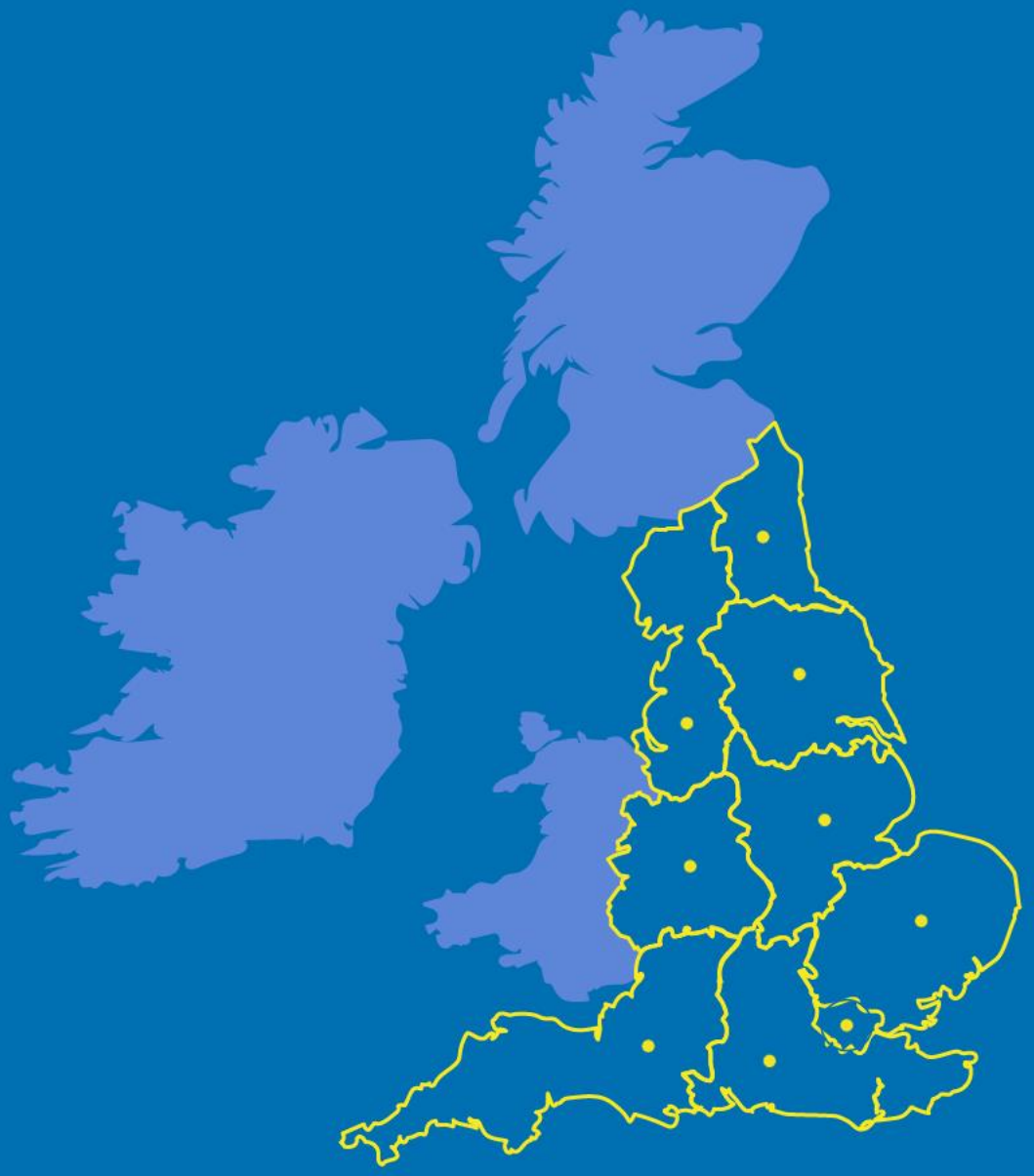
Public Health England

Joint Biosecurity Centre

CORONAVIRUS SITUATIONAL AWARENESS

Summary

date: 7 February 2021



Contents

This situational awareness summary report collates information and intelligence from various sources. The summary will be provided daily and the content will continue to be developed.

- National context
- Case Rate and Case rate change maps
- High level summary
- Case rates, [redacted], positivity and testing

Please note:

13/10/20 - denominator data for case and testing rates have been updated to 2019 mid-year population estimates.

20/10/20 - PHE has adjusted its approach to test positivity and testing rate metrics. Previously, any repeat tests for individuals since pandemic onset had been deduplicated. As the likelihood of individuals being tested multiple times has increased over time, test positivity and testing rate data are now deduplicated within each 7-day window. This change has been made in all OST outputs as of 20/10/2020 and applied retrospectively.

16/11/20-PHE has updated the way it records the location of people who test positive or negative for COVID-19. It now prioritises addresses given at the point of testing over the details registered on a patient's record in the NHS Digital Patient Demographic Service. This better reflects the distribution of cases and testing. However, it may give rise to differences in previously reported numbers of cases and rates in some areas. The change has been retrospectively applied to tests carried out from 1 September 2020, and data reports were updated to reflect this change on 16 November 2020.

20/12/20 - due to the increasing use of asymptomatic mass testing with lateral flow devices (LFD), positivity and testing rates reported in the national situational awareness reports are now only presented for PCR tests. This change has been made retrospectively, and rates reported here for earlier time periods will differ from those reported previously. Case rates are unaffected, and will include cases confirmed by PCR and/or LFD test. Data flows are being developed to enable reporting of testing and positivity by test type in early 2021.

- [redacted]
- Prevalence
- Hospitalisation
- NHS 111 potential COVID-19
- Outbreak reports
  - [redacted]
- Mortality

A separate Appendix contains Local Authority maps for case rates, positivity, testing, mortality and contact tracing.

Throughout the SAR:
Lower tier local authorities is used to represent local authority districts, unitary authorities, metropolitan district and London boroughs,
Upper tier local authorities is used to represent counties, metropolitan counties, London boroughs and unitary authorities

National context
(From 4 February 2021 Week 5 Report)

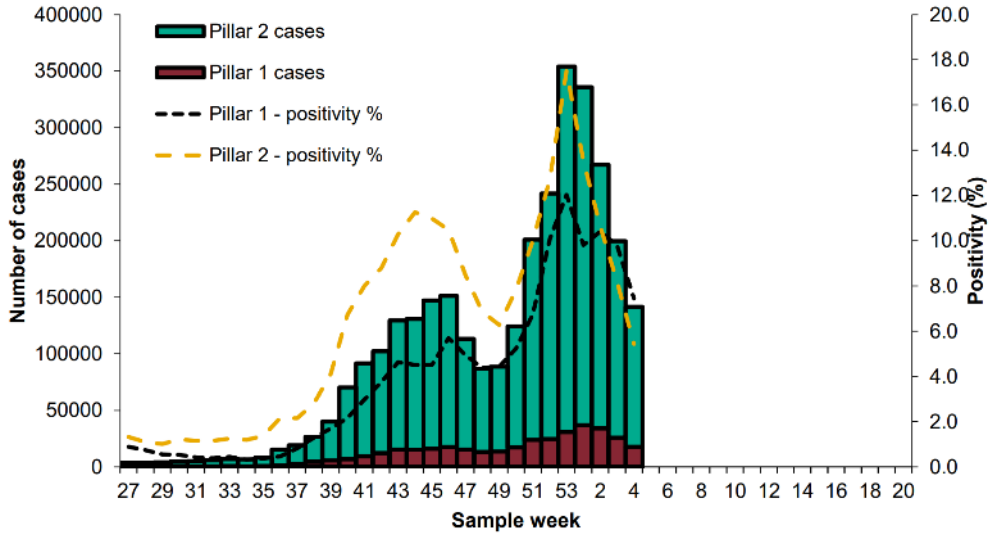
Overall case numbers and Pillar 1 and 2 positivity decreased in week 4. Decreases were seen in all age groups for case rates and positivity in week 4. Decreases were noted in case rates and positivity in all PHE Centres.

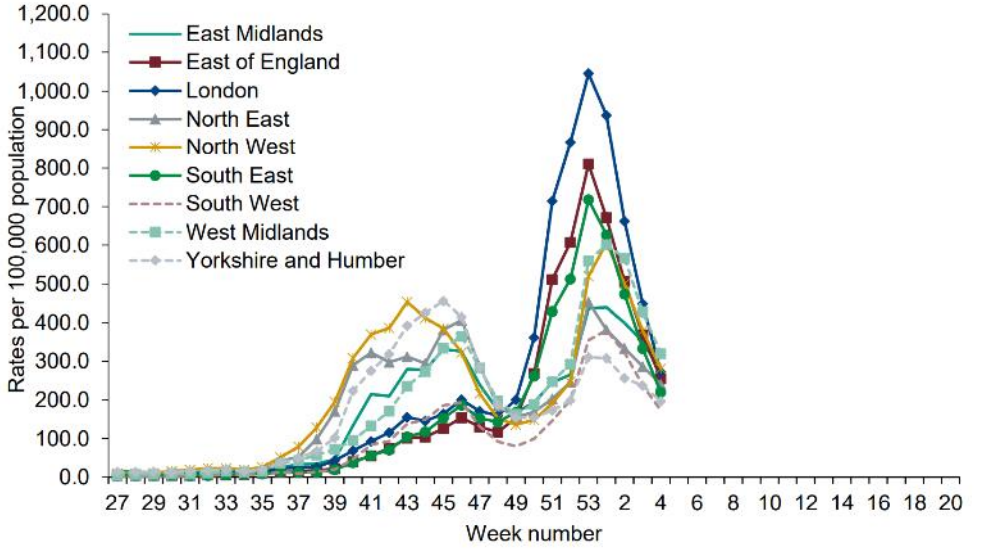
As of 09:00 on 2 February 2021, a total of 3,373,085 have been confirmed positive for COVID-19 in England under Pillars 1 and 2.

- The data are shown by the week the specimen was taken from the person being tested. This gives the most accurate analysis of this time progression, however, for the most recent week results for more samples are expected therefore this should be interpreted with caution.
- Positivity is calculated as the number of individuals testing positive during the week divided by the number of individuals tested during the week based on PCR testing.
- As of 16 November 2020, the methodology for allocating geographies for cases has been updated to include alternate postcodes where applicable. This change has been applied for cases reported since 1 September 2020. Cases reported prior to 1 September 2020 will not be allocated alternate postcode geographies.

Weekly laboratory confirmed COVID-19 case rates per 100,000 population tested under Pillar 1 and Pillar 2, by PHE Centres and sample week

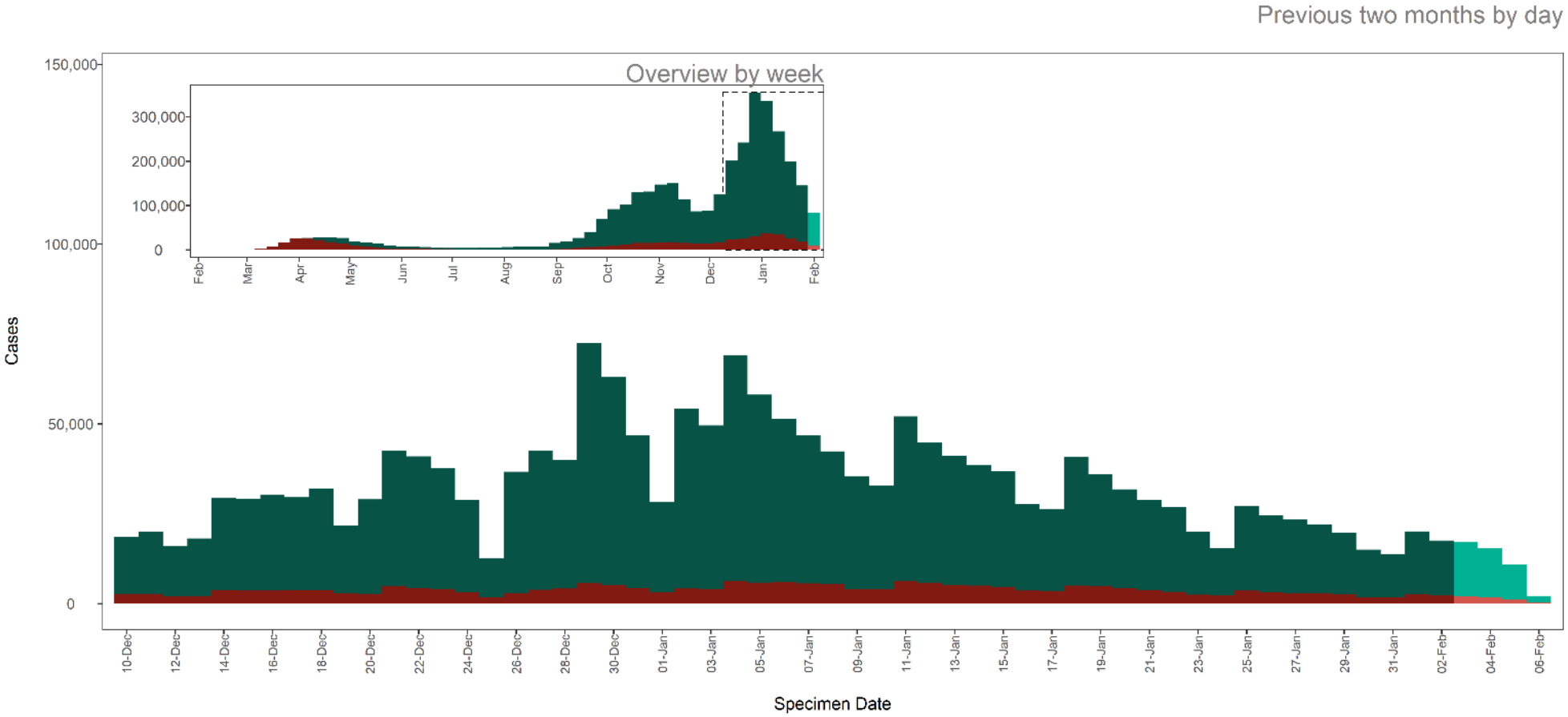
Case rates have been calculated using mid-2019 ONS population estimates





National context

England confirmed cases - epidemic curve*

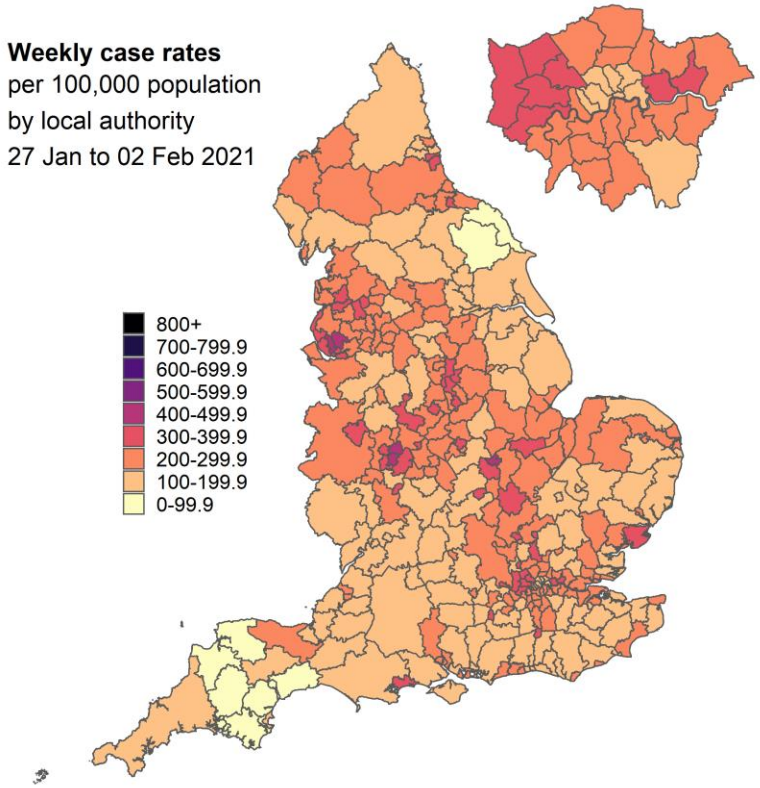


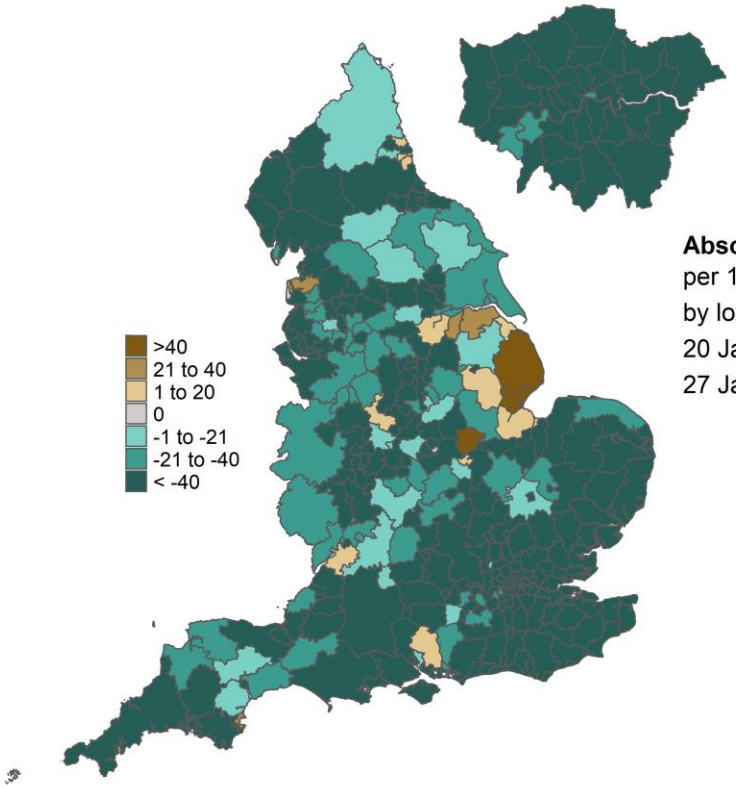
*Bars shaded in **light red** and **light green** are provisional.
Figures are expected to rise as results are received for additional samples tested during this period.
Inset epi curve is based on weekly reports from date of first case diagnosed.
Main epi curve shows daily cases truncated to show the previous two months.
Value labels are for combined **pillar 1** and **pillar 2** cases.

