



TB Prevention and Care in Chicago: Current Approaches to an Age-Old Disease

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★ A Brief History of Tuberculosis

- Characteristic DNA-confirmed TB skeletal changes reported in pre-dynastic Egypt (3500-2650 BC), Neolithic Sweden (3200 – 2300 BC)*
- Earliest TB skeletal changes found in Neolithic Italy (beginning of fourth millennium BC)



[Chicago Municipal Tuberculosis Sanitarium – Chicago, Illinois - Atlas Obscura](#)

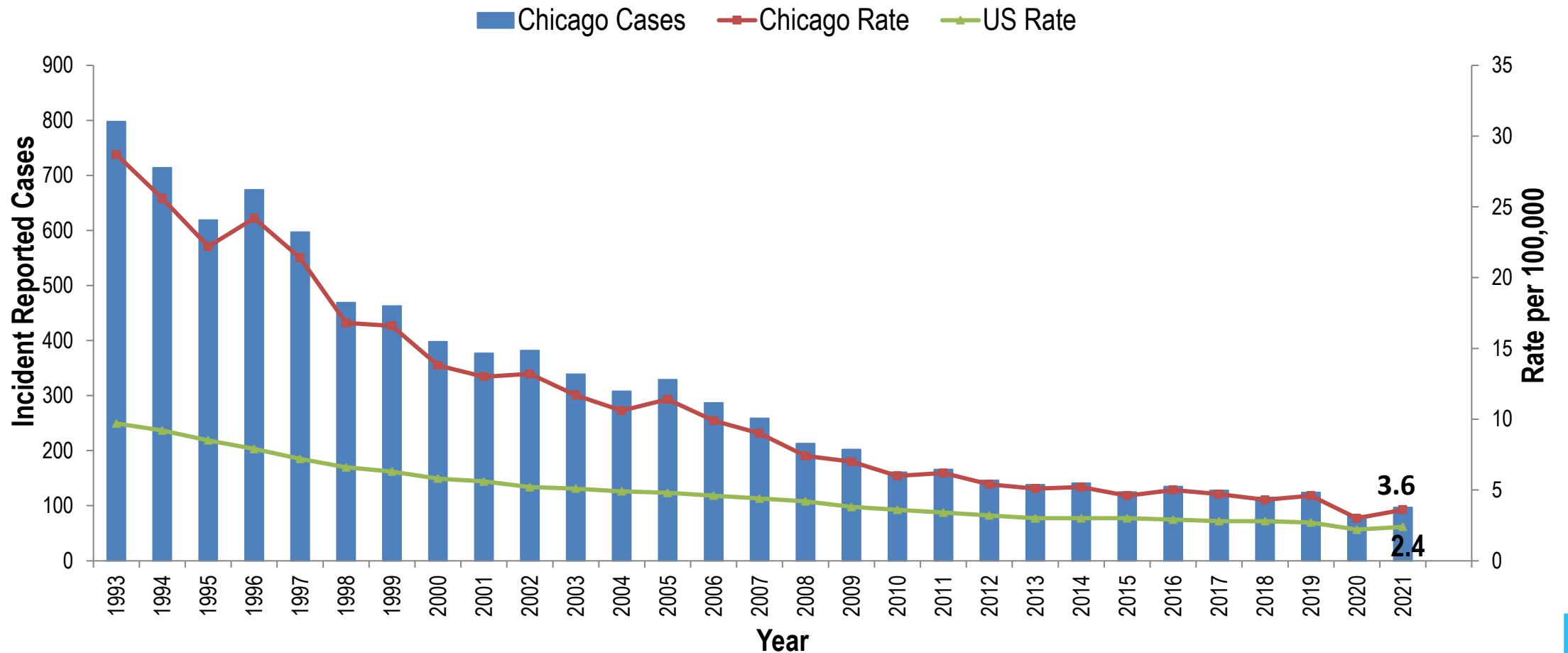


[West Side Center for Disease Control \(WSCDC\)](#)

*[Detection and Molecular Characterization of 9000-Year-Old Mycobacterium tuberculosis from a Neolithic Settlement in the Eastern Mediterranean - PMC \(nih.gov\)](#)



