

Tuberculosis in Manchester



Joint Strategic Needs Assessment (JSNA)

5 June 2024



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Introduction

Introduction: What is the Joint Strategic Needs Assessment (JSNA)?

The Local Government and Public Involvement in Health Act 2007 (as amended by the Health and Social Care Act 2012) states that every local authority must produce a **Joint Strategic Needs Assessment (JSNA)** covering the population(s) within its area.

Local Health and Wellbeing Boards are statutorily responsible for assessing the Health and Wellbeing needs of their population and for publishing a JSNA.

Local partners are responsible for agreeing the content, format and frequency of update of the JSNA. There are no national standards for this.

Local authorities, Integrated Care Boards (ICBs) and NHS England must have regard to the JSNA when planning health and care services for the populations they are responsible for.

This 'mini' Joint Strategic Needs Assessment (JSNA) provides an overview of the infectious disease of tuberculosis in Manchester. By looking at both data and evidence, this JSNA outlines the epidemiology of tuberculosis and how we can best address it as a local authority.

Through outlining key risk factors and populations, through data and literature this JSNA will help with the production of a targeted and purposeful approach to tackling tuberculosis in the region.

Limitations of the Data in the JSNA

This JSNA has attempted to retrieve the most up to date sources to supplement information and protocols for tuberculosis (TB) screening in Manchester that are in line with national expectations.

As the diagnosis, treatment and recovery period for TB is extensive, the publication of data often takes time. Furthermore, this means that the long-term effects of the global coronavirus pandemic on TB incidence is still difficult to determine.

For some of the data produced, due to smaller numbers it must be interpreted with caution.

So, the data available might not always reflect the most recent cases but it will be the earliest available data.

The data will support the suggestions and recommendations made from this report.

As new data emerges, the JSNA will be updated accordingly.

What is Tuberculosis?

Tuberculosis (TB) is a bacterial infection and mainly affects the lungs. This is known as pulmonary TB. However, a tuberculosis infection can develop in other parts of the body such as the abdomen, nervous system, and brain. This is known as extrapulmonary TB.

In both cases the infection is spread through prolonged close contact with a sputum-smear positive case (the evidence of bacteria in a sputum sample often indicating TB disease) and inhaling tiny droplets from a cough or sneeze from an infected body.

TB can be active and contagious and the incubation period for this bacteria is usually 3-8 weeks. However, TB can also be latent (LTBI), show no symptoms and live in the body for many years before becoming infectious. The infection can often become apparent when the immune system is weak or if an individual has just been diagnosed with another infection.

The WHO have also estimated that around a quarter of the world's population could be living with Latent Tuberculosis Infection (LTBI).

What is Tuberculosis? (continued)

TB is defined by the World Health Organization (WHO) as the second leading infectious cause of death globally after COVID-19.

The national picture demonstrates that TB is not evenly distributed around the country. Instead, it is concentrated to urban areas, disproportionately affecting the most deprived populations in the UK. This supports why the WHO define TB as a 'disease of inequality'.

The WHO estimated in 2022 that 10.6 million people globally fell ill with TB and 1.3 million people died from the disease. Such figures highlight the magnitude of the disease on a global scale.

Although the rates of TB in England have seen a decline since 2011, in 2023 cases increased by 10.7% from the previous year. The current trajectory in the UK is not in line with the [WHO aim to achieve elimination of the disease by 2035](#).

Symptoms and Treatment for Tuberculosis

The symptoms of TB include (but are not limited to) a persistent cough lasting more than 3 weeks, weight loss, night sweats, high temperature, tiredness and fatigue, loss of appetite and swellings in the neck.

Treating TB can be a difficult process and requires around 6 months of regimented medication. This is split into two phases, an initial phase and a continuation phase. The length of treatment may need to be modified on the condition of the treatment.

TB medication is known to carry strong side effects. Some of these include; orange urine, tiredness, itchiness, visual disturbances. However, with consistent support many patients are able to manage the side effects of the drug effectively.

Tuberculosis Screening

Screening for TB can focus on detecting active TB disease or latent TB infection (LTBI).

LTBI can be detected using tuberculin skin tests (TST) or interferon gamma release assays (IGRAs) and screening for active TB disease of the lungs usually involves chest X-rays.

The current pre-entry screening process for active TB will only cover migrants and asylum seekers that have come from a formal visa route, from a country with a high TB incidence (more than 40 cases per 100,000 people) or intend to remain in the country for more than 6 months. However, pre-entry TB screening is a valuable contribution to the reduction of TB in the UK.

However, at present pre-entry screening only detects active pulmonary TB at the time of screening and does not test for LTBI or for extra-pulmonary TB.

Many new cases of TB are often the result of reactivation of LTBI in new entrants once they are settled in the UK.

Bacillus Calmette-Guérin Vaccination

The Bacillus Calmette-Guérin (BCG) vaccine offers some protection against TB.

After being introduced in 1953 the BCG vaccine has undergone several changes in response to developing trends in TB epidemiology.

The vaccine is administered to babies and infants who are at increased risk of encountering TB. However, at present the vaccine is only 70-80% effective against more severe forms of TB. There is also little evidence to suggest the vaccine works well in those age 16 and above and to test alternative vaccines is a very expensive process.

The reason for this difference in effectiveness is largely believed to be due to environmental mycobacterial – in which different mycobacteria survives in different points of our lifetimes.

Therefore, wider prevention of TB needs to be understood and implemented to effectively manage incidence across the population. Reliance solely on vaccination is not a sustainable solution.

Multi Drug Resistant Tuberculosis (MDR-TB)

A patient diagnosed with active TB will be placed on a drug treatment lasting at least 6 months. TB can almost always be cured, provided that the medication is taken regularly, early in the diagnosis and for the entire course. If complete treatment is not taken, there is a risk of the patient developing drug-resistant TB which is a more difficult infection to treat. This is often referred to as **MDR-TB (multi-drug resistant TB)**.

Patients with drug-resistant TB experience longer infectious periods and treatment medication that leads to challenging side effects. MDR-TB requires more intensive drugs than the standard 6-month treatment.

At present, MDR rates have remained stable and made up only 1.9% of culture confirmed cases of TB in England (2021).

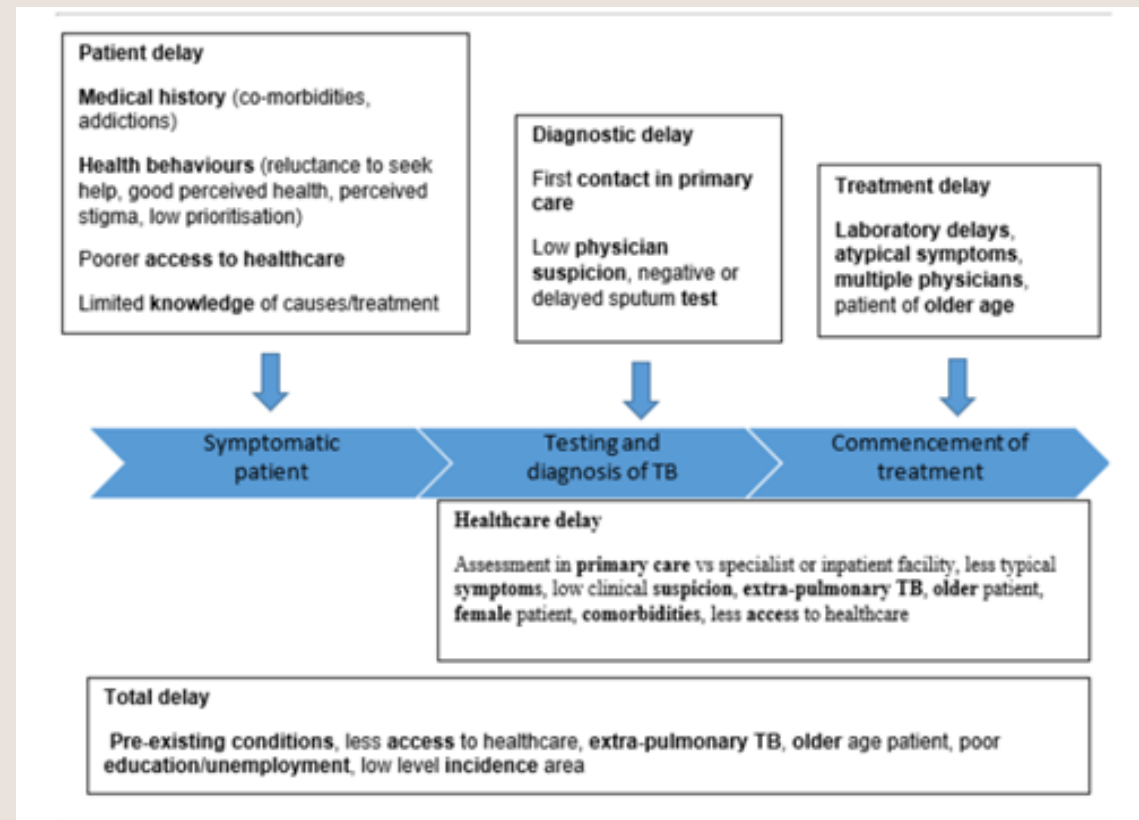
Failed treatment can also result in a costly cycle of repeated acute admissions and could potentially cause bed blocking within secondary care.

Ensuring proper adherence to treatment is an increasingly important aspect of the pathway of care, for both public health teams and wider society.

Delay in the Pathway of Care

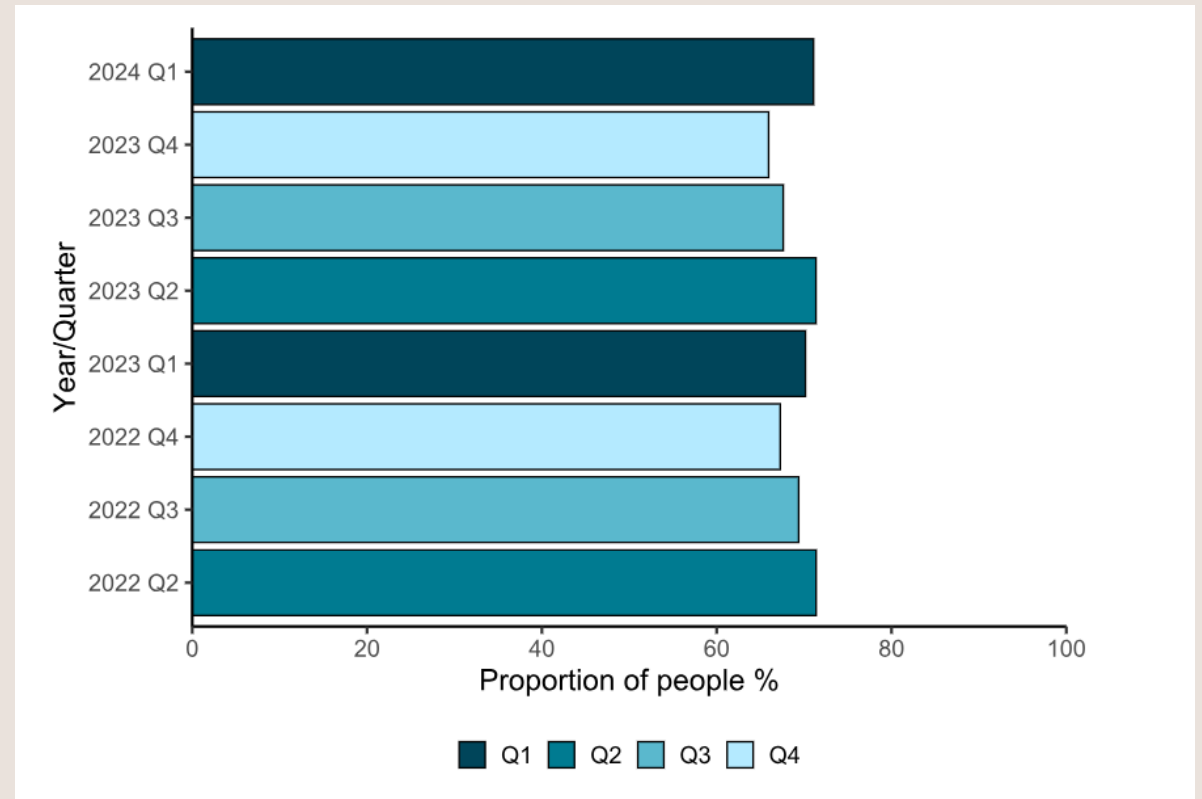
Treatment delay is calculated as the days difference between self-reported date of symptom onset and the date treatment started.

A delay in the diagnosis and treatment of TB directly affects the transmission of the disease within the community and the effects of the disease for the individual. This is outlined in more detail below.



Delay in the Pathway of Care

Proportion of pulmonary TB notifications starting treatment within 4 months, England, April 2022 to March 2024.



Directly Observed Therapy (DOT) and Video Observed Therapy (VOT)

For individuals that require more intensive support through their treatment of TB, there are effective behaviour interventions available to grant this.