Produced by the Outbreak Surveillance Team, Public Health England.

Case Rates - Geographical spread of COVID-19 in England

Geographical spread of COVID-19 in England





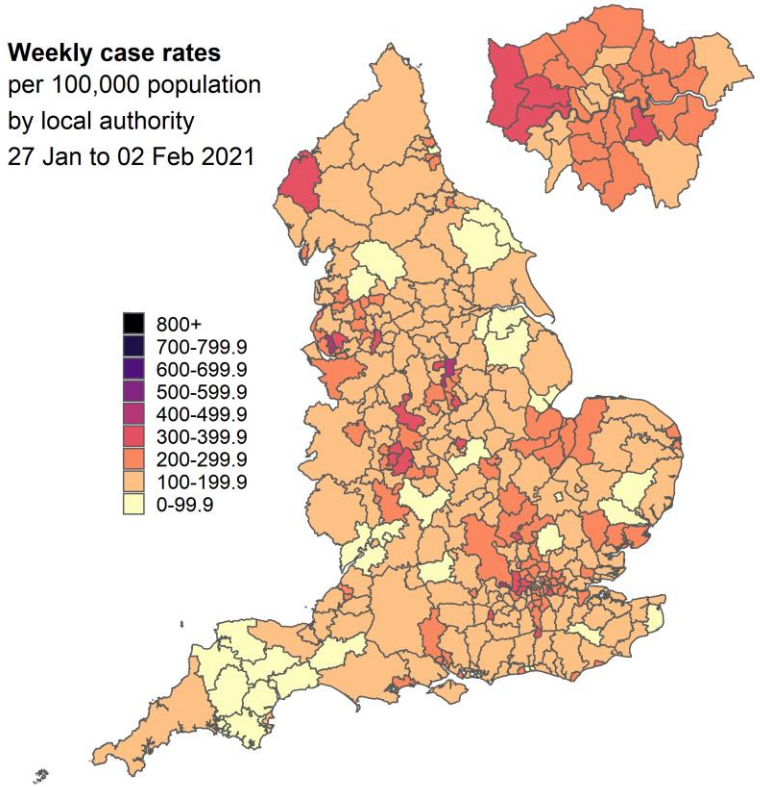
Absolute case rate change
per 100,000 population
by local authority between
20 Jan to 26 Jan 2021 and
27 Jan to 02 Feb 2021

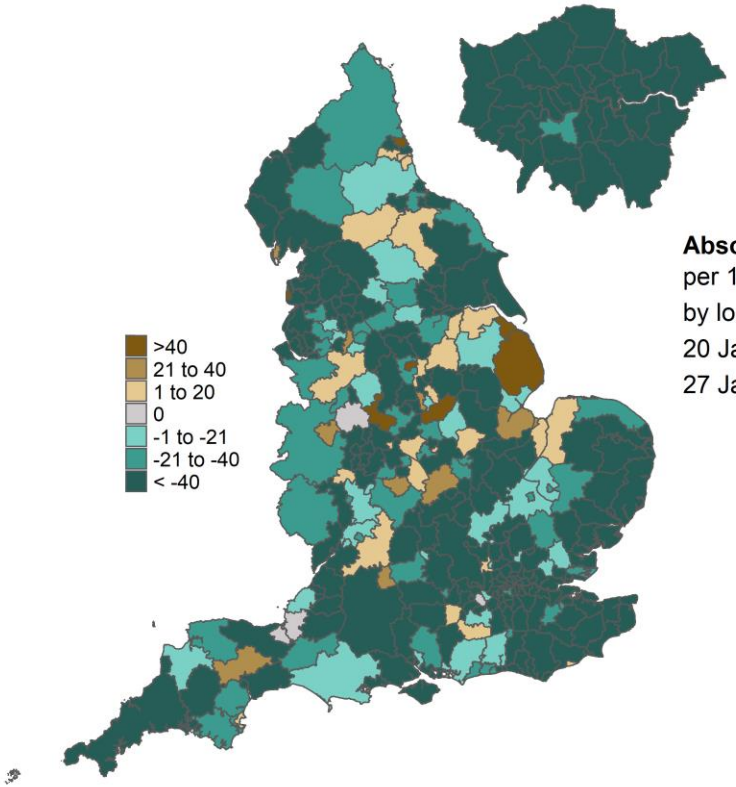
Data from SGSS; Pillar 1 and 2 testing. Figure by Outbreak Surveillance Team, Public Health England.

Contains National Statistics data including 2019 population estimates. Crown copyright and database right 2020

Case Rates - Geographical spread of COVID-19 in England (aged 60+ years)

Geographical spread of COVID-19 in England (aged 60+ years)

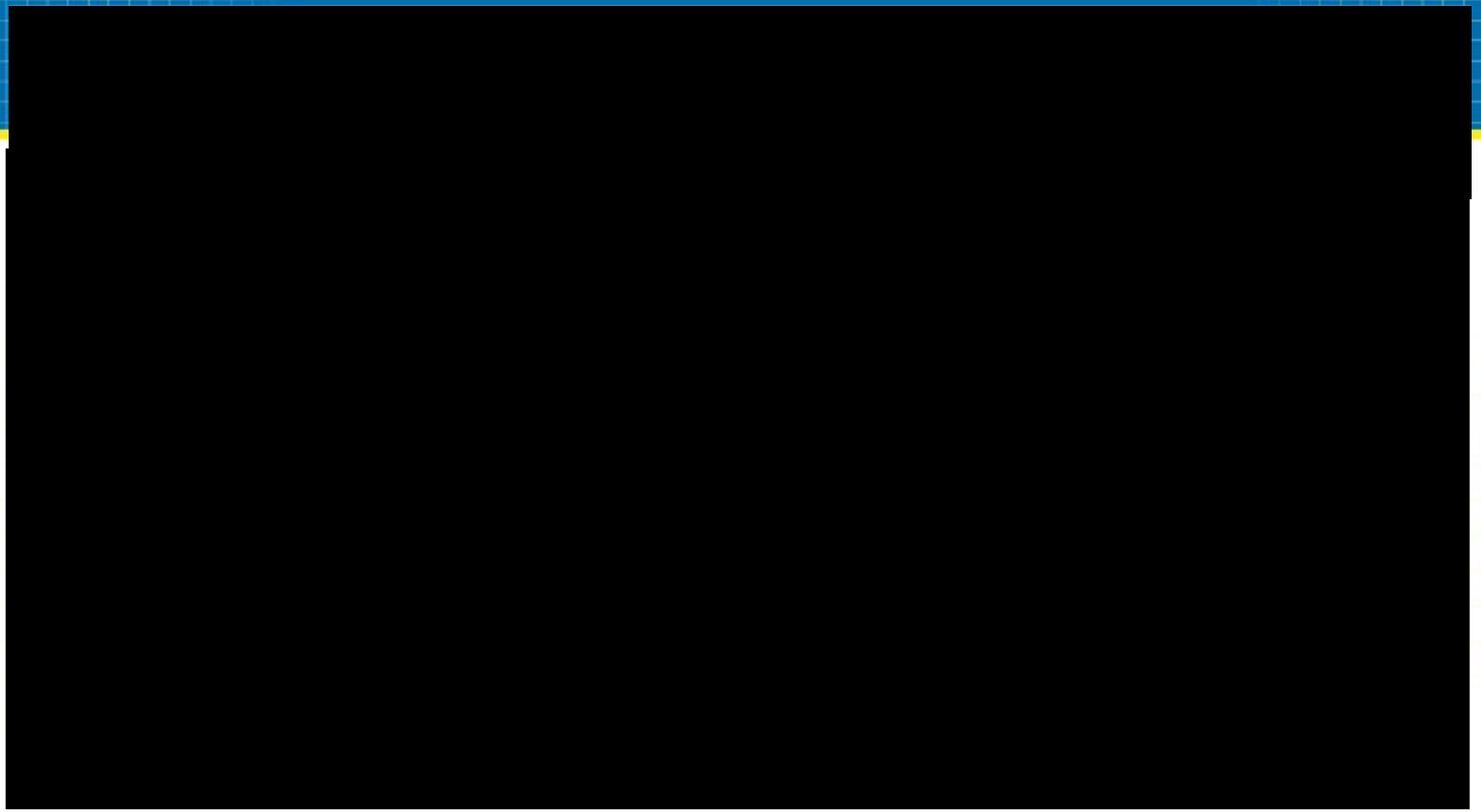


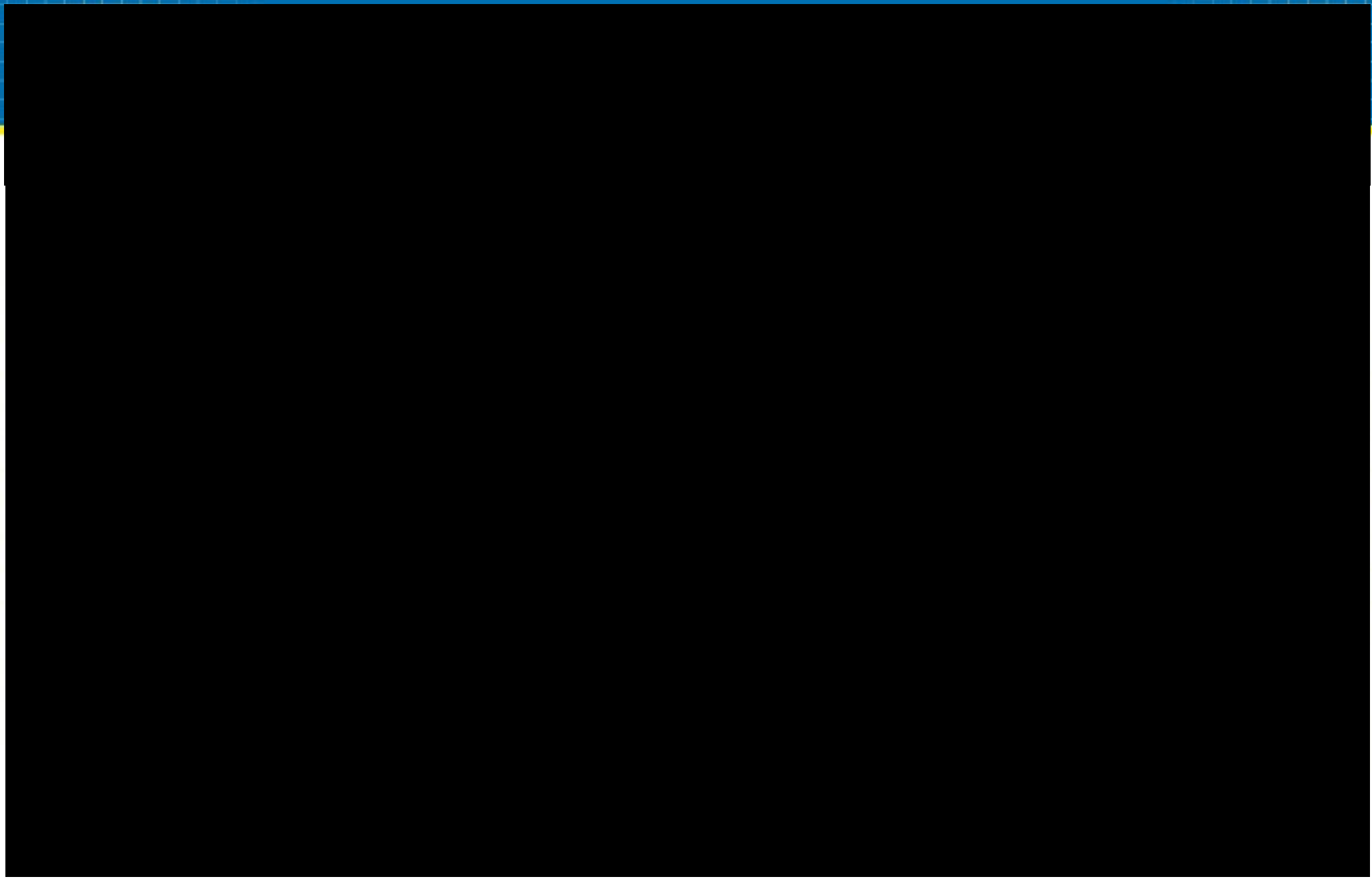


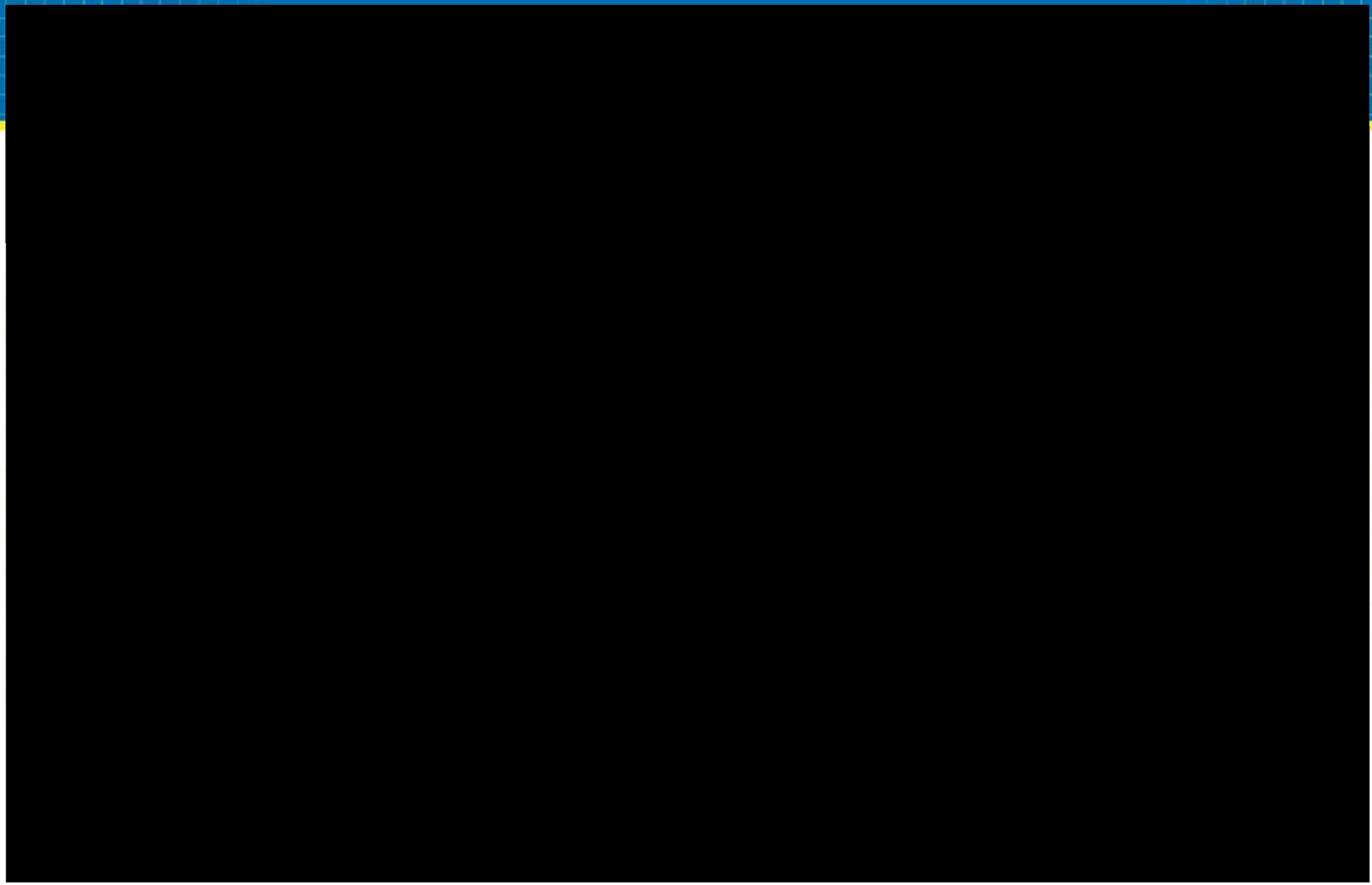
Absolute case rate change
per 100,000 population
by local authority between
20 Jan to 26 Jan 2021 and
27 Jan to 02 Feb 2021

