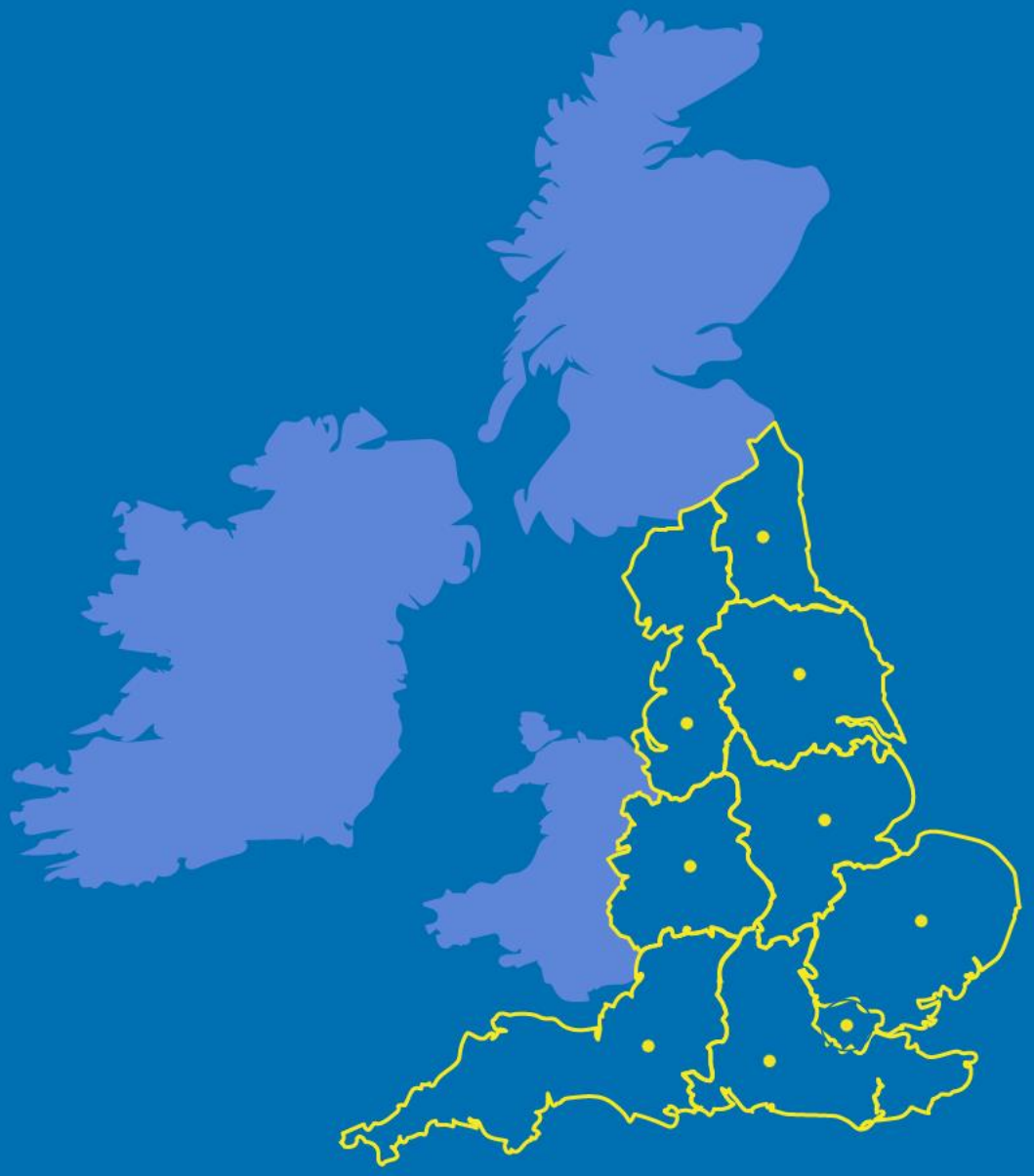
Public Health England

Joint Biosecurity Centre

CORONAVIRUS SITUATIONAL AWARENESS

Summary

date: 12 January 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.

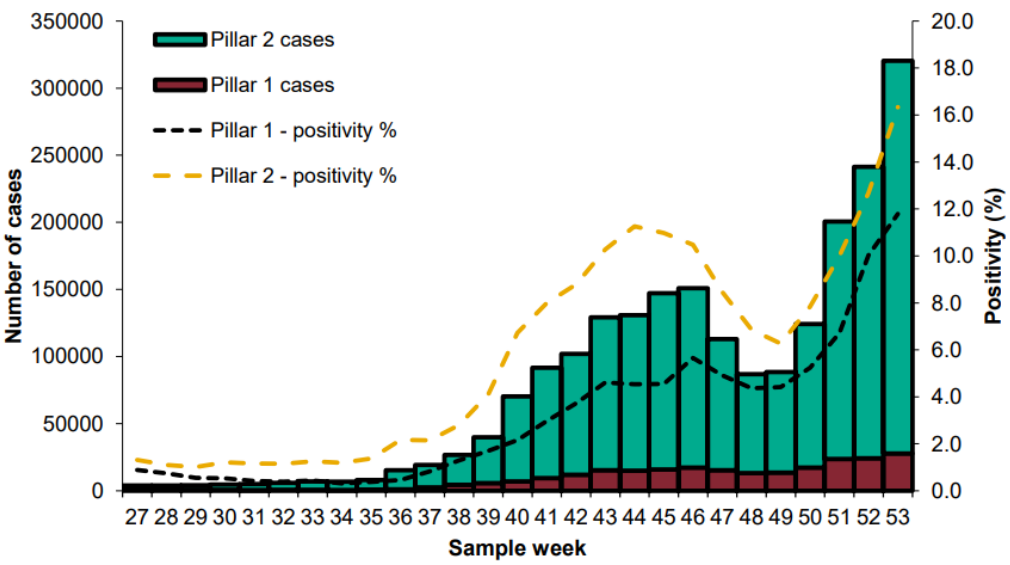
Throughout the SAR:
Lower tier local authorities is used to represent local authority districts, unitary authorities, metropolitan district and London boroughs,
Upper tier local authorities is used to represent counties, metropolitan counties, London boroughs and unitary authorities

National context
(From 7 January 2021 Week 1 Report)

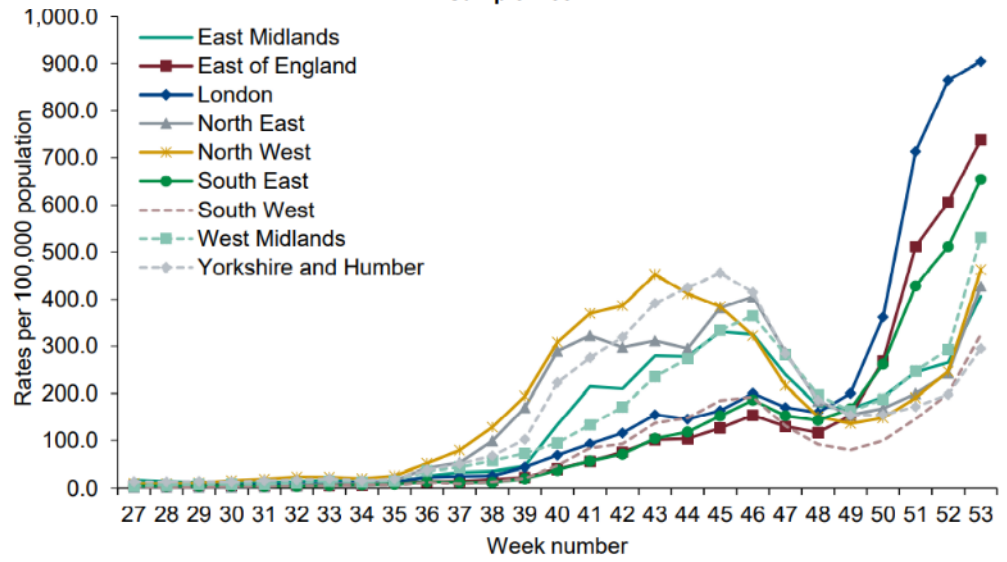
Overall case numbers and positivity in both Pillar 1 and 2 continued to increase in week 53. The highest case rates were seen in the 30 to 39 and 20 to 29 year olds in Pillars 1 and 2. Increases in positivity rates were noted across all age groups. Cases rates remain highest in London, East of England and South East regions, with increases noted in all regions.

As of 09:00 on 5 January 2021, a total of 2,394,923 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.



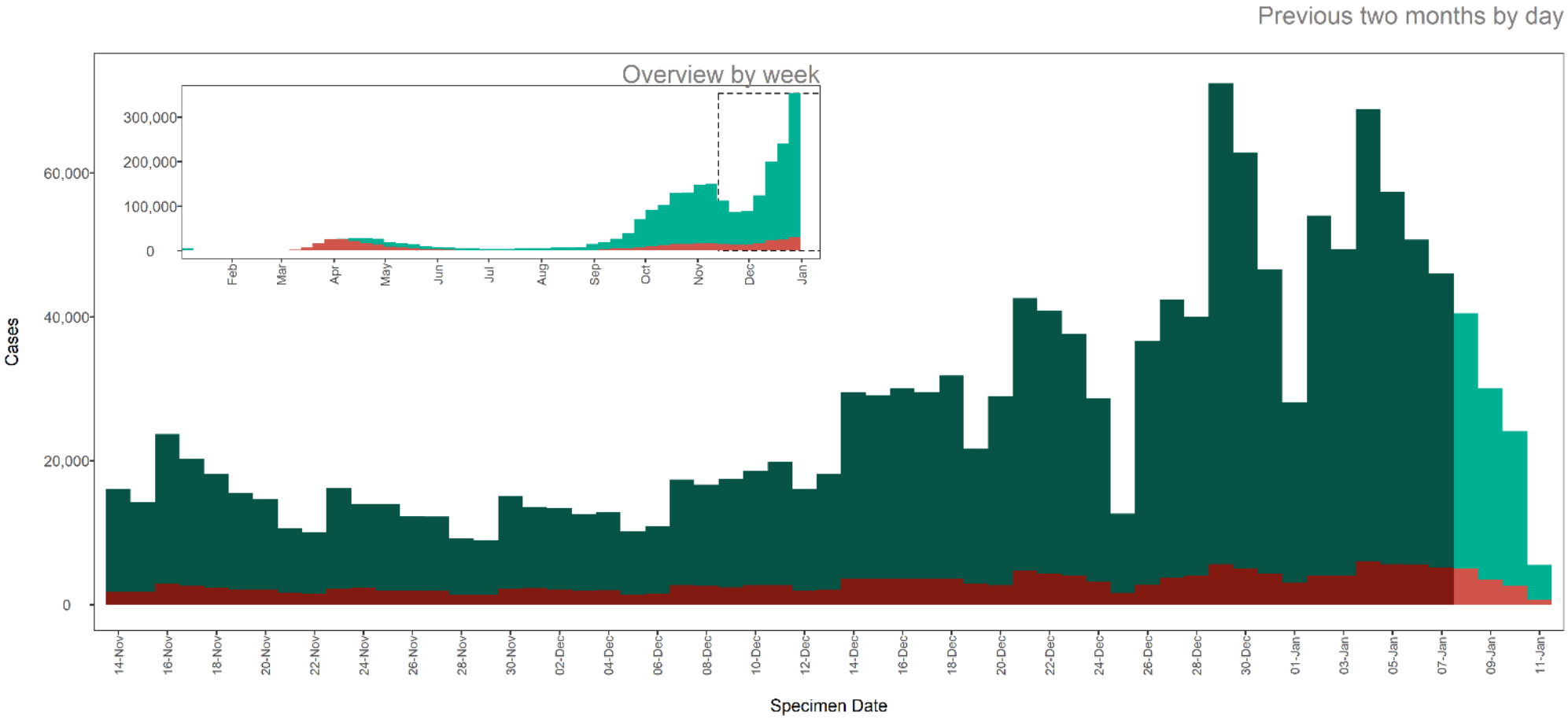
Weekly laboratory confirmed COVID-19 case rates per 100,000 population tested under Pillar 1 and Pillar 2, by PHE Centres and sample week