Directly Observed Therapy (DOT) and Video Observed Therapy (VOT) present two methods to help observe and monitor the treatment of patients throughout their recovery period.

Factors such as mental health, employment, discrimination, and financial difficulty all influence adherence to treatment. Therefore, patients will often value the support and social connection that DOT can provide.

However, DOT is not without its challenges. Although a degree of social connection and support is provided, for marginalised patients, some of the root causes of fundamental barriers of adherence to treatment are not dealt with or tackled through DOT.

In response to a recommendation from the WHO to use Video Observed Therapy (VOT), as an alternative to DOT, studies have suggested that VOT offers a more acceptable, effective, and cheaper option for supervision of multiple daily doses compared with DOT.

It is important to acknowledge that not all areas of the UK qualify for VOT treatment and therefore having the option of both VOT and DOT can help to strengthen the patient pathway and support the continuity of care essential for TB recovery.

High Risk Groups and Factors of Tuberculosis

High Risk Factors and Groups: Overview

- Tuberculosis is a marker of health inequality and disproportionately affects the most marginalised populations of society.
- For example, 15% of people in England diagnosed with TB have at least one Social Risk Factor (SRF).
- Addressing the social and economic determinants of TB is essential to achieving the goal of national elimination.
- Public Health England has recently produced a valuable resource titled 'Tackling TB in inclusion health groups: toolkit for a multi-agency approach' (2024).
- This report embellishes the view that a co-ordinated and whole system approach is needed to successfully tackle TB. High risk groups require targeted action and commitment to achieve elimination targets.

High Risk Factors and Groups of Tuberculosis

High Risk Factors of TB (as outlined):

1. Current or a history of homelessness
2. Diagnosis of HIV

High Risk Groups of TB (as outlined):

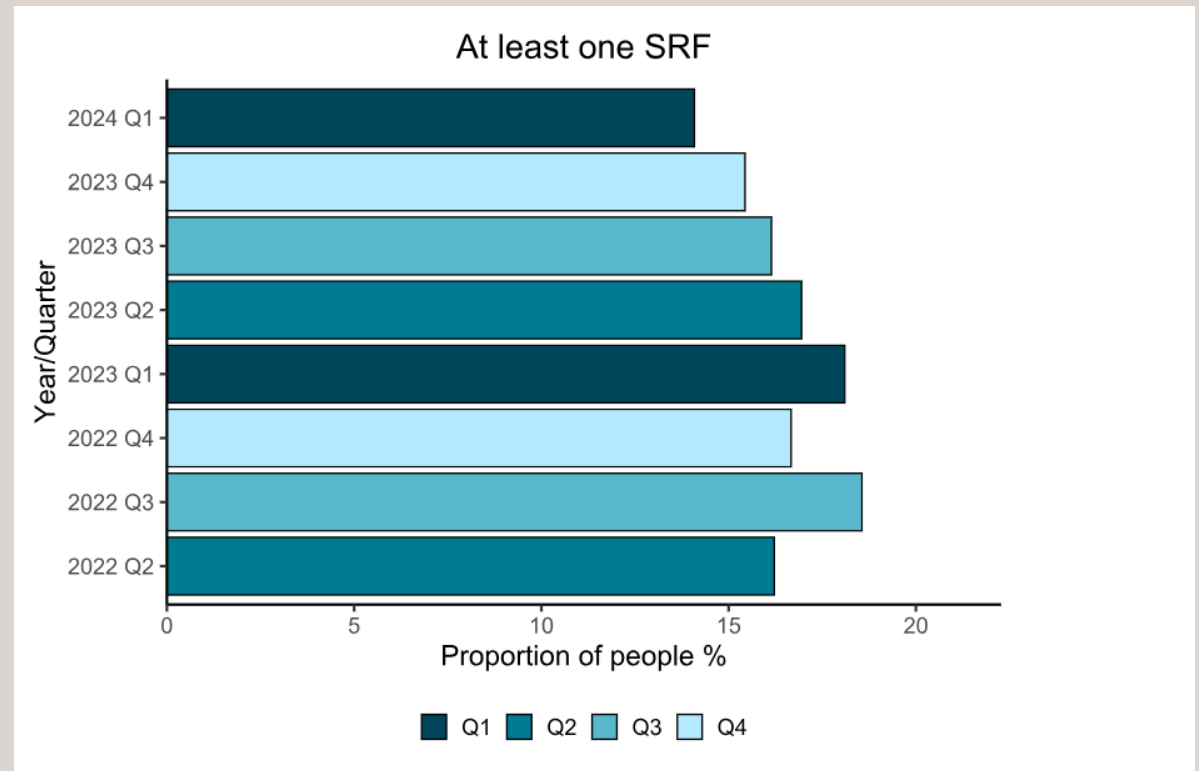
1. Asylum seeker or refugee status
2. Unaccompanied Asylum Seeker Children
3. Communities impacted by racial inequalities
4. Current or a history of imprisonment
5. No Recourse to Public Funds status

Other SRF to consider:

1. Mental health needs
2. Current drug and/or alcohol misuse

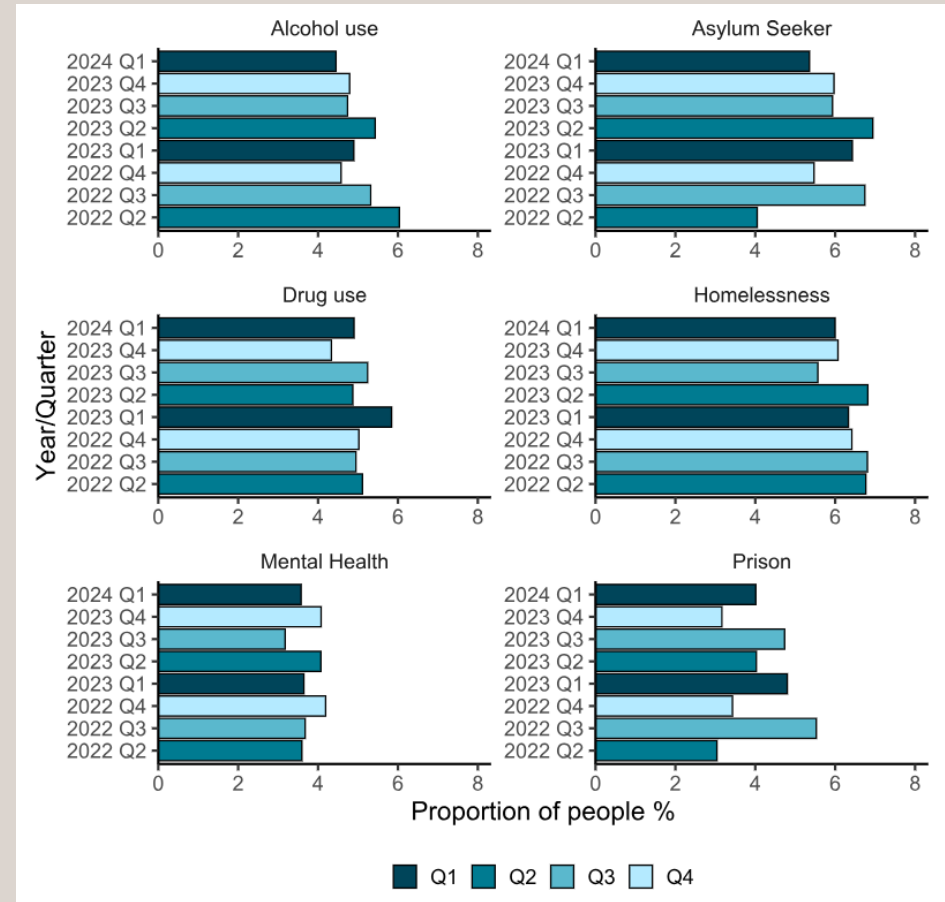
High Risk Factors of Tuberculosis: Data

Proportion of TB notifications with at least one Social Risk Factor (SRF), England, April 2022 to March 2024.



High Risk Factors of Tuberculosis: Data

Proportion of TB notifications (15 years or older) by SRF, England, April 2022 to March 2024.



High Risk Factors of Tuberculosis: Current or a history of homelessness

In 2023 it was estimated that approximately 300,000 people were experiencing homelessness in England. According to NICE life expectancy for homeless populations is 30 years less than the general population. Homeless individuals will often be in insecure or no accommodation at all, some will misuse drugs, and some will face different levels of vulnerability. Further barriers are created by poor access to healthcare and treatment, entrenched mistrust in systems, absence of trusted contacts and high levels of discrimination- all faced by those with a current or history of homelessness.

National Institute for Health and Care Excellence Tuberculosis guidance, adopts a 'broad and inclusive' definition of homelessness that includes people with TB in under-served groups as those who:

1. Share an enclosed space with people at high risk of undetected active pulmonary tuberculosis (APTb)
2. Have no means to safely secure and store prescribed medication.
3. Are without private space to self-administer the treatment
4. Are without secure accommodation to rest and recuperate in safety and dignity for the entire duration of treatment.

This definition challenges the typically rigid criteria and should warrant greater access to services than what we have previously seen. By widening the definition, this should in turn increase the number of individuals presenting to primary care when they experience symptoms. Consequently, this would also minimise transmission and strengthen the pathway of care for individuals experiencing homelessness.

High Risk Factors of Tuberculosis: Diagnosis of HIV

In 2019, it was estimated that 105,200 people were living with HIV in the UK, however only 94% are diagnosed. This means that 1 in 16 people living with HIV do not know. HIV is a high-risk factor for catching TB.

TB is often referred to as an 'opportunistic' infection and is more likely to occur in individuals who have weakened immune systems. As HIV weakens the immune system, those with a diagnosis are 20 times more likely to catch TB compared with those without a HIV infection. There is therefore a greater worry for those unaware of both a HIV infection and a TB infection. Stronger treatment may be required for such cases.

According to the WHO, TB is one of the leading causes of death among people with HIV- although where HIV medication is used the chances of catching TB are lowered. Therefore, a timely diagnosis of a HIV infection is crucial.

Research on the connection between HIV and TB is still in its infancy and more work needs to be done to understand how rates can be managed in this population.

High Risk Groups of Tuberculosis: Asylum seeker or Refugee status

When considering the approaches to treating and preventing TB we must consider the wider social and political factors that can change the population of the UK.

In the months between October 2023 and December 2023, 3,791 new entrants arrived in the UK. According to UNHCR statistics, as of November 2022, there were 231,597 refugees, 127,421 pending asylum cases and 5,483 stateless persons in the UK.

Crowded camps, perilous journeys, experiences of decreased nutrition, exposure to challenging environments and infectious diseases are all factors that contribute to the increased risk for asylum seekers and refugees and TB infections.

Latent Tuberculosis (LTBI) management is a critical part of control due to the lifetime risk of activating active tuberculosis faced by refugee populations – especially for those from high incidence countries.

Although the NHS is accessible to asylum seekers and refugees, significant barriers faced by this high-risk population still exist.

These include (but are not limited to):

- Language Difficulties
- Lack of familiarity and understanding of the UK healthcare system
- Low trust in government systems out of fear of deportation.

A whole system approach is therefore needed to tackle these barriers (amongst others) and increase the numbers of new entrants presenting to primary care when they experience TB symptoms.

High Risk Groups of Tuberculosis: Unaccompanied Asylum Seeker Children (UASC)

Unaccompanied asylum seeker children (UASC) are defined as children who are outside their country of origin to seek asylum in the UK and are separated from any parents or guardians.

It was estimated that in the year ending March 2021, there were 3,762 unaccompanied asylum-seeking children in the UK.

In the UK, it is statutory for all UASC to have an Initial Health Assessment (IHA). This intends to identify previously unrecognised or unmet health needs and provides a clear plan on how this should be managed.

As per NICE guidance, a child or young person presenting from a country with a TB incidence of 40/100,000 or greater – including (but not exclusive to) Ethiopia, Eritrea, Somalia, Sudan and Afghanistan - should be referred to paediatric TB or Infectious Diseases (ID) services for assessment.

However, both literature and firsthand experience of paediatricians consistently demonstrate that UASC are at increased risk of infections and experience extensive barriers to accessing healthcare.

The effect of the pandemic on UASC is also not fully understood. Therefore, it is important to ensure that children at high risk of TB are identified and screened to avoid potential public health consequences.

National Guidance for UASC

RCPCH (Royal College of Paediatrics and Child Health) guidance on Refugee and Unaccompanied Asylum-Seeking Children and Young People (December 2021) states that:

'Any child presenting from a country with a TB incidence of 40/100,000 or greater should be automatically referred to paediatric TB services for assessment. Unaccompanied asylum-seeking children are an especially vulnerable group. They should be screened proactively for latent TB Infection (TBI). They should not wait for IGRA screening through the current GP programme (available in some GP surgeries for those under 16 years of age from countries with TB incidence of 150/100,000).'