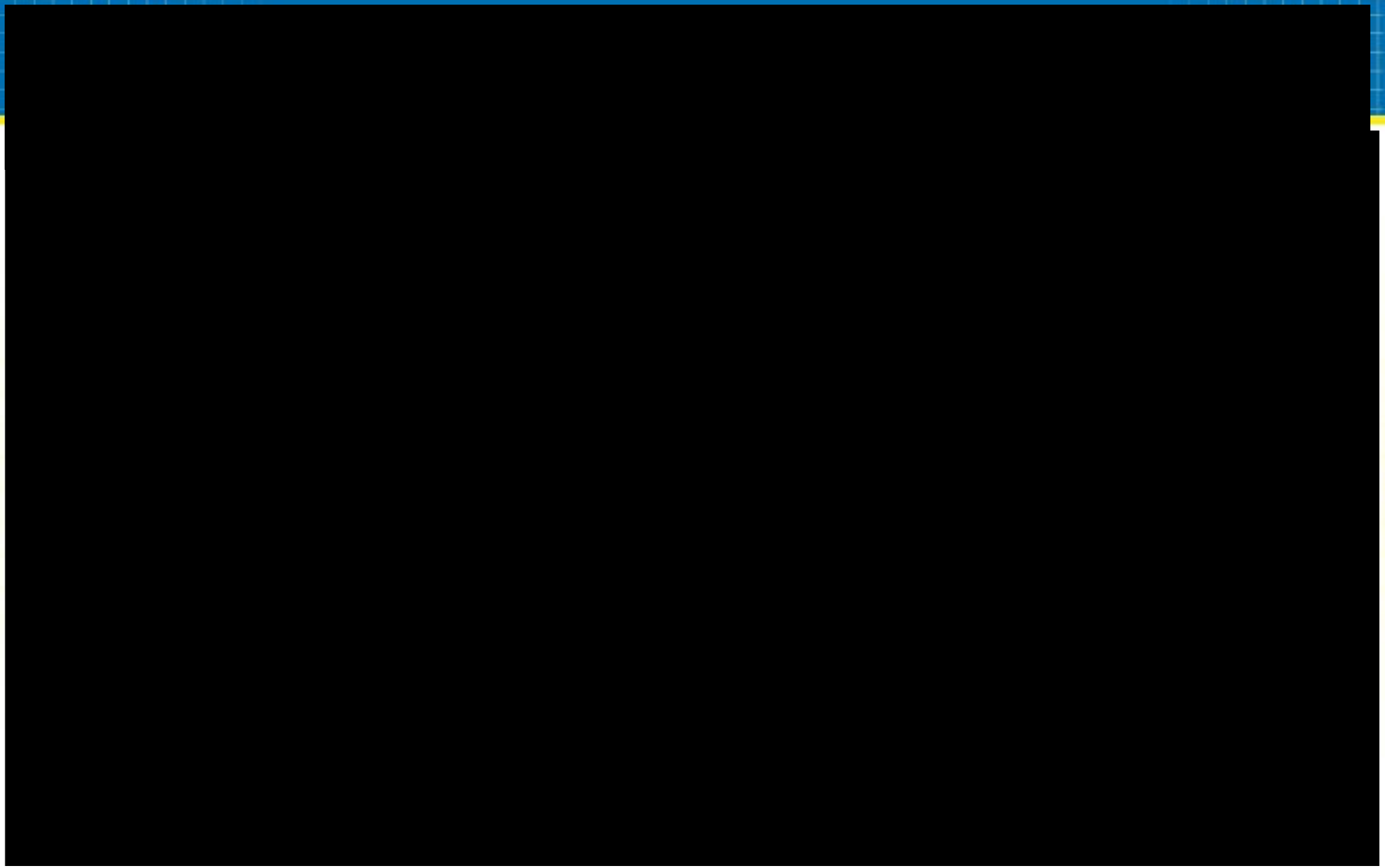
Data from SGSS; Pillar 1 and 2 testing. Figure by Outbreak Surveillance Team, Public Health England.

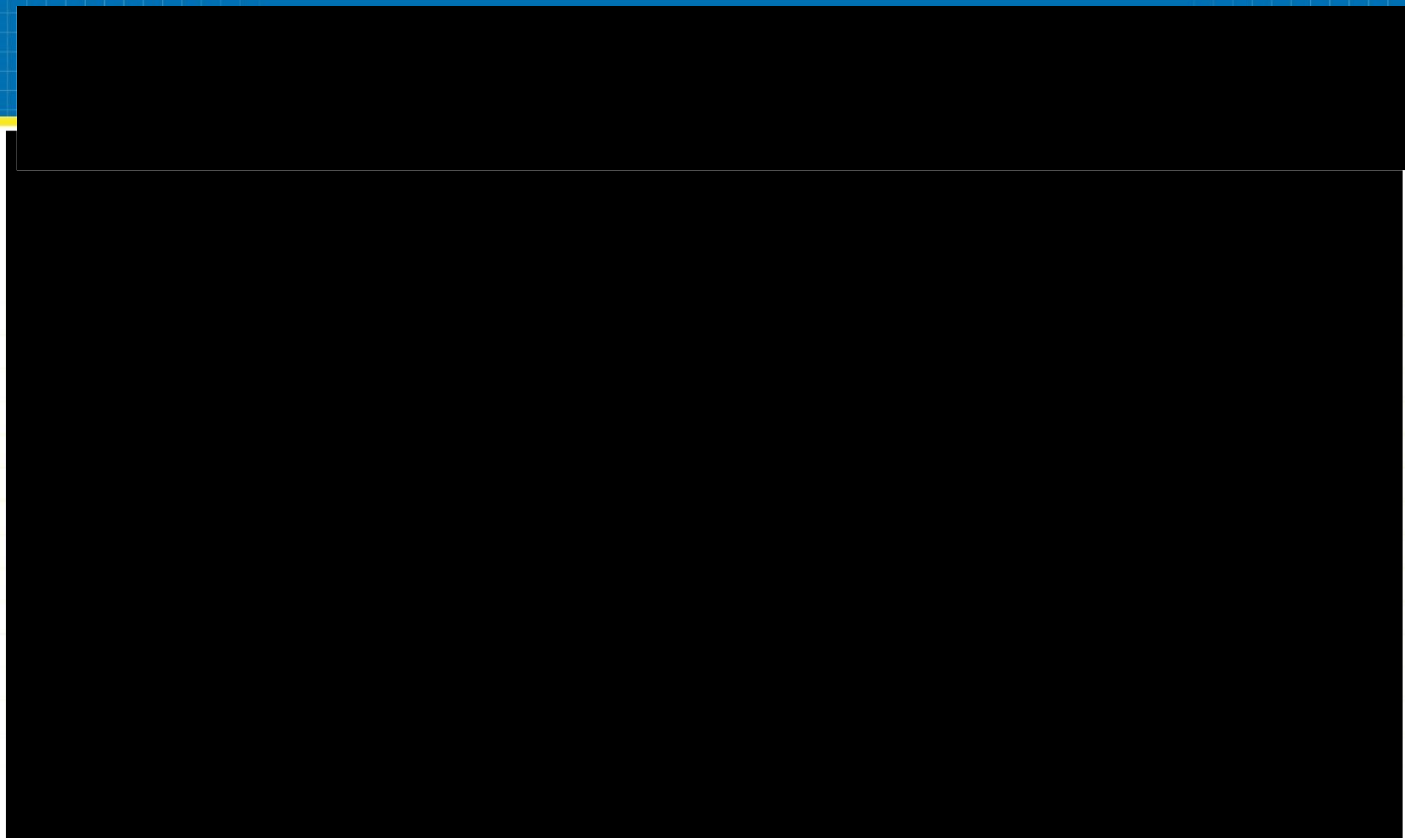
Contains National Statistics data including 2019 population estimates. Crown copyright and database right 2020