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

National context

England confirmed cases - epidemic curve*

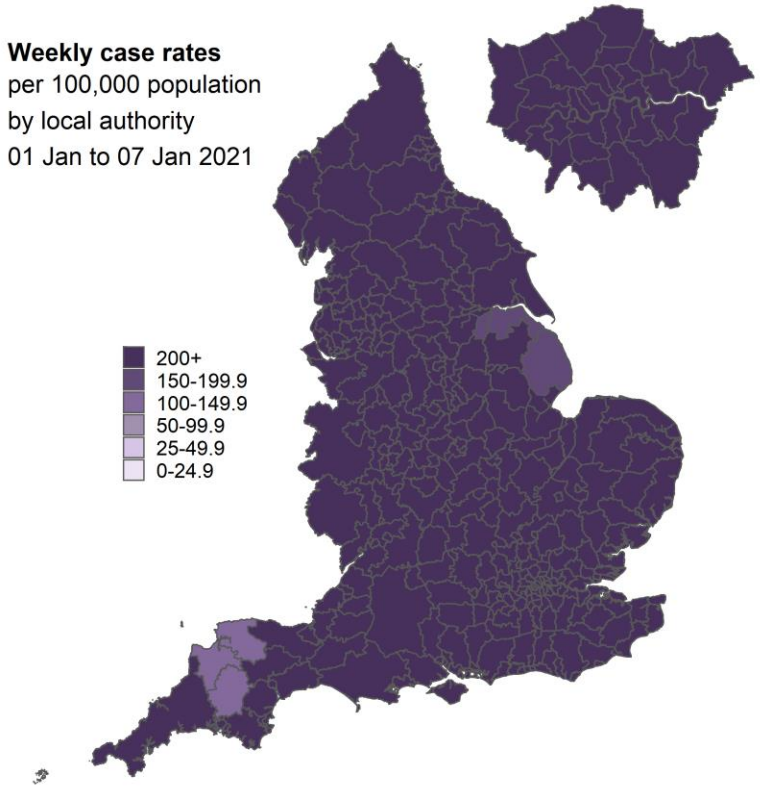


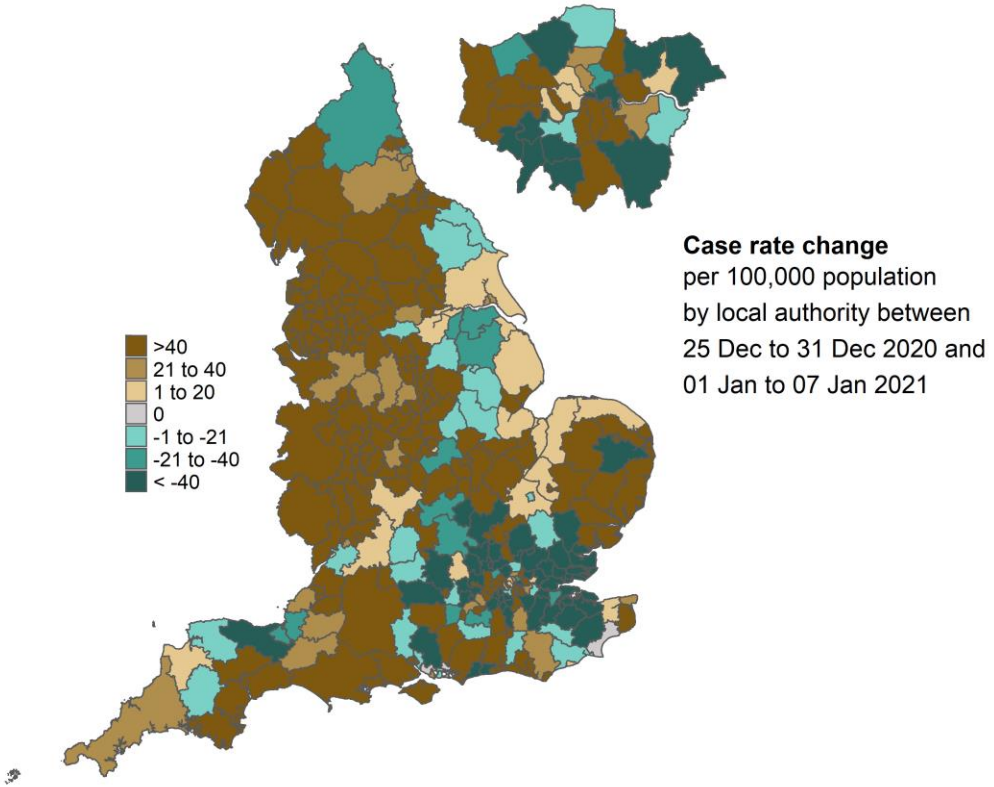
*Bars shaded in light red and light green are provisional.
Figures are expected to rise as results are received for additional samples tested during this period.
Inset epi curve is based on weekly reports from date of first case diagnosed.
Main epi curve shows daily cases truncated to show the previous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

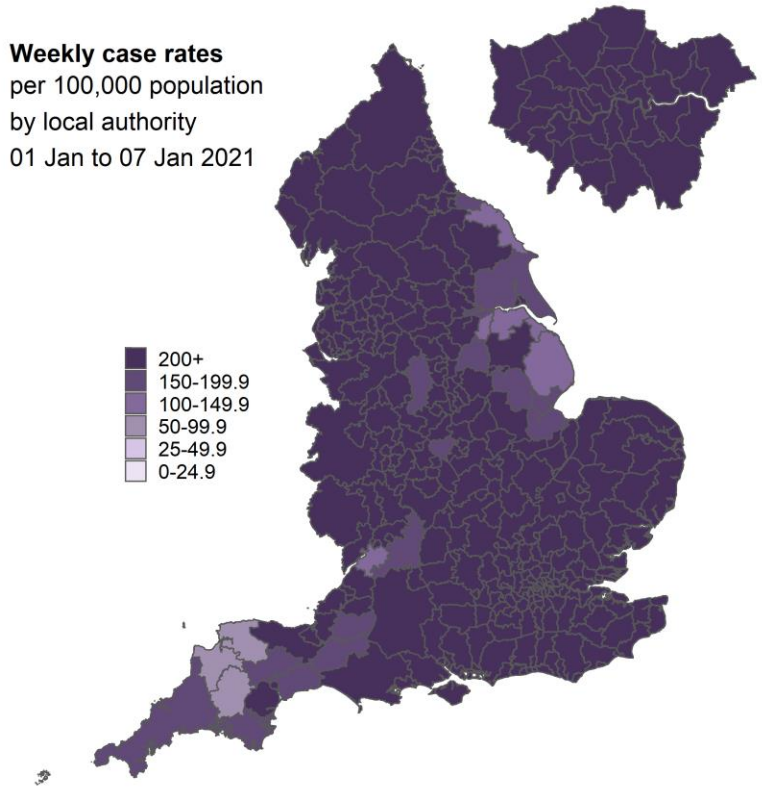


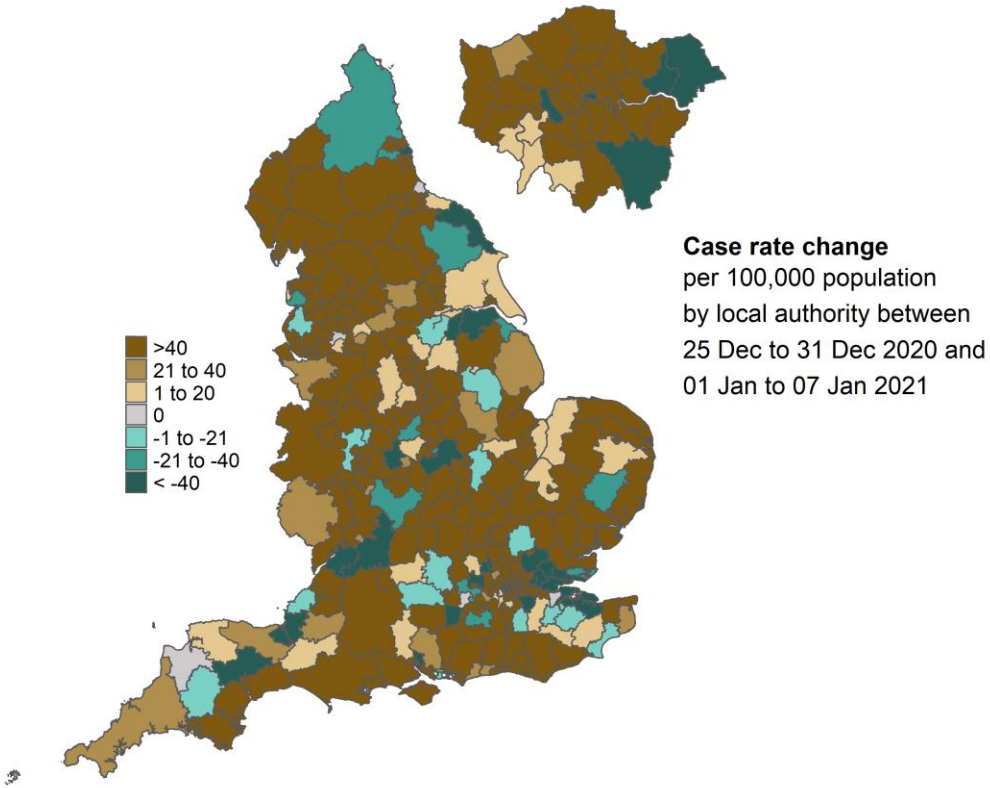


Data from SGSS; Pillar 1 and 2 testing. Figure by Outbreak Surveillance Team, Public Health England.