Trend in TB Case Count and Rate, United States and Chicago, 1993-2021



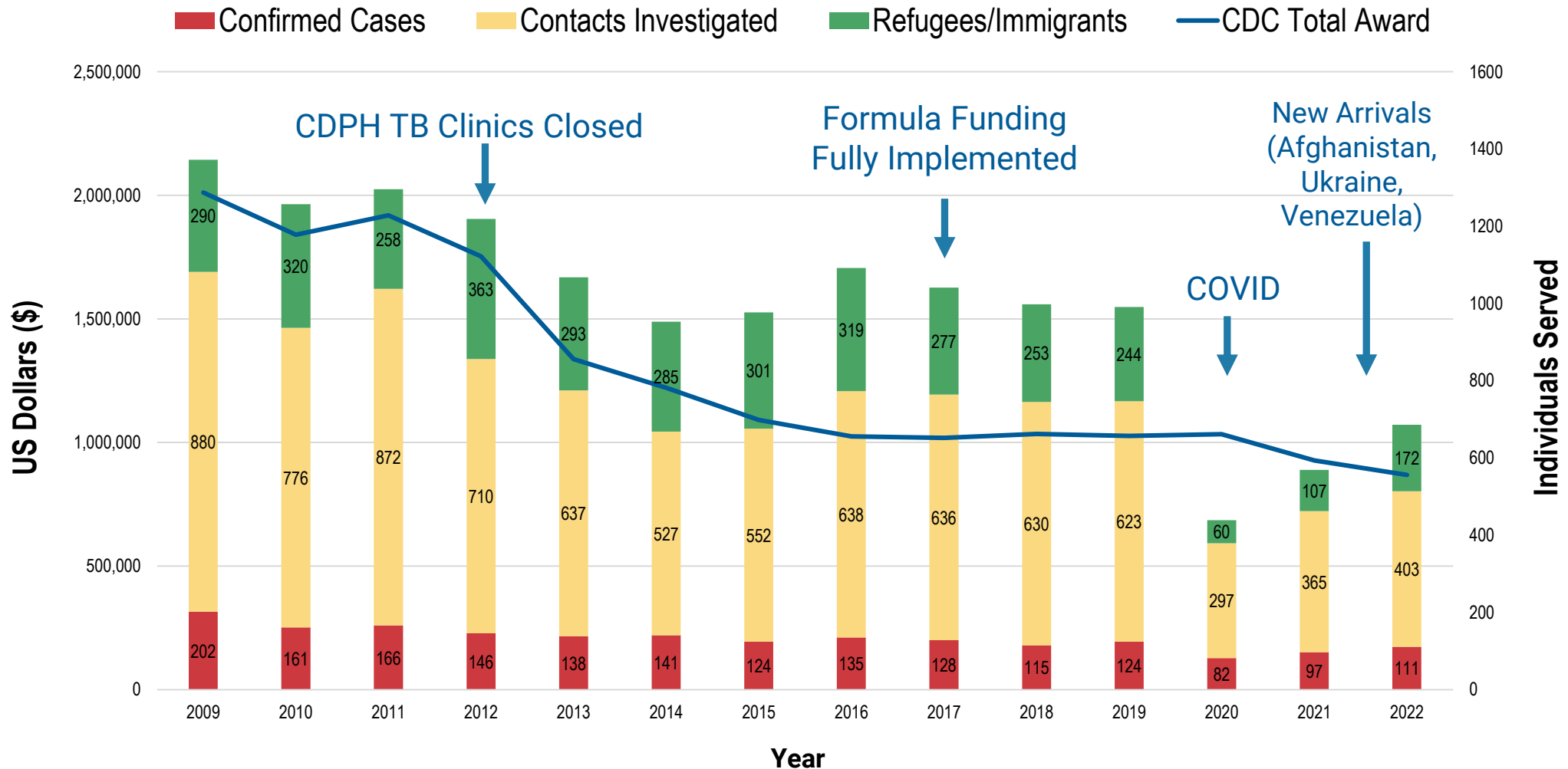


CDPH TB Program Funding Sources

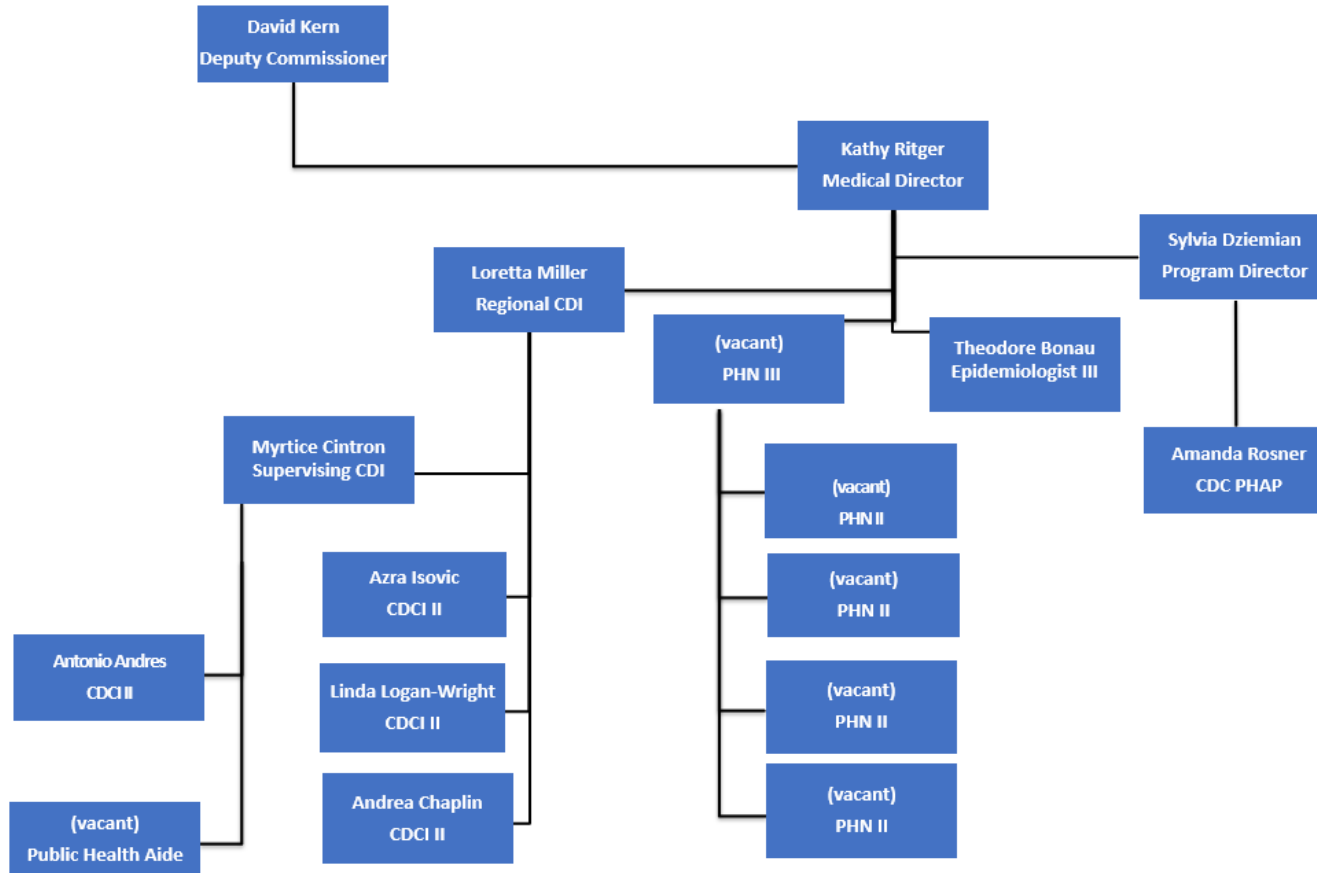
- Centers for Disease Control and Prevention (CDC)
 - Staff salaries
 - Office supplies and general operations
 - Training
 - Cannot fund clinical work or medications
- City of Chicago funding
 - Staff salaries
