

Kern County TB Statistics Review



Paul Rzucidlo
Assistant Division Director of
Health Services



Learning Objectives

01

Understand Active TB Cases in Kern County including key demographic breakdowns.

02

Understand common risk factors present in Kern Active TB Cases.

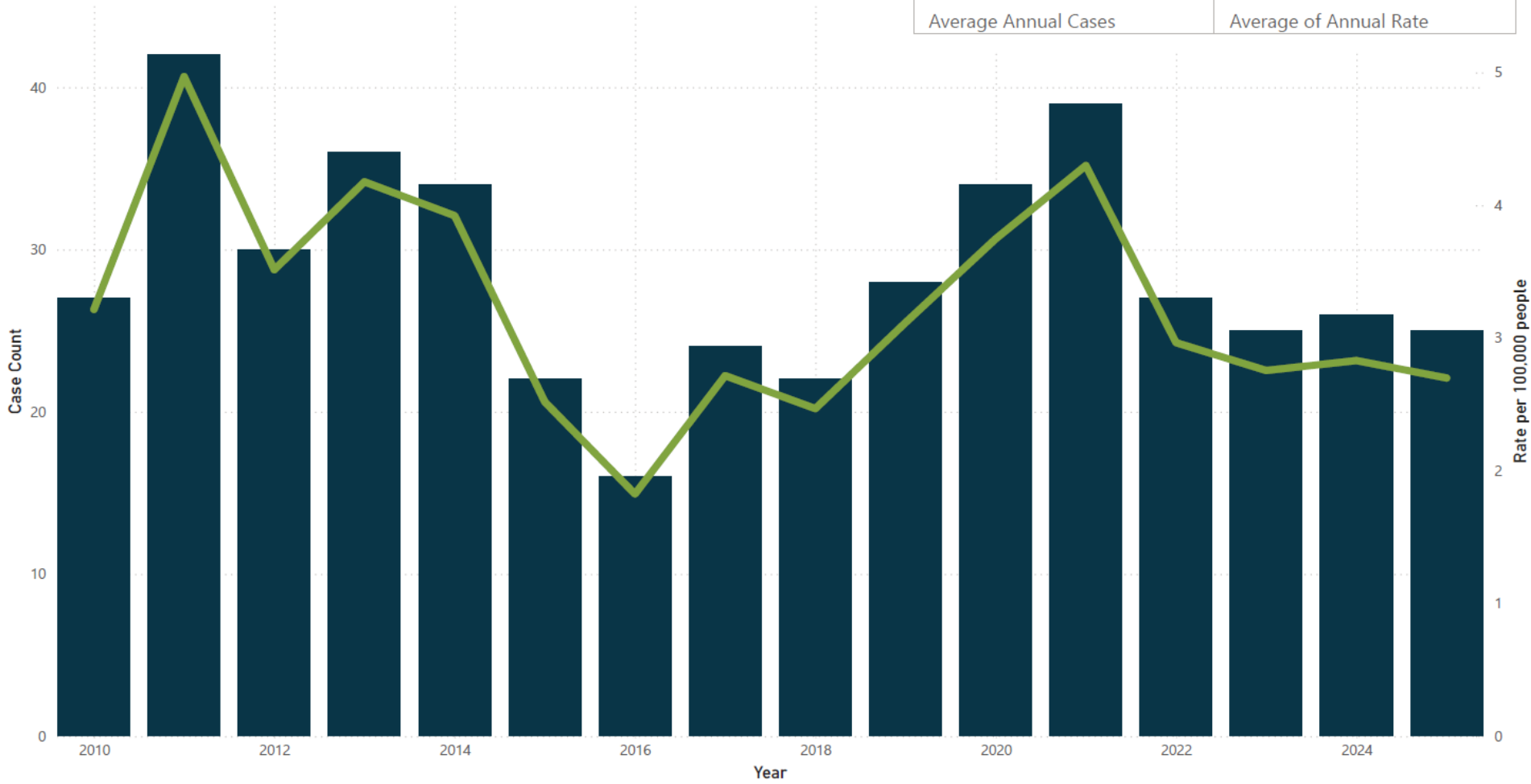
03

Understand basic statistics of LTBI and IGRA(+) tests received.

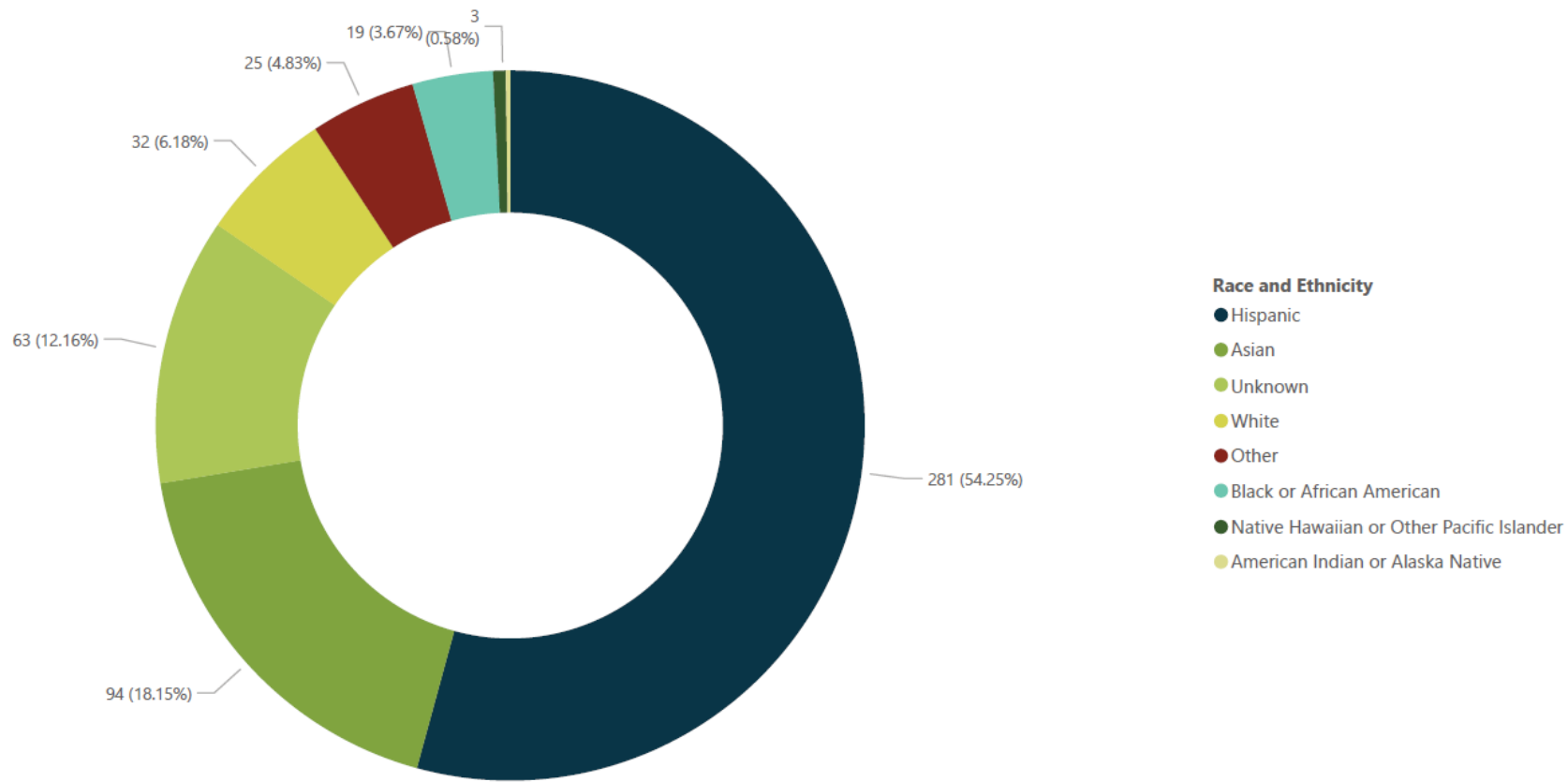
Annual Active TB Cases in Kern County 2010-2025