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

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





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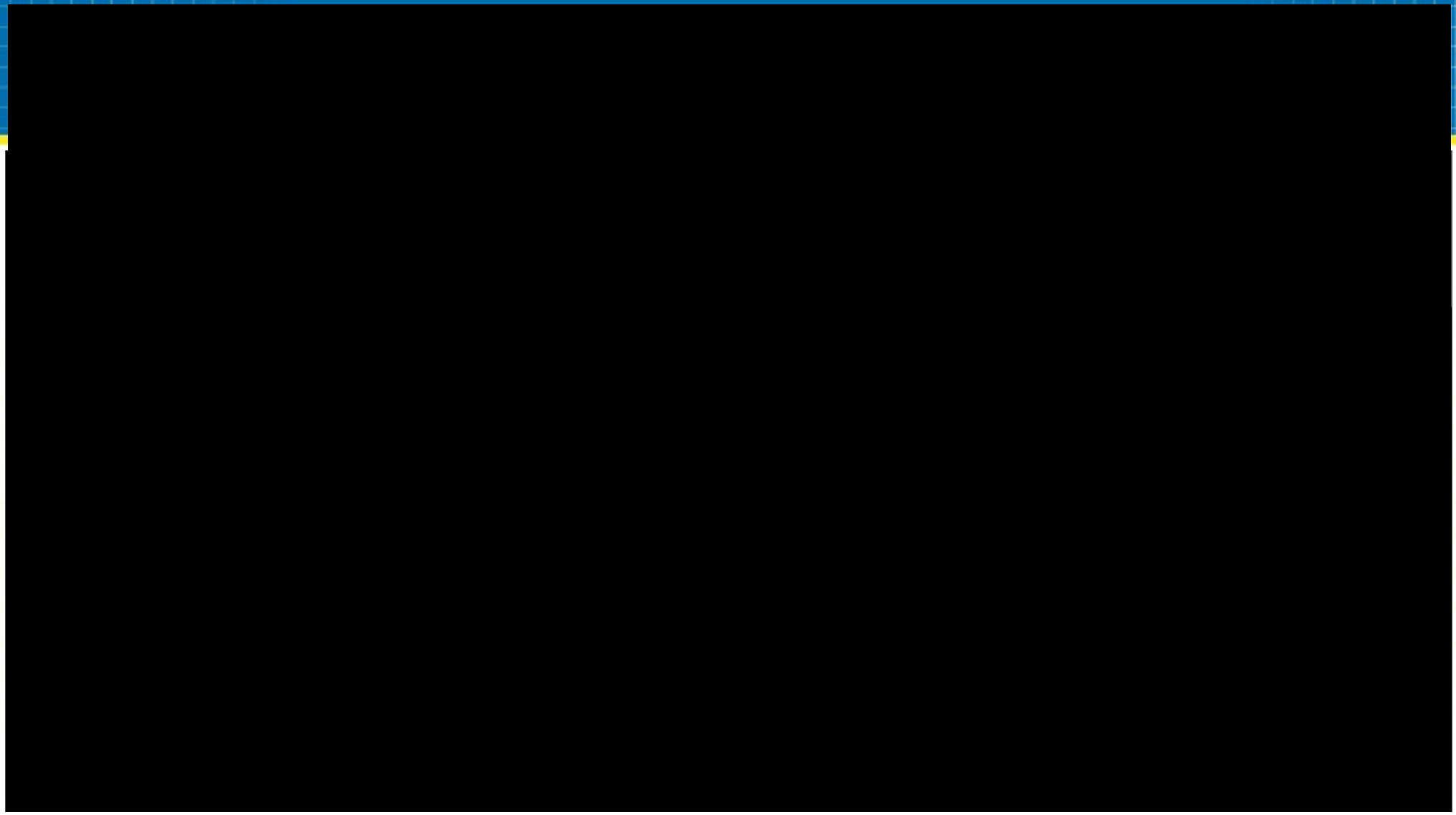
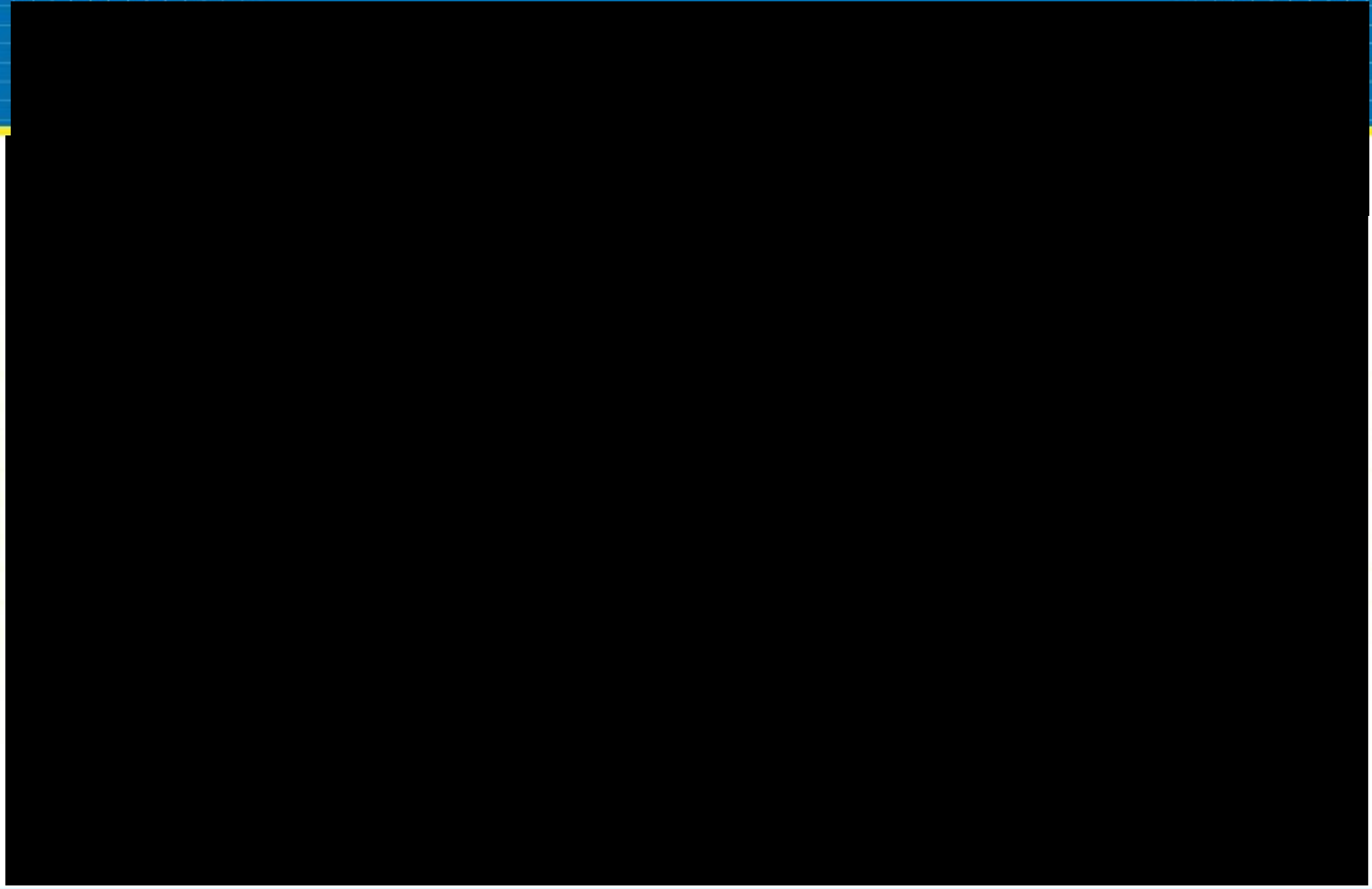
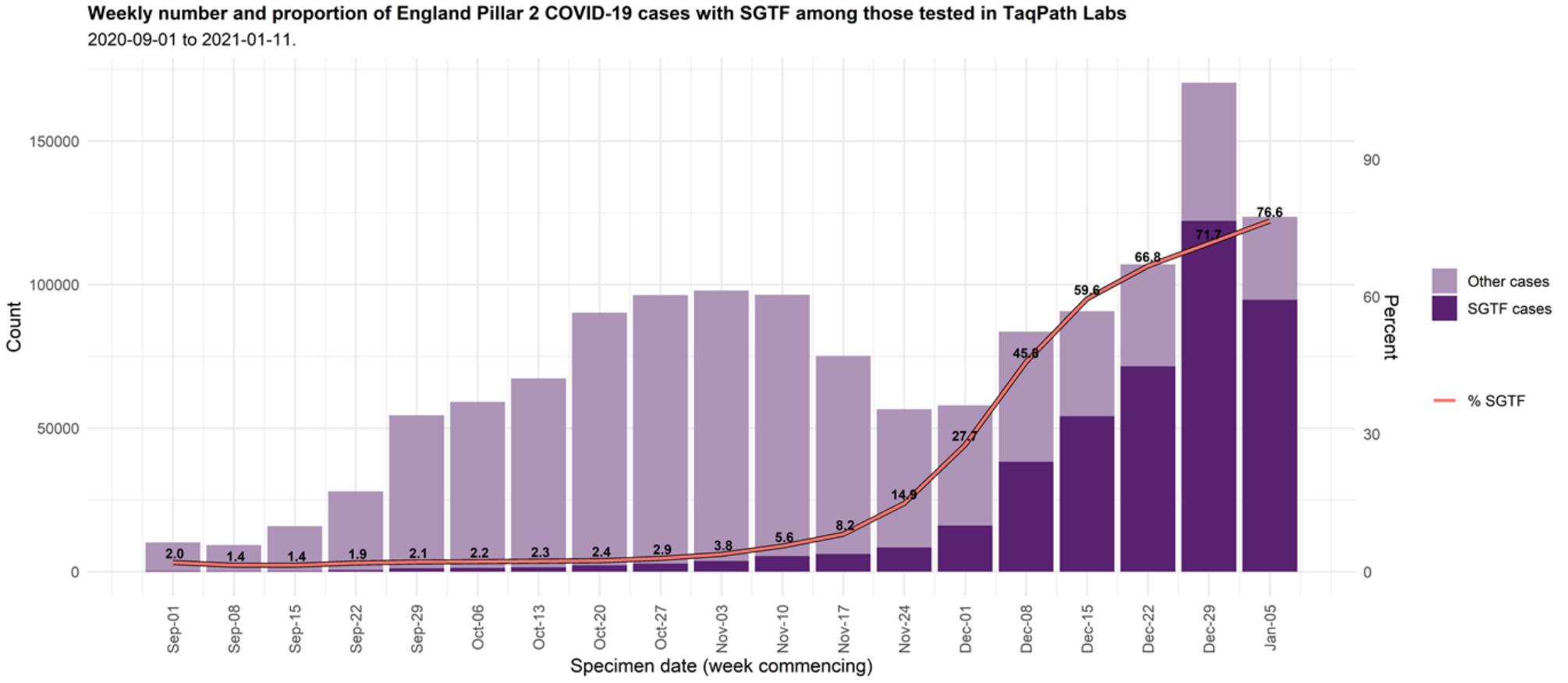




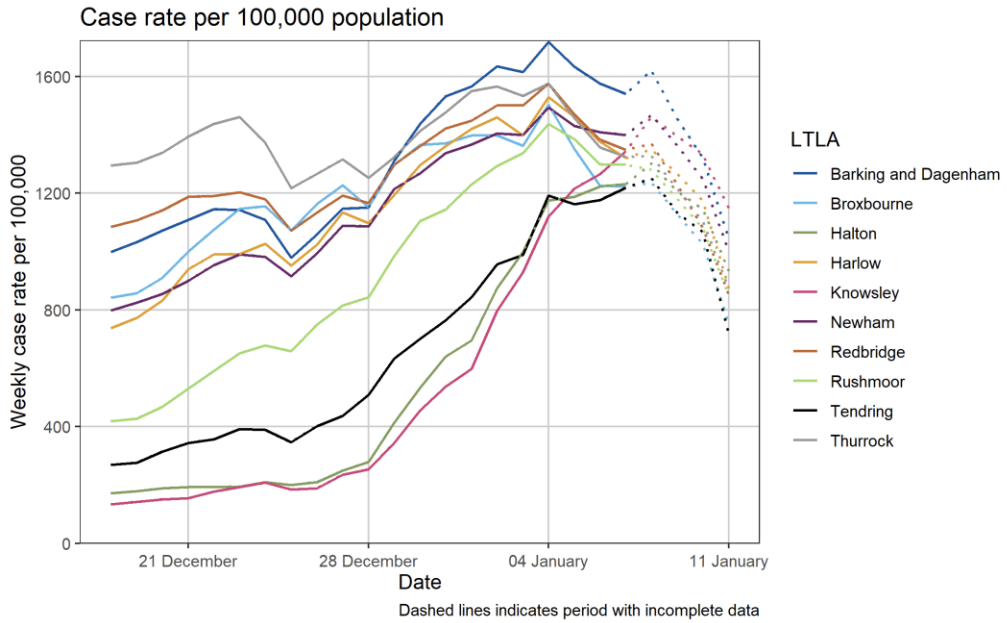
Tracking SARS-COV-2 S-Gene Target Failure