 - Delegate agencies (Hektoen/CCH, Heartland Alliance Health)
 - Medications



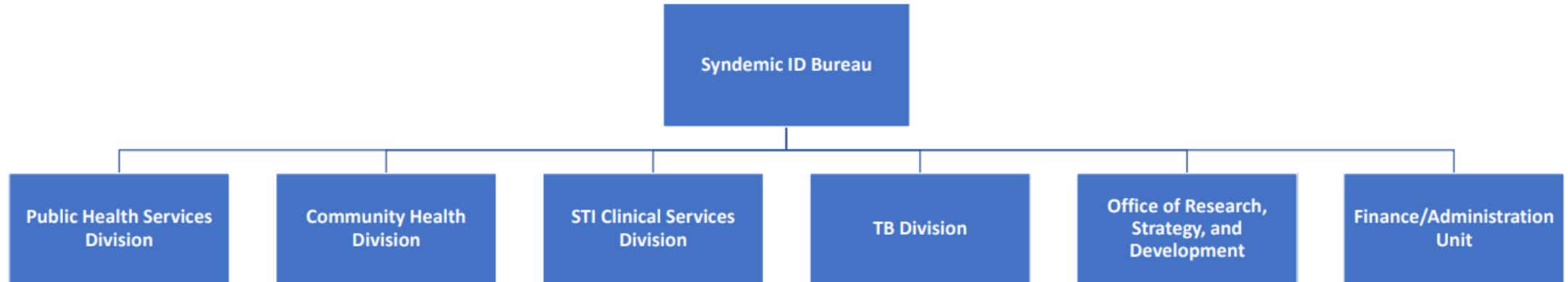
Trends in CDC TB Funding and Individuals Served by CDPH TB Program, 2009-2022



Tuberculosis Program Structure



Syndemic Infectious Diseases Bureau Structure



TB Program Delegate Agencies

- Hektoen/Cook County Health (CCH) for clinical services
- CDPH TB clinics closed in 2012
- Heartland Alliance Health (HAH) for housing