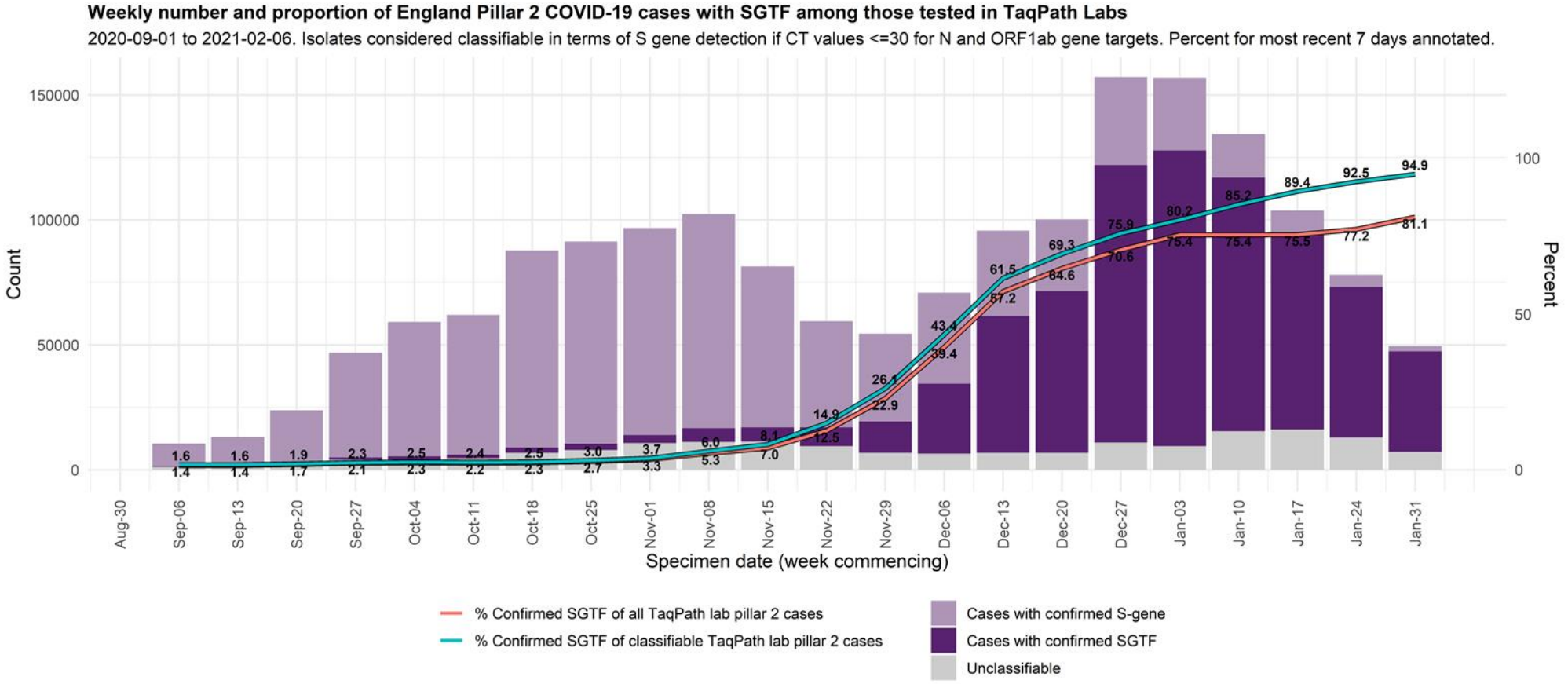




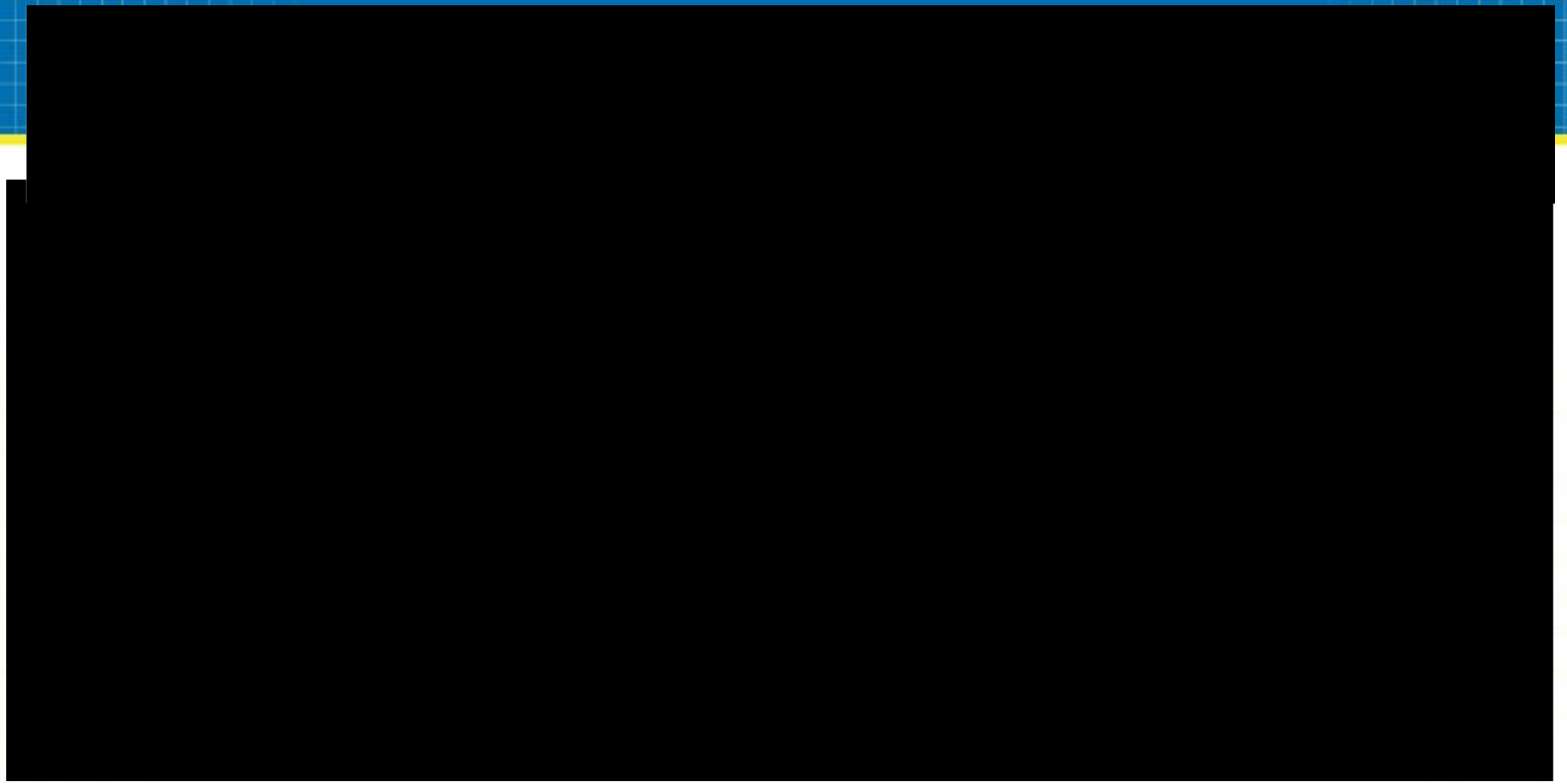




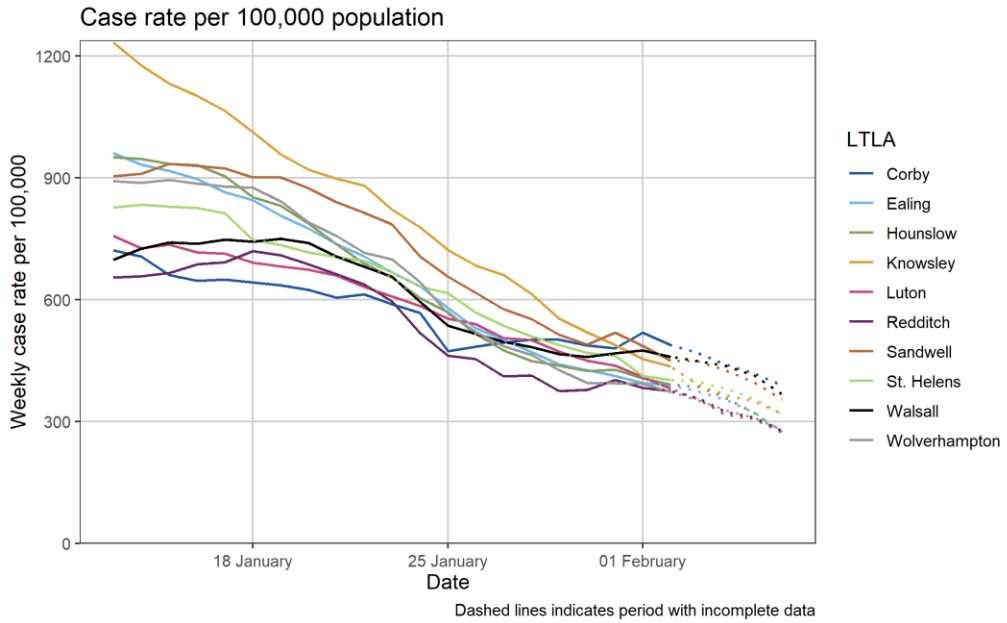
Tracking SARS-COV-2 S-Gene Target Failure – Weekly SGTF case numbers over time

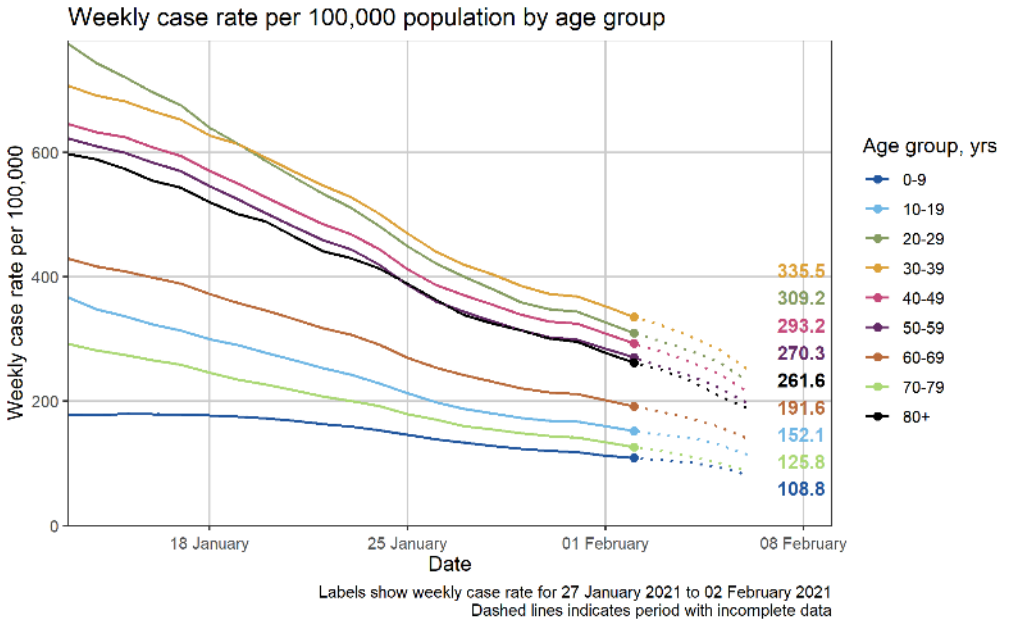


SGTF is a surveillance proxy for VOC-202012/01 and may include other variants.
Confirmed SGTF: Non-detectable S gene and <=30 CT values for N and ORF1ab genes. Confirmed S-gene: <=30 CT values for S, N, and ORF1ab genes.
TaqPath labs: Alderley Park, Milton Keynes and Glasgow Lighthouse Labs, which use TaqPath COVID-19 RT-PCR.
Data source: SGSS.Cases deduplicated to one positive test per person per week, prioritising SGTF tests.

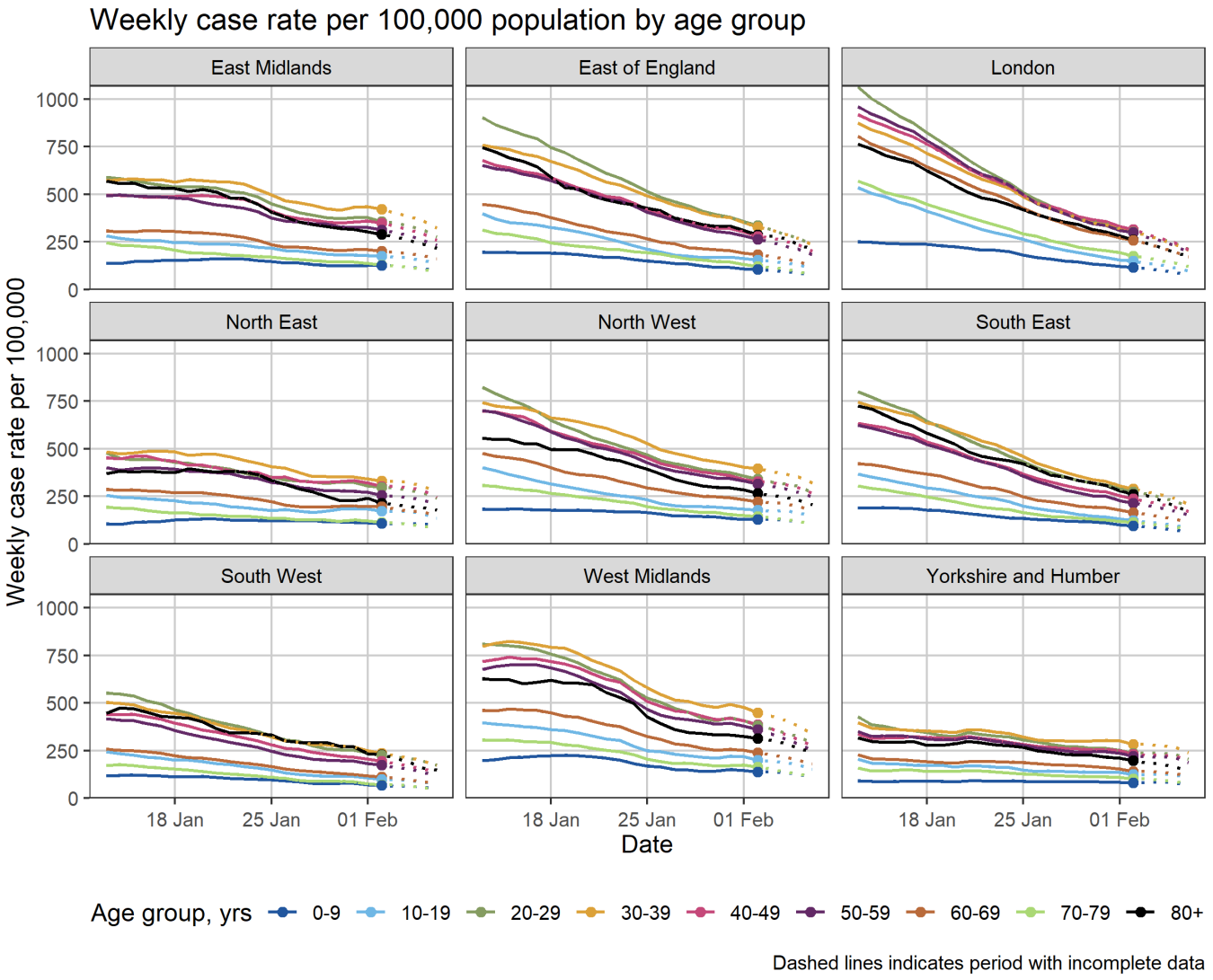


Case rate across both pillars 1 and 2 (weekly)
Data up to the 2 February 2021

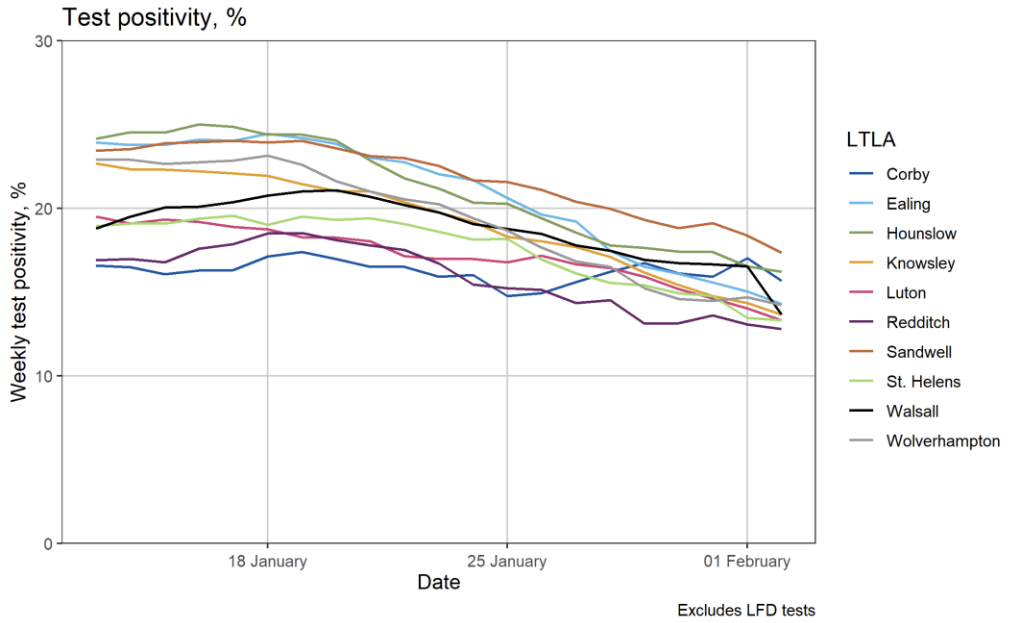


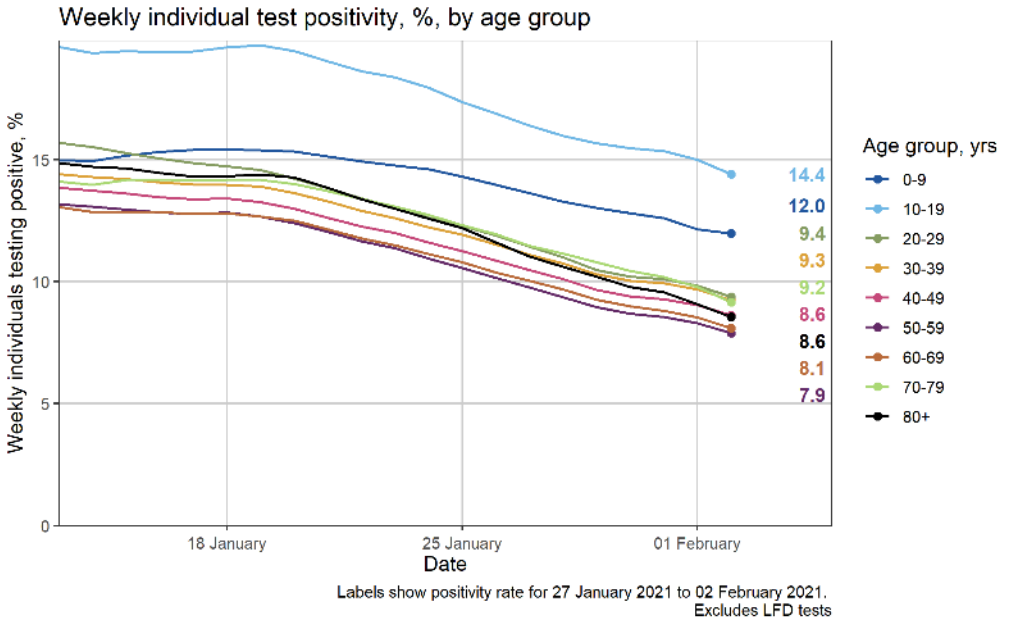


Case rate across both pillars 1 and 2 (weekly)
Data up to the 2 February 2021

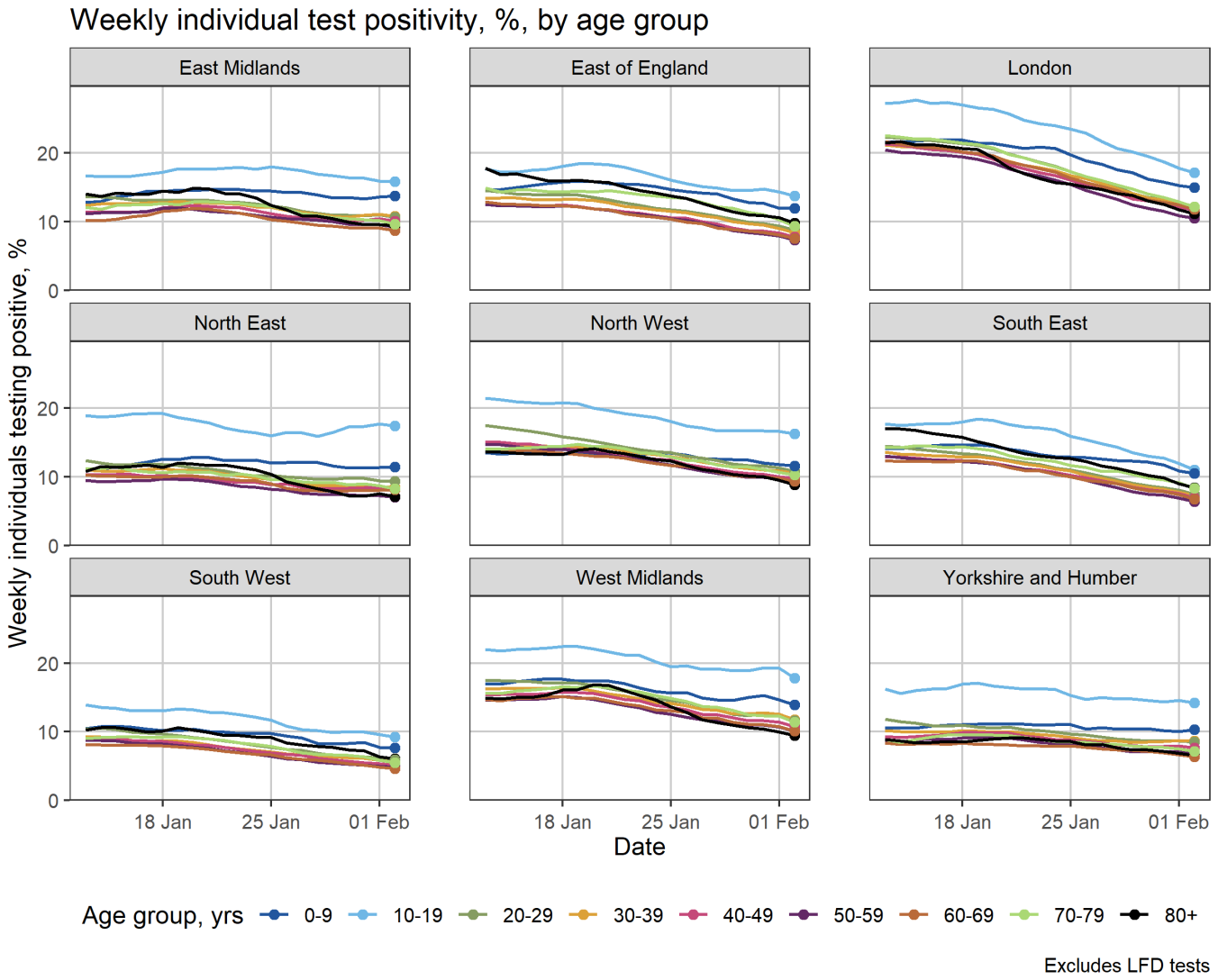


Percentage of individuals testing positive across both pillars 1 and 2 (weekly)
Data up to the 2 February 2021