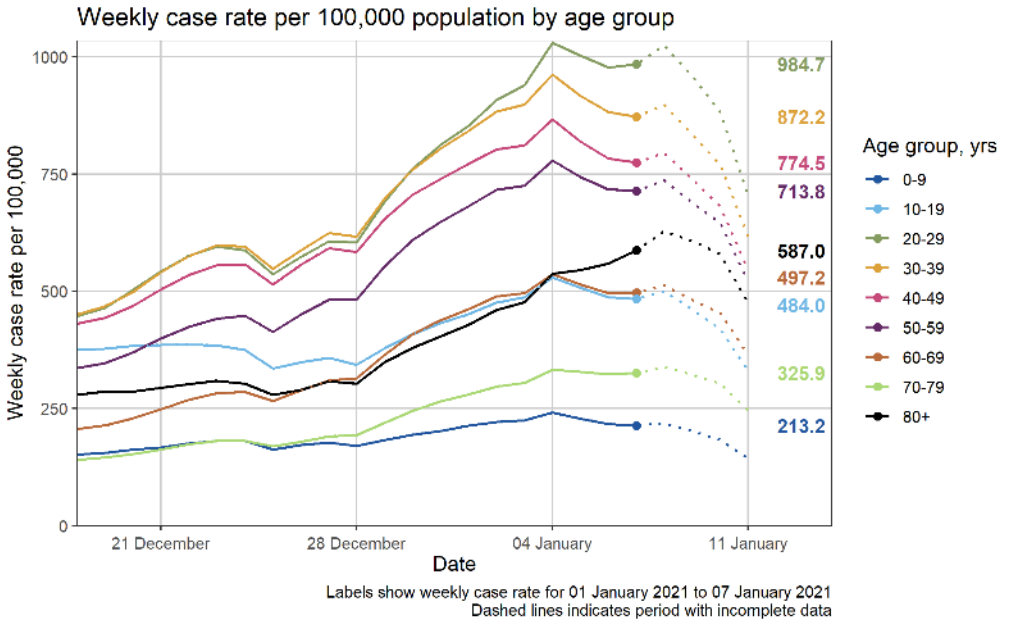
– weekly SGTF case numbers over time



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

Case rate across both pillars 1 and 2 (weekly)
Data up to the 7 January 2021





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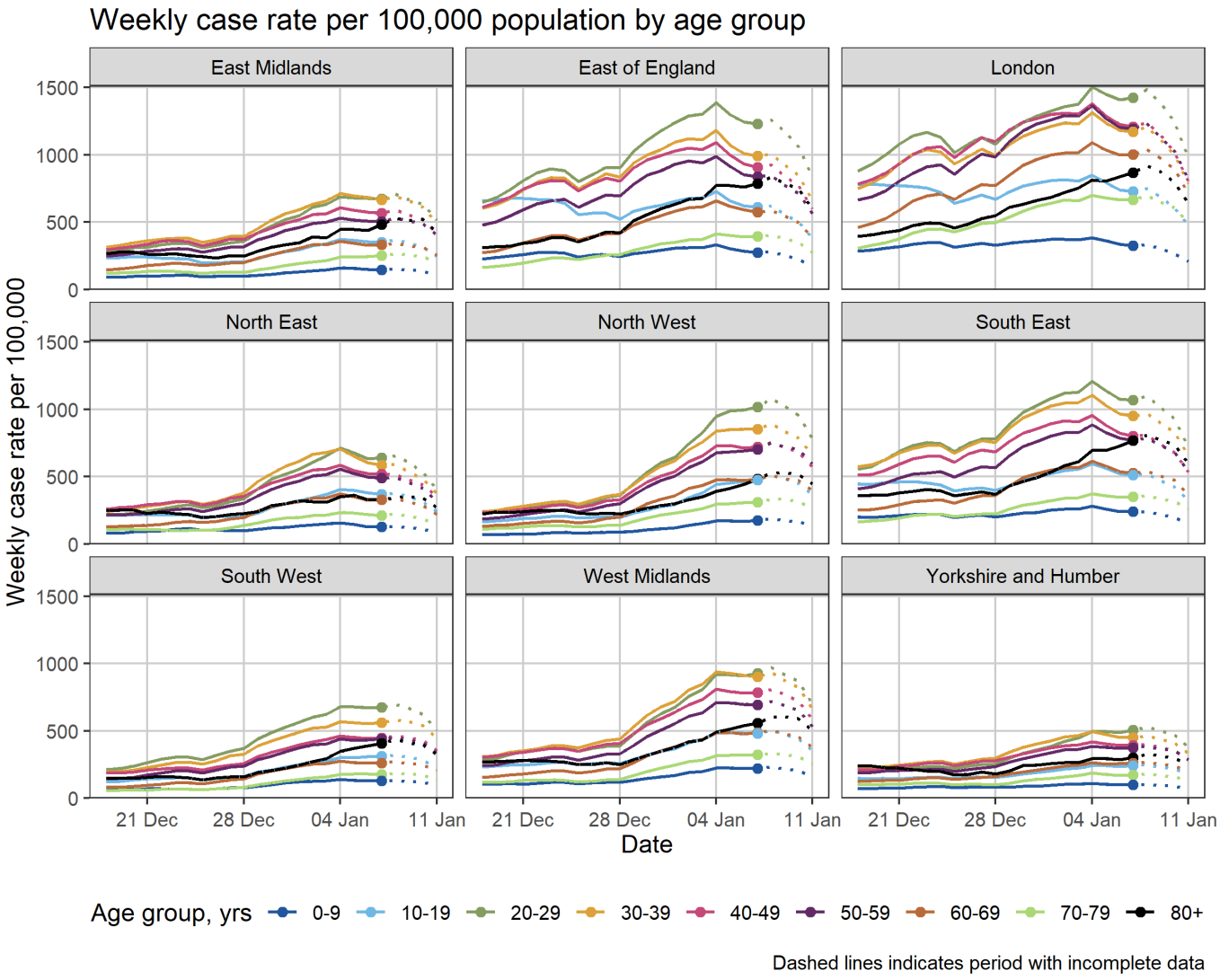

Percentage of individuals testing positive across both pillars 1 and 2 (weekly)
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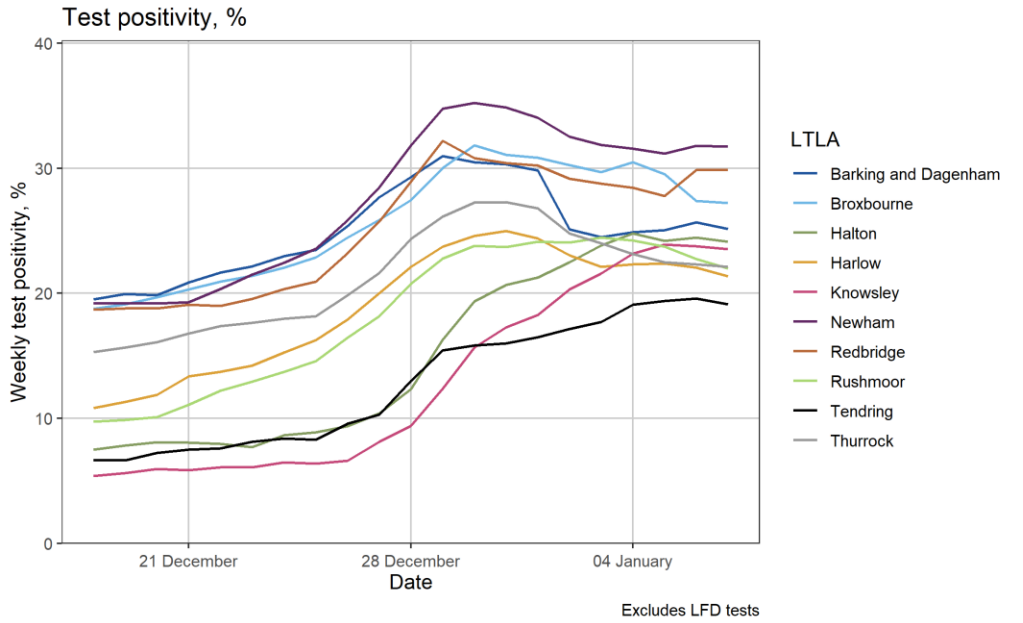

