



UK Health  
Security  
Agency

# Putting high risk under-served groups at the centre of joint efforts to eliminate TB and other priority infections

Dr Amy Stevens  
Y&H Public Health Registrar  
[a.stevens4@nhs.net](mailto:a.stevens4@nhs.net)



Public Health  
England

Protecting and improving the nation's health

### **PHE Infectious Diseases Strategy 2020-2025:**

*Putting high-risk under-served populations at the centre of joint efforts to eliminate Hepatitis B and C, Tuberculosis and HIV and halt the rise in sexually transmitted infections*

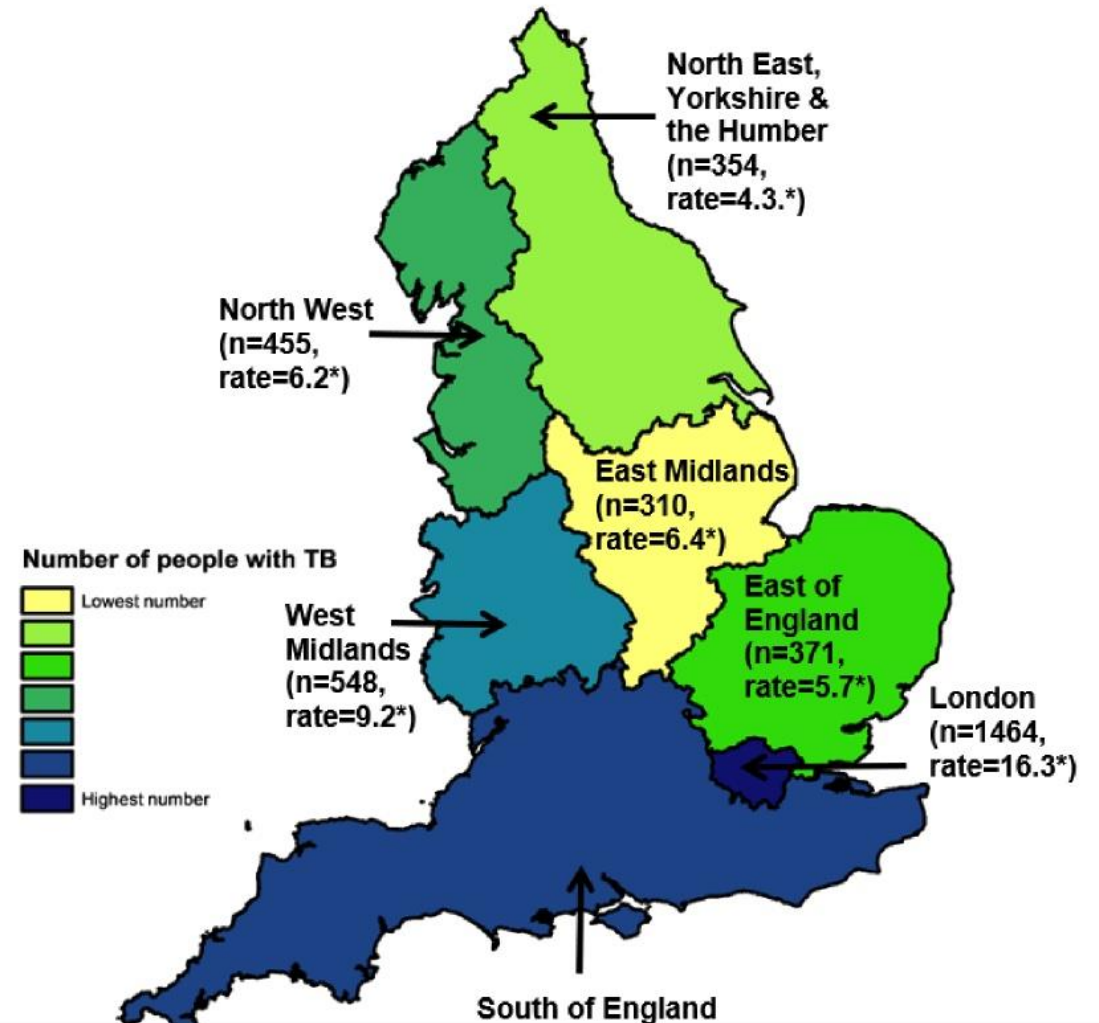
Amy Stevens

June 2020

# Tuberculosis in England

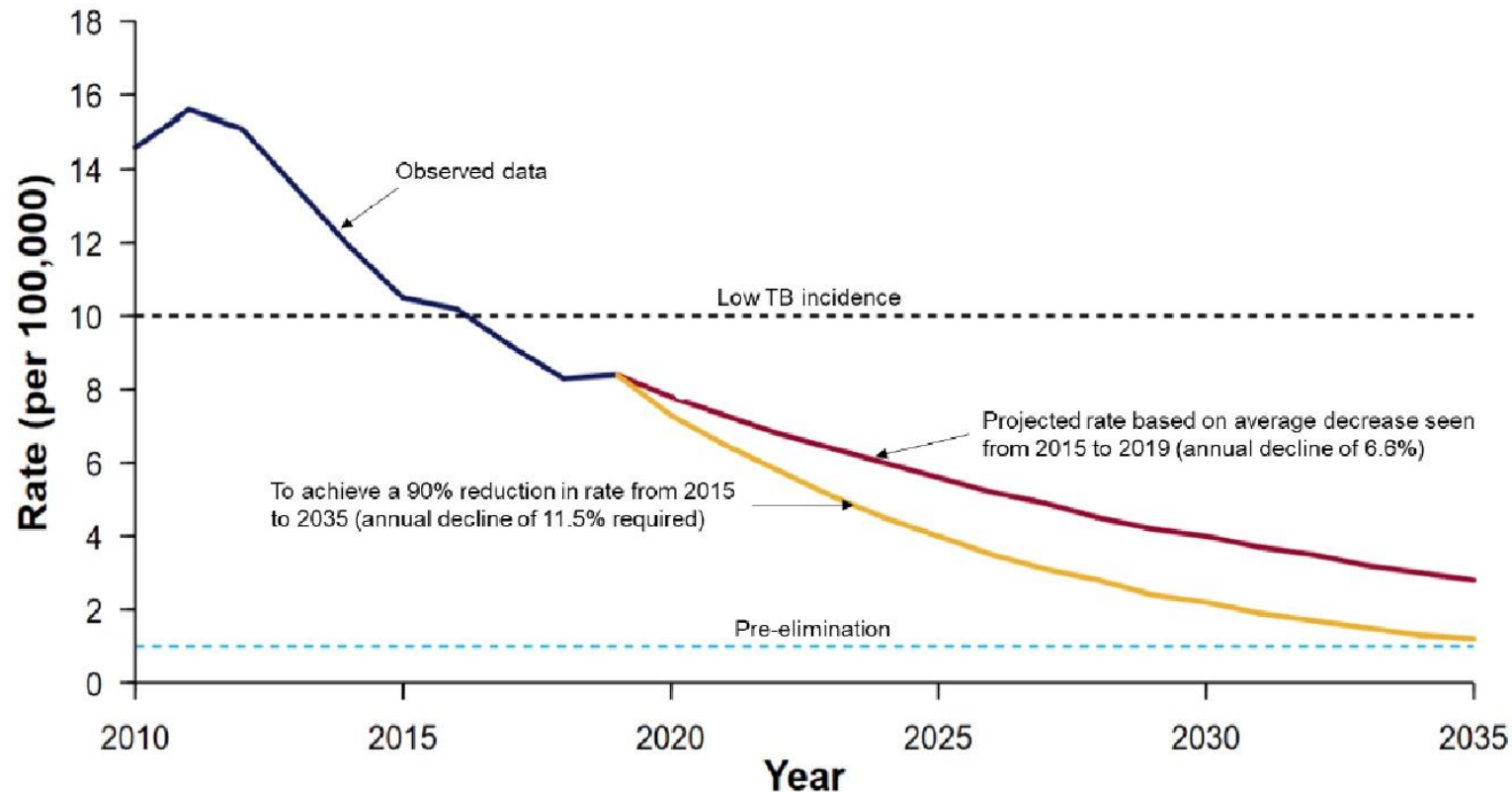
- The UK Health Security Agency (UKHSA) is committed to meeting the World Health Organization (WHO) Tuberculosis (TB) elimination targets by 2035 as outlined in the TB Action Plan for England 2021 to 2026.

Figure 1.2. Number TB notifications and rates by TB Control Board, England, 2020



# Changes in incidence rates

Figure A. Observed and projected rate of TB notifications, UK, 2010 to 2035 (based on 2019 data)



- Number of TB cases reported declined from 4,725 in 2019 to 4,125 in 2020
- This represents an overall decline in the rates of TB to 8.4 per 100,000 in 2019 to 7.3 per 100,000 in 2020
- In England there has been a reduction in TB incidence after a peak in 2011 (8,280 notifications and a rate of 15.6 per 100,000 reported)

- The UK Health Security Agency (UKHSA) is committed to meeting the World Health Organization (WHO) Tuberculosis (TB) elimination targets by 2035 as outlined in the TB Action Plan for England 2021 to 2026.
- UKHSA is also committed to eliminating **Hepatitis B** and **Hepatitis C**; eradicating **HIV** transmission and halting the rise of **sexually transmitted infections**



# Targeting high-risk groups

- Overlaps in the risk factors associated with different infections
- In a system of finite resources, targeting of high-risk groups should be prioritised.
- Effective health promotion to reduce infection risk and early diagnosis and treatment to reduce transmission are essential for success
- Many individuals at high risk from these infections also belong to under-served populations who face barriers to engagement with mainstream health promotion and healthcare

*Unexploited opportunities for collaboration between partners with shared ambitions to reduce infections, improve health outcomes and address health inequalities?*

*Targeted population approach rather than tackling infections in silo?*

# Overlapping risk factors

## Risk factors for TB

Born in country with high prevalence  
H/o homelessness  
H/o imprisonment  
H/o substance misuse

## Risk factors for STIs

Sexual contact with an infected person  
High risk groups: heterosexuals aged 15 to 24 years, black ethnic minorities, MSM, commercial sex workers

