





# **Invasive Group B Streptococcus 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 Invasive Group B Streptococcus



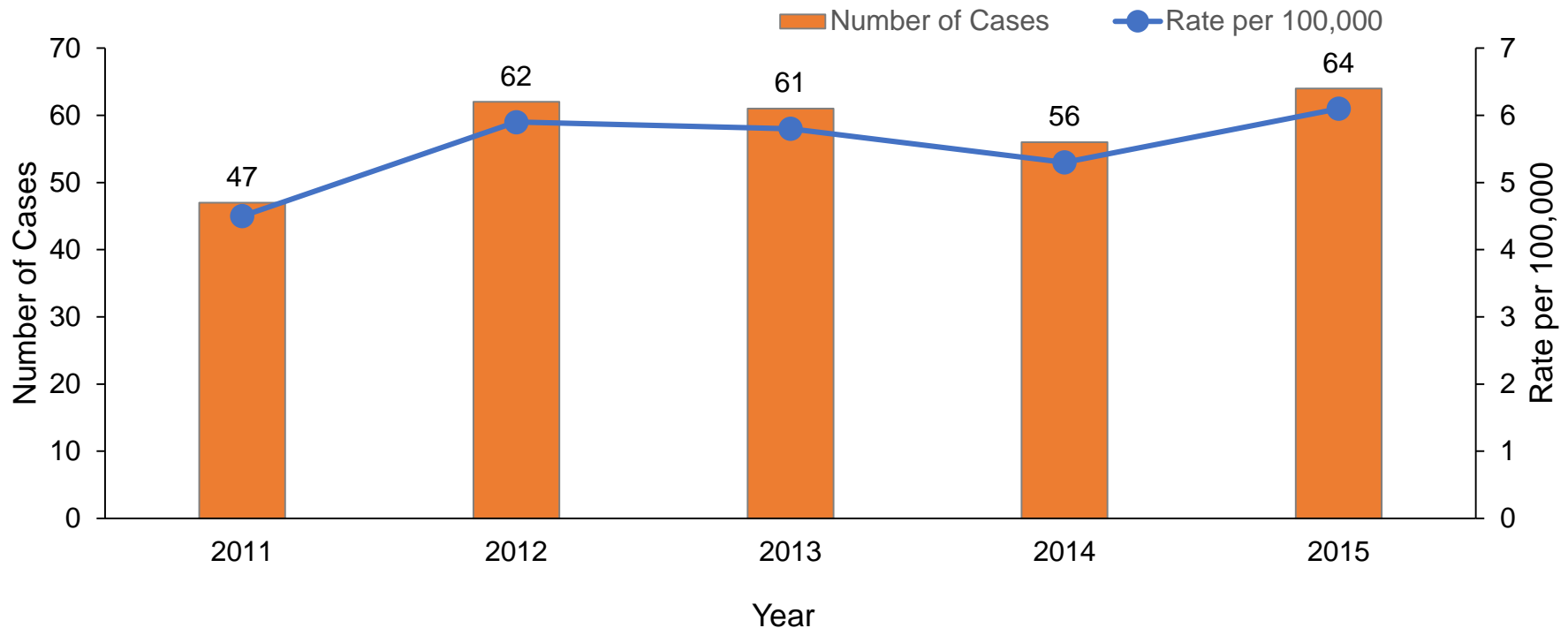
- Invasive Group B Streptococcus (GBS) is a type of bacteria that causes illness in people of all ages.
  - Newborns can be infected during the first week of life (early onset) or in the first week-three months of life (late onset) and experience sepsis, pneumonia, or meningitis.
  - Infections in adults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

