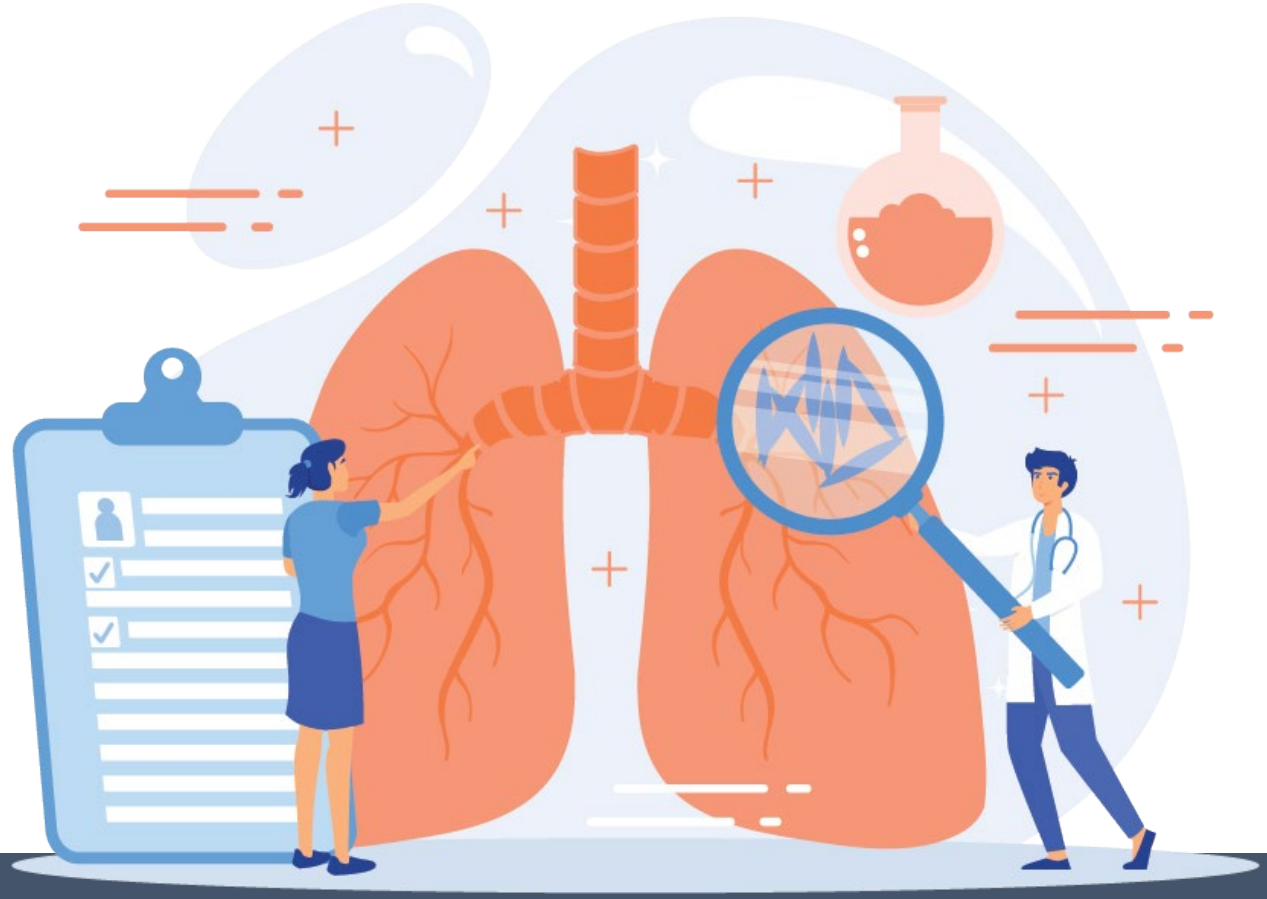


Tuberculosis Annual Surveillance Report, 2024

Center for HIV, Hepatitis, STD, and Tuberculosis Epidemiology (CHHSTE)
Division of Emergency Preparedness and Response (EPID)
Rhode Island Department of Health (RIDOH)

About Tuberculosis (TB)

- TB is a disease caused by *Mycobacterium tuberculosis* bacteria
- TB bacteria spread through the air and can be transmitted to others by those with active disease in the lungs or throat (pulmonary TB)
- Symptoms of pulmonary TB disease include cough, fever, night sweats, hemoptysis (coughing up blood), and weight loss
- TB may also cause infections outside of the lungs (extrapulmonary TB)
- Proper medication can cure TB

About Latent TB Infection (LTBI)

- People with LTBI are infected with TB but have no symptoms and cannot spread TB bacteria but are at risk of developing active disease.
- It's estimated that ~15% of foreign-born people have LTBI[1]
- About 5-10% of people with LTBI will develop active TB disease in their lifetime. Treatment reduces this risk.[1]
- Proper medication can cure LTBI

TB in Rhode Island, 2024

In 2024, 23 cases of active TB (2.1 cases per 100,000) reported

- 78.3% foreign-born, 21.7% US-born
- Decrease of 14.8% from 2023
- Decrease of 23.3% from 2015
- Yearly fluctuations—incidence peaks in 2013 (27), 2015 (30), and 2023 (27)
- Highest yearly rates of TB disease in Providence County and among individuals age 25-44