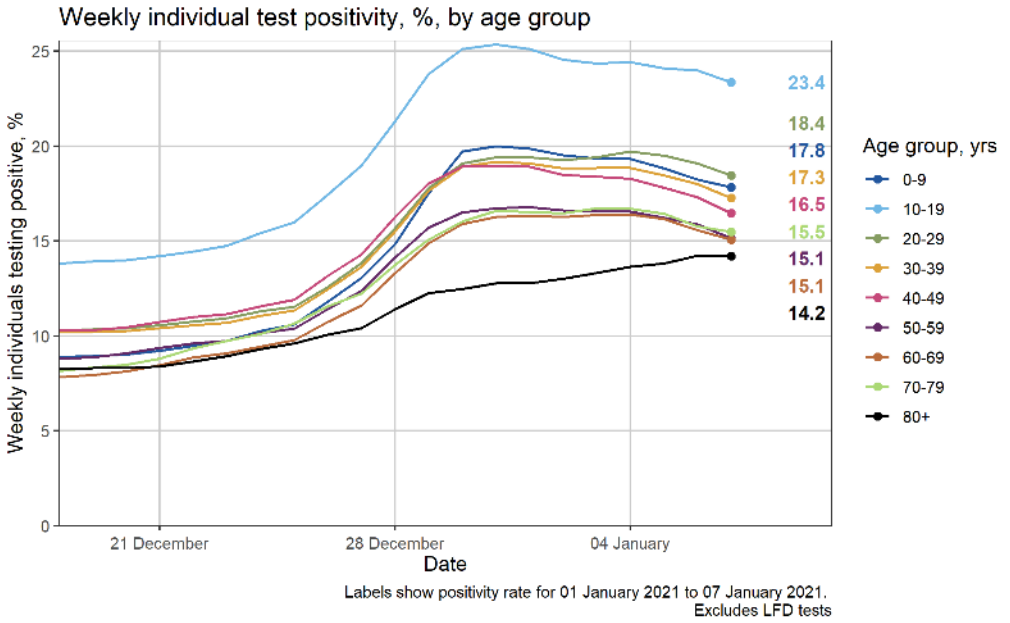

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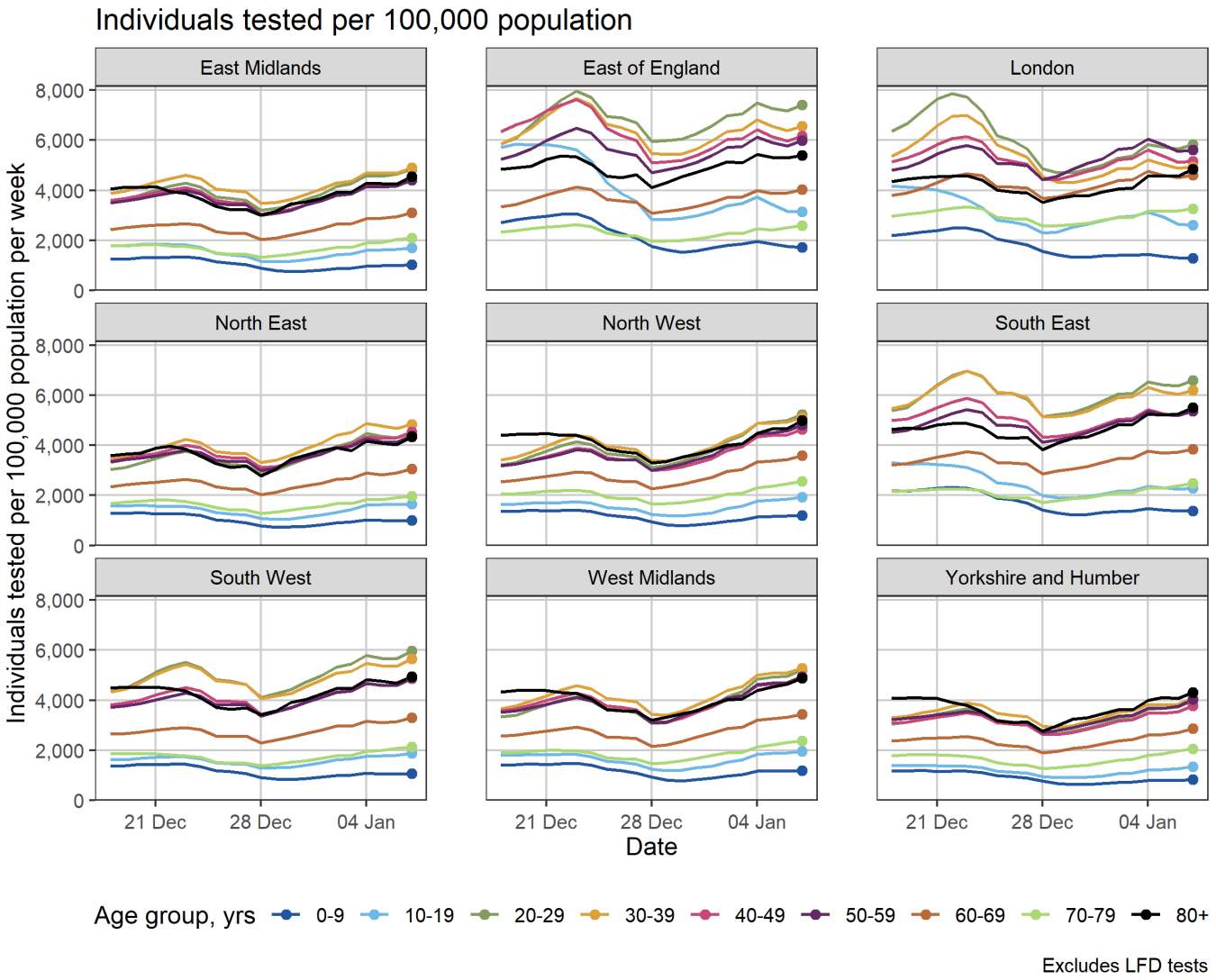
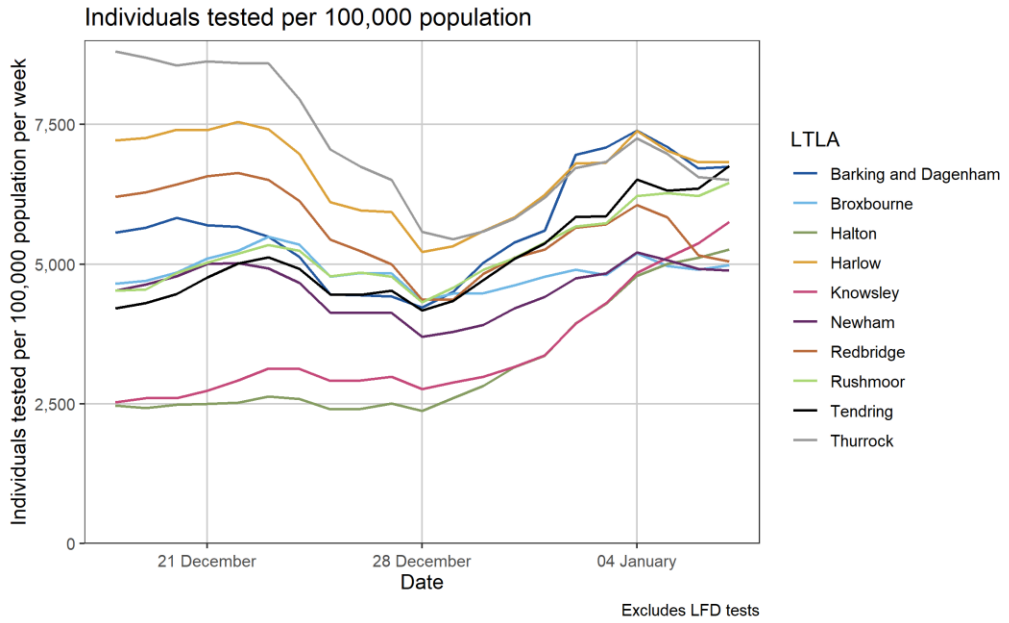
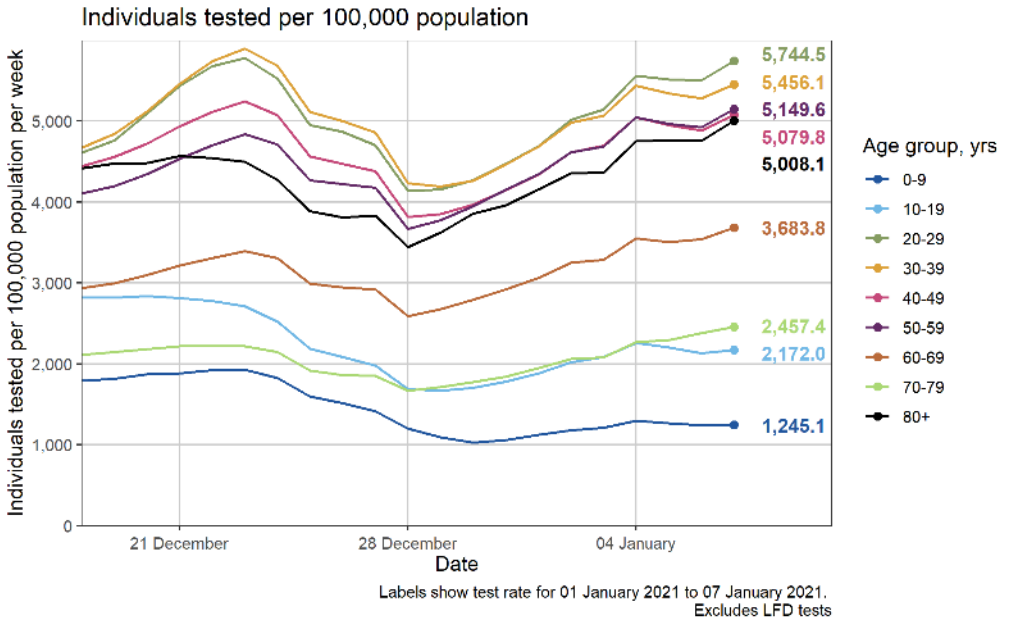


Individuals tested across both pillars 1 and 2 (weekly)
Data up to the 7 January 2021





Individuals tested across both pillars 1 and 2 (weekly)
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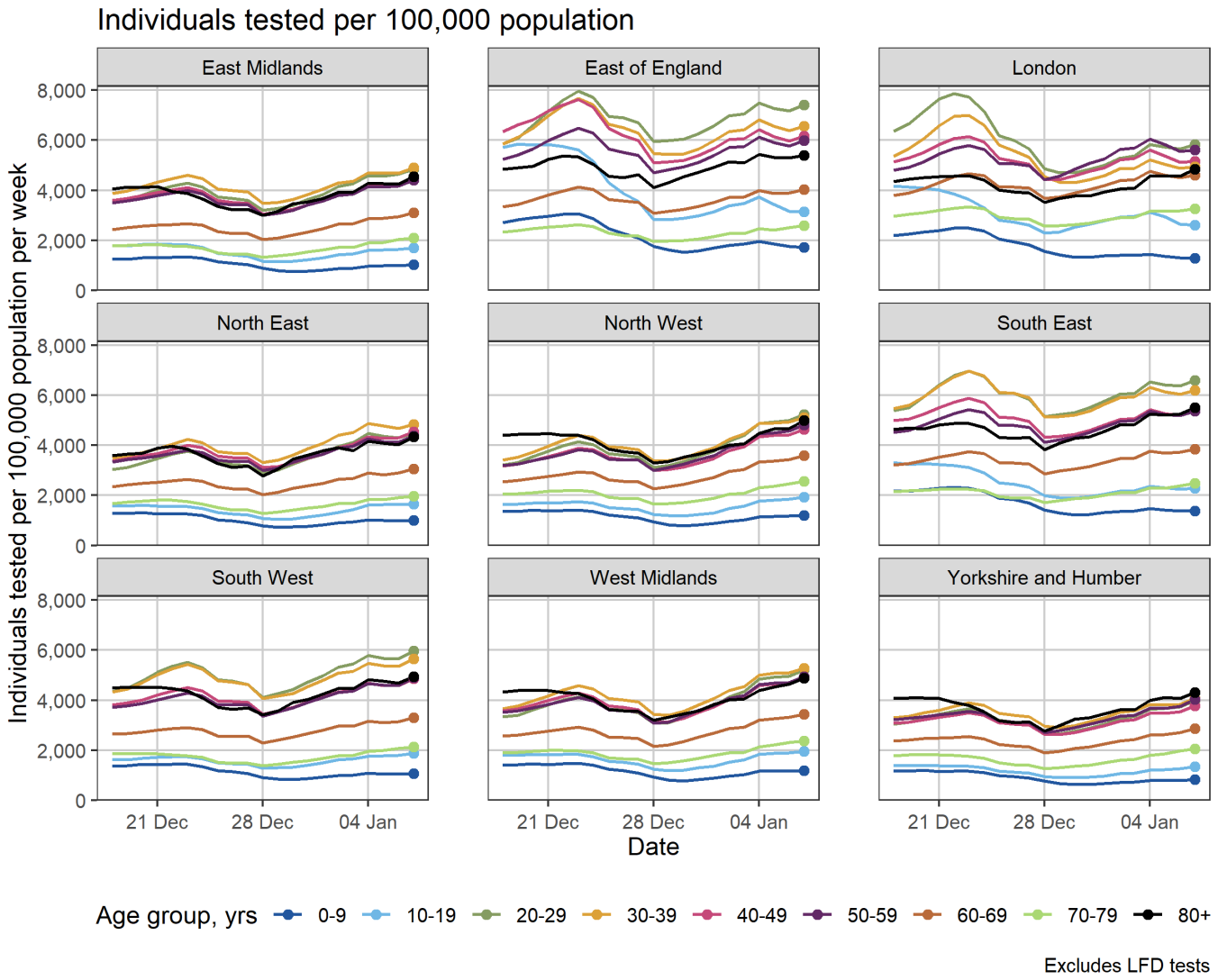

Percentage prevalence of COVID-19 across England and Government Office regions - table

Data generated 12 January 2021 by PHE Joint Modelling Cell

Geography	01/01/2021	08/01/2021	15/01/2021
England	1.94 (1.90, 1.99)	1.84 (1.69, 2.03)	1.64 (1.36, 2.01)
North East	1.37 (1.23, 1.52)	1.15 (0.88, 1.54)	0.87 (0.54, 1.54)
Yorkshire and The Humber	1.38 (1.27, 1.50)	1.38 (1.07, 1.84)	1.26 (0.78, 2.22)
North West	2.23 (2.10, 2.37)	2.67 (2.14, 3.40)	2.81 (1.80, 4.57)
East Midlands	1.59 (1.46, 1.73)	1.53 (1.20, 2.01)	1.33 (0.84, 2.30)
West Midlands	1.52 (1.39, 1.66)	1.39 (1.09, 1.83)	1.16 (0.72, 2.01)
East of England	1.95 (1.82, 2.09)	1.69 (1.36, 2.15)	1.32 (0.86, 2.16)
London	3.54 (3.37, 3.71)	3.24 (2.68, 4.07)	2.71 (1.81, 4.34)
South East	1.88 (1.77, 1.99)	1.49 (1.24, 1.86)	1.07 (0.74, 1.70)
South West	0.69 (0.62, 0.78)	0.59 (0.45, 0.81)	0.46 (0.28, 0.85)

Methodology

Prevalence estimates were generated by the Cambridge real-time model on **9 January 2021** using data up to **3 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 12 January 2020 by PHE Joint Modelling Cell

Prevalence estimates were generated by the Cambridge real-time model on **9 January 2021** using data up to **3 January 2021**.

