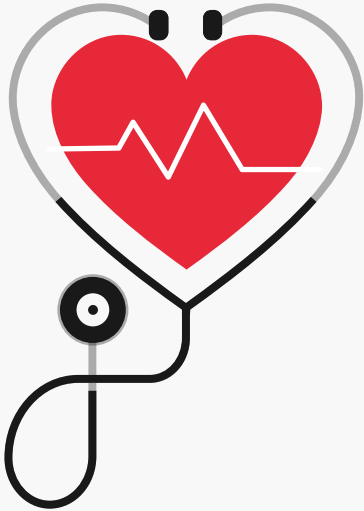


Global TB Burden

Dawn Gleeson-Roy



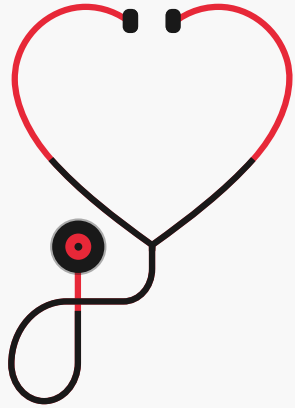
01



Project Goals



Project Goals



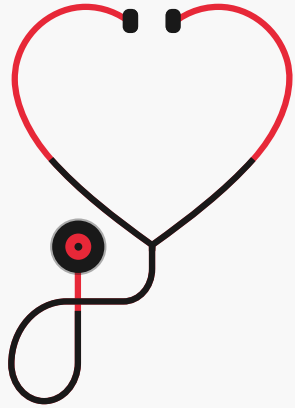
Assessing Population Density Effects

"Which countries demonstrate improvements in tuberculosis statistics, and conversely, which countries are still grappling with the tuberculosis epidemic based on the Global Tuberculosis Burden data spanning from 1990 to 2013?"

Trend Analysis for Tuberculosis Deaths

"What are the trends in Tuberculosis Deaths among both HIV-positive and HIV-negative cases, and what key milestones, turning points, and associations with global initiatives and interventions be identified around that time?"

Project Goals



Assessing Population Density Effects

"Which countries demonstrate improvements in tuberculosis statistics, and conversely, which countries are still grappling with the tuberculosis epidemic based on the Global Tuberculosis Burden data spanning from 1990 to 2013?"

Trend Analysis for Tuberculosis Deaths

Analyze trends in Tuberculosis Deaths among both HIV-positive and HIV-negative cases. Identify key milestones, turning points, and associations with global initiatives and interventions.

