Tuberculosis Epidemiology: A Global, National and Virginia Overview

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Overview

Global Tuberculosis (TB) Update

National TB Update*

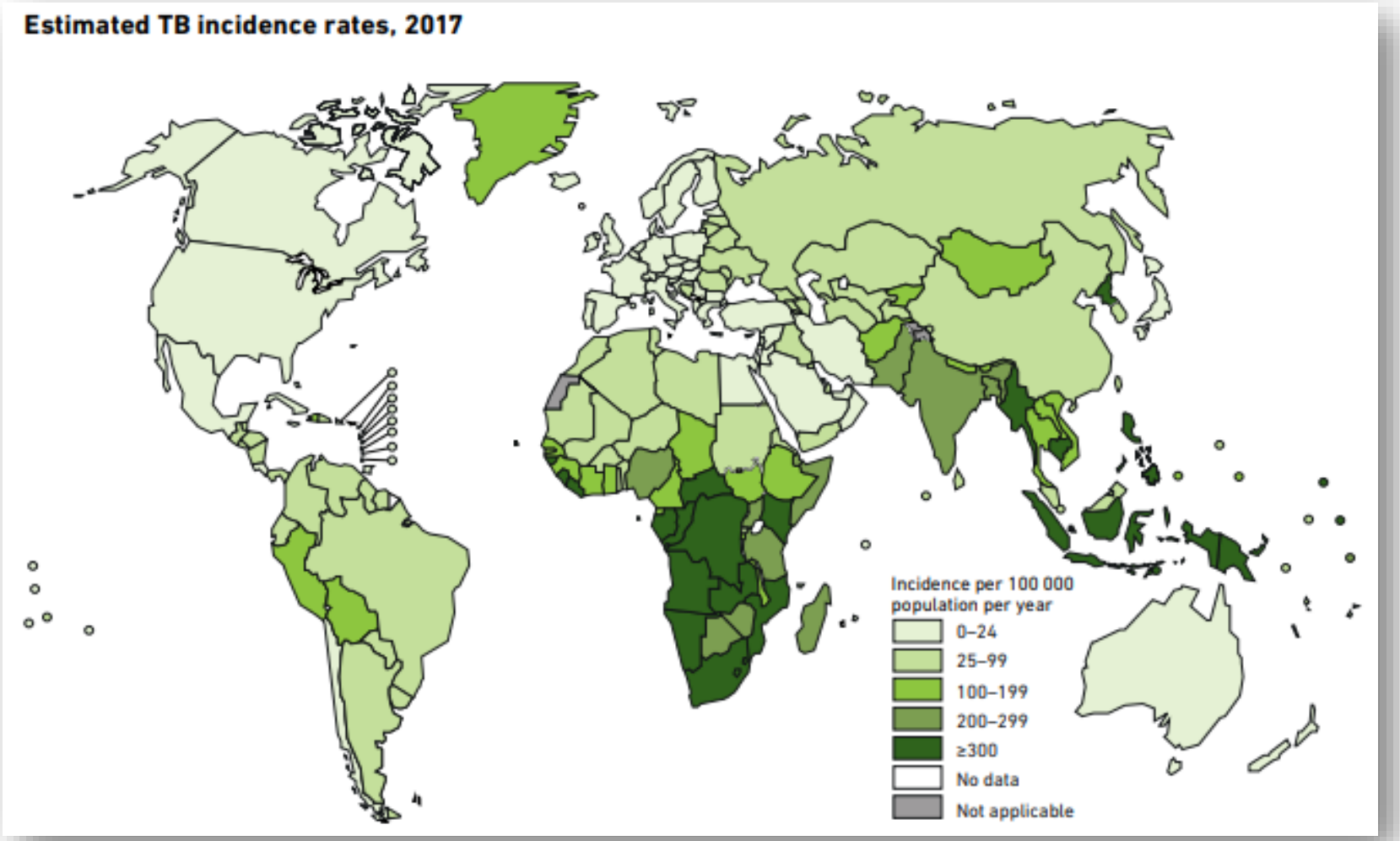
State TB Update*

**Please note that all 2018 data is provisional*

Global Tuberculosis Incidence

In 2017:

- 10 Million people became ill with TB
- 1.5+ million people died from TB
- Nearly 1 in every 4 people in the world lived with TB infection (LTBI)



Global Tuberculosis Incidence

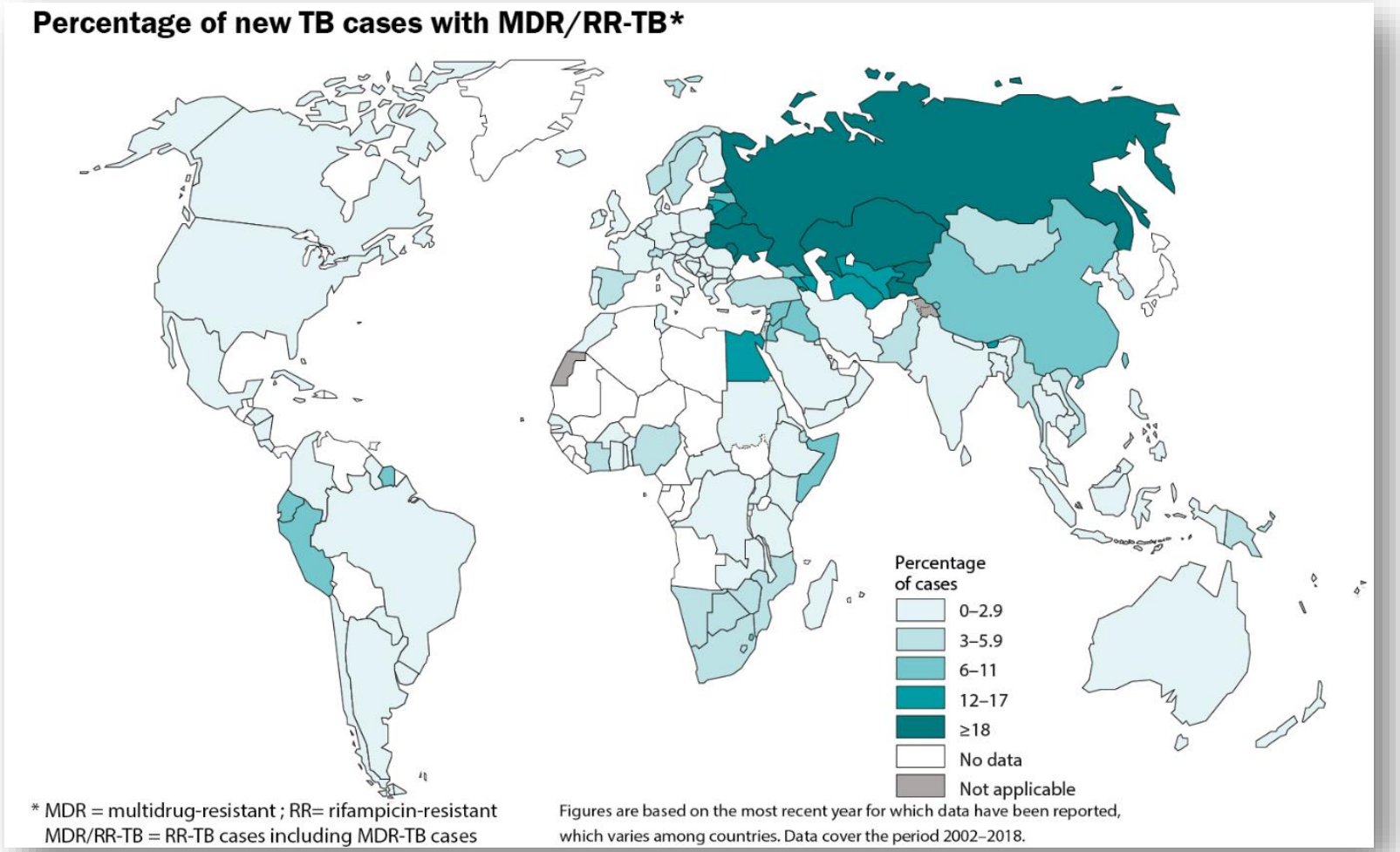
In 2017:

- 8 countries accounted for two-thirds of new cases

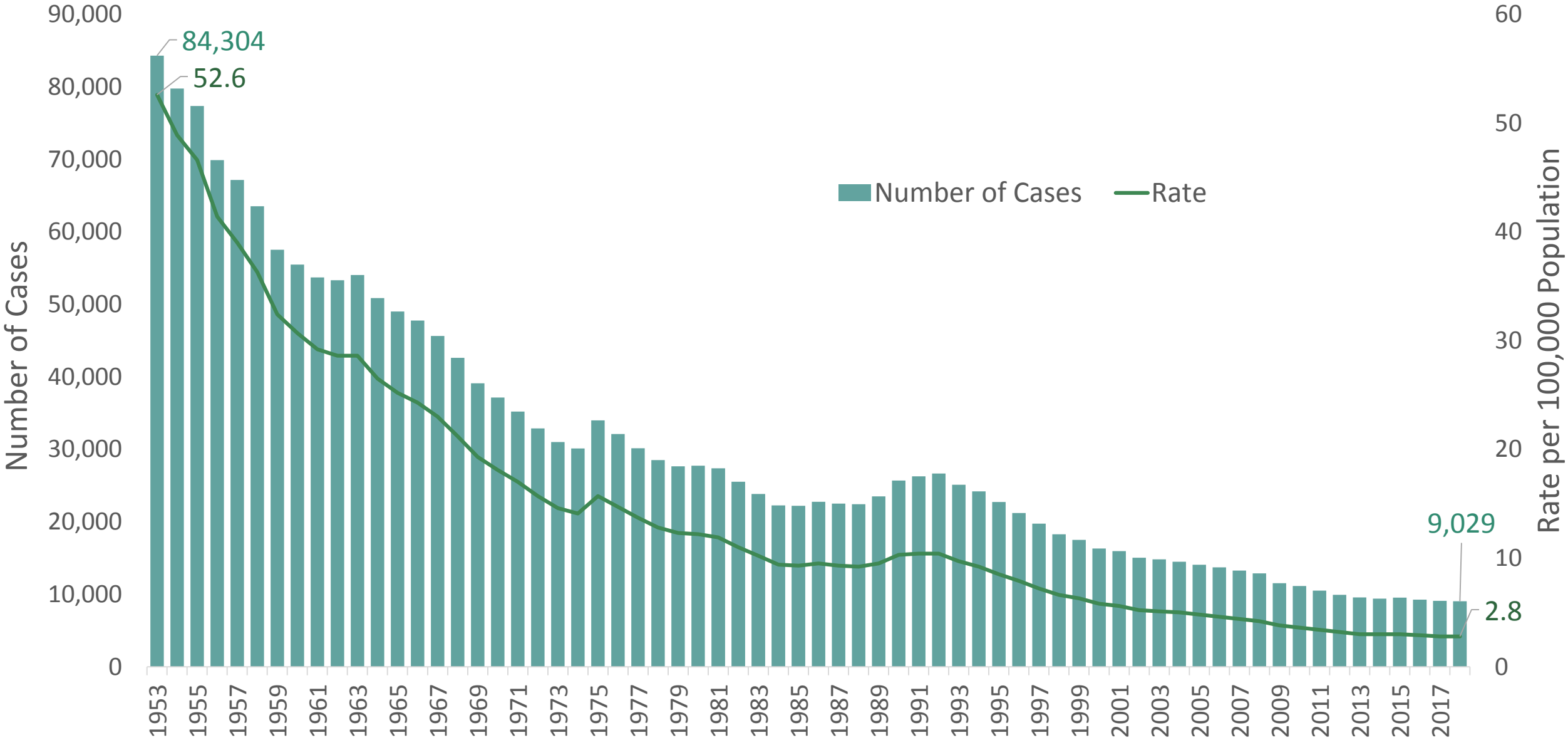
Global Tuberculosis Incidence

In 2017:

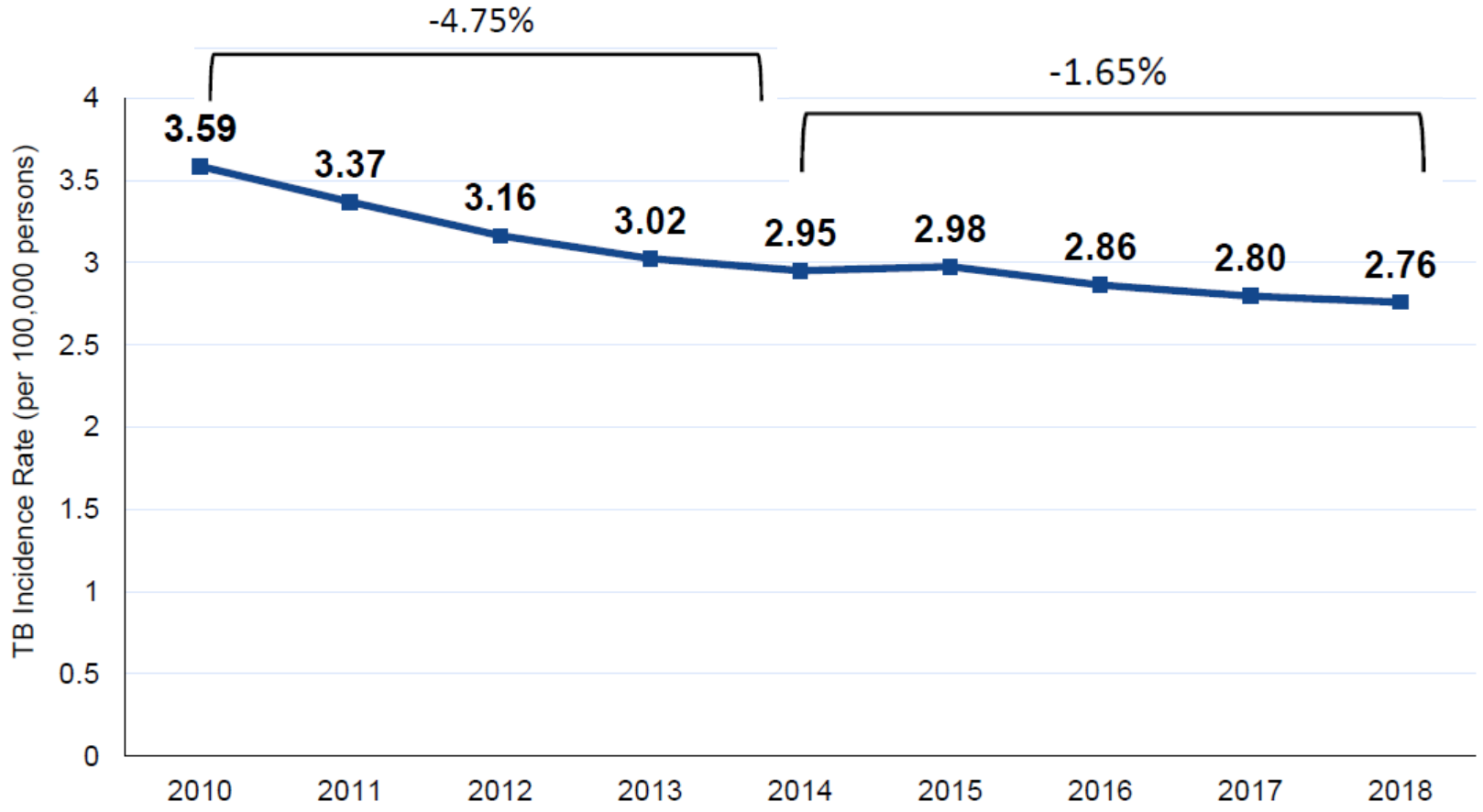
- 558,000 new cases of MDR/RR-TB
- 230,000 deaths from MDR/RR-TB



Tuberculosis Cases and Rates, United States, 1953-2018



Tuberculosis Incidence Rates* — United States, 2010–2018



*Based on provisional NTSS data as of February 11, 2019

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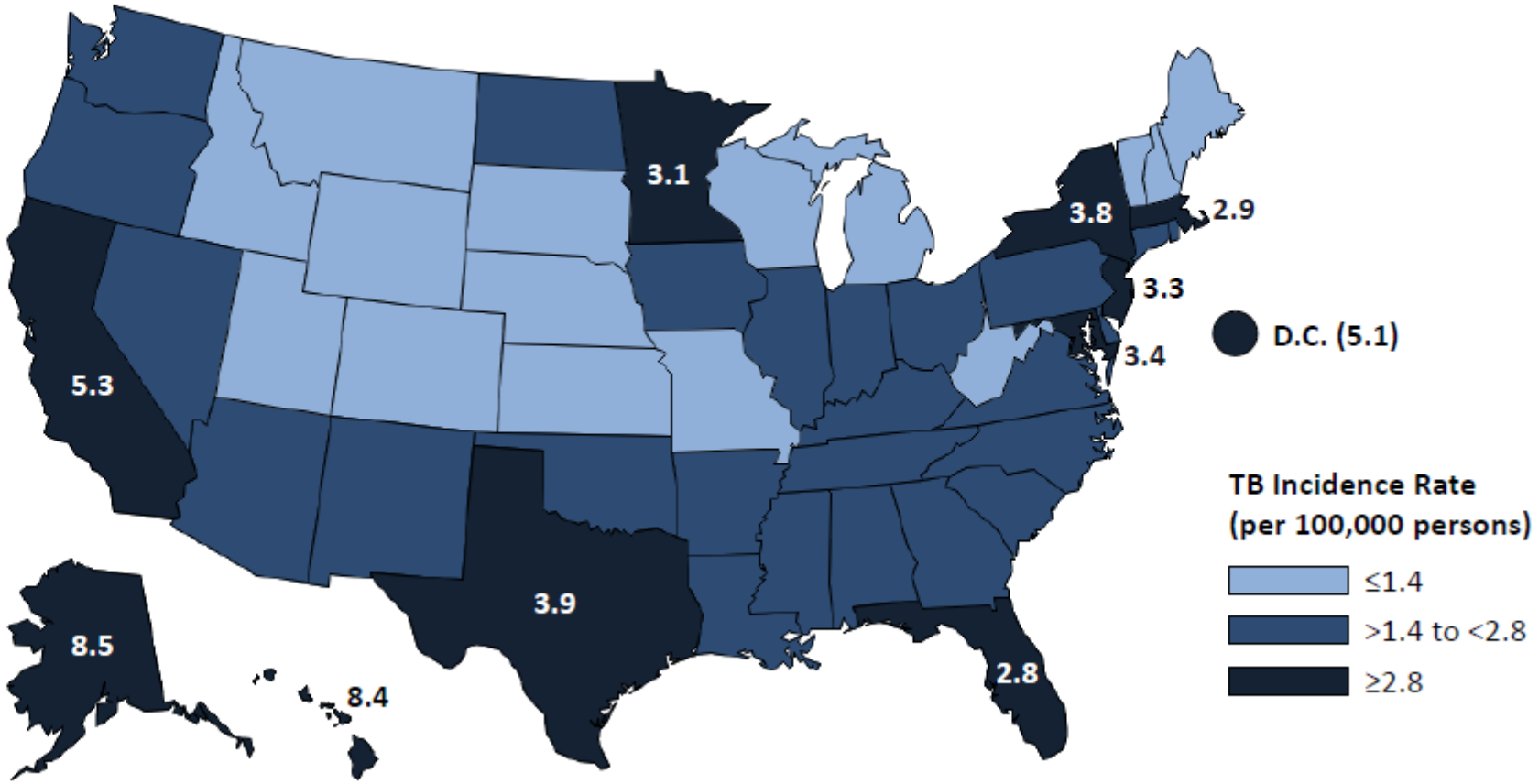
Tuberculosis — United States, 2018. Provisional Surveillance Data for World TB Day March 14, 2019.

Tuberculosis Incidence Rates by State* — United States, 2018



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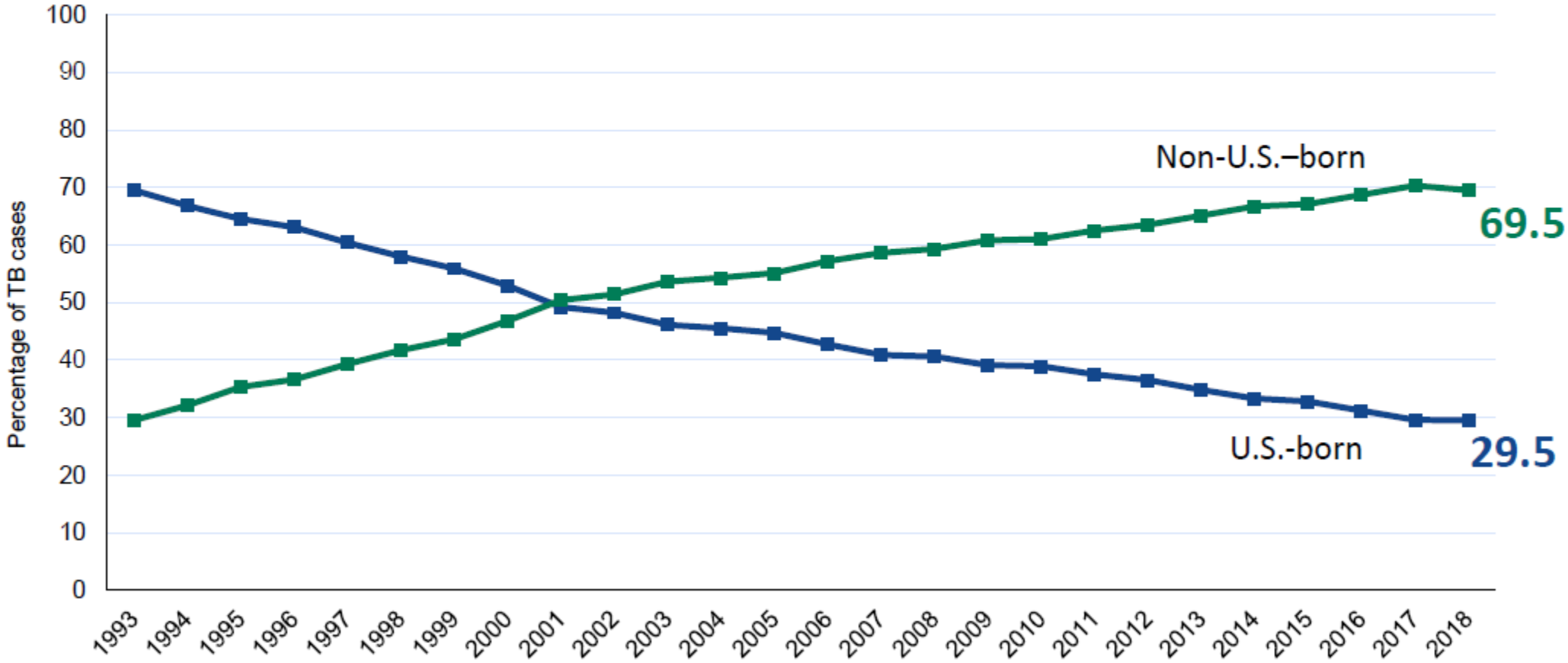
Percentage of Tuberculosis Cases by Country of Birth* — United States, 1993–2018



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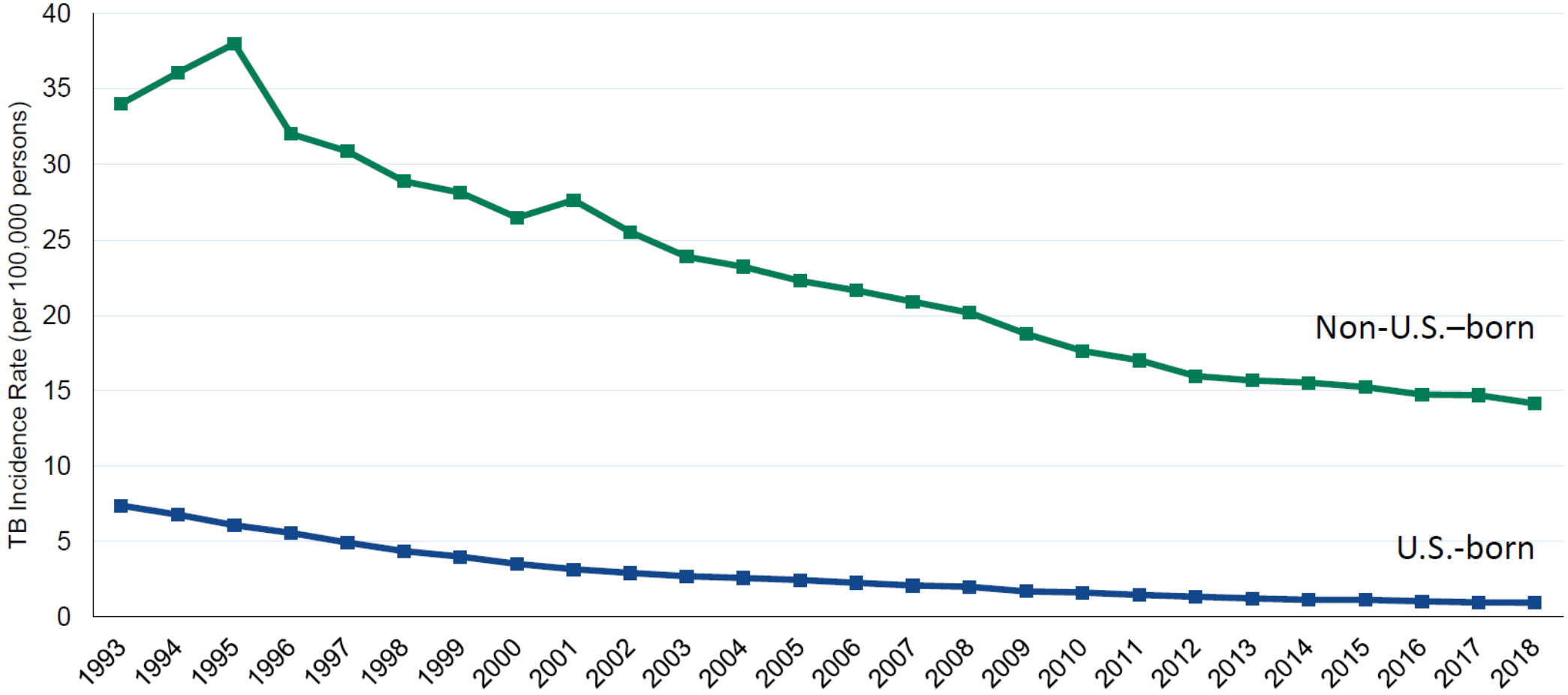