## Risk factors for HIV

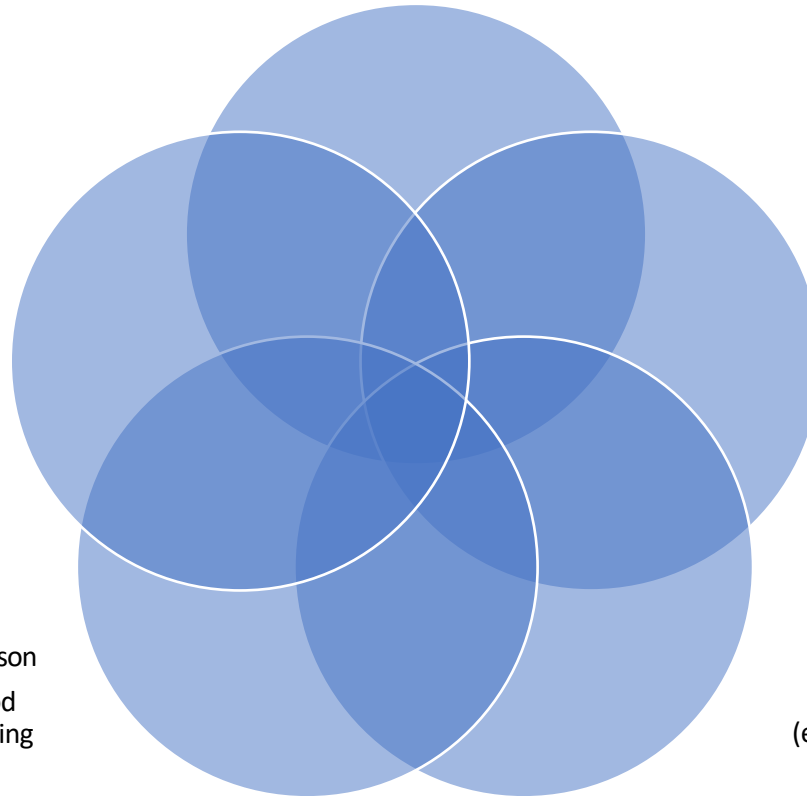
Sexual contact with an infected person  
Contact with infected human blood (e.g. sharing of contaminated injecting equipment)  
Vertical transmission  
Breastfeeding  
Born in country with high prevalence

## Risk factors for Hepatitis B

Contact with infected human blood (e.g. sharing of contaminated injecting equipment)  
Sexual contact with an infected person  
Vertical transmission  
Born in country with high prevalence

## Risk factors for Hepatitis C

Contact with infected human blood (e.g. sharing of contaminated injecting equipment)  
Born in country with high prevalence  
Vertical transmission  
Sexual contact with an infected person





# Co-infection

- Co-infection of two or more of the infections listed is not uncommon due to shared modes of transmission.
- There is evidence that having one of the infections also increases the risk of transmission of or adverse outcomes from other infections.

Table 1.3. Number of people with TB by co-morbidity status, England, 2020

Co-morbidity	n	%	Total <sup>a</sup>
Diabetes	466	11.9	3,920
Hep B	69	1.9	3,582
Hep C	58	1.6	3,568
Chronic liver disease	61	1.6	3,843
Chronic renal disease	134	3.5	3,867
Immunosuppression	234	6.1	3,843
Biological therapy	43	1.0	4,107
Transplantation	18	0.4	4,082
Cancer	26	19.7	132

Number of people with TB by Co-morbidity status, Yorkshire and Humber, 2020

Co-morbidity	Number of cases
Diabetes	27
Hep B	6
Hep C	3
Chronic liver disease	3
Chronic renal disease	8
<u>Immuniosuppression</u>	15
Biological therapy	4
Transplantation	2
Other	6
Cancer	2

# Many individuals at high risk also belong to under-served populations

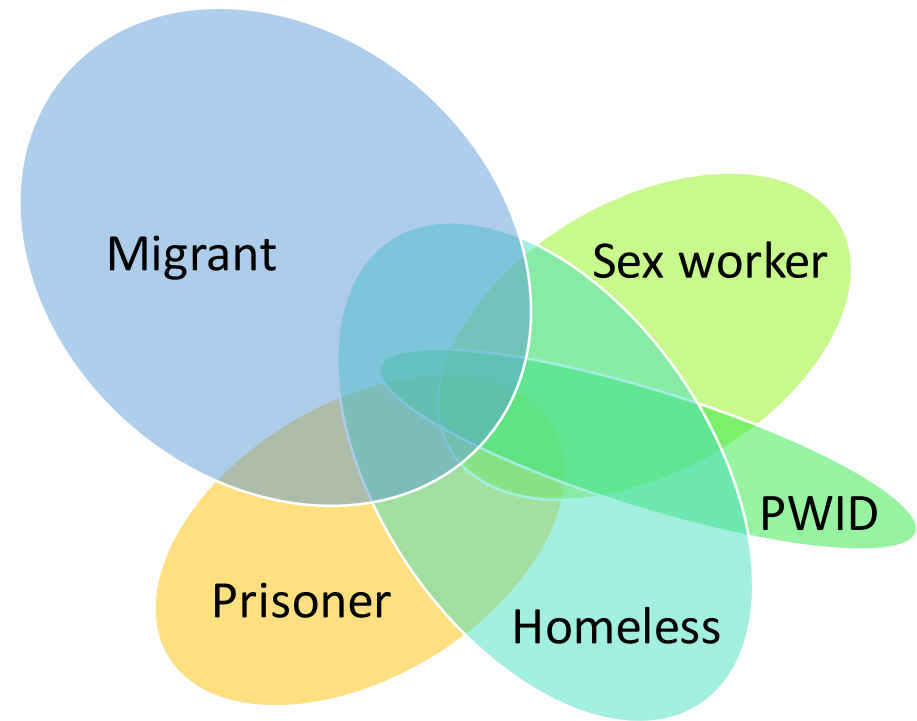
- Underserved migrants including refugees, asylum seekers and undocumented migrants
- People experiencing homelessness
- People who inject drugs
- People experiencing State imprisonment
- Sex-workers

