

Protecting and improving the nation's health

Tuberculosis in England

National quarterly report: Q3 2019

1 June to 30 September 2019

Provisional data

About Public Health England

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Background

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

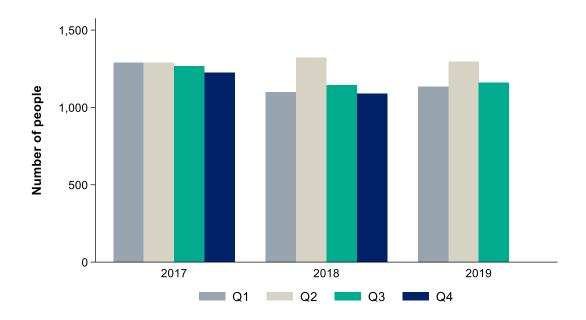
Detailed results for 2019 will be published in the annual report 'Tuberculosis in England' in 2020. The most recent annual report with data up to the end of 2018 is available here.

Please note: data for 2019 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 2017 to Q3 2019



In the third quarter of 2019 (Q3 2019, 1 July to 30 September), 1,160 people were notified with TB in England. This is a 1.3% decrease in numbers compared to the same quarter in the previous year (Q3 2018). Overall, 3,591 people were notified with TB in the first three quarters of 2019, a small increase compared to the same time period in the previous year (2018: 3,565, +0.7%). Exact numbers are shown in Table 1.

Please note: due to the reported seasonality in 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 -2017 2018 2019 Q2 **Q**3 Q1 **Q**4

Figure 2: Number of TB notifications by PHE Centre^a, England, Q1 2017 to Q3 2019

In Q3 2019, the number of people notified with TB in:

- West Midlands, South East, East Midlands and North East PHE Centres was lower than in Q3 2018
- London, North West, East of England and South West PHE Centres was higher than in Q3 2018

Overall, in the first three quarters of 2019, the number of people notified with TB increased in the North West (+7%), South East (+4.4%), East of England (+21.7%) and South West (+22.9%) PHE Centres, compared to the same time period in the previous year.

^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.

Figure 2: Number of TB notifications by PHE Centre, England, Q1 2017 to Q3 2019 continued

