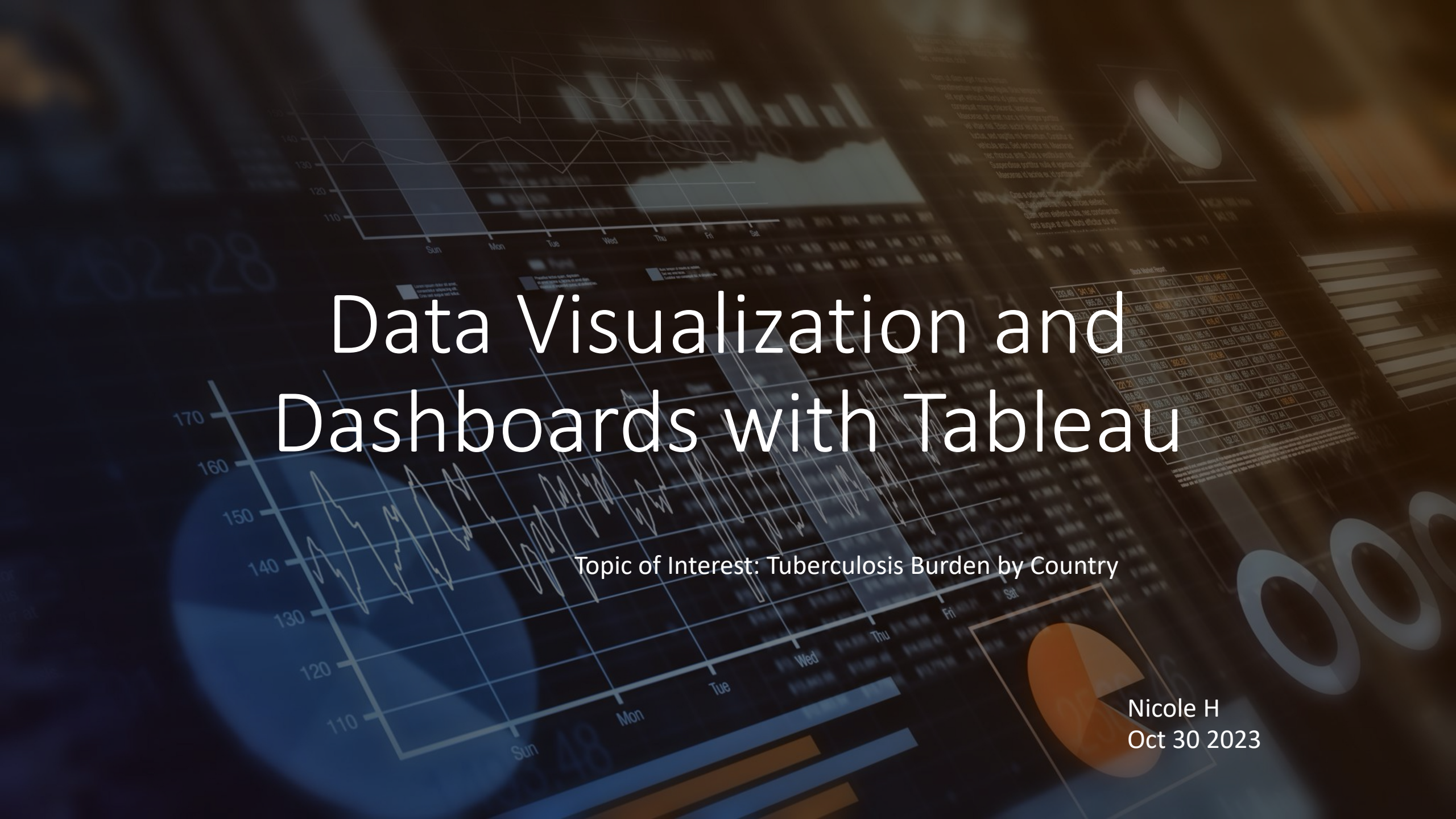