★ Program Priorities

1. Identification, management and treatment of **TB disease**
2. Finding and screening persons who have had **contact with people with TB disease**
3. Screening, testing and treatment of other selected **persons and populations at high risk for latent TB infection**
 - Newcomer/Immigrant evaluations
 - Others at risk (SUD, congregate settings)

Other essential program activities

- Surveillance
- Technical assistance
- Training and education

 Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™



Morbidity and Mortality Weekly Report (MMWR)

CDC

Essential Components of a Public Health Tuberculosis Prevention, Control, and Elimination Program: Recommendations of the Advisory Council for the Elimination of Tuberculosis and the National Tuberculosis Controllers Association

Recommendations and Reports / July 31, 2020 / 69(7);1-27

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★ TB Program Operations

- New case reports
 - Compiling case background information
 - Establishing patient contact
 - Initiating case management
 - Sputa collection at monthly intervals
 - Medication oversight (typically, six to nine months) and refills
 - Assessment for barriers to treatment completion
 - Directly observed therapy (DOT)
 - Referral to Chest Clinic or follow up with private providers
 - Transportation to Chest Clinic appointments
- Contact Investigation
 - Interviewing the case-patient
 - Locating and interviewing contacts, testing
 - Transporting to Chest Clinic appointments
 - DOT for children <5 yrs old



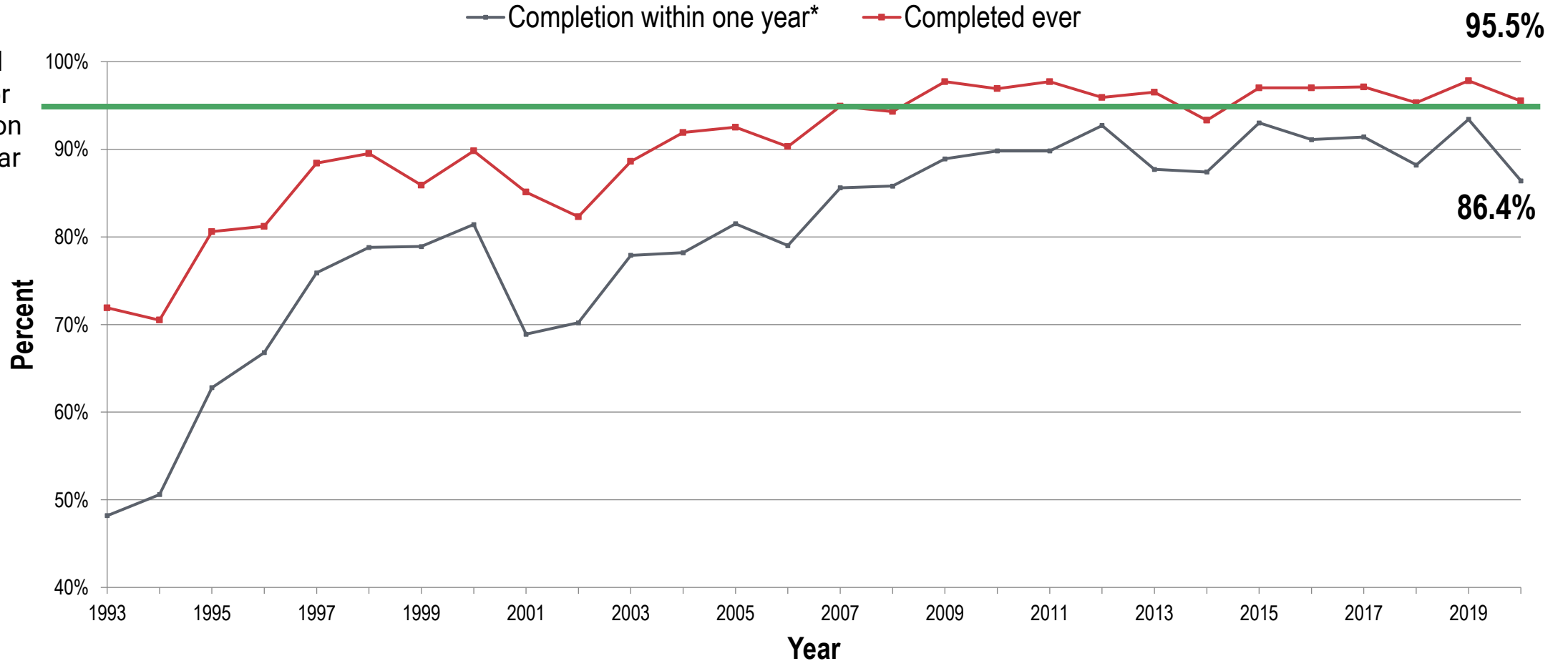


TB Program Operations (cont.)

