



INTRODUCTION TO PUBLIC HEALTH

LCHS 4008

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ASSIGNMENT 1 - EVENT DISCUSSION
GROUP 2

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INTRODUCTION

- Tuberculosis (TB) is serious infectious disease caused by *Mycobacterium Tuberculosis*.
- It mainly affect the lungs but can also affect
- TB spreads through the air when a person with an active Pulmonary coughs or sneezes, tiny droplets containing bacteria released into the air..
- It remains a global health problem but can be prevented and treated.

(WHO, 2025)

<https://newsroom.osfhealthcare.org/tuberculosis-symptoms-spread-and-safety-tips/>



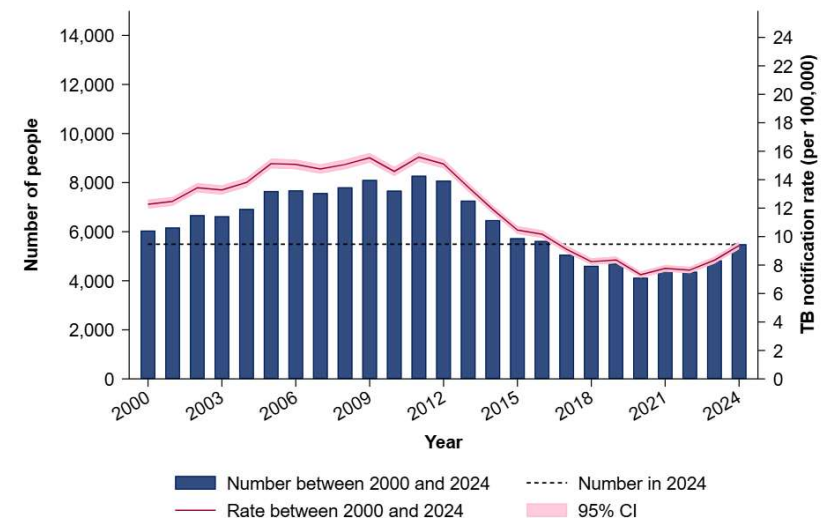
National TB Surveillance System (NTBS): A real time, web-based system for collecting clinical, laboratory and epidemiological data for all notified TB cases (UK Health Security Agency, 2024).

Morbidity Monitoring (TB Case): Morbidity is measured by tracking the number of new TB cases, confirmed diagnosis and hospital admissions. Healthcare services such as NHS England report TB cases to national database for monitoring (ONS, 2023)

Mortality Monitoring (TB Deaths): Deaths related to TB are recorded through national death registration systems. Data is analysed by the Office for National Statistics to monitor TB mortality trends in the United Kingdom (ONS, 2023)

Main Approaches and Strategies Used To Measure Tuberculosis in the UK

The UK employs several, often overlapping systems to measure morbidity (illness) and mortality.



Main Approaches and Strategies Used To Measure Tuberculosis in the UK

- **Screening and Early Detection Programs:** Screening programs identify TB in high-risk populations using chest X-rays and laboratory tests, this helps detect cases early and prevent transmission (UKHSA, 2023).
- **International Reporting and Monitoring:** The UK reports TB data to the World Health Organisation for global monitoring and comparison of TB incidence and mortality (WHO, 2024).



Statistics and Data on Tuberculosis (TB) in United Kingdom



<https://www.gov.uk/government/publications/tuberculosis-in-england-2023-report-data-up-to-end-of-2022/tb-incidence-and-epidemiology-england-2022>

- In 2024, around 5,490 tuberculosis cases were reported in England, showing an increase of about 13% compared with 2023, when approximately 4,850 cases were recorded (UK Health Security Agency, 2025).
- The TB incidence rate in England increased from 8.5 cases per 100,000 population in 2023 to about 9.5 per 100,000 in 2024, indicating a gradual rise in TB incidence in recent years (UK Health Security Agency, 2025).
- Mortality: In 2024, 4.6 of people diagnosed with TB died during or shortly after treatment (GOV.UK).
- Compared with the global average, the UK TB morbidity rate is much lower, with about 7-9 cases per 100,000 population, while the global average is around 100 cases per 100,000 people. (UKHSA, 2025).

