



The State of TB in Texas: New Directions in TB

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New Directions in TB
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Sandra Morris, MPH has the following disclosures to make:

- No conflict of interests
- No relevant financial relationships with any commercial companies pertaining to this educational activity





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Tuberculosis (TB) in Texas - New Directions in TB

April 2, 2024

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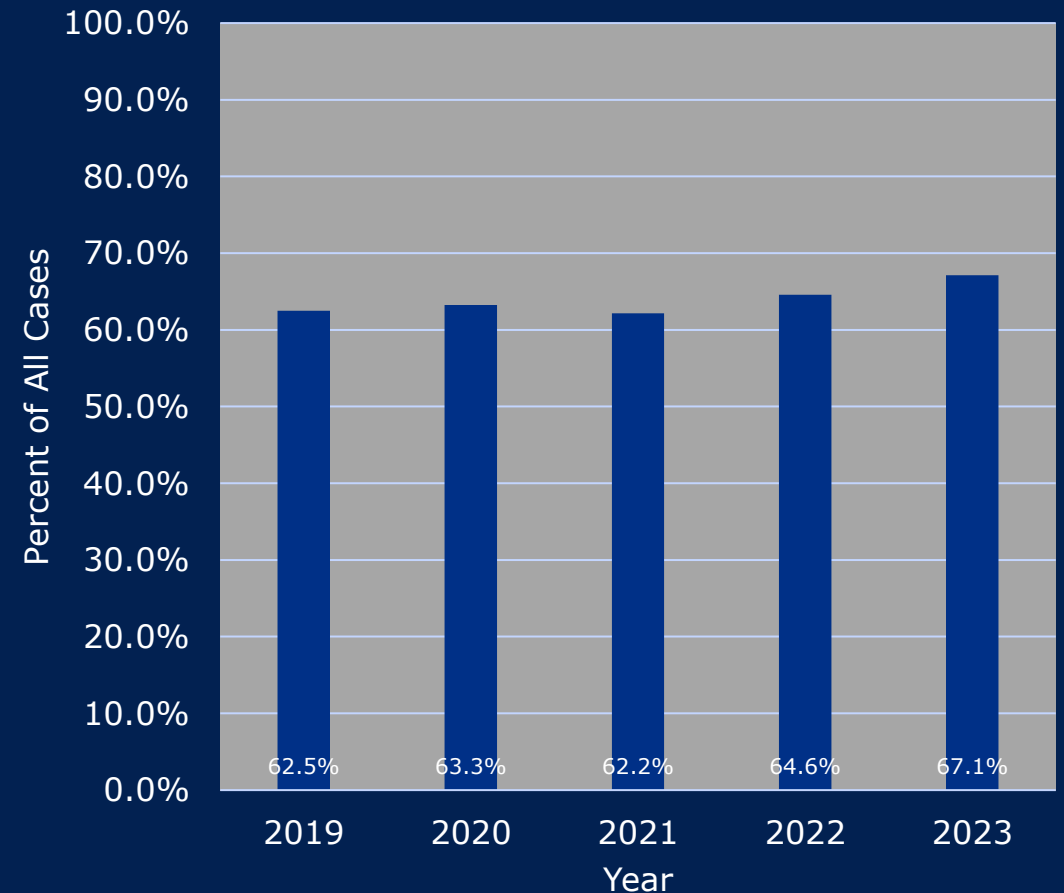
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Risk Factors for TB in Texas

Country of Origin, 2019-2023*

- Per the World Health Organization (WHO), 10.6 million people fell ill with TB worldwide in 2022.
 - TB is present in all countries and age groups
- Non-U.S. born persons represented about 72% of TB cases in the U.S. in the last 5 years.
- In 2023, 67% of Texas TB cases were born outside the U.S.



*2023 data are provisional



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Country of Birth

- Being born outside the U.S. is the highest risk factor for TB in Texas.
- There were about 61 different countries represented among Texas TB cases in 2023.
- 51.3% of all non-U.S. born TB cases in 2023 have been the U.S. for at least 5 years prior to diagnosis.