- Linkage to care for at-risk populations
 - Referrals and technical assistance
- Surveillance
 - Report of Verified Case of Tuberculosis
 - Data reports
- Technical assistance
 - Hospitals
 - Individual clinicians
 - Community organizations
 - Community members
 - Anyone who reaches out with TB questions

★ Completion of TB Treatment, Chicago, 1993-2020

Current national target for completion w/in 1 year = 95%

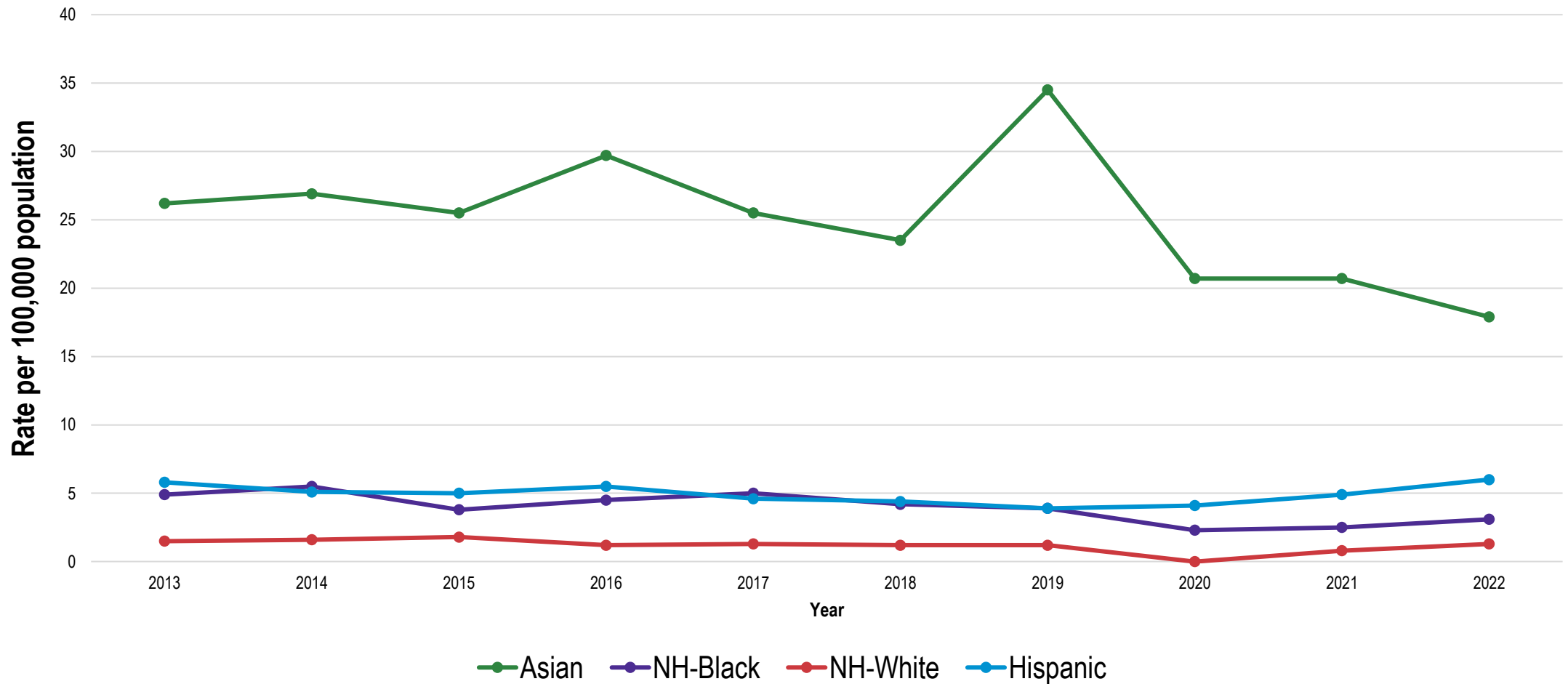




TB Program Tools and Resources