Reported Cases of TB, Rhode Island, 2015-2024

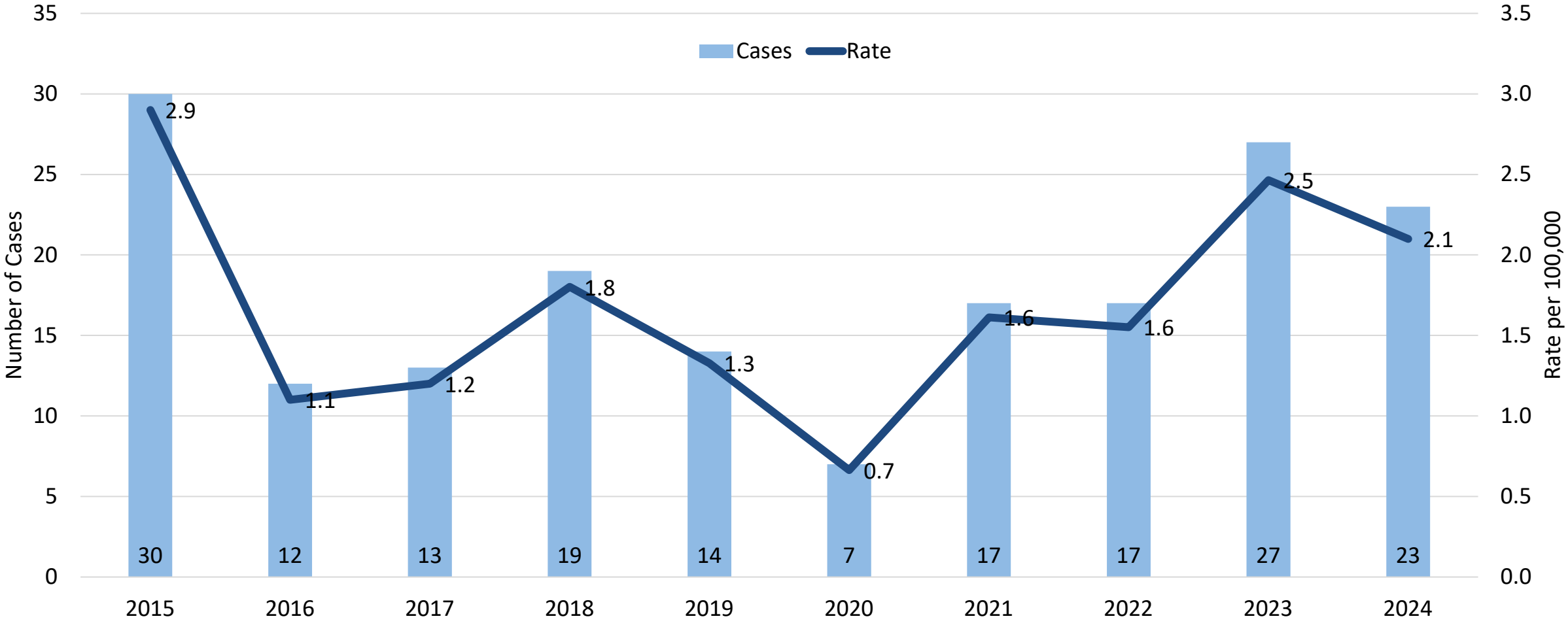


Figure 1. In 2024, 23 active TB cases were reported in Rhode Island, at a rate of 2.1 cases per 100,000 population.

Reported Cases of TB, Rhode Island, 2015-2024

Table 1. Annual Incidence of TB Disease in Rhode Island										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Cases	30	12	13	19	14	7	17	17	27	23
Rate per 100,000	2.9	1.1	1.2	1.8	1.3	0.7	1.6	1.6	2.5	2.1

TB Rate by Age Group, Rhode Island, 2024

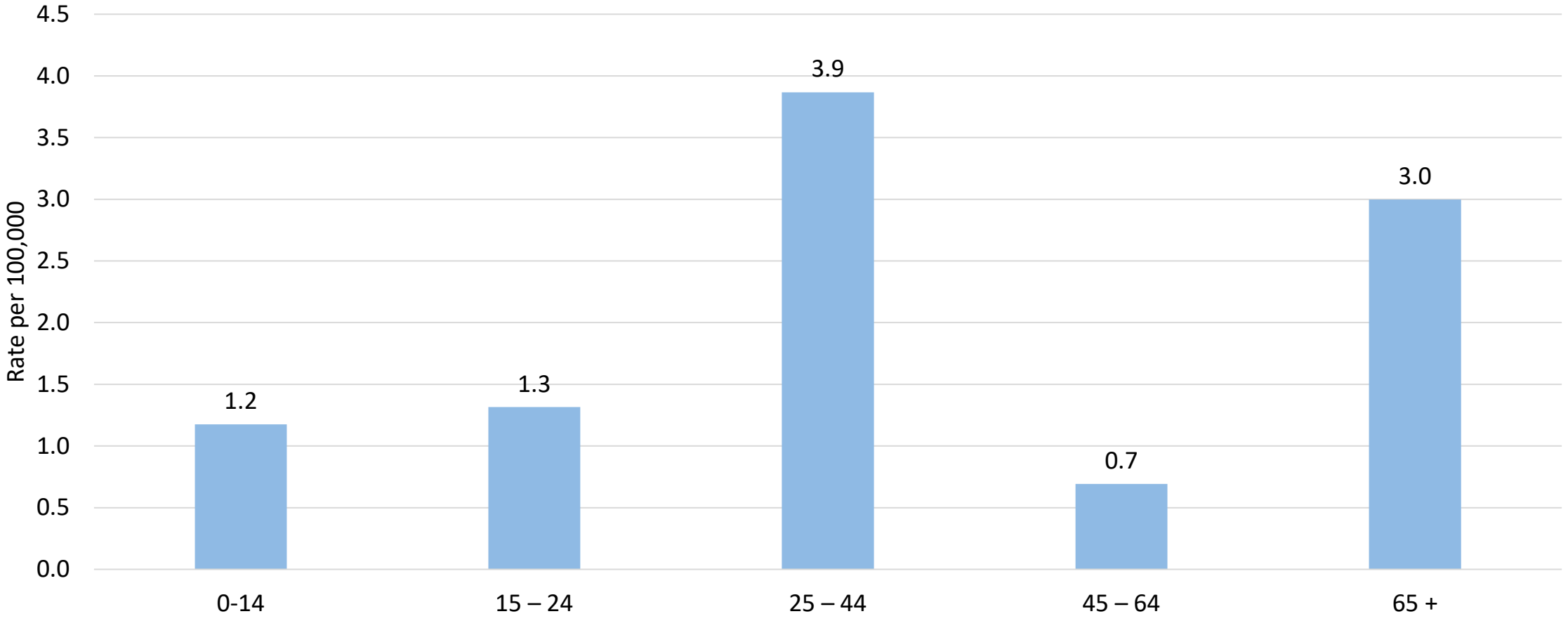


Figure 2. In 2024, the highest rates of active TB were observed in adults age 25-44 at a rate of 3.9 cases per 100,000 population. The second highest rate of infection was in those age 65+, at 3.0 cases per 100,000.