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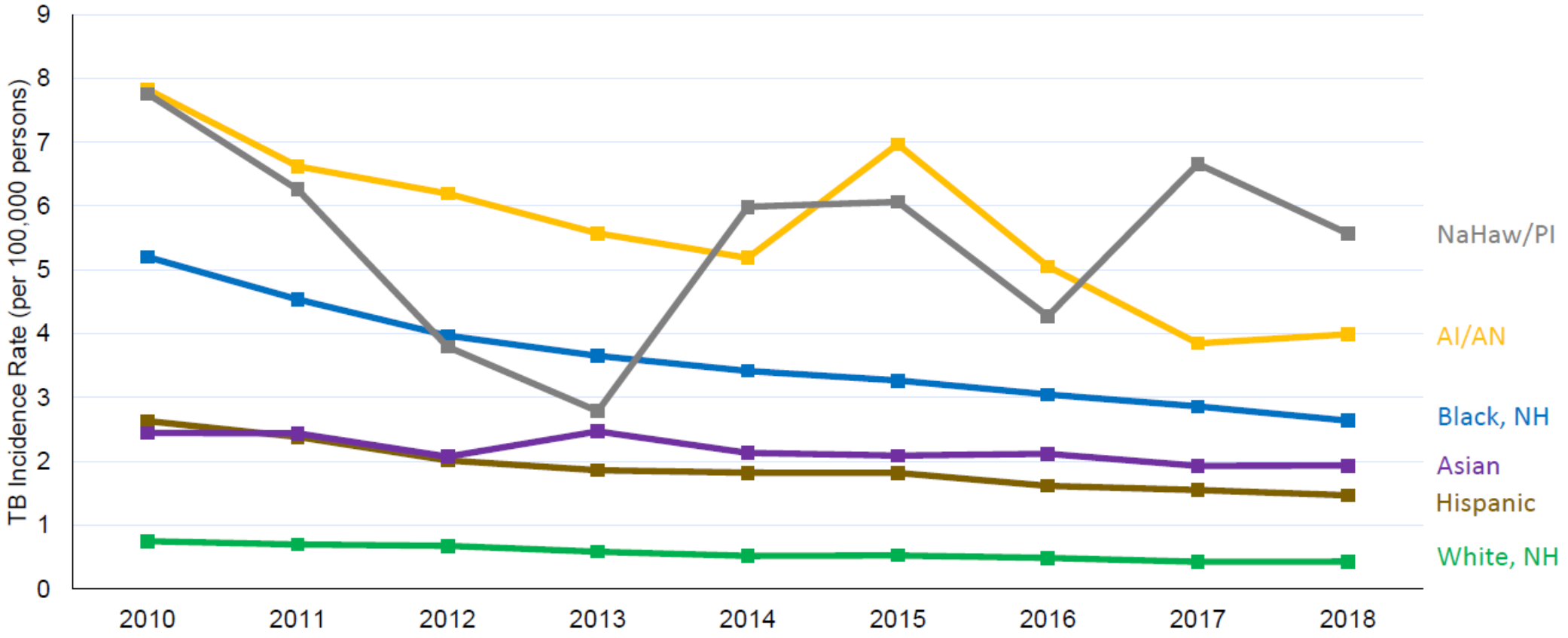
Tuberculosis Incidence Rates by Race/Ethnicity among U.S.-Born Persons* — United States, 2010–2018



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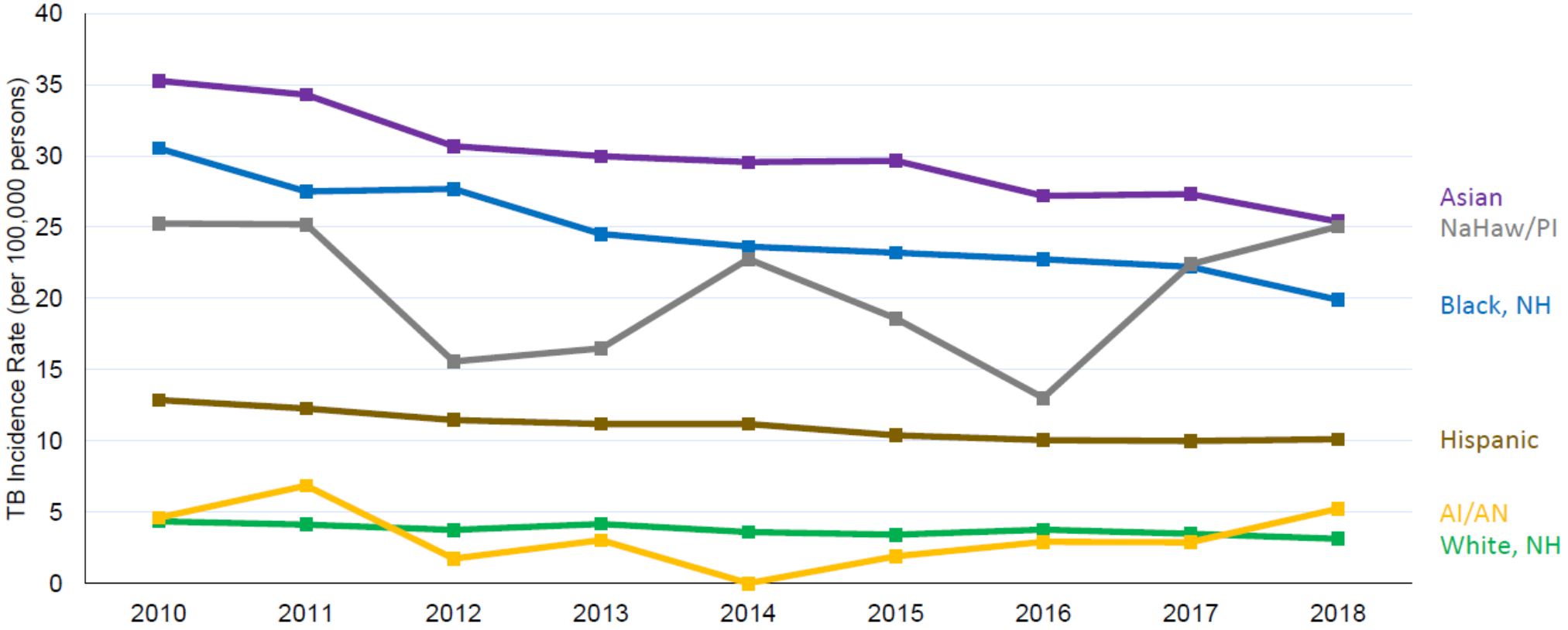
Tuberculosis Incidence Rates by Race/Ethnicity among Non-U.S.–Born Persons* — United States, 2010–2018



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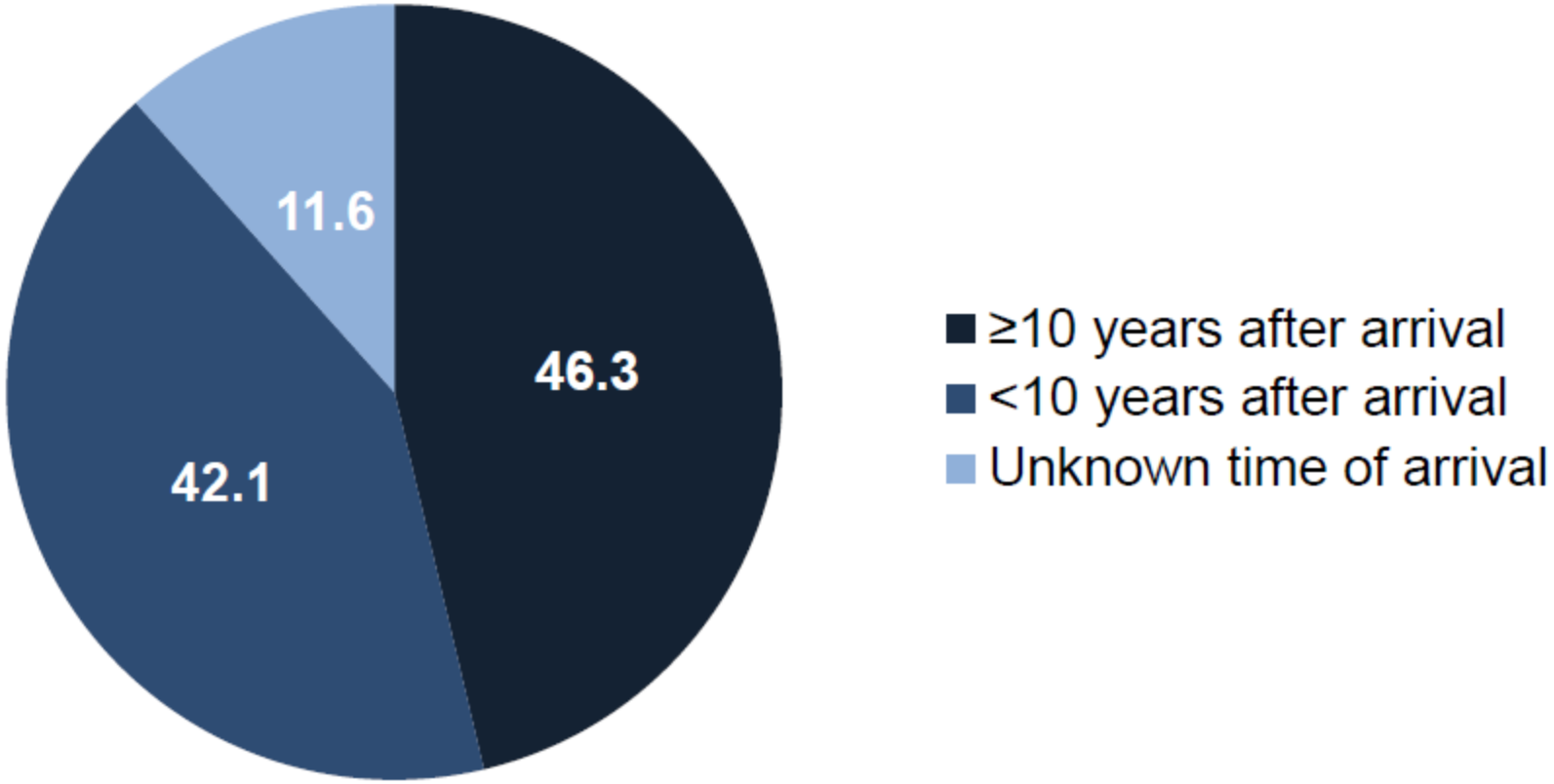
Percentage of Non-U.S.–Born Tuberculosis Cases by Time of Arrival in United States* — 2018



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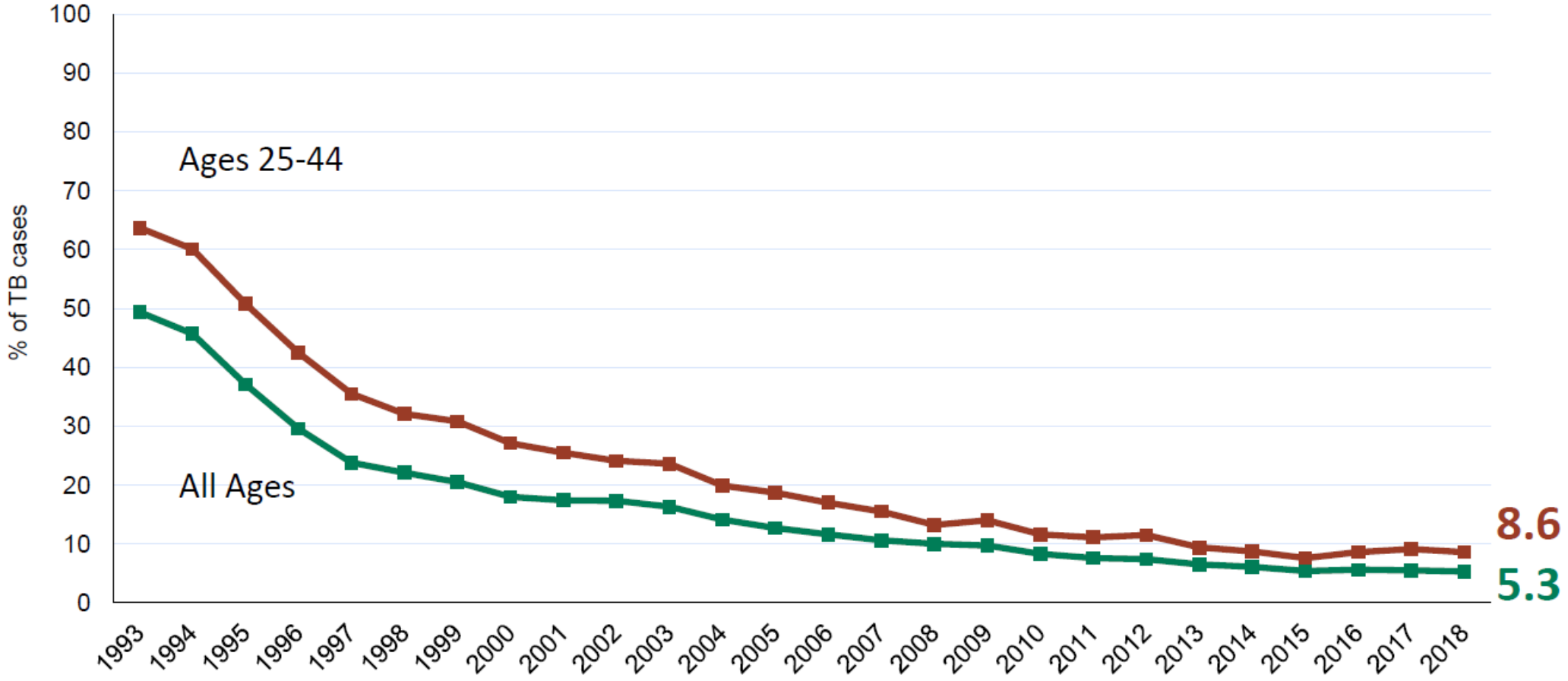
Annual Percentage of Tuberculosis Cases with HIV Coinfection*,† — United States, 1993–2018



