

Protecting and improving the nation's health

Tuberculosis in England

National quarterly report: Q4 2020

1 October to 31 December 2020

Provisional data

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

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Background

This report presents quarterly data on tuberculosis (TB) case notifications in England.

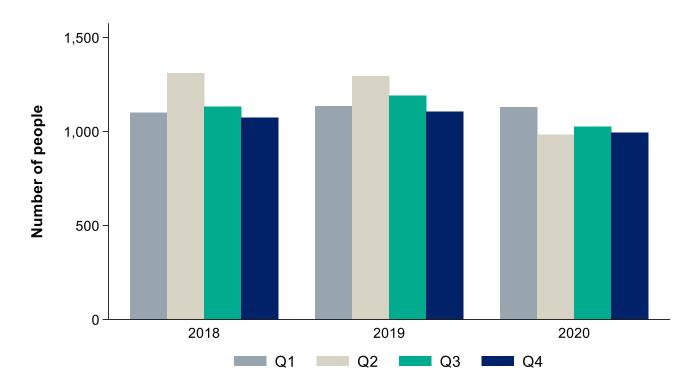
Detailed results for 2019 will be published in the annual report 'Tuberculosis in England: 2019 report' in 2020. The most recent annual report with data up to the end of 2019 is available.

Please note: data for 2019 and 2020 is provisional and subject to validation and should be interpreted with caution.

This report aims to provide timely and up-to-date figures of key epidemiological indicators to inform ongoing TB control efforts in England.

Overall numbers and geographical distribution

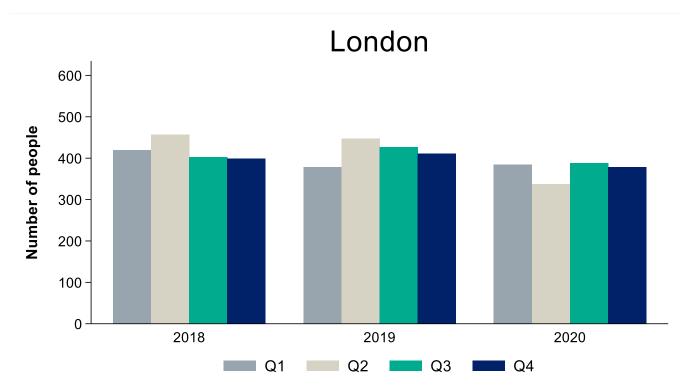
Figure 1: Number of TB notifications in England, Q1 2018 to Q4 2020



In the last quarter of 2020 (Q4 2020, 1 October to 31 December), 994 people were notified with TB in England. This is a 10.1% decrease compared to the same quarter in the previous year (Q4 2019: 1,106). Exact numbers are shown in Table 1.

Please note: due to the seasonality of TB notifications the most recent quarter is being compared to the same quarter in the previous year rather than to the previous quarter.

Figure 2: Number of TB notifications by PHE Centre^a, England, Q1 2018 to Q4 2020



^a Note the axes on the London figure are different to that of the other PHE Centres due to the higher number of TB notifications in London.

In Q4 2020, the number of people notified with TB in the UK:

- increased in the North West, South East and North East PHE Centres compared to Q4 2019
- the Yorkshire and The Humber had the largest decline (43.6%) whilst London had the smallest decline in numbers (7.8%) compared to Q4 2019

Figure 2: Number of TB notifications by PHE Centre, England, Q1 2018 to Q4 2020 continued