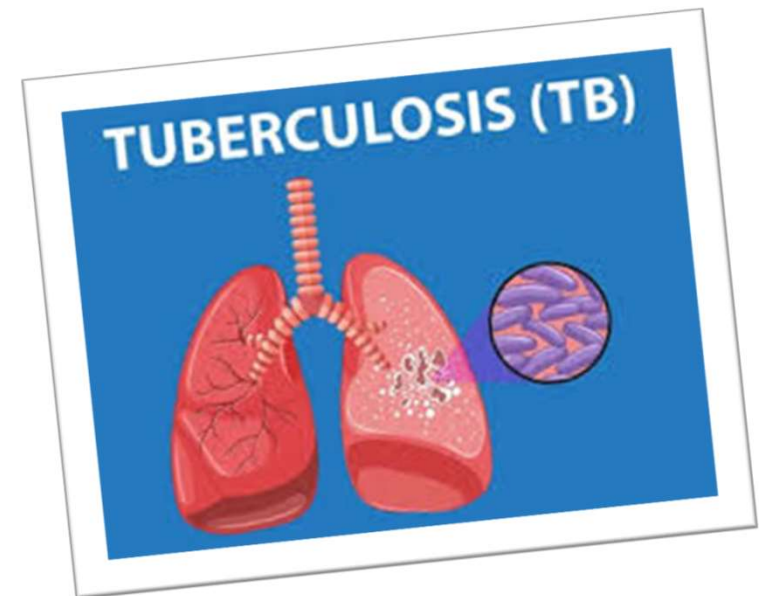
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- UK Health Security Agency (2024) *Tuberculosis in England: Annual report 2024*. London: UKHSA.
- Office for National Statistics (2023) *Tuberculosis statistics in the UK*. London: ONS.

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Monitoring TB means tracking cases of tuberculosis to prevent its spread and protect public health.

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Surveillance Systems



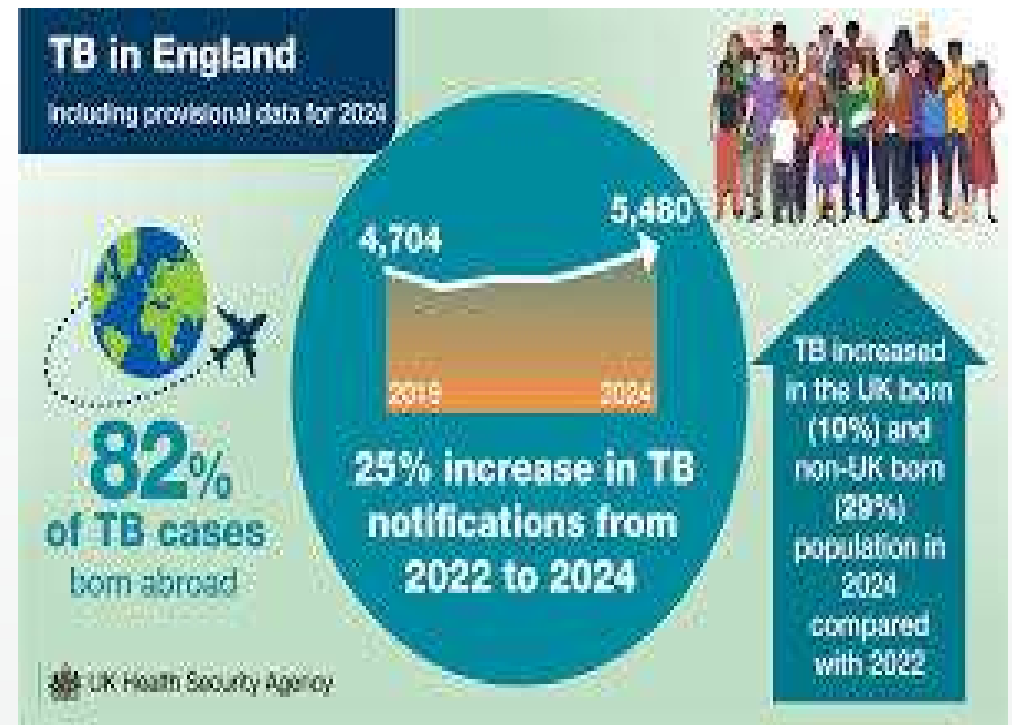
TB Cases reported by hospitals, clinics, and labs to UKHSA



