



Public Health
England

Protecting and improving the nation's health

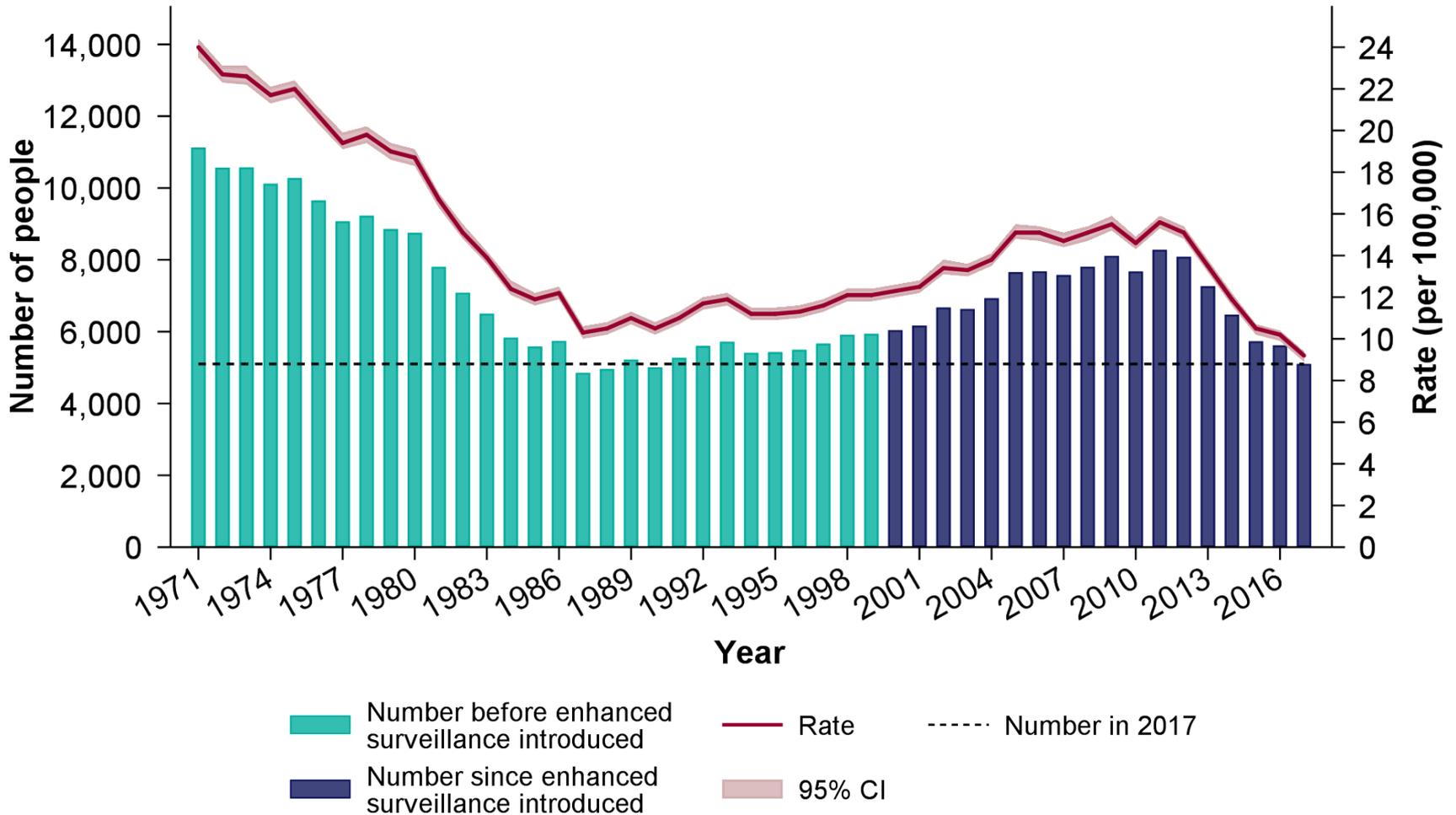
Tuberculosis in England

2018 report

(presenting data to end of 2017)

Tables and figures slide set

Number of TB notifications and rates, England, 1971-2017



Number of TB notifications and rates, England, 2000-2017

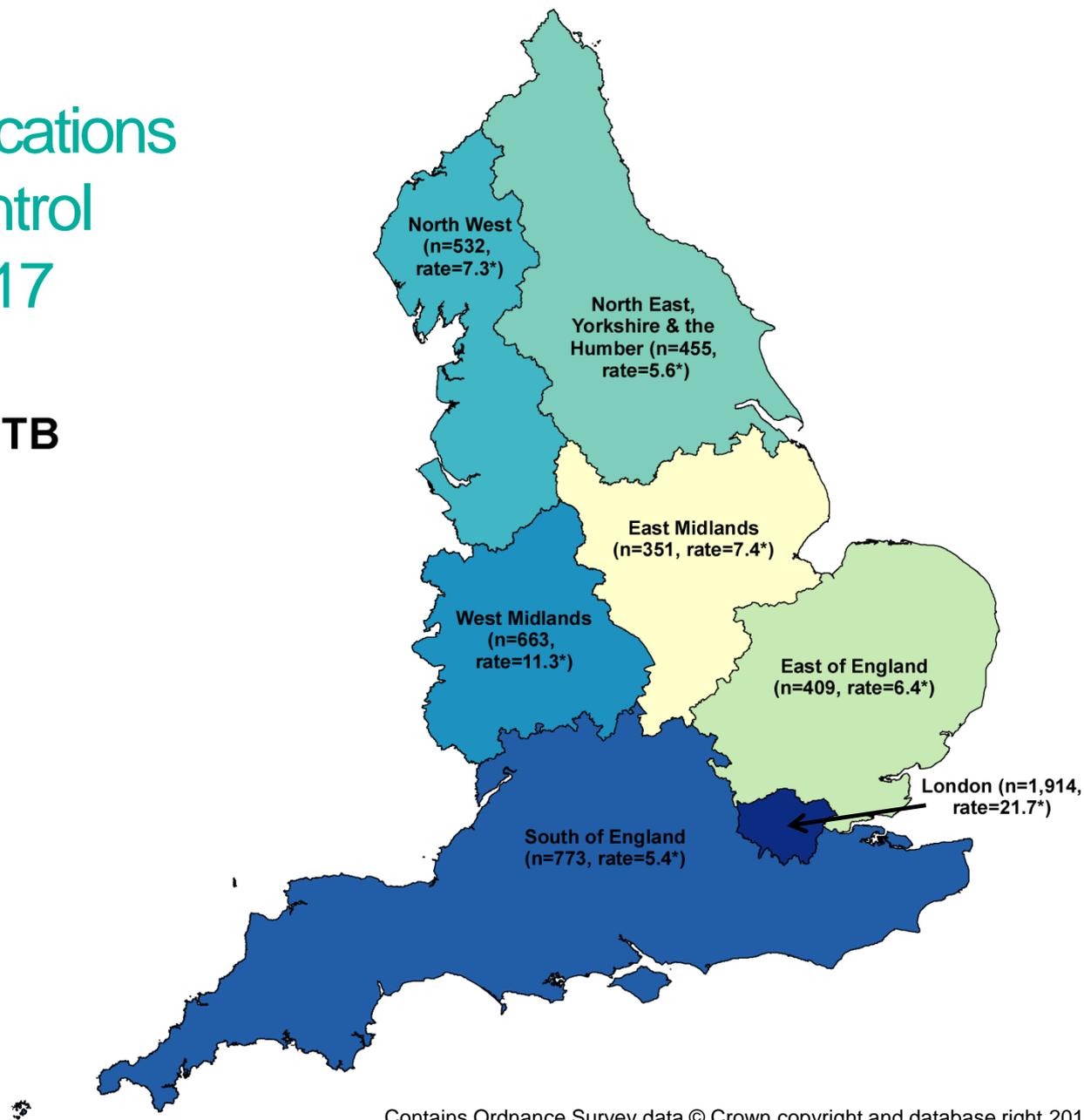
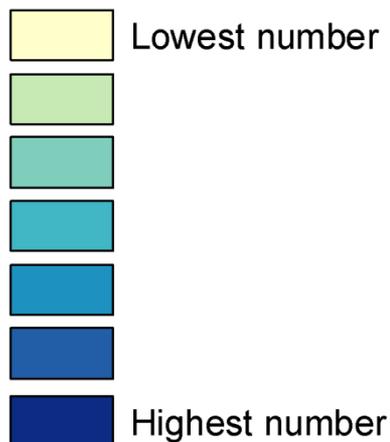
5,102 people

9.2 people per 100,000 population



Number of TB notifications and rates by TB control board, England, 2017

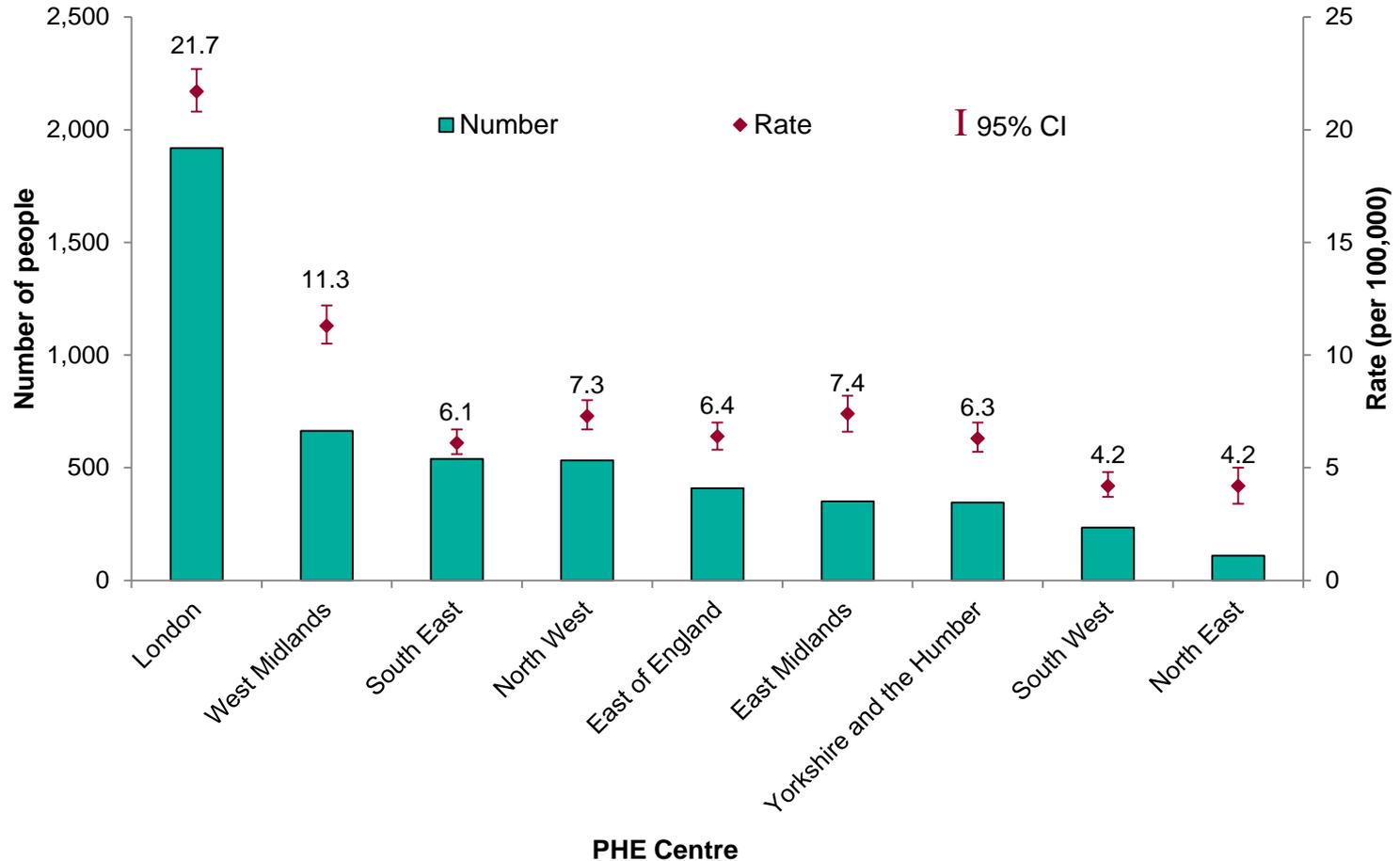
Number of people with TB



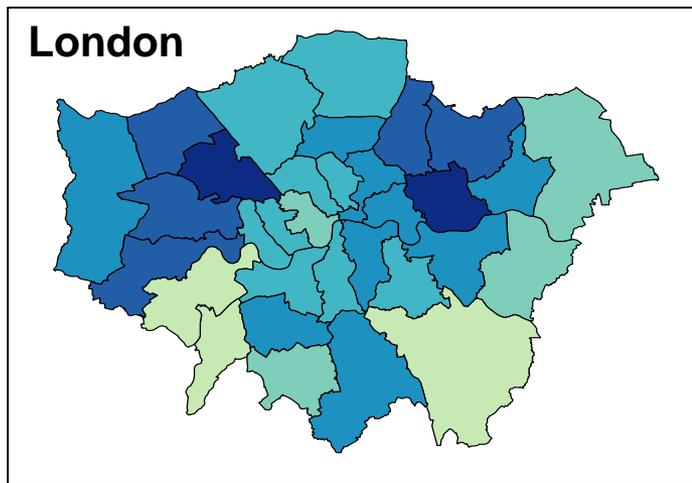
* per 100,000 population

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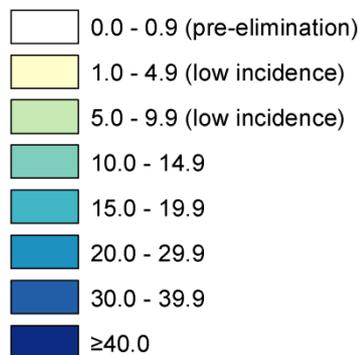
Number of TB notifications and rates by PHE Centre, England, 2017



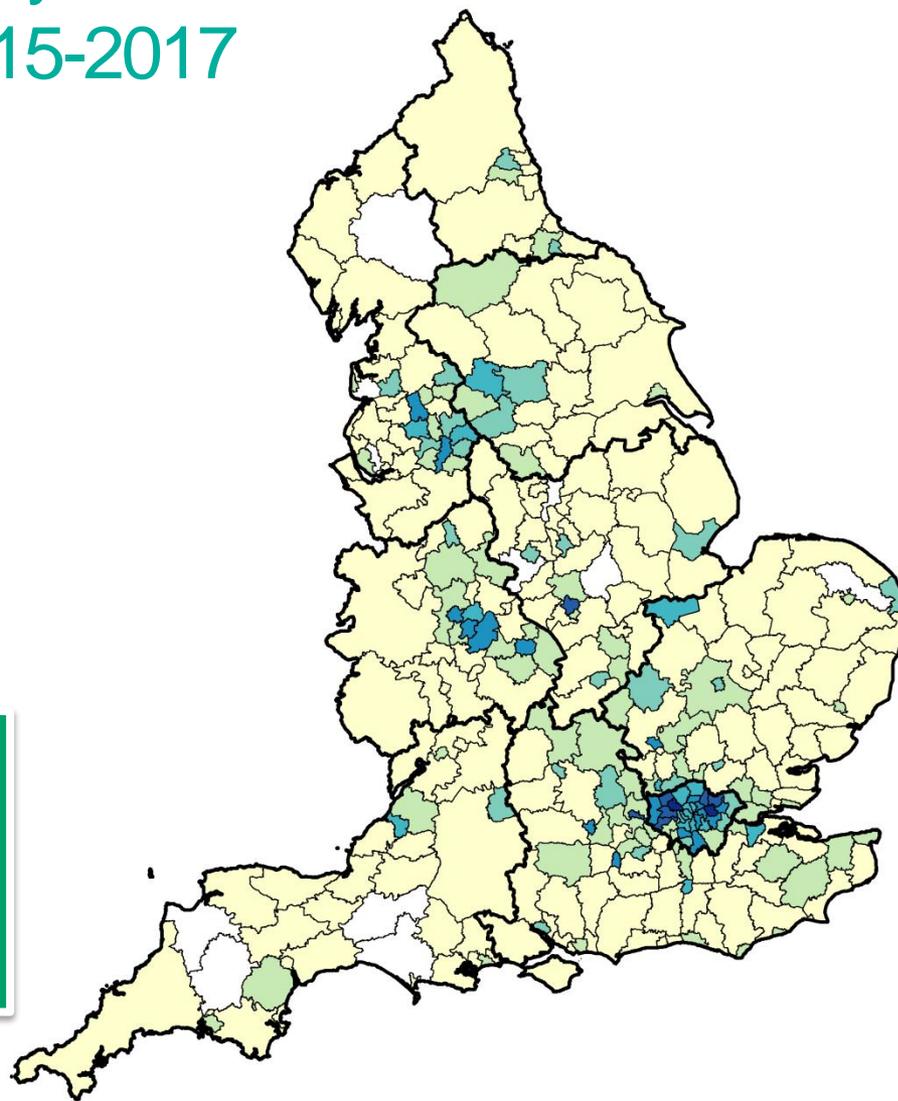
Three-year average TB rates by local authority district^a, England, 2015-2017



Tuberculosis rate (per 100,000)



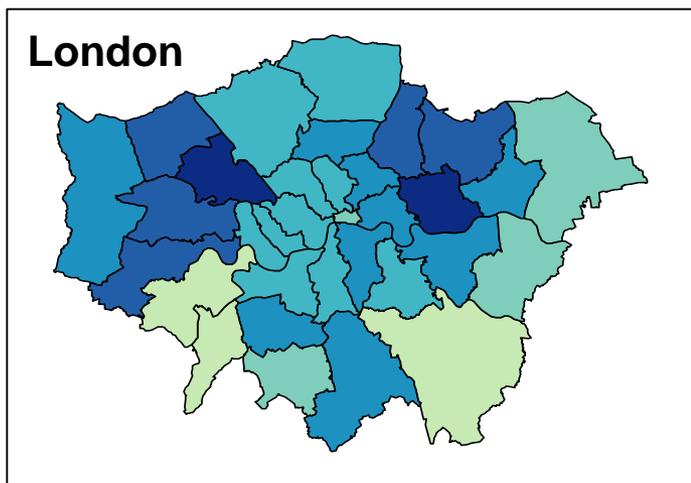
57% of LAs had a 3-year average rate of <5.0 per 100,000



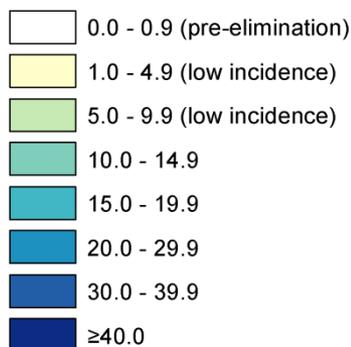
^aPHEC boundaries are outlined in black.