High Risk Groups of Tuberculosis: Communities impacted by racial inequalities

People born in India and Pakistan but living in the UK made up 21.8% and 11% of TB notifications in 2021 in Pakistan respectively. People born in other countries such as Romania, Somalia, and Eritrea contributed to the numbers – however, those born in the UK still make up the highest proportion of people notified with TB (22.9%).

However, the rates of TB in South Asian communities in the UK are up to 17 times higher than in White British groups. Many of these cases of TB are largely believed to be a product of reactivation of latent infection, that was initially caused by an infection in their countries of origin or on a visit.

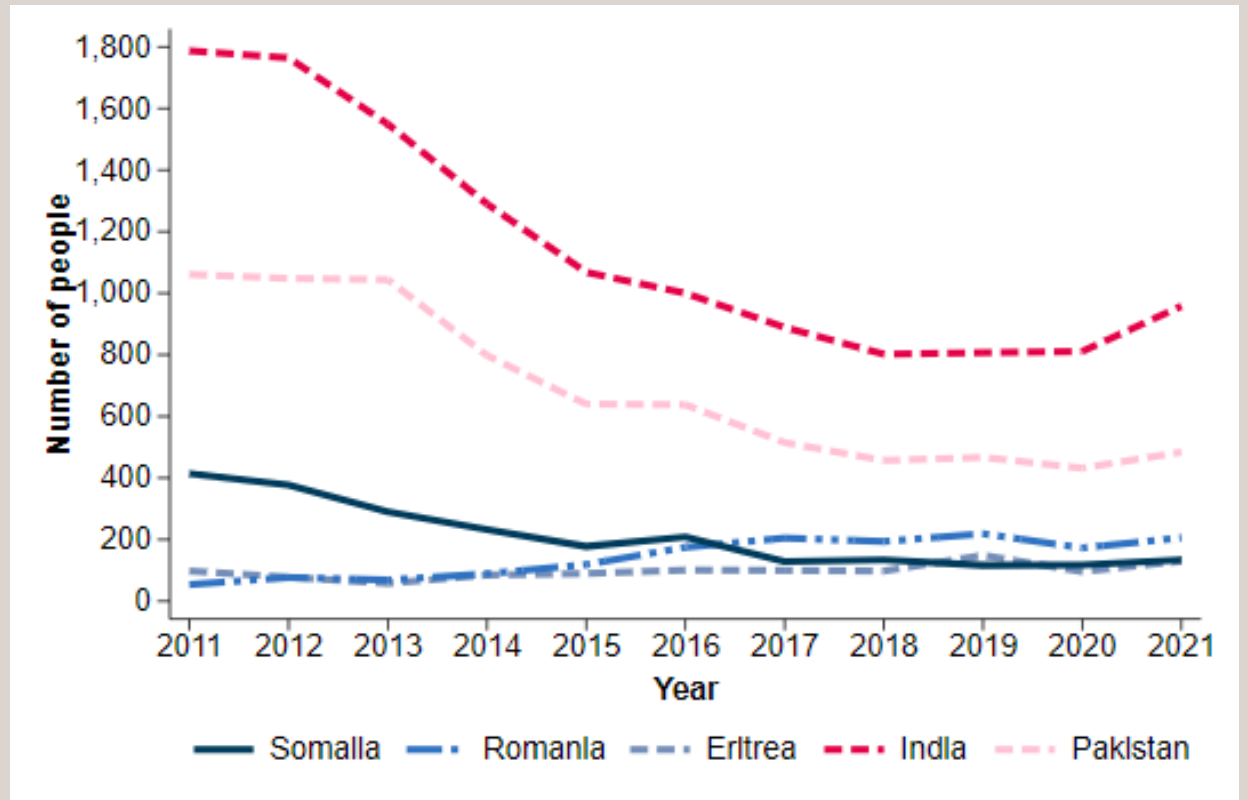
Stigma and misunderstanding held about the disease in the South Asian community has been cited in literature as a contributing factor for high TB rates. This creates a challenge for local authorities in effectively controlling and managing the disease spreading in this community.

It is therefore essential that we build a stronger understanding of the drivers of the disease, beyond LTBI-reactivation, to effectively tailor both existing and new TB services in the future.

Source: UKHSA TB incidence and epidemiology in England, 2021

High Risk Groups of Tuberculosis: Most common countries of birth for people with TB in the non-UK-born population

Numbers of TB notifications for the top 5 countries of birth for the non-UK-born population, England, 2011 to 2021



Source: [UKHSA TB incidence and epidemiology in England, 2021](#)

High Risk Groups of Tuberculosis: Current or a history of imprisonment

As of June 2023 , the UK had a total prison population of approximately 95,526 people.

According to the WHO (2019), the burden of TB in prison populations is about 10 times higher than in the general population.

An efficient system within a prison will detect cases early and ensure effective treatment for those contracting TB. This will also warrant continuity of care when patients move around the prison or leave the prison compounds – and either move into wider society or other prison environments.

Health Protection Teams across local authorities are responsible for the management of all TB incidents in the prison and working with the head of healthcare on the issues this presents. They are also responsible for convening an incident control meeting if indicated and with the agreement of the prison governor or nominated deputy.

Other similar centres should have control measures put in place in the event of a TB outbreak. Places of prescribed detention (PPD) include young offender institutions and immigration removal centres. In these areas, although the sites are often smaller, rates are high compared with the general population. PPD therefore present a good opportunity to develop targeted health programmes for TB control that can be replicated on a wider scale.

The government have produced a useful document that provides guidance for local strategies in dealing with and controlling TB within prison settings. This provides a deeper insight into how and why TB is vital to be managed in these settings.

High Risk Groups of Tuberculosis: No Recourse to Public Funds status

In 2021 it was estimated that 1.3 million people in the UK live with the No Recourse to Public Funds (NRPF) condition attached to their visa. This condition prohibits you from accessing benefits, tax credits or housing assistance offered by the local government. It also makes you ineligible for homelessness assistance.

3 in 5 people (60%) of people with NRPF are behind on their rent and a further 48% of people with NRPF live in overcrowded accommodation. Insecure accommodation is a common theme with this high-risk group. Additionally, 1 in 5 people living with this condition have been unable to feed themselves or their household because of the policy.

Although the exact numbers of people with NRPF are not completely certain and the individual figure is not known for Manchester, the evidence still shows that those with the NRPF status will face tremendous difficulty if diagnosed with a TB infection.

Clinical guidance in the UK recommends that people with active TB - including those with NRPF - should be provided with state-funded accommodation. However, the lack of an agreed national pathway after diagnosis means such patients are at risk of being discharged to the street following hospitalisation for TB treatment.

NICE guidelines recommend that local government and clinical commissioning groups should fund accommodation for homeless people diagnosed with active TB, who are otherwise ineligible for state-funded accommodation, using health and public health resources, in line with the Care Act 2004.

The NRPF network has produced a valuable resource that signposts to support services: [Support options for people with NRPF | NRPF Network](#)

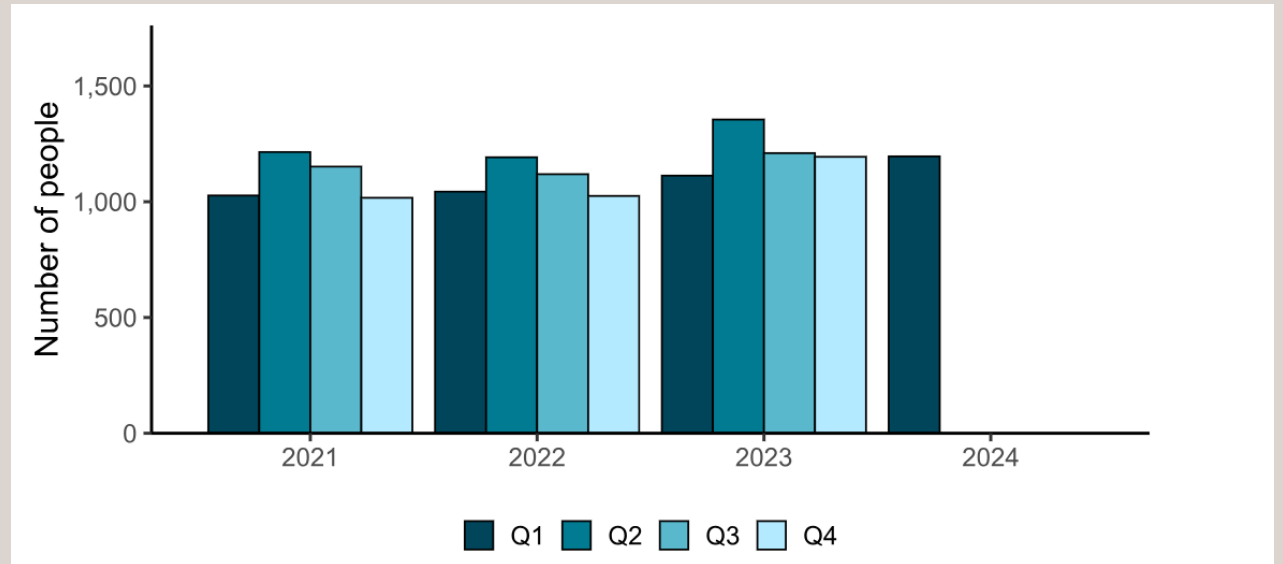
The National Picture

National Epidemiology of Tuberculosis

- The number of tuberculosis (TB) cases reported in England increased by 7.5% in quarter 1, 2024 compared to the same quarter in 2023.
- There was an 11.2% rise in TB notifications in the updated 2023 figures compared with 2022, rebounding to above the pre-COVID-19 pandemic numbers in 2019.
- Increases in TB notifications in quarter 1, 2024 compared with quarter 1, 2023 were unevenly distributed across regions in England.
- The number of individuals with culture-confirmed rifampicin-resistant (RR) TB or multi-drug-resistant (MDR) TB decreased in quarter 1 2024 compared with the same quarter last year (8 versus 20 people) but this is expected to increase as further laboratory results become available on individuals for this quarter.
- There were 72 people notified with rifampicin-resistant (RR) or MDR-TB in the updated figures from 2023, compared with 43 in 2022.
- For England in quarter 1, 2024, 1,196 people were notified with TB in England. This is 7.5% higher than quarter 1, 2023 (1,113 people notified).
- **The most recent quarterly figures suggest this rise in cases is continuing into 2024.**

National Epidemiology: Data

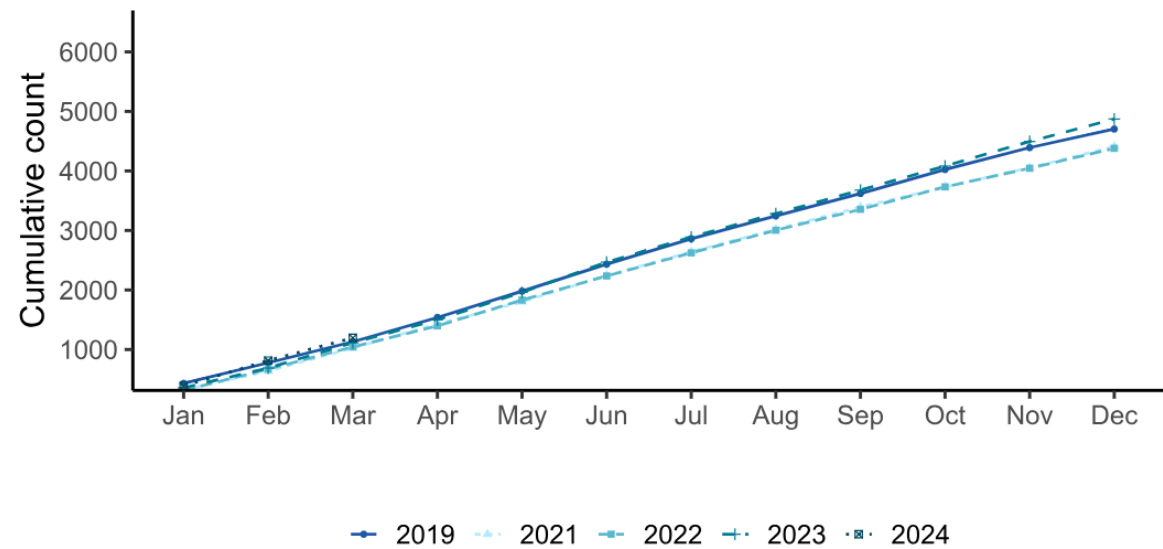
Numbers of TB notifications in England: Quarter 1 2021 (January to March) to Quarter 4 2024



[National quarterly report of tuberculosis in England: quarter 1, 2024, provisional data - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/national-quarterly-report-of-tuberculosis-in-england-quarter-1-2024-provisional-data)