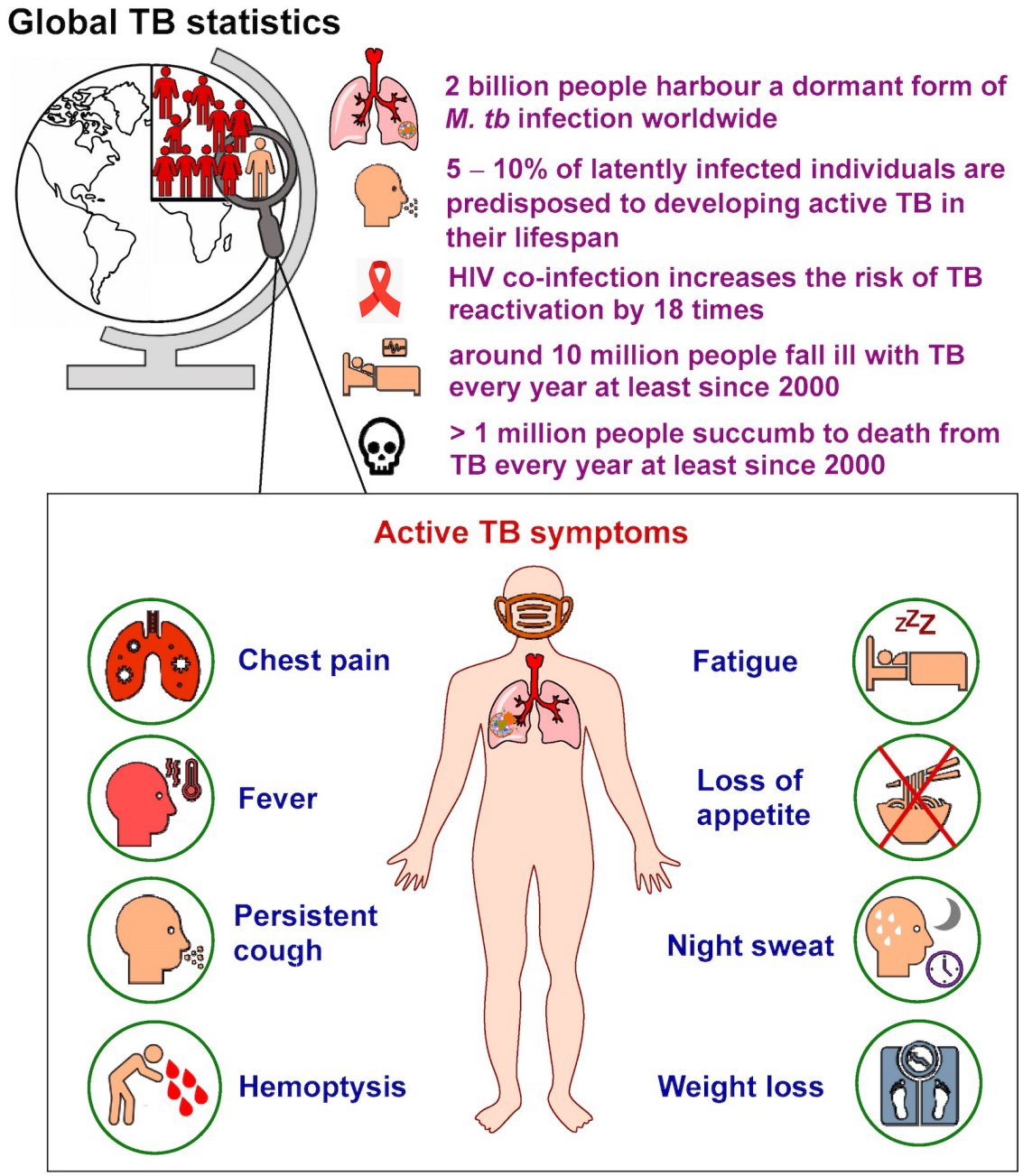


