

Protecting and improving the nation's health

Tuberculosis in England

National quarterly report: Q1 2021

1 January to 31 March 2021

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.

Public Health England Wellington House 133-155 Waterloo Road London SE1 8UG

Tel: 020 7654 8000 www.gov.uk/phe Twitter: @PHE_uk

Facebook: www.facebook.com/PublicHealthEngland

Prepared by: TB Unit, TARGET, National Infection Service, PHE

For queries relating to this document, please contact: tbsection@phe.gov.uk



© Crown copyright 2020

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit OGL. Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published April 2021
PHE publications
gateway number: GOV-8018



PHE supports the UN Sustainable Development Goals



Contents

Background	4
Overall numbers and geographical distribution	5
Demographic and clinical characteristics	g
Culture confirmation	g
Multi-drug resistant/rifampicin resistant (MDR/RR) TB	12
Treatment delays	13
Treatment outcomes	15
Social risk factors	16

Background

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

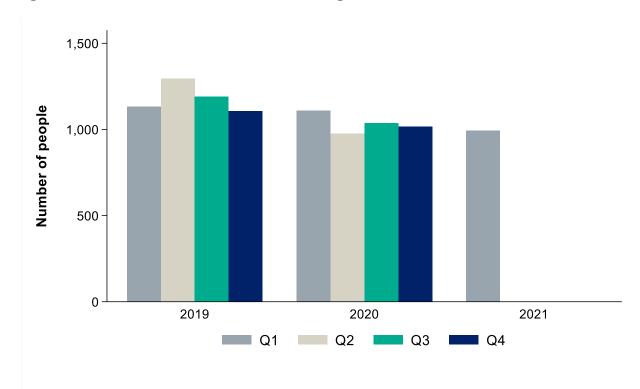
Detailed results for data up to the end of 2020 will be published in the annual report 'Tuberculosis in England: 2021 report' in 2021. The most recent annual report with data up to the end of 2019 is available on the website.

Please note: data for 2020 and 2021 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 2019 to Q1 2021



In the first quarter of 2021 (Q1 2021, 1 January to 31 March), 995 people were notified with TB in England. This is a 10.3% decrease compared to the same quarter in the previous year (Q1 2020: 1,109). 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.

London 600 500 Number of people 400 300 -200 -100 -0 2019 2020 2021 Q2 **Q**3 Q1 **Q**4

Figure 2: Number of TB notifications by PHE Centre¹, England, Q1 2019 to Q1 2021

In Q1 2021, the number of people notified with TB in:

- all PHE Centres except for the North West and the South East declined compared to Q1 2020
- the South West had the largest decline in numbers (-54.4%) followed by the East Midlands (-32.6%) compared to Q1 2020

¹ 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.

Figure 2: Number of TB notifications by PHE Centre, England, Q1 2019 to Q1 2021 continued