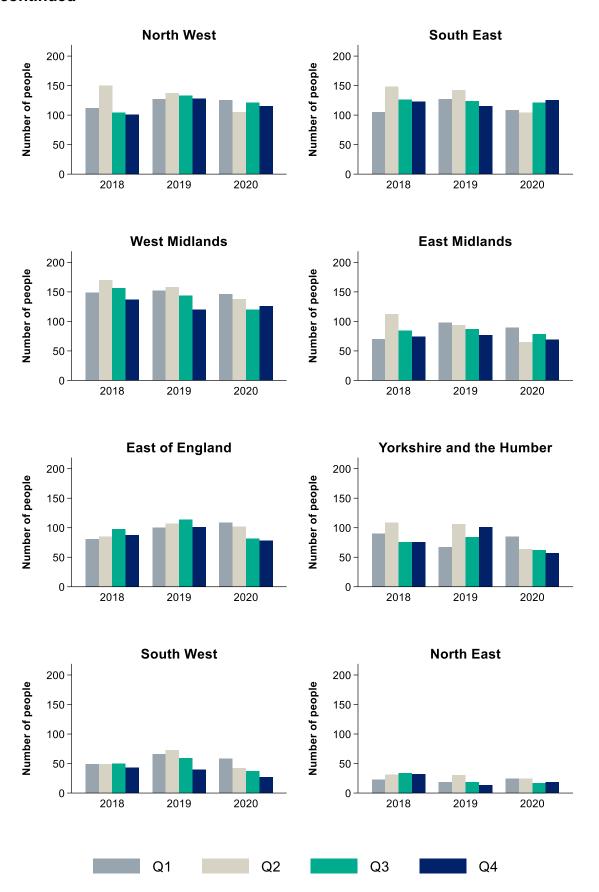


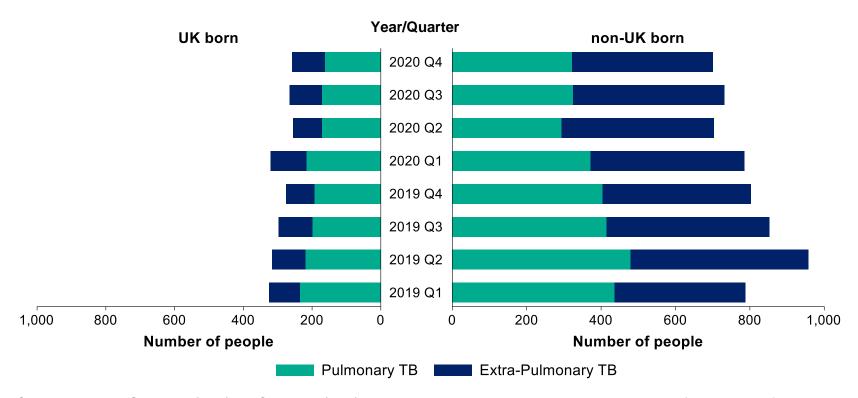
Table 1: Number of TB notifications by PHE Centre, England, Q1 2018 to Q4 2020

PHECa	2018					2019					2020				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3 ^b	Q4	Total
London	420	457	403	399	1,679	379	448	427	411	1,665	385	338	388	379 🔱	1,490
North West	149	170	156	137	612	152	158	144	120	574	146	138	120	126 \uparrow	530
South East	105	148	126	123	502	127	142	124	115	508	108	104	121	125 \uparrow	458
West Midlands	112	150	104	101	467	127	137	133	128	525	125	105	121	115 🔱	466
East Midlands	81	85	98	88	352	100	107	114	101	422	109	102	82	78 🕹	371
East of England	70	112	84	74	340	98	94	87	77	356	89	65	78	69 🔱	301
Yorkshire and the Humber	90	109	76	76	351	67	106	84	101	358	85	64	62	57 🔱	268
South West	49	49	50	43	191	66	73	59	40	238	58	42	37	27 🔱	164
North East	23	31	34	32	120	18	30	18	13	79	24	24	17	18 \uparrow	83
England	1,099	1,311	1,131	1,073	4,614	1,134	1,295	1,190	1,106	4,725	1,129	982	1,026	994 🔱	4,131

^a Ordered by decreasing total number of people with TB in Q4 2020 b Arrows show whether there has been a decrease (↓), an increase (↑) or no change (-) in the number of people notified with TB in each PHE Centre in Q4 2020 compared to Q4 2019

Demographic and clinical characteristics

Figure 3: Number of TB notifications by place of birth and site of disease, England, Q1 2019 to Q4 2020