Data shows who, where, and trends over time



Helps identify outbreaks and control measures



Screening & Testing

- High-risk people are screened regularly (immigrants from high – Tb countries, healthcare workers)
- Tests include Chest X-rays, sputum tests, and tuberculin skin tests
- Early detection is essential to stop TB from spreading



Contact Tracing

Close contacts
of TB patients
are tested

Prevents further
transmission in
the community



Data Analysis & Challenges

Data analysed to see trends and evaluate TB control programs;
Reports are published to inform healthcare providers and the public

Delayed diagnosis or underreporting can make monitoring harder;
Hard-to-reach populations may not access healthcare, making detection and control difficult;



References

- 1. UK Health Security Agency (UKHSA). Tuberculosis (TB) surveillance and monitoring in the UK. 2025.

<https://www.gov.uk/government/collections/tuberculosis-tb>

- 2. Public Health England. Tuberculosis: guidance, data and analysis. 2024.

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- 3. World Health Organization (WHO). Tuberculosis – Monitoring and Surveillance.

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<https://www.who.int/teams/global-tuberculosis-programme/surveillance>

- 4. Lumb, R. & Jutte, P. Tuberculosis in the UK: Surveillance and Control. British Medical Journal (BMJ), 2023; 380:e072345.

- <https://indiafightstb.com/the-importance-of-contact-tracing-in-tuberculosis-control/>

TUBERCULOSIS

EXPLAIN HOW
TUBERCULOSIS CAN BE
CONTROLLED



EARLY DETECTION AND EFFECTIVE TREATMENT

Controlling Tuberculosis Through Prompt Diagnosis & Treatment

- Early detection through **screening programmes** (high-risk groups, close contacts) (WHO,2023).
- Use of **sputum microscopy, GeneXpert, and chest X-rays** (CDC,2022).
- Prompt initiation of **standard anti-TB therapy (6-month regimen)** (WHO,2023).
- Directly Observed Therapy (DOT) to improve adherence (CDC,2022).
- Monitoring and managing **drug-resistant TB (MDR-TB)** (WHO,2023).

PREVENTION STRATEGIES

Preventing the Spread of Tuberculosis

- **BCG vaccine** for infants and high-risk groups (WHO,2023).
- Infection prevention and control (IPC) measures in healthcare settings (UKHSA,2023).
 - Adequate ventilation
 - Use of face masks (especially in active TB cases)
- Contact tracing and screening of exposed individuals (UKHSA,2023).
- Preventive therapy for latent TB infection (LTBI) (CDC,2022).