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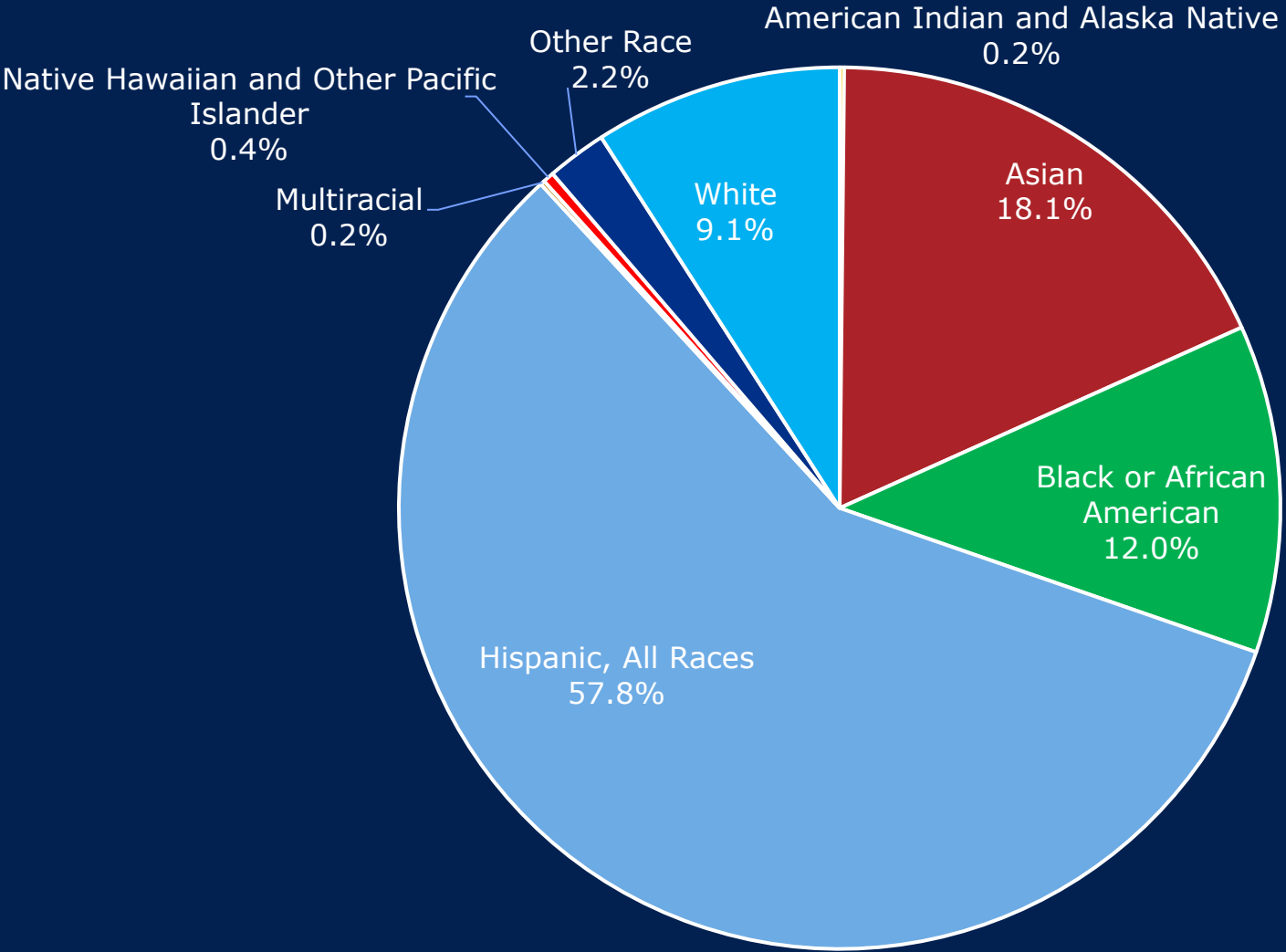
10 Countries With the Highest Representation Among Texas TB Cases, 2023

Country of Birth	Case Count	Percent of All Cases
Mexico	296	24.0%
Vietnam	80	6.5%
Honduras	62	5.0%
Venezuela	60	4.9%
India	59	4.8%
Guatemala	44	3.6%
Philippines	31	2.5%
El Salvador	25	2.0%
Nepal	22	1.8%
Colombia	16	1.3%
Total	695	56.3%