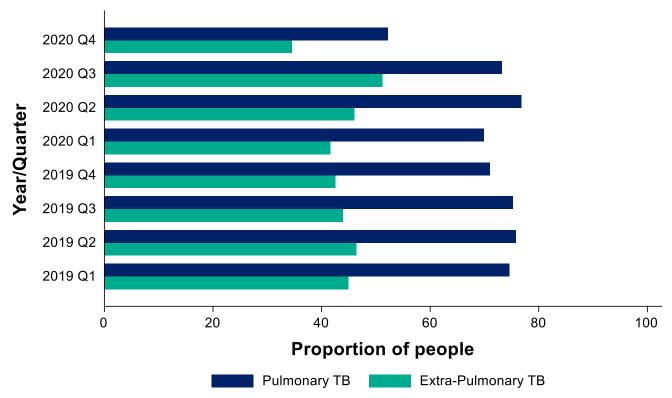


Compared with Q4 2019 (804), in Q4 2020 (705) there was a 12.3% decrease in the number of people notified with TB who were born outside the UK. Similarly, the number born in the UK decreased in the same time period (Q4 2019: 276, Q4 2020: 258, -6.5%).

In Q4 2020, the number of people with pulmonary TB accounted for 49.9% (496/994) of all people with TB, having decreased from 55.2% in Q4 2019 (610/1,106). For those born outside the UK, this proportion was 45.7% (322/705), whilst the proportion was much higher among people born in the UK (63.2%, 163/258).

Culture confirmation

Figure 4: Proportion of culture confirmation among TB notifications by site of disease, England, Q1 2019 to Q4 2020



Among people with pulmonary TB, the proportion who were culture confirmed decreased slightly between Q3 of 2019 and Q3 2020 (75.2% versus 73.2%, respectively). The proportion with culture confirmed extra-pulmonary TB increased over the same time period (Q3 2019: 43.9%, Q3 2020: 51.2%).

Please note: Q3 2020 is being compared as the number for Q4 2020 will likely increase as final results for cultures may not yet be available.

In Q3 2020, the largest changes in the proportion of people with culture confirmation were:

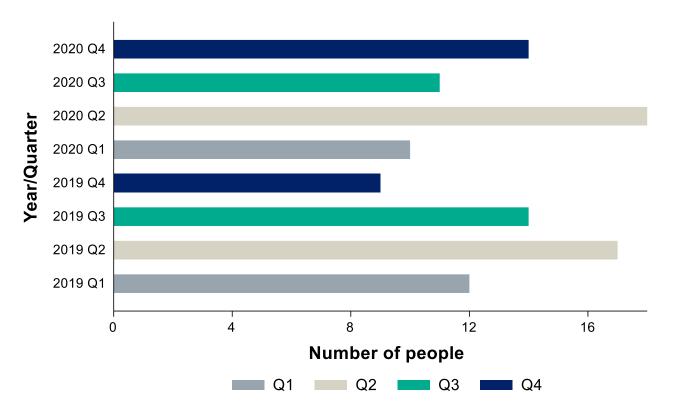
- pulmonary TB in the South West being higher than in Q3 2019
- pulmonary TB in the Yorkshire and the Humber, being lower than in Q3 2019
- extra-pulmonary TB in the North East, being higher than in Q3 2019
- extra-pulmonary TB in the South East being lower than in Q3 2019

North West South East London 2020 Q4 2020 Q4 2020 Q4 2020 Q3 2020 Q3 2020 Q3 Year/Quarter Year/Quarter Year/Quarter 2020 Q2 2020 Q2 2020 Q2 2020 Q1 2020 Q1 2020 Q1 2019 Q4 2019 Q4 2019 Q4 2019 Q3 2019 Q3 2019 Q3 2019 Q2 2019 Q2 2019 Q2 2019 Q1 2019 Q1 2019 Q1 0 20 40 60 80 100 0 20 40 60 80 100 0 20 40 60 80 100 Proportion of people Proportion of people Proportion of people **West Midlands East Midlands East of England** 2020 Q4 2020 Q4 2020 Q4 2020 Q3 2020 Q3 2020 Q3 Year/Quarter Year/Quarter Year/Quarter 2020 Q2 2020 Q2 2020 Q2 2020 Q1 2020 Q1 2020 Q1 2019 Q4 2019 Q4 2019 Q4 2019 Q3 2019 Q3 2019 Q3 2019 Q2 2019 Q2 2019 Q2 2019 Q1 2019 Q1 2019 Q1 100 40 60 80 100 40 60 80 100 60 80 0 20 Proportion of people Proportion of people Proportion of people **South West** Yorkshire and the Humber North East 2020 Q4 2020 Q4 2020 Q4 2020 Q3 2020 Q3 2020 Q3 Year/Quarter Year/Quarter 2020 Q2 2020 Q2 2020 Q2 2020 Q1 2020 Q1 2020 Q1 2019 Q4 2019 Q4 2019 Q4 2019 Q3 2019 Q3 2019 Q3 2019 Q2 2019 Q2 2019 Q2 2019 Q1 2019 Q1 2019 Q1 40 40 60 20 60 80 100 20 80 100 20 40 60 80 100 Proportion of people Proportion of people Proportion of people Extra-Pulmonary TB Pulmonary TB