# Data Overview, Invasive Group B Streptococcus



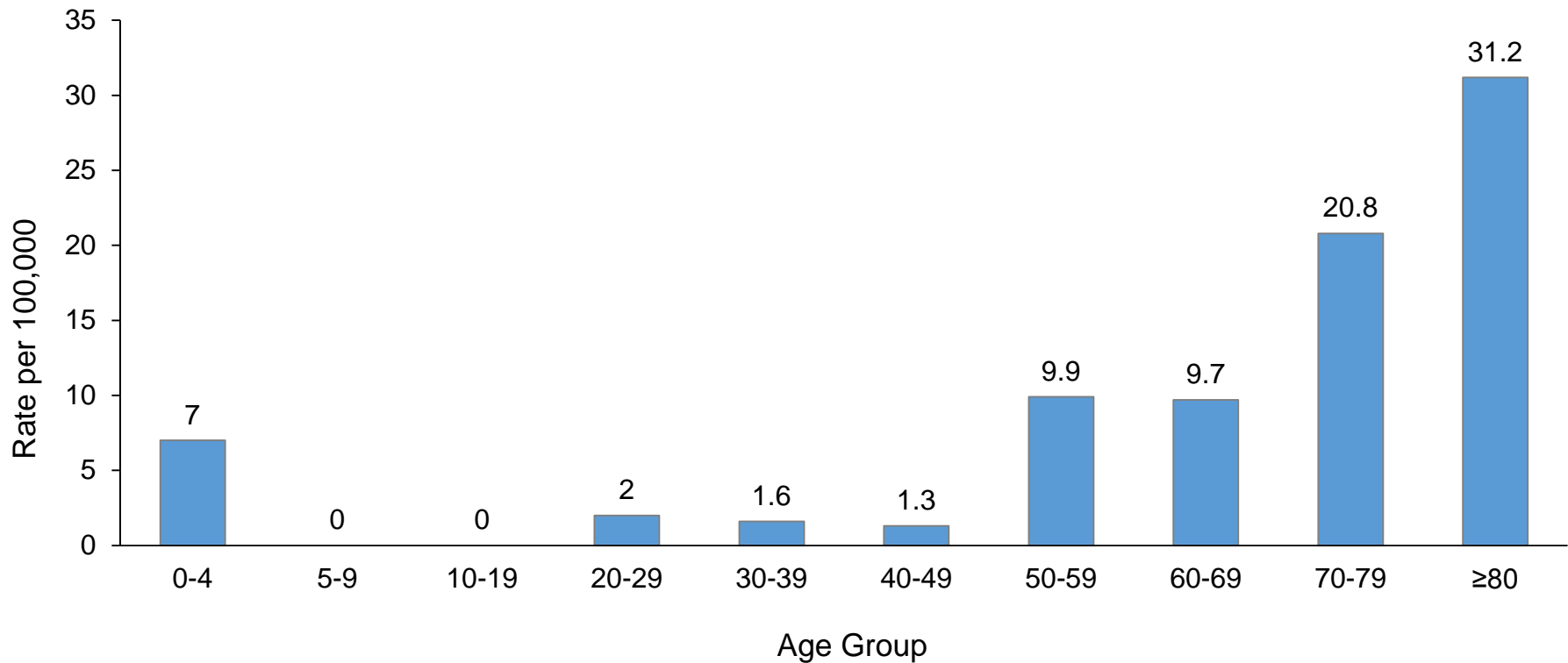
- In 2015, there were 64 cases of invasive Group B Streptococcal disease reported in Rhode Island.
- This represents an incidence rate of 6.1 cases per 100,000 people.
- This is the highest case number and incidence rate in the past five years, but does not represent a significant departure from the mean.
- Over time, the incidence rate has been largely constant.