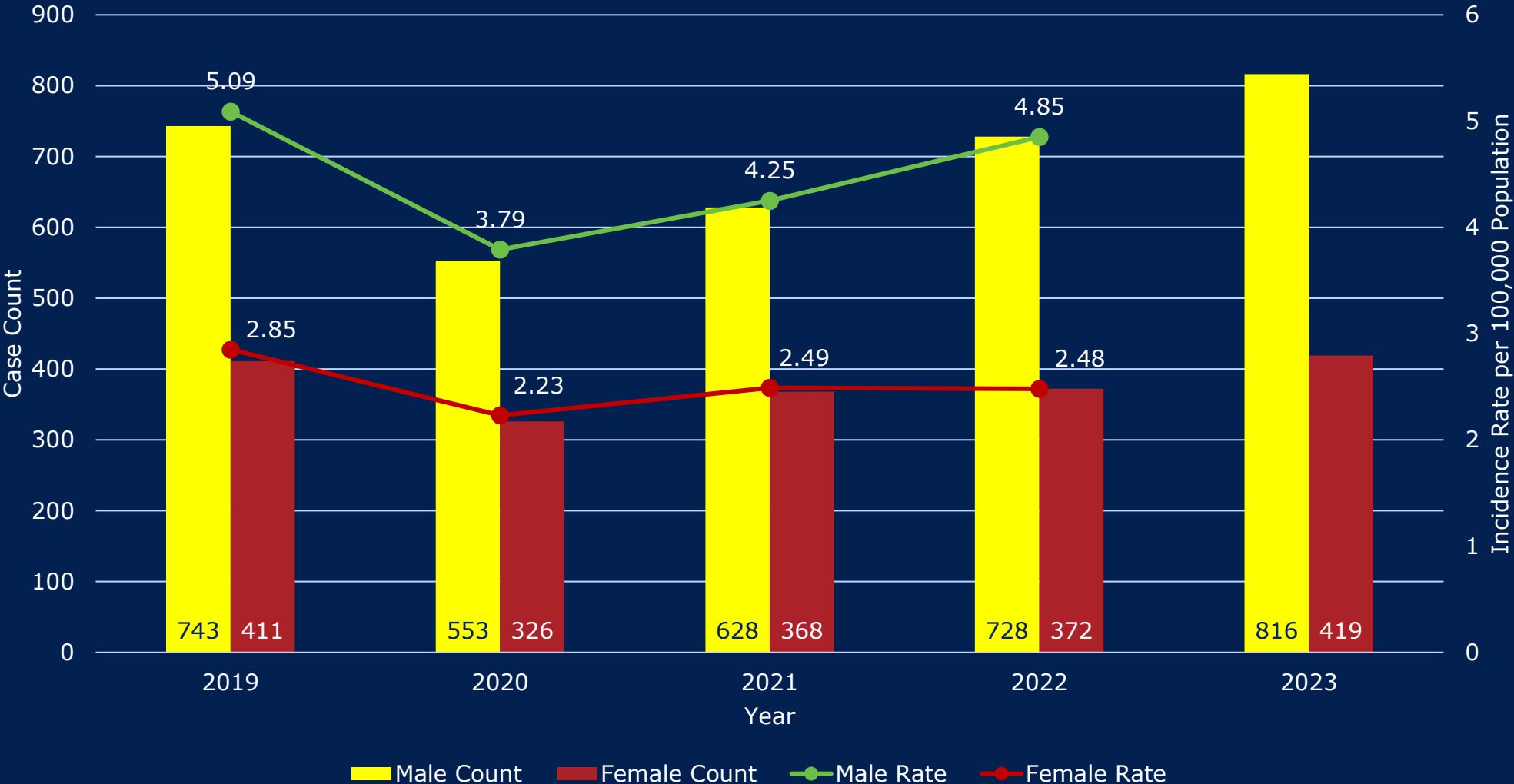
Race/Ethnicity for All Cases, 2023



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Sex at Birth, 2019-2023



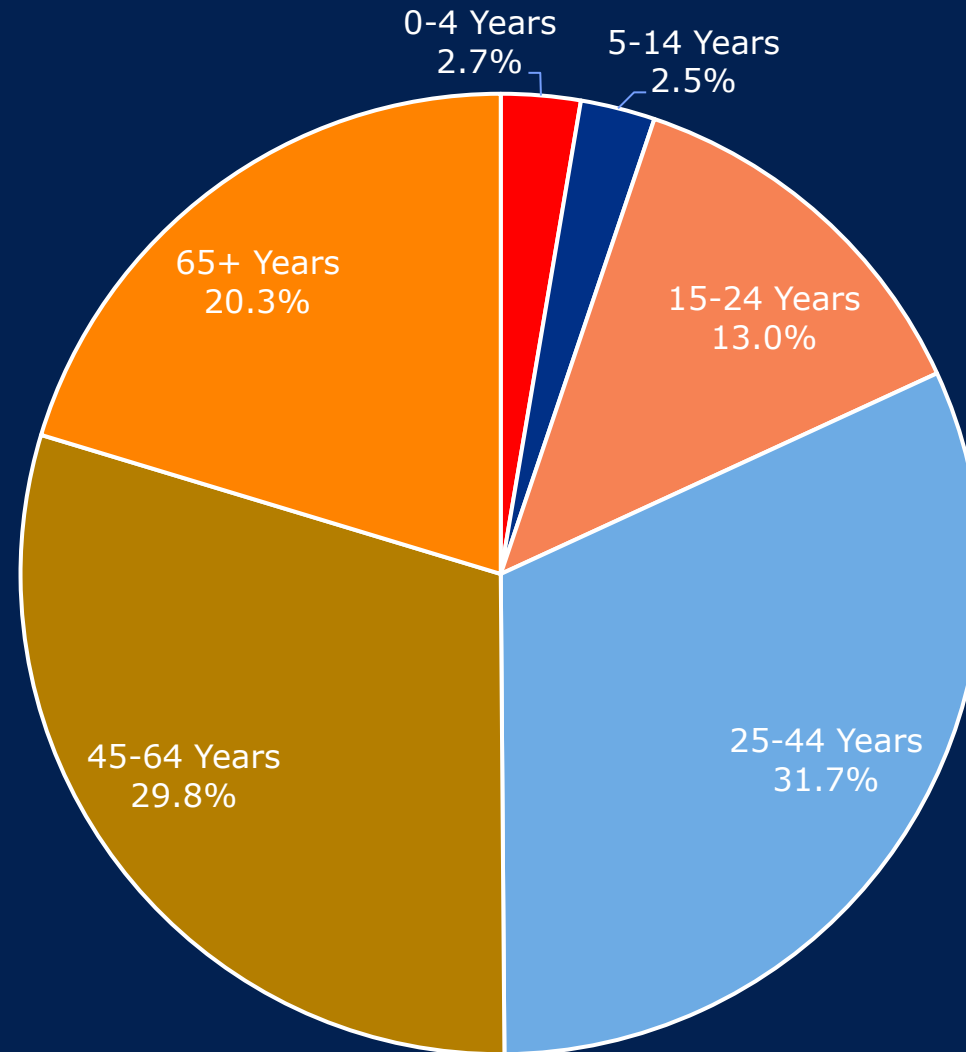
Cases by Age at Diagnosis (in Years), 2023