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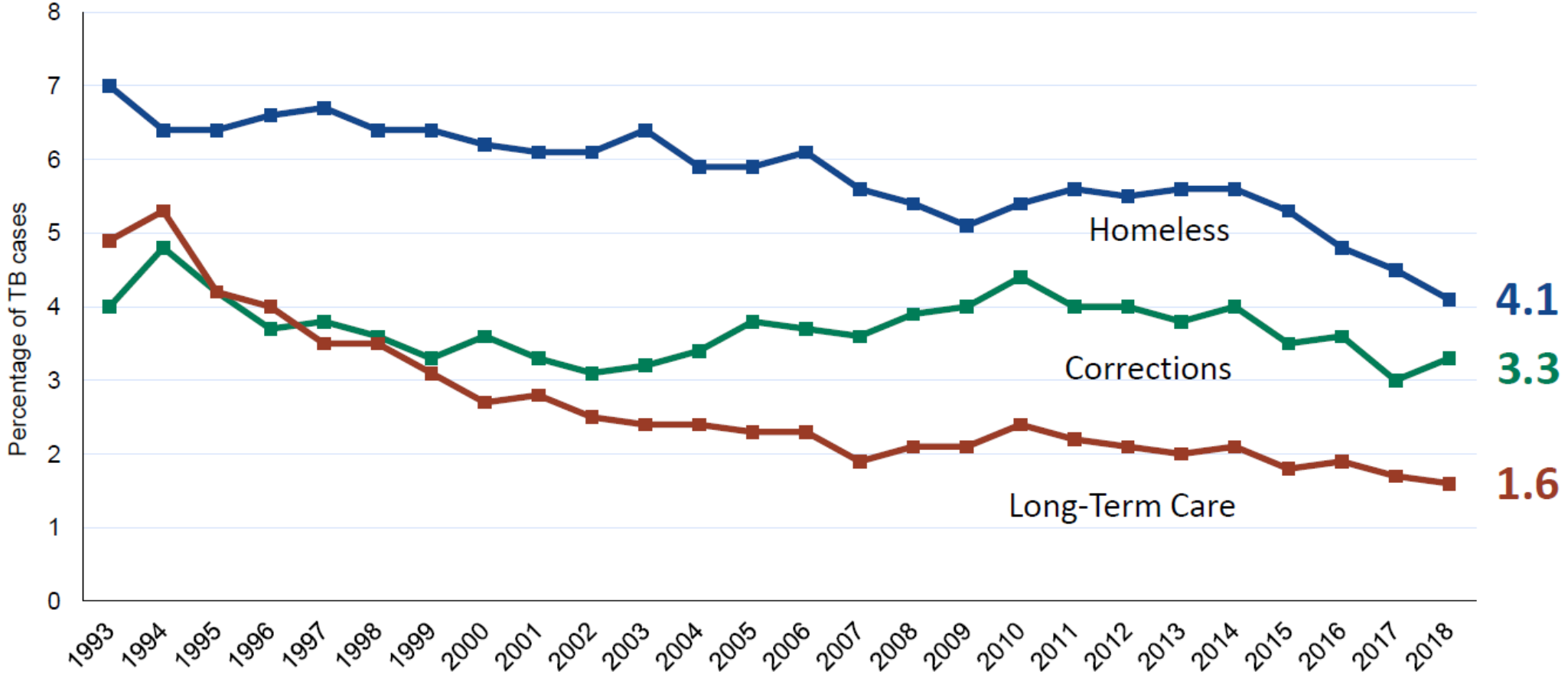
Annual Percentage of Tuberculosis Cases by Congregate Setting and Homelessness* — United States, 1993–2018



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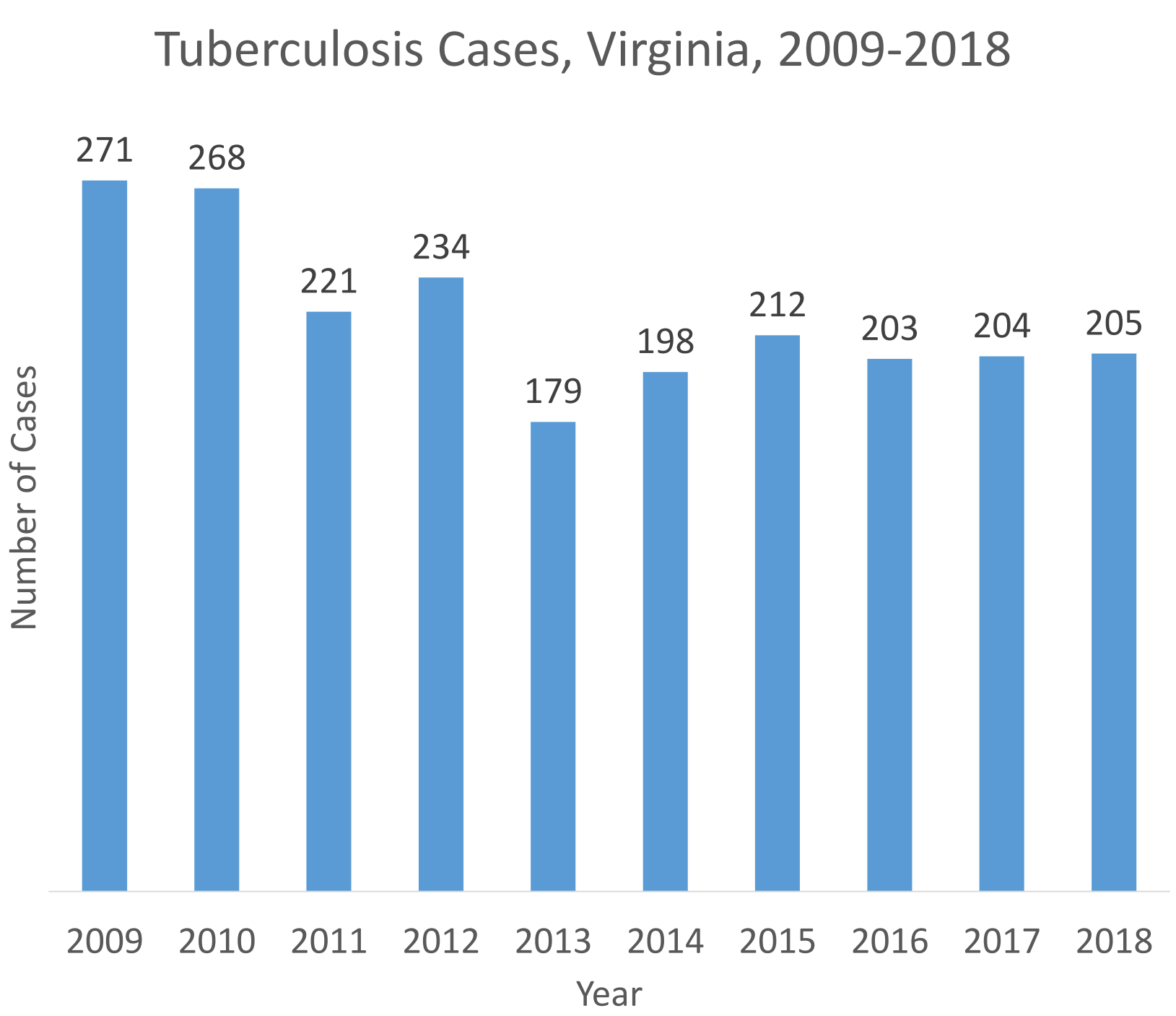
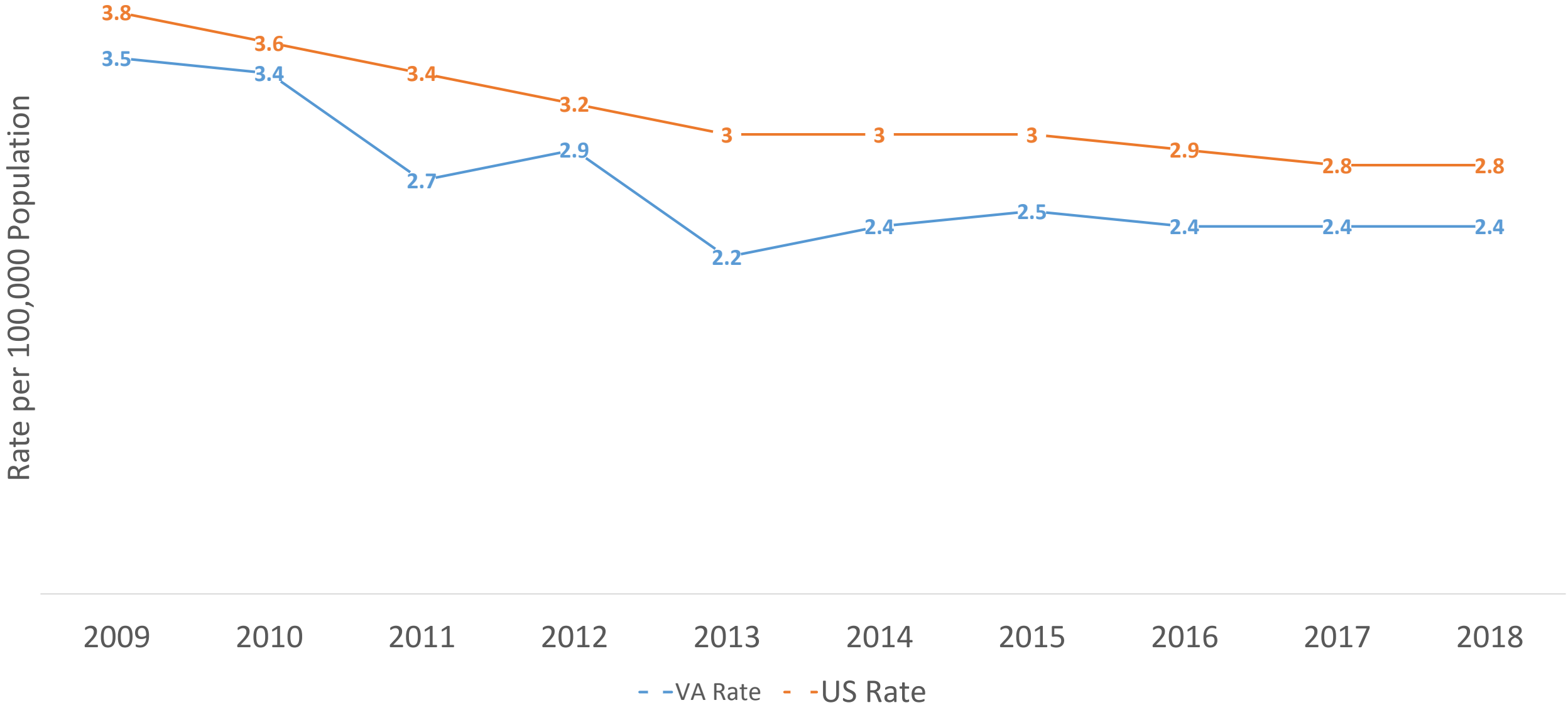
Tuberculosis in Virginia, 2018