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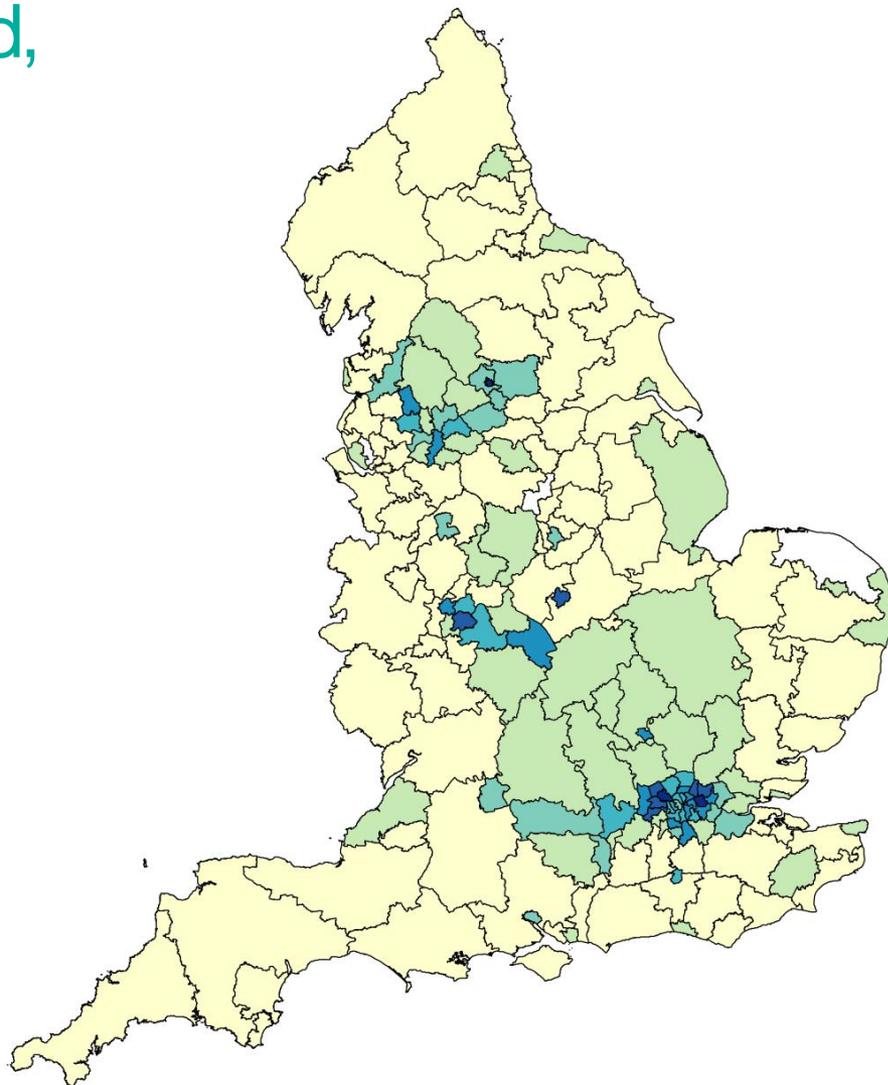
Three-year average TB rates by clinical commissioning group, England, 2015-2017



Tuberculosis rate (per 100,000)

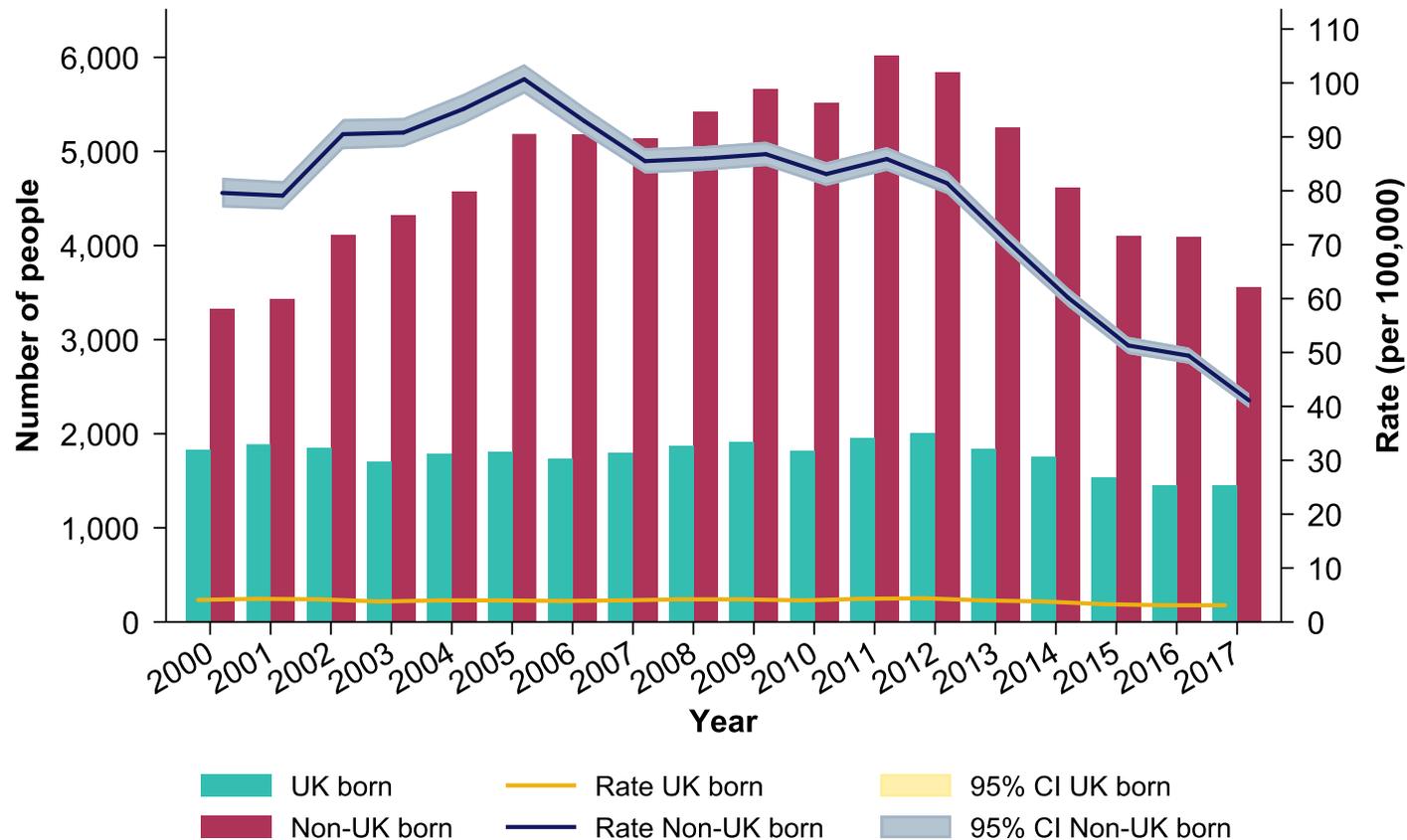


48.2% of CCGs had a 3-year average rate of <5.0 per 100,000



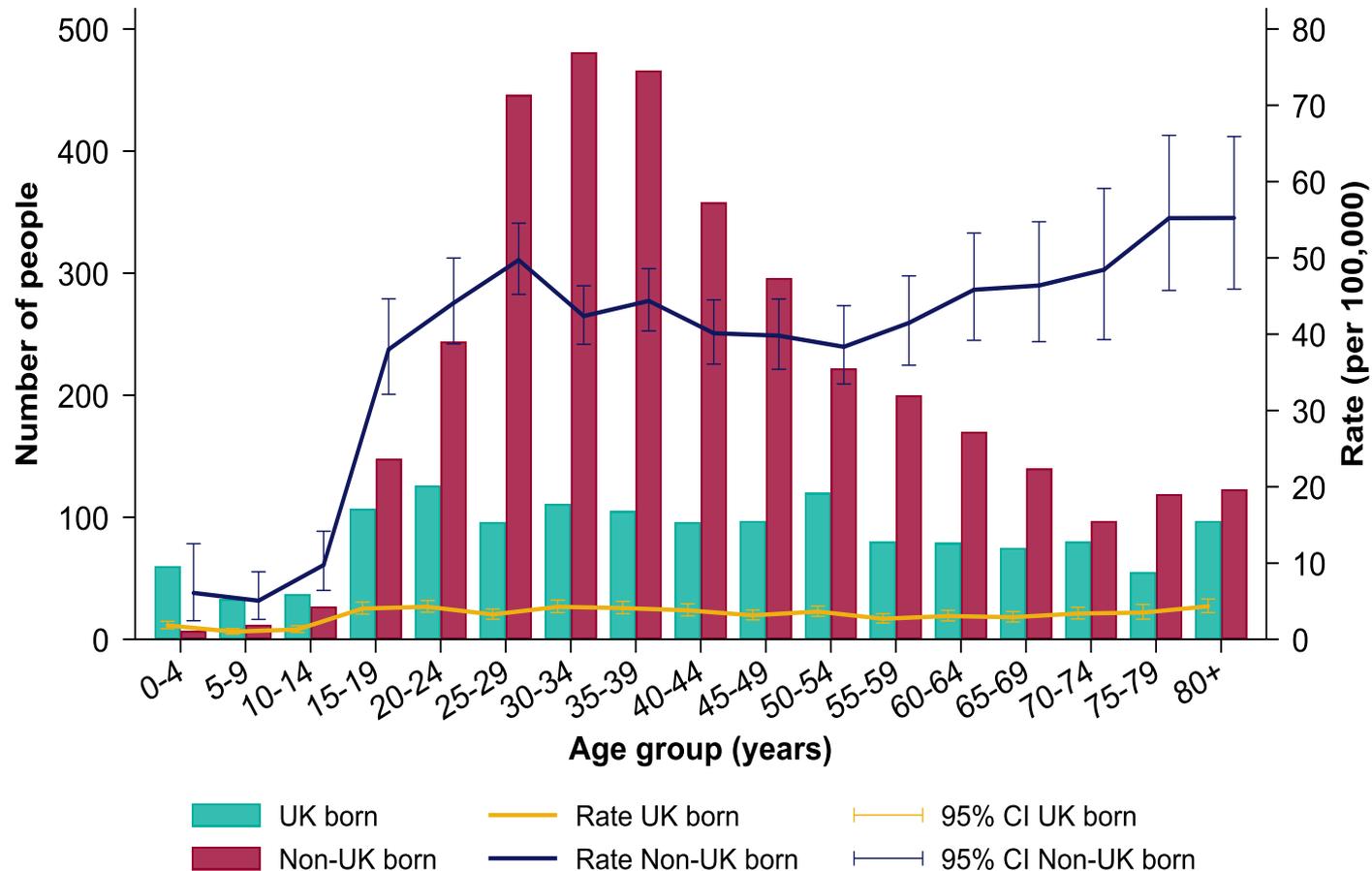
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Number of TB notifications and rates by place of birth, England, 2000-2017



Please note: confidence intervals around the UK born population are small and therefore not visible.

Number of TB notifications and rates by age group and place of birth, England, 2017



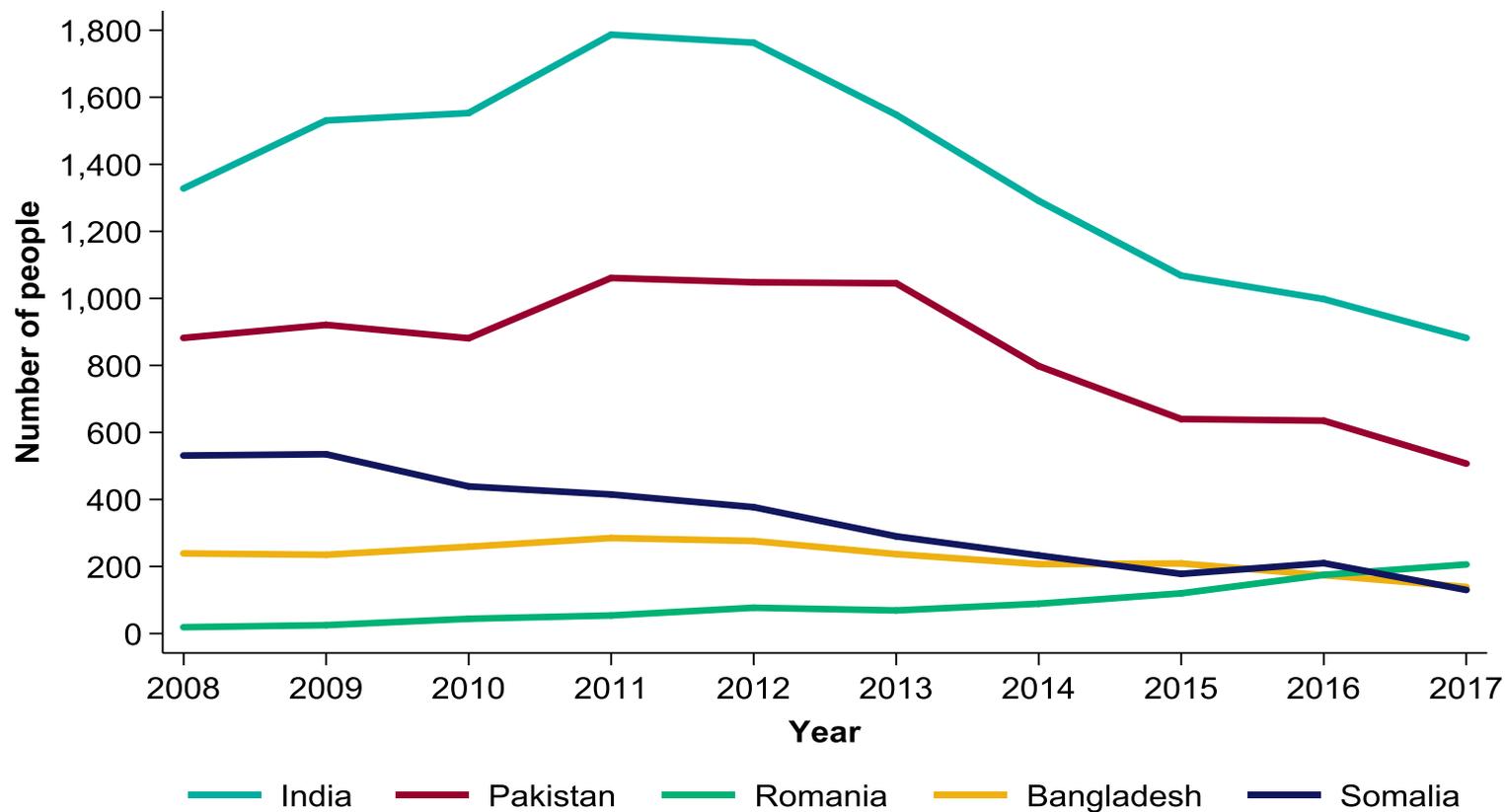
Country of birth and time from UK entry to TB notification, England, 2017