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Additional Risk Factors

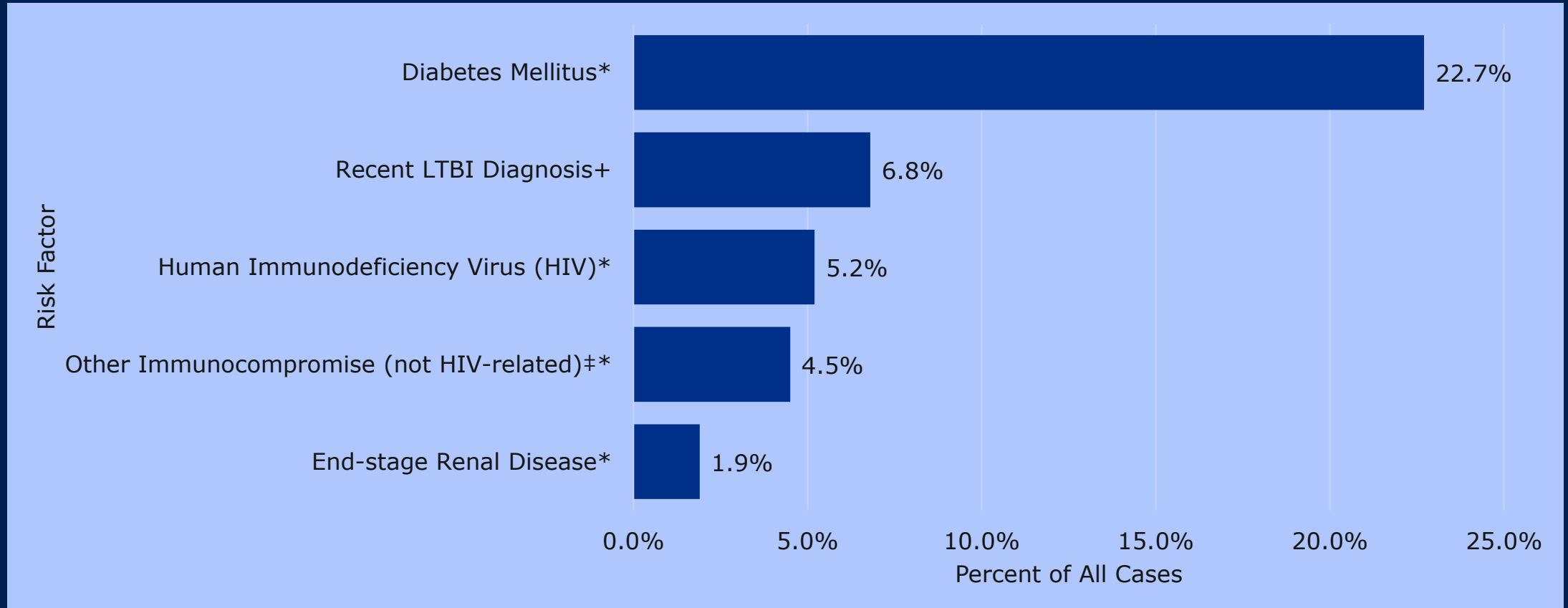
Medical Conditions , 2023



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+ Within 12 months prior to TB diagnosis

*At the time of TB diagnosis

‡Includes persons immunocompromised because of either a medical condition or immunosuppressive therapy.