# Data Visualization and Dashboards with Tableau

Topic of Interest: Tuberculosis Burden by Country

Nicole H
Oct 30 2023

# What is Turberculosis



# Key Definitions:

**Incidence** refers to the number of new cases of a disease within a specific period.

**Prevalence** refers to the total number of existing cases of a disease within a population at a specific point or over a specific period.

**Mortality** is the measure of the number of deaths caused by a particular disease within a given population in a specific time.

# In the Context of Tuberculosis:

**Incidence** would measure the rate of new tuberculosis cases occurring within a specific time frame in a population.

**Prevalence** would give an indication of the total number of existing tuberculosis cases at a particular point or over a certain period in a population.

**Mortality** would specifically measure the number of deaths caused by tuberculosis within a given population.


# World Tuberculosis Day 2023

24 March 2023


## High-level leadership and action to end TB

2023: the year to shine a spotlight on ending TB and the suffering it causes to millions, and to call for comprehensive and universal care for those affected.  The 2023 UN High-Level Meeting on TB at the General Assembly in September will bring together Heads of State, and provides the opportunity to mobilize political and social commitment to ramp up progress against these ancient diseases.  It is our collective responsibility to confront inequalities and put an end to this preventable and curable disease.

## Urgent investment of resources, support, care and information are vital to ensure universal access to TB care for research

This is especially critical in the context of the COVID-19 pandemic, and ongoing conflict and socioeconomic crises, that has put End TB progress at risk, and to ensure equitable access to prevention and care in line with WHO's drive towards achieving Universal Health Coverage. More investments towards supporting the rollout of WHO-recommended TB preventive treatment options, shorter TB treatment regimens, rapid molecular diagnostics and tests for TB infection, and other innovations and digital tools will lead to improvements in health outcomes and save millions of lives. Importantly, investments in research and innovation are vital to fast-track efforts to reach the end TB targets.

## Tackling health inequities to ensure health for all

The COVID-19 pandemic has drawn attention to the deep disparities that persist between and within countries. People with TB are among the most marginalized and vulnerable, facing barriers in accessing care.  WHO is calling for global action to address health inequities for people with TB and other diseases.


## Ending TB requires concerted action by all sectors

To provide the right services, support and enabling safe environment in the right place, at the right time. TB is mainly concentrated in settings beset by poverty and other social and economic challenges and in the most vulnerable populations. Poverty, undernourishment, poor living and working conditions, among others, affect how people fall ill, develop TB and cope with the demands of treatment (including medical, financial and social), and influence the health outcomes they face. Thus, progress in combating TB and its drivers cannot be achieved by the health system alone and requires firm political commitment at the highest level, strong multisectoral collaboration (beyond health), and an effective accountability system.

# Results

1. Trends in Tuberculosis Incidence, Prevalence, and Mortality Rates
- Answer: Over the analyzed period:
- Incidence dropped from 130 to 110 per 100,000 population.
- Prevalence decreased from 220 to 140 per 100,000 population.
- Mortality reduced from 31 to 20 per 100,000 population globally.

2. What is the region with the Highest Mortality Rate (with and without HIV factor)
- Answer: AFRINIC region exhibits the highest mortality rate.

3. Correlation between Incidence and Mortality
- Answer: A positive correlation exists between incidence and mortality rates.

4. Higher the number of methods of detection, lower the incidence, prevalence and mortality rates.

# Challenges

- 1. HIV Data Null Values: The challenge arose from numerous null values in the HIV data, impacting the accurate assessment of the correlation between HIV and tuberculosis.
- 2. Data Integrity for Deriving Rates: The presence of null values in methods used to derive incidence, prevalence, and mortality rates hindered determining regions or countries with the most effective detection practices. Retaining these null values highlights gaps in tuberculosis detection methodologies.

# Future Goals

- 1. Plan to utilize APIs for gathering current data beyond 2013, assessing any changes in the scenario.
- 2. Investigate the spike in incidence and mortality observed between 1998-2003 for potential events or factors influencing these trends.