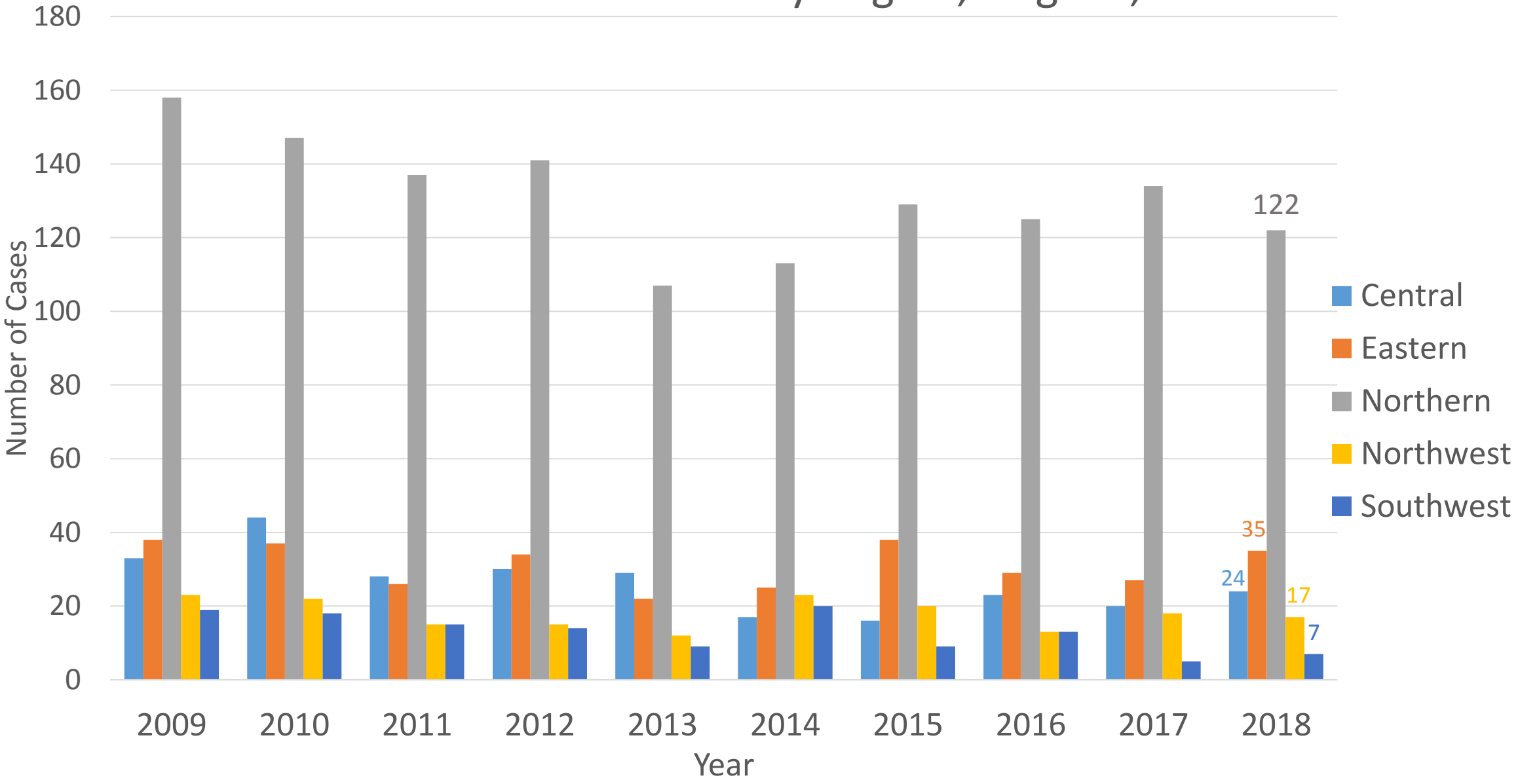
- 205 cases in 2018
- Rate of 2.4 per 100,000 population

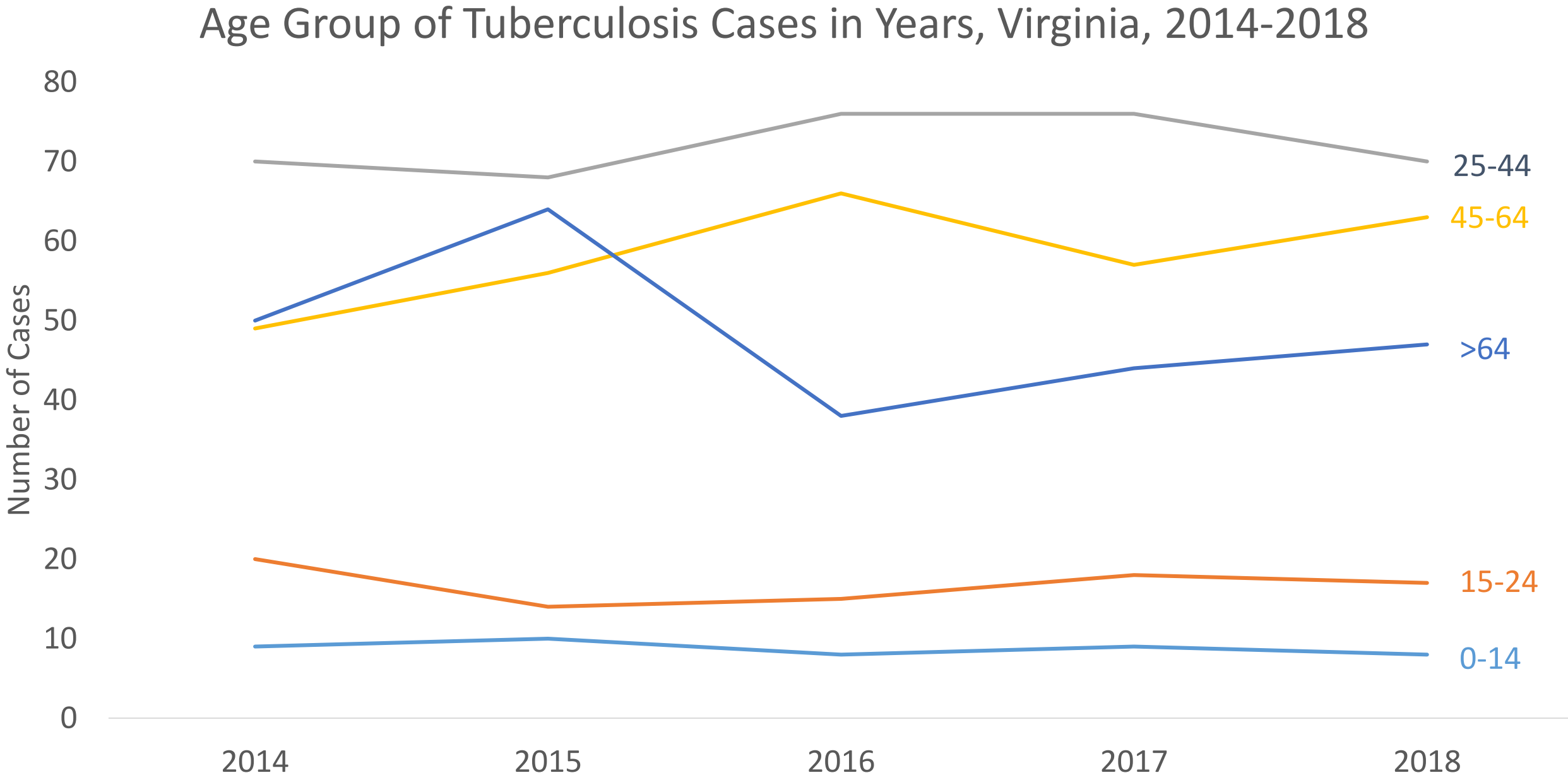


Tuberculosis Incidence Rate, Virginia and the United States, 2007-2018

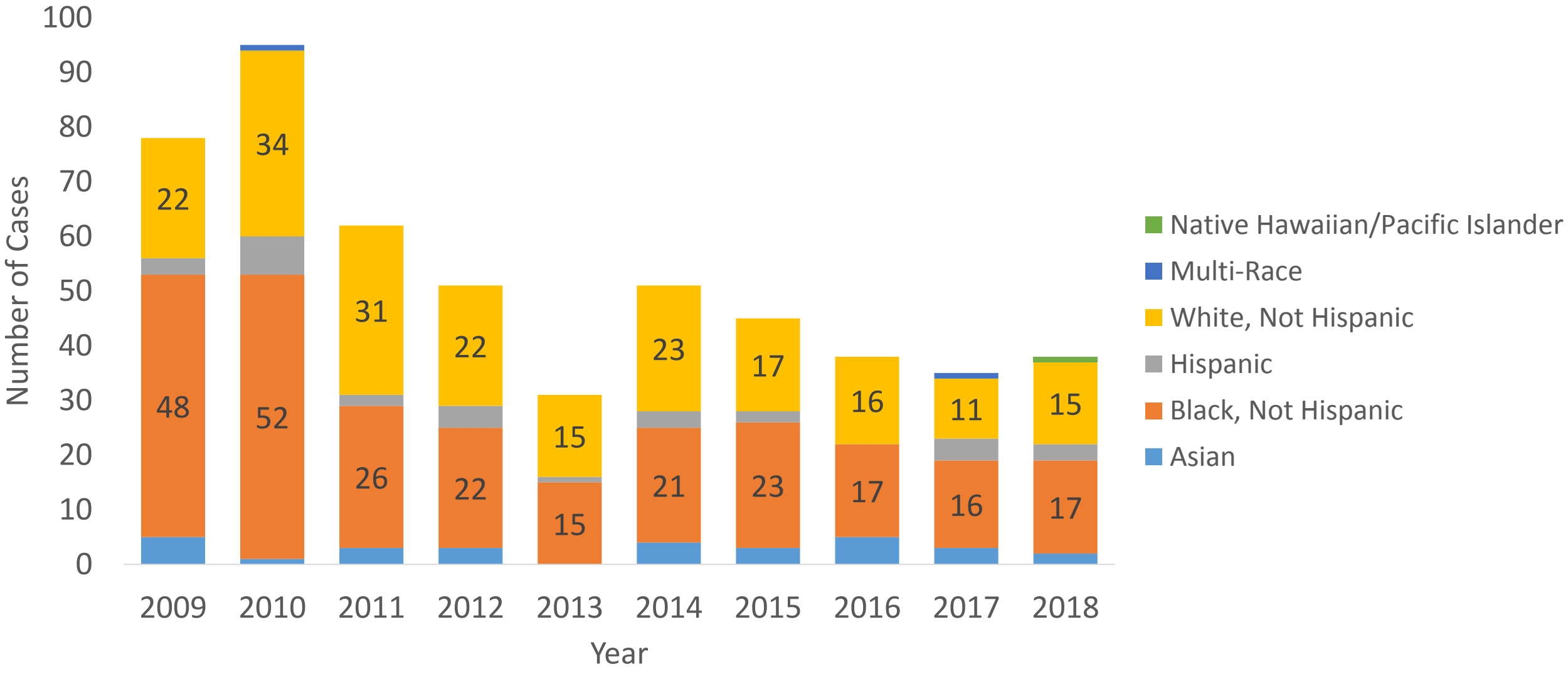


Tuberculosis Case Distribution by Region, Virginia, 2009-2018

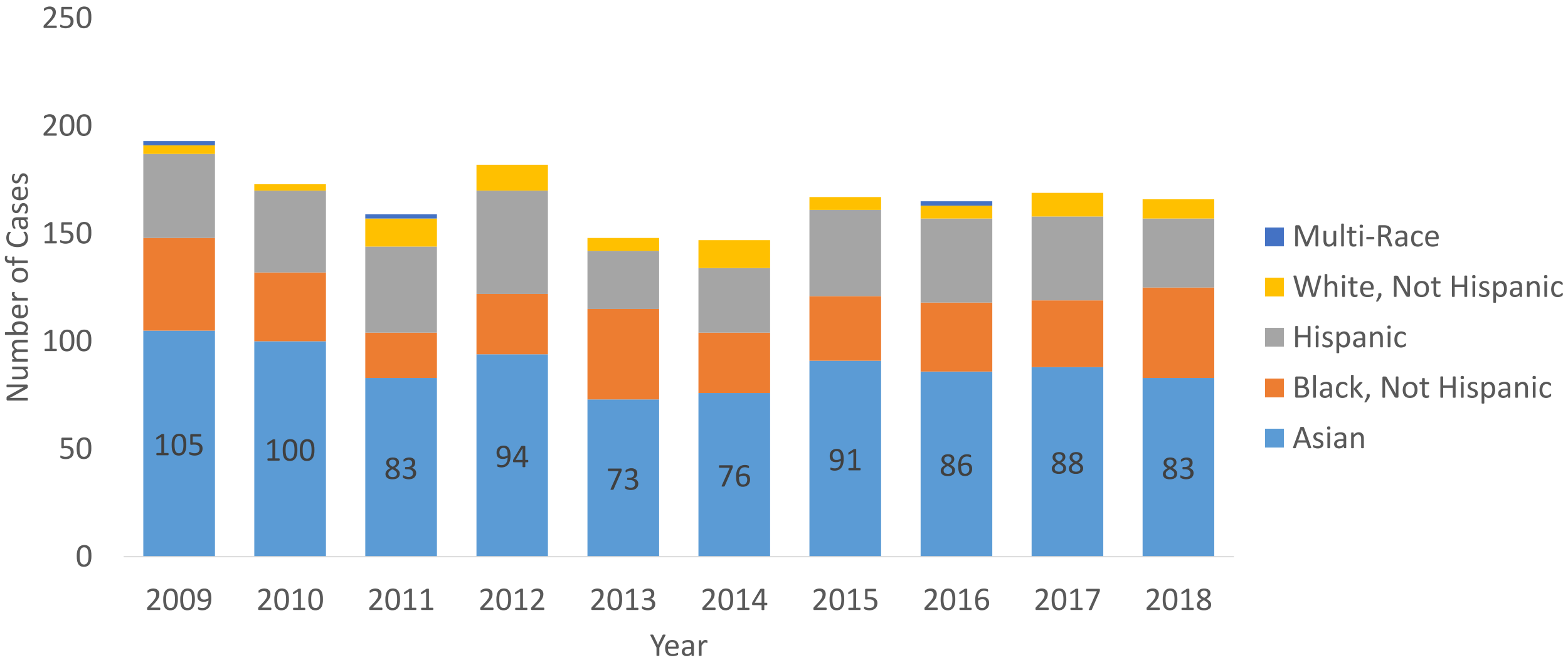



Age Group of Tuberculosis Cases in Years, Virginia, 2014-2018
Number of Cases
80
70
60
50
40
30
20
10
0
2014
2015
2016
2017
2018
25-44
45-64
>64
15-24
0-14