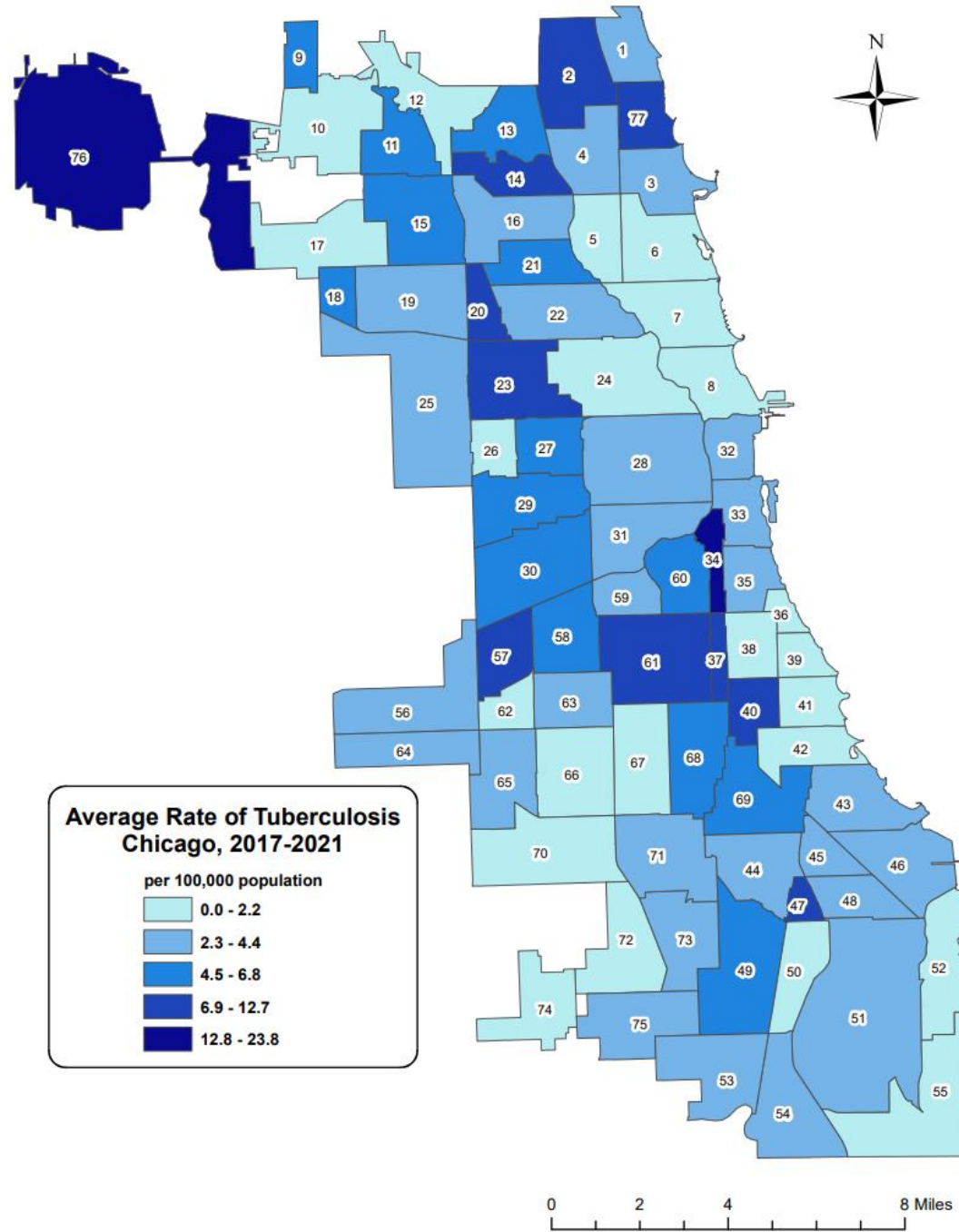
- Directly observed therapy (DOT)
 - In-person and video DOT (vDOT)
 - Supporting medication adherence
 - Consistent assessment of side-effects
- Language Line
 - Support for participants with interpreter services as needed
- Medication
 - Providing TB medications at no cost to participants (costs vary)
- Incentives and enablers
 - Nutritional support
 - Phones
 - Gift cards, cash
 - Fleet services
 - Six city of Chicago vehicles for transporting of participants and deliveries