*Due to social circumstances, language, culture or lifestyle individuals from under-served populations may have greater difficulties*

- *accessing health promotion messaging and support;*
- *recognising infection symptoms;*
- *accessing treatment and diagnostic services;*
- *self-administering treatment;*
- *and engaging with follow-up clinic appointments*

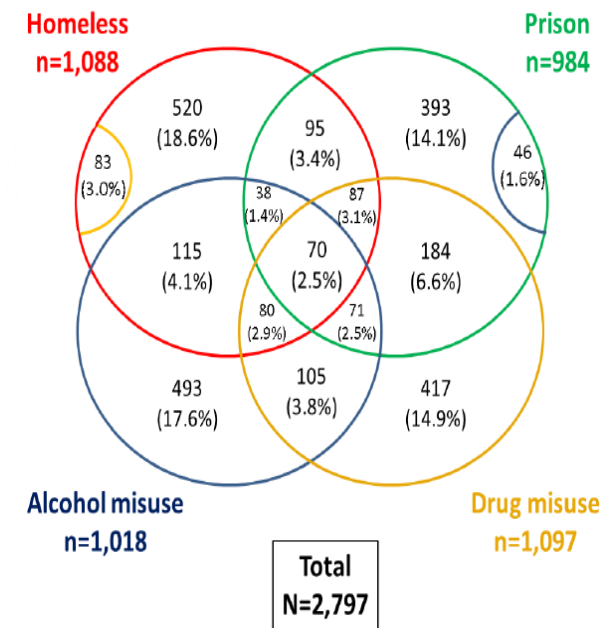
# Overlaps in under-served groups

	Homeless	Prisoner	PWID	Migrant	Sex worker
Homeless	280000	11741	13670	840	53900
Prisoner	11741	78278	50098	28500	unavailable
PWID	13670	50098	29086	unavailable	unavailable
Migrant	840	28500	unavailable	1171964	unavailable
Sex worker	53900	unavailable	unavailable	unavailable	70000