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Prevalence estimates set against the prevalence boundaries.

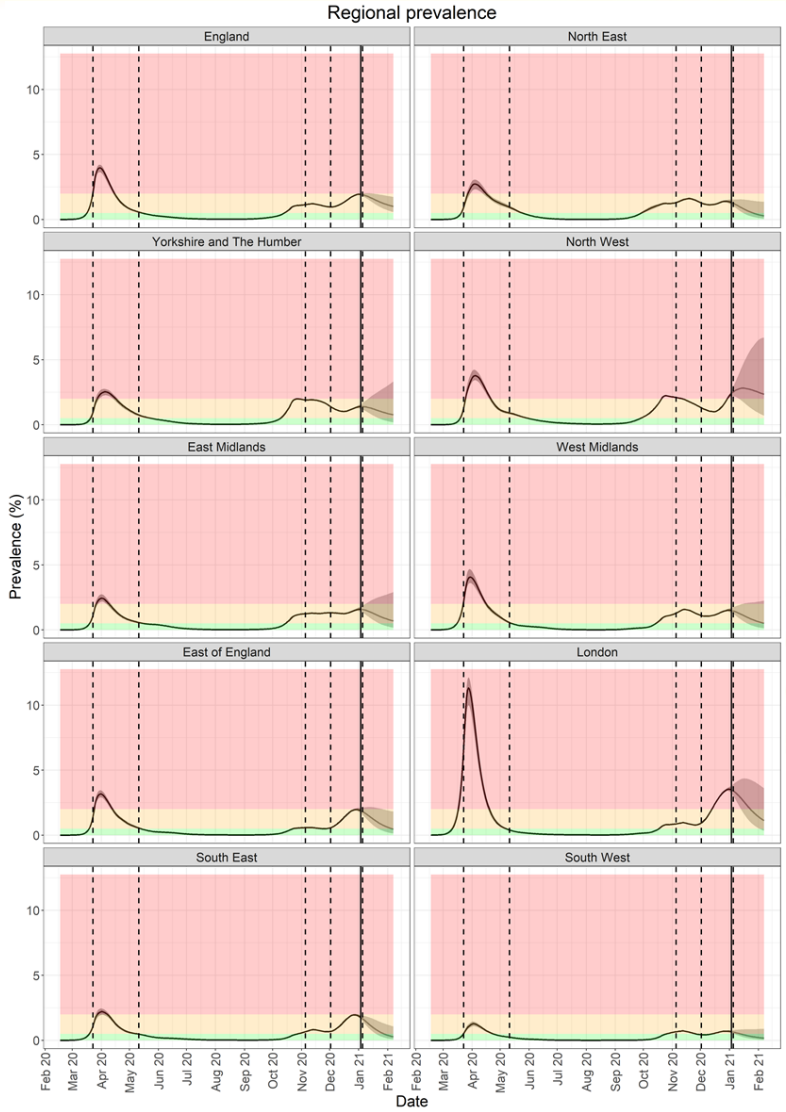
Solid line shows the point prevalence estimates, with the grey boundary covering the 5th to 95th centile range.

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.

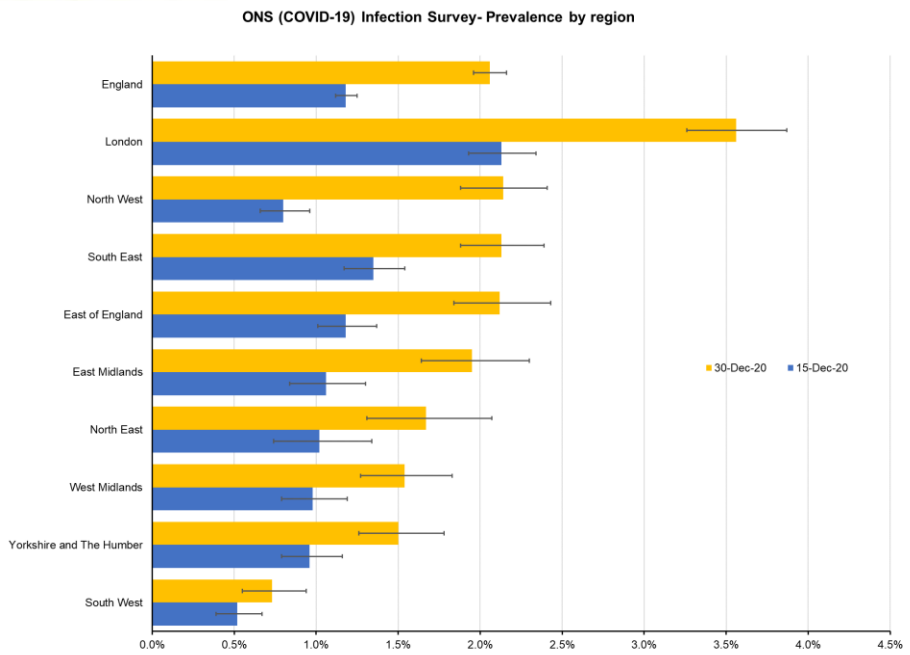
The dashed vertical lines indicate the time at which national measures were implemented.

Please note that weekly estimates are subject to revision.



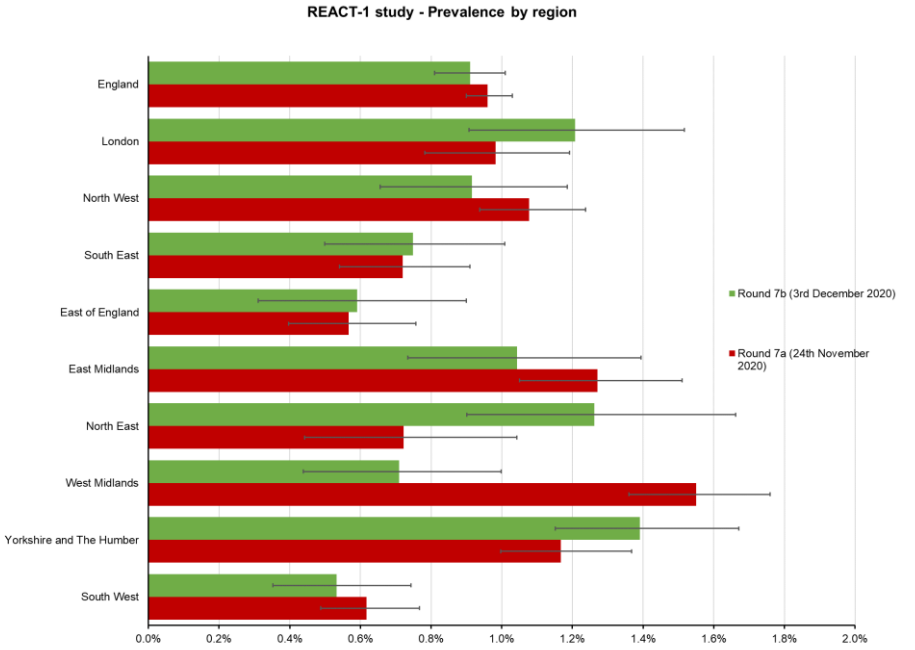
Estimated Prevalence by Region

ONS Coronavirus (COVID-19) Infection Survey (8 January)
Over the most recent week, the percentage of people testing positive has continued to increase. London has the highest percentage of people testing positive. The South West has a lower proportion of people testing positive compared with all other regions In the most recent week, the percentage of people testing positive has increased in all age groups apart from school age children and those aged 35 to 49 years. The percentage of people testing positive is now over 1% for those aged 70 years and over.



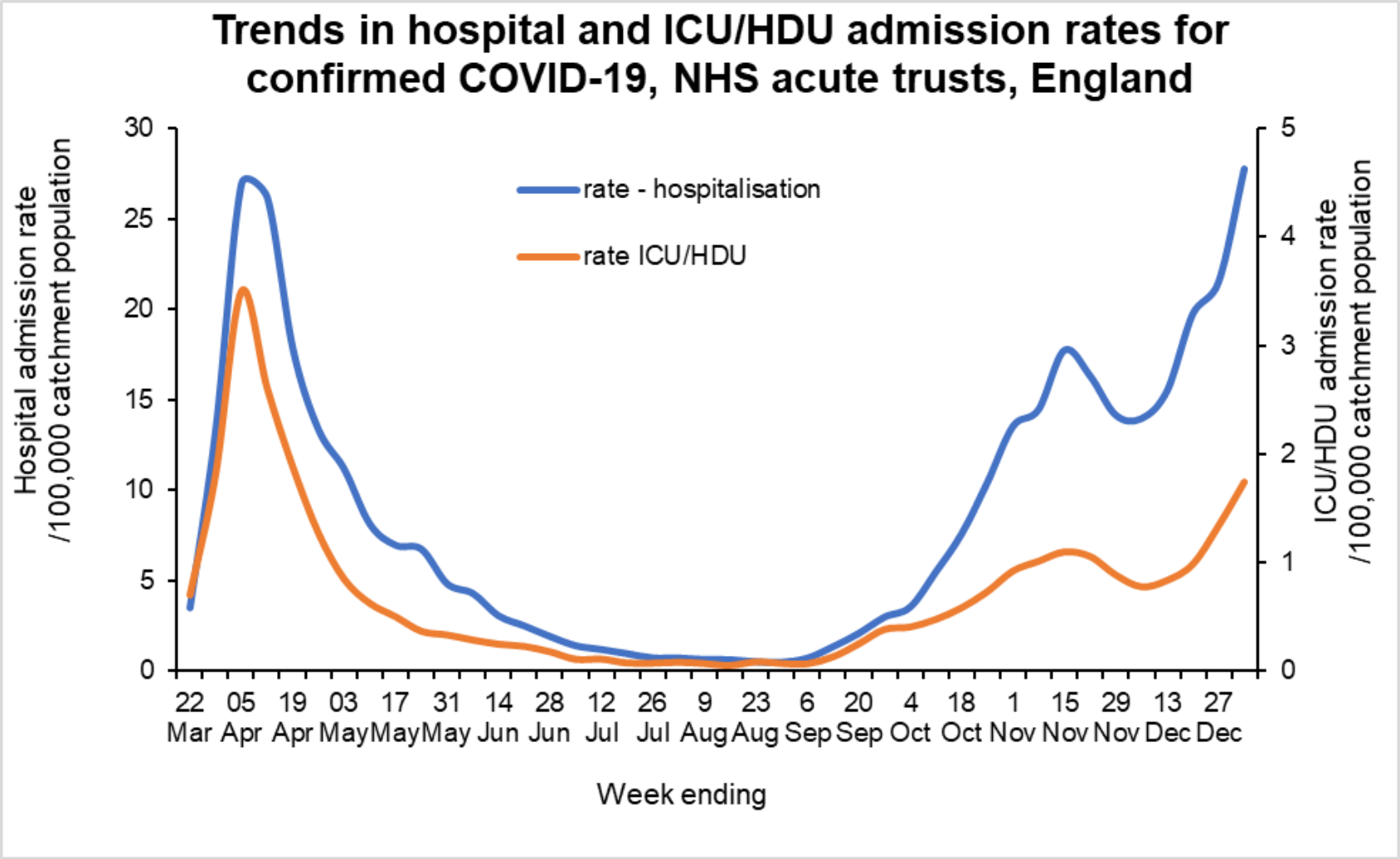
Coronavirus (COVID-19) Infection Survey, UK: 8 January 2021