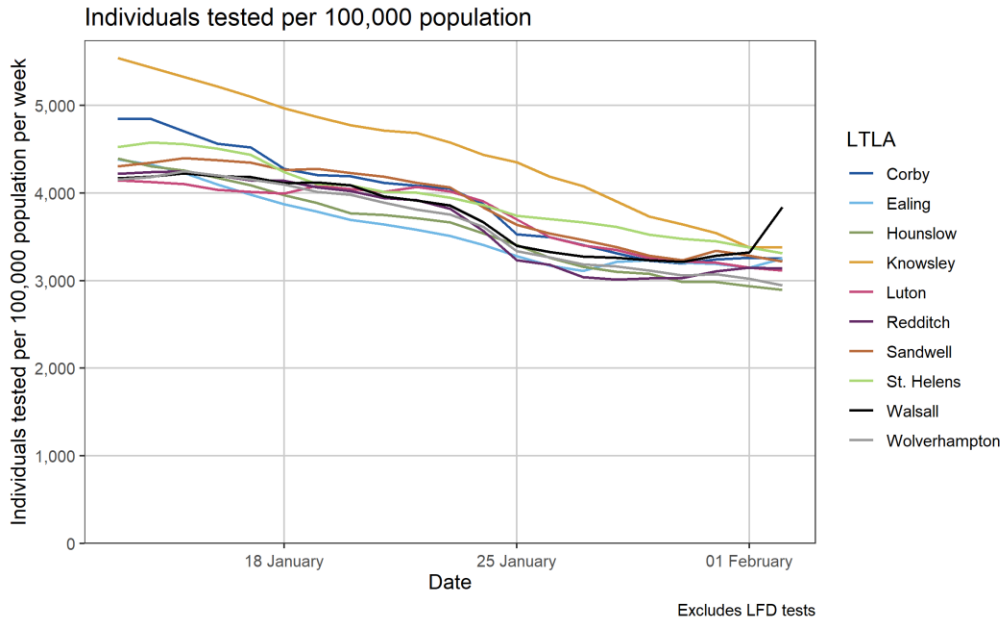


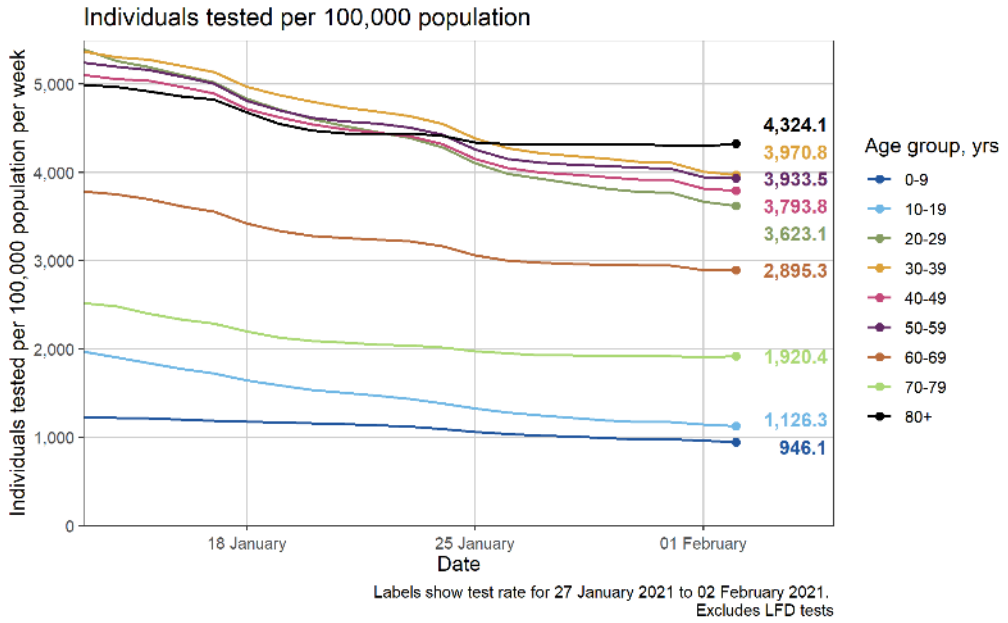


Percentage of individuals testing positive across both pillars 1 and 2 (weekly)
Data up to the 2 February 2021

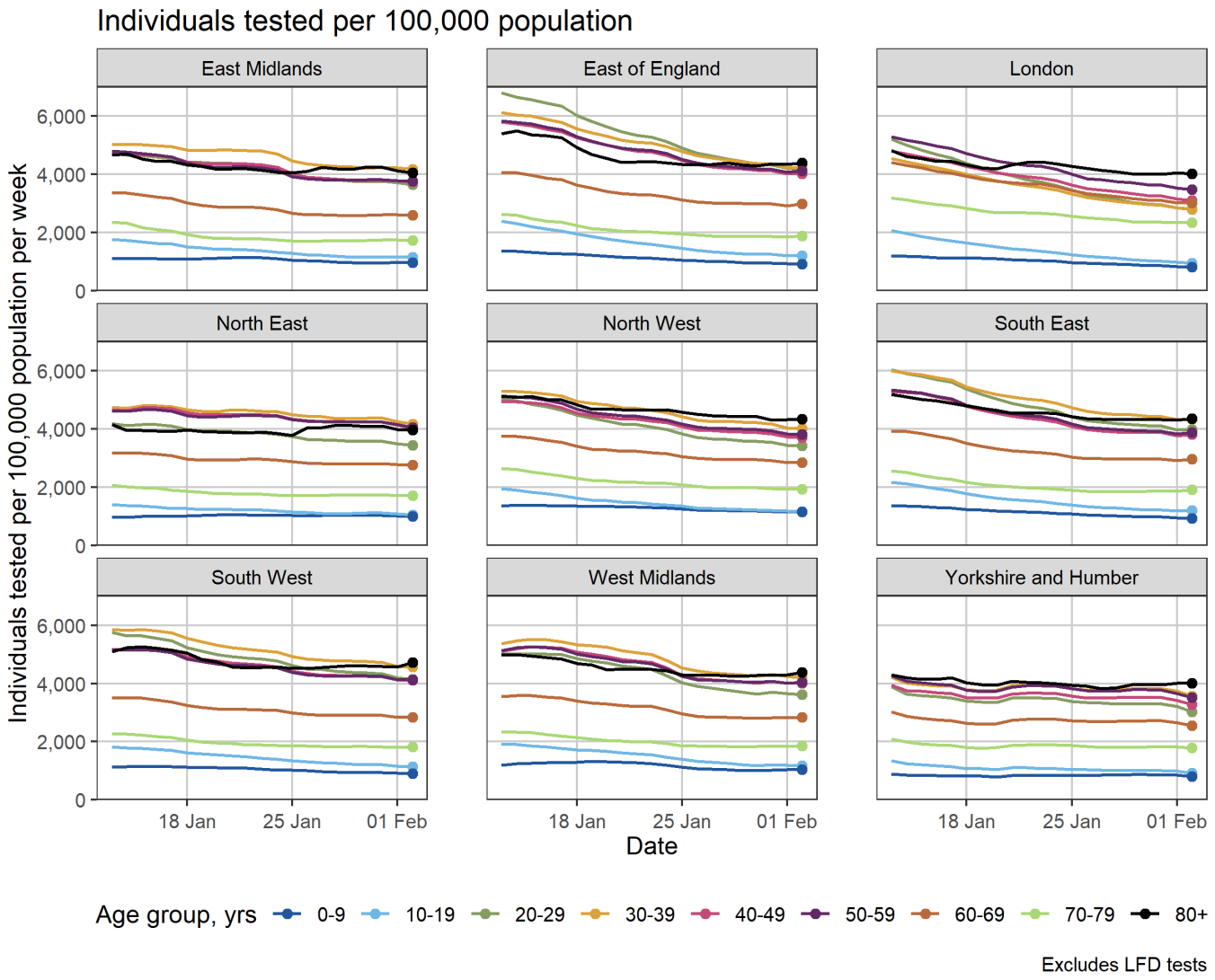


Individuals tested across both pillars 1 and 2 (weekly)
Data up to the 2 February 2021





Individuals tested across both pillars 1 and 2 (weekly)
Data up to the 2 February 2021



Percentage prevalence of COVID-19 across England and Government Office regions - table

Data generated 22 January 2021 by PHE Joint Modelling Cell

Last update
29th January 2021

Geography	22/01/2021	29/01/2021	05/02/2021
England	1.60 (1.46, 1.76)	1.45 (1.19, 1.82)	1.43 (1.04, 2.09)
North East	2.13 (1.57, 3.01)	2.45 (1.34, 4.72)	2.83 (1.15, 7.18)
Yorkshire and The Humber	1.15 (0.87, 1.59)	1.16 (0.67, 2.21)	1.20 (0.51, 3.15)
North West	2.40 (1.87, 3.21)	2.79 (1.65, 4.96)	3.21 (1.45, 7.28)
East Midlands	1.66 (1.29, 2.22)	1.54 (0.92, 2.78)	1.45 (0.65, 3.50)
West Midlands	1.58 (1.24, 2.06)	1.29 (0.80, 2.18)	1.05 (0.50, 2.33)
East of England	0.80 (0.67, 0.98)	0.40 (0.28, 0.60)	0.19 (0.11, 0.37)
London	2.14 (1.78, 2.62)	1.44 (0.97, 2.23)	0.97 (0.51, 1.92)
South East	1.17 (0.96, 1.45)	0.74 (0.50, 1.17)	0.47 (0.25, 0.97)
South West	1.17 (0.88, 1.61)	1.26 (0.71, 2.39)	1.38 (0.57, 3.57)

Methodology

Prevalence estimates were generated by the Cambridge real-time model on **22 January 2021** using data up to **16 January 2021**.

The percentage prevalence of COVID-19 infections in the regional populations are rated using the following scale:

- Low prevalence: less than 0.5%
- Medium prevalence: 0.5% to, but not including, 2%
- High prevalence: 2% and above.

These estimates are subject to, sometime significant, revision on a weekly basis. The underpinning model relies on death data which is subject to a reporting lag. In the weeks surrounding the implementation and relaxation of restrictions, it often takes a while for the system to settle, to account for the data lag and changes in mobility patterns. All prevalence estimates are reported as percentages, the values in parentheses represent the 5th and 95th percentiles respectively.

Further details on the Cambridge real-time model can be found https://www.mrc-bsu.cam.ac.uk/tackling-covid-19/nowcasting-and-forecasting-of-covid-19/

Percentage prevalence of COVID-19 across England and Government Office regions - charts

Data generated 22 January 2021 by PHE Joint Modelling Cell

Prevalence estimates were generated by the Cambridge real-time model on **22 January 2021** using data up to **16 January 2021**.

These estimates are subject to, sometime significant, revision on a weekly basis. The underpinning model relies on death data which is subject to a reporting lag. In the weeks surrounding the implementation and relaxation of restrictions, it often takes a while for the system to settle, to account for the data lag and changes in mobility patterns. Further details on the real-time model can be found here.

Prevalence estimates set against the prevalence boundaries.

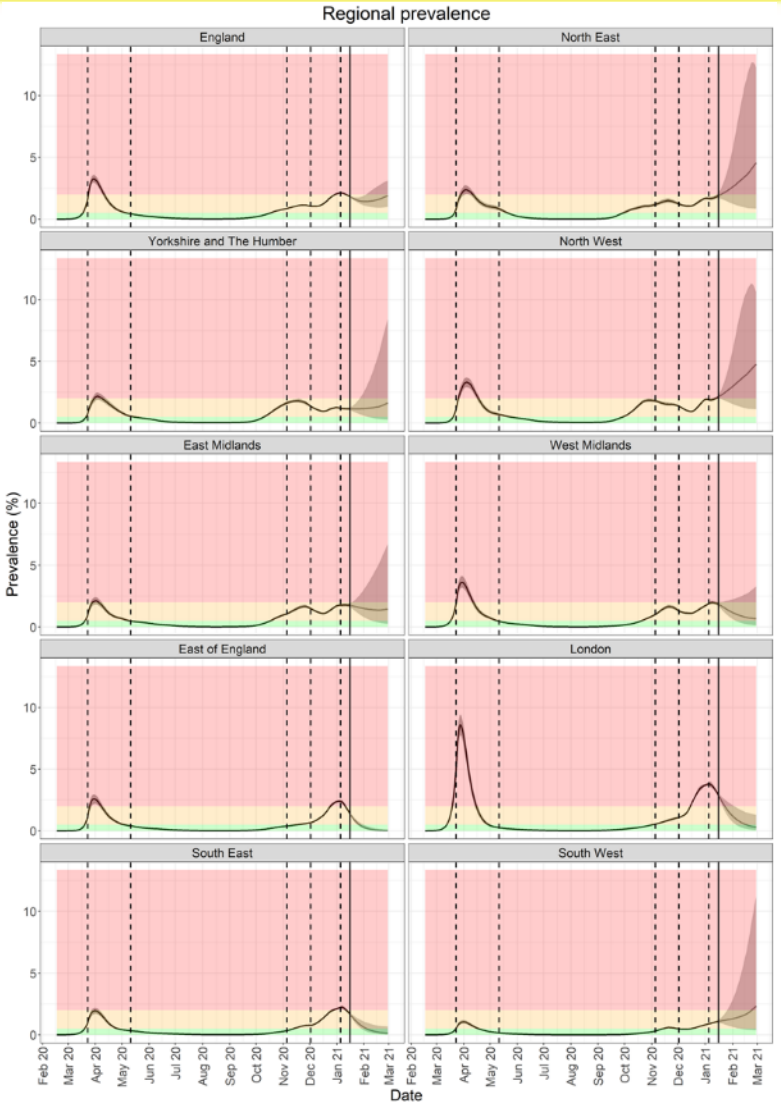
Solid line shows the point prevalence estimates, with the grey boundary covering the 5th to 95th centile range.

The solid vertical line indicates the cut off date for data that are used in the real-time model.

The point prevalence and range are faded after this date, indicating that the results are then projections.

The dashed vertical lines indicate the time at which national measures were implemented.

Please note that weekly estimates are subject to revision.