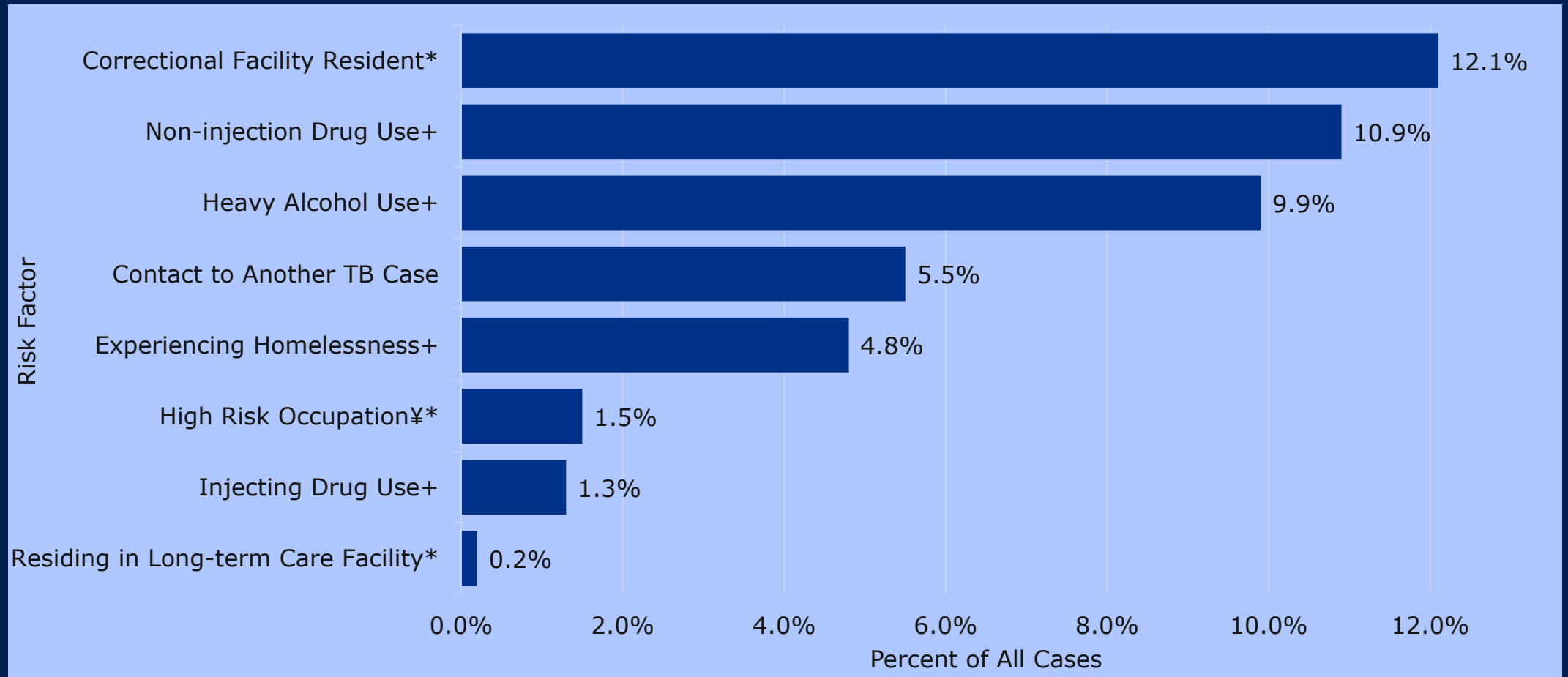
Social Risk Factors, 2023



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+ Within 12 months prior to TB diagnosis

*At the time of TB diagnosis

¥High risk occupations for TB include healthcare workers, correctional facility employees, and migrant/seasonal workers.



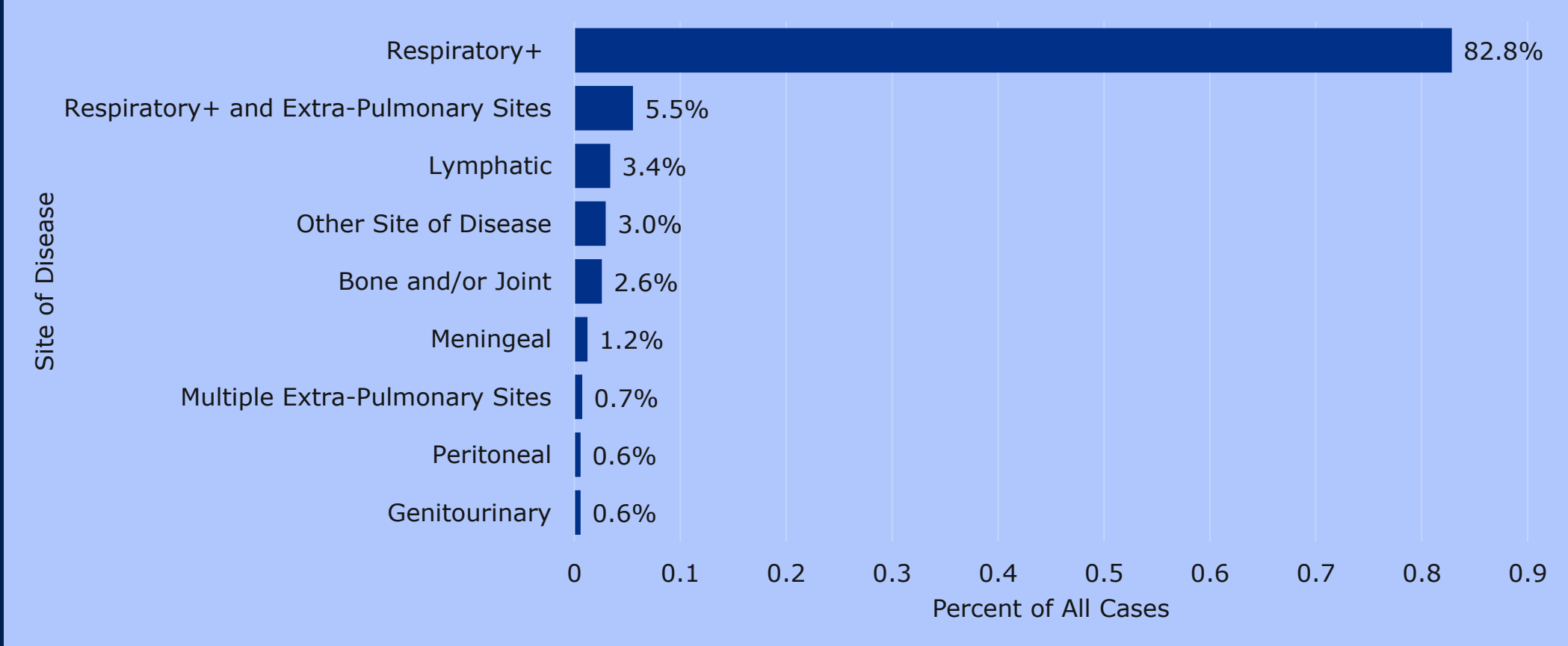
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Disease Presentation

Site of Disease, 2023



*Includes Pulmonary, Laryngeal, and Pleural Disease

Meningeal TB, 2023



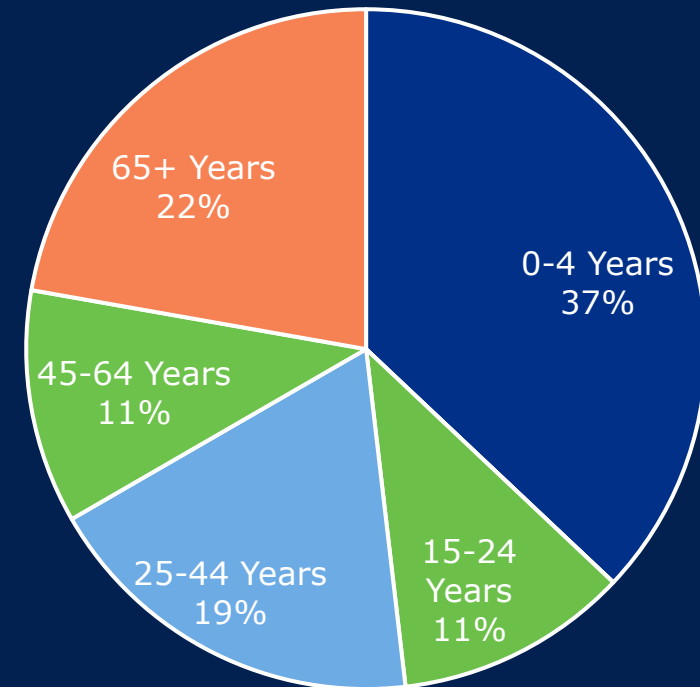
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- TB meningitis in Texas is most prevalent among children under 5 years of age.
- 10 of the 33 children in age group 0-4 years diagnosed with TB disease in 2023 were reported to have meningeal disease.
- 5-14 age groups has no cases with Meningeal TB.