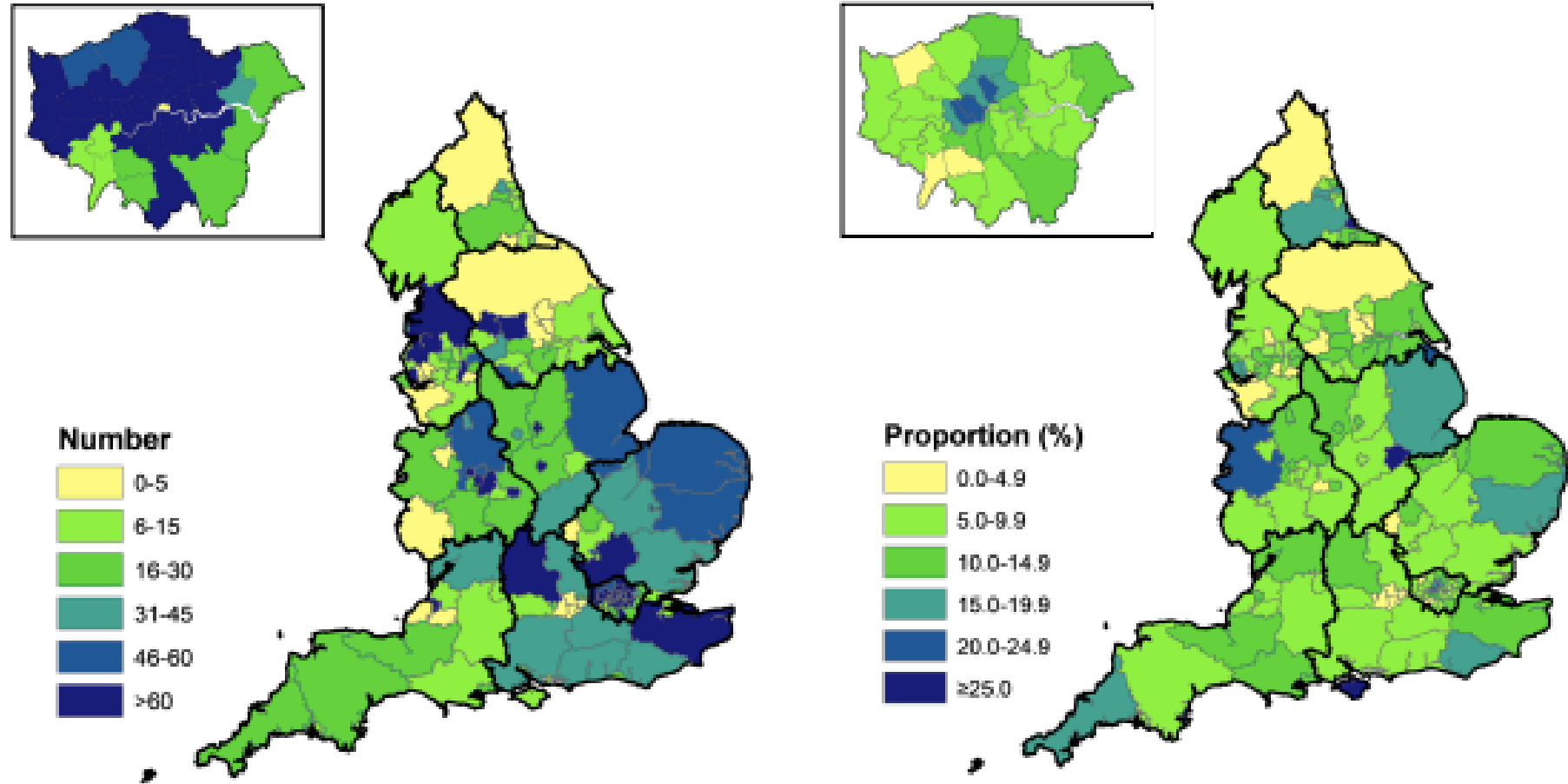
# TB in under-served groups

- Rates of TB continue to be highest in **people born outside the UK (72.8%)**, those with social risk factors including current **alcohol misuse, current or history of drug misuse, homelessness** and/or **imprisonment**, and from our more **deprived** communities
- The rate in non-UK born individuals is 36.3 per 100,000; over 15-fold greater than the rate in the UK born population.
- In 2020, 12.7% of people notified with TB had a social risk factor (SRF) broadly comparable with previous years.



Venn diagram showing the overlap in social risk factors among people with TB (aged  $\geq 15$  years), England, 2013-2017  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/773730/Tackling\\_TB\\_in\\_Under-Served\\_Populations\\_-\\_a\\_Resource\\_for\\_TBCBs\\_and\\_partners.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/773730/Tackling_TB_in_Under-Served_Populations_-_a_Resource_for_TBCBs_and_partners.pdf)

Figure 5.4. Number and proportion of people with TB ( $\geq 15$  years) with at least one SRF<sup>a</sup> by local authority, England, 2016/2020 (boxes shows enlarged map of London area)



<sup>a</sup> SRF refers to those with current alcohol misuse, current or history of homelessness, imprisonment or drug misuse. PHEC boundaries are outlined in black.  
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 Contains National Statistics data © Crown copyright and database right 2021.

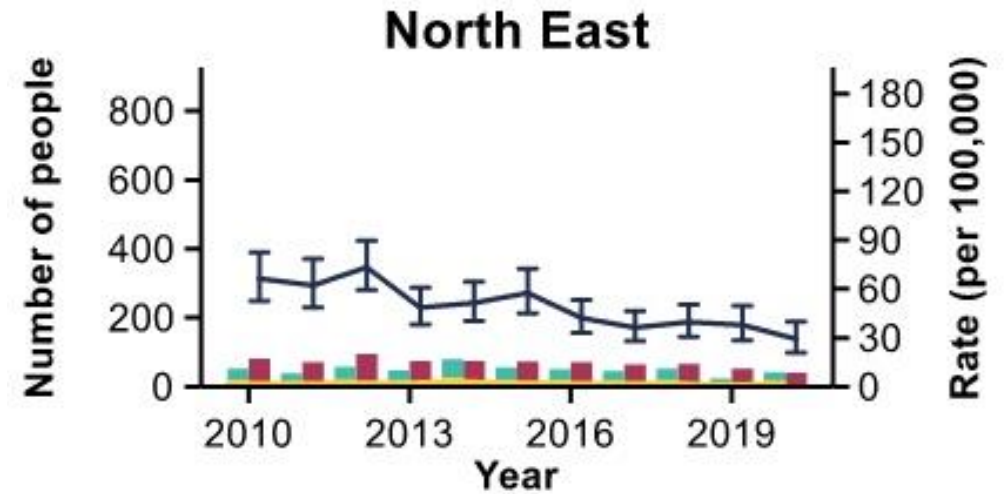
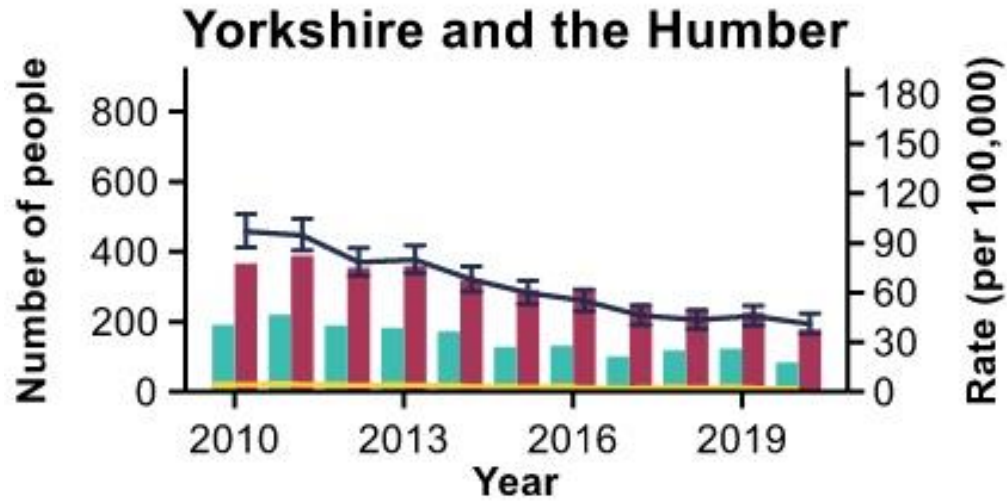
# Under-served migrants