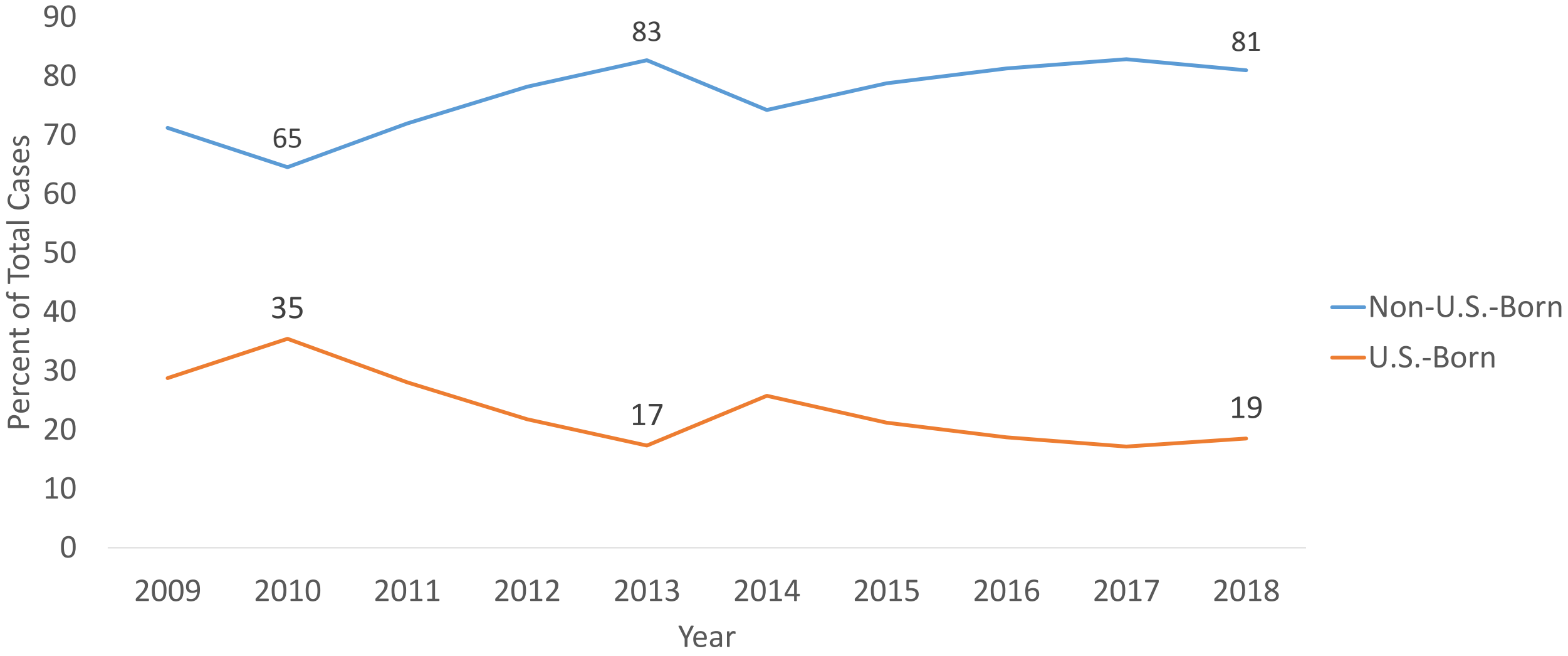
Tuberculosis Cases by Race and Ethnicity Among U.S.-Born Cases, Virginia 2009-2018



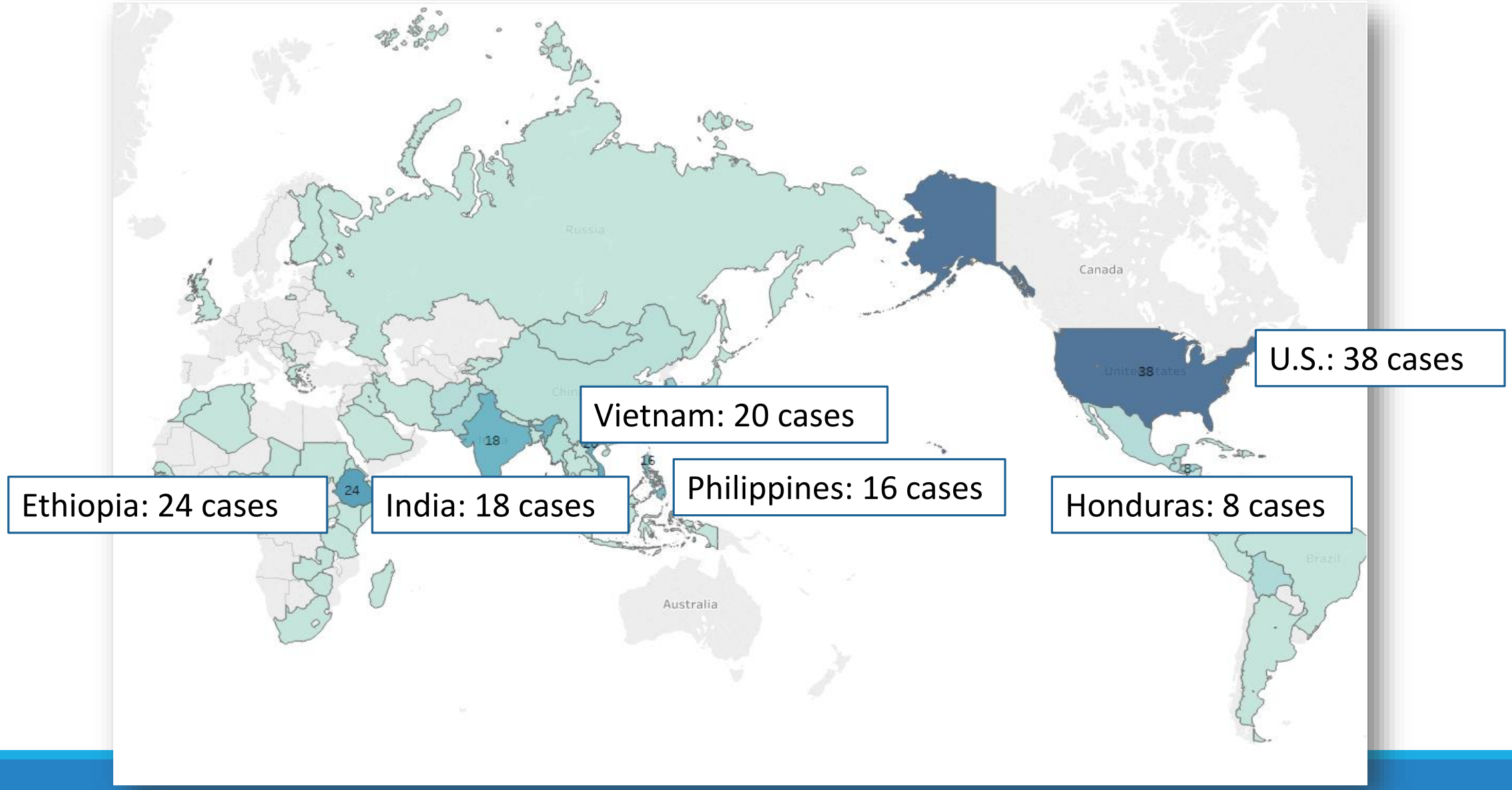
Tuberculosis Cases by Race and Ethnicity Among Non-U.S.-Born Cases, Virginia 2009-2018