REACT-1 round 7 updated report (3 December)
During round 7 there was a marked fall in prevalence in West Midlands, a levelling off in some regions and a rise in London. R numbers at regional level ranged from 0.60 (0.41, 0.80) in West Midlands up to 1.27 (1.04, 1.54) in London, where prevalence was highest in the east and south-east of the city. Nationally, between 13th November and 3rd December, the highest prevalence was in school-aged children especially at ages 13-17 years at 2.04% (1.69%, 2.46%), or approximately 1 in 50.



REACT-1 round 7 updated report: Between the previous round and round 7 (during lockdown), there was a fall in prevalence of swab-positivity nationally, but it did not fall uniformly over time or by geography 3 Dec 2020

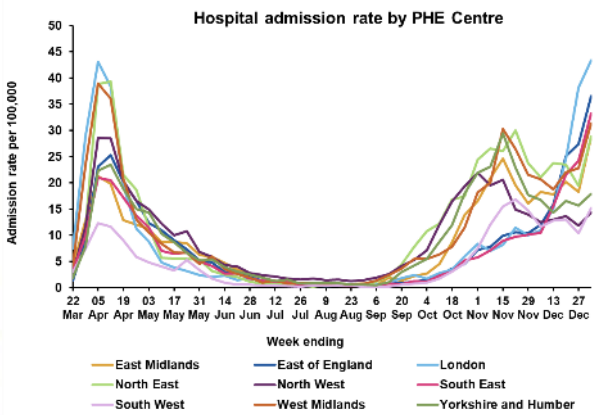
Hospitalisations national trends



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

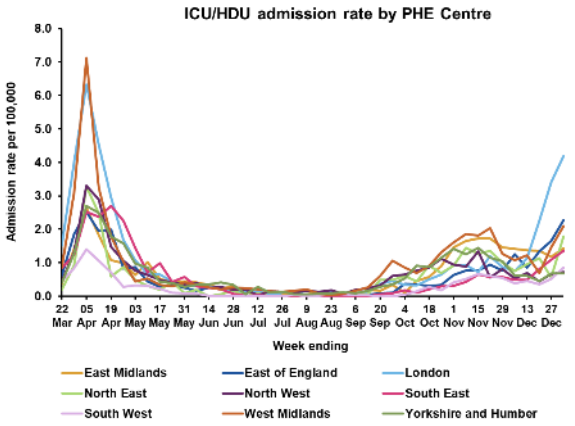
Source: PHE Severe Acute Respiratory Infection surveillance web tool - SARI-Watch

Hospitalisations by PHE Centre



Weeks 12 to 53

Weeks 27 to 53



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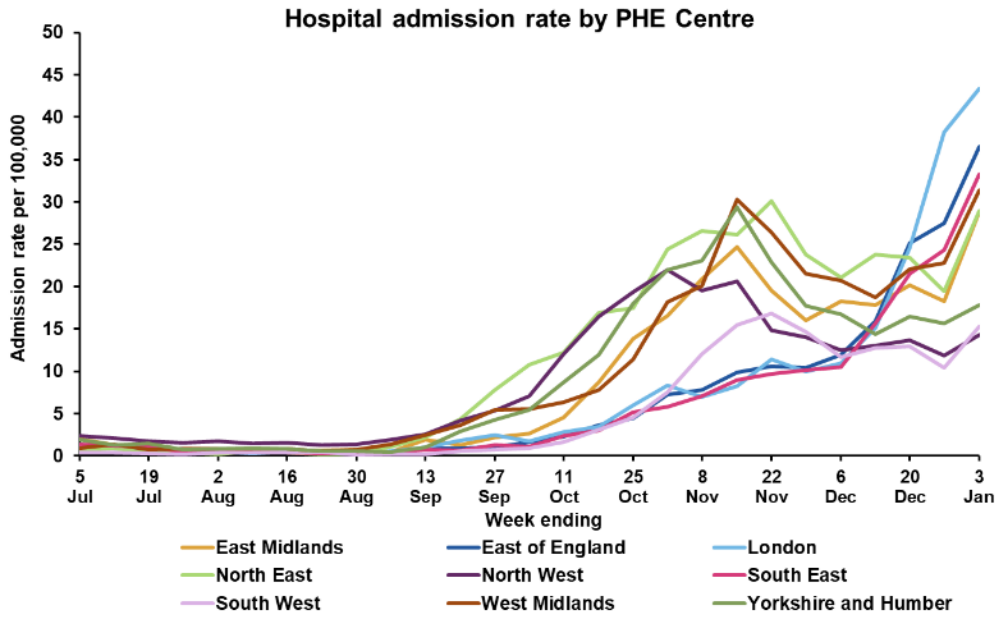

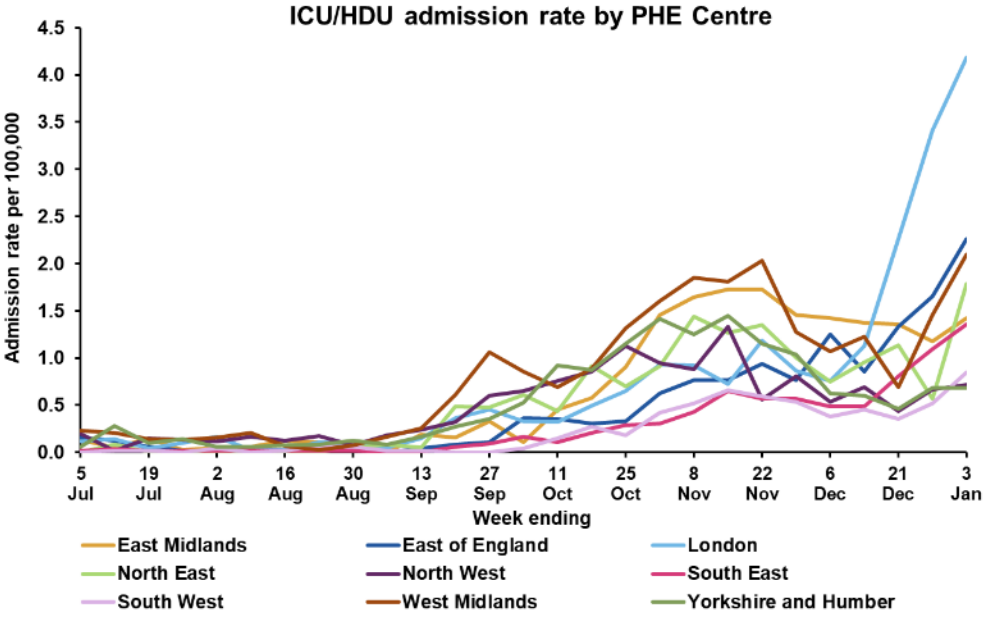

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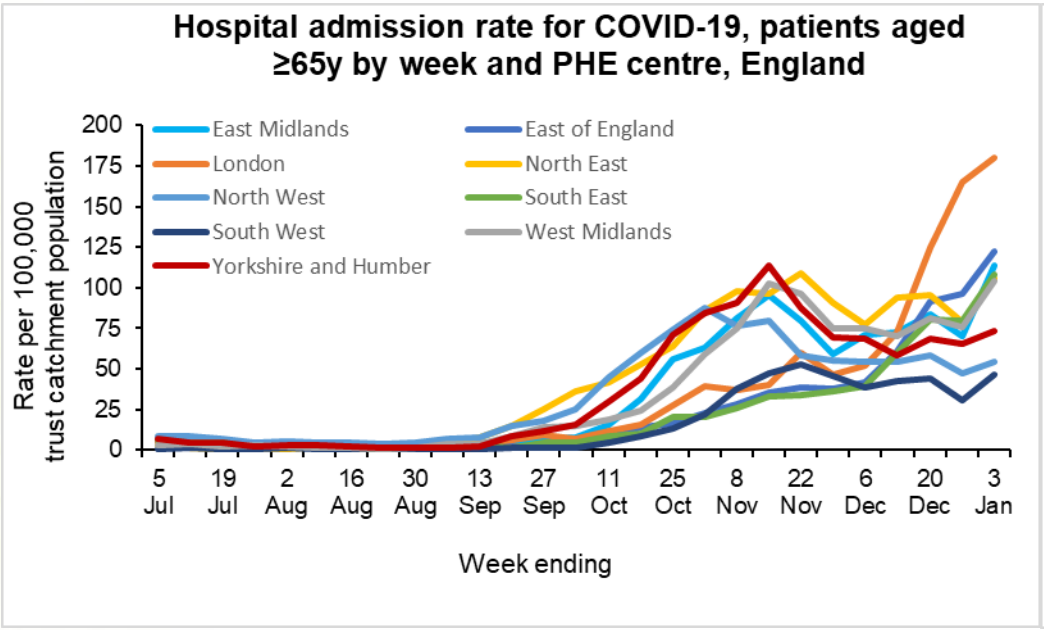
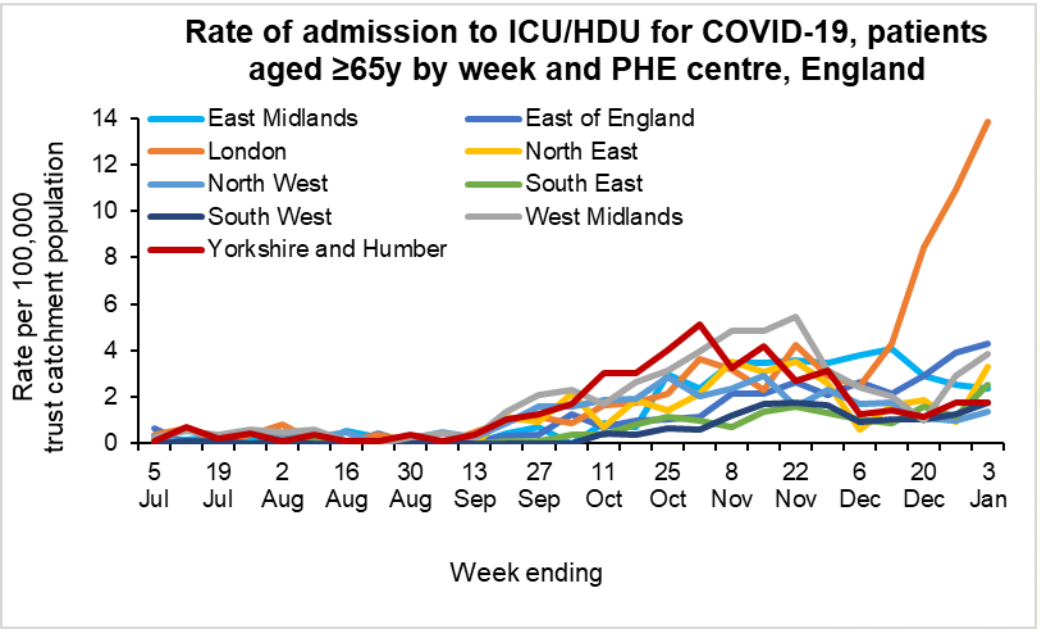
Source: PHE Severe Acute Respiratory Infection surveillance web tool - SARI-Watch