- TB rates are higher for non-UK born people, particularly those from South Asian and Black African non-UK born populations.
- Pre-migration factors include endemic disease, inadequate healthcare in country of origin; poor/overcrowded living conditions; malnutrition



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**Figure 1.8. Number of TB notifications and rates by PHE Centre and place of birth, 2010 to 2020**

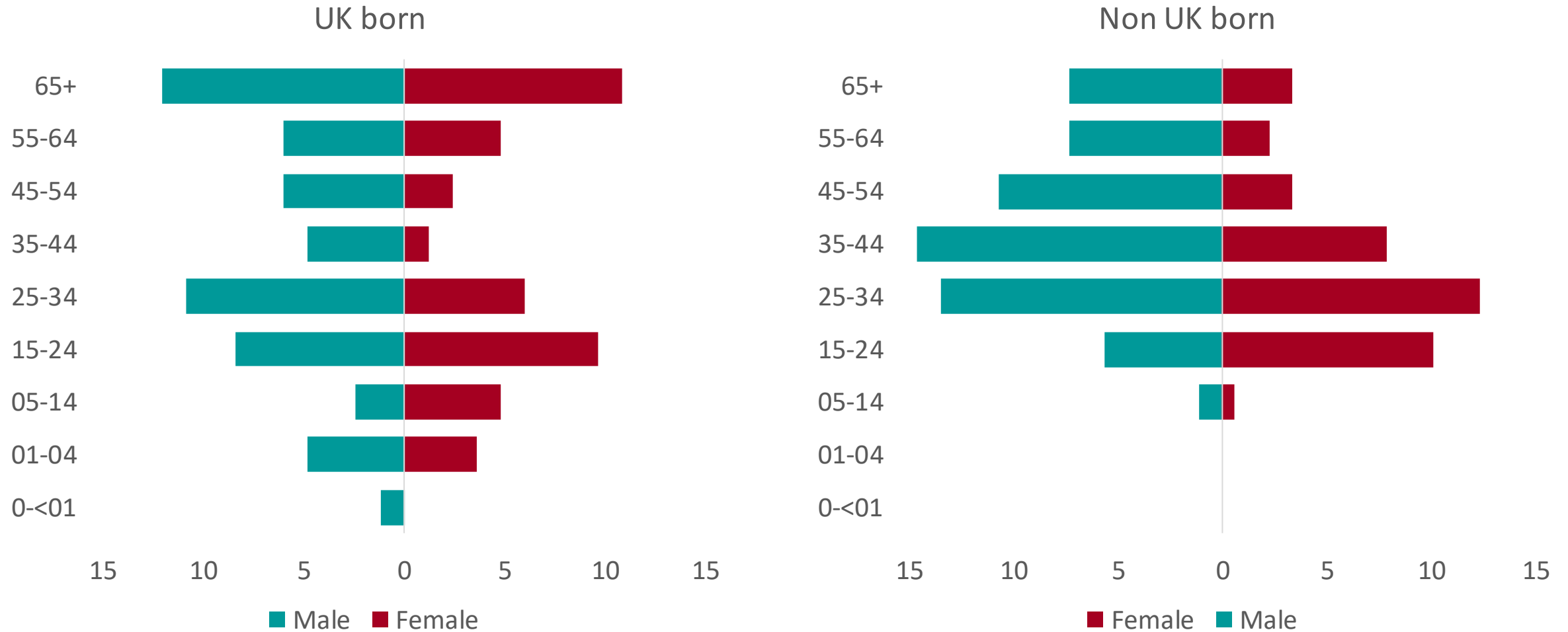


■ UK born     — Rate UK born     ┆ 95% CI UK born  
■ Non-UK born     — Rate Non-UK born     ┆ 95% CI Non-UK born

Between 2019 and 2020, the number of TB notifications and rates for people born outside the UK decreased across all PHECs, with the exception of the West Midlands

For those born outside the UK, the most frequent countries of birth were India, Pakistan, Romania, Somalia and Eritrea

# Proportion of people with TB by age and sex and place of birth, Yorkshire and Humber, 2020



There were 270 cases of TB notified in 2020 in Yorkshire and Humber, 17 of which were aged under 15.



