	5.2	7.0	8.7	7.0	10.4
5-9	0.0	0.0	0.0	0.0	0.0
10-19	0.7	0.0	0.0	0.0	1.4
20-29	2.0	0.7	0.0	2.0	3.4
30-39	2.4	1.6	0.0	1.6	4.8
40-49	3.9	1.9	2.6	1.3	4.8
50-59	9.2	5.9	7.9	9.9	7.9
60-69	10.7	14.6	9.7	9.7	21.4
70-79	15.6	22.5	20.8	20.8	17.3
≥80	23.4	27.3	25.3	31.2	23.4

Invasive Group B Streptococcus Frequency and Rates, Gender and Year, Rhode Island, 2012-2016



Table 5. Frequency by Sex and Year

	2012	2013	2014	2015	2016
Female	19	28	19	31	37
Male	43	33	37	33	41
Total	62	61	56	64	78

Table 6. Rate by Sex and Year

	2012	2013	2014	2015	2016
Female	3.5	5.2	3.5	5.7	6.8
Male	8.5	6.5	7.3	6.5	8.1

Invasive Group B Streptococcus Frequency, County and Year, Rhode Island, 2012-2016



Table 7. Frequency by County and Year

	2012	2013	2014	2015	2016
Bristol	0	1	4	2	3
Kent	15	17	12	16	18
Newport	8	10	5	8	4
Providence	30	27	23	29	38
Washington	9	6	12	9	15
All	62	61	56	64	78

Invasive Group B Streptococcus Rates by County and Year, Rhode Island, 2012-2016



Table 8. Rate by County and Year

	2012	2013	2014	2015	2016
Bristol	0.0	2.0	8.0	4.0	6.1
Kent	9.0	10.2	7.2	9.6	10.9
Newport	9.7	12.1	6.0	9.7	4.8
Providence	4.8	4.3	3.7	4.6	6.0
Washington	7.1	4.7	9.5	7.1	11.9

Invasive Group B Streptococcus Frequency, Month and Year, Rhode Island, 2012-2016



Table 9. Frequency by Month and Year

	2012	2013	2016	2015	2016
Jan	5	5	8	6	6
Feb	4	4	3	0	6
Mar	5	4	2	0	9
Apr	4	3	6	7	9
May	6	2	5	4	4
Jun	4	5	7	12	7
Jul	4	10	6	7	7
Aug	5	8	4	6	6
Sep	6	5	3	5	3
Oct	6	6	4	7	2
Nov	5	2	8	7	10
Dec	8	7	1	2	9
All	62	61	56	64	78



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.