National Epidemiology: Data

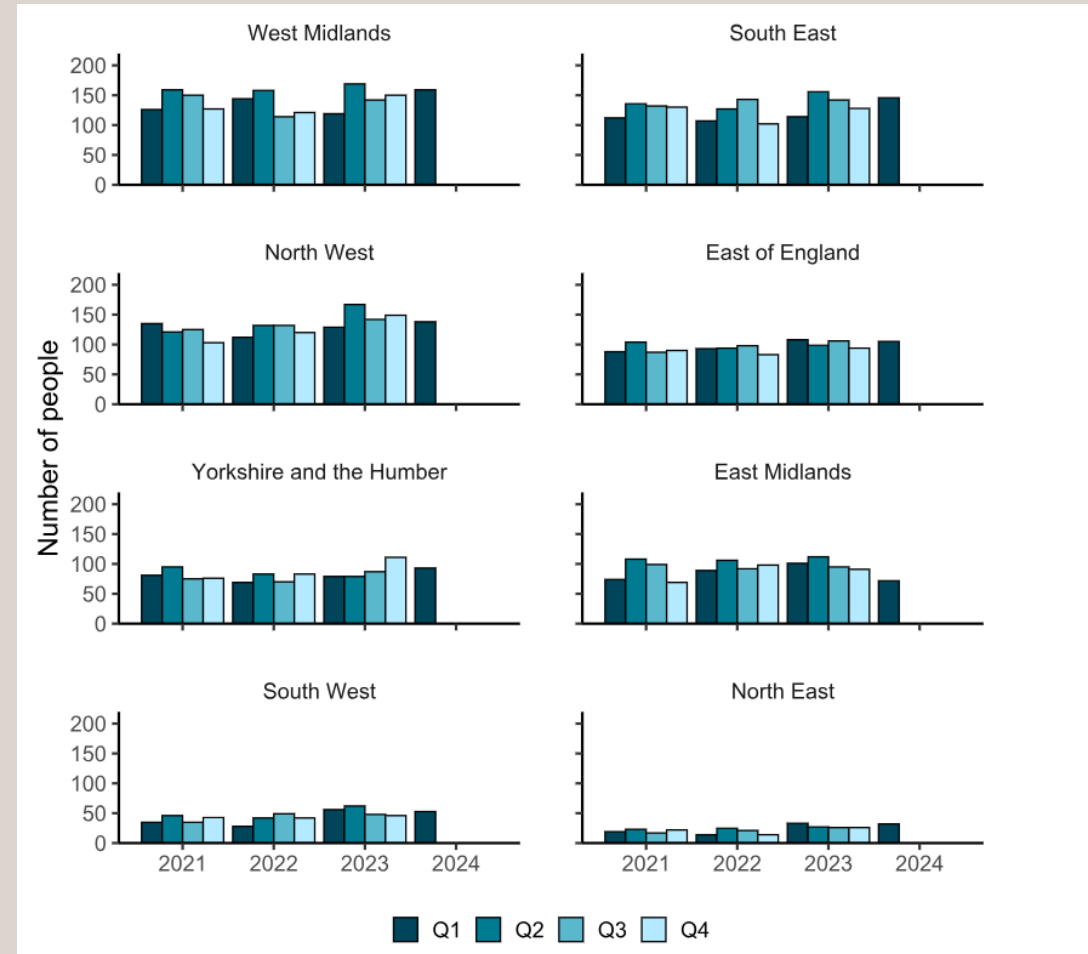
Monthly cumulative number of TB notifications England: 2019 to Quarter 1 2024.



[National quarterly report of tuberculosis in England: quarter 1, 2024, provisional data - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/national-quarterly-report-of-tuberculosis-in-england-quarter-1-2024-provisional-data)

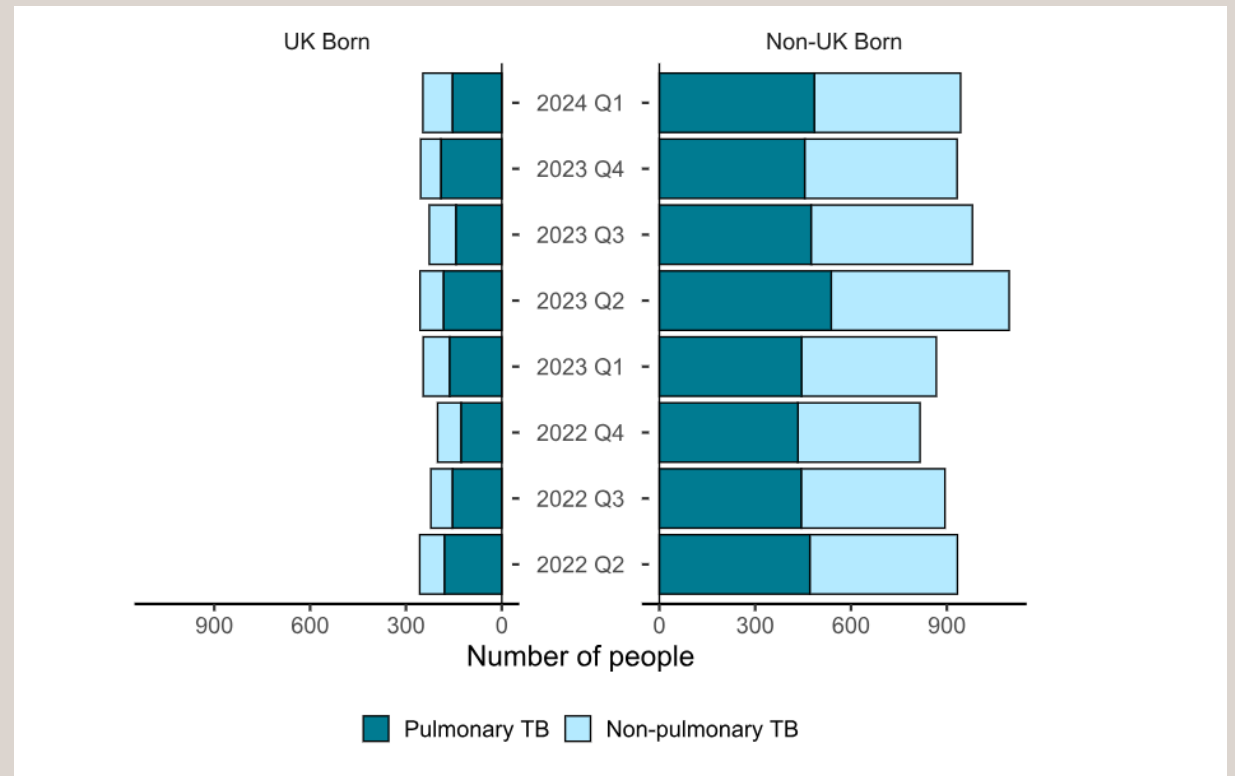
National Epidemiology: Data

Number of TB notifications by UKHSA region: Quarter 1 2021 to Quarter 4 2024



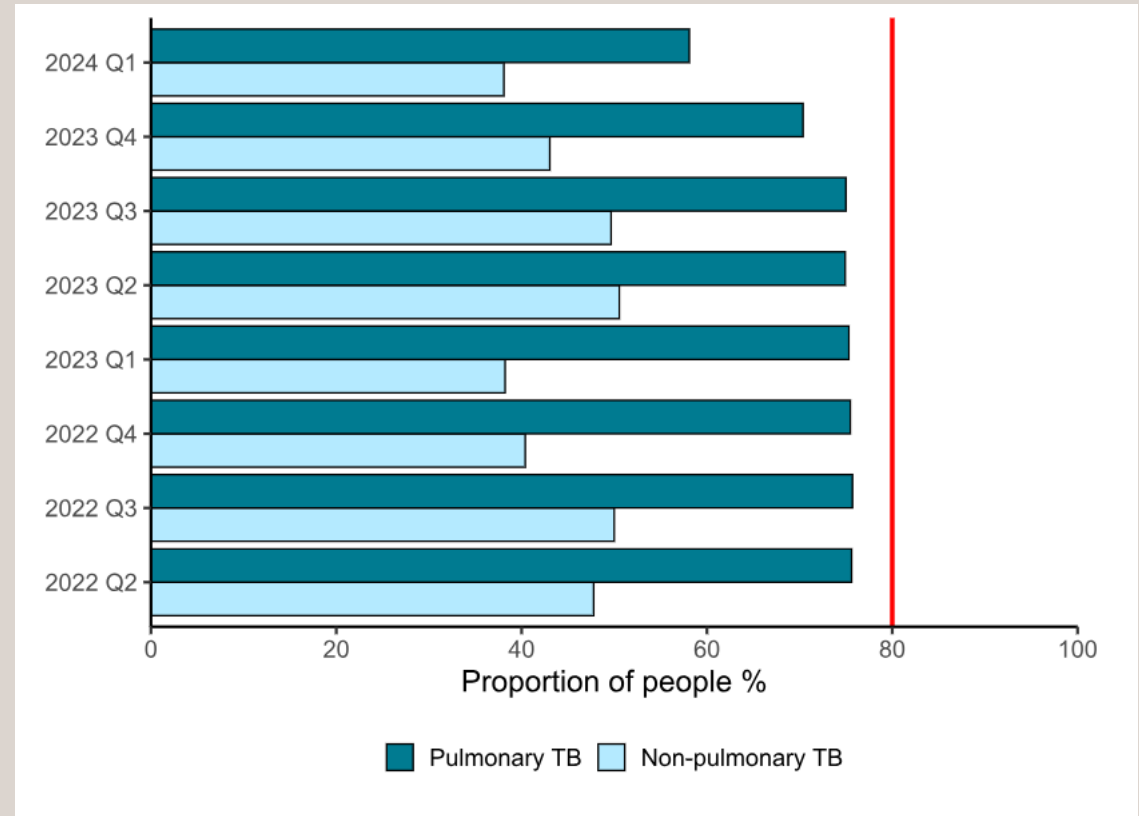
National Epidemiology: Data

Number of TB notifications by place of birth and site of disease, England:
April 2022 to March 2024.



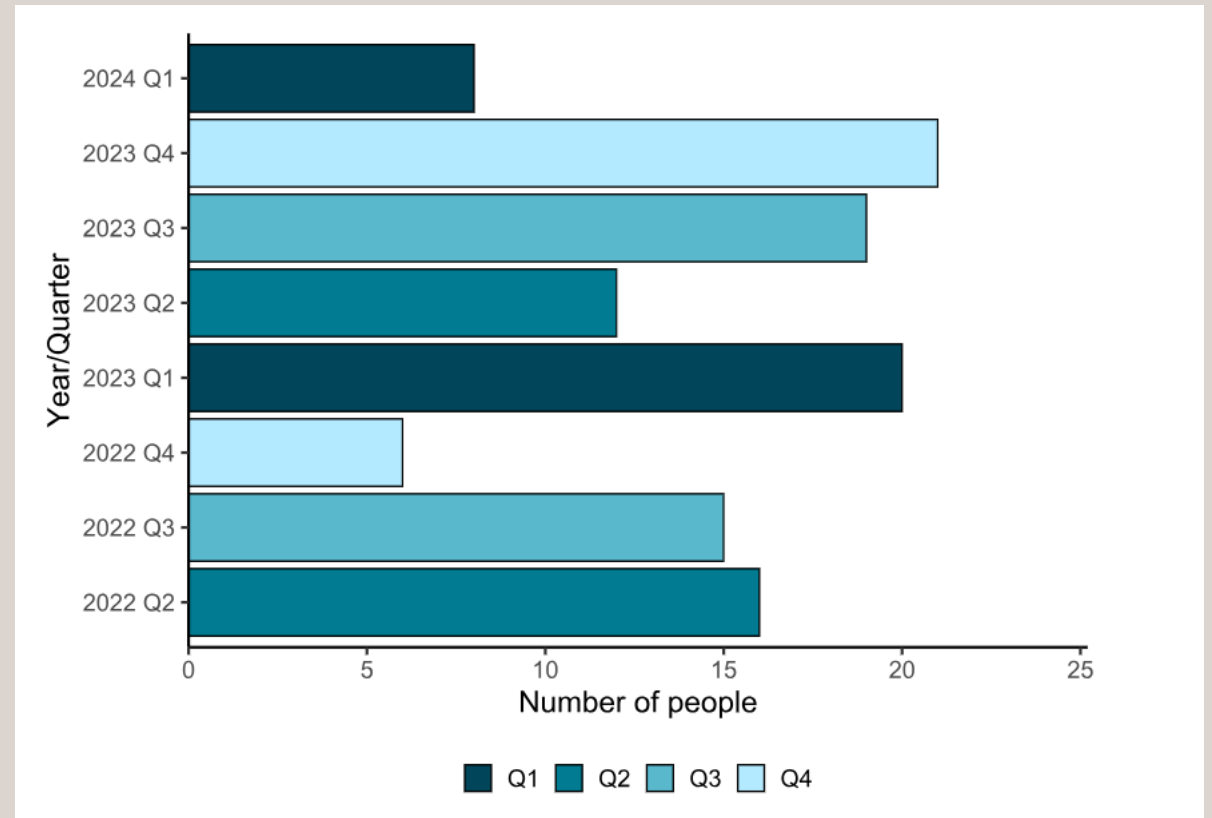
National Epidemiology: Data

Proportion of culture confirmation among TB notifications by site of disease, England: April 2022 to March 2024.