# Under-served migrants

- Post migration: risk of poor nutrition, sub-standard and overcrowded housing in deprived areas, low income, healthcare access barriers, disruption of treatment.
- TB treatment is free in the UK but those with 'No Recourse to Public Funds' (NRPFs) do not usually have access to welfare payments, LA/housing association accommodation or social care services → impacts ability to successfully complete treatment.



*Simon Rawles/British Red Cross*

<http://www.ncbi.nlm.nih.gov/pubmed/22448025>

<https://www.gov.uk/government/publications/tackling-tuberculosis-in-under-served-populations>

# People experiencing homelessness

- In 2020 4.3% of people with TB were currently or had a history of homelessness.
- A London based study estimated the point prevalence of active TB in people experiencing homeless to be 788 per 100,000 compared to an overall prevalence of only 27 per 100,000.
- Latent TB is substantially higher in the homeless population than the general population.
- Malnutrition, poor living conditions, shared accommodation, and delay in seeking treatment all increases the risk of TB and onward transmission.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1030165/TB\\_annual-report-2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1030165/TB_annual-report-2021.pdf)

<https://thorax.bmj.com/content/62/8/667>

<https://thorax.bmj.com/content/73/6/557>

# People who inject drugs

- In 2020 4.4% of people with TB had a current or a history of drug misuse.
- People who inject drugs are often malnourished and many have poor living conditions; both of which increase TB risk.
- Evidence suggests that opiates can act as cough suppressants and therefore make it difficult for people who inject drugs and patients on opioid substitution therapy (OST) to recognise TB symptoms and seek timely medical review and treatment.



John Rensten / Getty Images

# People experiencing imprisonment

- Prisoners tend to come from population groups at high risk of TB.
- In 2020 4.0% of people with TB had a current or history of imprisonment.
- A history of imprisonment is associated with an increased risk of latent TB in individuals born in the UK after adjusting for age, length of time spent homeless and any illicit drug use.
- Between 2010 and 2017, Enhanced TB Surveillance data reports that the proportion of people with TB with current or a history of imprisonment has increased from 2.8% to 4.4%.
- Between 2013 and 2017, where recorded, 21.3% (171/802) of the TB notifications reporting imprisonment were currently in prison at the time of diagnosis or during care.