Figure 5: Proportion of culture confirmation among TB notifications by site of disease and PHE Centre, Q1 2019 to Q4 2020

Multi-drug resistant/rifampicin resistant (MDR/RR) TB

Figure 6: Number^a of TB notifications with MDR/RR-TB, England, Q1 2019 to Q4 2020

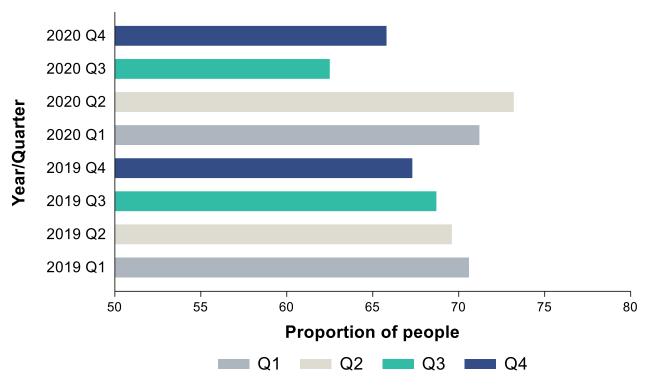


^a Note figure displays numbers rather than proportions due to low number of MDR/RR-TB notifications.

There were 11 people notified in Q4 2020 with confirmed MDR/RR-TB. Overall, 53 people were notified with MDR/RR-TB in 2020, compared to 52 in the previous year. Numbers may increase as final results for cultures in the most recent quarters may not yet be available.

Treatment delays

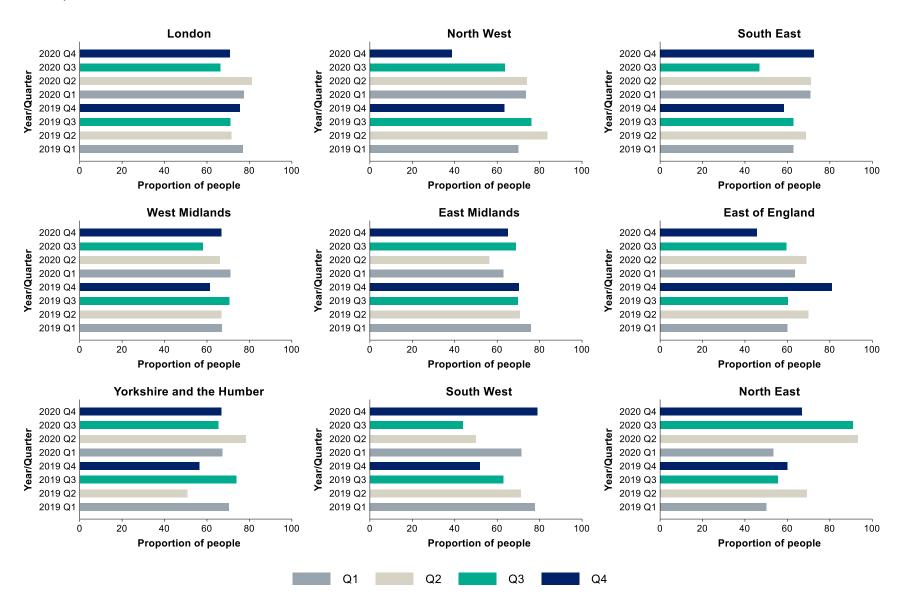
Figure 7: Proportion^a of pulmonary TB notifications starting treatment within 4 months (symptom onset to treatment start), England, Q1 2019 to Q4 2020



^a Note x-axis is not scaled to start at zero to improve data visualisation.