02



Process



Process

01

Download the
Dataset

02

Explore the Data
for interesting
information

03

Form and Test
Hypothesis

04

Build and Present
Dashboard



03



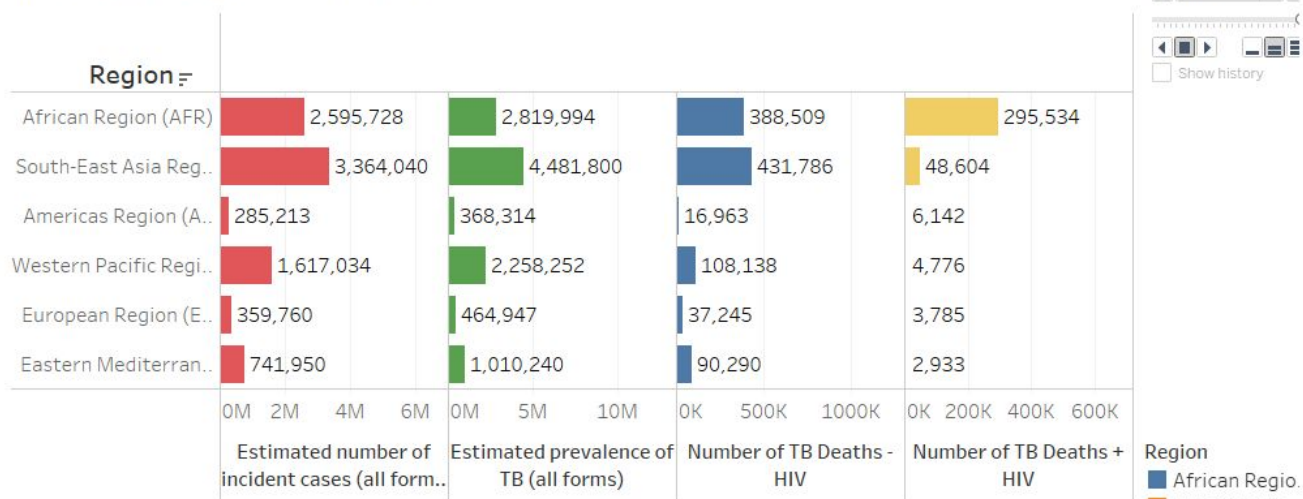
Results



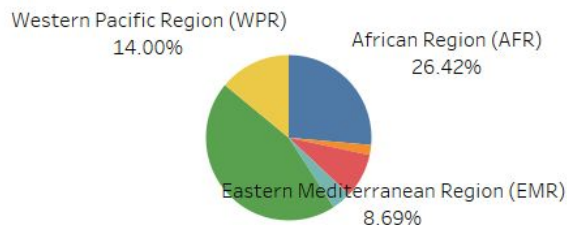
- Majority in Southeast Asia

- India's Influence

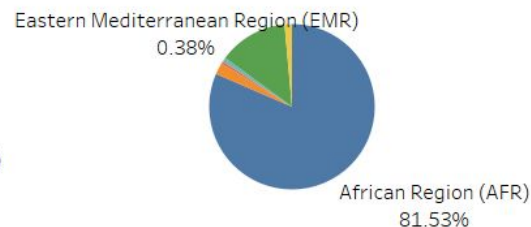
Region Info By Year - 2013



Region Death Toll - HIV



Region Death Toll + HIV



- India and China Prevalence
- Prevalence Per 100,000 People
- Population Density Impact

Cases VS. Cases Per Population

Estimated Prevalence of TB per country - 2005

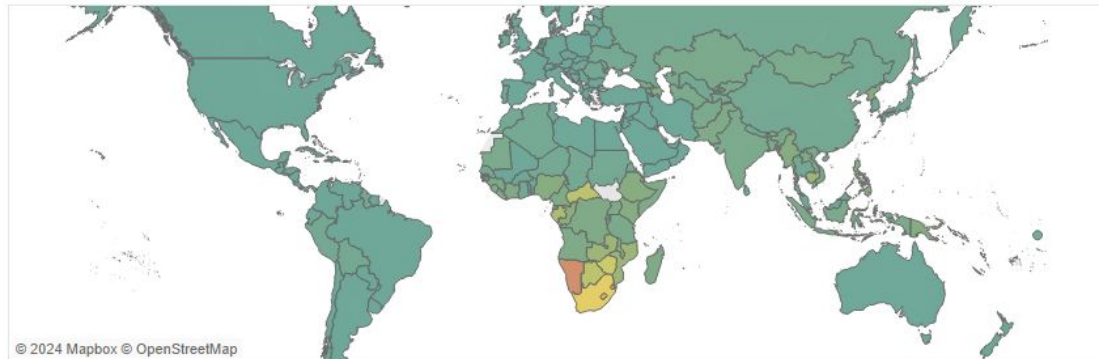


Estimated number c
0 2M

Year of Year
 < 2005 >
 < > < >
☐ Show history

Estimated incidence
0 1,66

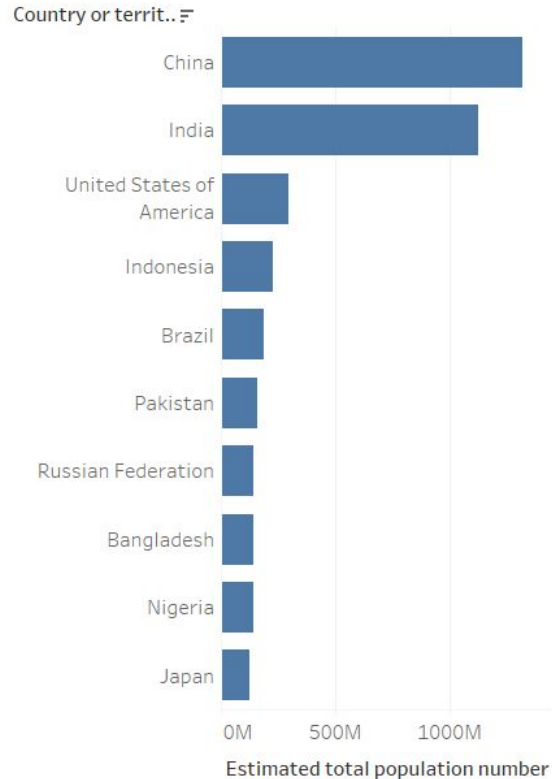
Estimated Incidence Per 100k Pop Per Country - 2005