# Reported Cases of Invasive Group B Streptococcus, Rhode Island, 2011-2015



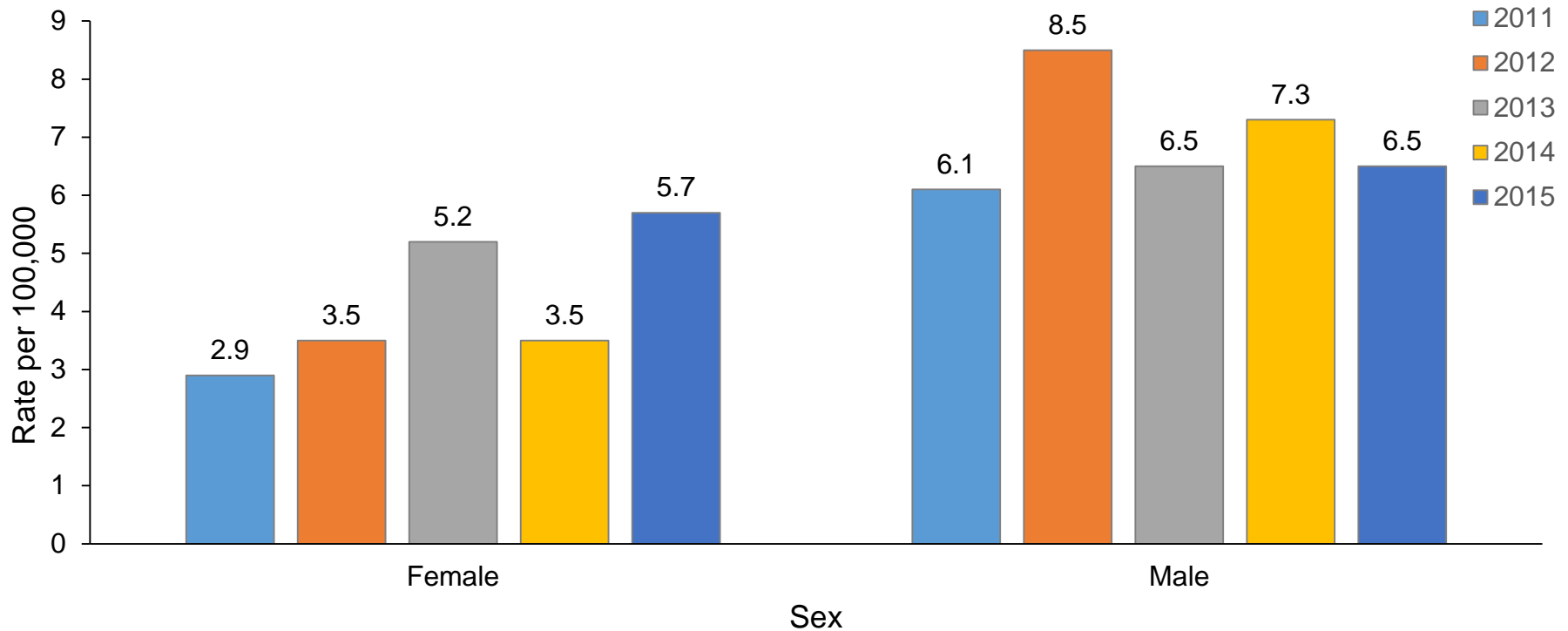
**Figure 1:** In 2015, 64 cases of invasive Group B Streptococcus disease were reported. This is the highest number of cases reported in the past five years. The case rate in 2015 was 6.1 cases per 100,000 people.

# Rate of Invasive Group B Streptococcus, Age Group, Rhode Island, 2015



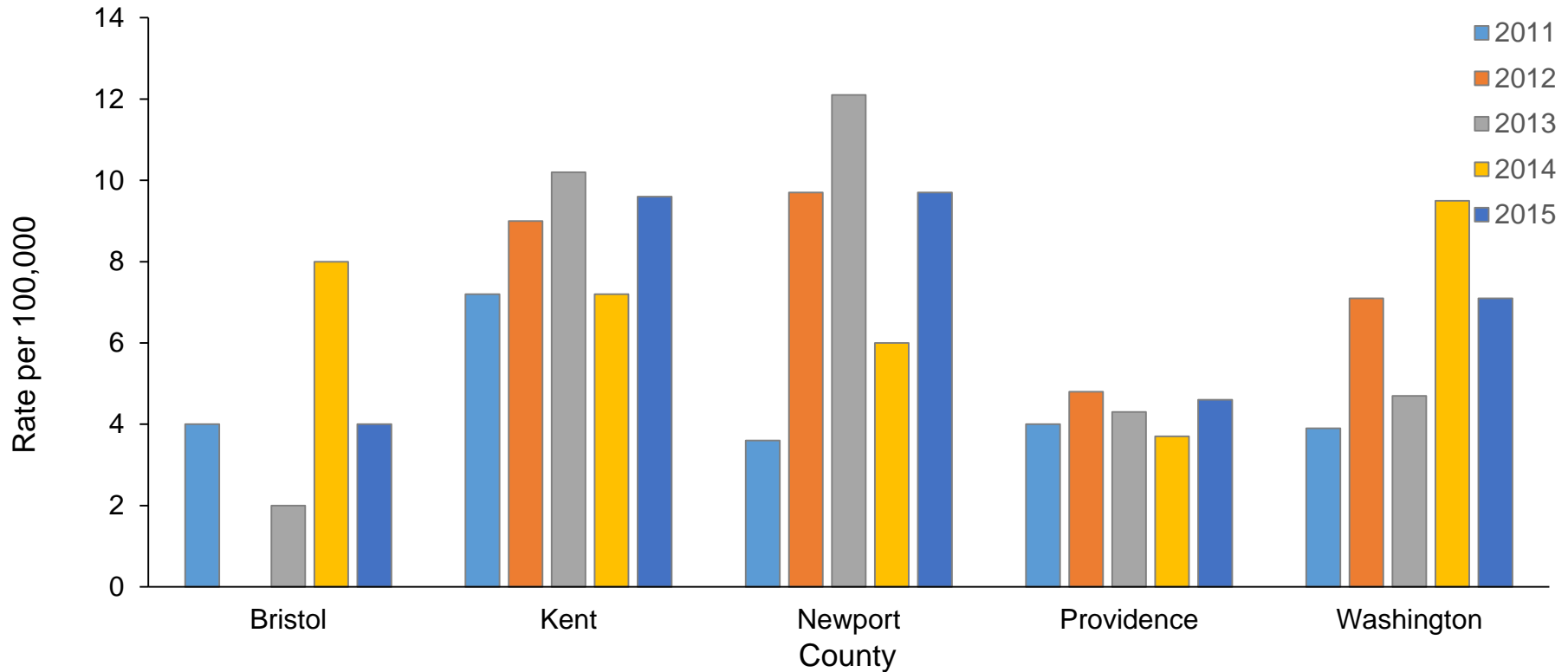
**Figure 2:** In 2015, the highest rate of disease occurred in adults 50 and older with those 80 and older having the highest rate (31.2 cases per 100,000 people). In 2015, there were fewer than five reported cases of newborn invasive Group B Streptococcal disease in children three months of age or younger.