TB Frequency and Rates by Age Group, Rhode Island, 2020-2024

Table 2. Frequency by Age Group and Year					
	2020	**2021**	**2022**	**2023**	**2024**
0-14	0	<5	<5	<5	<5
15 – 24	0	<5	6	<5	<5
25 – 44	<5	<5	<5	9	11
45 – 64	<5	7	<5	10	<5
65 +	<5	<5	<5	<5	6

Table 3. Rate by Age Group and Year					
	2020	**2021**	**2022**	**2023**	**2024**
0-14	0.0	0.6	0.6	1.2	1.2
15 – 24	0.0	0.6	3.9	2.0	1.3
25 – 44	1.1	1.5	1.4	3.2	3.9
45 – 64	0.3	2.4	1.4	3.5	0.7
65 +	1.8	2.4	10	1.5	3.0

TB Rate by Sex, Rhode Island, 2020-2024

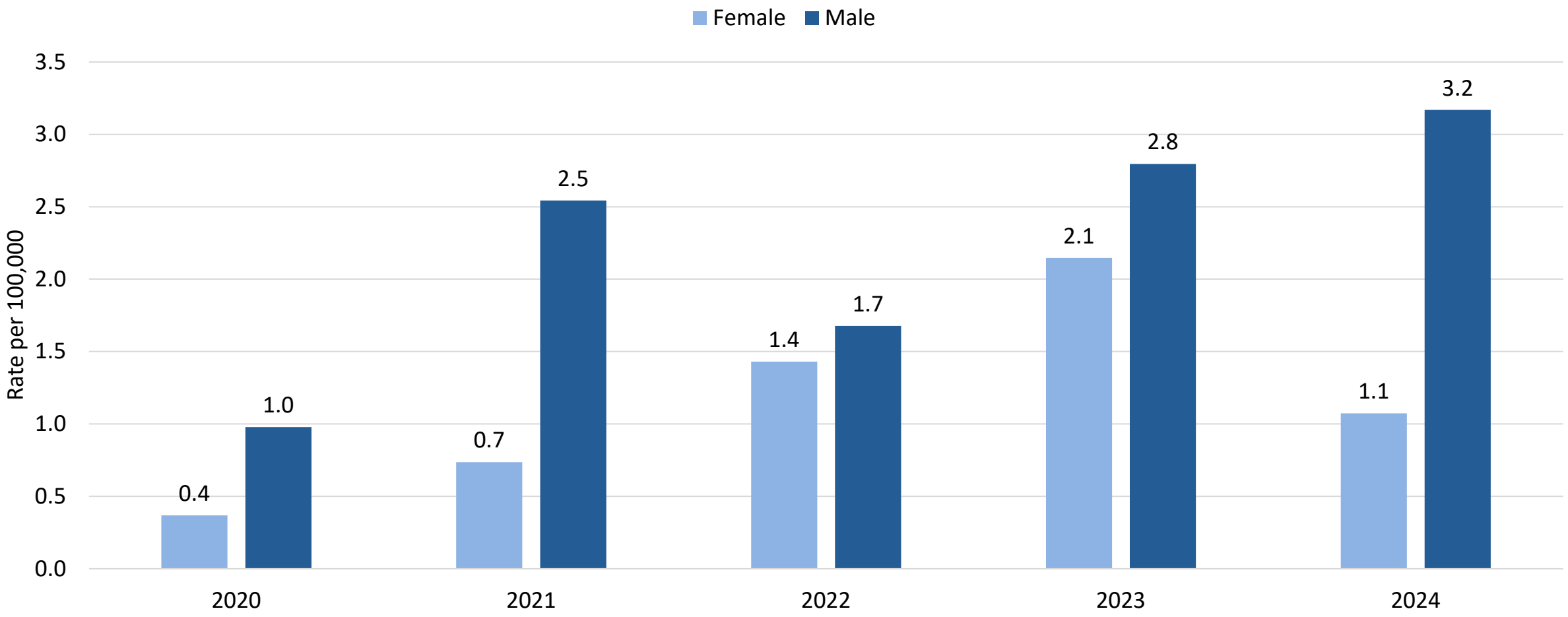


Figure 3. Over the last 5 years, rates of TB were higher in males than females.

TB Frequency and Rates by Sex, Rhode Island, 2020-2024

Table 4. Frequency by Sex and Year					
	2020	**2021**	**2022**	**2023**	**2024**
Female	<5	<5	8	12	6
Male	5	13	9	15	17

Table 5. Rate by Sex and Year					
	2020	**2021**	**2022**	**2023**	**2024**
Female	0.4	0.7	1.4	2.1	1.1
Male	1.0	2.5	1.7	2.8	3.2