Country of birth	Number of people	Proportion of people (%) ^a	Median time since entry to UK (IQR) ^b
United Kingdom	1,454	29.4	-
India	882	17.9	9 (3-19)
Pakistan	507	10.3	14 (5-36)
Romania	206	4.2	2 (1-4)
Bangladesh	139	2.8	12 (6-25)
Somalia	130	2.6	12 (7-18)
Eritrea	98	2.0	3 (1-8)
Nigeria	97	2.0	7 (4-14)
Nepal	95	1.9	6 (2-8)
Philippines	79	1.6	11 (6-15)
Poland	73	1.5	9 (4-11)
Zimbabwe	70	1.4	15 (12-17)
Afghanistan	70	1.4	4 (1-15)
Sudan	64	1.3	1 (0-4)
Sri Lanka	53	1.1	15 (8-18)
Ethiopia	53	1.1	2 (1-5)
Kenya	52	1.1	20 (10-32)
Lithuania	49	1.0	6 (4-9)
Other (<1%)	768	15.5	11 (3-20)
Total^a	4,939	100.0	9 (3-18)

^a Where country of birth was known

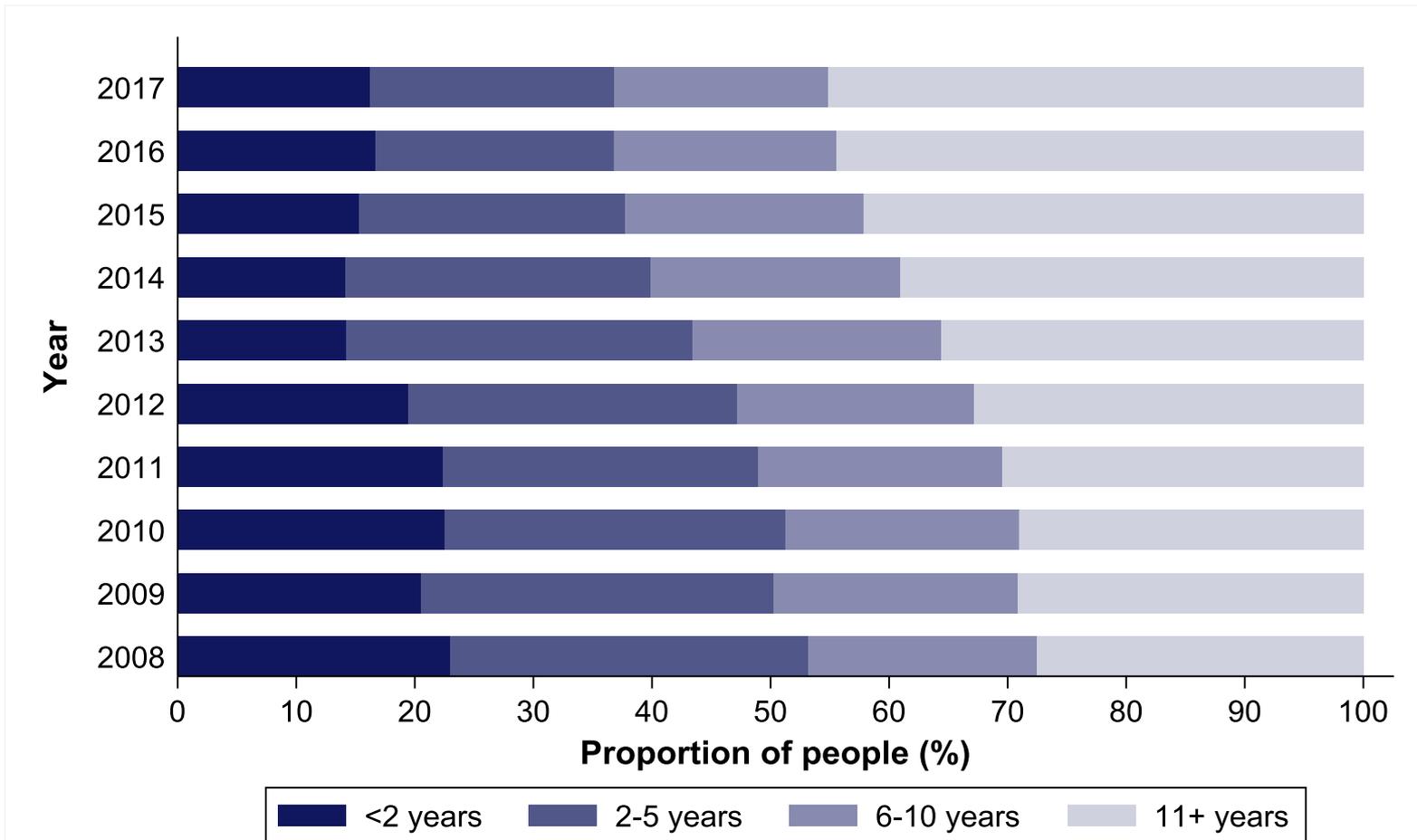
^b Years, IQR refers to interquartile range

Trend in the number of people with TB for the top five countries of birth^a for those born outside the UK, England, 2008-2017

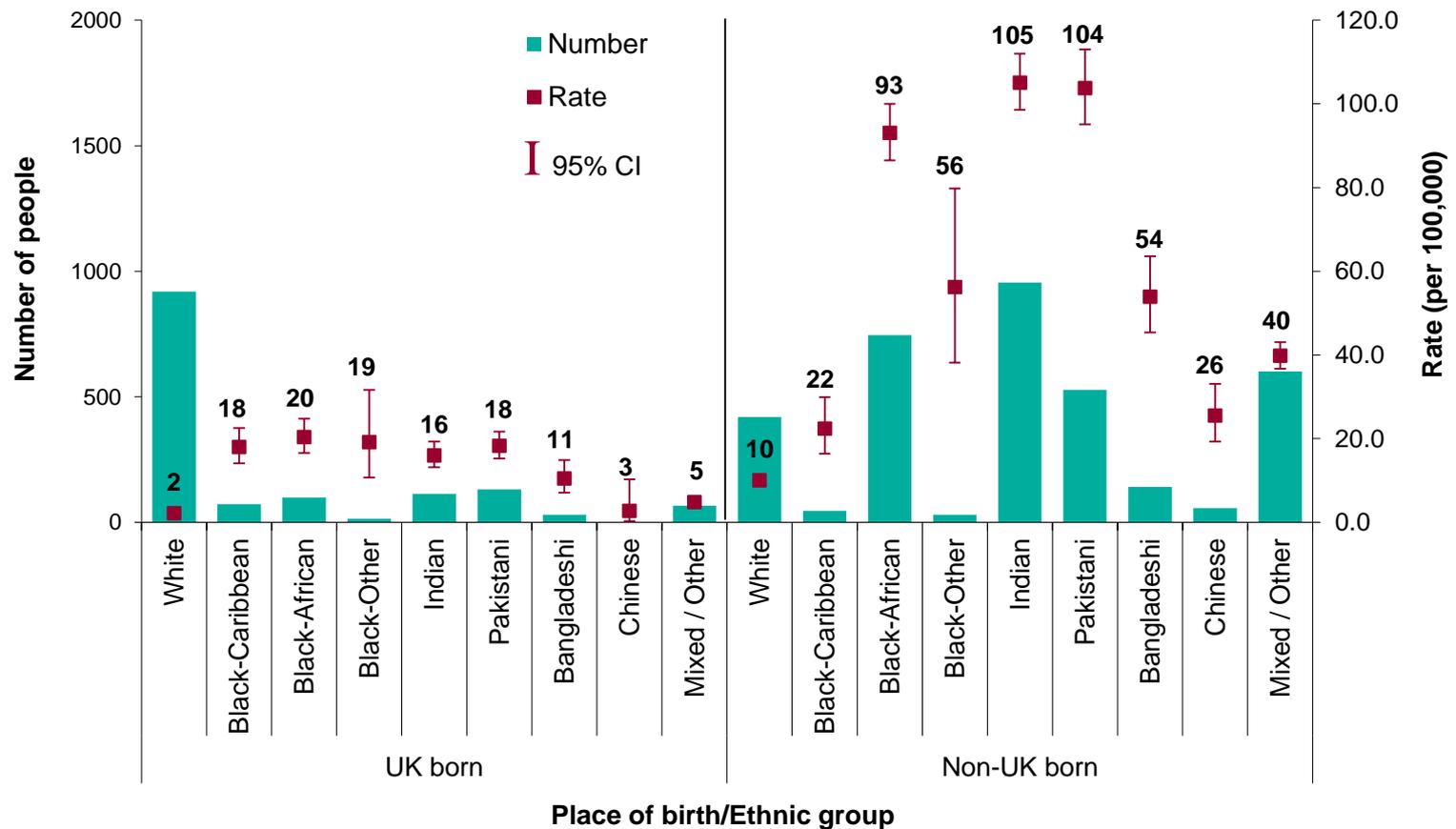


^a Five most frequent countries of birth in 2017

Time between entry to the UK and TB notification for people born outside the UK, England, 2008-2017

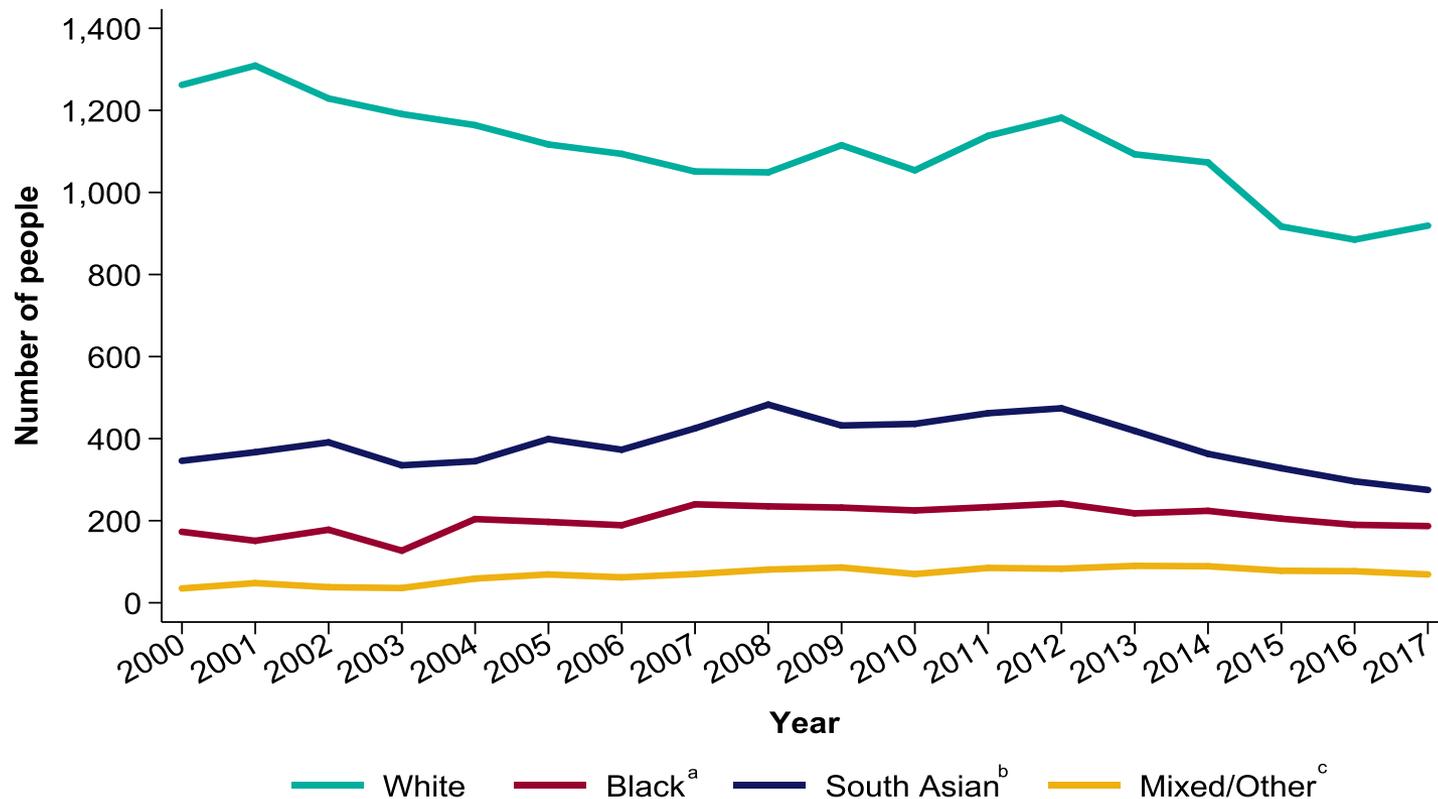


Number of TB notifications and rates by place of birth and ethnic group, England, 2017



Please note: rates by ethnic group are displayed as labels.

Number of people with TB born in the UK by ethnic group, England, 2000-2017



^a People from Black-Caribbean, Black-African and Black-Other ethnic groups were grouped as 'Black'

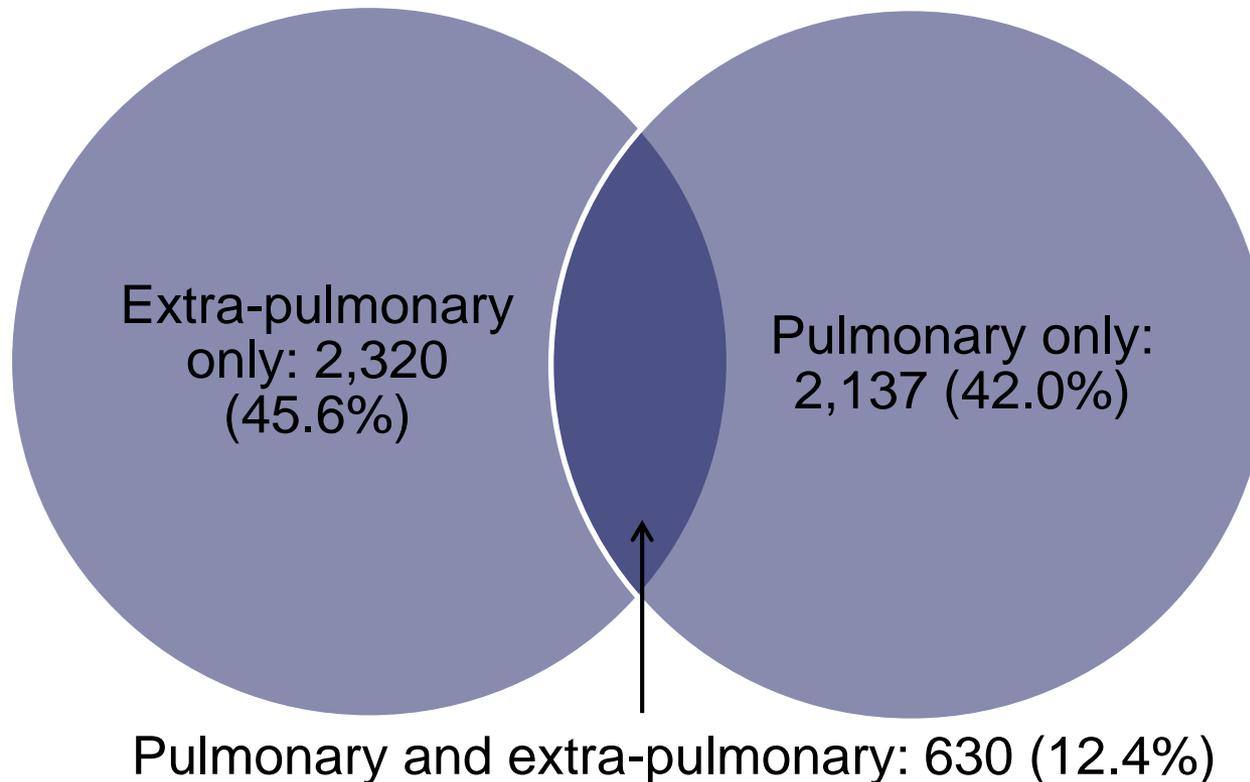
^b People from Indian, Pakistani and Bangladeshi ethnic groups were grouped as 'South Asian'

^c People from Mixed/Other and Chinese ethnic groups were grouped as 'Mixed/other'