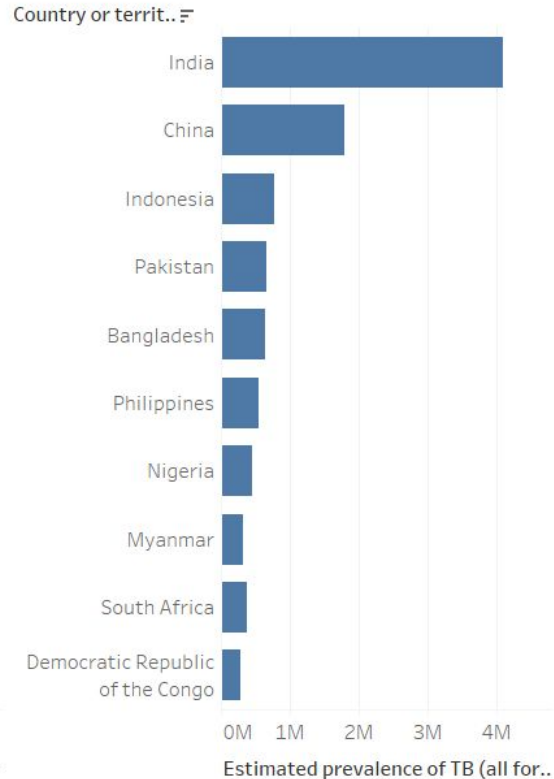
- Population Comparison
- India's Population Density
- Airborne Disease Spread