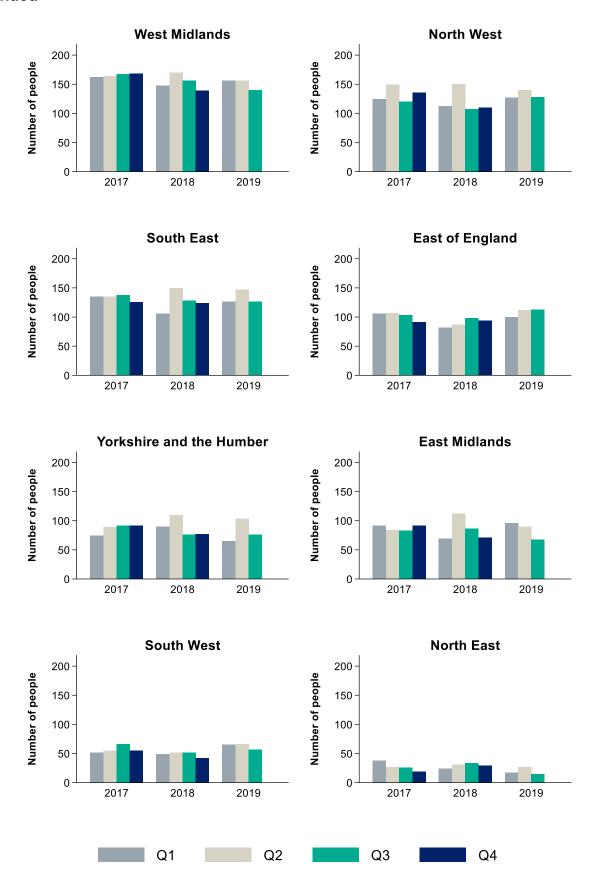


Table 1: Number of TB notifications by PHE Centre, England, Q1 2017 to Q3 2019

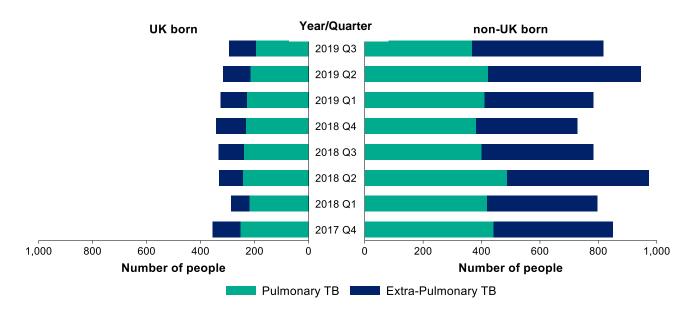
PHECa	2017			2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
London	506	480	473	448	419	460	408	404	382	455	437 ↑
West Midlands	162	164	167	168	148	170	156	139	156	156	140 ↓
North West	124	149	120	136	112	150	107	110	127	140	128 🛧
South East	135	135	138	126	106	150	128	124	127	147	127 ↓
East of England	106	107	103	91	82	87	98	94	100	112	113 🛧
Yorkshire and the Humber	74	89	91	91	90	109	76	77	65	103	76 –
East Midlands	91	84	83	91	69	112	86	71	96	90	67 ↓
South West	52	55	66	55	49	52	52	42	65	66	57 ↑
North East	38	27	26	19	24	31	34	29	17	27	15 ↓
England	1,288	1,290	1,267	1,225	1,099	1,321	1,145	1,090	1,135	1,296	1,160 ↑

^a Ordered by decreasing total number of people with TB in Q3 2019

b Arrows show whether there has been a decrease (↓), an increase (↑) or no change (–) in the number of people notified with TB in each PHEC in Q3 2019 compared to Q3 2018

Demographic and clinical characteristics

Figure 3: Number of TB notifications by place of birth and site of disease, England, Q4 2017 to Q3 2019

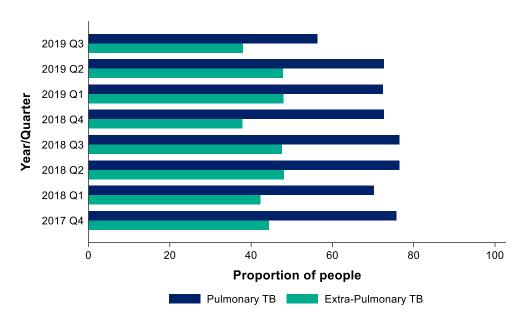


Compared with Q3 2018 (783), in Q3 2019 (818) there was a 4.5% increase in the number of people notified with TB who were born outside the UK. Conversely, the number born in the UK decreased in the same time period (Q3 2018: 334, Q3 2019: 295, -11.7%).

In Q3 2019, the number of people with pulmonary TB accounted for 50.7% (564/1,113) of all people with TB, having decreased from 57.4% in Q3 2018 (641/1,117). For those born outside the UK, this proportion was 45% (368/818), whilst the proportion was much higher among people born in the UK (66.4%, 196/295).

Culture confirmation

Figure 4: Proportion of culture confirmation among TB notifications by site of disease, England, Q4 2017 to Q3 2019



Among people with pulmonary TB, the proportion who were culture confirmed decreased from 76.4% in Q2 2018 to 72.6% in Q2 2019. The proportion with culture confirmed extra-pulmonary TB remained stable in the same time period (Q2 2018: 48%, Q2 2019: 47.8%).

Please note: Q2 2019 is being compared as the number for Q3 2019 will likely increase as final results for cultures may not yet be available.