Age at Diagnosis in Years for Cases with Meningeal Involvement, 2023



Pediatric TB in Texas, 2018-2022

State	Cases	Percent of U.S. Cases	Rate per 100,000	Population
Texas	148	16.0%	2.5	5,968,528
California	132	14.3%	1.9	7,106,053
Illinois	43	4.6%	1.9	2,232,922
Georgia	42	4.5%	2.1	1,960,801
Florida	41	4.4%	1.2	3,419,165
U.S.	925	100.0%	1.6	58,651,158

- Between 2018 and 2022 Texas had the highest share of Pediatric TB cases in the U.S.
- Pediatric TB Rates in Texas are higher than the national rate



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Drug Resistant TB

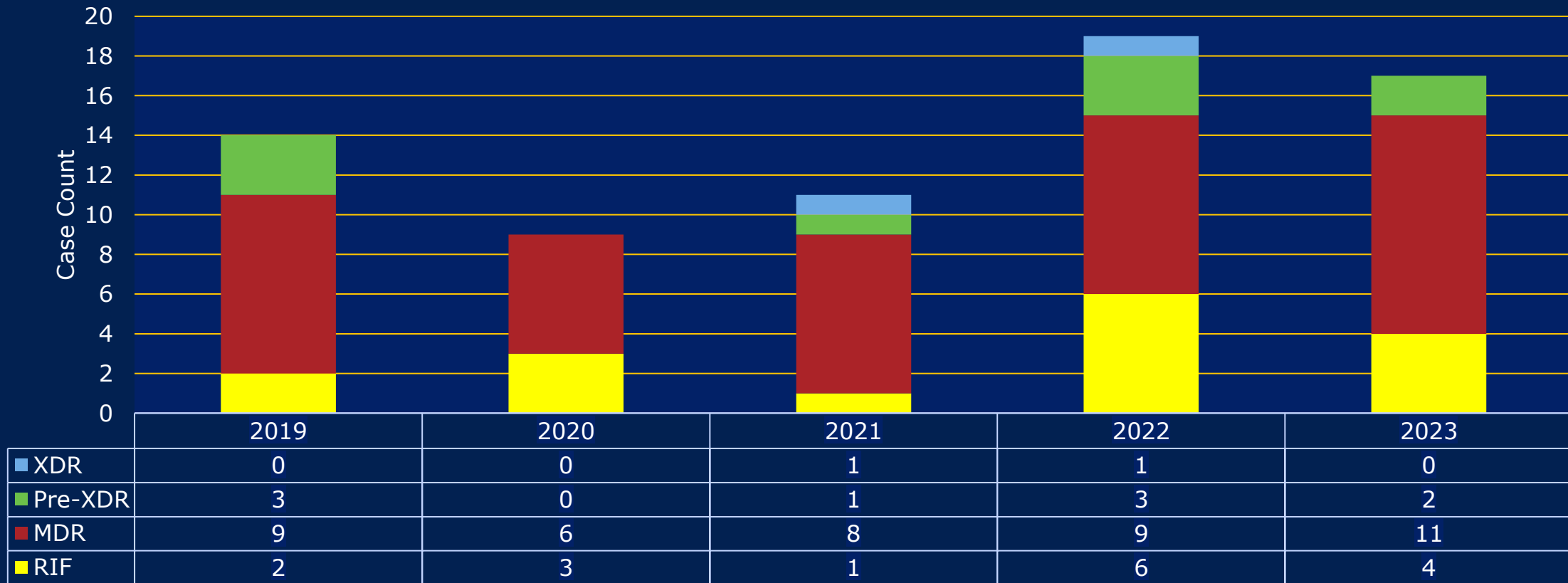
Multi-Drug Resistant TB, 2019 – 2023*



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* Includes the following drug resistance patterns:

- Rifampin (RIF) resistance: resistance to rifampin excluding MDR, pre-XDR, and XDR TB
- Multidrug Resistant (MDR) TB: resistance to at least isoniazid and rifampin
- Pre-extensive Drug Resistant (Pre-XDR) TB: resistance to isoniazid, rifampin, and a fluoroquinolone or second-line injectable
- Extensive Drug Resistant (XDR) TB: resistance to isoniazid, rifampin, a fluoroquinolone, and:
 - A. A second-line injectable; or
 - B. Bedaquiline or linezolid