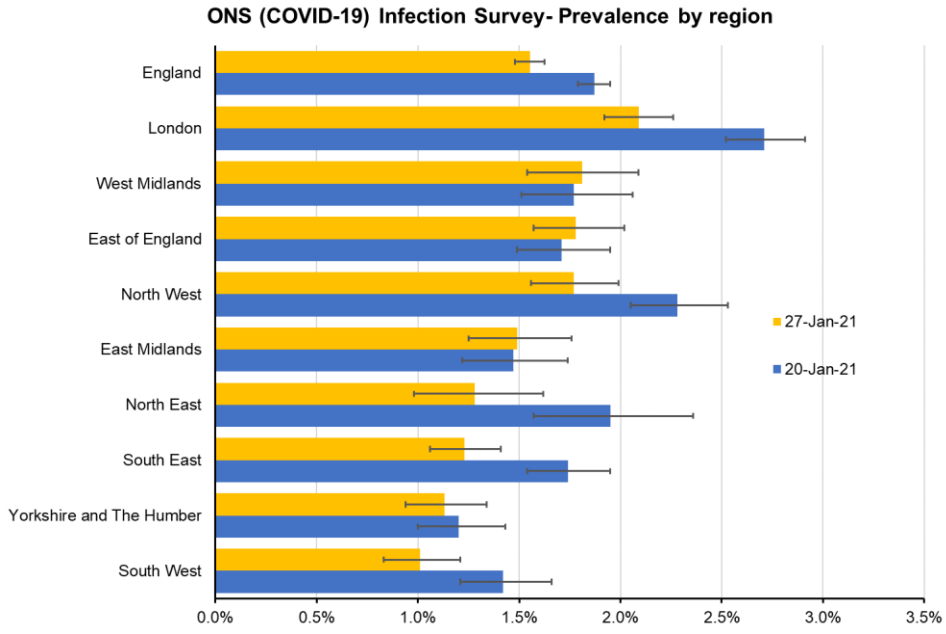
Last update
29th January 2021

Estimated Prevalence by Region

ONS Coronavirus (COVID-19) Infection Survey (5 February)

In England, the percentage of people testing positive for the coronavirus (COVID-19) decreased in the week ending 30 January 2021 but remains high; we estimate that 846,900 within the community population in England had COVID-19 (95% credible interval: 806,500 to 886,700), equating to around 1 in 65 people.

In England, trends in new UK variant compatible positives varied substantially by region. At the national level the percentage of people testing positive with strains of the virus that were either compatible with or clearly not compatible with the new UK variant continued to decrease in the week ending 30 January 2021. The percentage of people testing positive where the virus level is too low for the variant to be identifiable has also decreased in the week ending 30 January 2021.

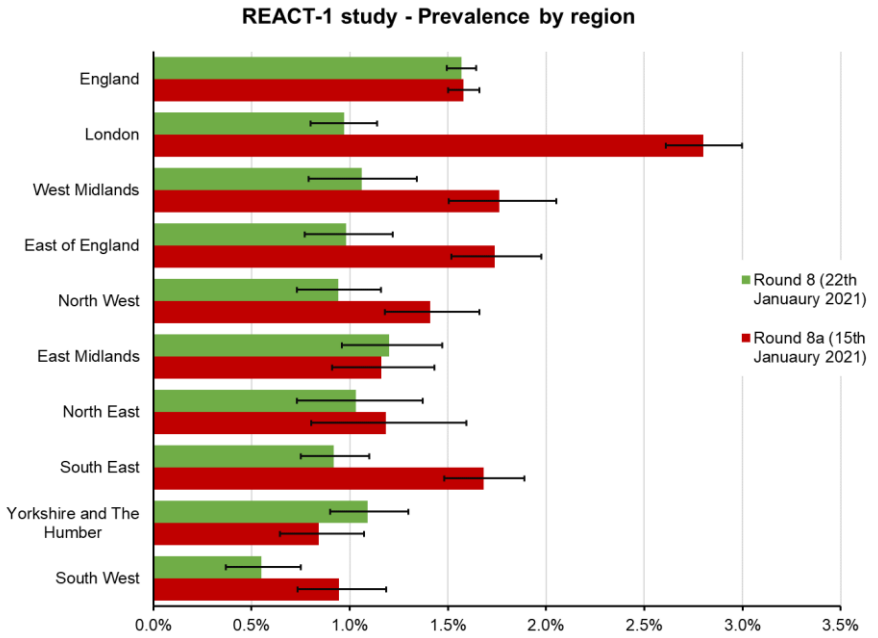


Coronavirus (COVID-19) Infection Survey, UK: 5 February 2021

REACT-1 round 8report (22 January)

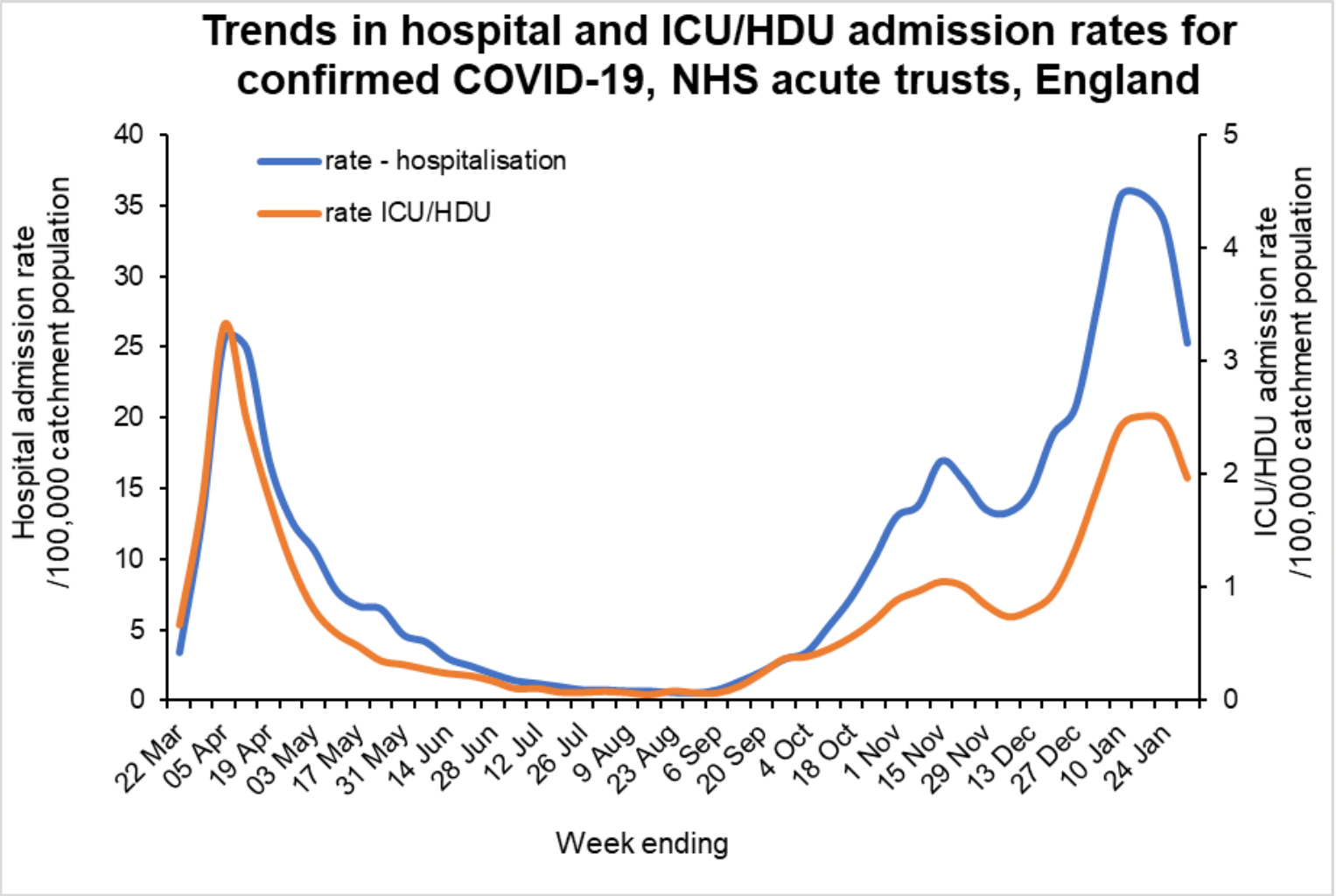
In this large study of SARS-CoV-2 prevalence in the community in England, we show that prevalence in January 2021 nationally was at extremely high levels. This is being reflected in high levels of hospital admissions, intensive care admission and deaths. While there was indication of a possible decline in prevalence toward the end of our study period (up to 22nd January), the levels of infection remain much higher than those seen during lockdown in May 2020 [14], with a shallower downward trajectory.

Regional patterns of prevalence estimated for this round of REACT-1 share key features with regional patterns of PCR-positivity from routine surveillance data. Both data streams appear to be declining in North West, South West, London and South East. Both appear to be either level or increasing in the remaining regions.



REACT-1 round 8 report from 28/01/21 includes some swab tests from the 30th December 2020 onwards. The report also includes some dates up to the 15/01/21 and a small number of samples from subsequent days

Hospitalisations national trends

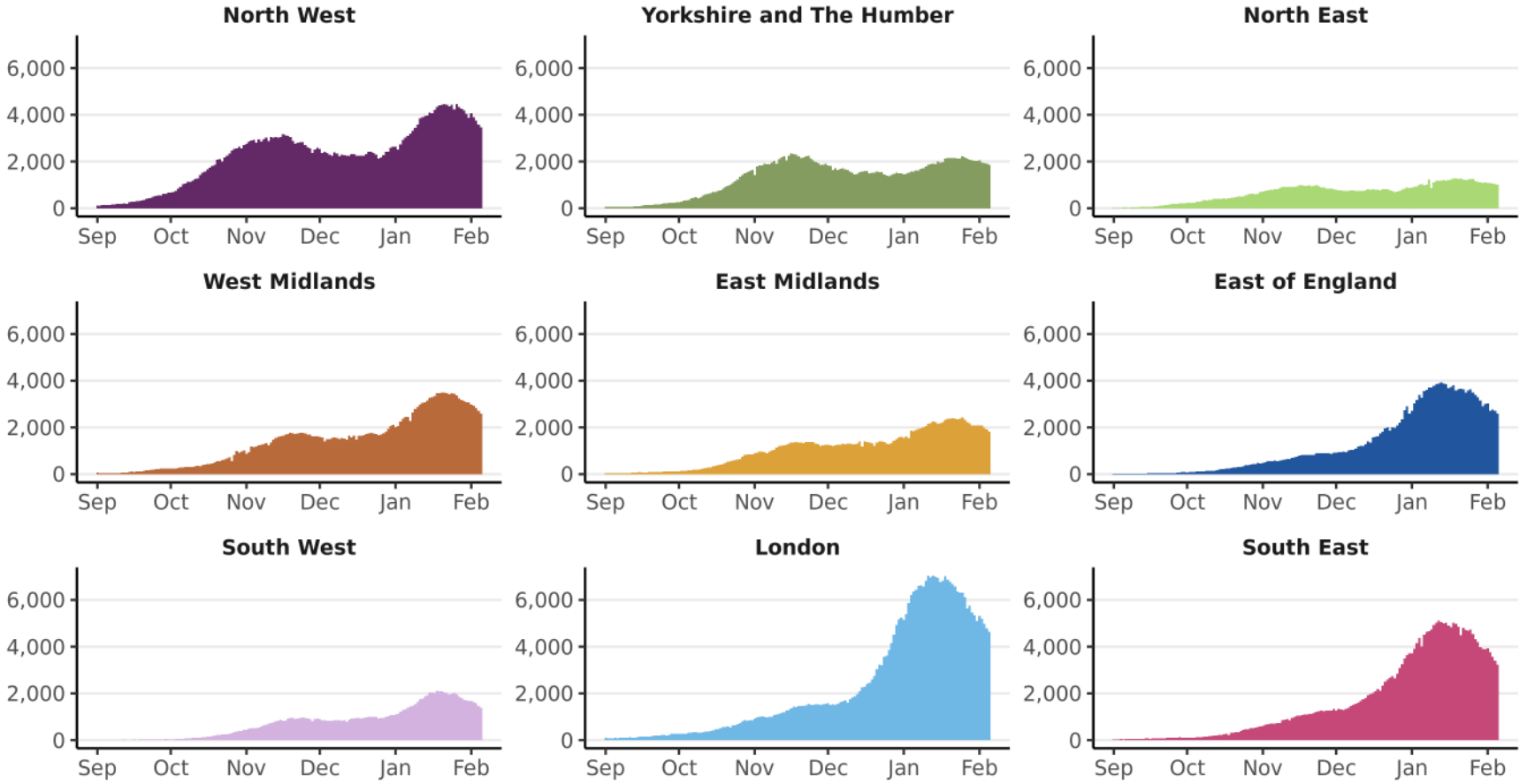


Hospital admissions refers to admissions to all levels of care inclusive of ICU/HDU admissions

Source: PHE Severe Acute Respiratory Infection surveillance web tool - SARI-Watch

Patients in hospital by region

Daily count of confirmed COVID-19 patients in hospital at 8am by region



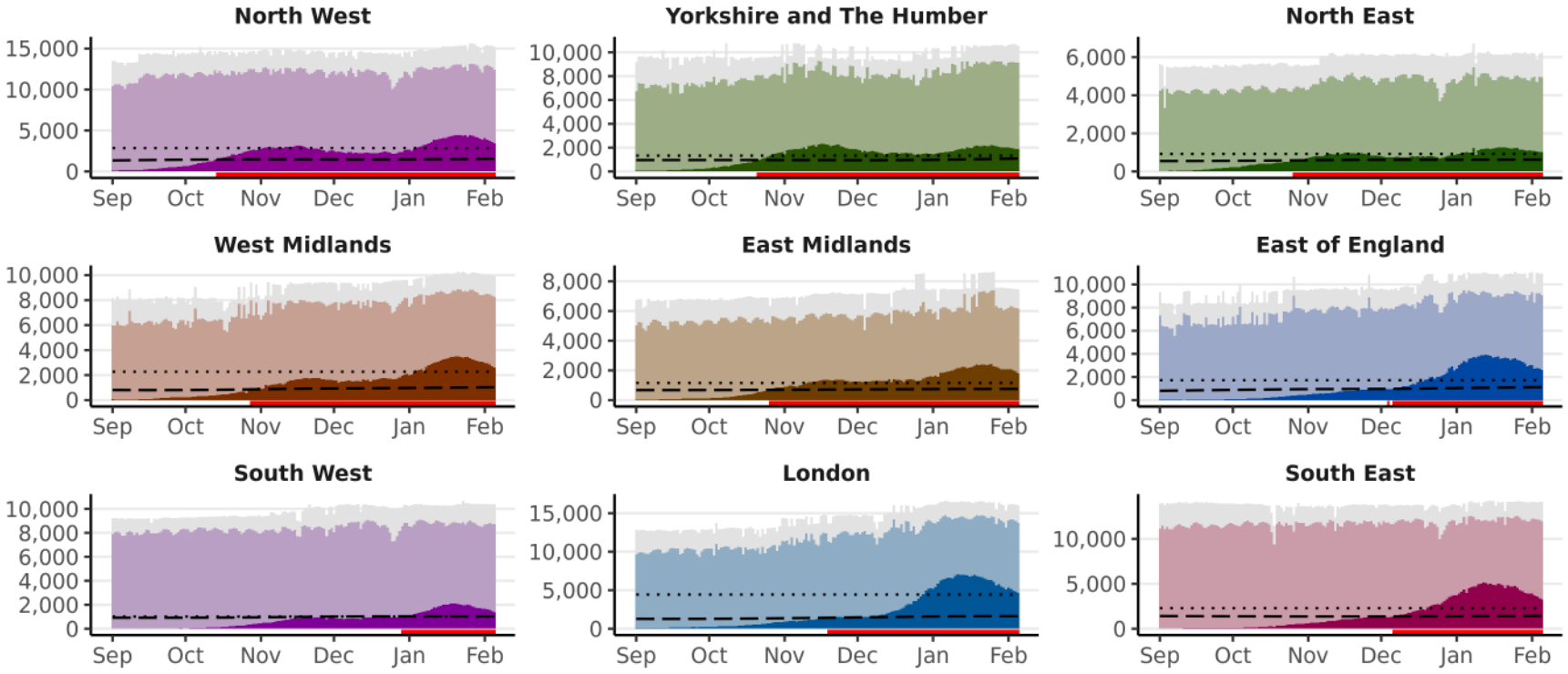
Source: NHS England & Improvement COVID-19 Hospital Activity Data, from 01 September 2020 to 05 February 2021. Produced by Joint Biosecurity Centre.

NOTE: slide shows bed occupancy, not new admissions.