In Q2 2019, the largest changes in the proportion of people with culture confirmation for:

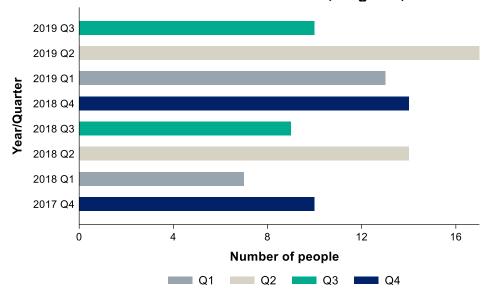
- pulmonary TB were seen in the West Midlands, being higher than in Q2 2018
- pulmonary TB were seen in the South West and East of England, being lower than in Q2 2018
- extra-pulmonary TB were seen in the North West and South East, being higher than in Q2 2018
- extra-pulmonary TB were seen in the North East and East of England, being lower than in Q2 2018

North West West Midlands London 2019 Q3 2019 Q3 2019 Q3 2019 Q2 2019 Q2 2019 Q2 Year/Quarter Year/Quarter Year/Quarter 2019 Q1 2019 Q1 2019 Q1 2018 Q4 2018 Q4 2018 Q4 2018 Q3 2018 Q3 2018 Q3 2018 Q2 2018 Q2 2018 Q2 2018 Q1 2018 Q1 2018 Q1 2017 Q4 2017 Q4 2017 Q4 100 20 40 60 80 0 20 40 60 80 100 0 20 40 60 80 100 Proportion of people Proportion of people Proportion of people **East of England South East** Yorkshire and the Humber 2019 Q3 2019 Q3 2019 Q3 2019 Q2 2019 Q2 2019 Q2 Year/Quarter Year/Quarter 2019 Q1 2019 Q1 2019 Q1 2018 Q4 2018 Q4 2018 Q4 2018 Q3 2018 Q3 2018 Q3 2018 Q2 2018 Q2 2018 Q2 2018 Q1 2018 Q1 2018 Q1 2017 Q4 2017 Q4 2017 Q4 100 100 100 0 20 40 60 80 0 20 40 60 80 60 80 Proportion of people Proportion of people Proportion of people **East Midlands South West North East** 2019 Q3 2019 Q3 2019 Q3 2019 Q2 2019 Q2 2019 Q2 Year/Quarter Year/Quarter 2019 Q1 2019 Q1 2019 Q1 2018 Q4 2018 Q4 2018 Q4 2018 Q3 2018 Q3 2018 Q3 2018 Q2 2018 Q2 2018 Q2 2018 Q1 2018 Q1 2018 Q1 2017 Q4 2017 Q4 2017 Q4 60 80 100 40 60 100 20 40 20 80 20 40 60 80 100 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, Q4 2017 to Q3 2019

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

Figure 6: Number^a of TB notifications with MDR/RR-TB, England, Q4 2017 to Q3 2019

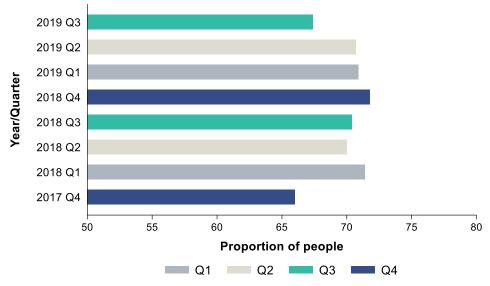


^a Note figure displays numbers rather than proportions due to low number of MDR/RR-TB notifications.

There were 10 people notified in Q3 2019 who were confirmed to have MDR/RR-TB. Overall, 40 people were notified with MDR/RR-TB in the first three quarters of 2019, compared to 30 in the same same period the previous year. Numbers may increase as final results for cultures in the most recent quarters may not yet be available.