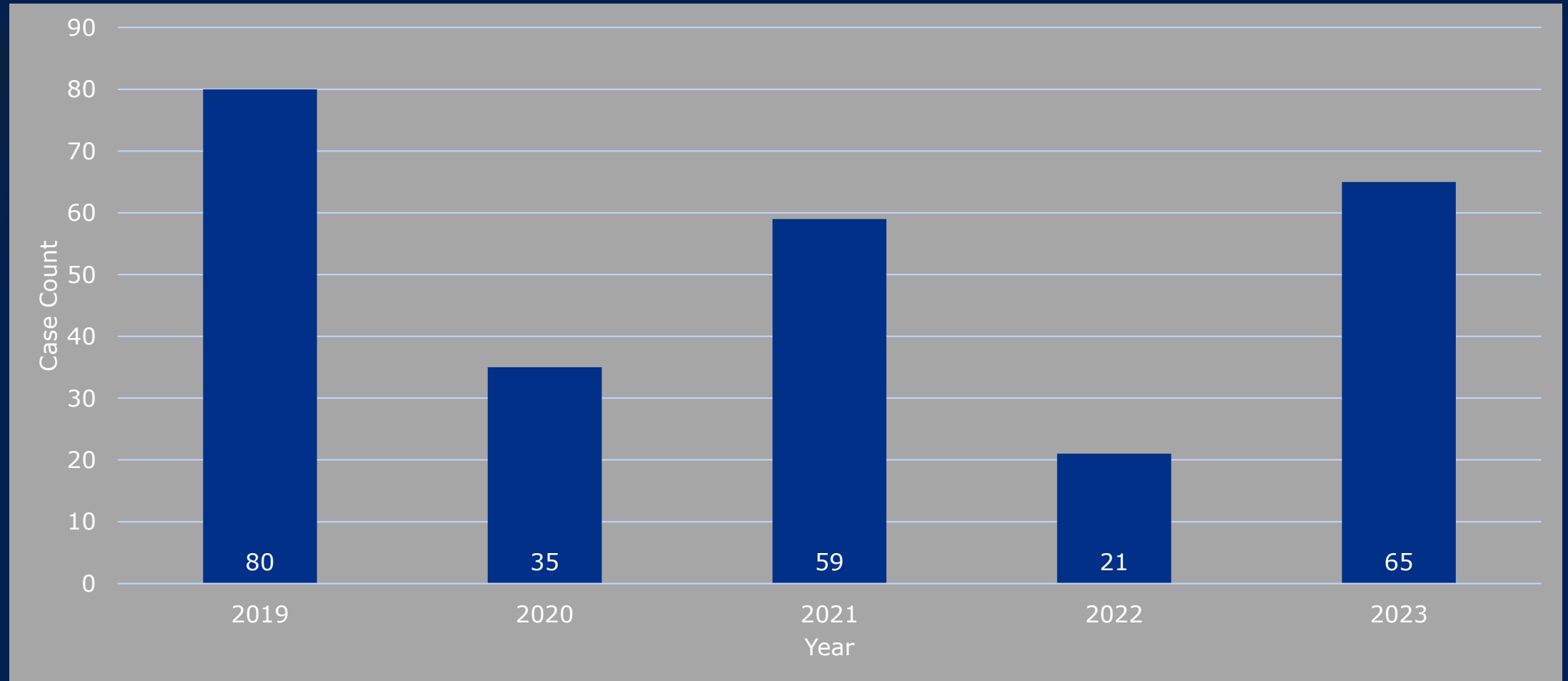
Cases Resistant to Isoniazid (INH), 2019-2023



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Includes cases resistant to Isoniazid without any Rifampin resistance