Number of people with TB by site of disease, England, 2017

5,087 people with TB where site of disease was known:

- 2,767 (54.4%) had pulmonary disease
- 2,950 (58.0%) had extra-pulmonary disease



Number of people with TB by site of disease, England, 2017

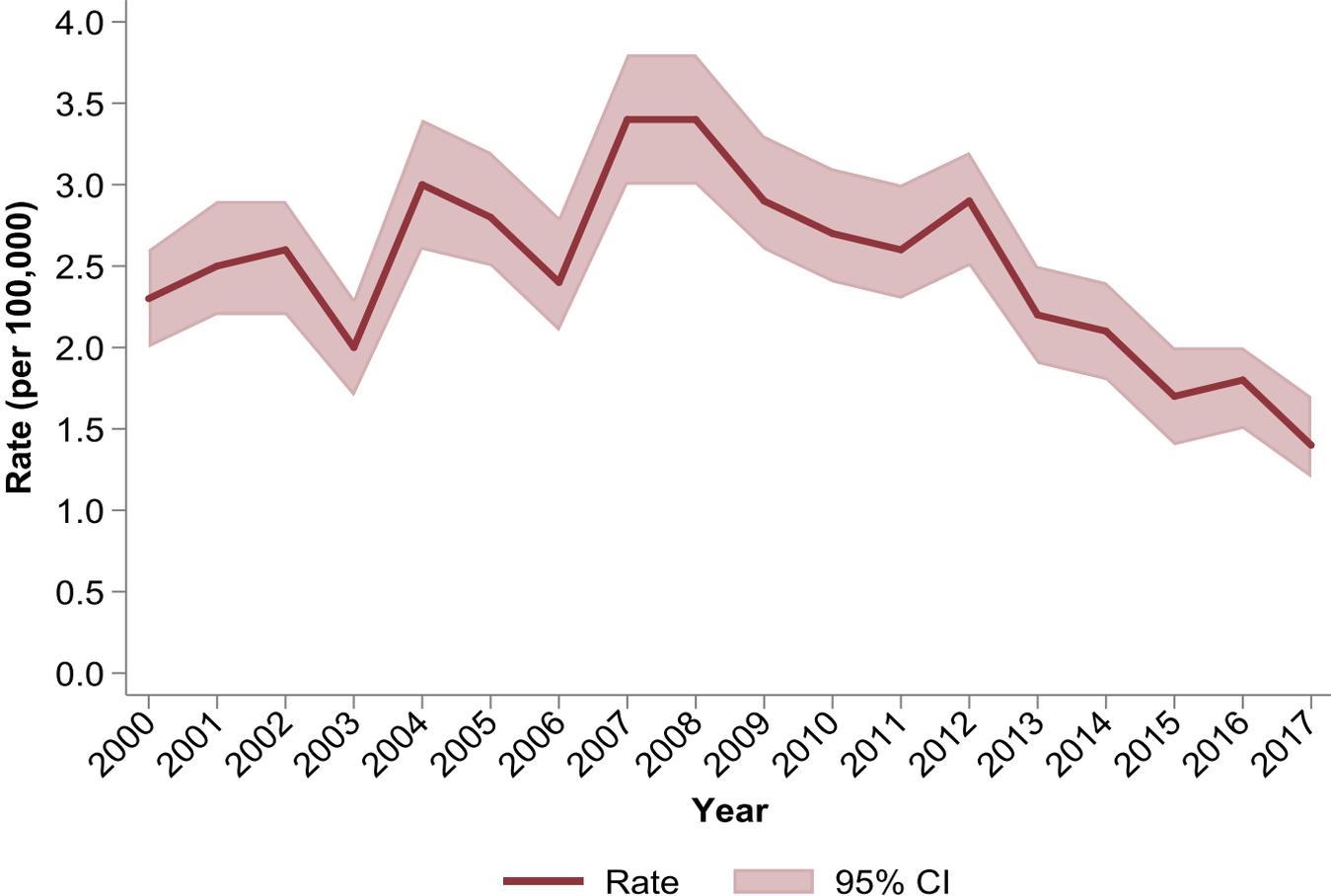
Site of disease ^a	Number of people	Percentage ^b
Pulmonary	2,767	54.4
Miliary	135	2.7
Laryngeal	13	0.3
Extra-pulmonary	2,950	58.0
Extra-thoracic lymph nodes	1,050	20.6
Intra-thoracic lymph nodes	637	12.5
Unknown extra-pulmonary	364	7.2
Pleural	439	8.6
Other extra-pulmonary	410	8.1
Gastrointestinal	232	4.6
Bone – spine	195	3.8
Bone – not spine	113	2.2
CNS – meningitis	112	2.2
CNS – other	108	2.1
Genitourinary	76	1.5
Cryptic disseminated	38	0.7

^a With or without disease at another site

^b Proportion of people with TB for which sites of disease were known (5,087); total exceeds 100% due to disease at more than one site

CNS - Central Nervous System

Rate of TB in children (<15 years) born in the UK, England, 2000-2017



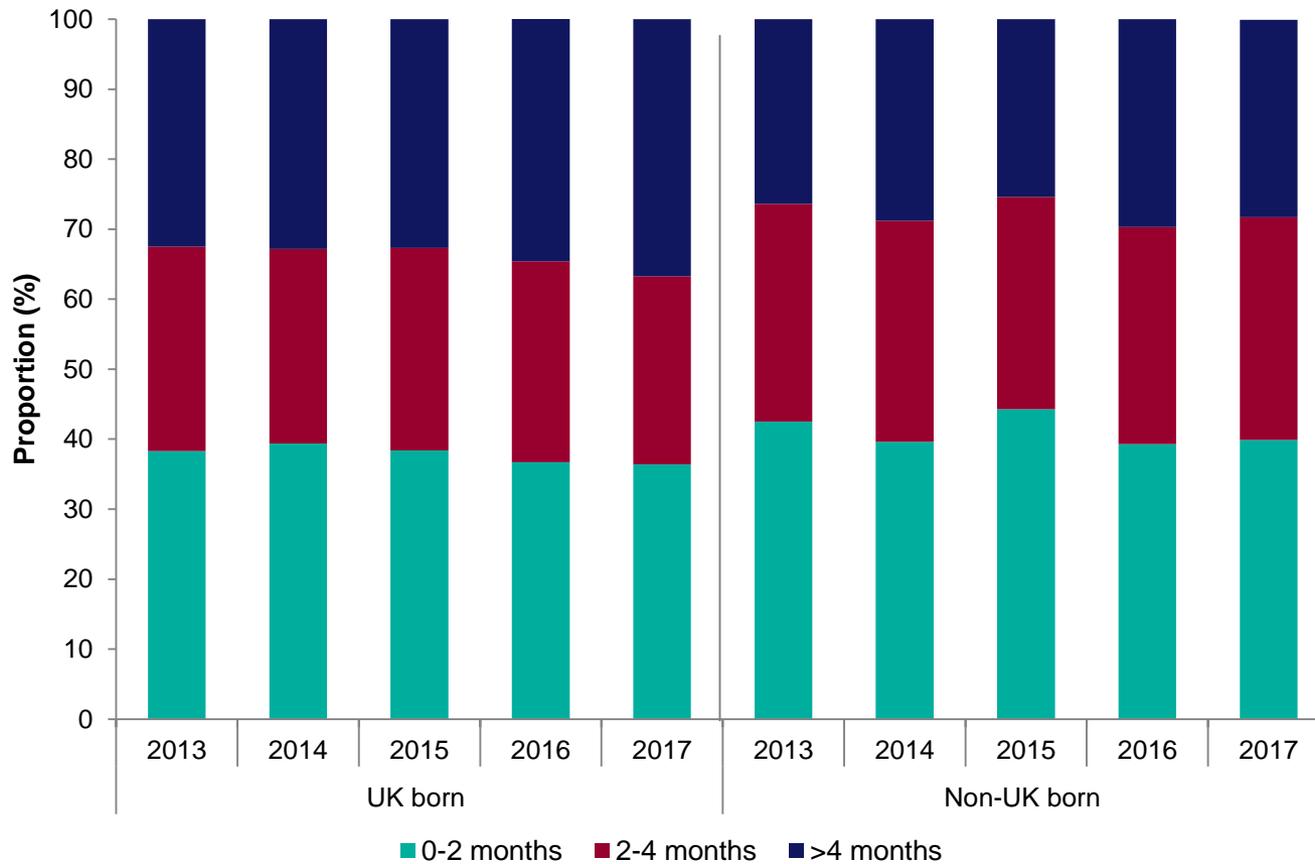
Number and proportion of people with TB clustered using WGS by place of birth and number of new clusters, North and Central England, 2017

SNP cut off applied	Clustered		Non-UK born clustered		UK born clustered		Clusters	Clusters by cluster size							
								2		3-4		5-9		≥10	
	n	% ^a	n	% ^a	n	% ^a	n	n	%	n	%	n	%	n	%
12 SNPs	268	23.3	99	13.2	166	44.6	83	43	51.8	28	33.7	11	13.3	1	1.2
5 SNPs	218	18.9	82	10.9	134	36.0	73	38	52.1	26	35.6	9	12.3	0	0.0
2 SNPs	173	15.0	68	9.1	103	27.7	63	41	65.1	16	25.4	6	9.5	0	0.0

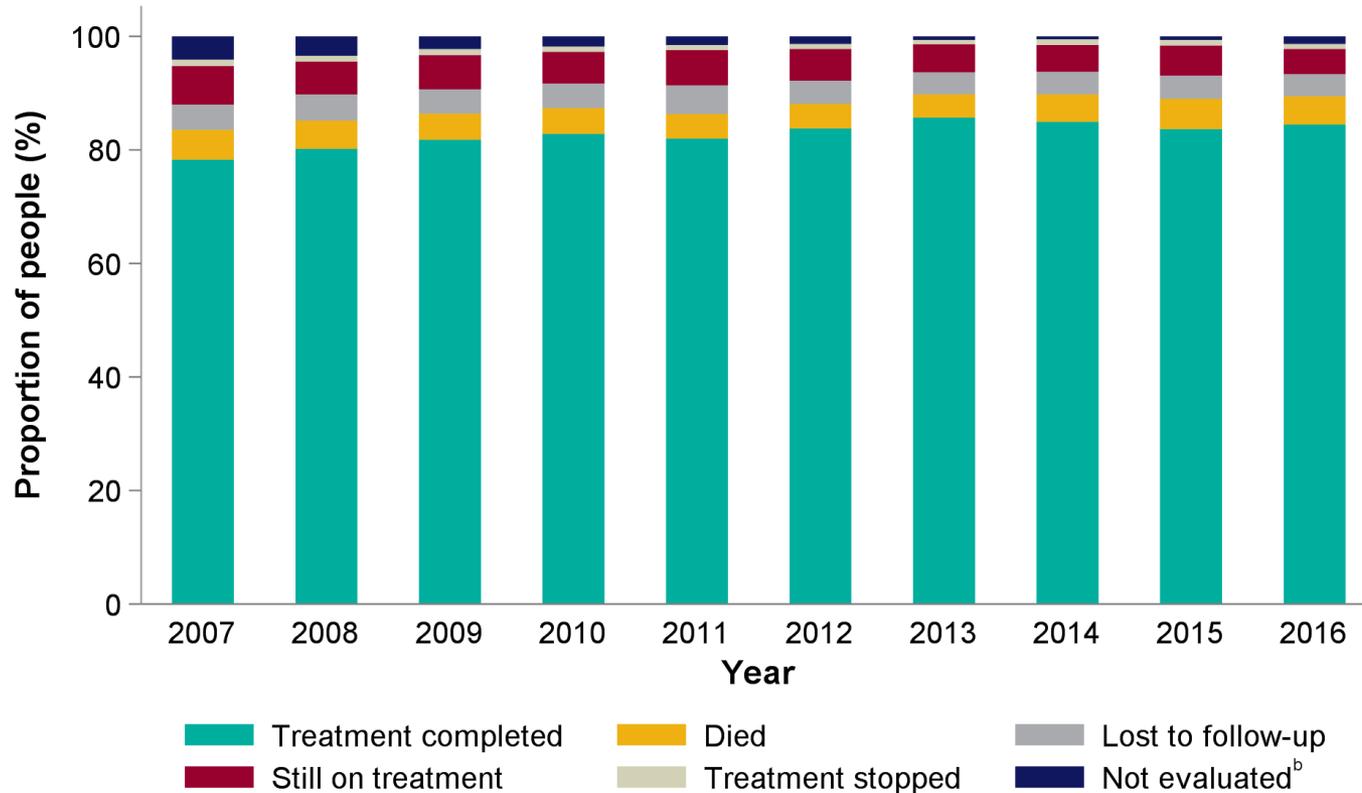
WGS was rolled out in North and Central England in December 2016. This table displays the first year of data for these areas.

^a Of the people who have culture confirmed TB with an isolate sequenced of sufficient quality to report relatedness, denominator restricted by place of birth for latter groupings

Proportion of people with pulmonary TB by time from symptom onset to treatment start by place of birth, England, 2013-2017



Outcomes at 12 months for people with drug sensitive TB with expected treatment duration <12 months^a, England, 2007-2016

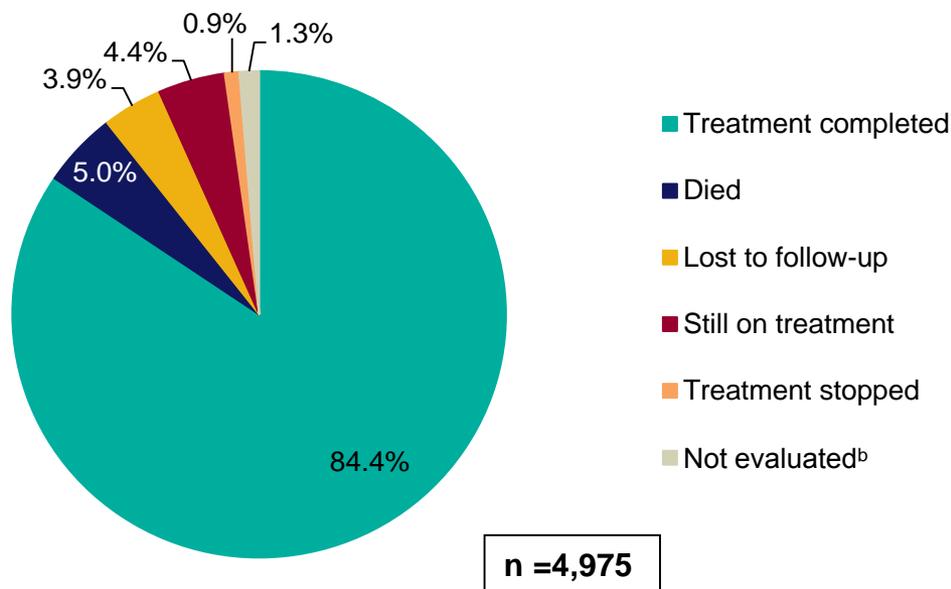


^a Excludes people in the drug resistant cohort and those with CNS, spinal, miliary or cryptic disseminated TB

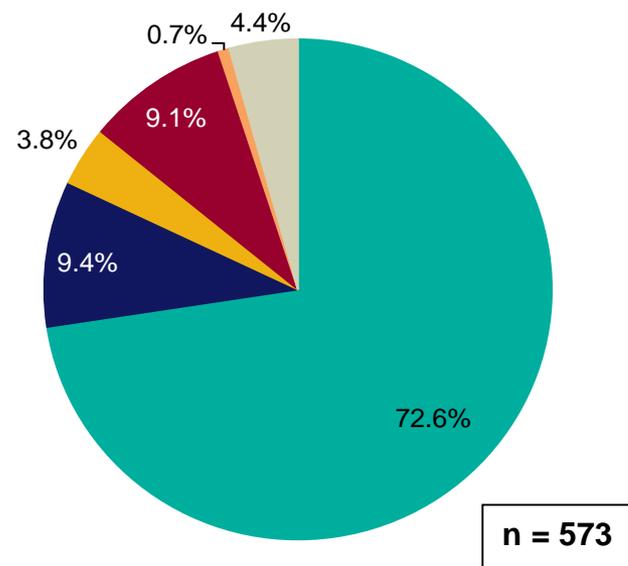
^b Not evaluated includes unknown and transferred out