★ TB Cases by Race and Ethnicity, Chicago, 2013-2022

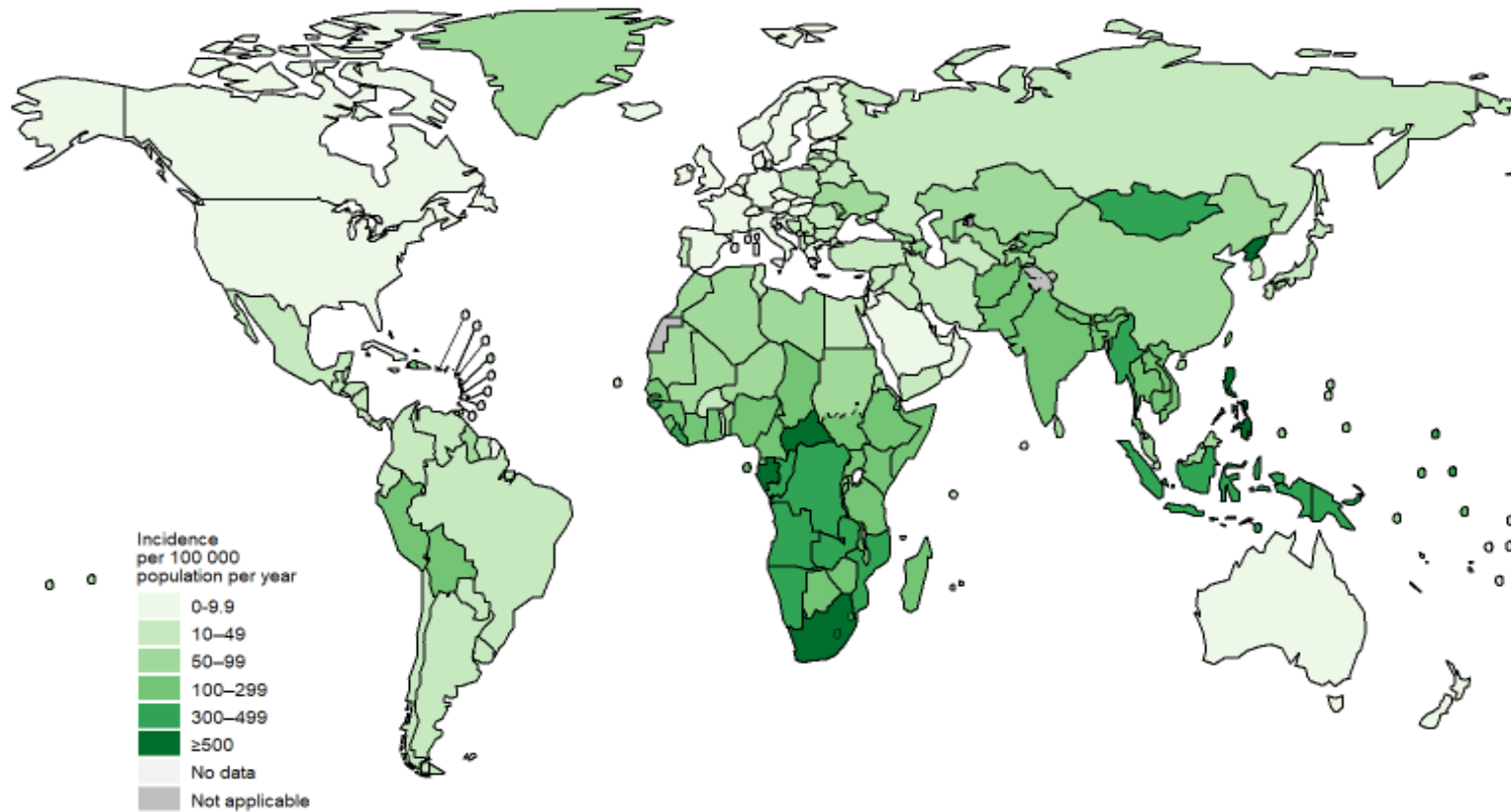




TB Case Rate by Chicago Community Area, 2017-2021



★ TB Case Rates by Country, 2021



<https://www.who.int/teams/global-tuberculosis-programme/tb-reports/global-tuberculosis-report-2022/tb-disease-burden/2-1-tb-incidence>