TB Rate by County, Rhode Island, 2020-2024

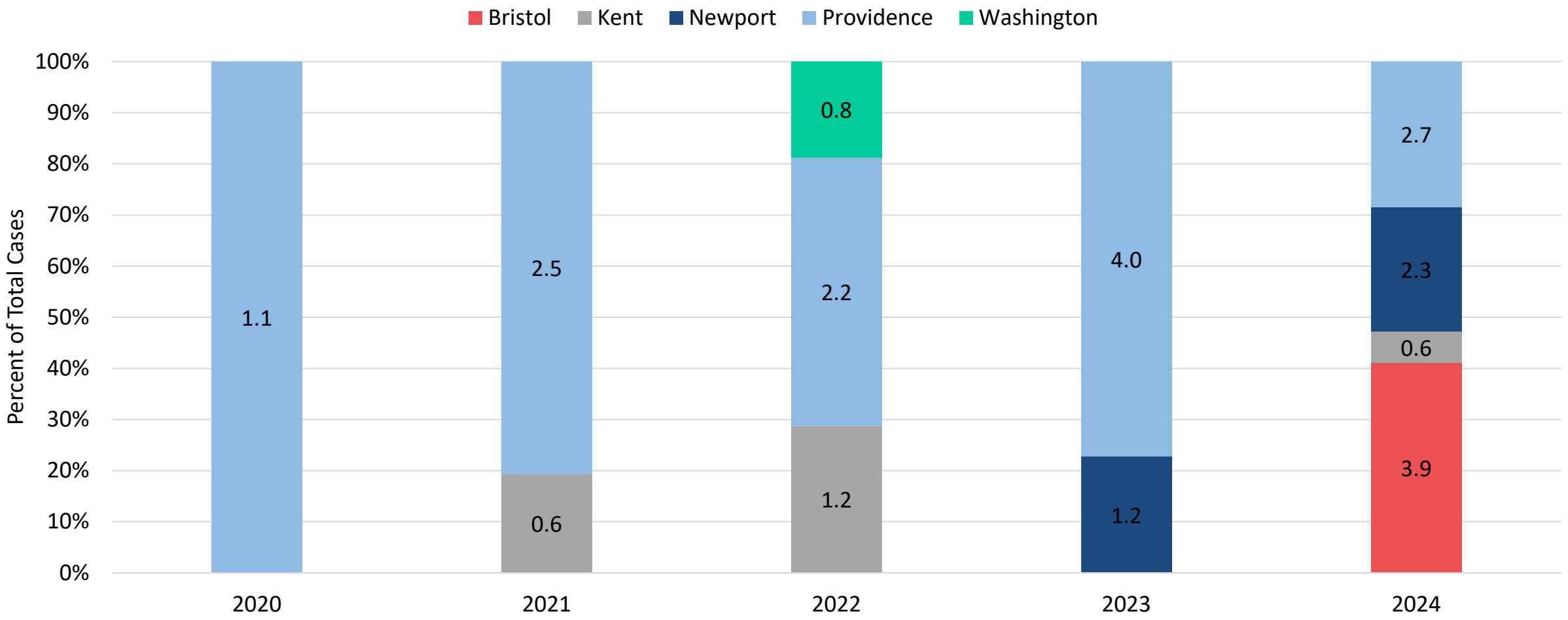


Figure 4. Annually, most cases of TB are observed in Providence County. In 2024, Bristol County had a rate of 3.9 cases per 100,000 population, the highest rate for the county since 2015. Rates in Providence County decreased from 4.0 cases per 100,000 in 2023 to 2.7 cases per 100,000 in 2024 but remained higher than previous years.

TB Frequency and Rate by County, Rhode Island, 2020-2024

Table 6. Frequency by County and Year					
	2020	2021	2022	2023	2024
Bristol	0	0	0	0	<5
Kent	0	<5	<5	0	<5
Newport	0	0	0	<5	<5
Providence	7	16	14	26	18
Washington	0	0	<5	0	0

Table 7. Rate by County and Year					
	2020	2021	2022	2023	2024
Bristol	0.0	0.0	0.0	0.0	3.9
Kent	0.0	0.6	1.2	0.0	0.6
Newport	0.0	0.0	0.0	1.2	2.3
Providence	1.1	2.5	2.2	4.0	2.7
Washington	0.0	0.0	0.8	0.0	0.0

TB Rate by Racial/Ethnic Group, Rhode Island, 2020-2024

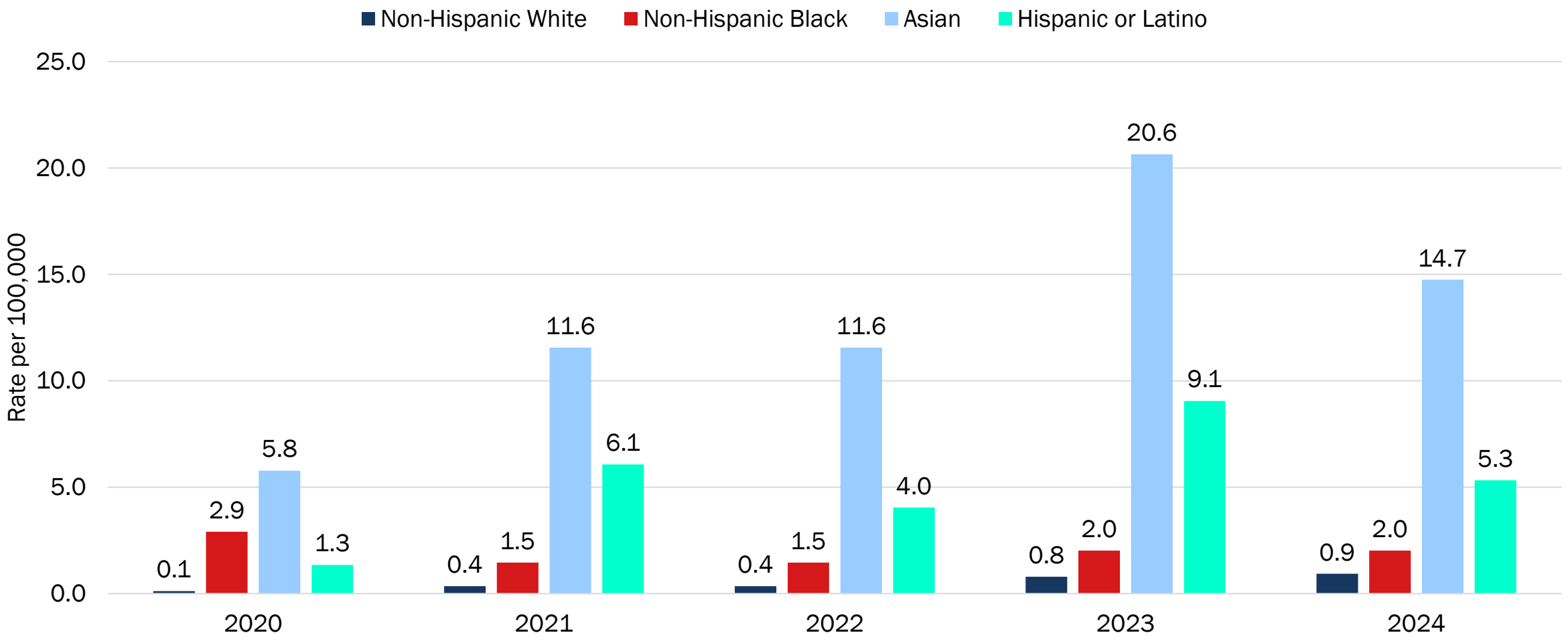


Figure 5. Rates of TB in Rhode Island are consistently highest in the Asian and Hispanic/Latino populations compared to non-Hispanic white and non-Hispanic black populations. **Note:** Rates for other racial/ethnic groups, including Native Hawaiian/Other Pacific Islander, are excluded from the chart due to scaling. The high 2023 rates in this population in Table 9 are the result of small case counts and small population denominators.

TB Frequency by Race/Ethnicity, Rhode Island, 2020-2024

Table 8. Frequency by Race/Ethnicity and Year					
	2020	**2021**	**2022**	**2023**	**2024**
Hispanic	<5	8	6	17	10
Non-Hispanic White	<5	<5	<5	<5	<5
Non-Hispanic Black	<5	<5	<5	0	<5
Asian	<5	<5	<5	7	5
American Indian/ Alaska Native	0	0	0	0	0
Hawaii Native/ Other Pacific Islander	0	0	0	<5	0

TB Rate by Race/Ethnicity, Rhode Island, 2020-2024

Table 9. Rates by Race/Ethnicity and Year					
	2020	**2021**	**2022**	**2023**	**2024**
Hispanic	1.3	6.1	4.0	9.1	5.3
Non-Hispanic White	0.1	0.4	0.4	0.8	0.9
Non-Hispanic Black	2.9	1.5	1.5	2.0	2.0
Asian	5.8	11.6	11.6	20.6	14.7
American Indian/ Alaska Native	0.0	0.0	0.0	0.0	0.0
Hawaii Native/ Other Pacific Islander	0.0	0.0	0.0	131.9	0.0