Treatment outcomes in the drug sensitive cohort, England, 2016

Outcome at 12 months for people with expected treatment duration <12 months^a



Last recorded outcome for people with expected treatment duration >12 months^c

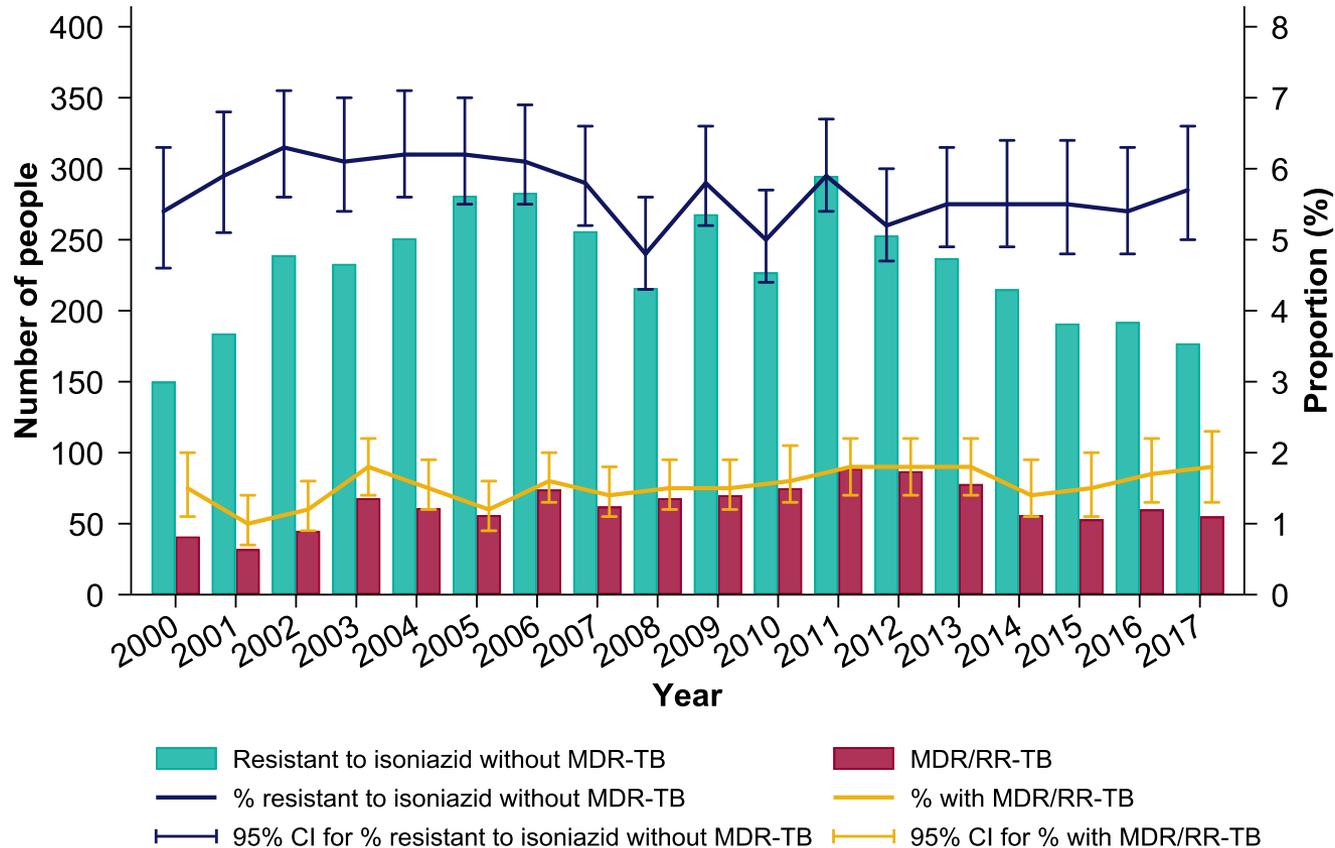


^a Excludes people in the drug resistant cohort and those with CNS, spinal, military or cryptic disseminated TB

^b Not evaluated includes unknown and transferred out

^c Excludes people in the drug resistant cohort and only includes people with drug sensitive CNS, spinal, military or cryptic disseminated TB

Number and proportion^a of people with TB with initial drug resistance, England, 2000-2017



^a People with culture confirmed TB with a result (DST or WGS) for isoniazid and rifampicin

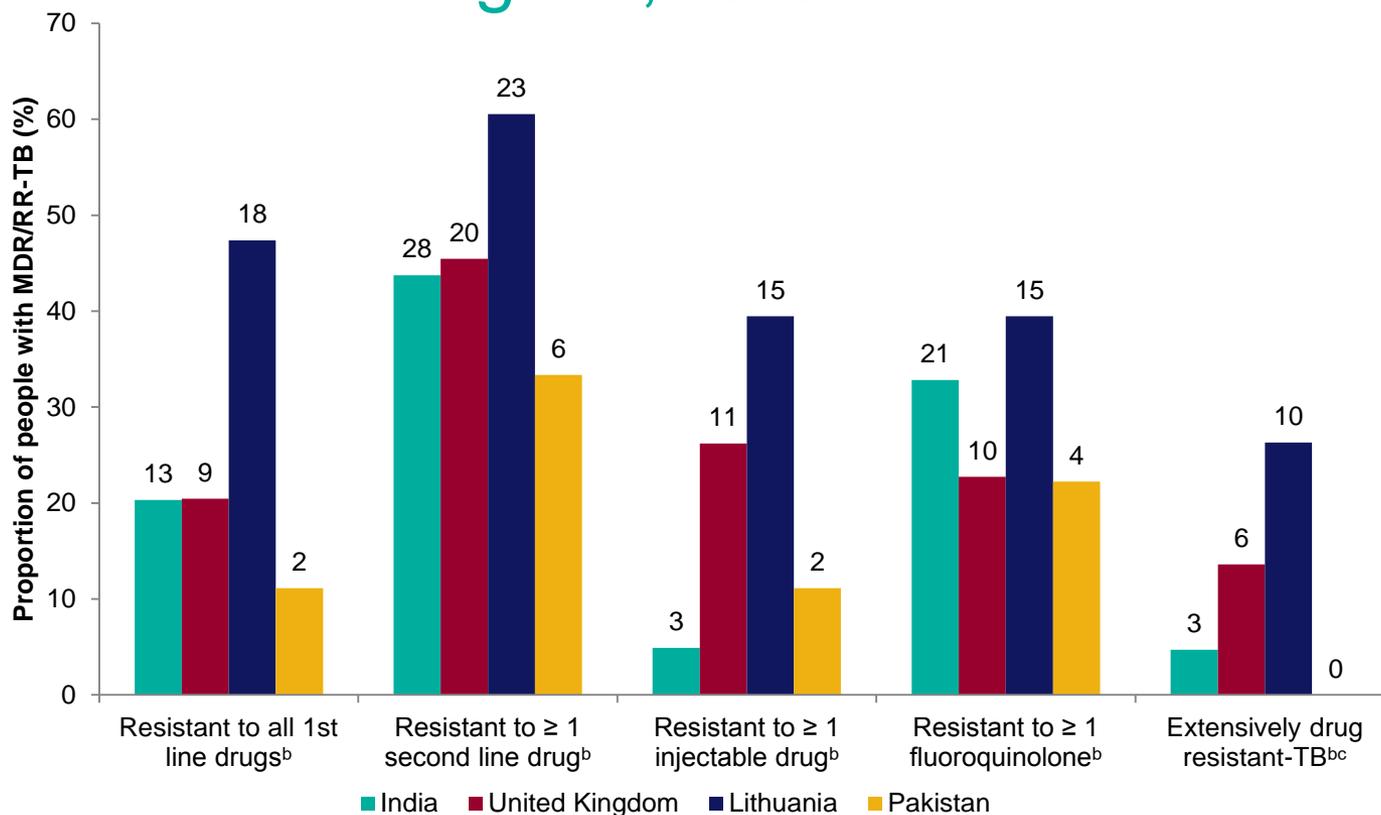
Most frequent countries of birth of people with drug resistant TB, England, 2017

Country of birth ^a	Total number ^b	Isoniazid resistance without MDR-TB		MDR/RR-TB	
	n	n	%	n	%
UK	838	48	5.7	14	1.7
India	502	40	8.0	12	2.4
Pakistan	317	22	6.9	1	0.3
Romania	148	4	2.7	1	0.7
Somalia	80	4	5.0	1	1.3
Bangladesh	64	4	6.3	1	1.6
Philippines	59	8	13.6	2	3.4
Lithuania	38	0	0.0	9	23.7

^a Included if four or more people had either isoniazid resistance without MDR-TB or MDR/RR-TB, ordered by number of people with a result (DST or WGS) for isoniazid and rifampicin

^b People with culture confirmed TB with a result (DST or WGS) for isoniazid and rifampicin

Number and proportion of people with MDR/RR-TB^a with second-line drug resistance by most frequent country of birth, England, 2013-2017



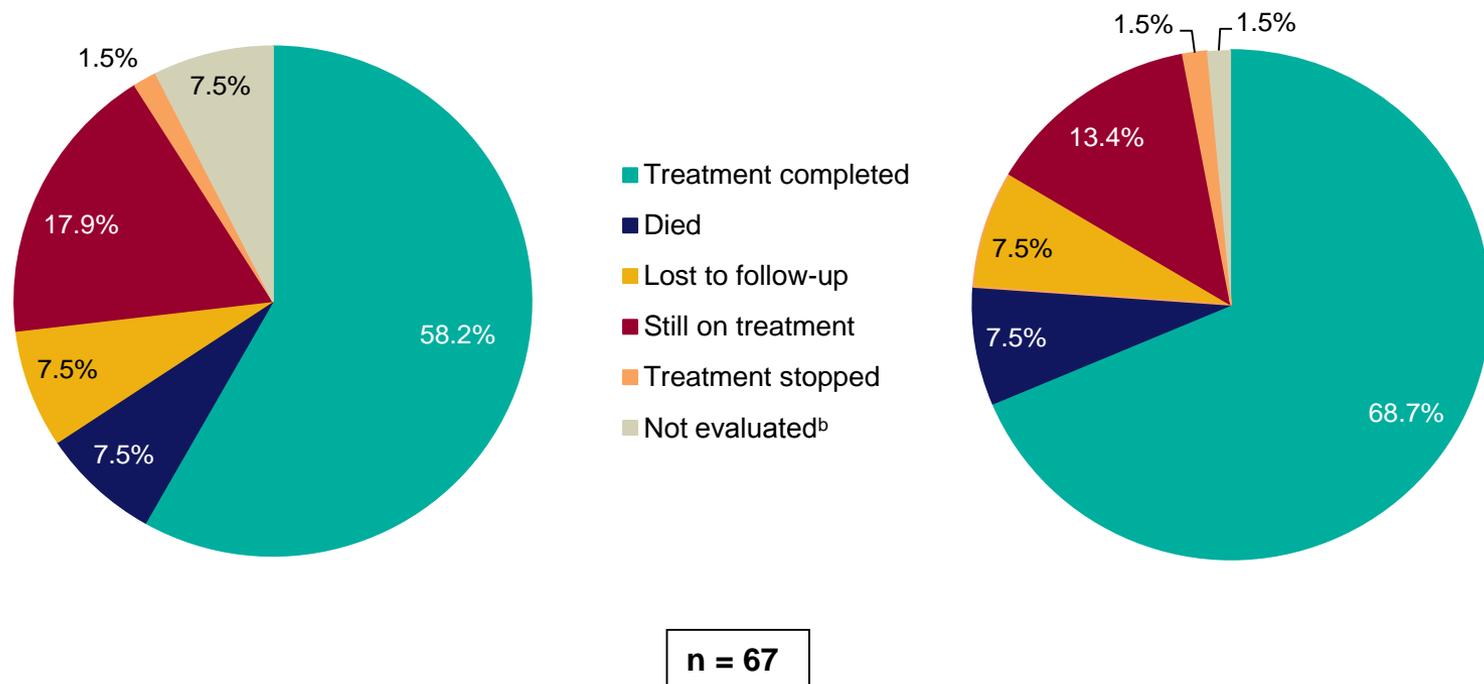
^a People with culture confirmed TB with results (DST or WGS) for isoniazid and rifampicin

^b Denominators only include people with results for the drugs in question

^c Resistant to both a fluoroquinolone and an injectable

TB outcome at 24 months for drug resistant cohort^a, England, 2015

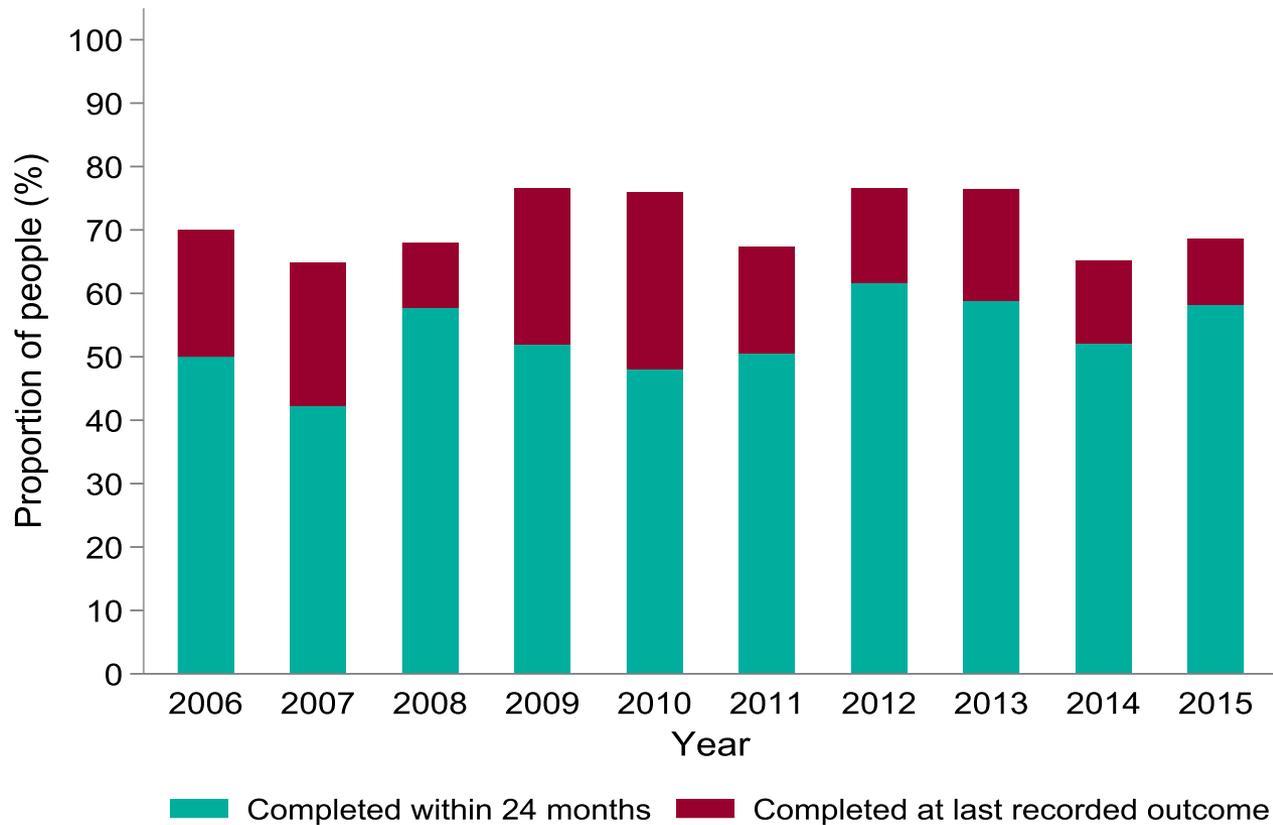
Last recorded TB outcome for drug resistant cohort^a, England, 2015



^a Includes initial and acquired MDR/RR-TB and people treated with a second line regimen without phenotypic DST results or WGS resistance predictions