★ Working Toward TB Elimination

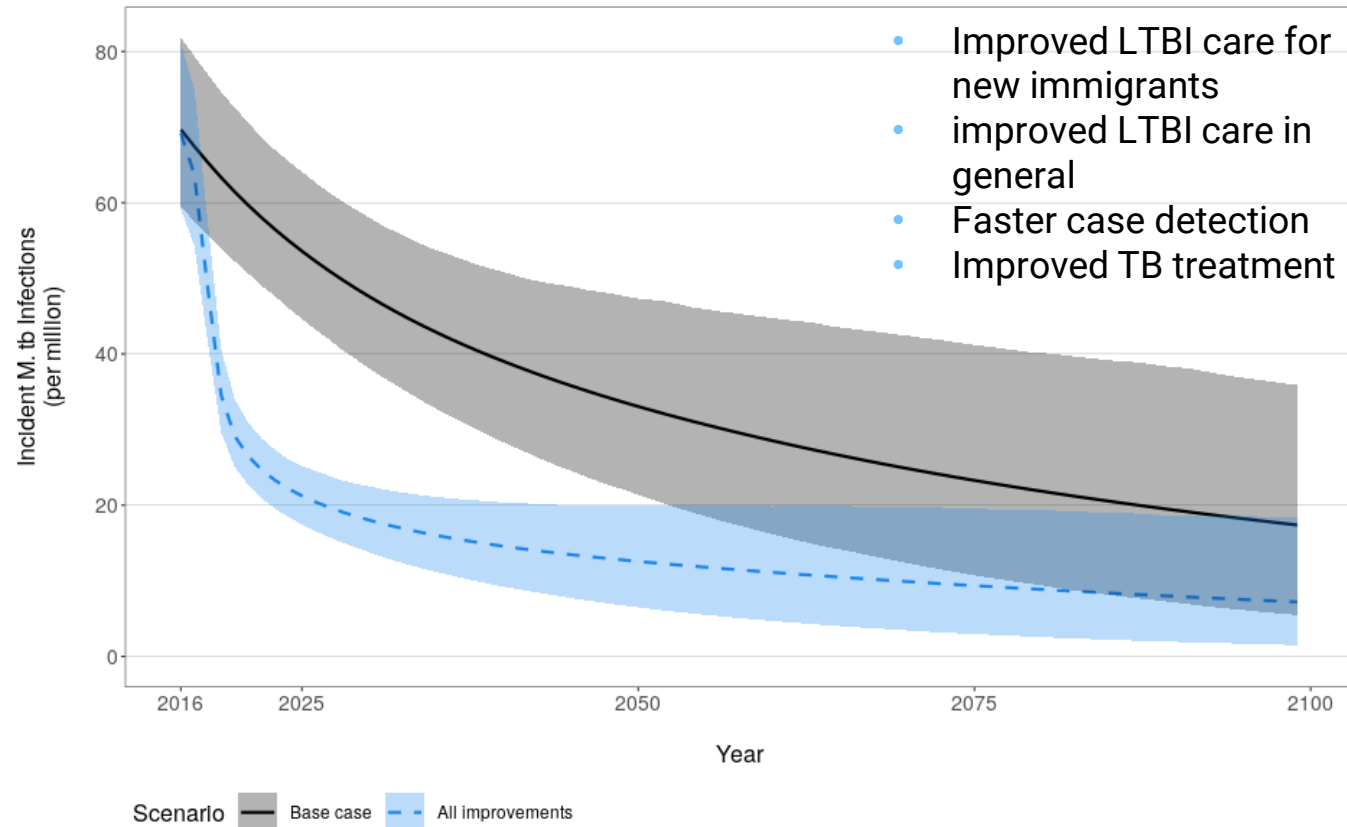
- We can't eliminate TB disease without addressing latent TB infection
- Approaches to latent TB Infection (LTBI)
 - What does a city-wide approach to screening and treatment look like?



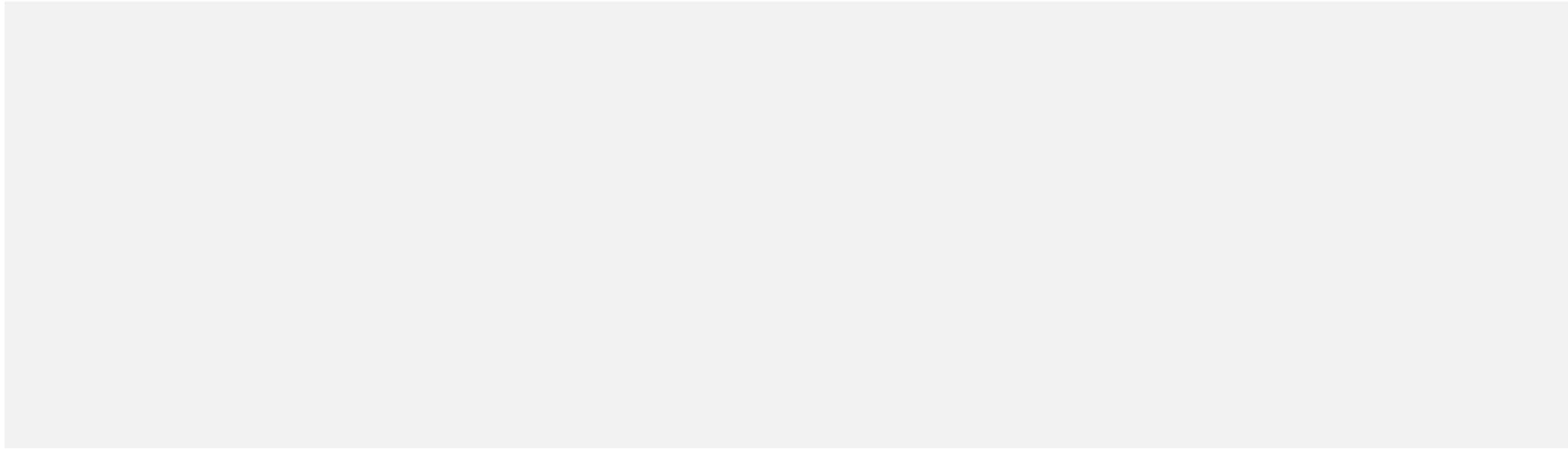
★ Planning for the Future

- How do we work toward TB elimination with today's resources?

Projected Incident M. tb Infections in the total US population, all age groups



Tabby web tool, accessed Jan 2023. This web tool was funded by the CDC, National Center for HIV, Viral Hepatitis, STD, and TB Prevention Epidemiologic and Economic Modeling Agreement (NEEMA, # 5U38PS004644-01).



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