Percent of Total Tuberculosis Cases by Nativity, Virginia, 2009-2018

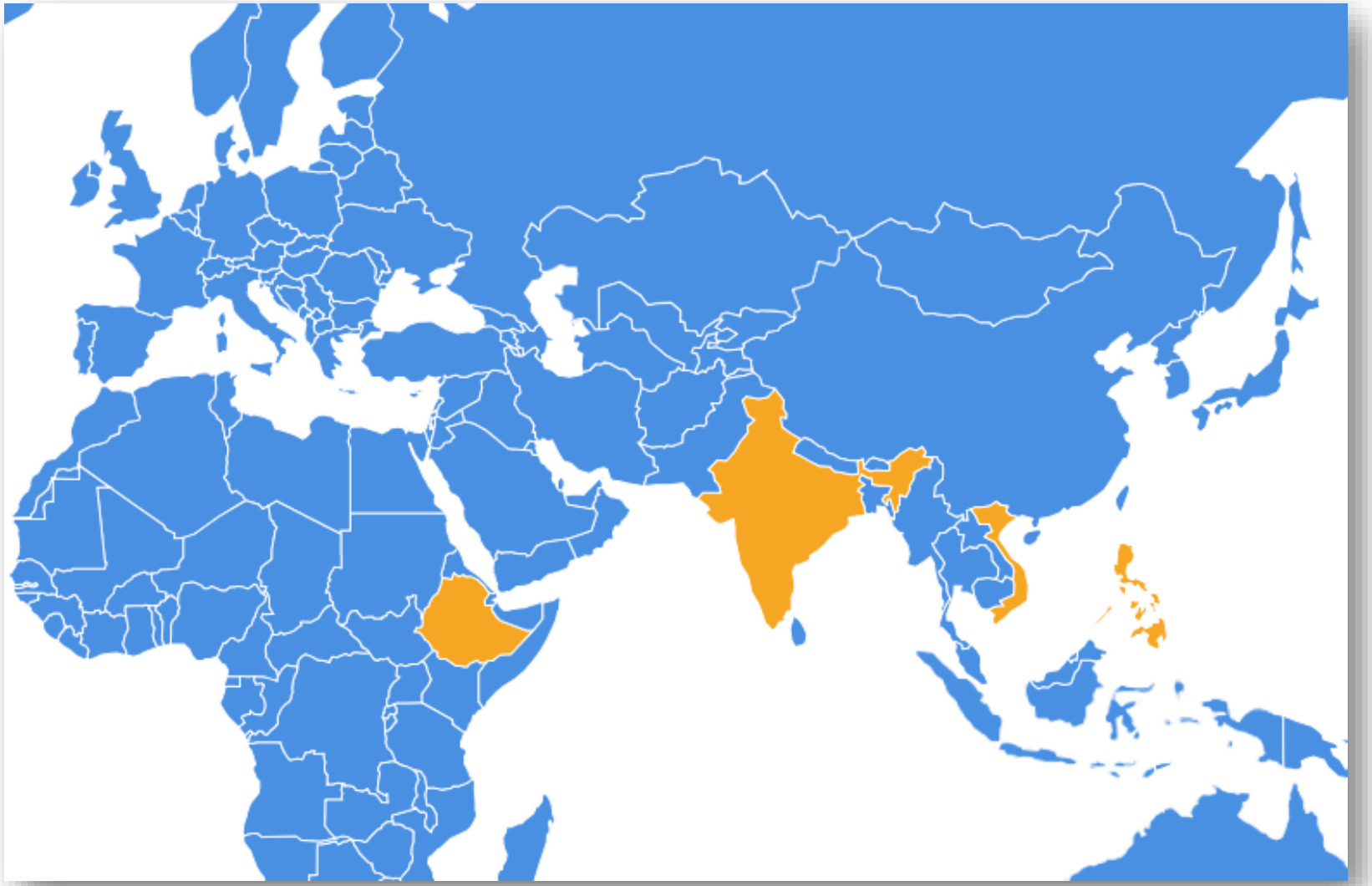


County of Birth of Tuberculosis Cases, Virginia, 2018

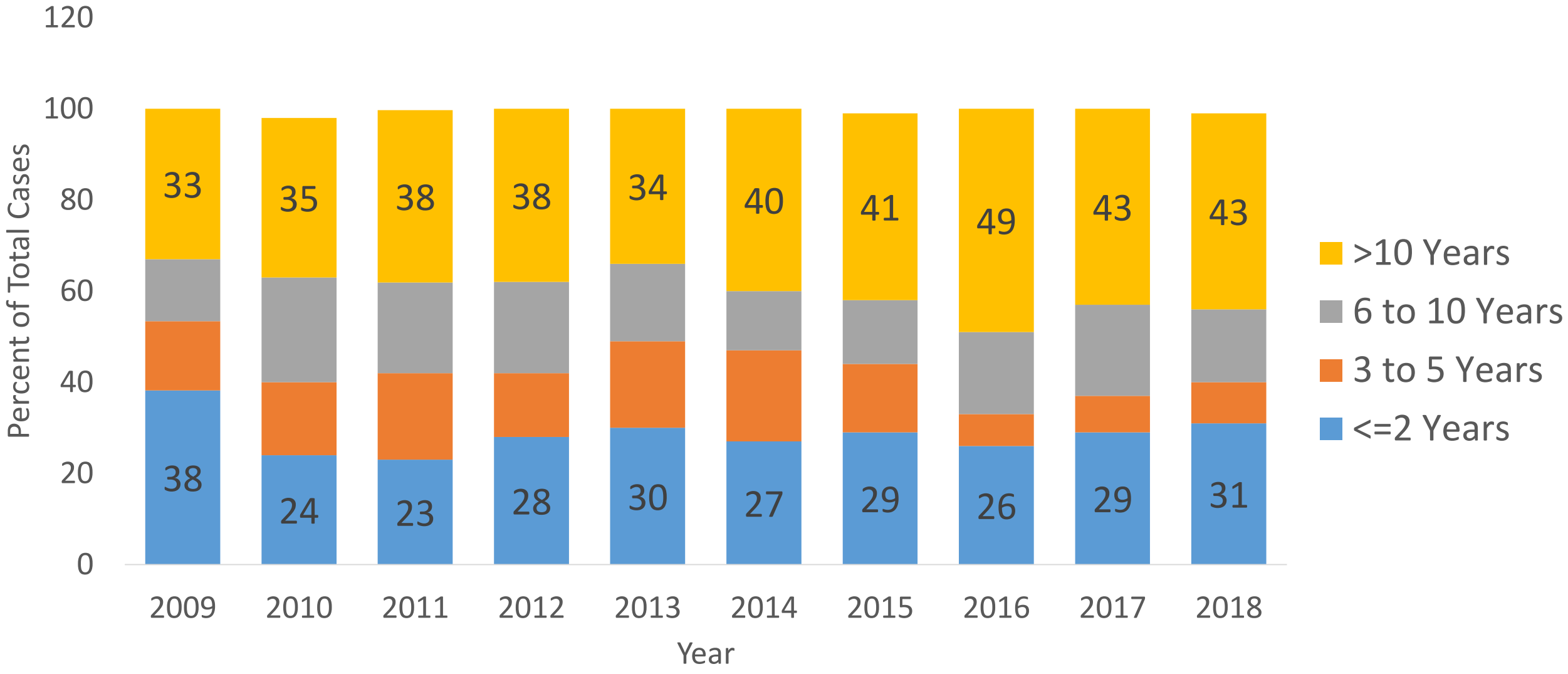


Top Countries Represented in Virginia's TB Cases Over the Past Five Years

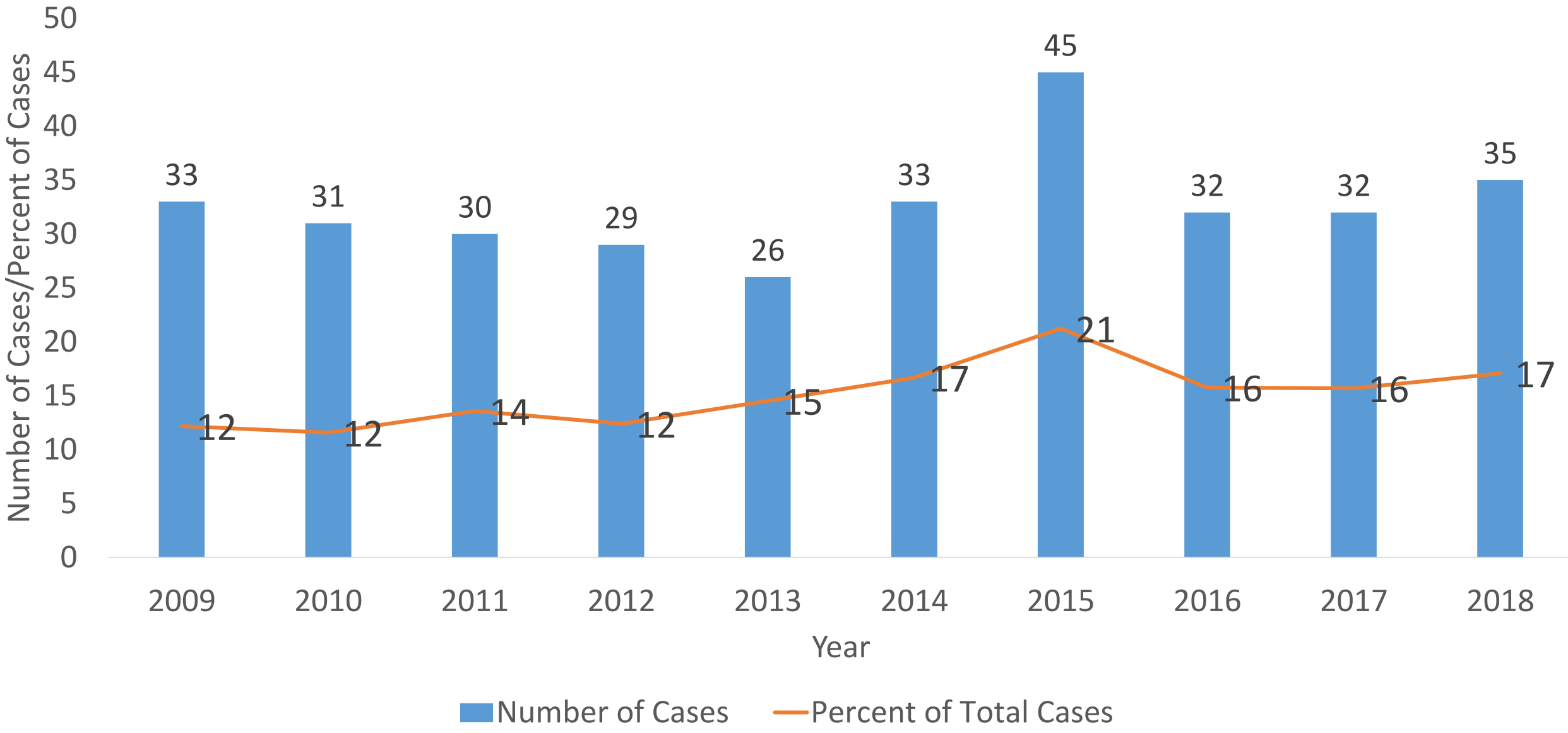
- India
- Vietnam
- Ethiopia
- Philippines



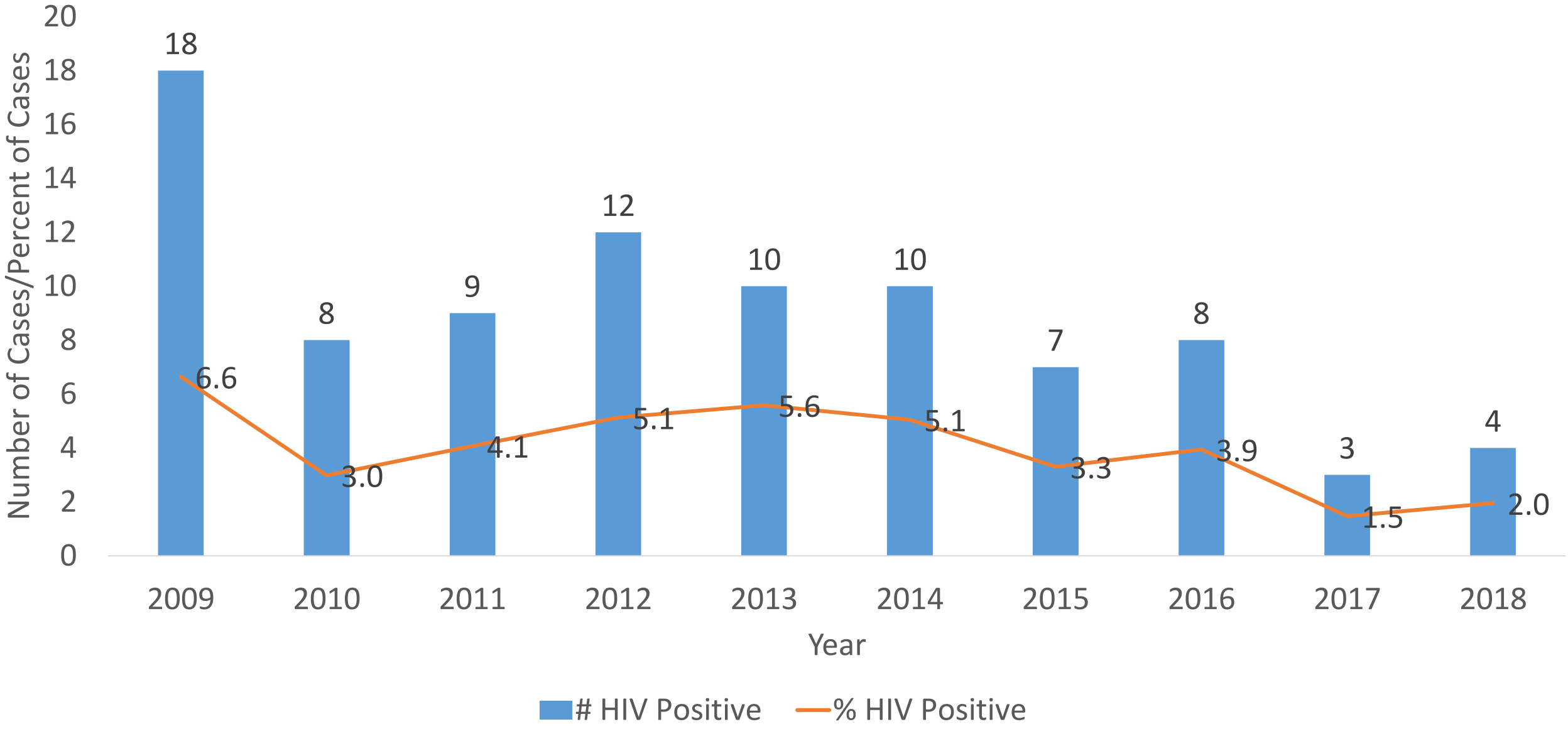
Tuberculosis Cases among Non-U.S.-Born Persons by Time of Residence in the U.S., Virginia, 2009-2018



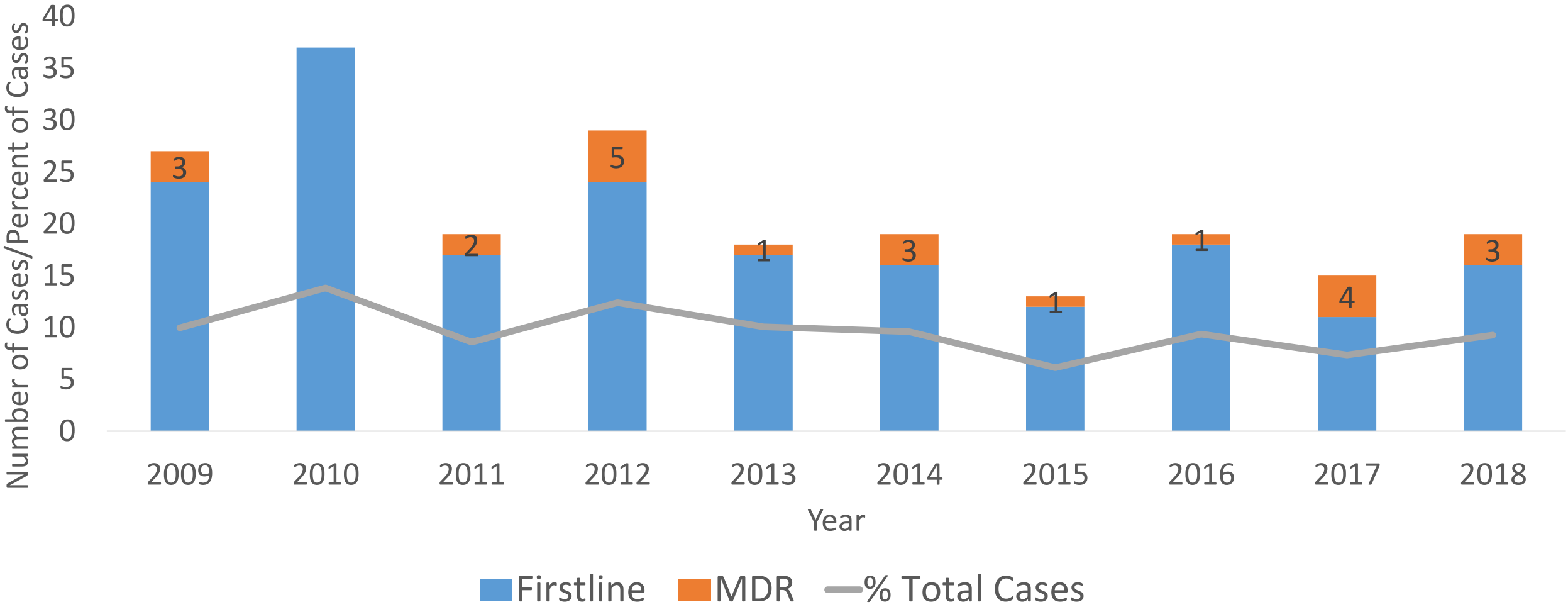
Tuberculosis Cases with Diabetes, Virginia, 2009-2018