RI Cases of TB, Distribution by Country of Birth, 2024

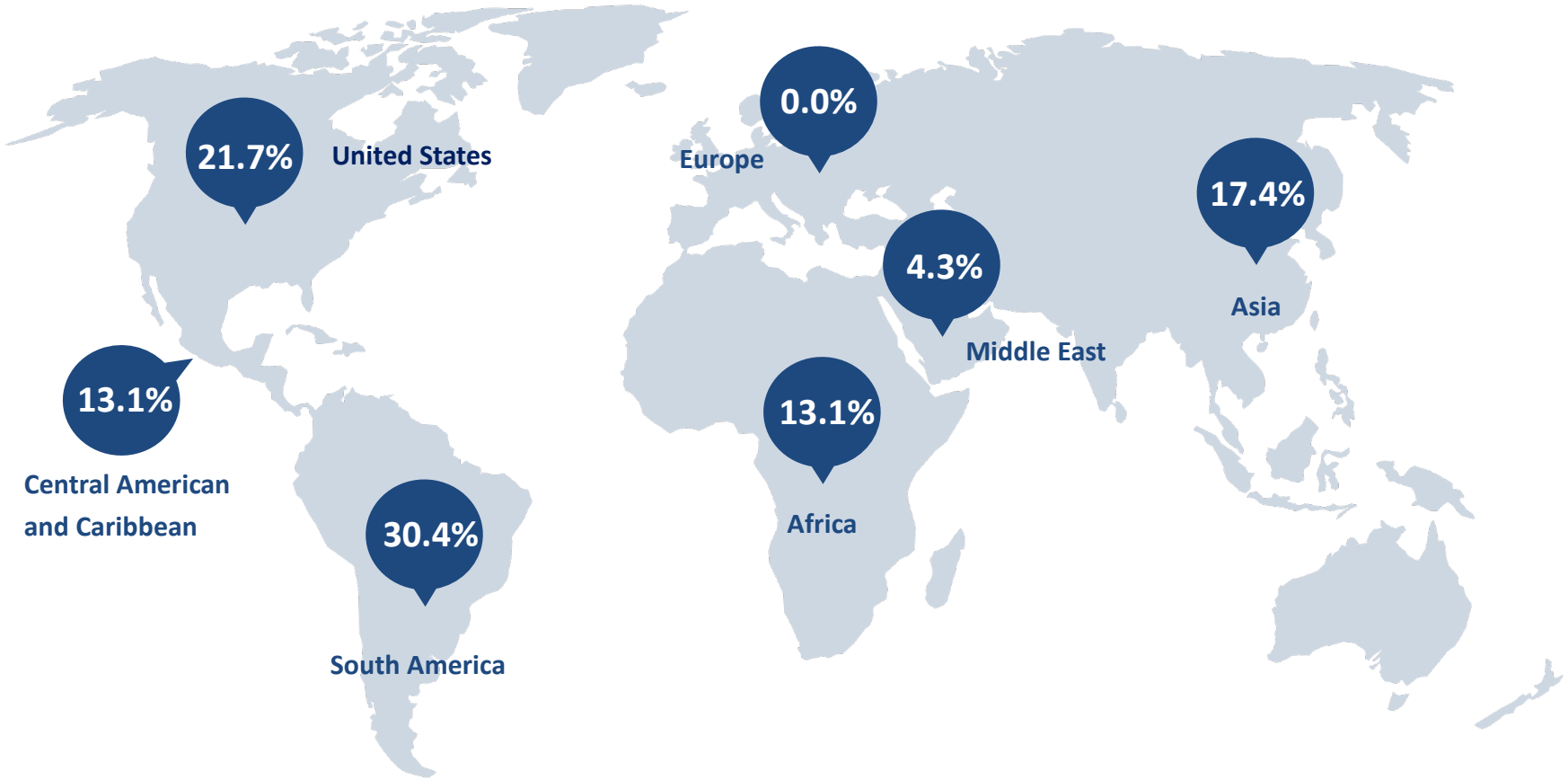
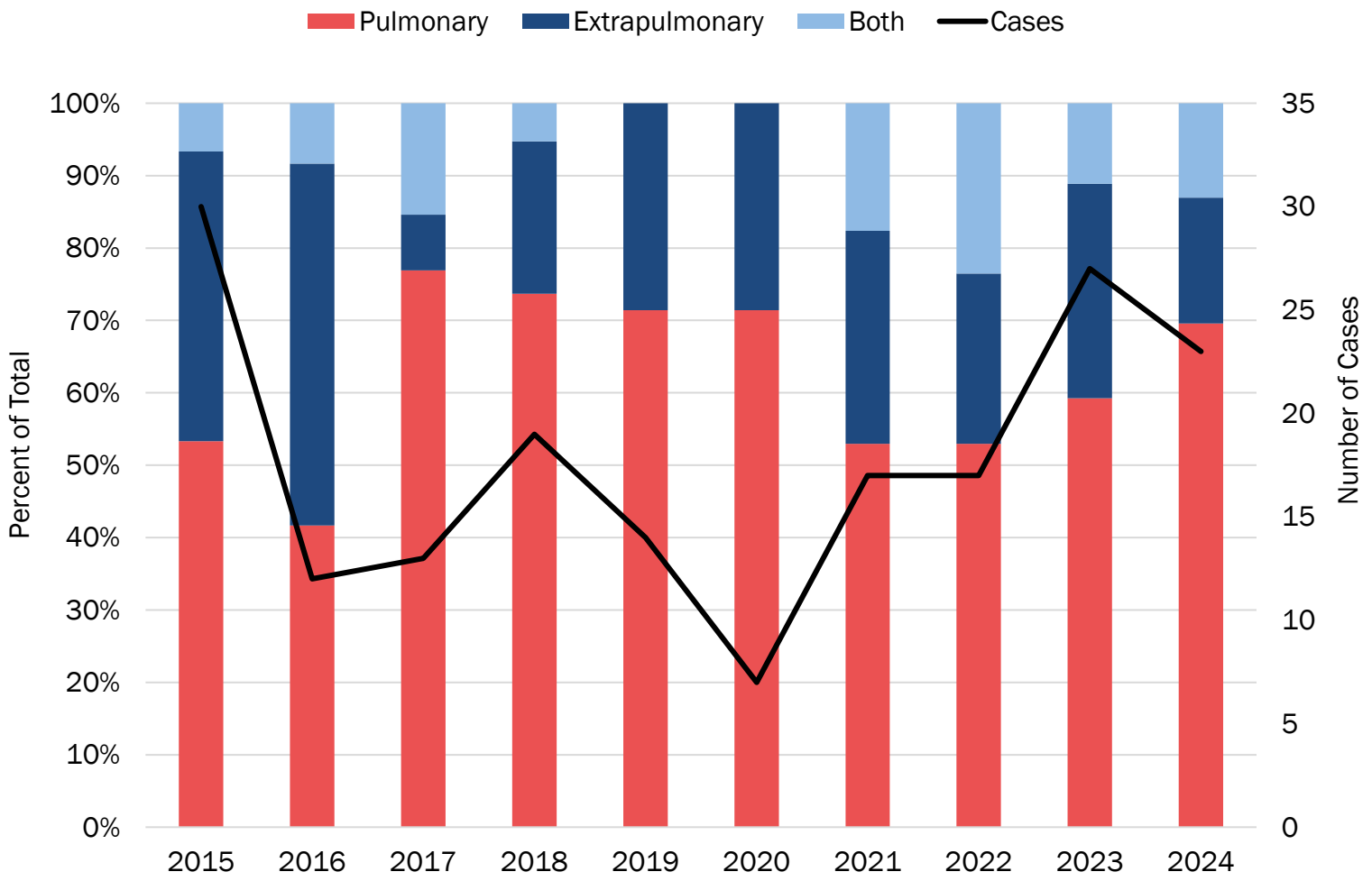