● Case Count ● Rate per 100,000 people

28.56 Average Annual Cases	3.23 Average of Annual Rate
--------------------------------------	---------------------------------------

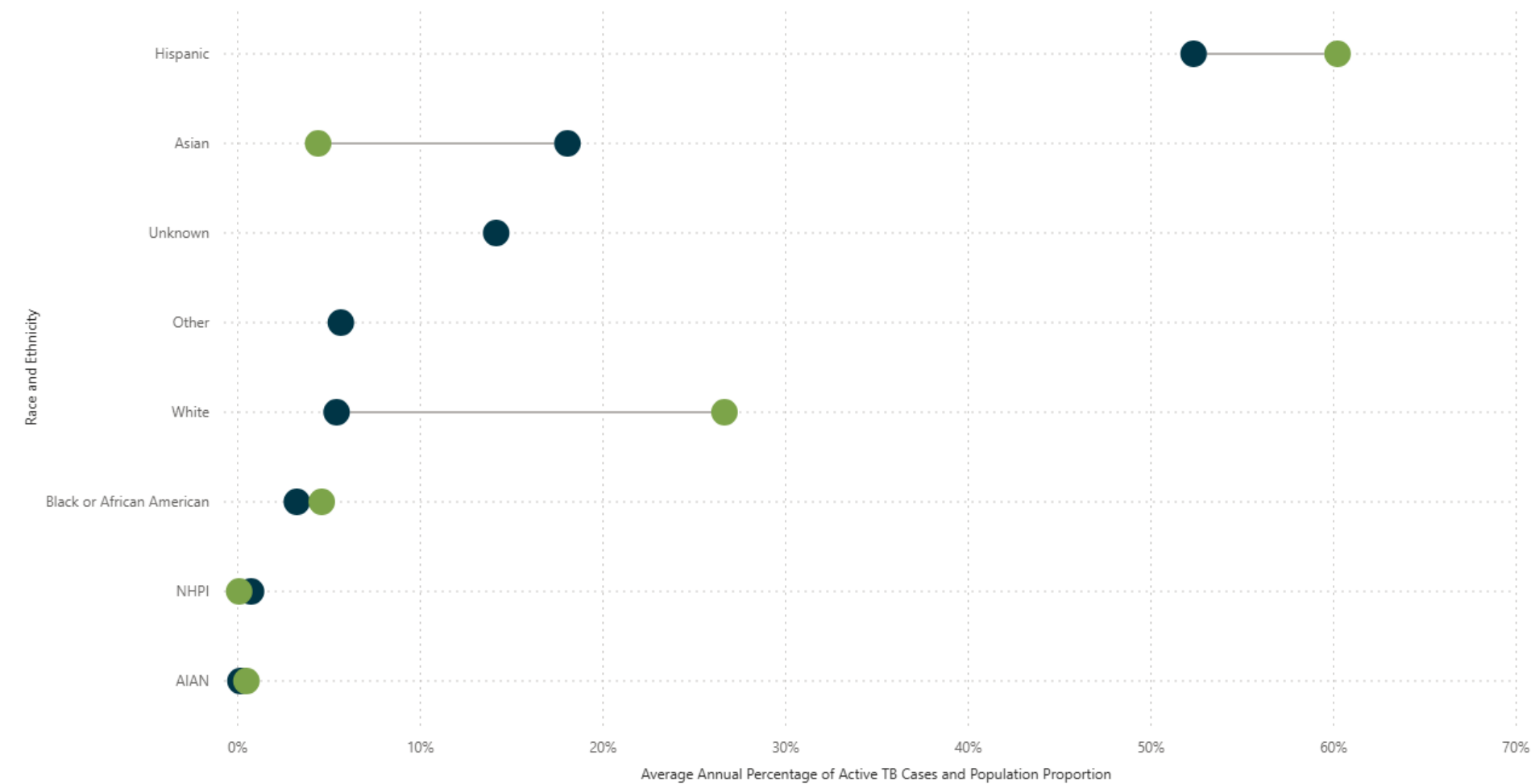


All Active TB Cases 2010-2025 by Race and Ethnicity

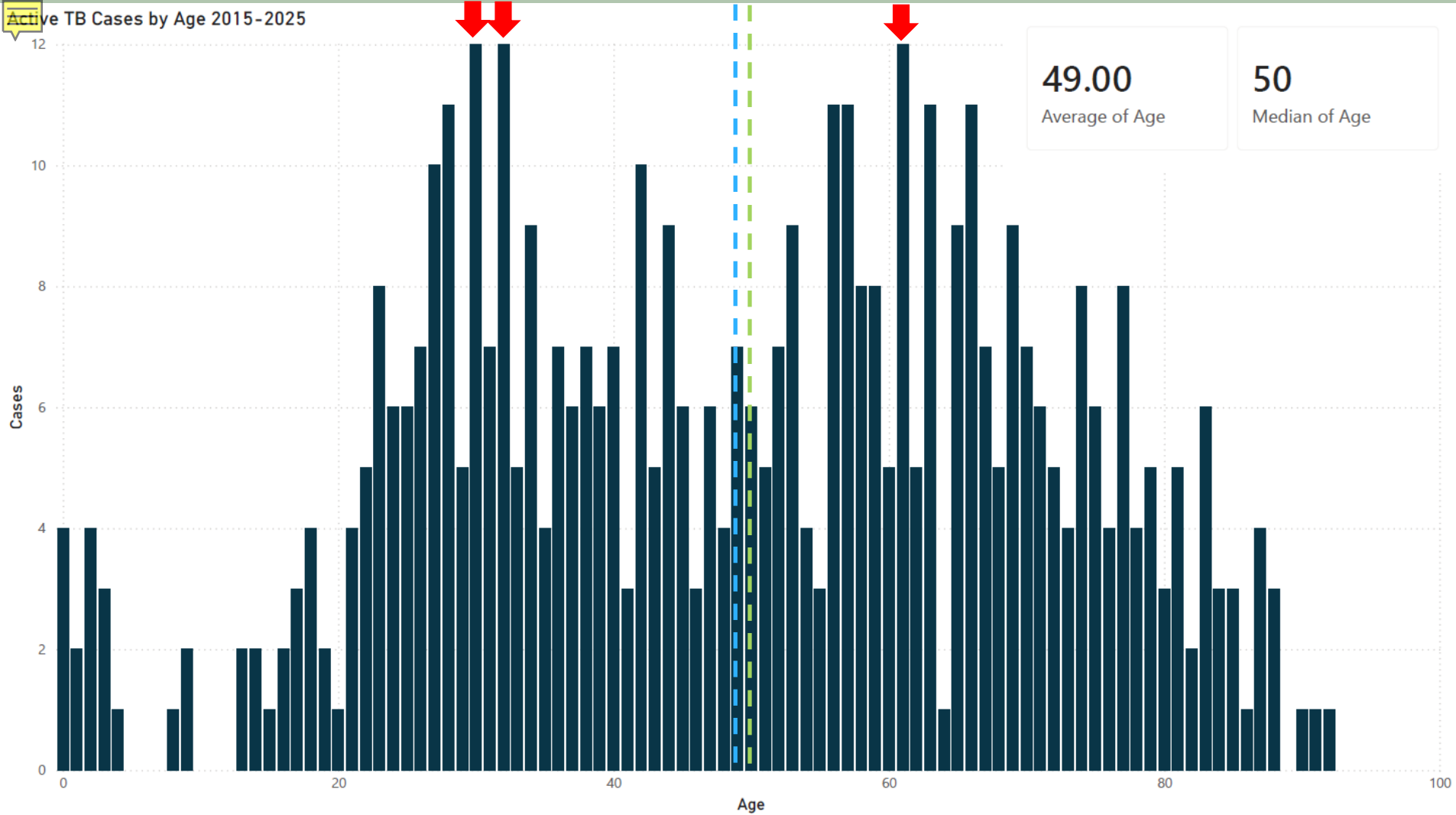


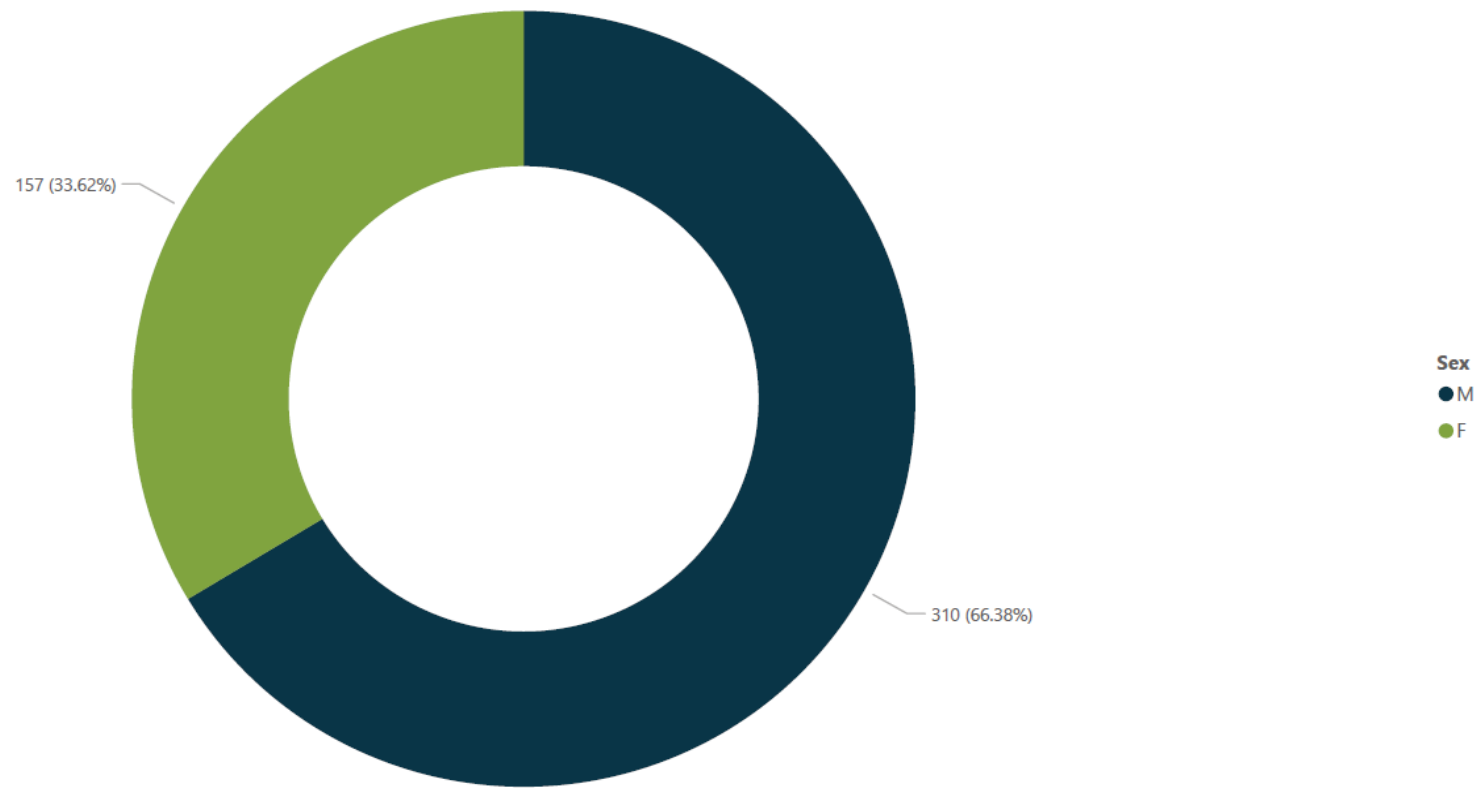
Percentage of Active TB Cases by Race and Ethnicity with Population Proportion