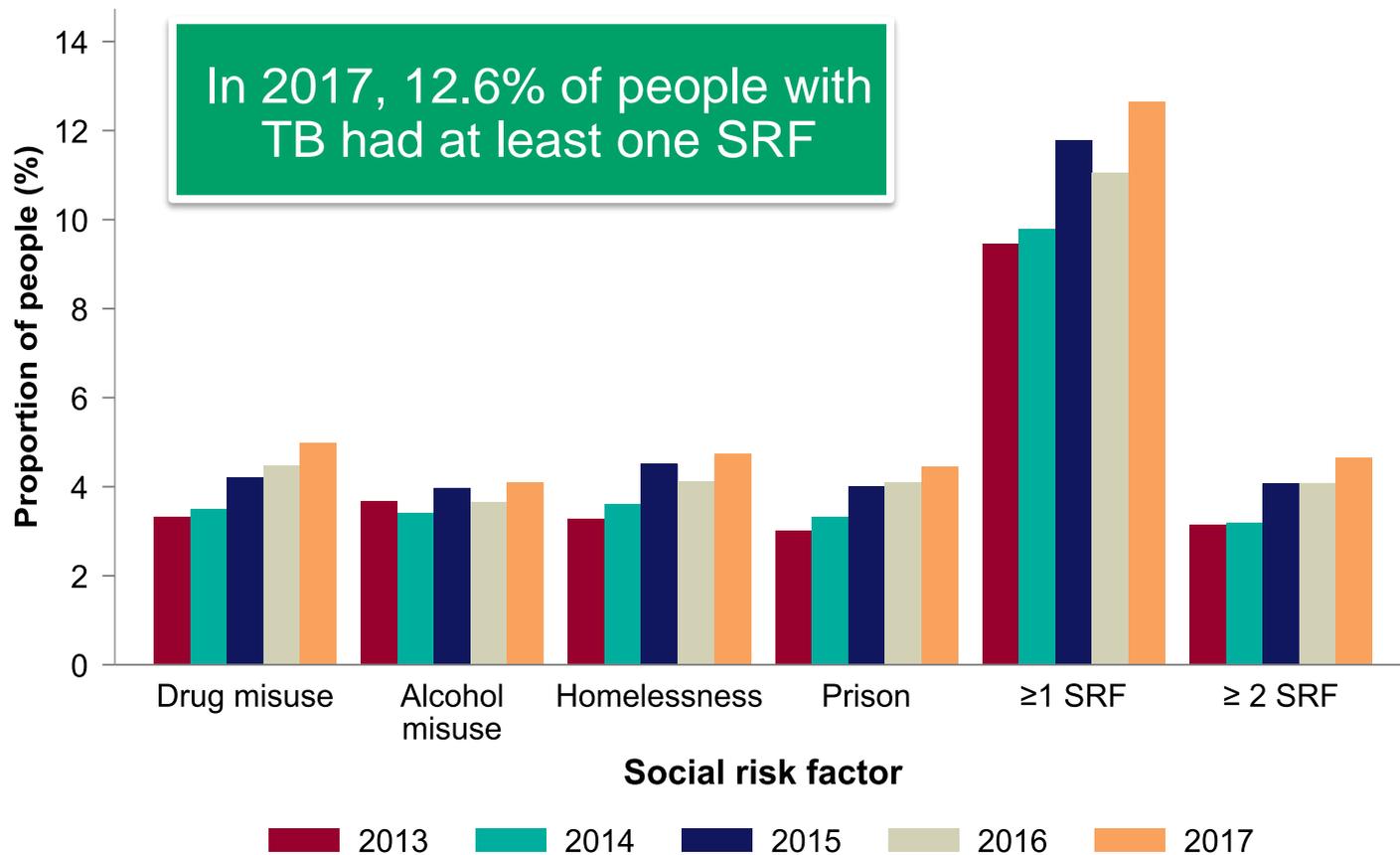
^b Not evaluated includes unknown and transferred

Treatment completion for the drug resistant TB cohort^a, England, 2006-2015

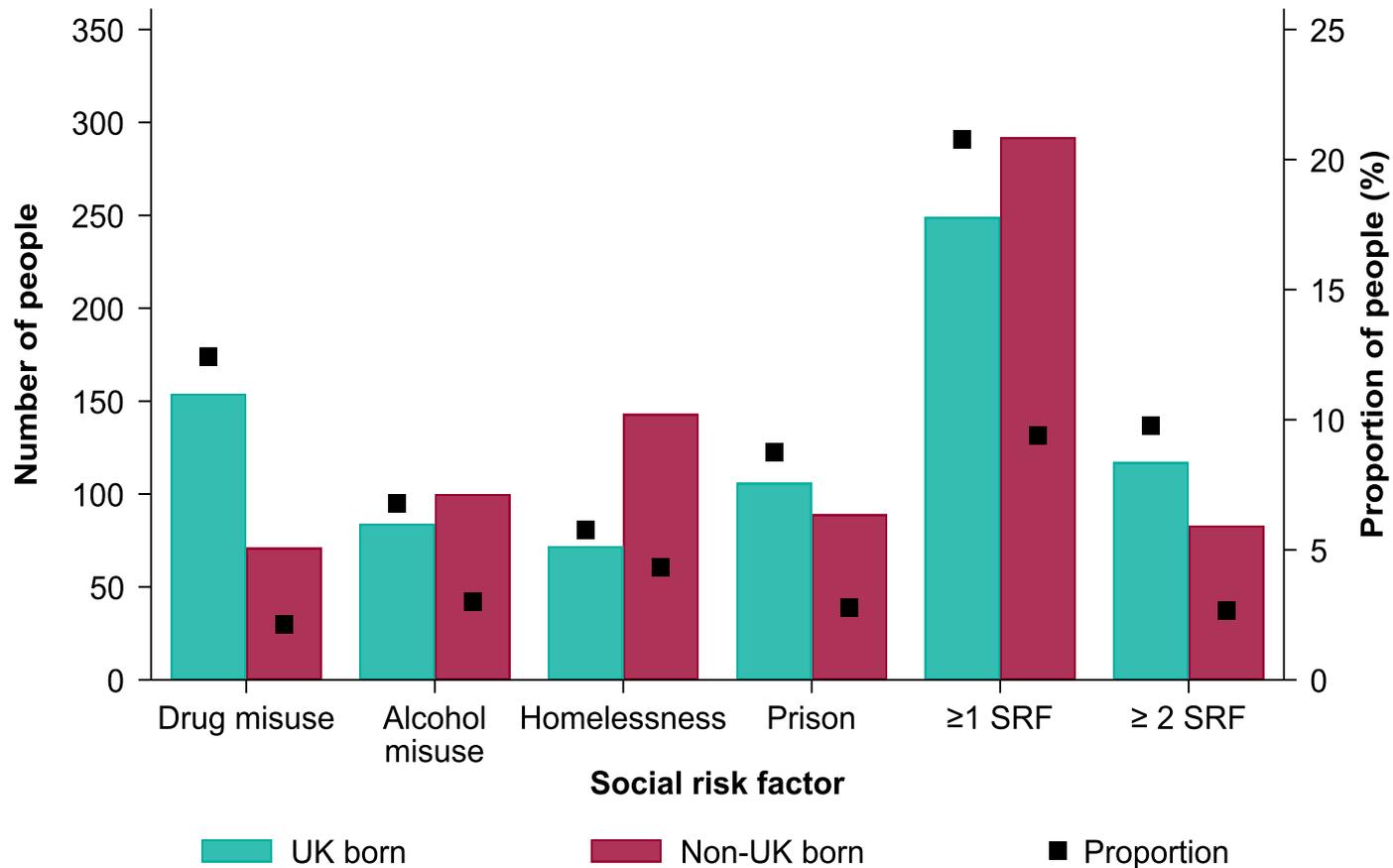


^a Includes people with initial and acquired MDR/RR-TB and people treated with a second line regimen

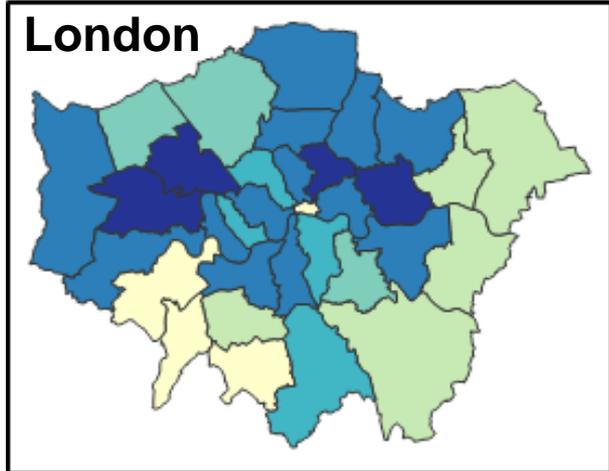
Proportion of people with TB (aged ≥ 15 years) with at least one social risk factor (SRF), England, 2013-2017



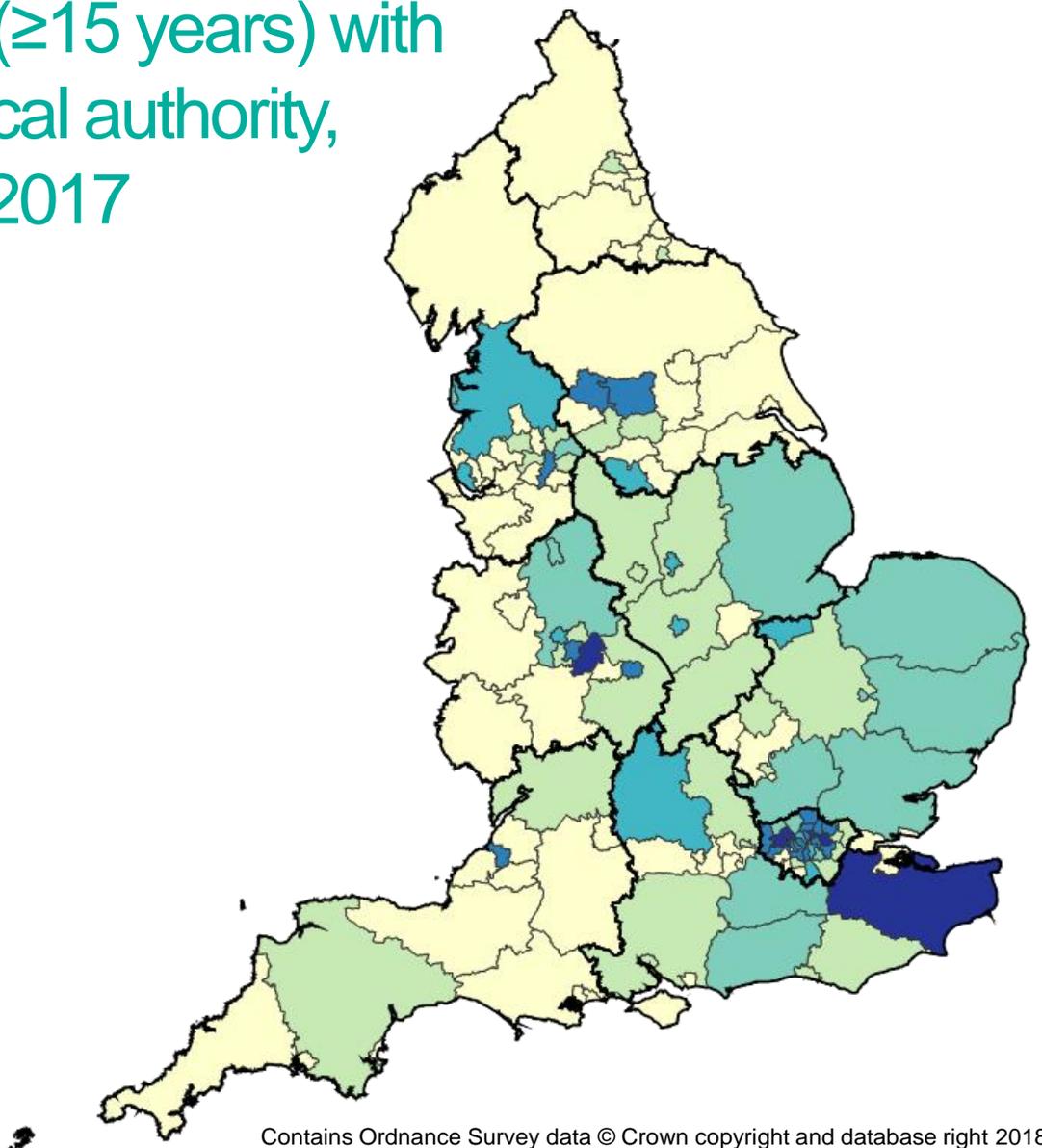
Proportion of people with TB (≥ 15 years) with social risk factors by place of birth, England, 2017



Number of people with TB (≥ 15 years) with at least one SRF^a by local authority, England, 2010-2017

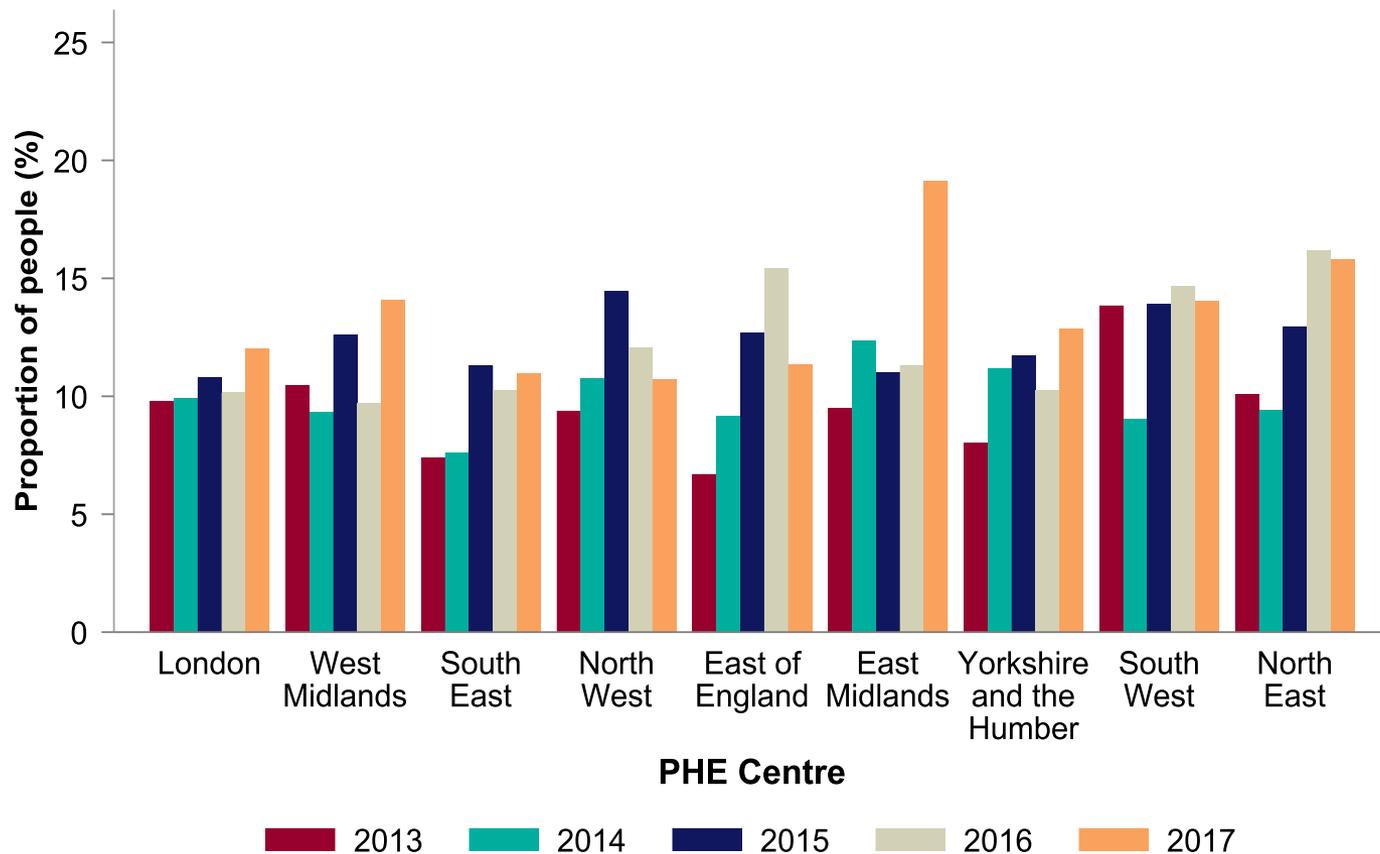


^a SRF refers to those with current alcohol misuse, current or history of homelessness, imprisonment and drug misuse. PHEC boundaries are outlined in black.