Tuberculosis Cases with HIV Co-Infection, Virginia, 2009-2018



Drug Resistance Among Tuberculosis Cases, Virginia, 2009-2018

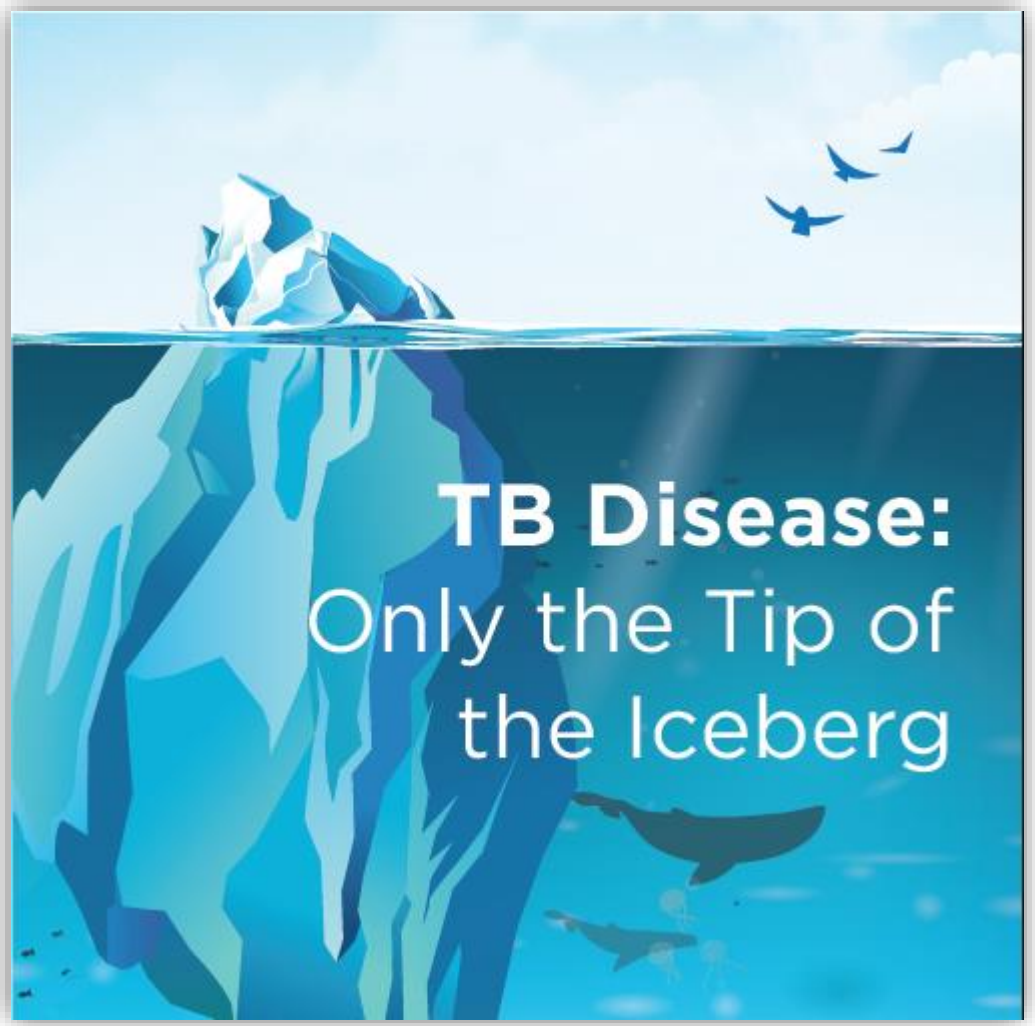


How do we continue down from the plateau?

Image: https://qph.fs.quoracdn.net/main-qimg-1f7165b565844eb05bce75de275f3bd0.webp

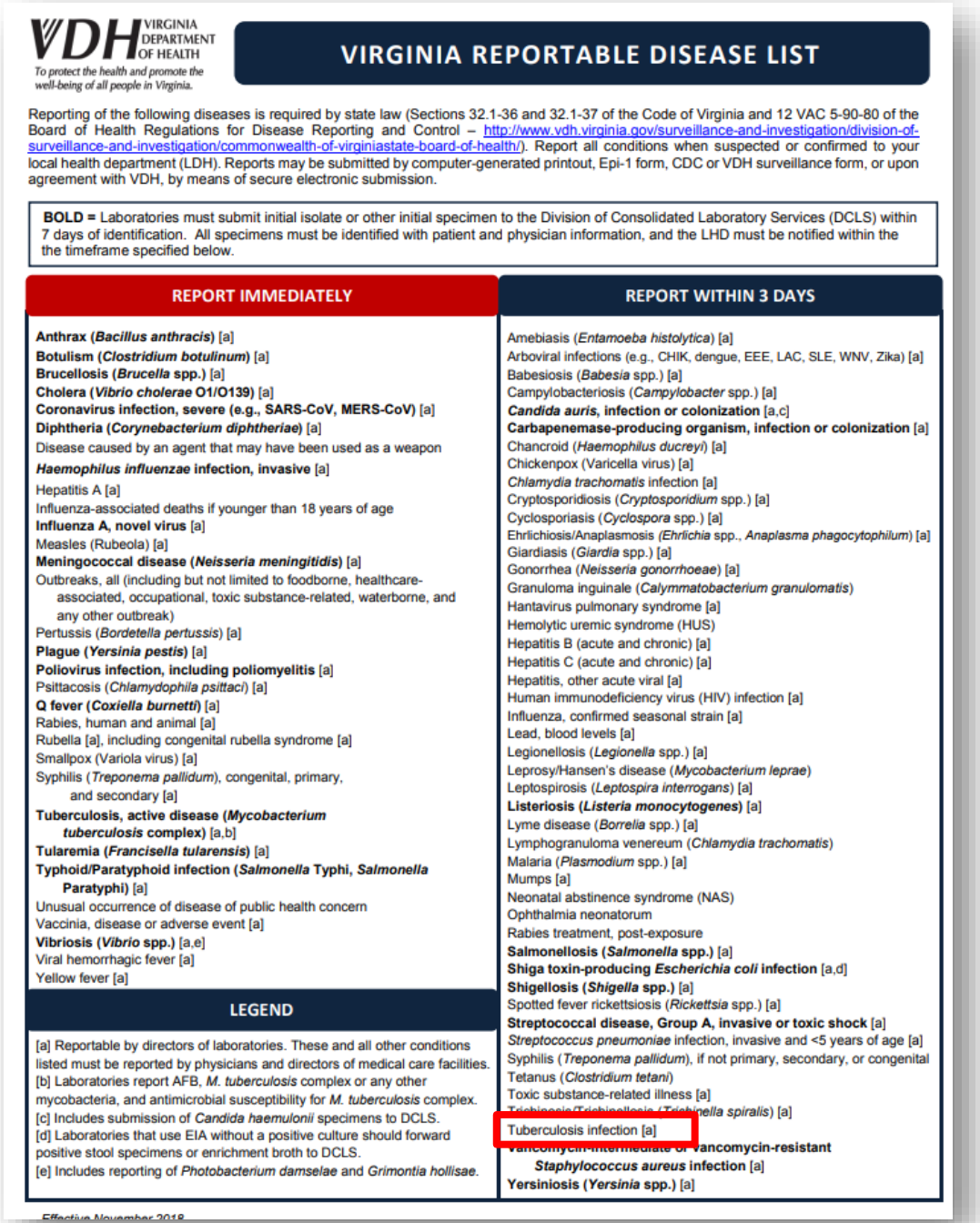
Millions of people in the U.S. have latent TB infection (LTBI)

Without treatment, they are at risk for developing TB disease.



Addressing Latent TB Infection

- Education
- Surveillance
- Testing
- Treatment



VDH VIRGINIA DEPARTMENT OF HEALTH
To protect the health and promote the well-being of all people in Virginia.

VIRGINIA REPORTABLE DISEASE LIST

Reporting of the following diseases is required by state law (Sections 32.1-36 and 32.1-37 of the Code of Virginia and 12 VAC 5-90-80 of the Board of Health Regulations for Disease Reporting and Control – http://www.vdh.virginia.gov/surveillance-and-investigation/division-of-surveillance-and-investigation/commonwealth-of-virginiastate-board-of-health/). Report all conditions when suspected or confirmed to your local health department (LDH). Reports may be submitted by computer-generated printout, Epi-1 form, CDC or VDH surveillance form, or upon agreement with VDH, by means of secure electronic submission.

BOLD = Laboratories must submit initial isolate or other initial specimen to the Division of Consolidated Laboratory Services (DCLS) within 7 days of identification. All specimens must be identified with patient and physician information, and the LHD must be notified within the the timeframe specified below.

REPORT IMMEDIATELY

Anthrax (*Bacillus anthracis*) [a]
Botulism (*Clostridium botulinum*) [a]
Brucellosis (*Brucella* spp.) [a]
Cholera (*Vibrio cholerae* O1/O139) [a]
Coronavirus infection, severe (e.g., SARS-CoV, MERS-CoV) [a]
Diphtheria (*Corynebacterium diphtheriae*) [a]
Disease caused by an agent that may have been used as a weapon
***Haemophilus influenzae* infection, invasive** [a]
Hepatitis A [a]
Influenza-associated deaths if younger than 18 years of age
Influenza A, novel virus [a]
Measles (Rubeola) [a]
Meningococcal disease (*Neisseria meningitidis*) [a]
Outbreaks, all (including but not limited to foodborne, healthcare-associated, occupational, toxic substance-related, waterborne, and any other outbreak)
Pertussis (*Bordetella pertussis*) [a]
Plague (*Yersinia pestis*) [a]
Poliovirus infection, including poliomyelitis [a]
Psittacosis (*Chlamydophila psittaci*) [a]
Q fever (*Coxiella burnetti*) [a]
Rabies, human and animal [a]
Rubella [a], including congenital rubella syndrome [a]
Smallpox (Variola virus) [a]
Syphilis (*Treponema pallidum*), congenital, primary, and secondary [a]
Tuberculosis, active disease (*Mycobacterium tuberculosis* complex) [a,b]
Tularemia (*Francisella tularensis*) [a]
Typhoid/Paratyphoid infection (*Salmonella* Typhi, *Salmonella* Paratyphi) [a]
Unusual occurrence of disease of public health concern
Vaccinia, disease or adverse event [a]
Vibriosis (*Vibrio* spp.) [a,e]
Viral hemorrhagic fever [a]
Yellow fever [a]

LEGEND

[a] Reportable by directors of laboratories. These and all other conditions listed must be reported by physicians and directors of medical care facilities.
[b] Laboratories report AFB, *M. tuberculosis* complex or any other mycobacteria, and antimicrobial susceptibility for *M. tuberculosis* complex.
[c] Includes submission of *Candida haemulonii* specimens to DCLS.
[d] Laboratories that use EIA without a positive culture should forward positive stool specimens or enrichment broth to DCLS.
[e] Includes reporting of *Photobacterium damselae* and *Grimontia hollisae*.

REPORT WITHIN 3 DAYS

Amebiasis (*Entamoeba histolytica*) [a]
Arboviral infections (e.g., CHIK, dengue, EEE, LAC, SLE, WNV, Zika) [a]
Babesiosis (*Babesia* spp.) [a]
Campylobacteriosis (*Campylobacter* spp.) [a]
***Candida auris*, infection or colonization** [a,c]
Carbapenemase-producing organism, infection or colonization [a]
Chancroid (*Haemophilus ducreyi*) [a]
Chickenpox (Varicella virus) [a]
Chlamydia trachomatis infection [a]
Cryptosporidiosis (*Cryptosporidium* spp.) [a]
Cyclosporiasis (*Cyclospora* spp.) [a]
Ehrlichiosis/Anaplasmosis (*Ehrlichia* spp., *Anaplasma phagocytophilum*) [a]
Giardiasis (*Giardia* spp.) [a]
Gonorrhea (*Neisseria gonorrhoeae*) [a]
Granuloma inguinale (*Calymmatobacterium granulomatis*)
Hantavirus pulmonary syndrome [a]
Hemolytic uremic syndrome (HUS)
Hepatitis B (acute and chronic) [a]
Hepatitis C (acute and chronic) [a]
Hepatitis, other acute viral [a]
Human immunodeficiency virus (HIV) infection [a]
Influenza, confirmed seasonal strain [a]
Lead, blood levels [a]
Legionellosis (*Legionella* spp.) [a]
Leprosy/Hansen's disease (*Mycobacterium leprae*)
Leptospirosis (*Leptospira interrogans*) [a]
Listeriosis (*Listeria monocytogenes*) [a]
Lyme disease (*Borrelia* spp.) [a]
Lymphogranuloma venereum (*Chlamydia trachomatis*)
Malaria (*Plasmodium* spp.) [a]
Mumps [a]
Neonatal abstinence syndrome (NAS)
Ophthalmia neonatorum
Rabies treatment, post-exposure
Salmonellosis (*Salmonella* spp.) [a]
Shiga toxin-producing *Escherichia coli* infection [a,d]
Shigellosis (*Shigella* spp.) [a]
Spotted fever rickettsiosis (*Rickettsia* spp.) [a]
Streptococcal disease, Group A, invasive or toxic shock [a]
Streptococcus pneumoniae infection, invasive and <5 years of age [a]
Syphilis (*Treponema pallidum*), if not primary, secondary, or congenital
Tetanus (*Clostridium tetani*)
Toxic substance-related illness [a]
Trichinosis (*Trichinella spiralis*) [a]
Tuberculosis infection [a]
Vancomycin-intermediate or vancomycin-resistant *Staphylococcus aureus* infection [a]
Yersiniosis (*Yersinia* spp.) [a]

Effective November 2018

Questions?

Contact:

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804-864-7922

References

World TB Day — March 24, 2019. MMWR Morb Mortal Wkly Rep 2019;68:257.
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