● Average Annual Percentage of Active TB Cases ● Population Proportion



Active TB Cases by Age 2015-2025

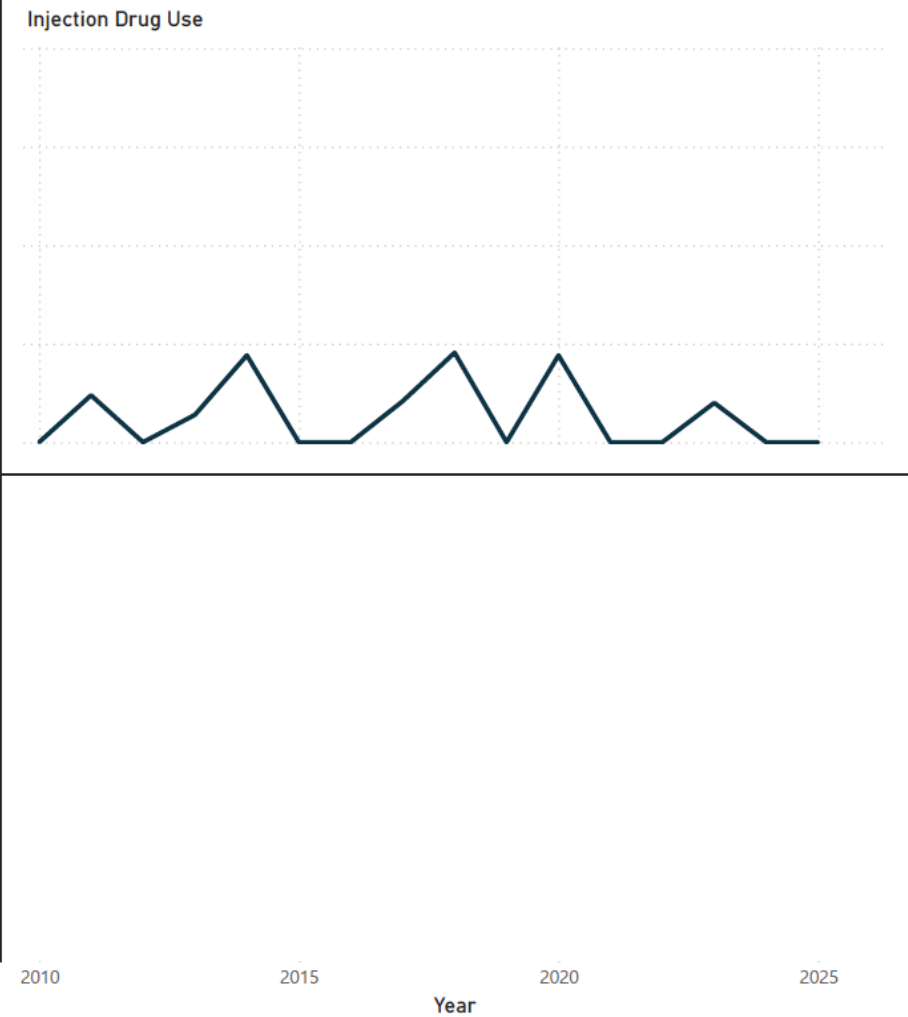
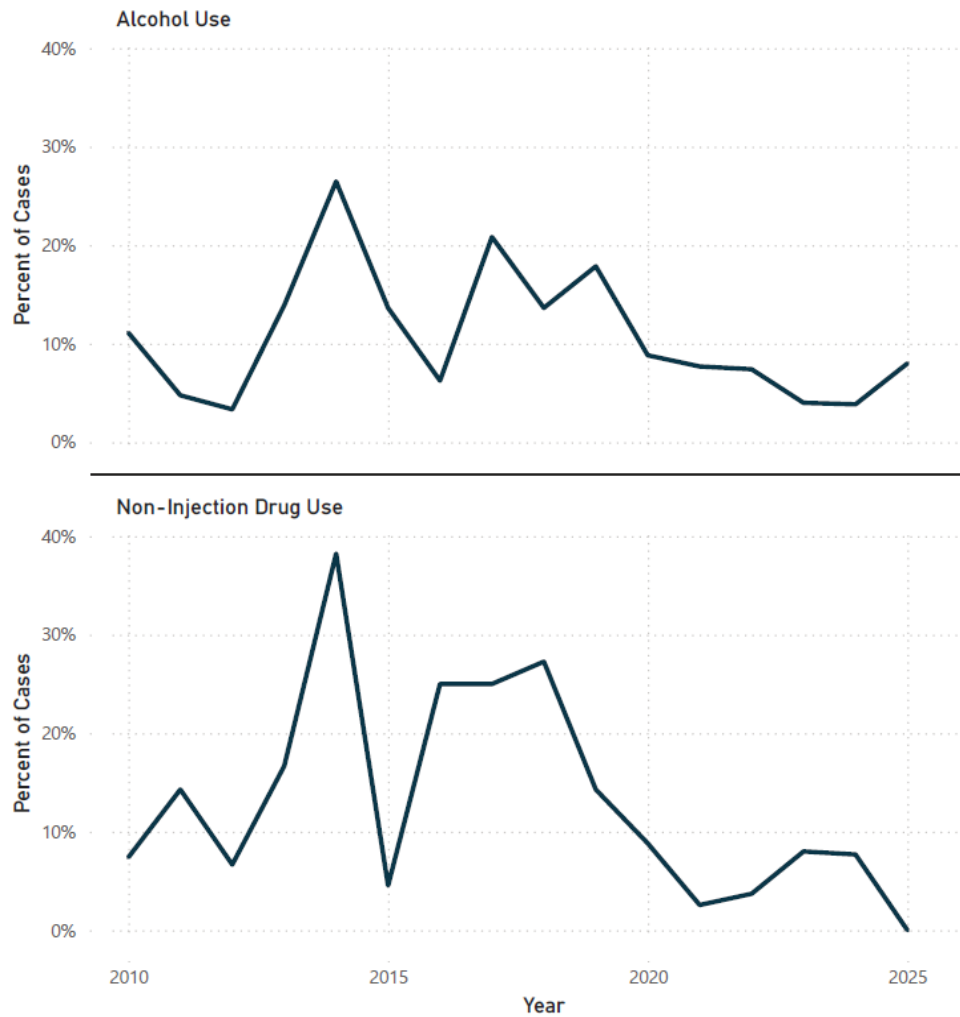




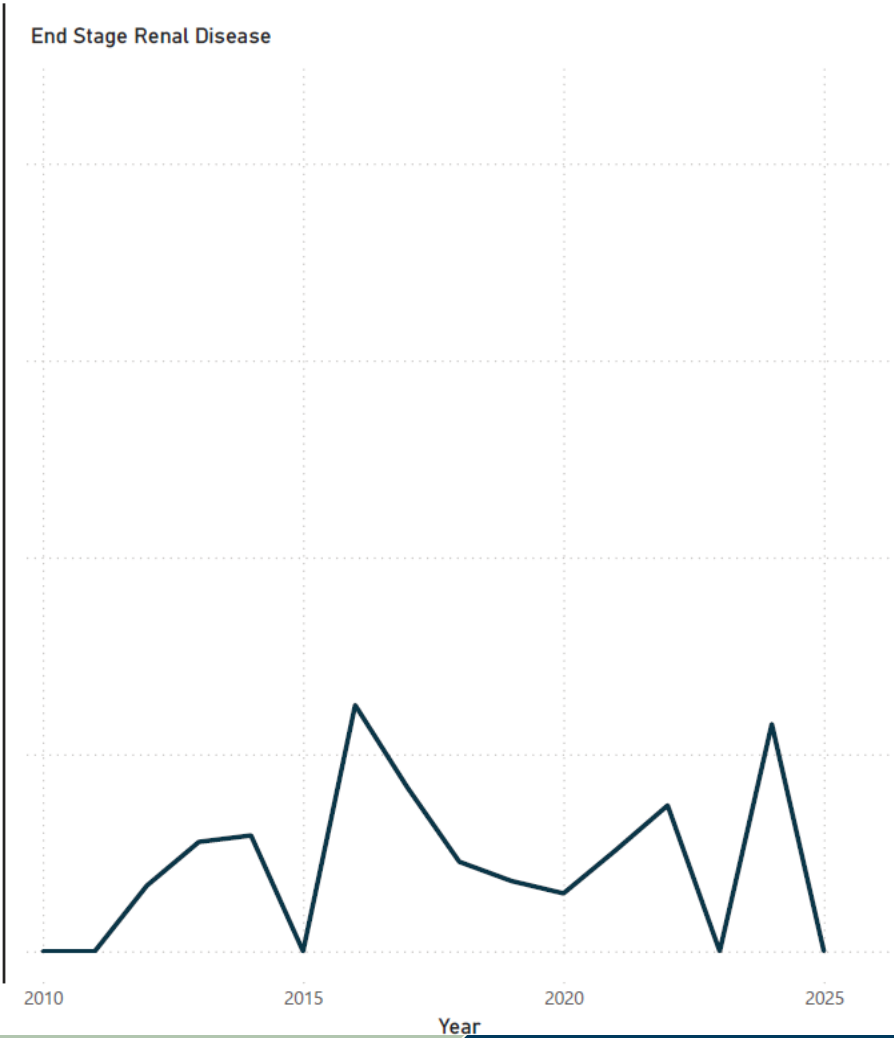
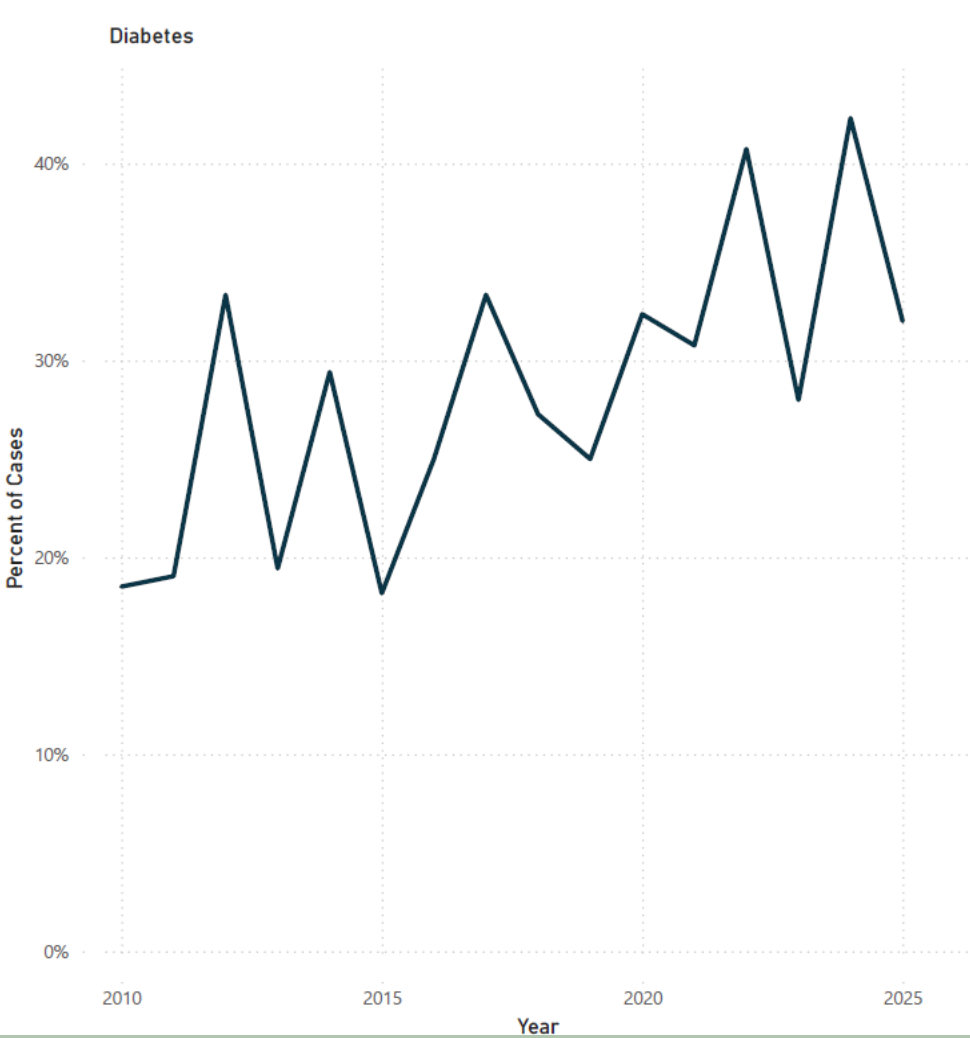
Risk Factors