Treatment delays

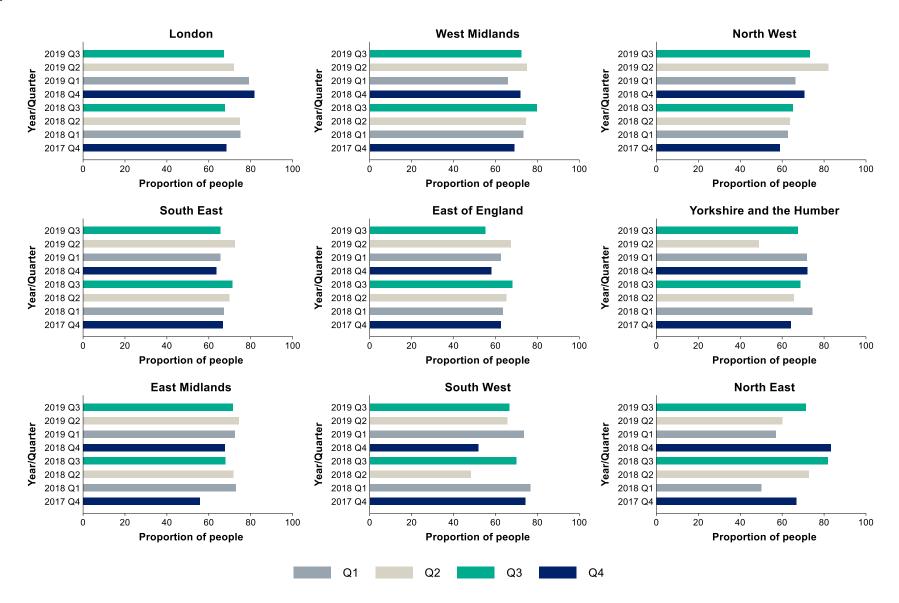
Figure 7: Proportion^a of pulmonary TB notifications starting treatment within 4 months (symptom onset to treatment start), England, Q4 2017 to Q3 2019



^a Note x-axis is not scaled to start at zero in order to more clearly visualise changes in proportions.

In Q3 2019, 67.4% of people with pulmonary TB started treatment within 4 months of symptom onset was, an decrease from 70.4% in Q3 2018. 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, Q4 2017 to Q3 2019

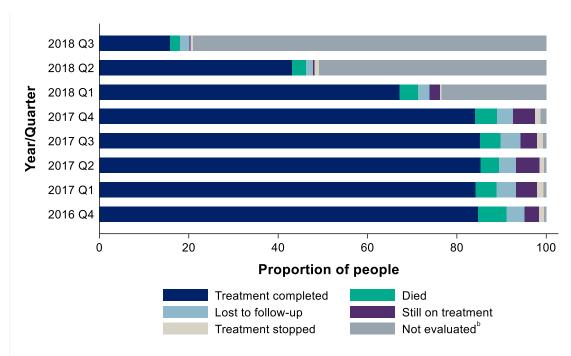


In Q3 2019, the proportion of people with TB who started treatment within 4 months of symptom onset in:

- the North West and East Midlands was higher than in Q3 2018
- the East of England, North East, West Midlands and South East was markedly lower than in Q3 2018

Treatment outcomes

Figure 9: Outcomes at 12 months for people with drug sensitive TB with expected treatment duration <12 months^a, England, Q4 2016 to Q3 2018



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

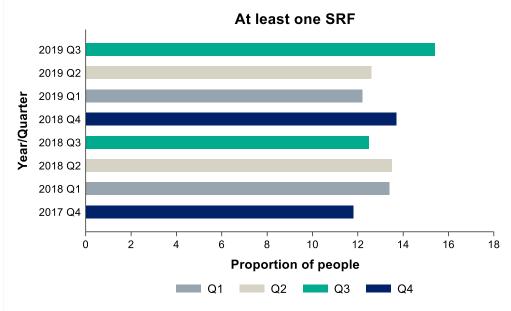
The proportion of people with drug-sensitive TB (with an expected treatment duration of less than 12 months) who completed treatment at 12 months was 84.2% for people notified in Q4 2017.

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. This effect is no longer seen after a further three quarters, by when the data are complete. For a meaningful comparison of complete data, Q4 2017 should be compared to Q4 2016. The proportion not evaluated for the latest 2 quarters 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, Q4 2017 to Q3 2019



^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 Q3 2019, 15.4% of people with TB aged 15 years and older had at least 1 SRF, an increase from 12.5% in Q3 2018, and the highest quarterly proportion since data collection began in 2010.

In Q3 2019, the proportion of people with TB with:

- current or a history of drug misuse was higher than in Q3 2018
- alcohol misuse was higher than in Q3 2018
- current or a history of homelessness was higher than in Q3 2018
- imprisonment was slightly higher than in Q3 2018

Figure 10: Proportion of TB notifications (≥15 years) with social risk factors, England, Q4 2017 to Q3 2019 continued