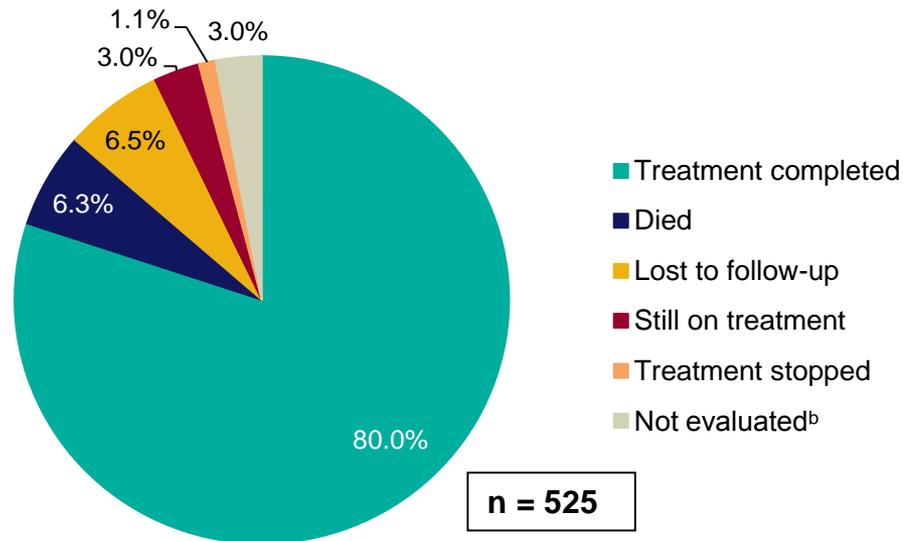
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Proportion of people with TB (≥ 15 years) with at least one social risk factor by PHE Centre, England, 2013-2017

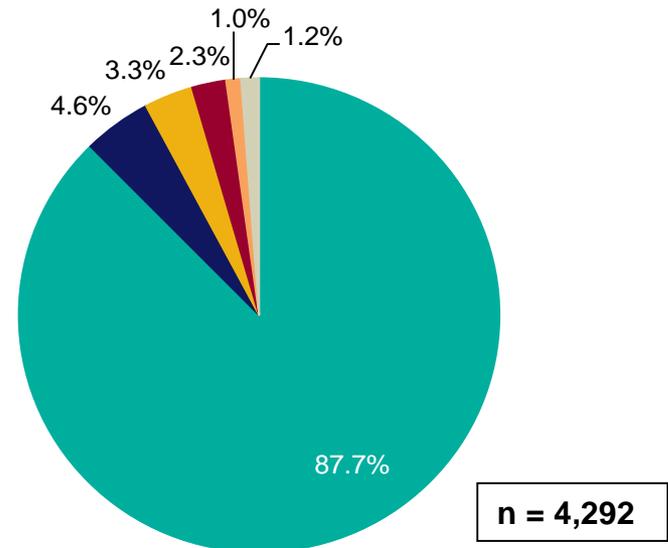


Last recorded TB outcome for the entire drug sensitive cohort by social risk factor^a, England, 2016

With at least one social risk factor



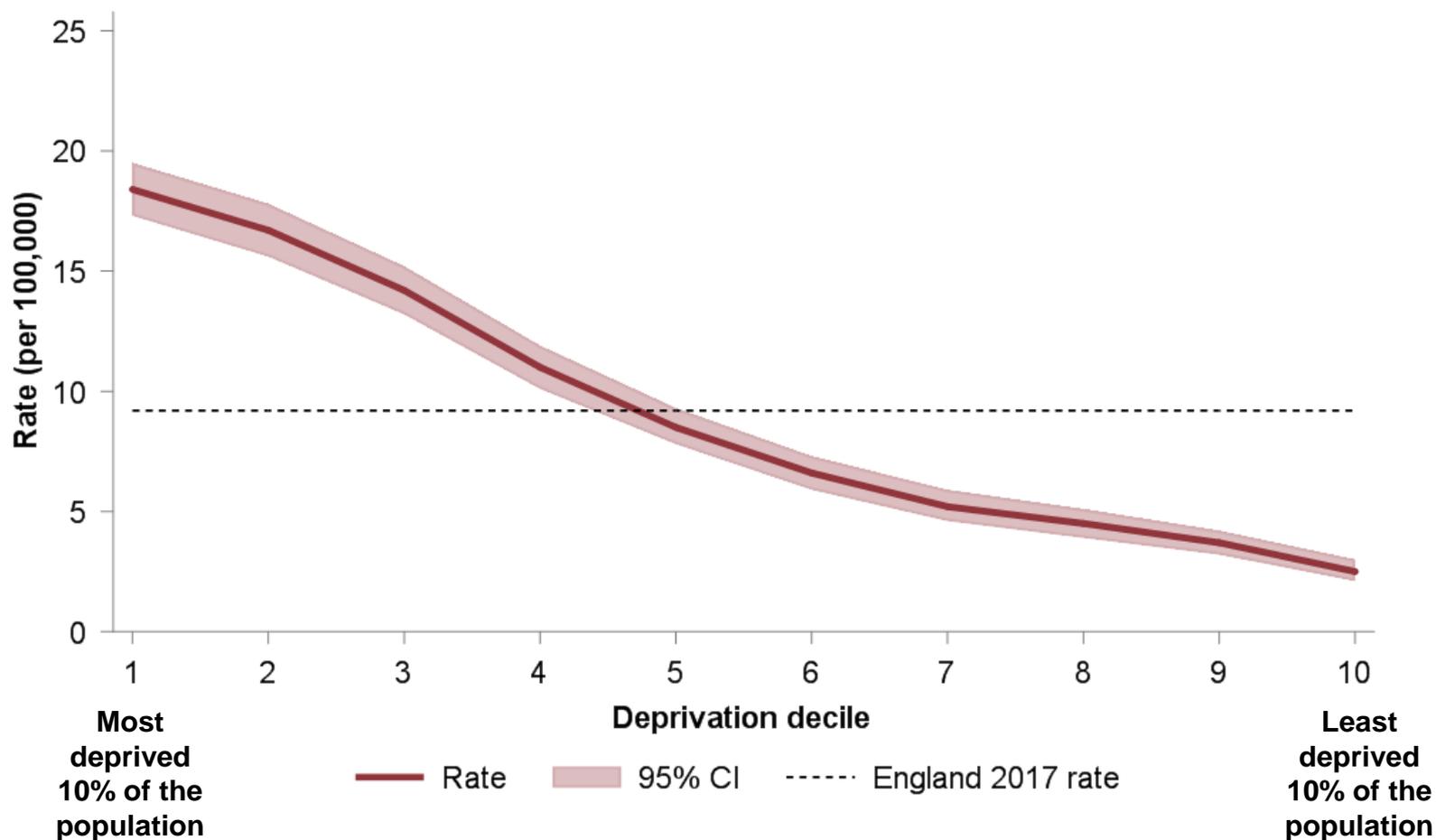
With no social risk factor



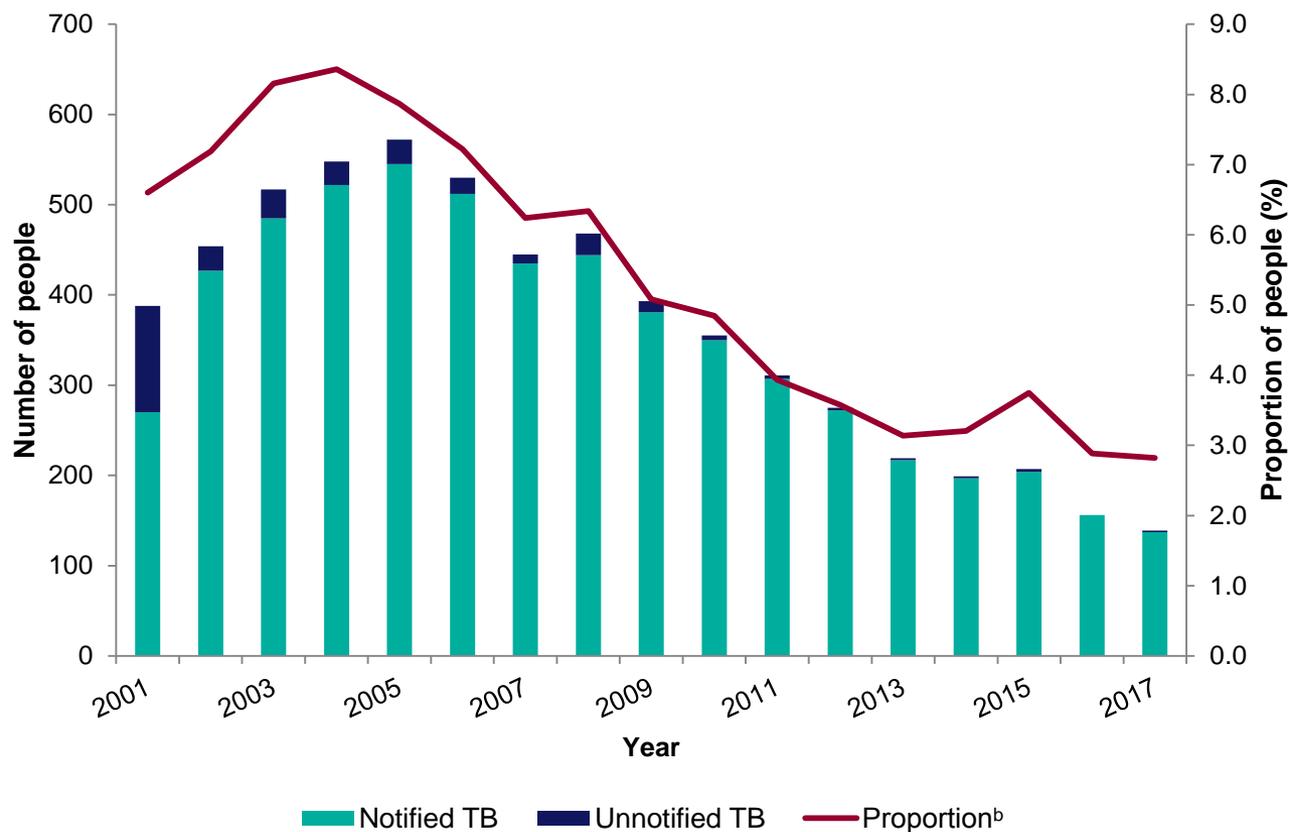
^a Excludes people with initial and amplified rifampicin resistant TB, MDR-TB, and those treated with an MDR-TB regimen

^b Not evaluated includes unknown and transferred out

Rate of TB by deprivation decile, England, 2017



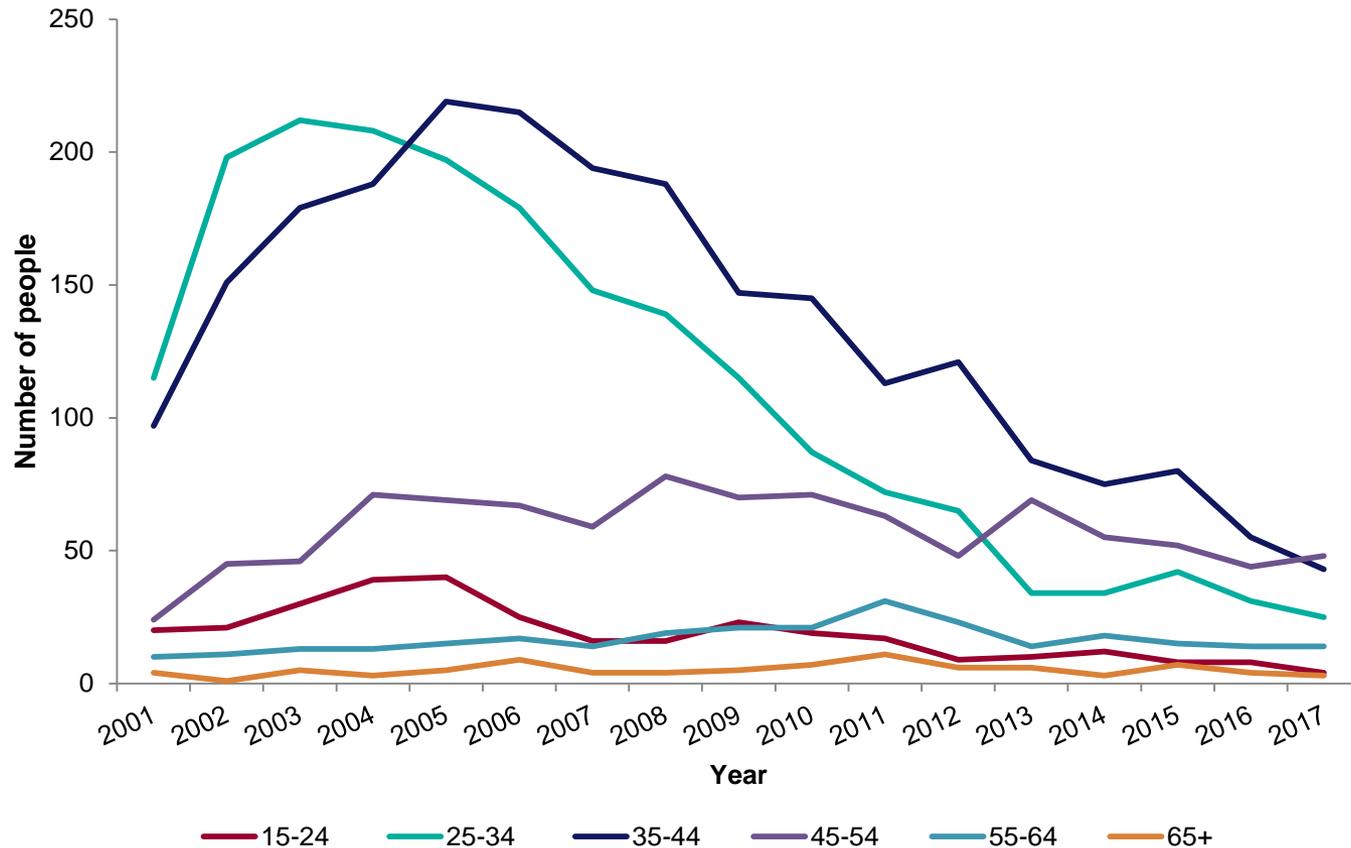
Number and proportion of people with TB who have HIV co-infection^a, England, 2001-2017



^a Includes people with TB-HIV co-infection aged 15 years and older.

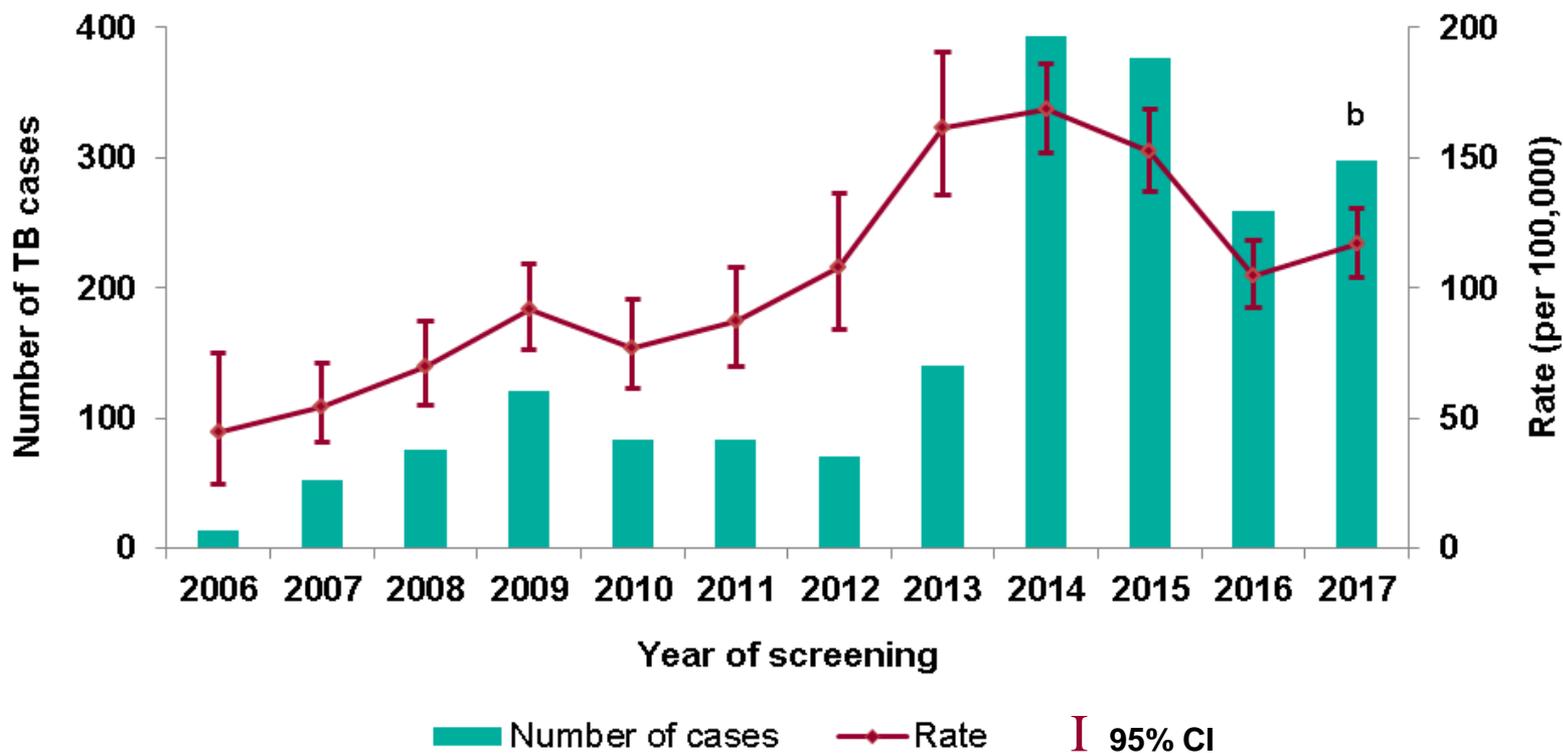
^b Proportion is calculated using the number of TB notifications with HIV co-infection plus the number who are un-notified with an MTBC isolate which matched to a person with HIV as the numerator, and the number of all TB notifications (with or without HIV co-infection) plus the number of un-notified TB isolates which matched to a person with HIV as the denominator.