- Case investigations include standardized questions about risk factors.
 - Standardized forms have been used for case investigations, questions may be slightly different on each form but capture same idea.
- Select factors will be reviewed, two common factors have been excluded as they are not present in significant numbers annually.
 - Long term care facility residents
 - Healthcare workers
- Two risk factors reviewed were not standardized on the 2009 case investigation, but were on the 2020 case investigation. For those risk factors data is only available for 2022-2025.
 - Ever lived outside the US for >2 months uninterrupted (Live Outside US)
 - Residence or Travel in Countries other than the US, Canada, Australia, New Zealand, or Countries in Northern or Western Europe in the Past Two Years, Last at Least One Month Uninterrupted (Travel or Residence Outside US)

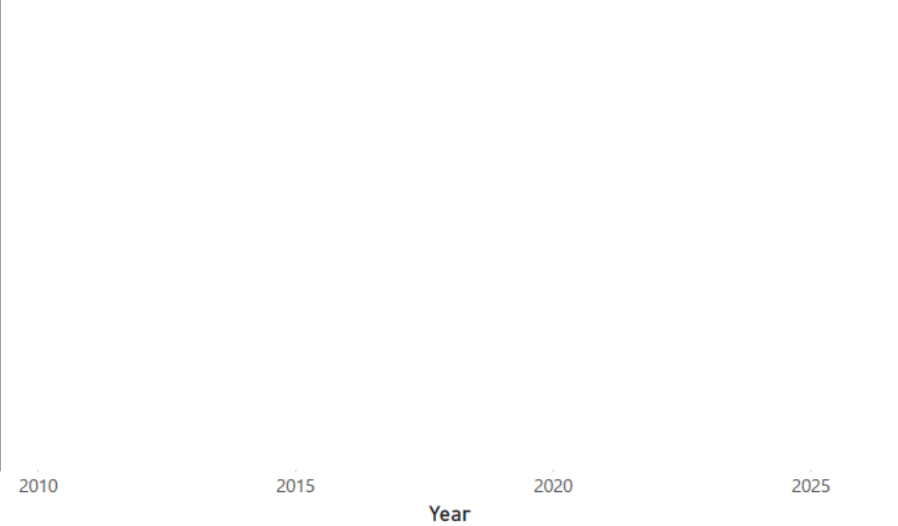
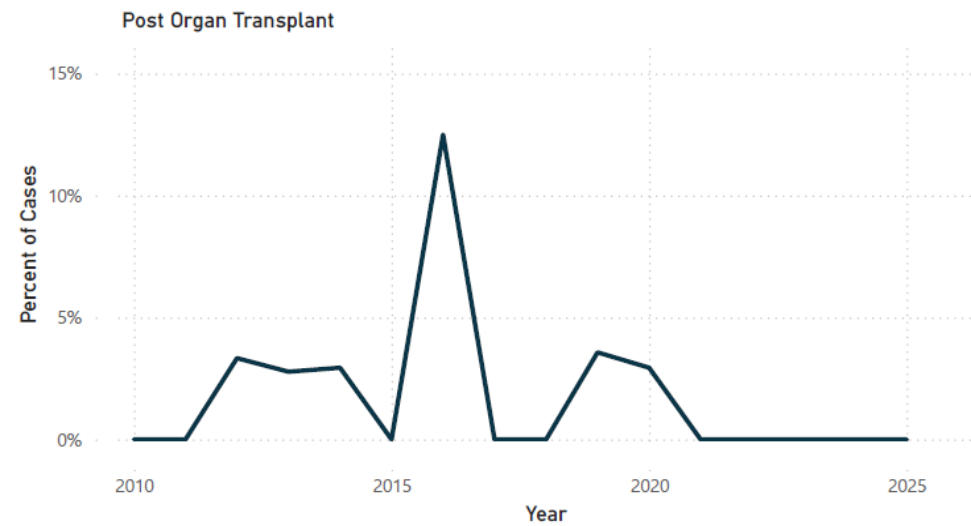
Percentage of Cases with Select Risk Factors - Substance Use