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TB Mortality

Deaths Related to TB Disease, 2019-2023

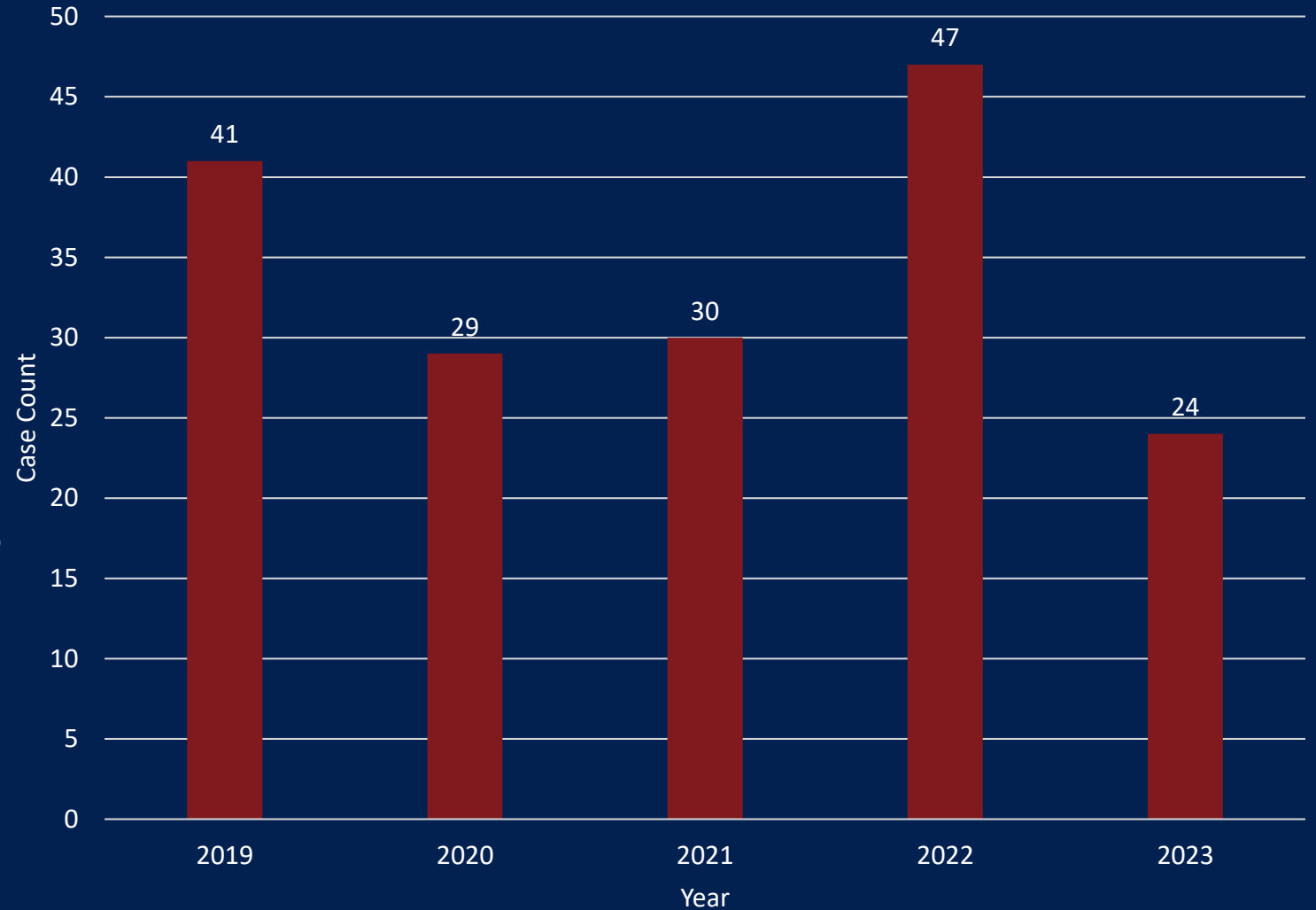


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- Every year, Texans die due to complications of TB disease.
- The number of deaths varies year to year.



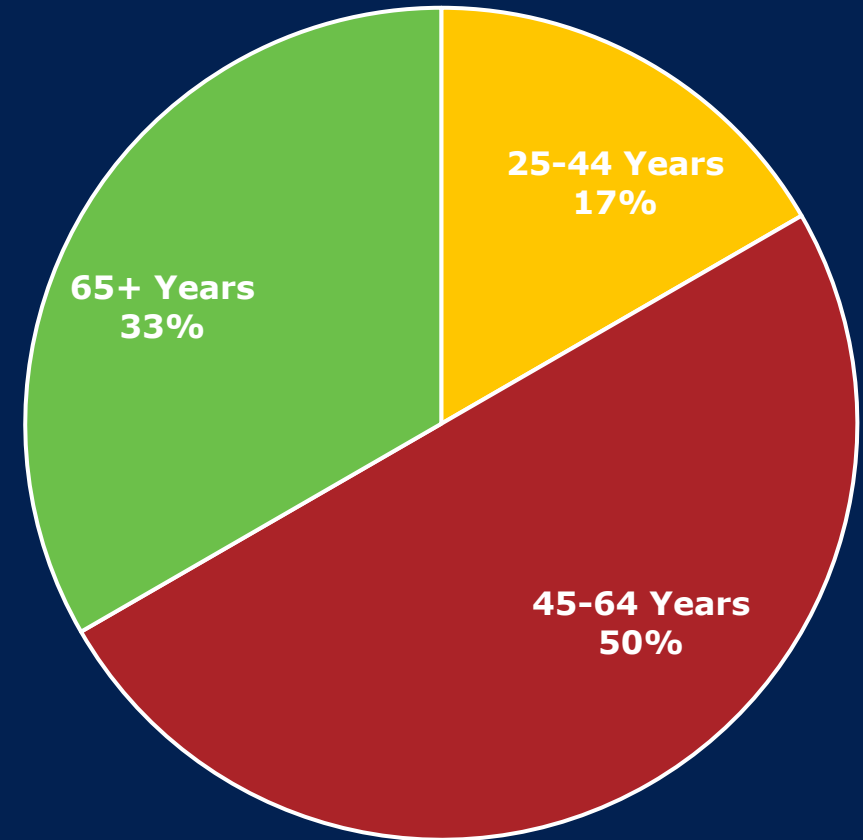
Age at Diagnosis for TB-Related Deaths 2023



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- Adults aged 45-64 years represented the largest proportion of TB-related deaths in 2023.
- There were no pediatric (0-14 years) TB-related deaths reported in 2023.
- There were no deaths recorded in the 15-24 age group.





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Challenges and the Way Forward

TB Remains a Public Health Threat



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- Texas has the second highest incidence of TB in the United States.
- Pediatric TB rates in Texas are higher than the national rate.
- TB mortality remains a public health concern.
- Ongoing medication shortages.
- High rates of TB along the Texas-Mexico border.
- More complex TB disease presentation.

The Way Forward



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- Detect TB
 - Active surveillance
 - Systematic screening of high-risk populations
 - Whole genome sequencing – cluster investigations
- Treat TB
 - Empower individuals diagnosed with TB to complete treatment
 - Short course TB regimens
 - Partnerships and collaboration

The Way Forward



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- Assessments
 - Pediatric case reviews
 - Mortality reviews
 - Program evaluation
 - Medical consultation capacity
- TB awareness
 - Talk about TB – Tell our Story
 - Social media campaigns

Thank you!

New Directions in Tuberculosis

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