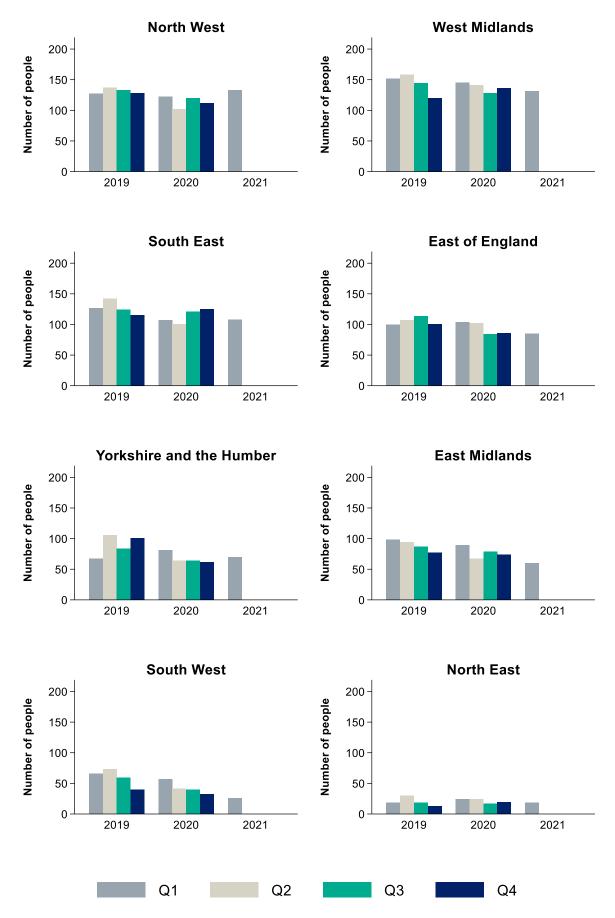


Table 1: Number of TB notifications by PHE Centre, England, Q1 2019 to Q1 2021

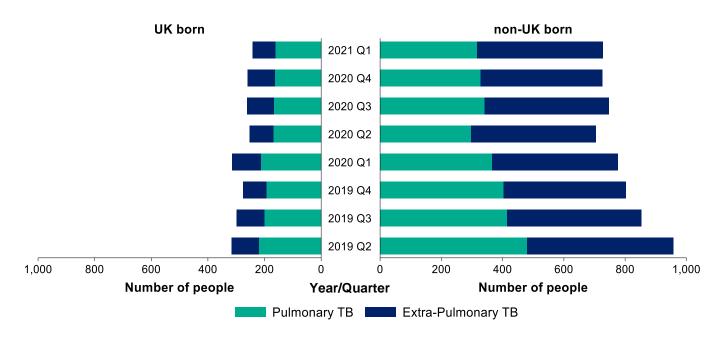
PHEC ¹	2019					2020					2021				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total	Q1 ²	Q2	Q3	Q4	Total
London	379	448	427	411	1,665	380	334	384	370	1,468	364 ↓	ı	ı	-	364
North West	127	137	133	128	525	122	102	120	112	456	133 ↑	ı	ı	-	133
West Midlands	152	158	144	120	574	145	141	128	136	550	131 ↓	ı	1	-	131
South East	127	142	124	115	508	107	101	121	125	454	108 ↑	ı	ı	•	108
East of England	100	107	114	101	422	104	102	84	86	376	85 ↓	-	-	-	85
Yorkshire and the Humber	67	106	84	101	358	81	64	64	62	271	70 ↓	-	-	-	70
East Midlands	98	94	87	77	356	89	67	79	74	309	60↓	-	-	-	60
South West	66	73	59	40	238	57	41	40	32	170	26 ↓	-	-	-	26
North East	18	30	18	13	79	24	24	17	19	84	18↓	ı		-	18
England	1,134	1,295	1,190	1,106	4,725	1,109	976	1,037	1,016	4,138	995 ↓	-	•	-	995

¹ Ordered by decreasing total number of people with TB in Q1 2021

² 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 Q1 2021 compared to Q1 2020

Demographic and clinical characteristics

Figure 3: Number of TB notifications by place of birth and site of disease, England, Q2 2019 to Q1 2021

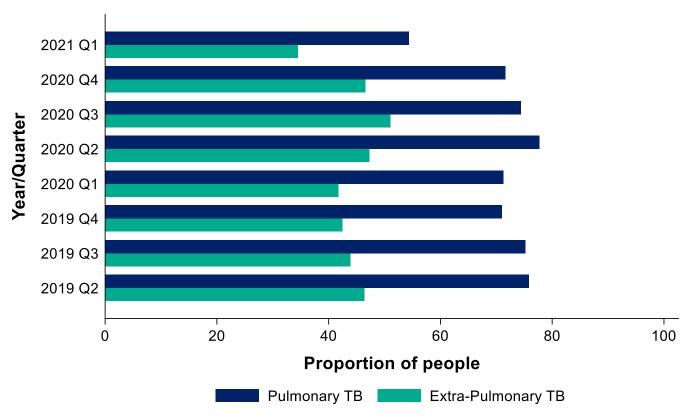


Compared with Q1 2020 (779), in Q1 2021 (728) there was a 6.5% decrease in the number of people notified with TB who were born outside the UK. The number born in the UK also decreased in the same time period, however to a greater extent (Q1 2020: 316, Q1 2021: 243, -23.1%).

In Q1 2021, the number of people with pulmonary TB accounted for 49.5% (491 of 993) of all people with TB, having decreased from 53.1% in Q1 2020 (586 of 1,104). For those born outside the UK, this proportion was 43.5% (316 of 727), whilst the proportion was much higher among people born in the UK (66.5%, 161 of 242).

Culture confirmation

Figure 4: Proportion of culture confirmation among TB notifications by site of disease, England, Q2 2019 to Q1 2021



Among people with pulmonary TB, the proportion who were culture confirmed increased slightly between Q4 2019 and Q4 2020 (71.0% versus 71.6%, respectively). The proportion with culture confirmed extra-pulmonary TB also increased over the same time period (Q4 2019: 42.5%, Q4 2020: 46.6%).

Please note: Q4 2020 is being compared as the number for Q1 2021 will likely increase as final results for cultures may not yet be available.