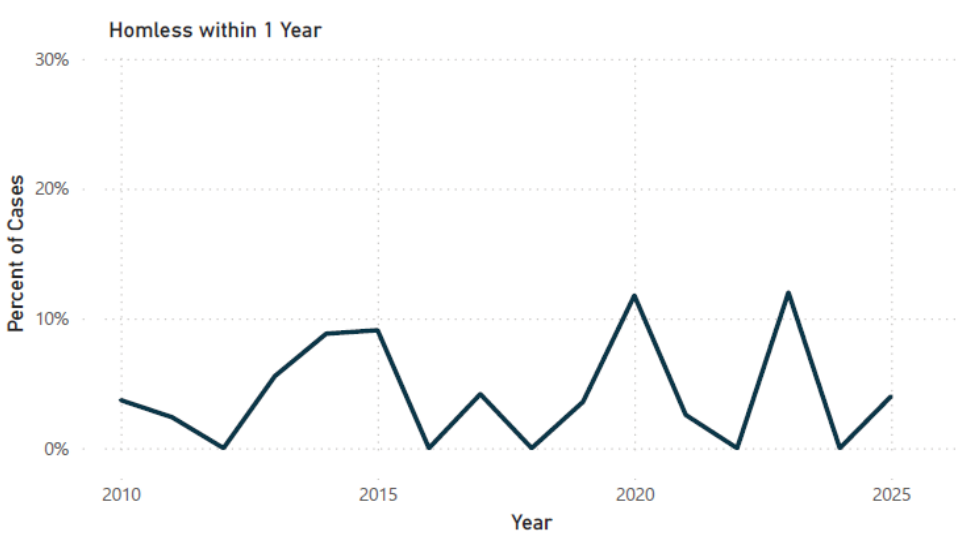
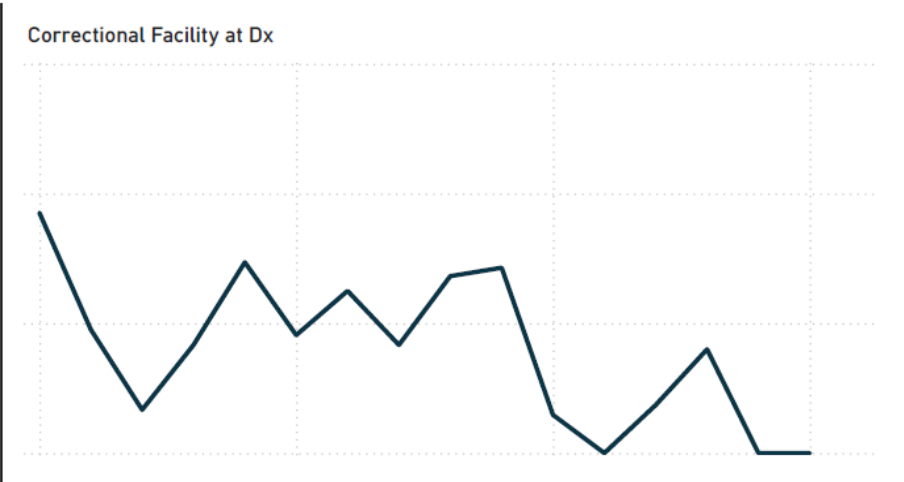
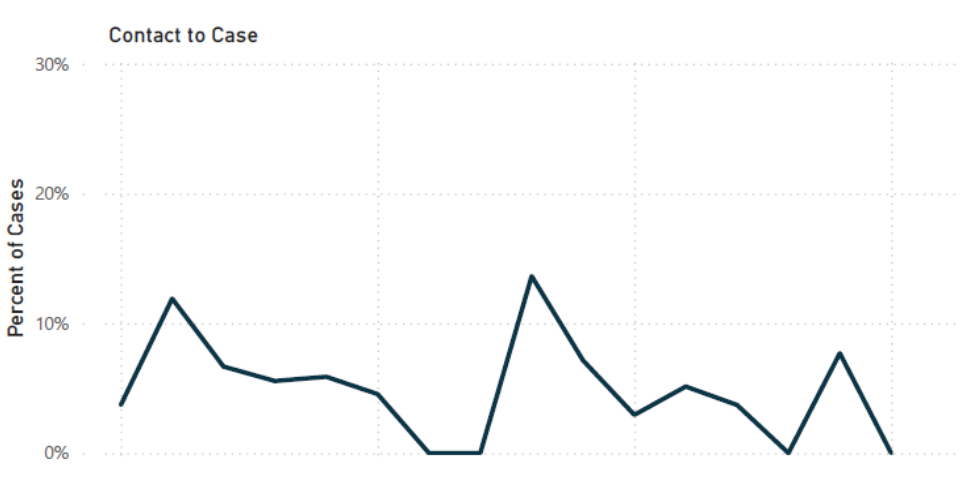
Percentage of Cases with Select Risk Factors - Chronic Disease