In Q4 2020, 65.8% of people with pulmonary TB started treatment within 4 months of symptom onset, compared to 67.3% in Q4 2019. This proportion will likely increase as some people in the most recent quarter are yet to begin treatment.

Figure 8: Proportion of pulmonary TB notifications starting treatment within 4 months (symptom onset to treatment start) by PHE Centre, Q1 2019 to Q4 2020

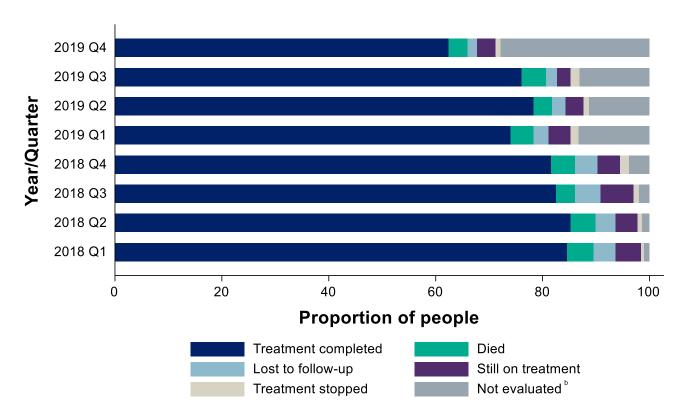


In Q4 2020, the proportion of people with TB who started treatment within 4 months of symptom onset in:

- the South West and South East were notably higher than in Q4 2019
- the East of England and the North West were substantially lower than in Q4 2019

Treatment outcomes

Figure 9: Outcomes at 12 months for people with drug sensitive TB with expected treatment duration <12 months^a, England, Q1 2018 to Q4 2019



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

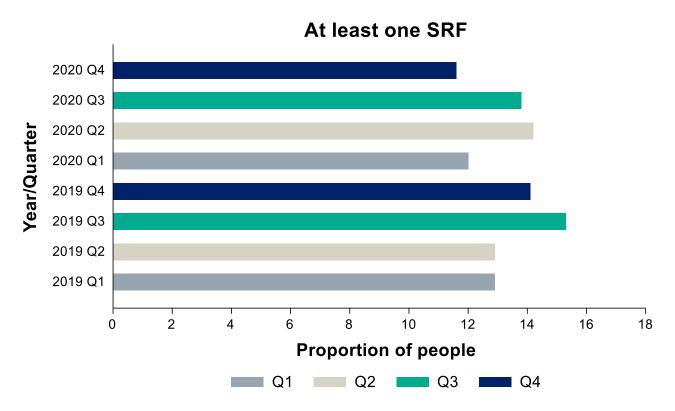
The proportion of people with drug sensitive TB (with an expected treatment duration of less than 12 months) who completed treatment at 12 months was 81.7% for people notified in Q4 2018.

Please note: the latest three quarters show a high proportion of people with treatment outcomes recorded as "not evaluated" despite having started at least 12 months previously. This reflects a delay in reporting the final outcome. The proportion not evaluated is expected to decrease with time.

^b Not evaluated includes unknown and transferred out

Social risk factors

Figure 10: Proportion of TB notifications (≥15 years) with social risk factors (SRF), England, Q1 2019 to Q4 2020



^a Note the axes on the figure for people with at least 1 SRF are different to that for individual SRFs due to the higher proportion of people with at least 1 SRF

In Q4 2020, 11.6% of people with TB aged 15 years and older had at least 1 SRF, a decrease from 14.1% in Q4 2019.

In Q4 2020, the proportion of people with TB with:

- current or a history of drug misuse was lower than in Q4 2019
- alcohol misuse was lower than in Q4 2019
- current or a history of homelessness was lower than in Q4 2019
- imprisonment was lower than in Q4 2019

Figure 10: Proportion of TB notifications (≥15 years) with social risk factors, England, Q1 2019 to Q4 2020 continued