Figure 6. Distribution of country of birth among 2024 active TB cases. In 2024, 78.3% of cases reported in Rhode Island were foreign-born and 21.7% of cases were born in the US. This is highest percentage of US-born cases since 2016.

Site of Disease, TB in Rhode Island, 2015-2024

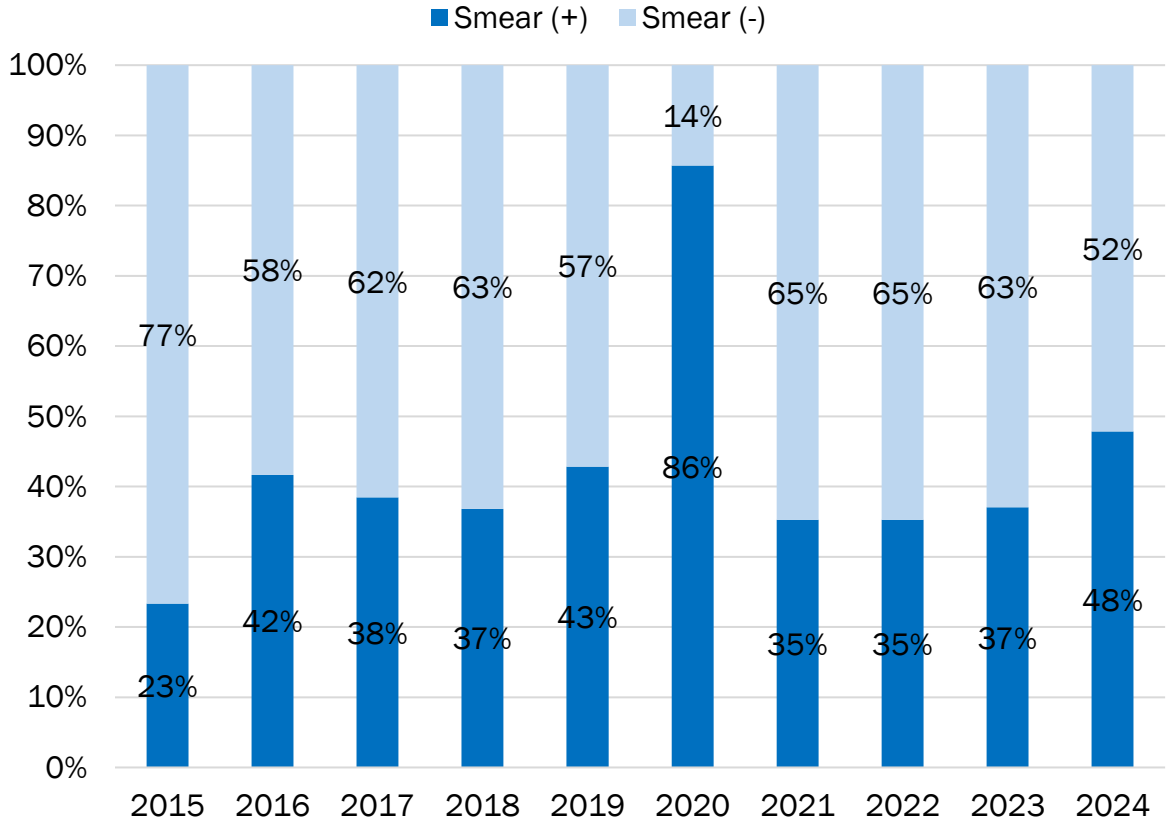


- TB bacteria spread through the air and can be transmitted to others by those with active disease in the lungs or throat (pulmonary TB)
- Symptoms of pulmonary TB disease include cough, fever, night sweats, hemoptysis (coughing up blood), and weight loss
- TB may also occur outside of the lungs (extrapulmonary TB)

Figure 7. Annually, most cases of TB disease occur in the lungs (pulmonary). In the last 10 years, an average of 62% of cases had pulmonary infection alone; an average of 10% had infection in both the lungs and extra-pulmonary sites; and an average of 28% had extra-pulmonary infection alone.

Sputum Smear & Culture Results, 2015-2024

Sputum specimens testing positive (+) for *Mycobacterium TB* by smear and culture show a patient's level of infectiousness and risk to transmit TB to others.