Percentage of Cases with Select Risk Factors - Immunocompromised

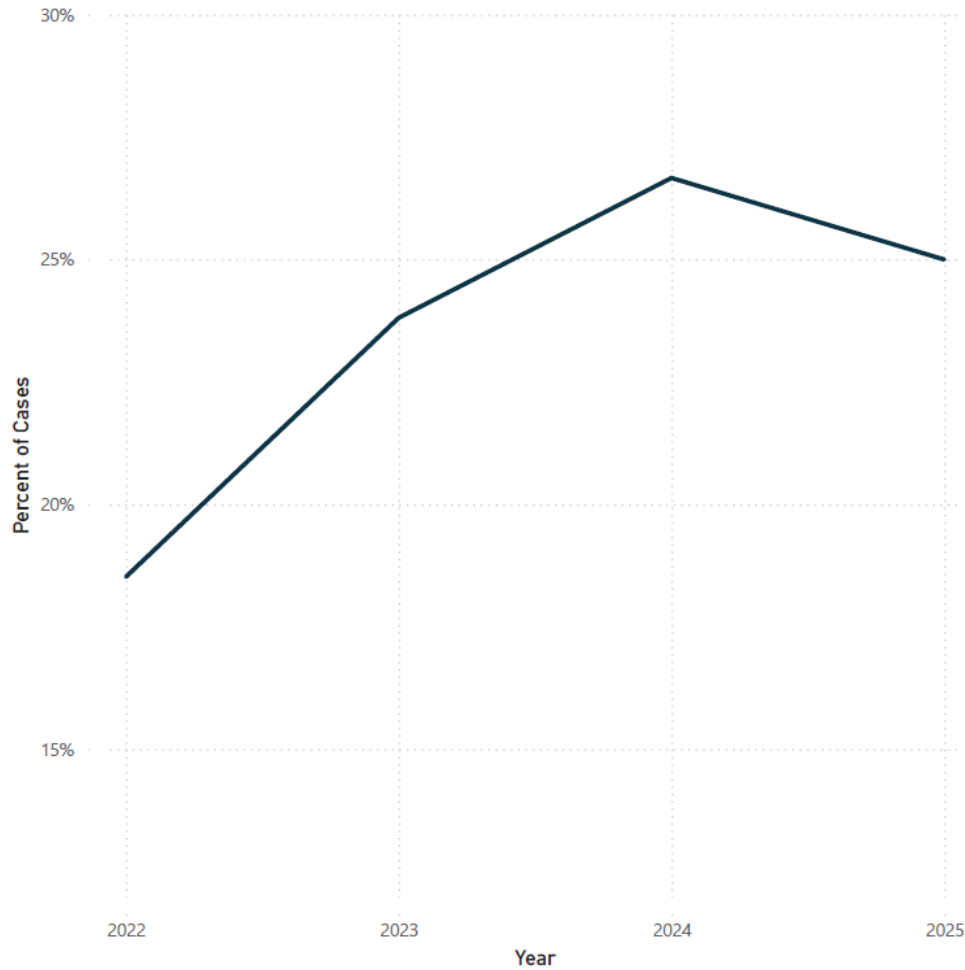


Percentage of Cases with Select Risk Factors - Occupation or Setting

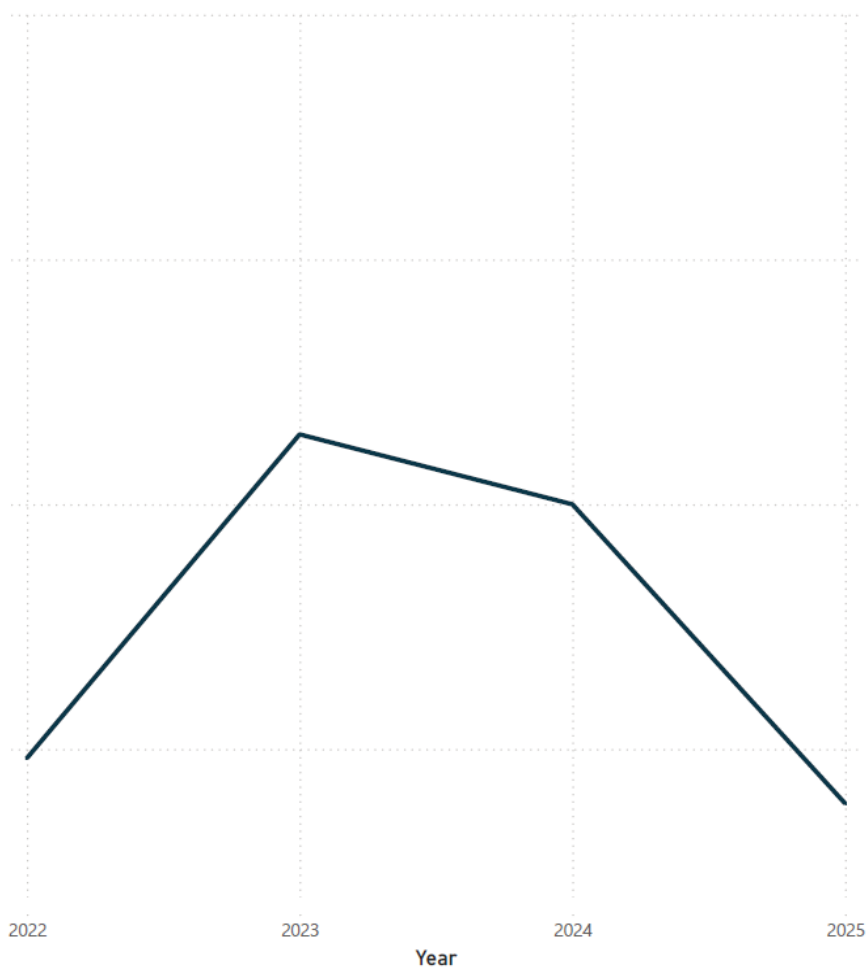


Outside of US Travel or Residence

Live Outside of US