PUBLIC HEALTH & COMMUNITY INTERVENTIONS

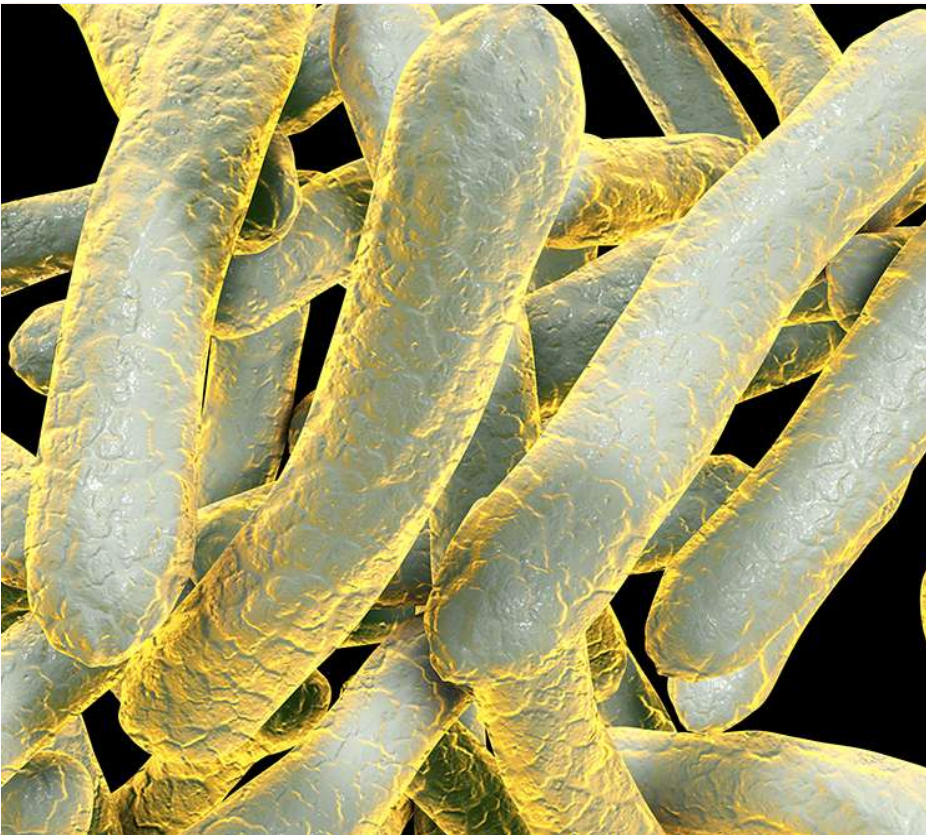
Strengthening Public Health Measures

- Health education and community awareness (WHO,2023).
- Reducing stigma associated with TB (WHO,2023).
- Improving living conditions (reducing overcrowding) (UKHSA,2023)
- Strengthening national TB control programmes (WHO,2023).
- Collaboration with global initiatives such as the **World Health Organization End TB Strategy** (WHO,2023).

REFERENCE

- World Health Organization (2023) *Global tuberculosis report 2023*. Geneva:WHO.
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TUBERCULOSIS (TB)

IS AN INFECTIOUS DISEASE PRIMARILY AFFECTING THE LUNGS, THOUGH IT CAN IMPACT OTHER PARTS OF THE BODY, SUCH AS THE KIDNEYS, SPINE, AND

BRAIN. IT IS CAUSED BY A BACTERIUM CALLED MYCOBACTERIUM

TUBERCULOSIS.

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What Policy and Strategies are available to the UK Government to maintain public health

Public Health in the United Kingdom focuses on protecting and improving the health of the population while reducing health inequalities.

The UK government implements various policies and strategies through organisations such as the Department of Health and Social Care (DHSC), NHS England

The UK Health Security Agency (UKHSA). These policies aim to prevent disease, promote healthy lifestyles, and strengthen health protection systems (NHS England, 2024).

Prevention and Health Promotion Strategies

- < Vaccination (Primarily Prevention)
- < Educating parents and communities about BCG vaccination.
- < Ensuring vaccination within 4 weeks birth for eligible infants.
- < Targeting high-risk communities (GOV.UK).

Key UK Programmes

- < Latent Tuberculosis Infection
- < Improving health outcomes through prevention and early intervention
- < Reducing health inequalities across communities



Digital Public Health Strategy

Digital approaches support disease surveillance, health information dissemination, and decision-making within healthcare system.

Example

- < digital tools and data analysis allow public health organisations to track health trends
- < Identify risk factors
- < Improve policy responses (GOV.UK)

Reducing Health Inequalities Strategy

- < Cultural
- < Social
- < Communication barriers
- < Education
- < Housing
- < Employment

Infectious Disease Control Strategies

- < Surveillance systems
- < Vaccination programmes
- < Public awareness campaigns(GOV.uk)

Conclusion

Public health policies in the UK focus on prevention, reducing health inequalities, strengthening disease surveillance, and promoting healthier lifestyles. Collaboration between healthcare organisations, government agencies, and communities is essential to ensure effective implementation of these strategies and to address emerging public health challenges.

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- < Public Health England (2019) PHE strategy 2020 to 2025. London: GOV.UK. Available at: <https://www.gov.uk/government/publications/phe-strategy-2020-to-2025> (Accessed: 10 March 2026).
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