Bed occupancy and capacity by region - general and acute beds

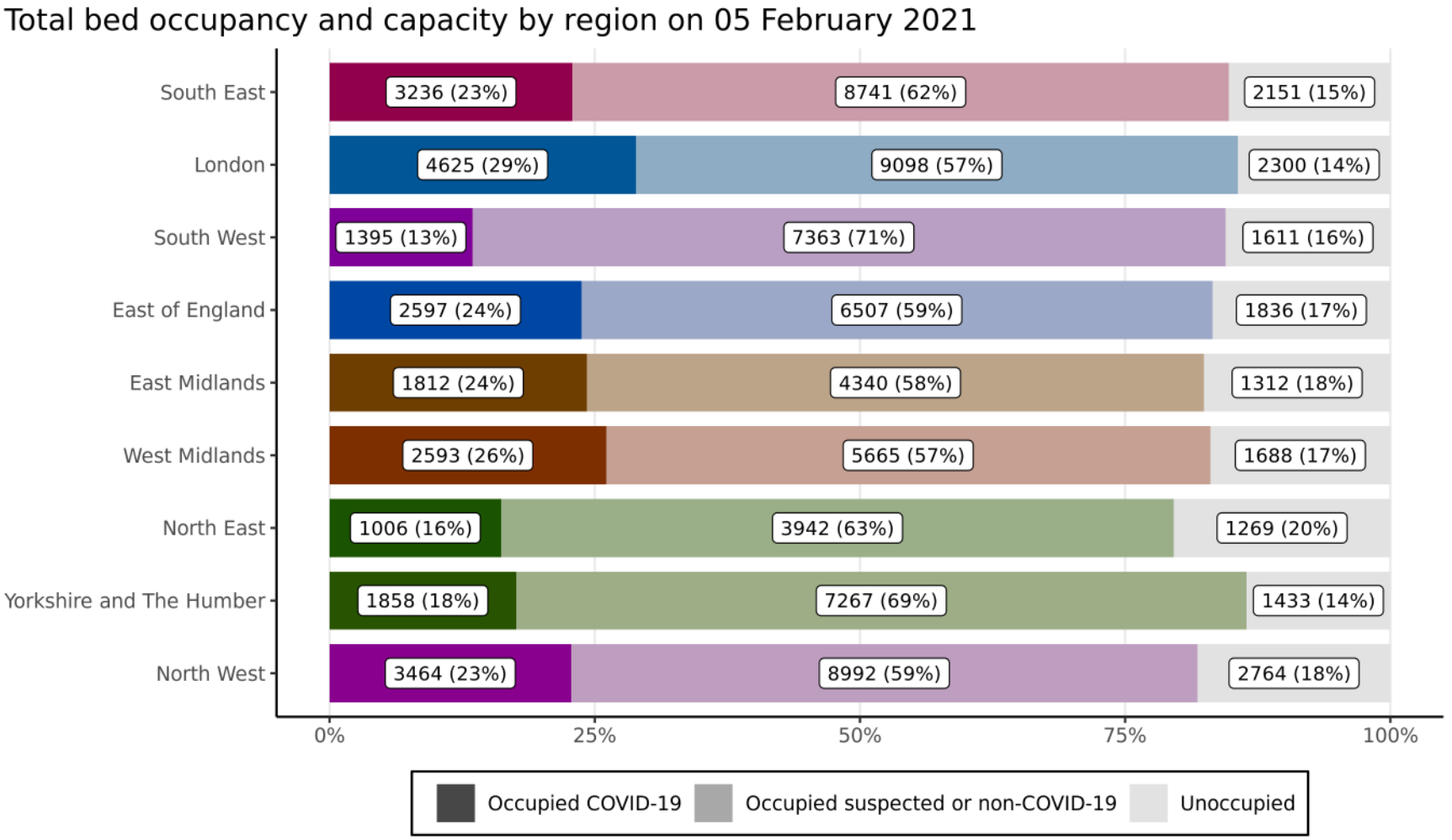
Total bed occupancy and capacity by region

Dotted line shows 'spring peak value', i.e. highest daily COVID-19 bed occupancy recorded between 02 April 2020 and 01 June 2020. Solid bar above axis indicates when daily recorded COVID-19 bed occupancy is above 10% of daily available capacity, which is approximately shown by the dashed line.



Source: NHS England & Improvement COVID-19 Hospital Activity Data, from 02 April 2020 to 05 February 2021. Produced by Joint Biosecurity Centre.

Bed occupancy and capacity by region - general and acute beds

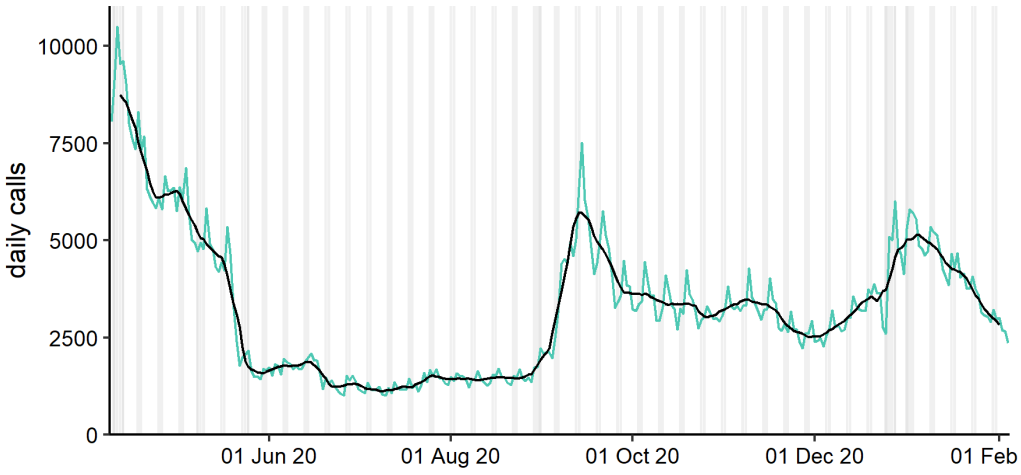


Source: NHS England & Improvement COVID-19 Hospital Activity Data. Produced by Joint Biosecurity Centre.

NHS 111 ‘potential COVID-19’ calls

Trends in daily NHS 111 ‘potential COVID-19’ calls, national, PHE Centre and by age (to 4 Feb)

potential covid-19 09/04/2020 - 04/02/2021

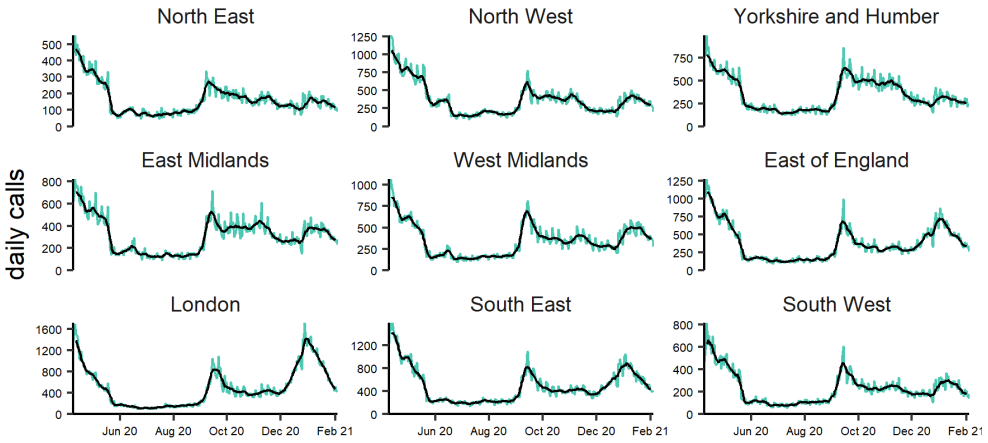


Black line is 7 day moving average adjusted for bank holidays. Grey columns show weekends and bank holidays.

NHS 111 ‘potential COVID-19’ calls

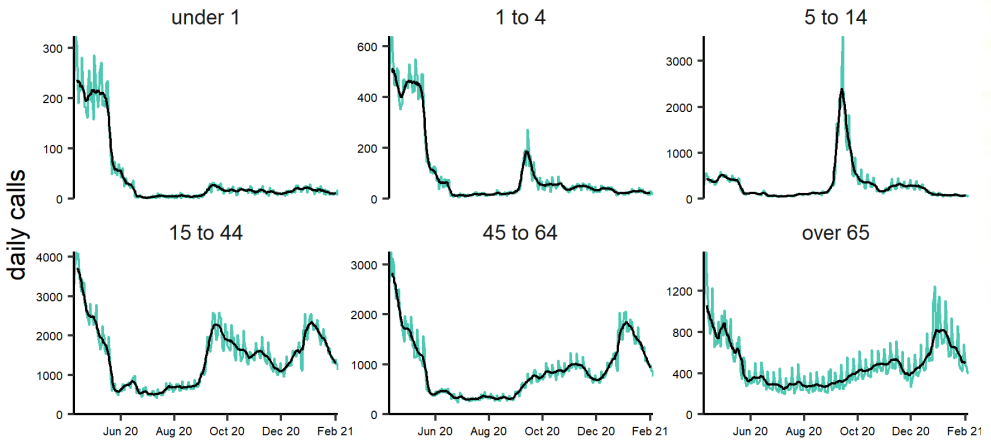
- These data are based on ‘potential COVID-19’ symptoms reported by callers
- These data are not based on outcomes of tests for coronavirus
- Charts should be used to monitor trends (not the actual number of people symptomatic in the community)
- Daily and 7-day moving averages are shown in all charts
- PHE Centre charts should only be compared for trend, not number of calls (PHE Centre population size varies). Please note the different scales on these charts.

potential covid-19 by PHE Centre 09/04/2020 - 04/02/2021



NOTE: SCALES MAY VARY BY CENTRE TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays.

potential covid-19 by age group (years) 09/04/2020 - 04/02/2021

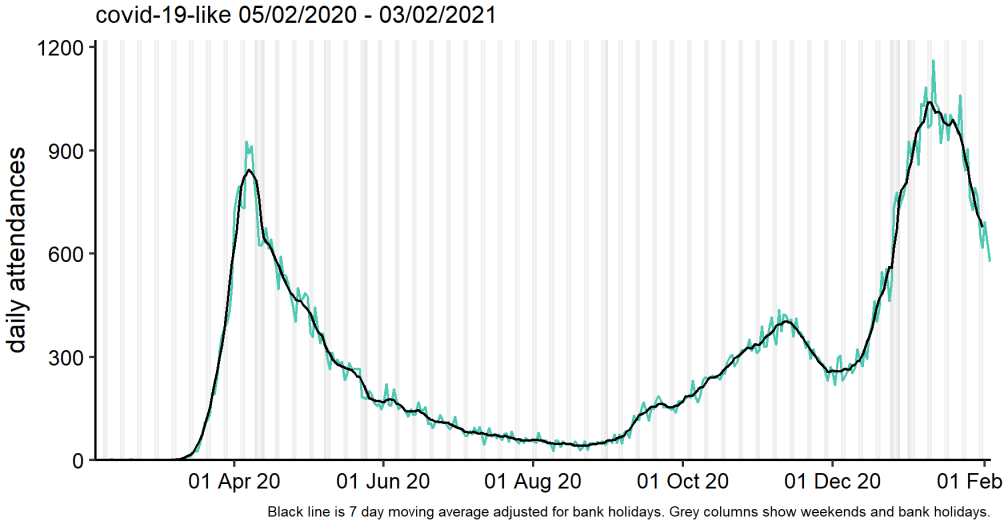


NOTE: SCALES VARY BY AGE GROUP TO ENABLE TREND COMPARISON. Black line is 7 day moving average adjusted for bank holidays.

Further information and weekly NHS 111 reports containing potential COVID-19 call and online assessment surveillance data is available from the PHE Remote Health Advice bulletin.

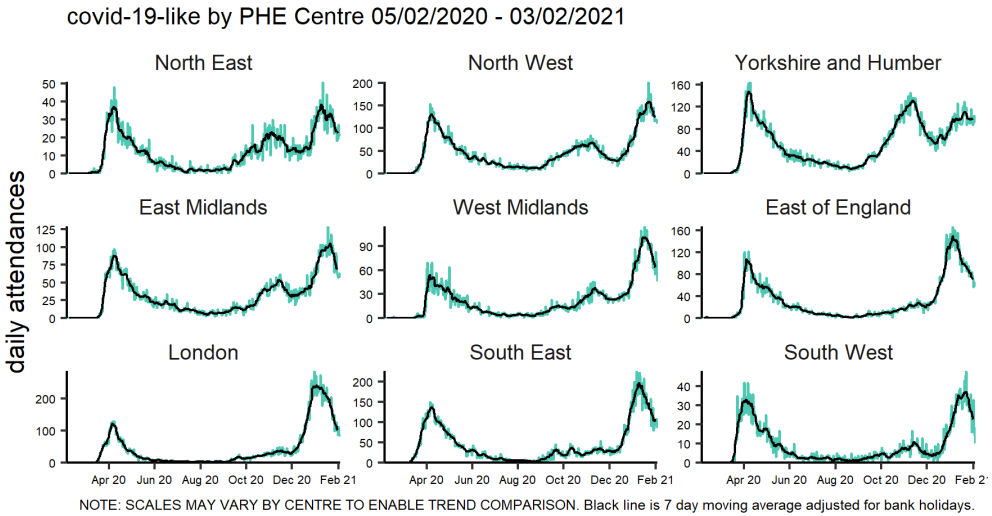
Emergency Department Syndromic Surveillance System COVID-19-like attendances

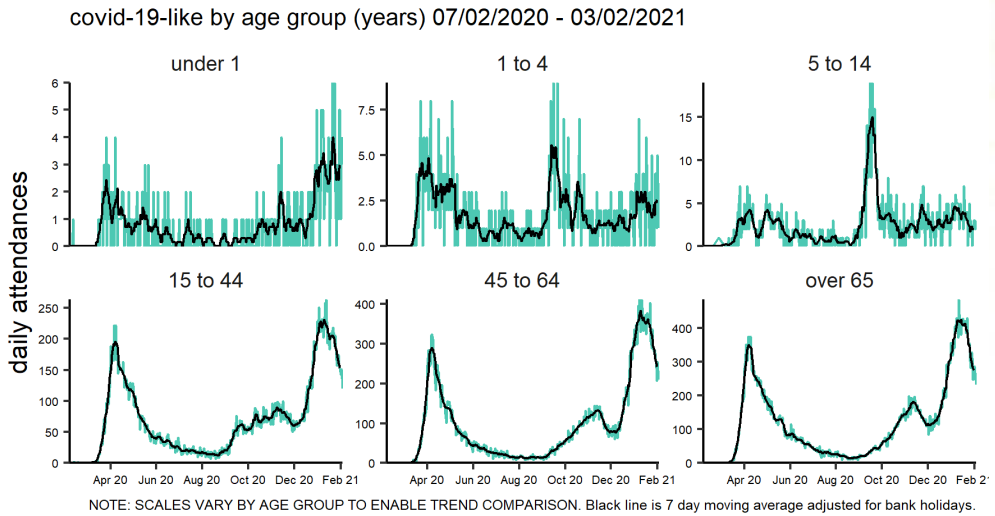
Trends in daily ED COVID-19-like attendances, national, PHE Centre and by age (to 3 Feb)



Emergency Department Syndromic Surveillance System (EDSSS) COVID-19-like attendances.