Population Vs Prevalence

Estimated Population of Countries
- Top 10 - 2005



Estimated Prevalence of TB Top
10 - 2005

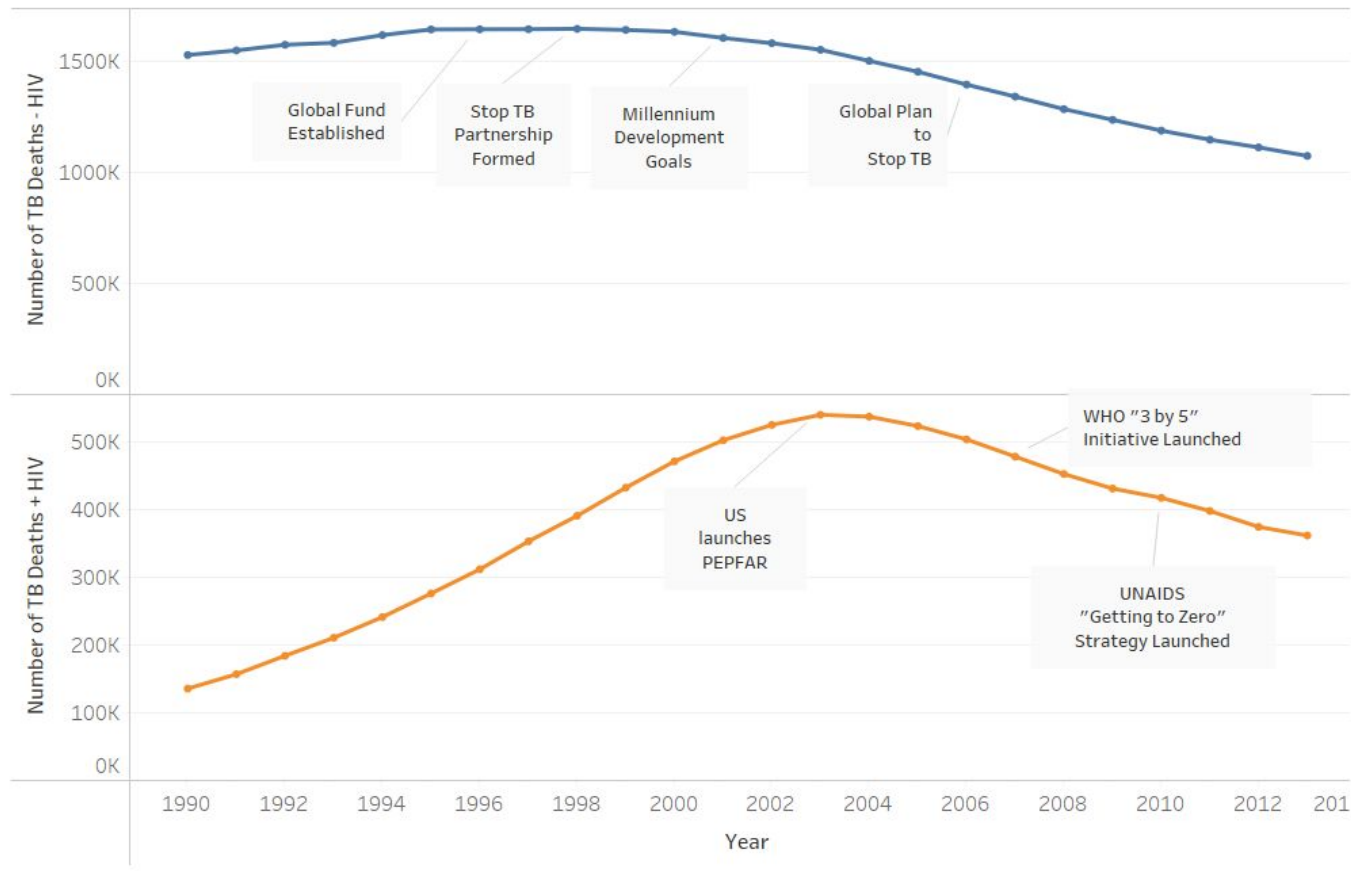


Year of Year
2005
Show history

- TB Deaths Trend Lines
- HIV-Negative Cases
- HIV-Positive Cases

Actions Taken

HIV vs. TB Death Toll Comparasion



- Percentages Relative to Total Population

- Absolute Numbers Increase

- Percentage Per Population Decrease

1990 VS. 2013

Start-End Pop vs. Death Per Region

Region	Year ..	Death Rate Percent	Estimated number of deaths from TB (..	Estimated total population number
African Region (AFR)	1990	0.069912095	351,637	502,970,338
	2013	0.041893646	388,509	927,370,706
Americas Region (AMR)	1990	0.005342521	38,817	726,564,416
	2013	0.001747291	16,963	970,820,511
Eastern Mediterranean R..	1990	0.031386688	118,652	378,032,242
	2013	0.014635964	90,290	616,906,419
European Region (EUR)	1990	0.004587766	38,930	848,557,031
	2013	0.004106169	37,245	907,052,722
South-East Asia Region (SEA)	1990	0.049333103	646,262	1,309,996,650
	2013	0.023276002	431,786	1,855,067,723
Western Pacific Region (WPR)	1990	0.021722305	332,699	1,531,602,660
	2013	0.005818849	108,138	1,858,410,405

Start-End Pop vs. Incident Per Region

Region	Year ..	Indicent Case Percent	Estimated number of incident cases (a..	Estimated total population number
African Region (AFR)	1990	0.272194381	1,369,057	502,970,338
	2013	0.279901876	2,595,728	927,370,706
Americas Region (AMR)	1990	0.055255459	401,467	726,564,416
	2013	0.029378531	285,213	970,820,511
Eastern Mediterranean..	1990	0.136112729	514,550	378,032,242
	2013	0.120269457	741,950	616,906,419
European Region (EUR)	1990	0.042952470	364,476	848,557,031
	2013	0.039662531	359,760	907,052,722
South-East Asia Region (SEA)	1990	0.219963921	2,881,520	1,309,996,650
	2013	0.181343245	3,364,040	1,855,067,723
Western Pacific Region (WPR)	1990	0.162902055	2,495,012	1,531,602,660
	2013	0.087011695	1,617,034	1,858,410,405

- Majority in Southeast Asia

- India's Influence

Future Forecasting



04



Challenges



Challenges

Ensuring Data Quality

In regards to null values,
outliers, and inconsistencies in
the data types



Compact Data Presentation

It was difficult to fit all of
the information I wanted
to into the dashboard

05



Future Goals



Future Goals

GPD per Capita

Identify emerging patterns and variations to inform targeted interventions



2014 Onwards

Identify emerging patterns and variations to inform targeted interventions.



Health Care Plan

Develop insights into the effectiveness of healthcare policies.