In Q4 2020, the largest changes in the proportion of people with culture confirmation for:

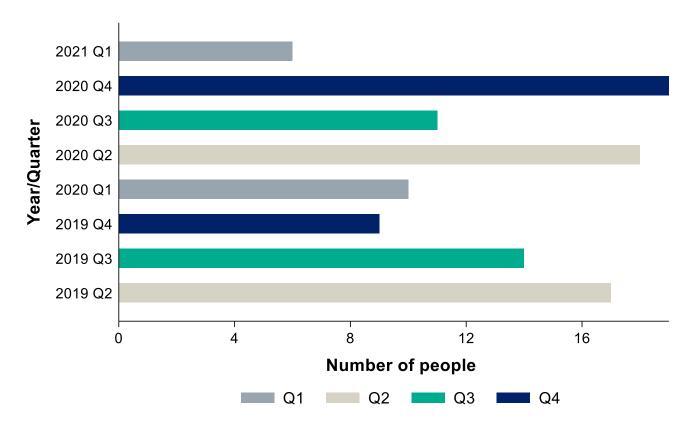
- pulmonary TB were seen in the South West being higher than in Q4 2019
- pulmonary TB were seen in the North East, being lower than in Q4 2019
- extra-pulmonary TB were seen in the South West, being higher than in Q4 2019
- extra-pulmonary TB were seen in the East of England, being lower than in Q4 2019

North West London **West Midlands** 2021 Q1 2021 Q1 2021 Q1 2020 Q4 2020 Q4 2020 Q4 Year/Quarter Year/Quarter Year/Quarter 2020 Q3 2020 Q3 2020 Q3 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 0 20 40 60 80 100 0 20 40 60 80 100 20 40 60 80 100 0 Proportion of people Proportion of people Proportion of people **South East East of England** Yorkshire and the Humber 2021 Q1 2021 Q1 2021 Q1 2020 Q4 2020 Q4 2020 Q4 Year/Quarter Year/Quarter 2020 Q3 2020 Q3 2020 Q3 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 0 20 40 60 80 100 0 20 40 60 80 100 20 40 60 80 100 0 Proportion of people Proportion of people Proportion of people **East Midlands South West North East** 2021 Q1 2021 Q1 2021 Q1 2020 Q4 2020 Q4 2020 Q4 Year/Quarter Year/Quarter 2020 Q3 2020 Q3 2020 Q3 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 20 40 60 80 100 20 40 60 80 100 20 40 60 80 100 0 0 0 Proportion of people Proportion of people Proportion of people Pulmonary TB Extra-Pulmonary TB

Figure 5: Proportion of culture confirmation among TB notifications by site of disease and PHE Centre, Q2 2019 to Q1 2021

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

Figure 6: Number¹ of TB notifications with MDR/RR-TB, England, Q2 2019 to Q1 2021

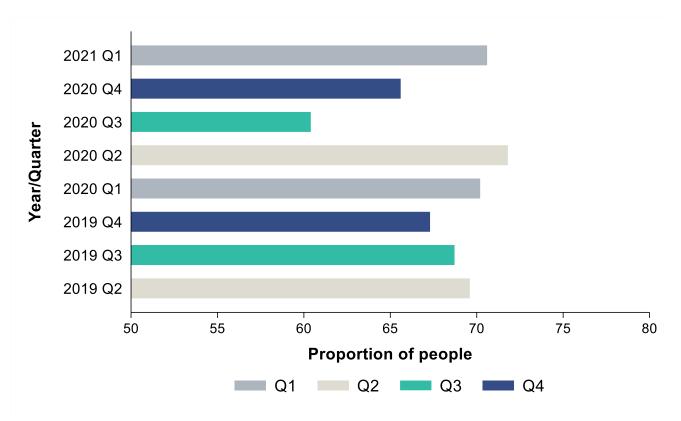


¹ Note figure displays numbers rather than proportions due to low number of MDR/RR-TB notifications.

There were 6 people notified in Q1 2021 with confirmed MDR/RR-TB. Overall, 54 people were notified with MDR/RR-TB since Q2 2020, compared to 50 in the previous twelve month period. Numbers may increase as final results for cultures in the most recent quarters may not yet be available.