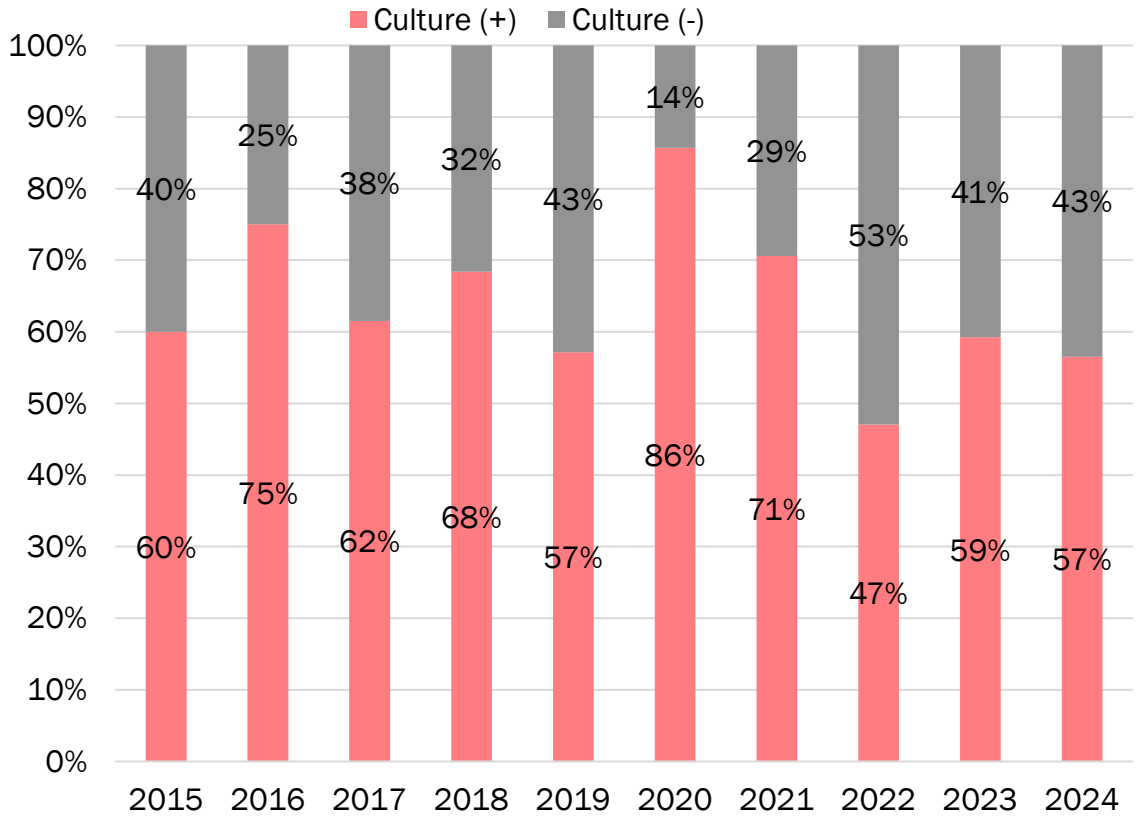


Figure 8. The blue chart, on the left, demonstrates the distribution of *Mycobacterium TB* sputum smear results. The red chart, on the right, demonstrates the *Mycobacterium TB* culture results.

HIV Co-Infection among TB Cases, Rhode Island, 2015-2024

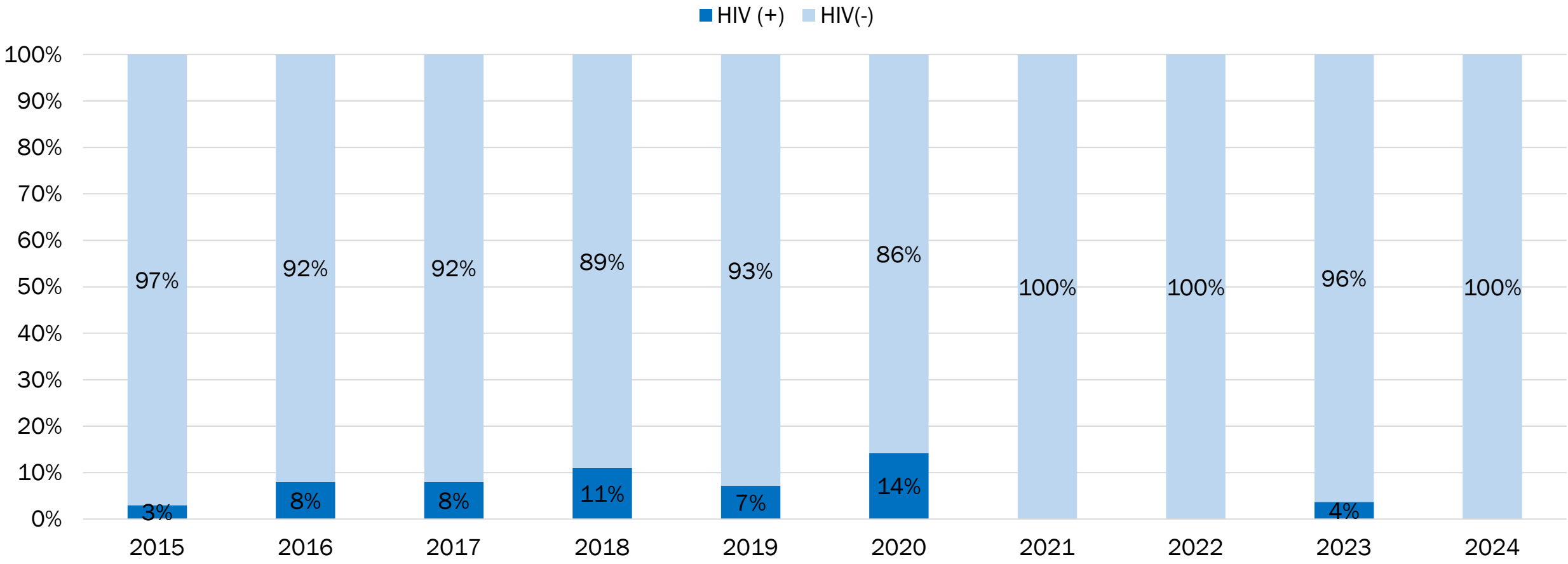


Figure 9. A small proportion of total TB cases are co-infected with HIV each year. HIV testing is offered to all TB patients upon TB diagnosis, if HIV status is unknown.

Drug Susceptibility Testing

Specimens testing positive for *Mycobacterium TB* are often sent for phenotypic and genotypic drug susceptibility testing (DST). Results of DST inform patient care and treatment regimens.