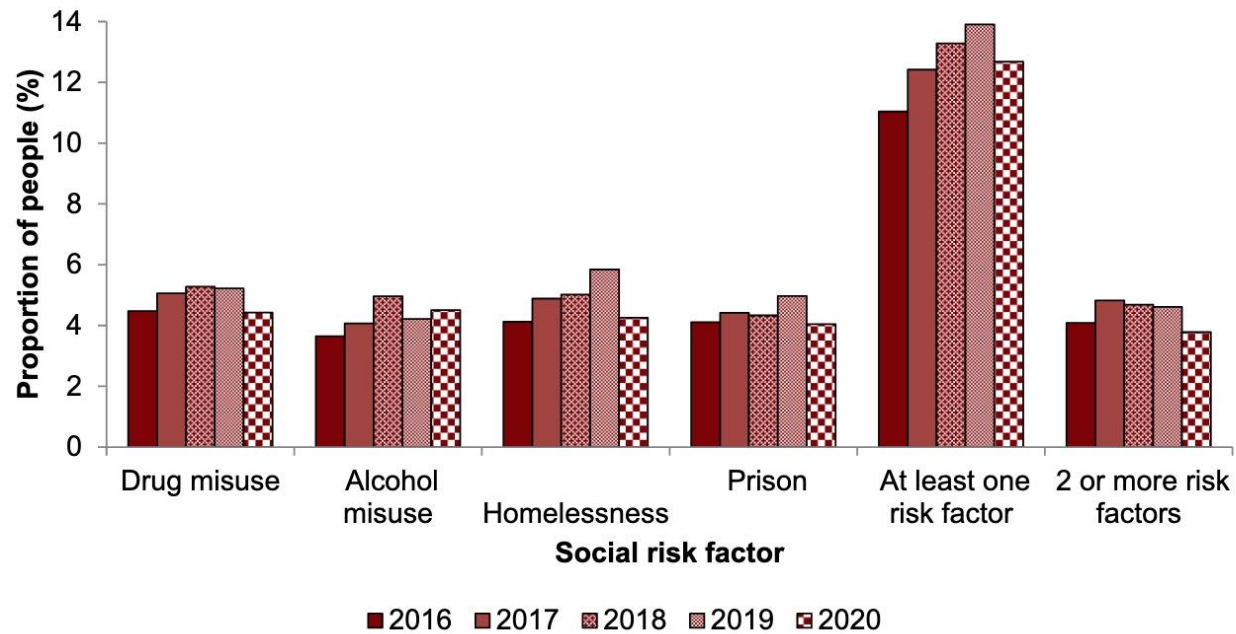


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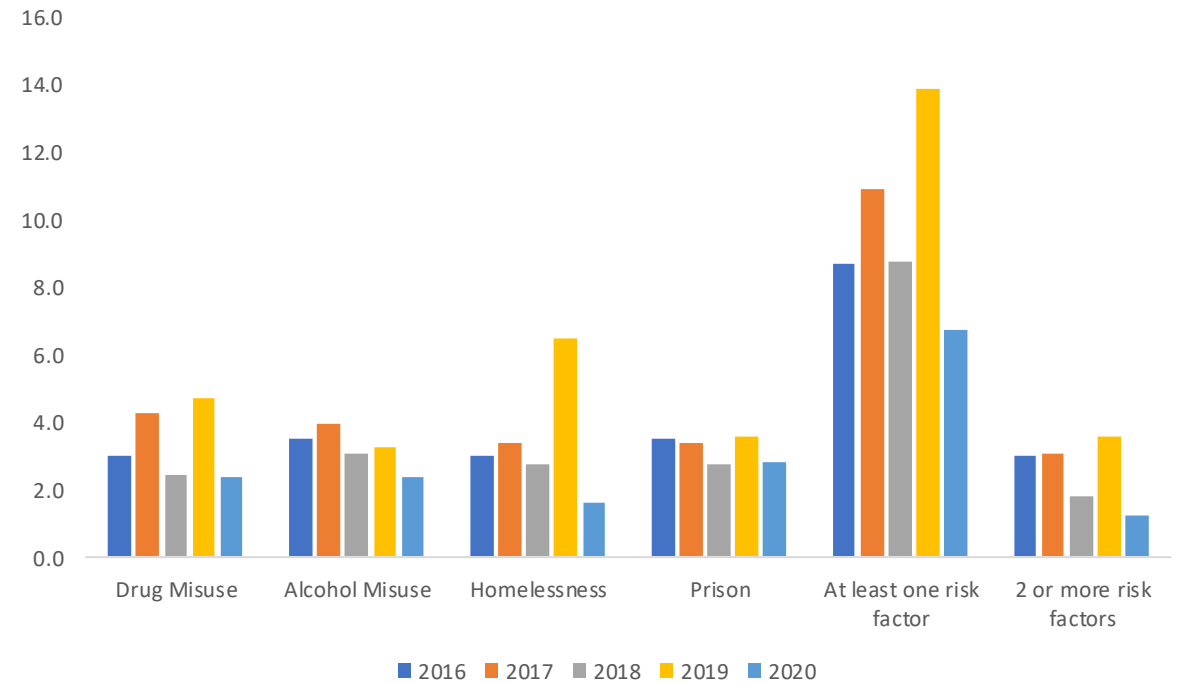
<https://thorax.bmj.com/content/73/6/557>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/773730/Tackling\\_TB\\_in\\_UnderServed\\_Populations\\_-\\_a\\_Resource\\_for\\_TBCBs\\_and\\_partners.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/773730/Tackling_TB_in_UnderServed_Populations_-_a_Resource_for_TBCBs_and_partners.pdf)

**Figure 5.2. Proportion of people with TB ( $\geq 15$  years) with at least one social risk factor (SRF), England, 2016 to 2020**



**Proportion of people with TB ( $\geq 15$  years) with at least one social risk factor (SRF), Yorkshire and Humber, 2016 - 2020**



# Sex-workers

- Many street sex-workers also experience homelessness and have current or history of drug or alcohol misuse which puts them at increased risk of TB.
- While figures on the prevalence of tuberculosis in sex-workers are unavailable it is recognised in the literature to be a health concern in this group.

# Challenges to accessing mainstream healthcare services

- Difficulties registering with a GP;
- Language barriers;
- Clinicians unaware of complex needs;
- Felt and experienced discrimination by service-providers;
- Difficulties navigating the healthcare system;
- Chaotic life circumstances impacting ability to keep to fixed appointment times;
- Cultural barriers;
- Transport issues;
- **Digital exclusion.**



# Challenges to accessing mainstream healthcare services

- Fear and distrust
- Stigmatisation and criminalisation of behaviours associated with some of the underserved groups
- Overseas visitor charging and NHS data sharing with the Home Office
- Interruption of care
- Contact tracing challenges: high mobility, communication challenges (e.g. no phone, no home address, language/literacy issues), distrust causing reluctance to share contact details, and stigmatisation of people with the infections.



# Putting high-risk under-served groups at the centre of partnership work

- It is necessary to provide **targeted health promotion and awareness, immunisations, and testing and management of infections that takes into account the barriers to healthcare**
- Delivery needs to be **innovative, opportunistic and tailored.**
- There needs to be **integrated health services capable of delivering TB, HIV, HBV, HCV, sexual health and harm reduction services in settings accessible to high risk groups.**

# Potential settings

- Homeless hostels
- Asylum-seeker accommodation including initial accommodation centres
- Immigration detention centres
- Prisons
- Drug rehabilitation centres/treatment clinics
- Needle and syringe programmes
- Pharmacies
- Clinics/outreach services providing specialist healthcare to identified under-served groups
- A&E departments

# Recommendations

- Integrate delivery of TB, HBV, HCV, HIV and sexual health services for under-served groups.
- Carry out asset mapping of potential settings for programme delivery and relevant agencies for partnership working.
- Undertake community engagement and research activities to inform interventions to improve awareness of infection risk and prevention measures and increase uptake of testing and treatment.
- Consider co-production of interventions and services.
- Address the legal, social and policy barriers to infection control and good population health.