National Epidemiology: Data

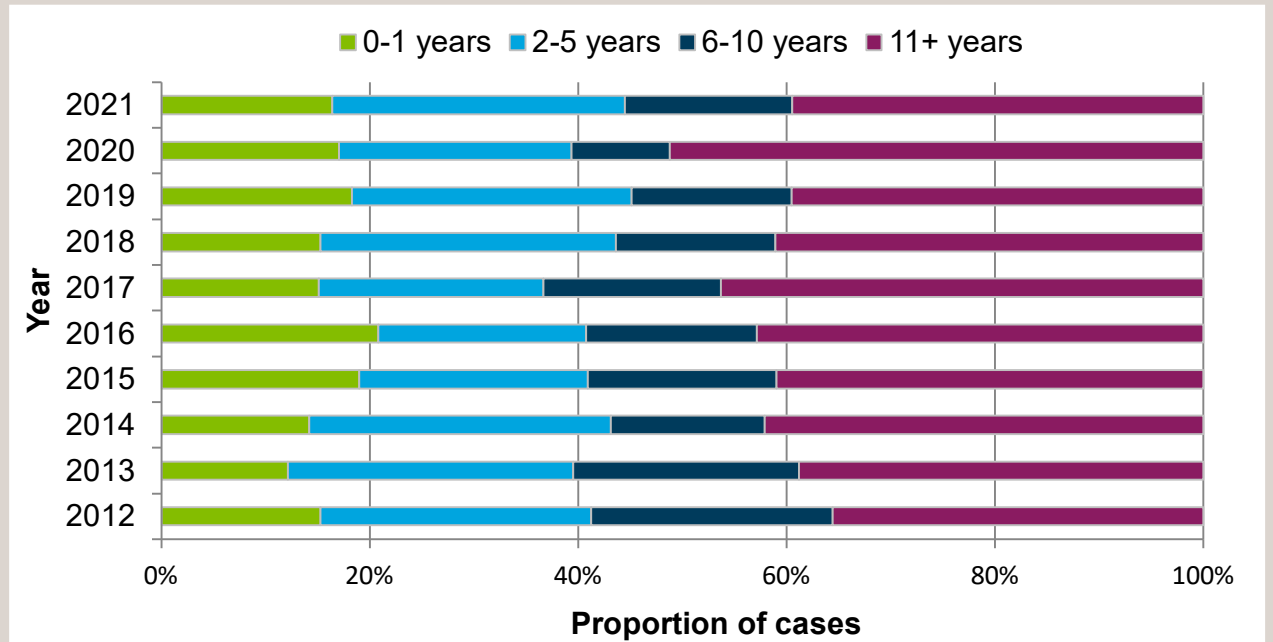
Number of culture confirmed TB notifications with MDR or RR TB at diagnosis: April 2022 to March 2024.



[National quarterly report of tuberculosis in England: quarter 1, 2024, provisional data - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/national-quarterly-report-of-tuberculosis-in-england-quarter-1-2024-provisional-data)

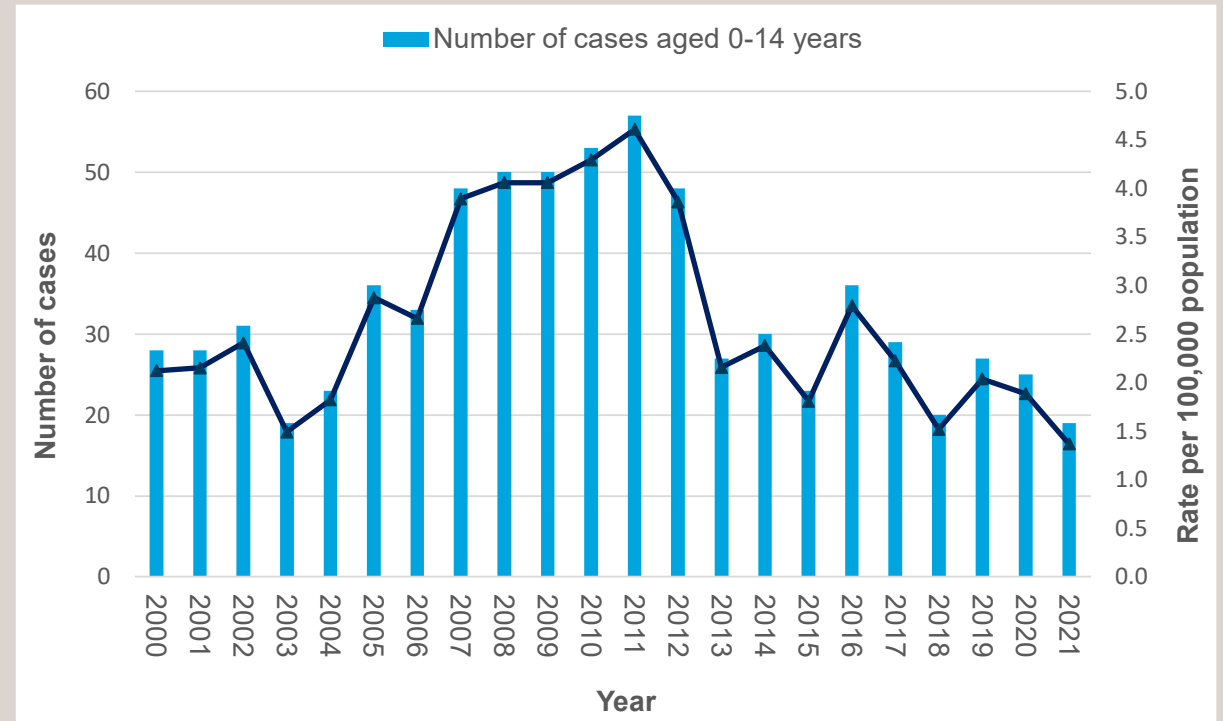
National Epidemiology: Data

Time between entry to the UK and TB notification for non-UK born cases by year, North West: 2012 to 2021.



National Epidemiology: Data

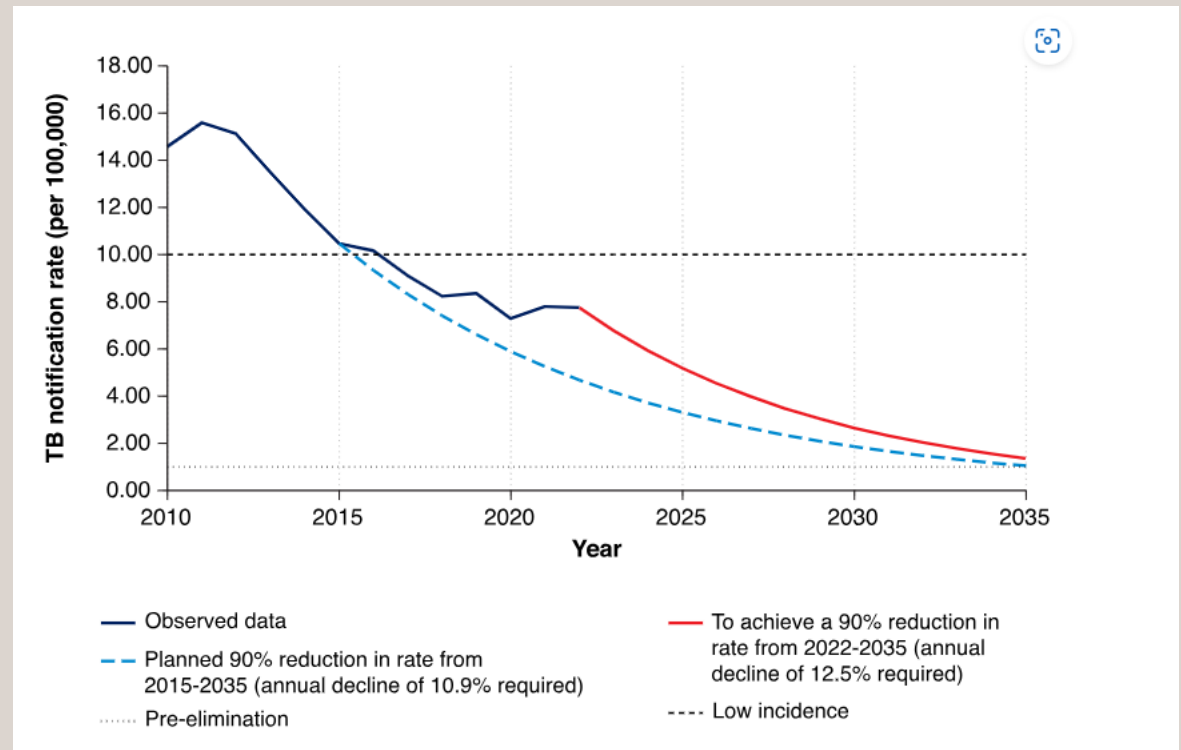
Incidence of TB in children per 100,000, aged under 15 years, North West: 2000 to 2021.



[Tuberculosis in the North West: annual review 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/tuberculosis-in-the-north-west-annual-review-2022)

National Epidemiology: Data

Observed rates of decrease in TB notifications in England from 2010 to 2035 compared with required rate of decrease to achieve the WHO End TB goal of a 90% reduction in TB incidence from 2015-2035.



[TB incidence and epidemiology, England, 2022 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/tb-incidence-and-epidemiology-england-2022)

NICE Guidance for Tuberculosis

[NICE Guidance](#) recommends that new entrants from high incidence countries are offered testing for latent TB and those that come from countries with incidence of more than 150 per 100,000 per year should be made priority for latent TB testing when they arrive. NICE guidance further recommends that **vulnerable migrants** should be tested for TB.

A '**vulnerable migrant**' can be defined by the nature of their journey for example staying in refugee camps or travelling through complex and dangerous routes in cramped and overcrowded conditions.

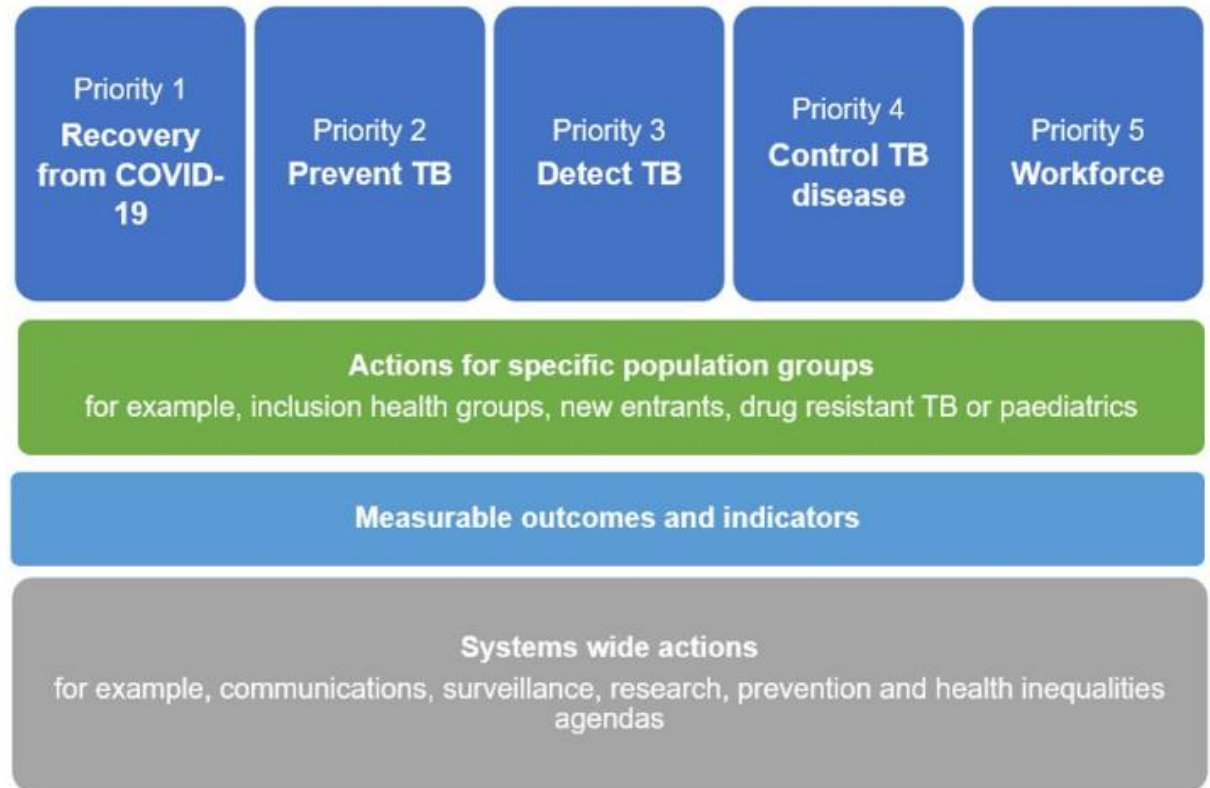
NICE Guidelines also outline **4 key areas for prevention**:

1. Raising and sustaining awareness of TB
2. Providing information for the public of TB
3. BCG Vaccination
4. Preventing infection in specific settings.