# Rate of Invasive Group B Streptococcus, Gender and Year, Rhode Island, 2011-2015



**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.

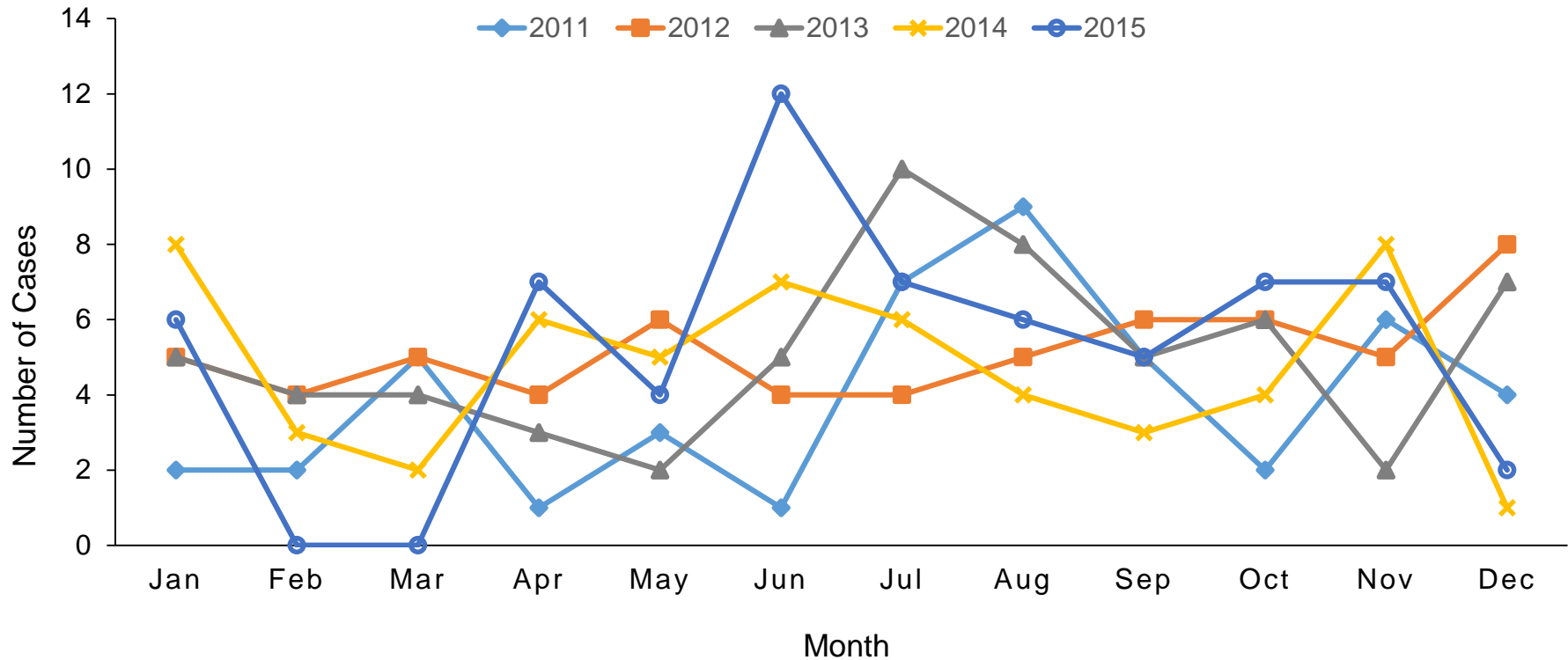
# Rate of Invasive Group B Streptococcus, County and Year, Rhode Island, 2011-2015



**Figure 4:** In 2015, the highest rate of invasive Group B Streptococcus cases was in Newport County (9.7 cases per 100,000 people). The highest average rate during the five-year period (2011-2015) was in Kent County (8.6 cases per 100,000 people).