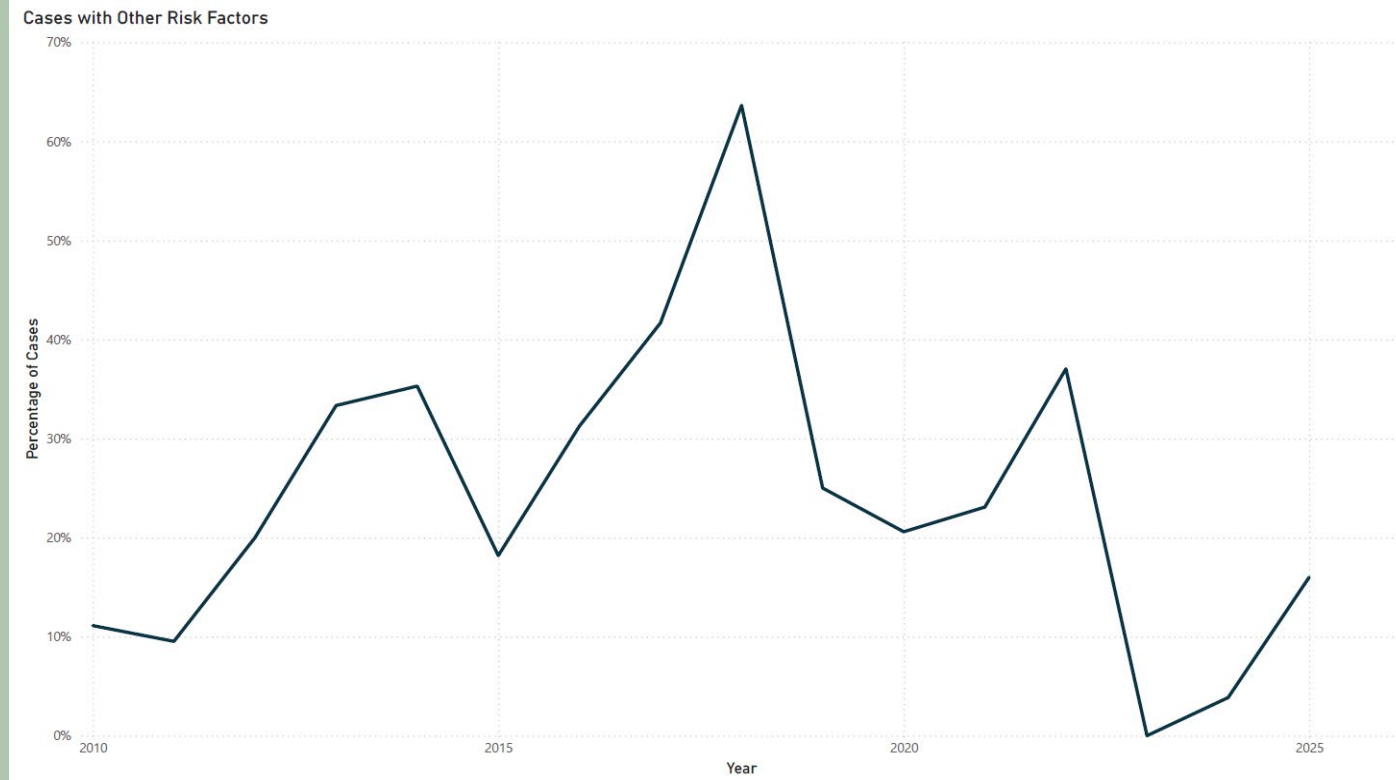


Travel or Reside Outside US



Common Factors:

- Coccidioidomycosis
- Cancer
- Hypertension
- Does include some of the common risk factors misclassified as other.





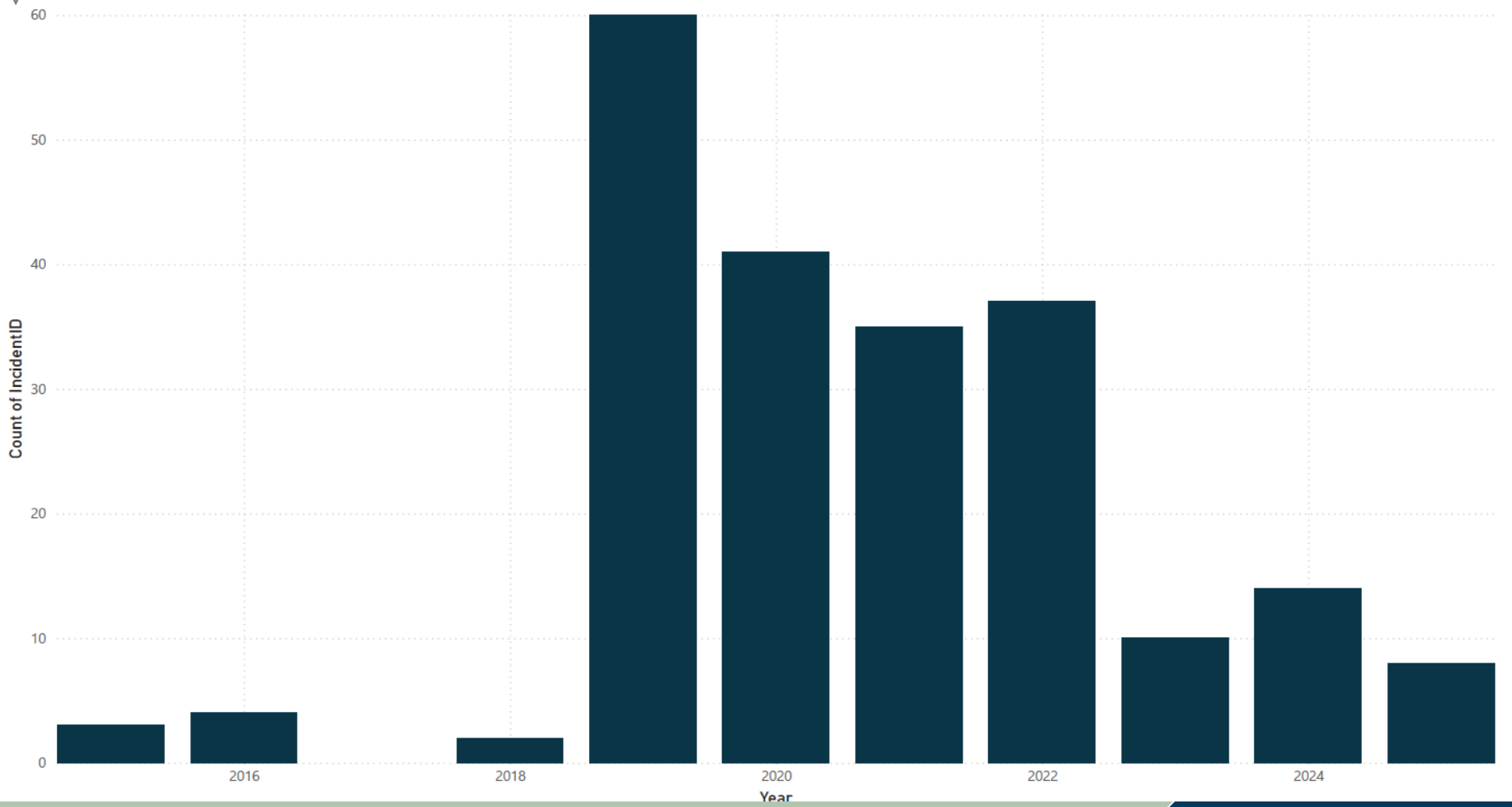
Percentage of Active TB Cases Resistant to mainline antibiotics