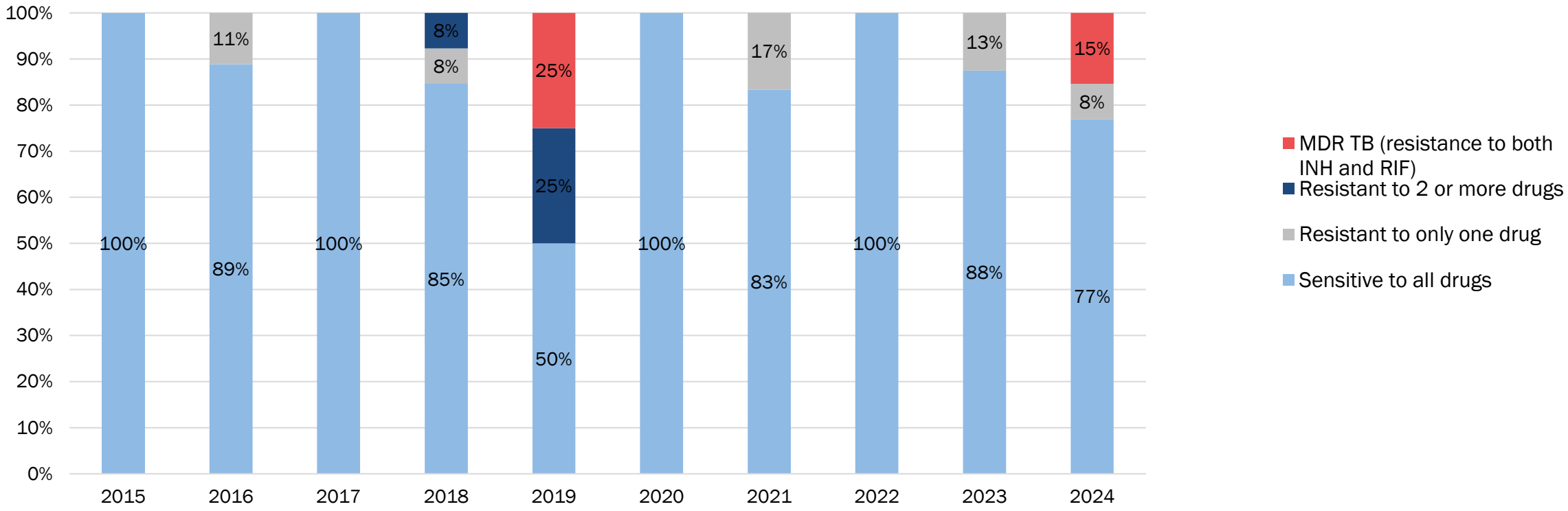


Figure 10. In 2024, fewer than 5 cases of TB were multi-drug resistant—resistant to both isoniazid (INH) and rifampin (RIF). In the last 10 years, no cases of extensively-drug-resistant (XDR) TB have been reported. XDR TB is resistant to rifampicin, at least one fluoroquinolone, and at least one Group A drug (Bedaquiline or linezolid).

TB Incidence by Rhode Island Municipality, 2015-2024

Table 10: Incidence by Rhode Island Municipality	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Barrington	0	0	0	0	0	0	0	0	0	<5
Bristol	<5	0	0	0	0	0	0	0	0	<5
Burrillville	0	0	0	0	0	0	0	0	0	0
Central Falls	<5	<5	0	<5	<5	0	<5	<5	<5	<5
Charlestown	0	0	0	0	0	0	0	0	0	0
Coventry	0	0	0	0	0	0	<5	<5	0	<5
Cranston	<5	0	<5	<5	<5	<5	<5	<5	<5	<5
Cumberland	<5	0	0	0	0	0	0	0	0	0
East Greenwich	<5	<5	0	0	<5	0	0	0	0	0
East Providence	0	<5	0	<5	0	0	<5	0	<5	<5
Exeter	0	0	0	0	0	0	0	0	0	0
Foster	0	0	0	0	0	0	0	0	0	0
Glocester	0	0	0	0	0	0	0	0	0	0
Hopkinton	0	0	0	0	0	0	0	0	0	0
Jamestown	0	0	0	0	0	0	0	0	0	0
Johnston	<5	0	0	0	<5	0	0	<5	<5	0
Lincoln	0	0	0	0	0	<5	<5	0	0	<5
Little Compton	0	0	0	0	0	0	0	0	0	0
Middletown	0	0	<5	0	0	0	0	0	0	<5
Narragansett	0	0	0	0	0	0	0	0	0	0

TB Incidence by Rhode Island Municipality, 2015-2024

Table 10: Incidence by Rhode Island Municipality (cont.)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
New Shoreham	0	0	0	0	0	0	0	0	0	0
Newport	<5	0	0	0	<5	0	0	0	0	<5
North Kingstown	0	0	0	<5	0	0	0	0	0	0
North Providence	0	0	0	0	0	<5	0	0	0	0
North Smithfield	0	0	0	0	0	0	0	0	0	0
Pawtucket	<5	<5	<5	<5	<5	0	0	<5	<5	0
Portsmouth	<5	<5	0	0	0	0	0	0	0	0
Providence	12	<5	11	8	5	<5	10	6	15	9
Richmond	0	0	0	0	0	0	0	0	0	0
Scituate	0	0	0	0	0	0	0	0	0	0
Smithfield	<5	<5	<5	0	0	0	0	0	0	0
South Kingstown	<5	0	0	<5	0	0	0	<5	0	0
Tiverton	0	0	0	0	0	0	0	0	<5	0
Warren	<5	0	0	0	<5	0	0	0	0	0
Warwick	0	0	<5	0	0	0	0	0	<5	0
West Greenwich	0	0	0	0	0	0	0	0	0	0
West Warwick	0	0	0	0	<5	0	0	<5	0	0
Westerly	0	0	0	0	0	0	0	0	0	0
Woonsocket	0	<5	0	0	0	<5	<5	<5	<5	0
State Total	**30**	**12**	**13**	**19**	**14**	**7**	**17**	**17**	**27**	**23**

Data Sources

- Clinical Overview of Latent Tuberculosis Infection, CDC
- RI-National Electronic Disease Surveillance System (NEDSS) Base System (NBS)
- RI-NTSS
- 2010 U.S. Census
- 2016 U.S. Census
- 2021 1-Year ACS

Rate Expressions

Rates are expressed as cases per 100,000 population

- 2014-2016 rates based on population of Rhode Island determined by 2010 U.S. Census
- 2017-2021 rates based on population of Rhode Island determined by 2016 U.S. Rhode Island Census Estimate
- 2022-2024 rates based on population of Rhode Island determined by 2021 1-Year ACS

Resources

- CONFIDENTIALITY NOTICE: Values lower than 5 are suppressed for confidentiality. If these data are used in a publication, please acknowledge the Rhode Island Department of Health, Division of Emergency Preparedness and Infectious Disease.
- This data is privileged, confidential, and/or otherwise protected from disclosure to anyone other than its intended recipients. Any dissemination or use of this data or its contents by persons other than the intended recipients is strictly prohibited.
- Prepared by the Center for HIV, Hepatitis, STD, and TB Epidemiology, Rhode Island Department of Health, May 2025

Rhode Island Department of Health
Division of Emergency Preparedness and Response
Center for HIV, Hepatitis, STD, and Tuberculosis
Epidemiology TB Program
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