# Reported Cases of Invasive Group B Streptococcus, Month and Year, Rhode Island, 2011-2015



**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, 2011-2015



**Table 1. Frequency by Year**

	2011	2012	2013	2014	2015
<b>Number of Cases</b>	47	62	61	56	64

**Table 2. Rate by Year**

	2011	2012	2013	2014	2015
<b>Rate per 100,000</b>	4.5	5.9	5.8	5.3	6.1

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



**Table 3. Frequency by Age Group and Year**

	2011	2012	2013	2014	2015
<b>0-4</b>	5	3	4	5	4
<b>5-9</b>	0	0	0	0	0
<b>10-19</b>	0	1	0	0	0
<b>20-29</b>	3	3	1	0	3
<b>30-39</b>	2	3	2	0	2
<b>40-49</b>	6	6	3	4	2
<b>50-59</b>	10	14	9	12	15
<b>60-69</b>	3	11	15	10	10
<b>70-79</b>	11	9	13	12	12
<b>≥80</b>	7	12	14	13	16
<b>Total</b>	47	62	61	56	64

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



**Table 4. Rate by Age Group and Year**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>0-4</b>	8.7	5.2	7.0	8.7	7.0
<b>5-9</b>	0.0	0.0	0.0	0.0	0.0
<b>10-19</b>	0.0	0.7	0.0	0.0	0.0
<b>20-29</b>	2.0	2.0	0.7	0.0	2.0
<b>30-39</b>	1.6	2.4	1.6	0.0	1.6
<b>40-49</b>	3.9	3.9	1.9	2.6	1.3
<b>50-59</b>	6.6	9.2	5.9	7.9	9.9
<b>60-69</b>	2.9	10.7	14.6	9.7	9.7
<b>70-79</b>	19.1	15.6	22.5	20.8	20.8
<b>≥80</b>	13.6	23.4	27.3	25.3	31.2

# Invasive Group B Streptococcus Frequency and Rates, Gender and Year, Rhode Island, 2011-2015



**Table 5. Frequency by Sex and Year**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Female</b>	16	19	28	19	31
<b>Male</b>	31	43	33	37	33
<b>Total</b>	47	62	61	56	64

**Table 6. Rate by Sex and Year**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Female</b>	2.9	3.5	5.2	3.5	5.7
<b>Male</b>	6.1	8.5	6.5	7.3	6.5

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



**Table 7. Frequency by County and Year**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Bristol</b>	2	0	1	4	2
<b>Kent</b>	12	15	17	12	16
<b>Newport</b>	3	8	10	5	8
<b>Providence</b>	25	30	27	23	29
<b>Washington</b>	5	9	6	12	9
<b>All</b>	47	62	61	56	64

# Invasive Group B Streptococcus Rates by County and Year, Rhode Island, 2011-2015



**Table 8. Rate by County and Year**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Bristol</b>	4.0	0.0	2.0	8.0	4.0
<b>Kent</b>	7.2	9.0	10.2	7.2	9.6
<b>Newport</b>	3.6	9.7	12.1	6.0	9.7
<b>Providence</b>	4.0	4.8	4.3	3.7	4.6
<b>Washington</b>	3.9	7.1	4.7	9.5	7.1

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



**Table 9. Frequency by Month and Year**

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Jan</b>	2	5	5	8	6
<b>Feb</b>	2	4	4	3	0
<b>Mar</b>	5	5	4	2	0
<b>Apr</b>	1	4	3	6	7
<b>May</b>	3	6	2	5	4
<b>Jun</b>	1	4	5	7	12
<b>Jul</b>	7	4	10	6	7
<b>Aug</b>	9	5	8	4	6
<b>Sep</b>	5	6	5	3	5
<b>Oct</b>	2	6	6	4	7
<b>Nov</b>	6	5	2	8	7
<b>Dec</b>	4	8	7	1	2
<b>All</b>	47	62	61	56	64





# 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.