This JSNA adheres to the first two key areas of NICE guidance. It promotes awareness of TB and the risks it carries, whilst simultaneously providing information for the wider public.

TB Action Plan for England 2021-2026

On a national level, there is currently [a 5-year TB action plan running between 2021-2026](#). This plan combines UKHSA and NHSE to work together to drive down the cases of TB. There are five priority areas of this work that are overseen by actions, measurable outcomes and system wide actions (see below).



TB Action Plan: 'Get it Right First Time'

Within the 5-year TB action plan there is a commitment to a key action called: 'Get it Right First Time'. This is a national programme designed to improve the treatment and care of patients through in-depth reviews and data driven evidence to support improvements and change.

Aims of the GIRFT TB project:

1. Identify how different services are providing TB care and reflect this back to each provider.
2. Identify good practice and develop a standardised pathway and care model for TB.
3. Help to reduce diagnostic and patient delays.
4. Gain better understanding of TB workforce models.
5. Improve TB services through appropriate rationalisation and service transformation that future proofs TB services.

Local Government Action Plans for Tuberculosis

The LGA and PHE have produced a plan titled 'Tackling TB: Local Governments Public Health Role (2018)'. This outlines seven recommendations on how local authorities can tackle TB:

1. Facilitate appropriate access to information and advice.
2. Promote registration with GPs for new migrants, vulnerable or marginalised people.
3. Work with Public Health and other organisations to ensure that screening, immunisation, and treatment services can be accessed and reached by diverse populations.
4. Consider how third sector organisations can help improve access to TB services and patient support.
5. **Include TB in LA's JSNA and JHWS.**
6. Encourage multi-agency working on TB with HWB and Health protection board.
7. Consider a scrutiny committee review of TB.

The LGA plan overall suggests that a **multi-agency approach** is needed in which statutory agencies and council departments could work together to provide holistic care for patients and populations at risk or living with TB.

Groups and Collaborations: Northwest TB Control Board

The North West TB Control Board, chaired by the UK Health Security Agency, provides strategic leadership towards achieving TB elimination at a regional level.

Sub-regional representation on the group comes from NHS commissioners, NHS providers, microbiology, field epidemiology and includes local authority public health representation.

The board aims to ensure the planning, coordinating, supporting, and monitoring of TB control across the North West. This also includes the clinical and PHE services and workforce development and planning.

The Manchester Picture

The Manchester Picture: Overview

A key focus of [Manchester's Joint Health and Wellbeing Strategy](#) is early intervention to prevent the escalation of existing problems. Early intervention and detection in the pathway of care would highlight a commitment to this strategy. However, at present the funding and capacity is not available to provide the best protection for the residents of Manchester.

Furthermore, in the [Locality Plan for Manchester](#), it is predicted that Manchester will see a 13% rise in population by 2027. This growth will present population changes and potentially new health risks and needs that we have not seen previously.

Through [Making Manchester Fairer](#), the Public Health Team at Manchester City Council are committed to placing health equity at forefront. But at present this promise cannot be fulfilled with current funding and capacity available.

Tackling TB through a prevention approach would help with the progression and development of a healthier Manchester – as outlined by the Locality Plan.

The Manchester Picture: Data

TB Epidemiology in Manchester Residents (2021)

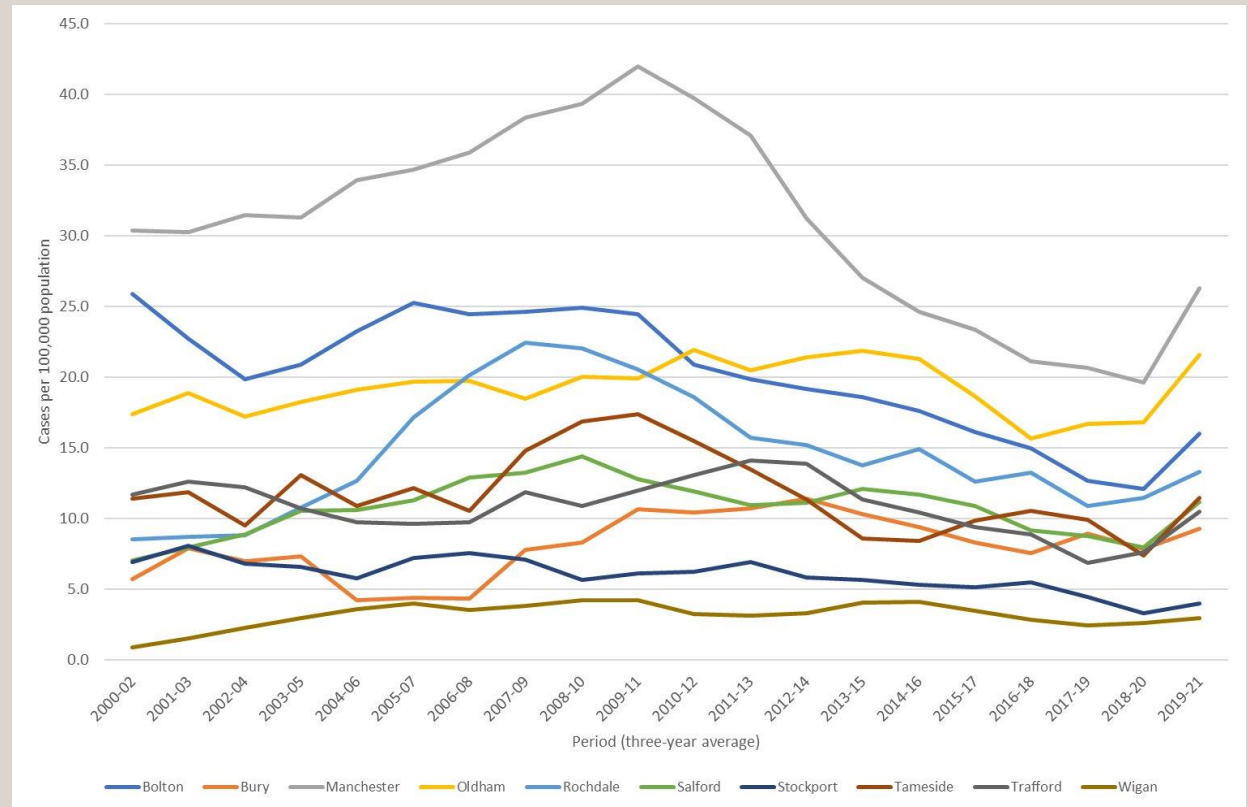
TB INCIDENCE	Manchester	North West
Number of TB cases (% pulmonary TB)	116 (33.6%)	481 (48.0%)
Rate per 100,000 population	21.1	6.5
DRUG RESISTANCE		
% culture confirmed cases with resistance to at least one first line drug	17.2	15.7
% culture confirmed cases with multi-drug (MDR) or rifampicin resistant (RR) TB*	3.4	2.8
SOCIAL RISK FACTORS (history of past or current homelessness, imprisonment, drug and/or alcohol misuse)		
% with any social risk factor*	4.5	9.5
TREATMENT COMPLETION within 12 months for patients in the non-MDR or non-RR TB cohort and without central nervous system disease**		
Number (%) of those notified in 2020	88 (92.6%)	346 (85.9%)

*of cases with risk factor information recorded. Aged 15 years and over only

**patients with these forms of disease may have planned treatment for 12 months or longer

Manchester Picture: Data

TB incidence rate per 100,000 population in GM (2000-2021).



Enhanced Tuberculosis Surveillance system (ETS) and Office for National Statistics (ONS)

The Manchester Picture: Data

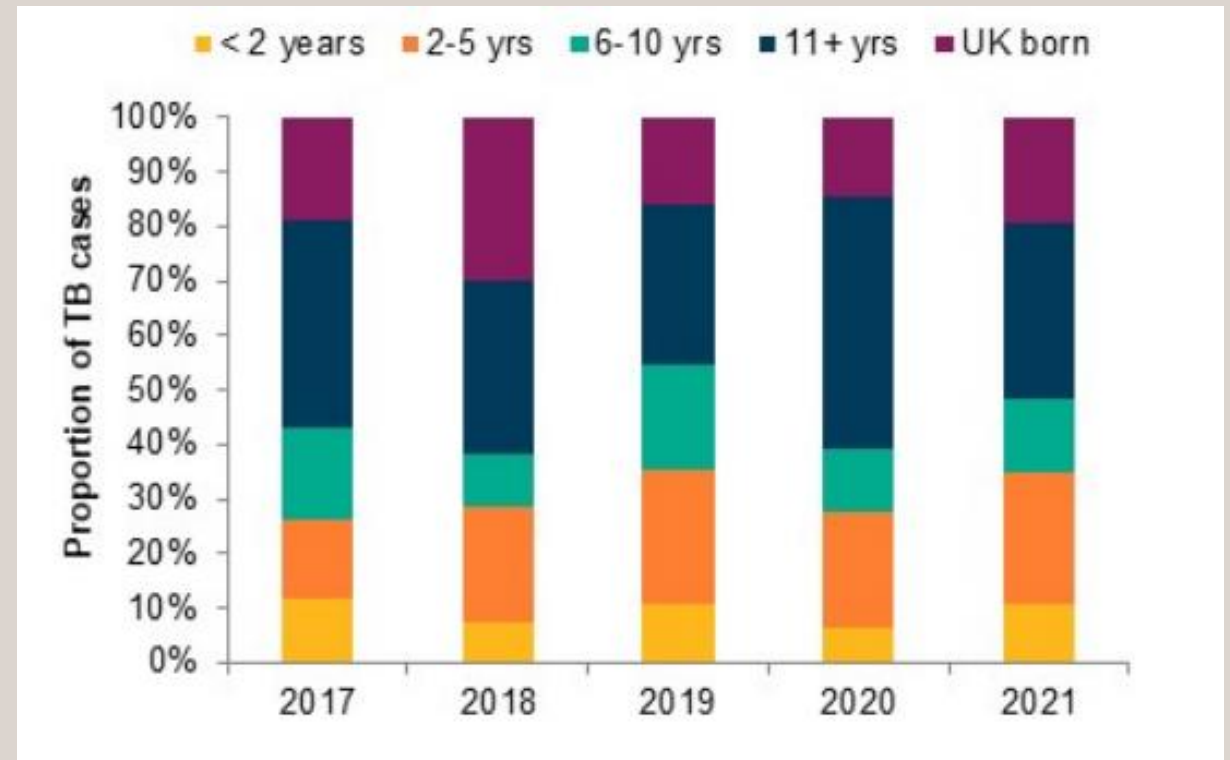
TB Cases by most common country of birth, Manchester (2021)

Country of birth	TB cases	
	n	%
Pakistan	32	27.6%
UK	20	17.2%
India	11	9.5%
Nigeria	7	6.0%
Romania	7	6.0%
Bangladesh	5	4.3%
All other countries*	34	29.3%

*with <5 cases in 2021

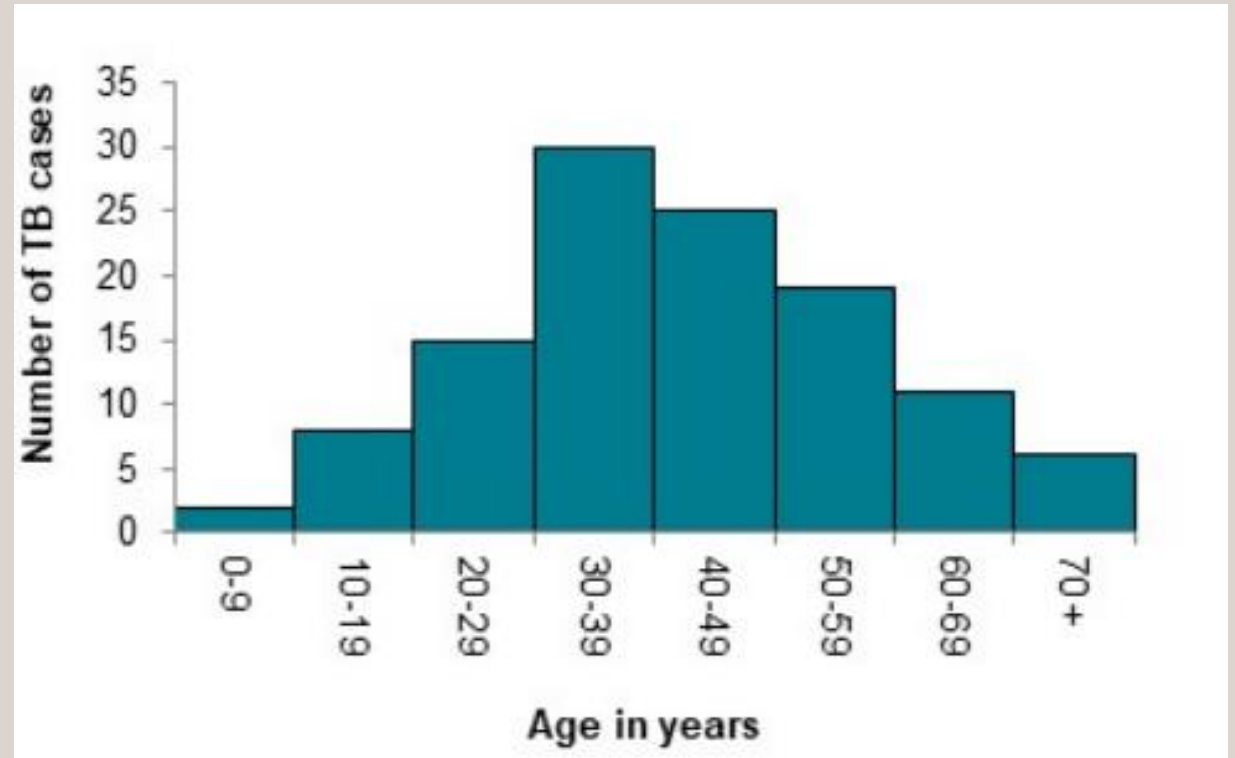
The Manchester Picture: Data

Proportion of TB cases in UK born or time since entry to the UK ,if not UK born, (2021)