Number of people notified with TB-HIV co-infection by age group^a, England, 2001-2017



^a Based on age at TB notification

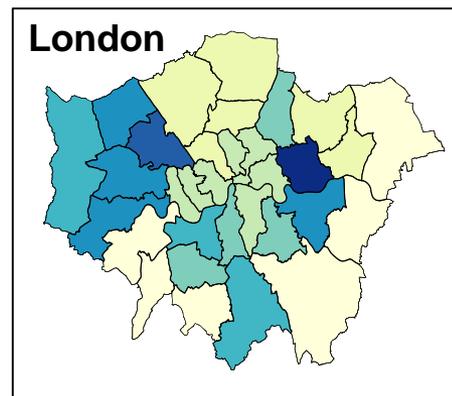
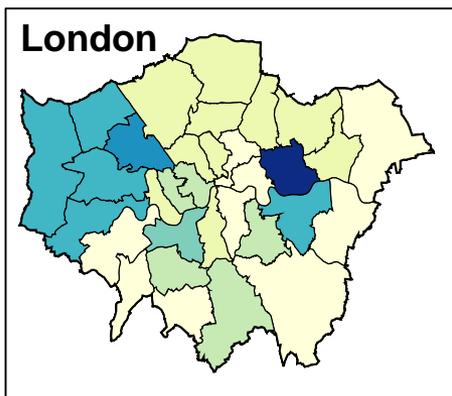
Number and rate of TB cases detected in high incidence countries through the UK pre-entry screening programme, 2006 to 2017^a



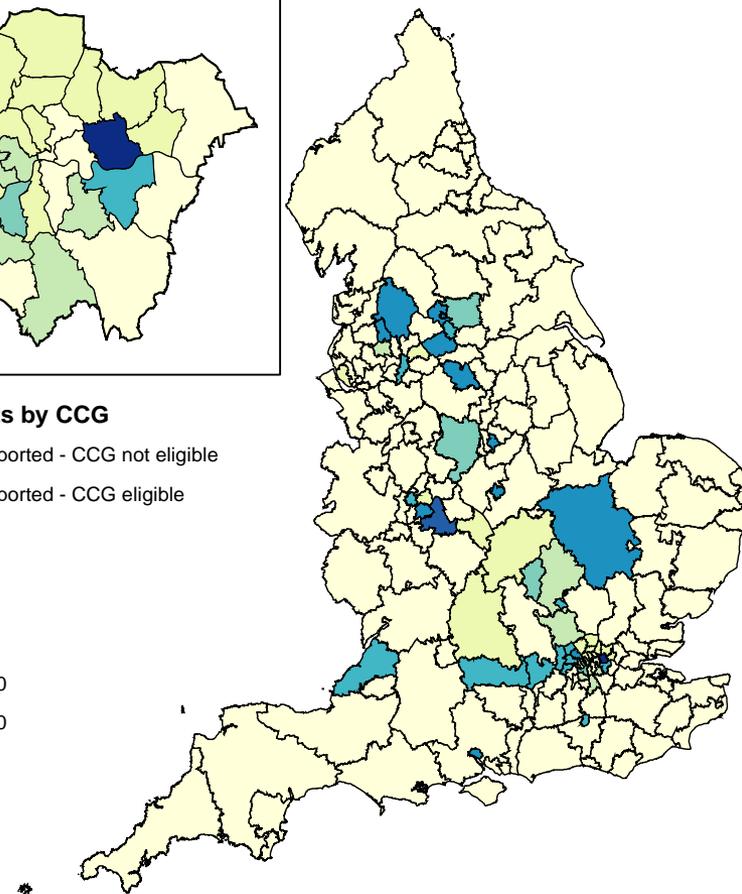
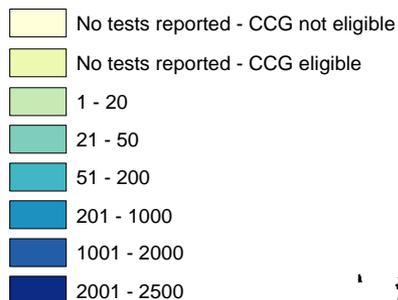
^a For countries which became part of pre-entry screening programme during the global roll out, there is a possibility of under-ascertainment in 2012 and 2013, as clinics were establishing reporting systems during this transition phase

^b As of 1st May 2018, 794 sputum samples are pending and the rate may increase when final results are available

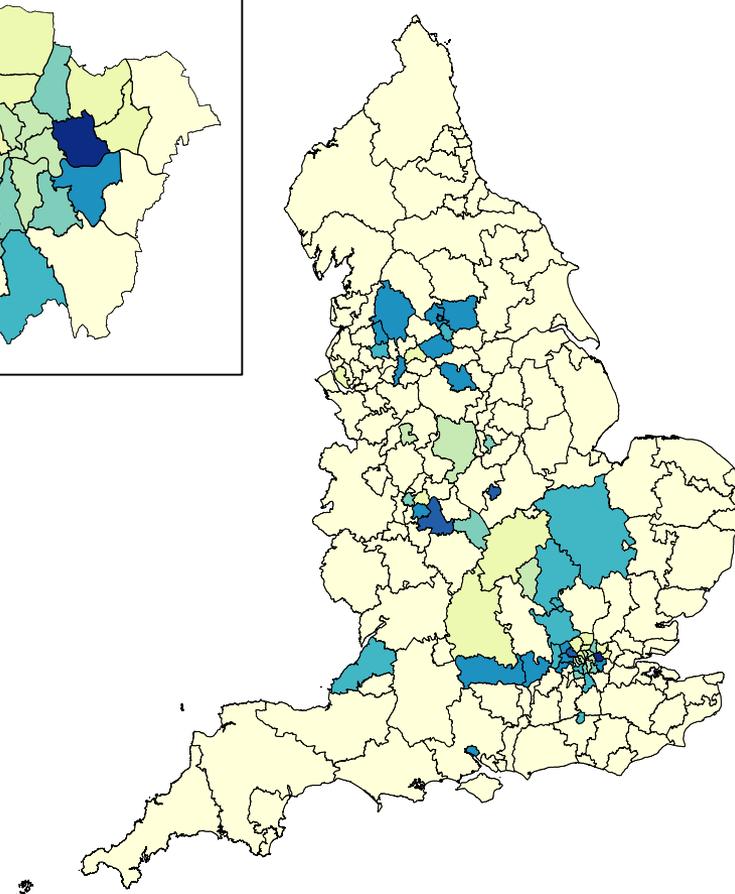
Number of LTBI tests by CCG and year, England, 2016 - 2017



Number of tests by CCG

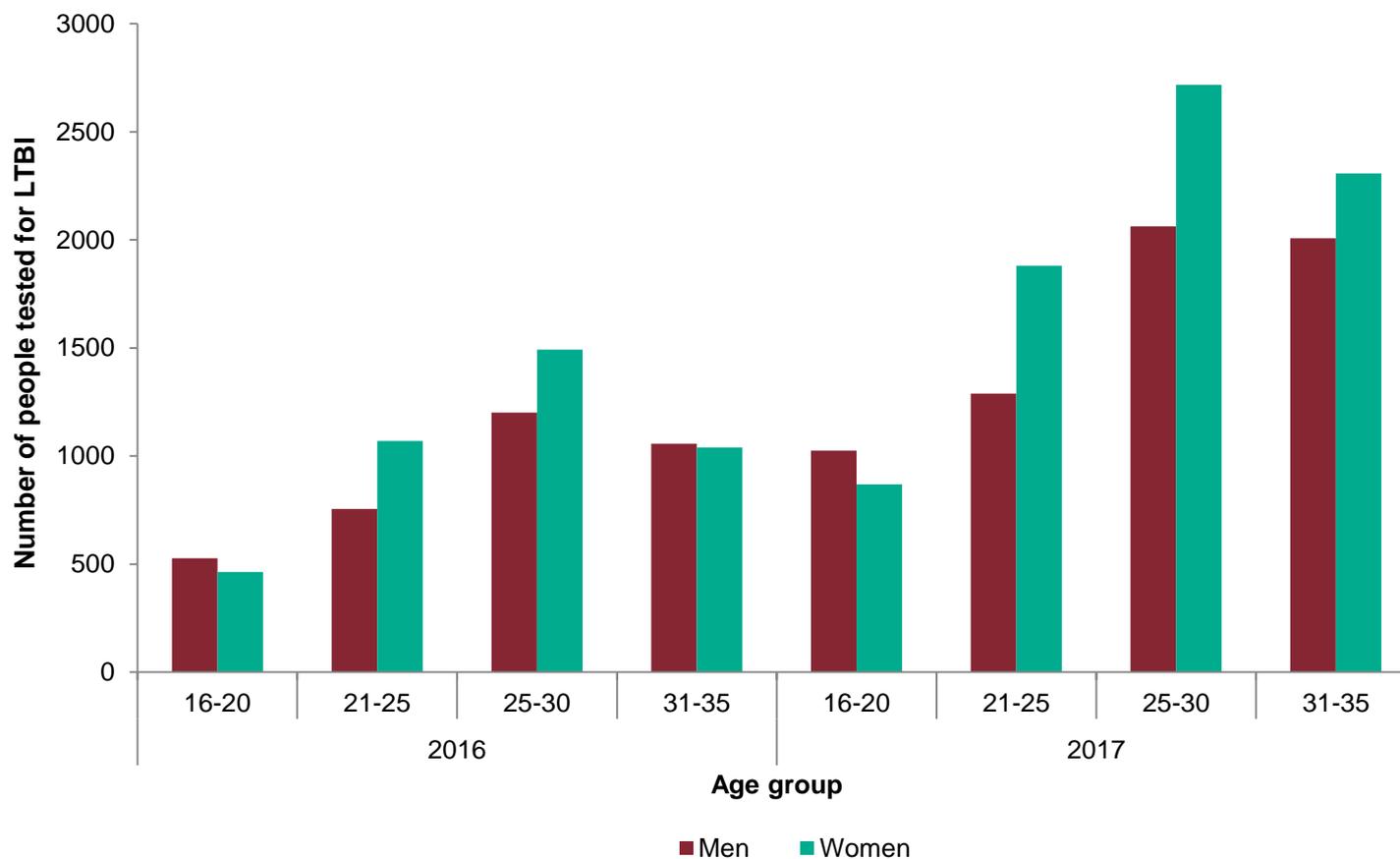


2016

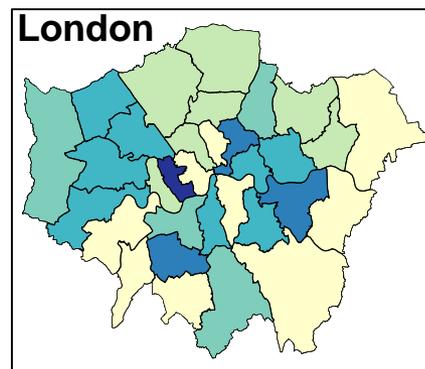
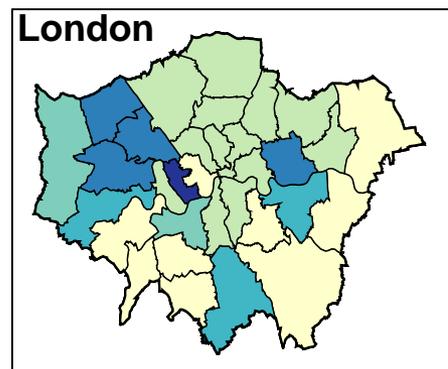


2017

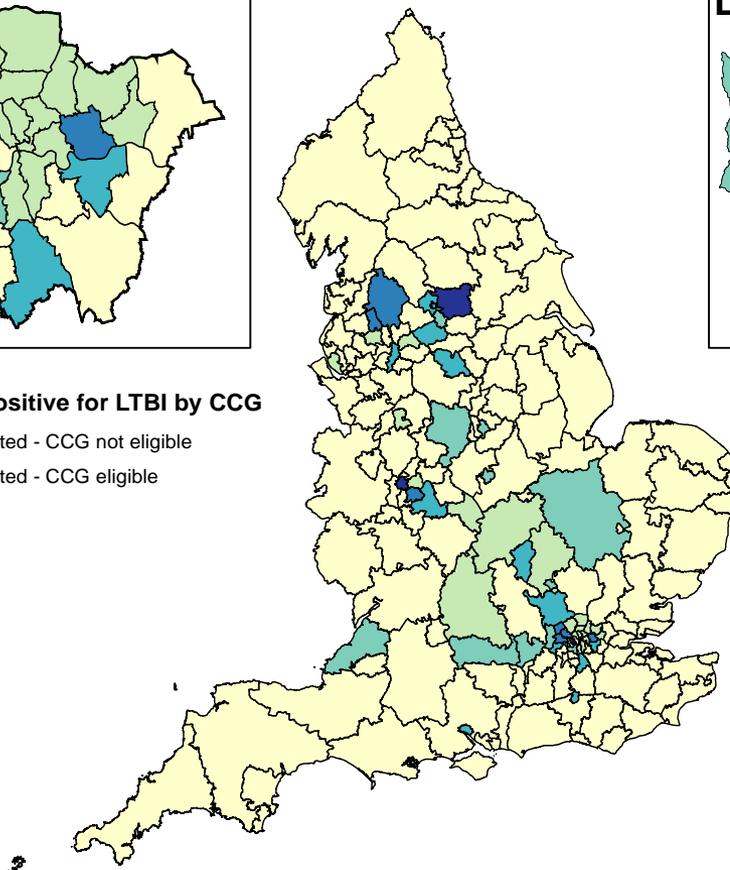
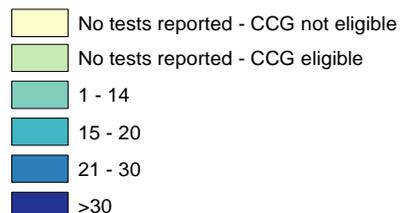
Number of people tested for LTBI by sex and age group, 2016-2017



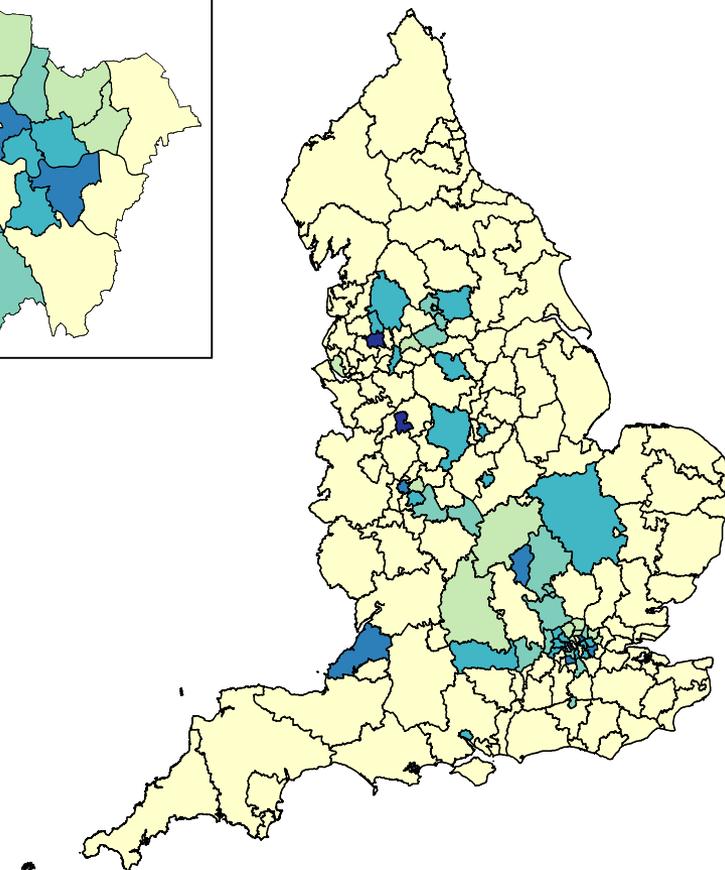
Proportion of people that tested positive for LTBI by CCG and year, 2016 - 2017



Proportion (%) positive for LTBI by CCG



2016



2017

Proportion of people that tested positive for LTBI by sex and age group, 2016-2017