Treatment delays

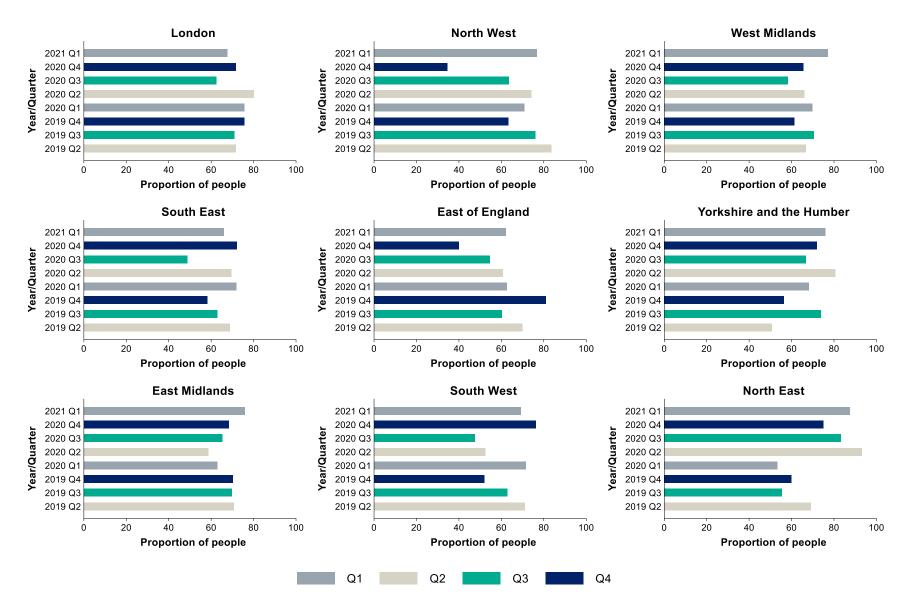
Figure 7: Proportion¹ of pulmonary TB notifications starting treatment within 4 months (symptom onset to treatment start), England, Q2 2019 to Q1 2021



¹ Note x-axis is not scaled to start at zero to improve data visualisation.

In Q1 2021, 70.6% of people with pulmonary TB started treatment within 4 months of symptom onset, compared to 70.2% in Q1 2020. 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, Q2 2019 to Q1 2021

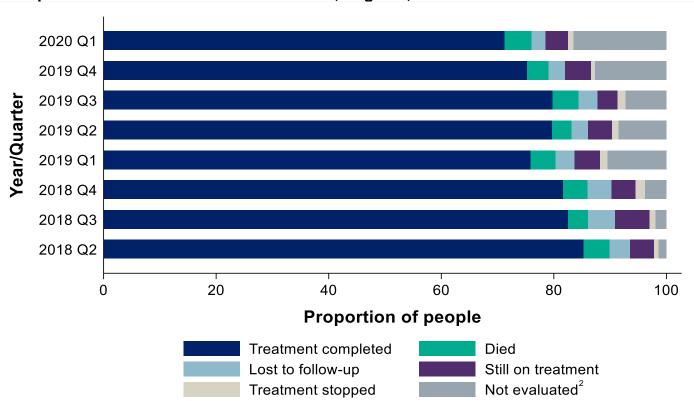


In Q1 2021, the proportion of people with TB who started treatment within 4 months of symptom onset in:

- the North East and the East Midlands was notably higher than in Q1 2020
- London and the South East was notably lower than in Q1 2020

Treatment outcomes

Figure 9: Outcomes at 12 months for people with drug sensitive TB with expected treatment duration <12 months¹, England, Q2 2018 to Q1 2020



¹ Excludes people in the drug resistant cohort and those with CNS, spinal, miliary or cryptic disseminated TB

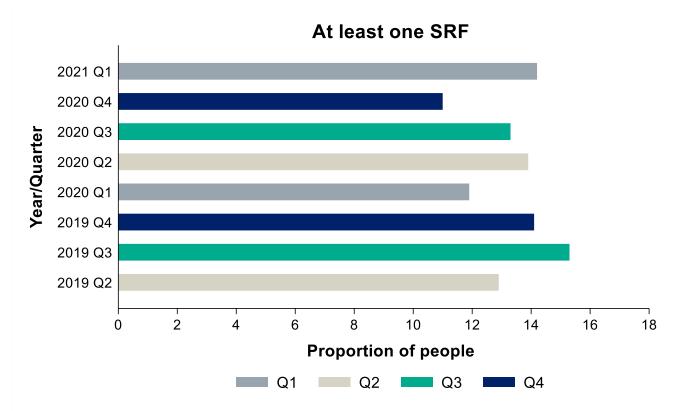
The proportion of people with drug sensitive TB (with an expected treatment duration of less than 12 months) who completed treatment at 12 months was 75.9% for people notified in Q1 2019.

Please note: the latest 3 quarters tend to 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.

² Not evaluated includes unknown and transferred out

Social risk factors

Figure 10: Proportion of TB notifications (≥15 years) with social risk factors (SRF), England, Q2 2019 to Q1 2021



¹ 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 Q1 2021, 14.2% of people with TB aged 15 years and older had at least one SRF, a notable increase from 11.9% in Q1 2020.

In Q1 2021, the proportion of people with TB with:

- current or a history of drug misuse was higher than in Q1 2020
- alcohol misuse was higher than in Q1 2020
- current or a history of homelessness was higher than in Q1 2020
- imprisonment was higher than in Q1 2020

Figure 10: Proportion of TB notifications (≥15 years) with social risk factors, England, Q2 2019 to Q1 2021 continued