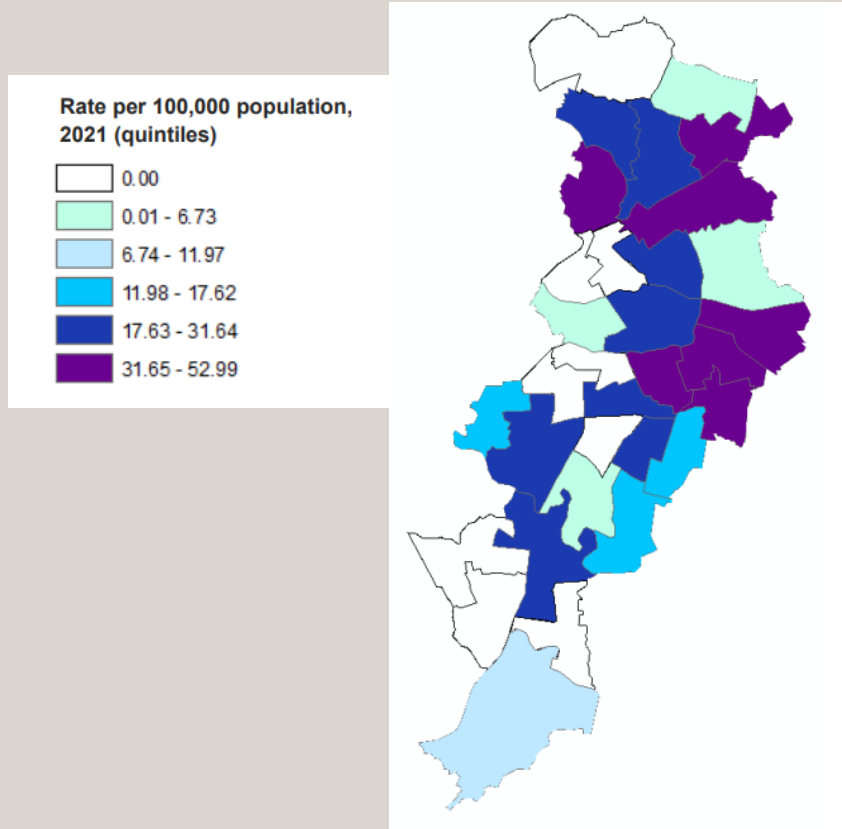
The Manchester Picture: Data

TB notifications by age group, Manchester (2021)



The Manchester Picture: Data

TB Incidence rate by ward, Manchester (2021).

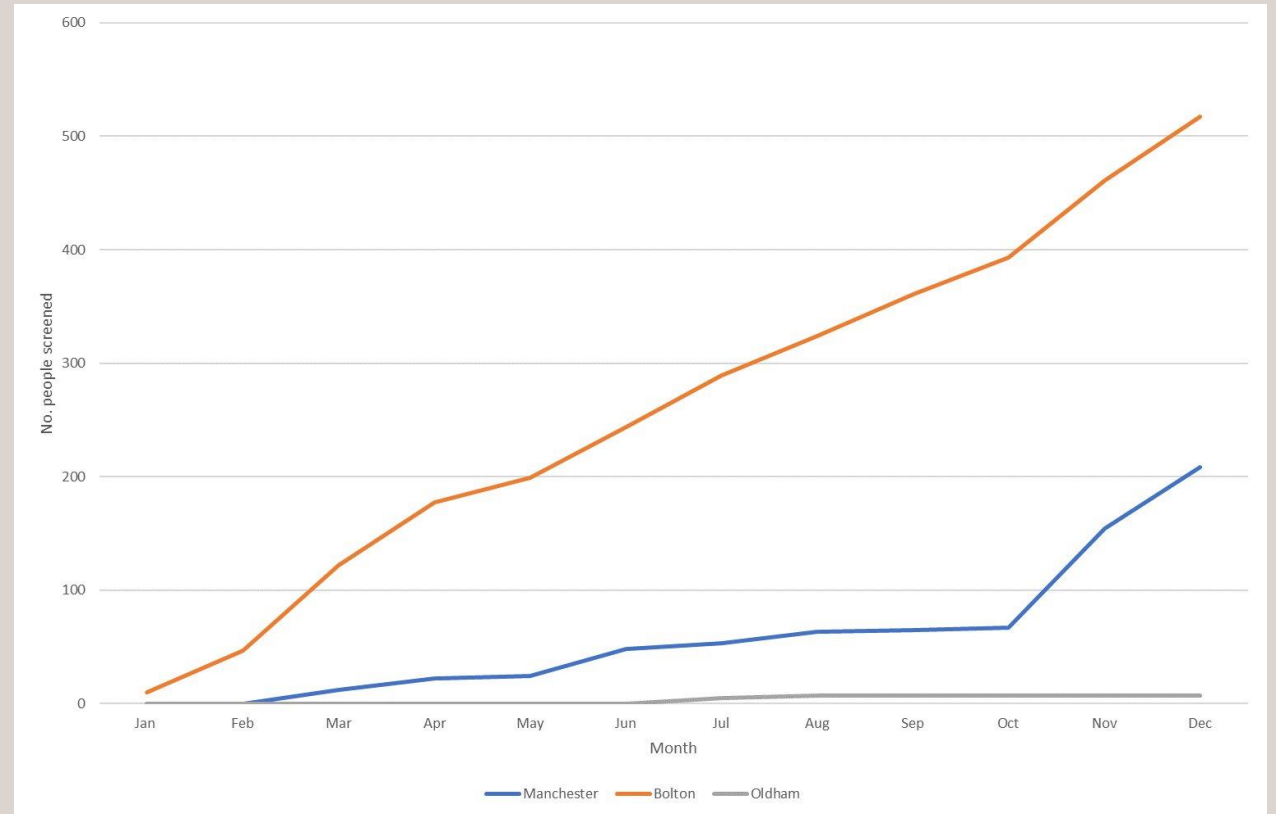


Rates were calculated using ONS mid-year population estimates.
Rates should be interpreted with caution due to low numbers.

UK Health Security Agency. National Tuberculosis Surveillance (NTBS) system.

The Manchester Picture: Screening Data

Cumulative Number of People Screened for Latent TB Infection in 2021 by Month: Manchester, Bolton and Oldham.



Enhanced Tuberculosis Surveillance system (ETS) and Office for National Statistics (ONS)

What do we want to achieve for the residents of Manchester?

To live with this condition, Manchester residents need to be able to achieve several core aims:

1. Access the required medication needed.
2. Operate independently without fear of transmission to others.
3. Access the required social help and guidance.

For those in employment, patients must be granted the time to attend required appointments, and this should not affect salary or position in the workplace.

As per NICE guidance, Manchester also needs to:

1. Provide information for the public of TB and raise awareness of the disease.
2. Prevent infection in specific settings by having comprehensive and detailed infection prevention plans.
3. Invest in Latent Tuberculosis screening, for individuals who come from high incidence TB countries and vulnerable migrants (as per NICE definition).

A stronger continuity of care can be achieved if the fundamentals are met through a collaborative approach of Public Health teams, the NHS and VCSE organisations, all working to address and control TB in the region.

What do we need to do to achieve this?

Currently there is a strong collaborative approach between key organisations and teams involved in TB prevention, detection, and control in Manchester.

Local systems are also working within the resource constraints available, and Manchester is fortunate to have strong political support from the Executive Member for Healthy Manchester and Social Care, who is also the Chair of the Health and Wellbeing board. Political support for the agenda is essential for awareness and profile raising of TB.

Through the Executive Member, the Public Health team have ensured that local members are briefed appropriately on any outbreaks that relate to their wards so they can act appropriately and accordingly. This ensures transparency and consistency across Manchester in outbreak response. This will also help to prevent infection and potential outbreaks in different community settings across the city.

What is Manchester currently doing?

The Director of Public Health for Manchester City Council and the Manchester Health Protection Team believe migrants should have screening for active TB before arrival in the UK.

However, as this is not currently the case nationally, the Manchester Public Health team are having to respond to cases as they arise and manage the risks appropriately.

Manchester City Council also believe that there should be equitable access to inclusive and funded screening, locally and nationally.

This belief is embedded through **Making Manchester Fairer.** Any process should be both systematic and timely and should be accessible to all who are at higher risk of contracting TB. This will be a fair and equitable system for all.

What is Manchester currently doing? (continued)

Currently there is a **3-year LTBI programme plan** across the areas of Manchester, Bolton and Oldham.

The areas outlined have been identified as areas of high TB burden in England and therefore have been able to receive additional funding from NHS England for the provision of a three-year LTBI screening and treatment programme.

However, the funding for the programme is due to finish 2024/25 and the budget is only sufficient to fund 26% of the total number of eligible GP registrations- as indicated in the Flag 4 data for high TB burden areas.

This raises uncertainty for what will happen after 2024/2025 for high TB burden areas.

What is Manchester currently doing? (continued)

The **BCG vaccine** is not given as part of the routine vaccination schedule but instead only administered when a child is at increased risk of encountering TB.

Eligible babies include all new-born babies whose parent/s or grandparent/s was born in a country where the annual incidence of TB is 40 per 100,000 or greater or new-born babies living in areas of the UK where the annual incidence of TB is 40 per 100,000 or greater.

Current guidance states that eligible babies should be offered the BCG vaccine 28 days after birth (or very soon after), although vaccinations may be administered earlier than 28 days provided that a SCID (severe combined immunodeficiency) screen outcome is available.

All local authorities in Greater Manchester run a selective vaccination programme. No eligible population or coverage figures are reported for the selective programmes.

In Manchester, April to June 2022, Manchester had a 70.7% BCG vaccine coverage of all eligible children at 3 months of age. This is in line with the GM average of 70%.

What is Manchester doing for high-risk populations?

Amongst the work taking place in Manchester, outlined below are some of the key things happening in the city to address TB in high-risk groups:

1. As of March 2023, Manchester had the **highest rates of households assessed as homeless**, per 1,000 in England. In 2022 there were over 3,600 Manchester residents accessing drug and alcohol treatment. Using DOT for homelessness patients has proven to be a valuable method for treatment to help improve continuity of care for patients.
2. At the end of December 2022 there were 697 prisoners at HMP Manchester, this is higher than average rates of overcrowding in the two decades prior to 2021. Positively, **Manchester receives the highest level of funding in the country for the accommodation of ex-offenders (AfEO) programme**. This programme supports ex-offenders who might otherwise become homeless to access the private rented sector. This funding is particularly important in cases of TB, as access to stable accommodation is a key requirement to live and recover from TB.
3. No Recourse to Public Funds (NRPF) cases are complex and propose a range of individual challenges. **In Manchester, suitable housing, and support for TB cases with NRPF** who are homeless are provided on the condition of:
 - That the patient is fully compliant with the treatment
 - The patient has no other suitable housing available.
 - The patient has active TB at the time of diagnosis.

What is Manchester currently doing?: Service Provision in Manchester

Effective interventions have taken place across GM and Manchester to help with TB infections and notifications.

- Each locality within GM has health professionals who can care and treat people with latent or active tuberculosis and each locality has their own specific TB consultant.
- Some areas have a full-time dedicated TB nurse/s and others may have a part time TB nurse who works in other areas of respiratory medicine or infectious diseases.
- Any cases of multi drug resistant TB are cared for by a specialist centre. In Manchester there is the North Manchester General Hospital Infectious Diseases Unit and the Manchester Royal Infirmary.