Mean:

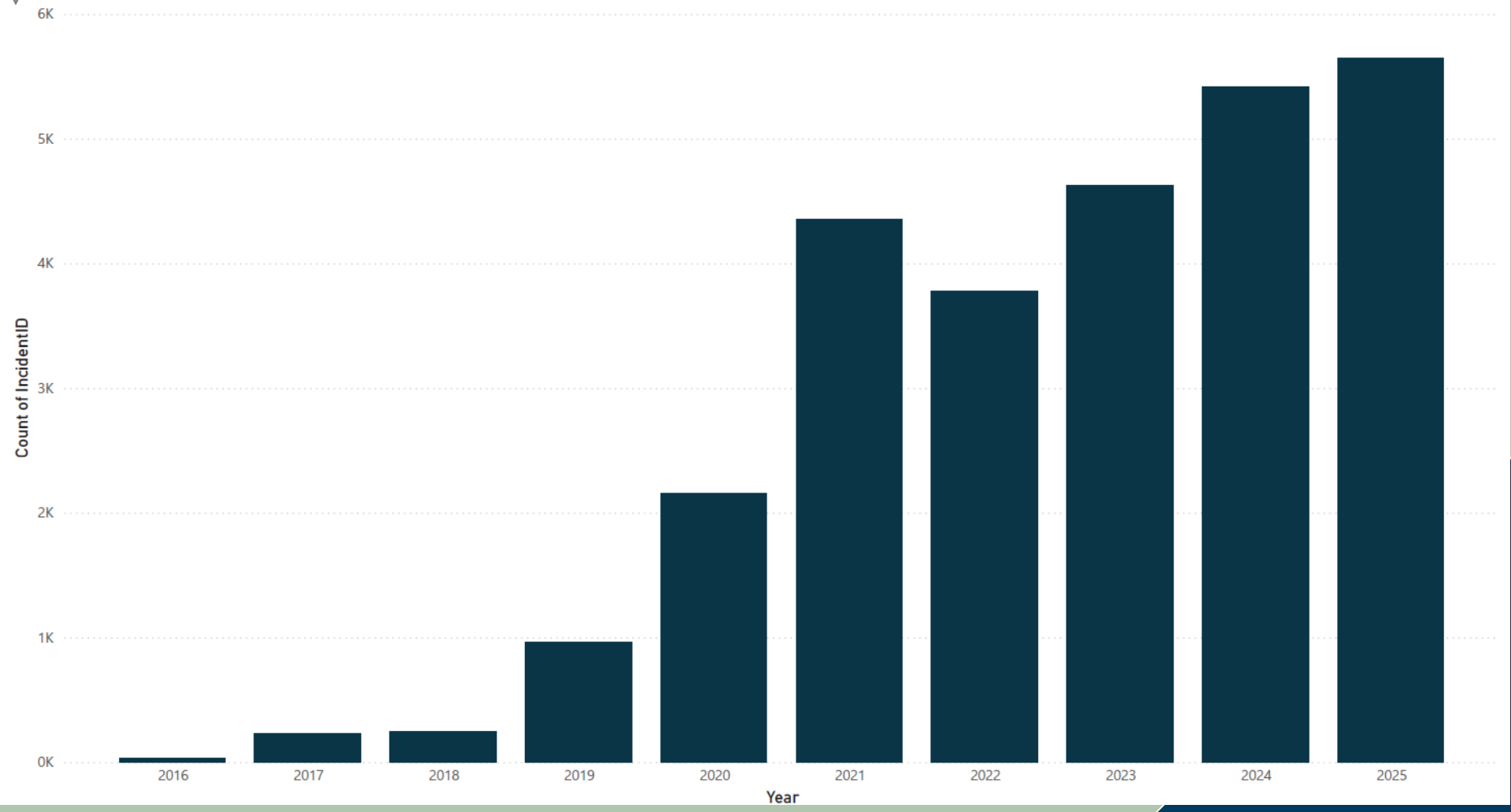
- Isoniazid: 5.5%
- Rifampin: 0.8%
- Pyrazinamide: 6.4%
- Ethambutol: 0.3%

Year	Isoniazid	Rifampin	Pyrazinamide	Ethambutol
2010	14.8%	0.0%	7.4%	0.0%
2011	2.4%	2.4%	4.8%	2.4%
2012	3.3%	0.0%	3.3%	0.0%
2013	11.1%	0.0%	2.8%	0.0%
2014	8.8%	0.0%	2.9%	0.0%
2015	4.5%	0.0%	13.6%	0.0%
2016	0.0%	0.0%	6.3%	0.0%
2017	0.0%	4.2%	8.3%	0.0%
2018	9.1%	0.0%	0.0%	0.0%
2019	0.0%	0.0%	7.1%	0.0%
2020	2.9%	2.9%	5.9%	2.9%
2021	2.6%	0.0%	5.1%	0.0%
2022	3.7%	0.0%	7.4%	0.0%
2023	8.0%	4.0%	20.0%	0.0%
2024	0.0%	0.0%	7.7%	0.0%
2025	16.0%	0.0%	0.0%	0.0%

Cases of Latent TB Infections 2015-2025



Positive IGRA Electronic Lab Reports Received



Data Limitations

- Demographic data has unknown values, highest for race and ethnicity at 12%
- Risk factors that are standardized as checkboxes are sometimes captured in the “Other” text field. Parsed data, but likely still an undercount.
- Antibiotic resistance data were not standardized across investigation forms or laboratory reporting. Because susceptibility testing panels varied, not all antibiotics were tested for every isolate. As a result, certain rare resistance findings were removed since the true denominator was unknown and could have artificially skewed the percentages.
- IGRA results underwent basic de-duplication, but not an advance algorithm, therefore duplicate results may be present.

Thank you!