- EDs are included in surveillance based on the speed and frequency of reporting in the most recent 7 days
  - EDs included can change on a day by day basis
- These data are based on COVID-19-like primary diagnoses (patients may have multiple diagnoses listed)
- These data are not based on outcomes of tests for coronavirus
- Charts are an underestimation of the actual number of COVID-19-like attendances (as alternative diagnoses may have been entered)
- Charts should be used to monitor trends
- PHE Centre charts should only be compared for trend, not number of attendances (PHE Centre population size and number of EDs included varies)
  - Please note the different scales on the charts.
- Daily and 7-day moving averages are shown in all charts



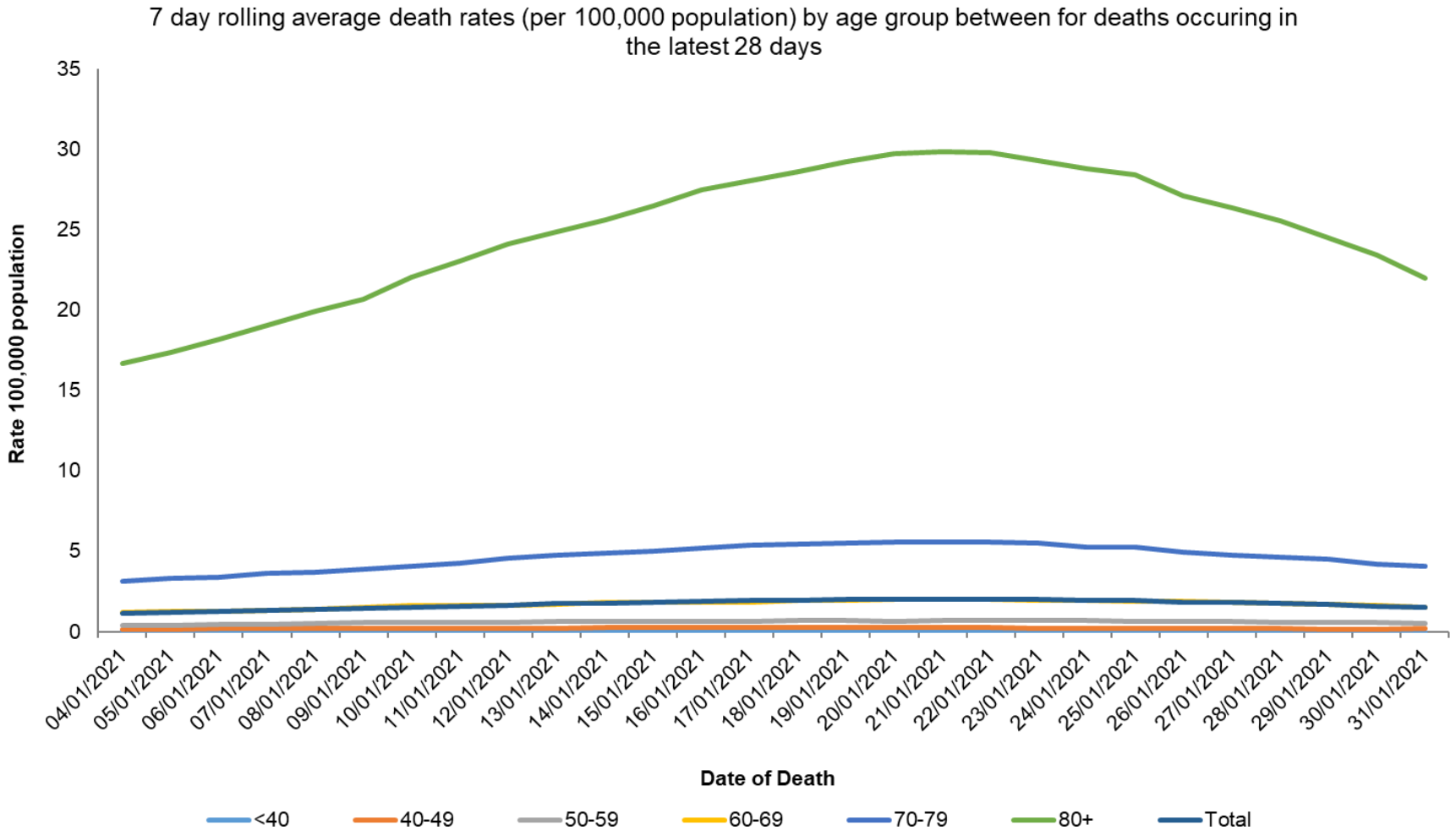


Further information and weekly EDSSS reports containing COVID-19-like attendance surveillance data is available from the PHE EDSSS bulletin.

Care homes
report changes from 17 November 2020

- **From the 17 November 2020, this report now includes all incidents** (HPZone situation types exposure and issue in addition to ‘outbreak’ and ‘cluster’) in care homes reported to PHE local teams. This is necessitated by a change in recording practice by PHE local teams. In addition the analysis now matches reported incidents to positive laboratory test results in order to show the number of incidents with confirmed COVID-19 in residents.
- Some outbreaks are recorded in HPZone as being in care homes when in fact they are in another similar institution. The report **now only includes those we recognise are in CQC-registered care homes;** this is now possible due to changes in data entry at a local level

Mortality rate per 100,000 population by age group (seven day rolling average) for deaths within 28 days of first positive specimen

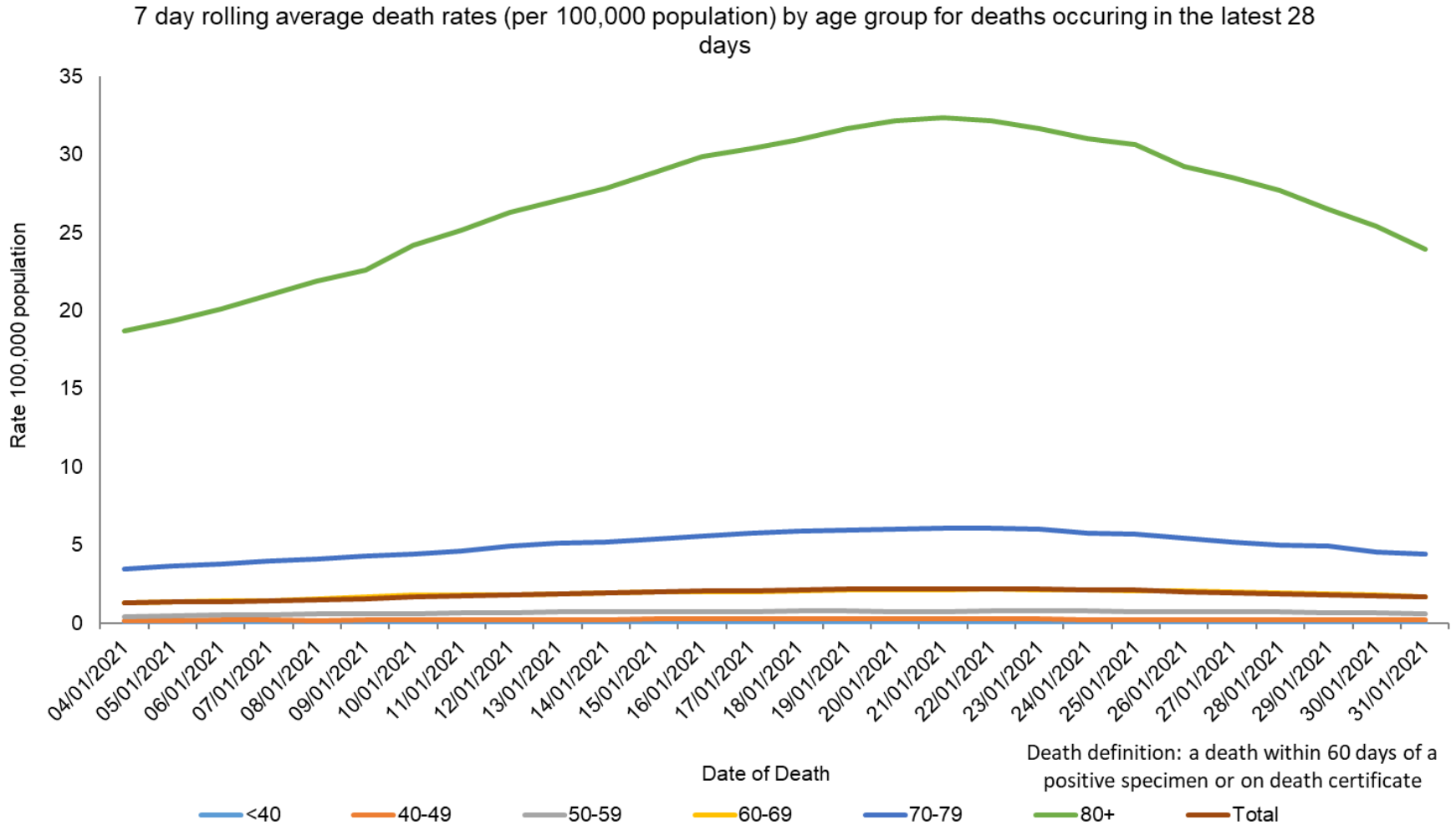


*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

Death definition: a death within 28 days of a positive specimen

Prepared by PHE Epidemiology Cell

Mortality rate per 100,000 population by age group (seven day rolling average) for deaths within 60 days of first positive specimen or died more than 60 days after first positive specimen and COVID-19 is mentioned on the death certificate

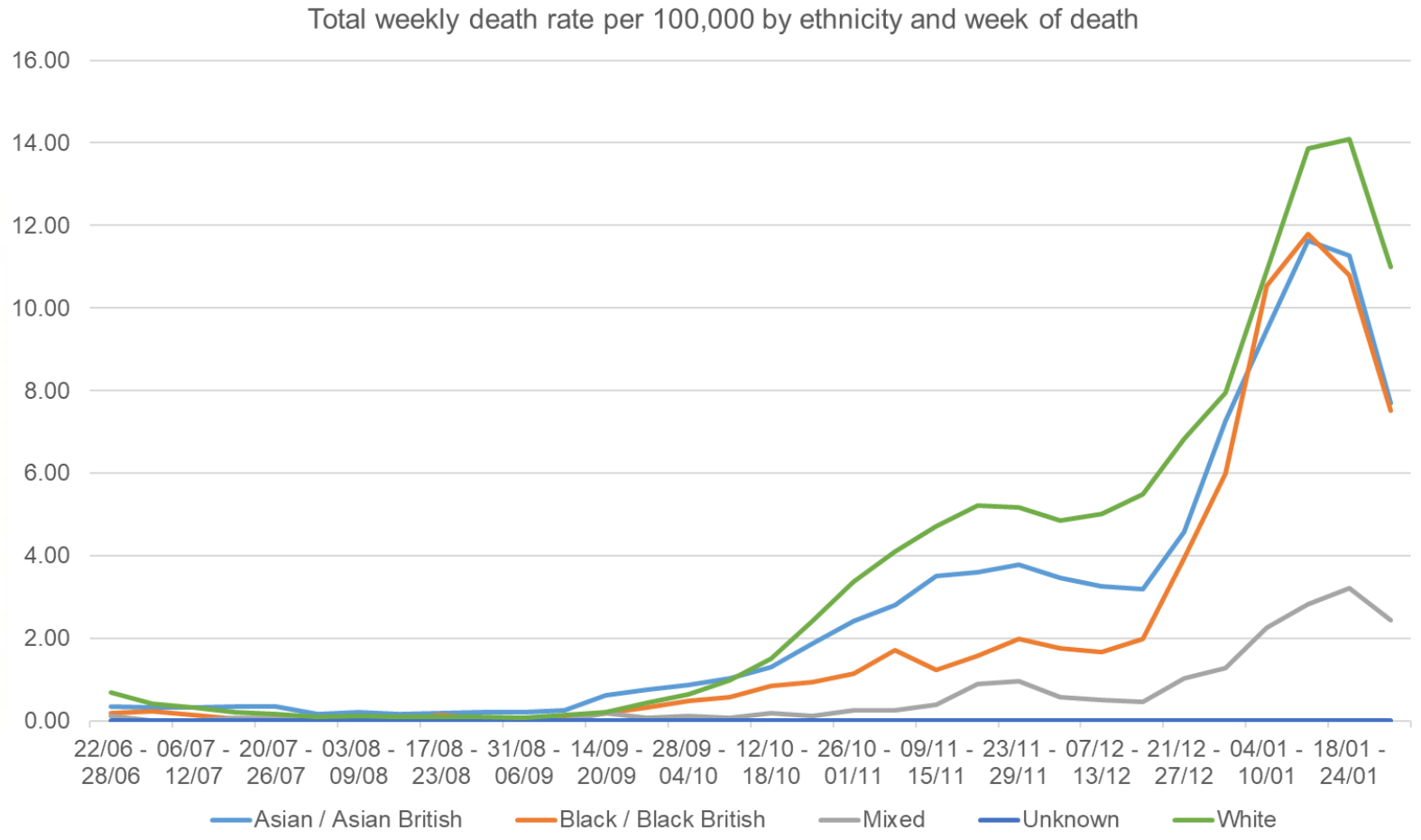


*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

Death definition: a death within 60 days of a positive specimen or on death certificate

Prepared by PHE Epidemiology Cell

Mortality rate per 100,000 population by ethnicity (seven day rolling average) for deaths within 28 days of first positive specimen



*Excludes the Other ethnicity group.

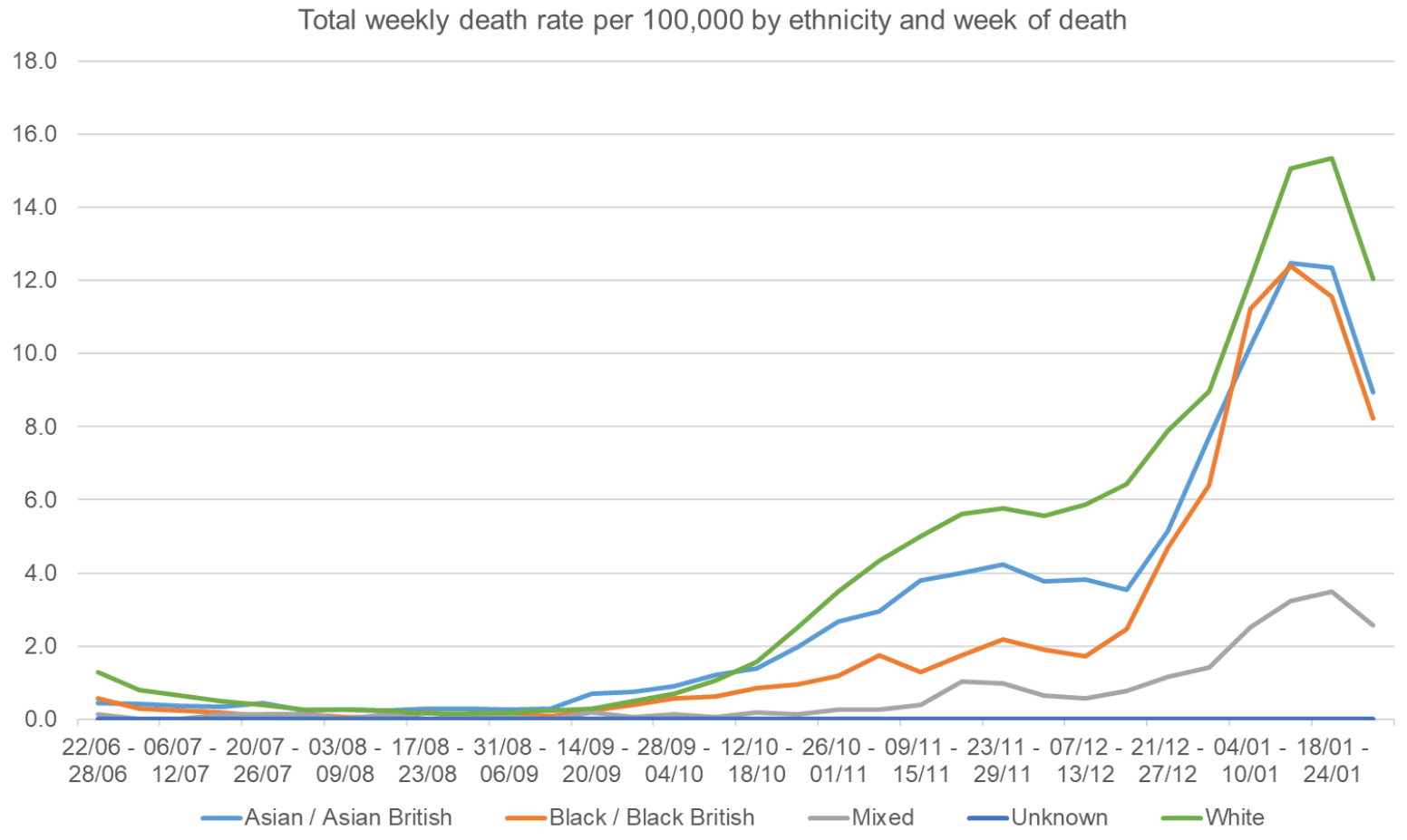
Death definition: a death within 28 days of a positive specimen

*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

Death definition: a death within 28 days of a positive specimen

Prepared by PHE Epidemiology Cell

Mortality rate per 100,000 population by ethnicity (seven day rolling average) for deaths within 60 days of first positive specimen or died more than 60 days after first positive specimen and COVID-19 is mentioned on the death certificate



*Excludes the Other ethnicity group.

Death definition: a death within 60 days of a positive specimen or on death certificate

*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

Death definition: a death within 60 days of a positive specimen or on death certificate

Prepared by PHE Epidemiology Cell