Every person who has been identified with the TB disease is notified to the **UKHSA**.

TB services across MFT have also been heavily involved with a large-scale TB screening programme for Afghan refugees and treatment for residents of hotel housing asylum seekers across Manchester.

In Manchester Children's hospital, a youth worker and psychology service are also offered to children aged 11-16 who suffer from mental health issues or social exclusion as a result of a TB diagnosis.

What is Manchester currently doing?: TB Service Provision MFT

TB Service Provision in Manchester from Manchester University NHS Foundation Trust	
North Manchester	<ul style="list-style-type: none">• Team based at North Manchester General Hospital.• Dedicated infectious diseases unit with 6 negative pressure rooms.• Team of 6 TB nurses.• Dedicated paediatric infectious disease consultant also based here
Central Manchester	<ul style="list-style-type: none">• Team based at Manchester Royal Infirmary. Part of Respiratory Medicine.• Two consultants and team of 6 nurses.• Facility to care for multi drug resistant TB patients. Hospital has capacity for 2 negative pressure rooms• Royal Manchester Children's Hospital provides TB care to children across the GM footprint. Two Paediatric constants with a special interest in TB based here.
South Manchester	<ul style="list-style-type: none">• Team based at Wythenshawe Hospital. Part of Infectious Diseases Unit.• Team of infectious disease physicians and infectious disease nurses who care for people with TB

Groups and Collaborations: GM TB Collaborative

The **GM TB collaborative** leads the development and implementation of a multi-agency TB control strategy for GM based on the National TB action plan for 2021-2026.

The collaborative is responsible for:

- Providing assurance on the implementation of the GM TB action plan 2021-26.
- Developing and implementing the GM TB control strategy 2022-2025.
- Promoting service improvements that result in reductions in GM TB incidence.
- Providing strategic oversight and direction on the commissioning, quality assurance and performance management of GM TB services.

The GM TB Collaborative is accountable to the GM ICS (Population Health Board) and reports to the NW TB Control Board. The collaborative reports quarterly progress against TB control metrics as outlined in the GM TB control strategy.

Manchester City Council's Deputy Director of Public Health (Health Protection Lead) represents Greater Manchester Directors of Public Health on the GM TB Collaborative.

Groups and Collaborations in Manchester: Public Health, Manchester City Council

As part of the Greater Manchester Health Protection Reform work, a workstream to share learning and further develop joint work on TB is being implemented.

Support is being provided from the Local Government Association's National Sector Led Improvement Team. Work is currently underway to map existing TB services and processes with all 10 local authorities and their partners.

Manchester City Council's Assistant Director of Public Health (Health Protection Lead) is the lead for this workstream, supported by colleagues from within the Manchester Department of Public Health, other GM local authorities and colleagues from NHS Greater Manchester Integrated Care and UK Health Security Agency.

Supplementary insight from other areas of the country will help to benefit Manchester and similarly, Manchester are keen to share what they have learned and influence work at a national level.

Team members from the Manchester Department of Public Health presented the work being done locally at the National TB Nurses and Allied Health Professionals Conference 2023 on the 29th September and are contributing to a national toolkit on TB that is being developed.

Groups and Collaborations in Manchester: Manchester Health Protection Board

The Manchester Health Protection board, chaired by the Director of Public Health, has responsibility for overseeing TB work at a local level.

There have been several focussed discussions on TB at the Health Protection Board over the last 12 months, given the complexity of the work and the risks and issues associated with the current situation.

Manchester City Council's Assistant Director of Public Health (Health Protection Lead) shares information from the NW TB Control Board, the GM TB Collaborative, and local Manchester Health Protection Steering Group. The Manchester Health Protection Board reports to this Health and Wellbeing Board. This group is essential to managing, overseeing and addressing the issues of TB within the city.

Groups and Collaborations in Manchester: No Recourse to Public Funds Team

The Public Health team at Manchester City Council also provide accommodation for people who are experiencing homelessness, a No Recourse to Public Funds (NRPF) condition and have active TB.

Wrap around support promotes treatment adherence and completion of therapy whilst reducing the probability that antimicrobial drug resistance will occur in the TB bacteria.

In 2019 (formerly) Greater Manchester CCGs and Manchester City Council agreed to provide suitable housing and subsistence support for TB cases in GM with NRPF who are homeless for the duration of their treatment.

Subsistence provision is provided to a maximum of the current Universal Credit allowance for a single person over 25 and takes account of any other forms of financial support. The NRPF team based at Manchester City Council identifies suitable housing, provides ongoing advice around immigration issues, and organises a weekly subsistence payment for food and other expenses.

If the patient has social care needs, these would be provided through Adult Social Care.

What other organisations are working to support Manchester residents?

Black Health Agency (BHA) For Equality is a national charity commissioned by Manchester City Council.

They deliver a range of public health campaigns, sexual health advice and offer both commissioned work and grant based activities.

For TB, BHA play a valuable role in local community and engagement work. The charity supports people with latent TB to improve treatment compliance, promote self-care and address any wider concerns that may be detrimental to an individual's health and wellbeing.

BHA have also worked closely with asylum seeker hotels, mosques, and schools to increase understanding of the dangers surrounding TB. Building community connections mobilises BHA to signpost ESOL classes, jobs and benefits to help with patient aftercare and mental health.

Working closely with organisations such as Rainbow Haren, Manchester Refugee Support network and the Red Cross, BHA also help to promote TB awareness across Manchester charities. BHA believe that this should be replicated on a wide scale approach across the city through other charities and organisations.

Opportunities for Action

Opportunities for Action: Overview

The opportunities for action in this JSNA align with NICE guidelines and Local Government guidelines. This has been done with the interest of creating consistency and ensuring that Manchester City Council is aligned to the national picture. They should be considered as part of TB programme work. The opportunities to be actioned are as follows:

- **World TB Day:** Use the day for campaigns and awareness raising of TB.
- **Latent TB Screening Intervention:** Advocate to increase the funding available to screen new entrants to the UK who have arrived from high-risk countries.
- **Further Strengthen Collaborative working:** Make certain that we continue to build on positive relationships whilst also create new and innovative connections, to support vulnerable population groups in the city.
- **Creating a 'One Stop Shop':** Introduce a holistic approach to health and social care through a one stop shop, to provide a cascade of care through direct intervention.
- **Improve understanding of lived experiences:** Conduct qualitative research to understand lived experiences of high-risk groups and those who experienced MDR-TB.
- **Contribute to local health intelligence:** Build a deeper understanding of gaps in knowledge through comprehensive data collection.

Opportunities for Action: World TB Day

World TB Day is on the 24th March. This marks the day in 1882 when Dr Robert Koch announced that he had discovered the bacterium that causes TB. The discovery paved the way to diagnose and cure the disease.

World TB Day raises the profile of the disease to help contribute to end the global TB epidemic. Manchester City Council should use this day, alongside its partners, to actively engage with communities in Manchester who are more vulnerable to TB and dispel myths and confusion in parts of the city. Additionally, literature has consistently highlighted that attitudes play a crucial part in TB control efforts. Therefore, awareness of TB needs to go beyond what the disease is but also addressing what it means for individuals and how this translates to treatment and screening.

Marking this day, enables partners across local authorities, the NHS, UKHSA and VCSE groups to come together and raise awareness of TB in a meaningful and purposeful way. Champions of this work should also include GPs and Care providers.

An example of positive practice on World TB Day:

Amanda McCormack (TB nurse specialist South Hub/prison liaison lead) featured with a TB patient on National Prison Radio, as part of a campaign launched on World TB day, to raise awareness about TB amongst people that live and work in prisons.

Opportunities for Action: Latent Tuberculosis Screening Intervention

This JSNA advocates for sufficient funding to be in place to test new entrants for Latent TB as a crucial aspect of controlling TB.

LTBI management is a crucial part of controlling and mitigating the potential risks created by TB. However, in Manchester there is currently around 18,000 people on the waiting list for new entrant latent TB screening. This number is expected to grow.

Clinics and labs do not have the capacity to carry out such extensive latent TB screening and process the blood samples that this will create. Severe cuts to funding have reduced staff capacity and have not increased to meet increasing demands and cases across the city.

The appropriate funding schemes need to be accessed to ensure the delivery of future plans. Manchester City Council will need to work closely with GM Integrated Care Board (NHS GM ICB) to propose practical solutions to this issue.

Increasing funding would license a larger number of new entrants (from high TB incidence countries) to be appropriately screened LTBI. If picked up, TB teams can treat patients to prevent active TB developing.

Opportunities for Action: Further strengthen collaborative working

Embedded throughout this JSNA, are the groups and collaborations working to support Manchester residents with tuberculosis. This work is vital for vulnerable and high-risk individuals who have poorer health outcomes and require a system wide approach to care.

It is important that Manchester City Council, along with its partners and external organisations, are frequently reviewing the approach to collaborative working. Asking questions such as:

1. What do we know has worked well in the past?
2. What should we do to improve our collective response to TB outbreaks?
3. Are we working well with services to provide care for vulnerable residents in Manchester?

Collaborative working can also be demonstrated by disseminating the findings of the JSNA with task groups who have a closer relationship with high-risk groups. For example, the Health and Homelessness group, Manchester Homelessness Partnership, CHEM sounding boards and neighbourhood teams.

By harnessing established connections whilst also creating new ones, this action will improve the health outcomes of our most vulnerable populations in Manchester.

Opportunities for Action: Creating a 'One Stop Shop'

As the evidence has highlighted, a high proportion of TB cases within Manchester are seen with new entrants to the UK. TB is also highest within high-risk groups of individuals who will present with other health and social care needs.

By making every contact count, we have the potential to improve and transform outcomes for residents living with TB in Manchester. The effects of TB do not have to be solely negative. A diagnosis does not have to be viewed in a silo, and a cascade of care can be provided through screening and treatment. A patient presenting with TB symptoms, can also present an opportunity for intervention on a wider scale.

Therefore, proposed by the TB Team based at Manchester Royal Infirmary and Royal Manchester Children's Hospital is a '**One Stop Shop**' to promoting 'wrap around' intervention for new entrants. This would take place during the process of new registrations to the GP. New entrants to the UK would be referred to the necessary health assessments checks and any other medical needs, specific to the individual, at the point of registration. Patients will then also be given referrals to the appropriate services

The 'One Stop Shop' provides an opportunity to capture new entrants that require proper service referral and other high-risk groups who need wrap around support.

Case Study: 'Car in the Community', Lincolnshire,

A team of nurses went into the community to deliver care and tailored support to vulnerable groups direct from their car, to increase engagement and ease of access to healthcare in rural settings.

Opportunities for Action: Improve understanding of lived experience

Manchester City Council and Public Health teams have demonstrated a long-term commitment to controlling TB through the work already taking place. However, capturing the lived experience of Manchester residents living with TB or who have survived from TB, would further this commitment. This is a challenging task but would be an essential part of building trust and understanding with population groups in the city. For example, research could be carried out to understand reasons for delays in patients presenting for TB screening.

The work will involve a combination of direct consultation and primary qualitative research. There is little to no published research that has studied the impact of TB on patients living with the disease in the UK. Manchester City Council could work in partnership with VCSE organisations and academic institutions to produce innovative and insightful research.

This has the potential to support funding into early intervention, service referral and screening. Appropriately disseminating these stories also increases awareness of TB and removes the stigma typically associated with the disease, especially present in high-risk groups.

Opportunities for Action: Contribute to Local Health Intelligence

Manchester City Council and the appropriate services should contribute to local health intelligence.

Some of the reasons for this are as follows:

Patterns of international migration are changing rapidly. This inevitably will have an impact on Manchester's population and the potential for rising TB cases.

- A selective vaccination programme is run in Greater Manchester. However, there is no eligible population or coverage figures are reported for selective programmes.
- We do not currently have a method of knowing how many individuals in Manchester have a NRPF status.

It is not to be ignored that this presents a challenging action. A system wide approach is needed to agree a suitable approach to navigating this. Local intelligence teams can lead on this work. In particular to collect data on the gaps in our knowledge and translate this into practice.

Summary

Tuberculosis is both a preventable and curable disease. Although this story is complicated with high-risk groups and factors, Manchester does have a strong foundation and commitment to further the TB agenda.

This foundation can be strengthened by committing to the actions recommended in this JSNA which closely align to NICE and Local Government guidance. However, the actions can be summed up in a final point to be taken forward:

We must promote awareness and understanding of TB and advocate to increase funding for Latent TB screening for new entrants.

Dr Tedros Adhanom
Ghebreyesus:
Director
World Health
Organization



*“For millennia, our ancestors have suffered and died with tuberculosis, without knowing what it was, what caused it, or how to stop it. Today, we have knowledge and tools they could only have dreamed of. We have political commitment, and we have an opportunity that no generation in the history of humanity has had: the **opportunity to write the final chapter in the story of TB**”.*

[Global tuberculosis report 2023](#)

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