Hospitalisations by PHE Centre and age 65 years and over





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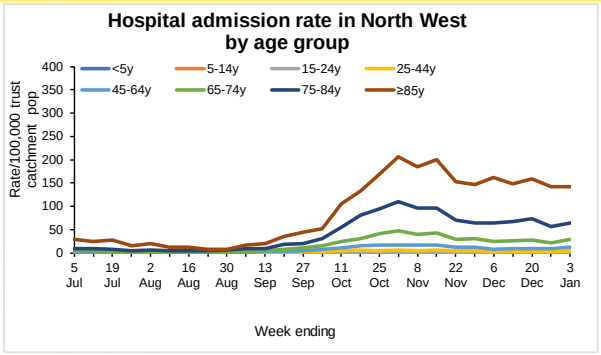
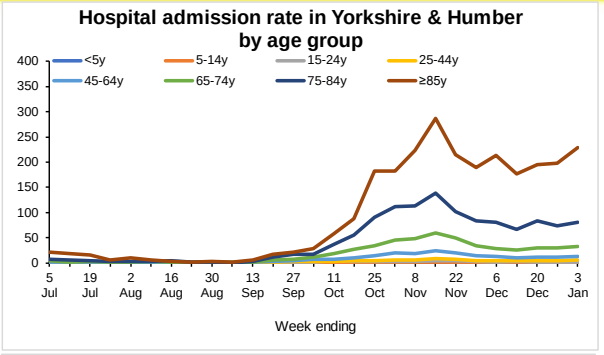
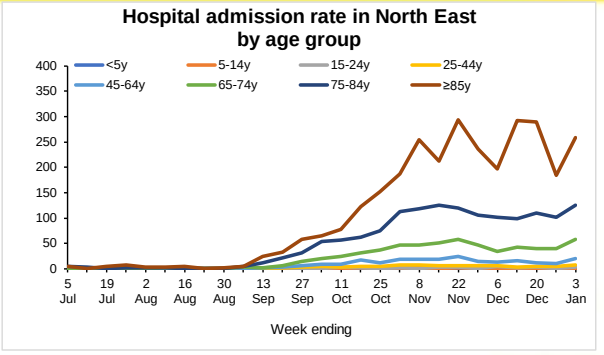
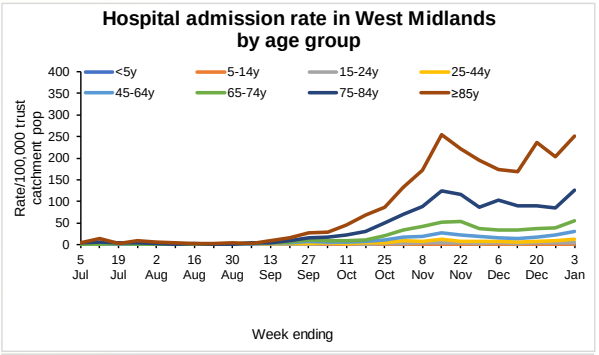
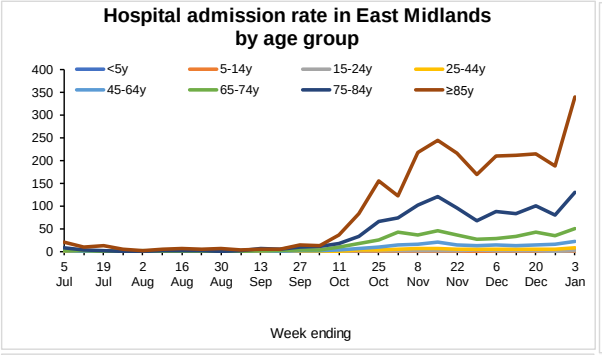
Hospitalisations by PHE Centre and age

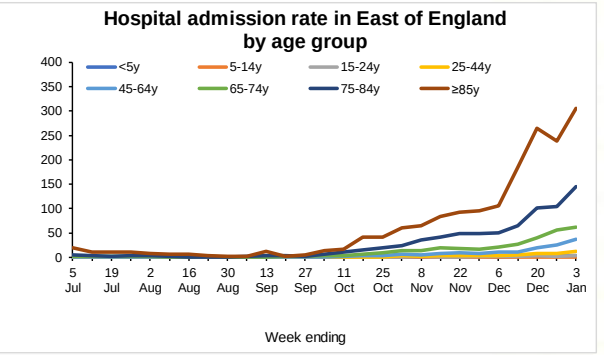


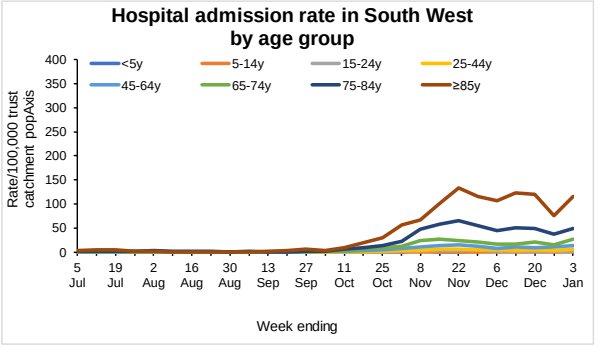


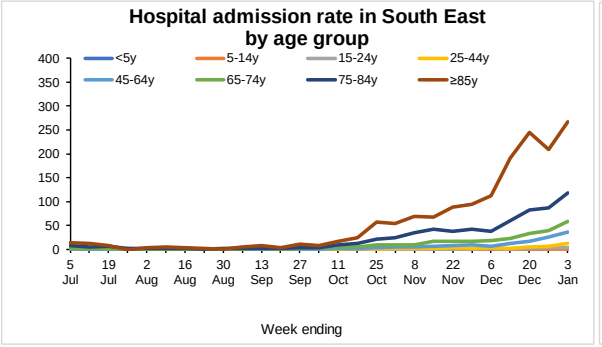


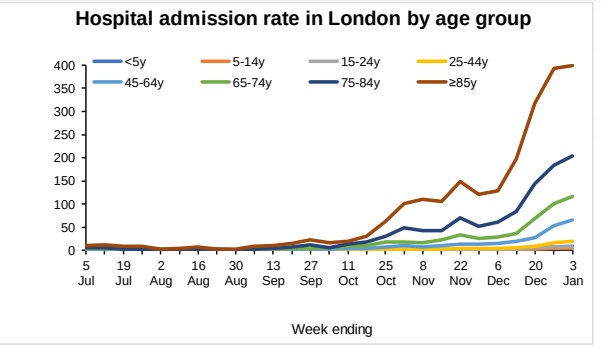












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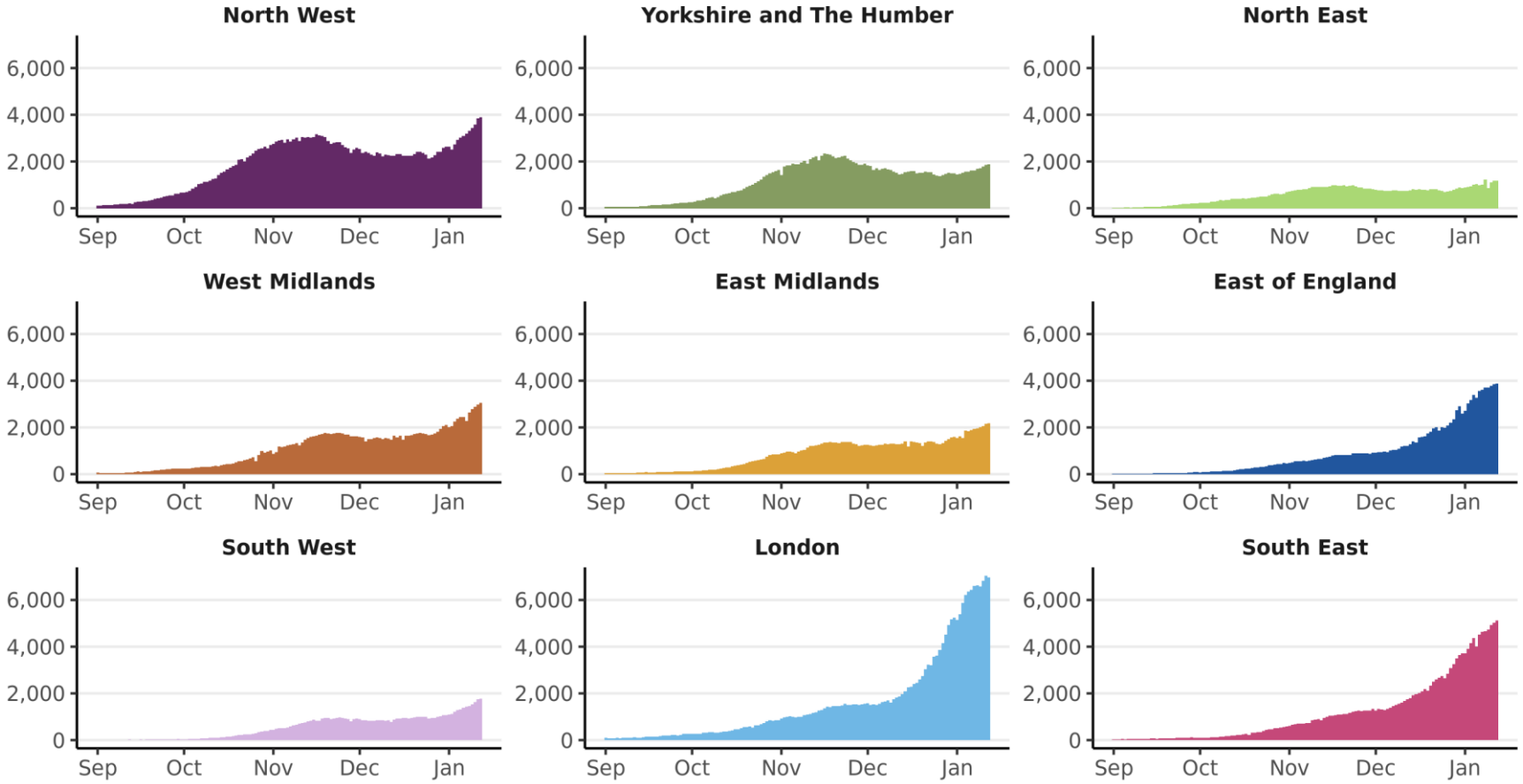
Source: PHE Severe Acute Respiratory Infection surveillance web tool - SARI-Watch

Patients in hospital by region

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



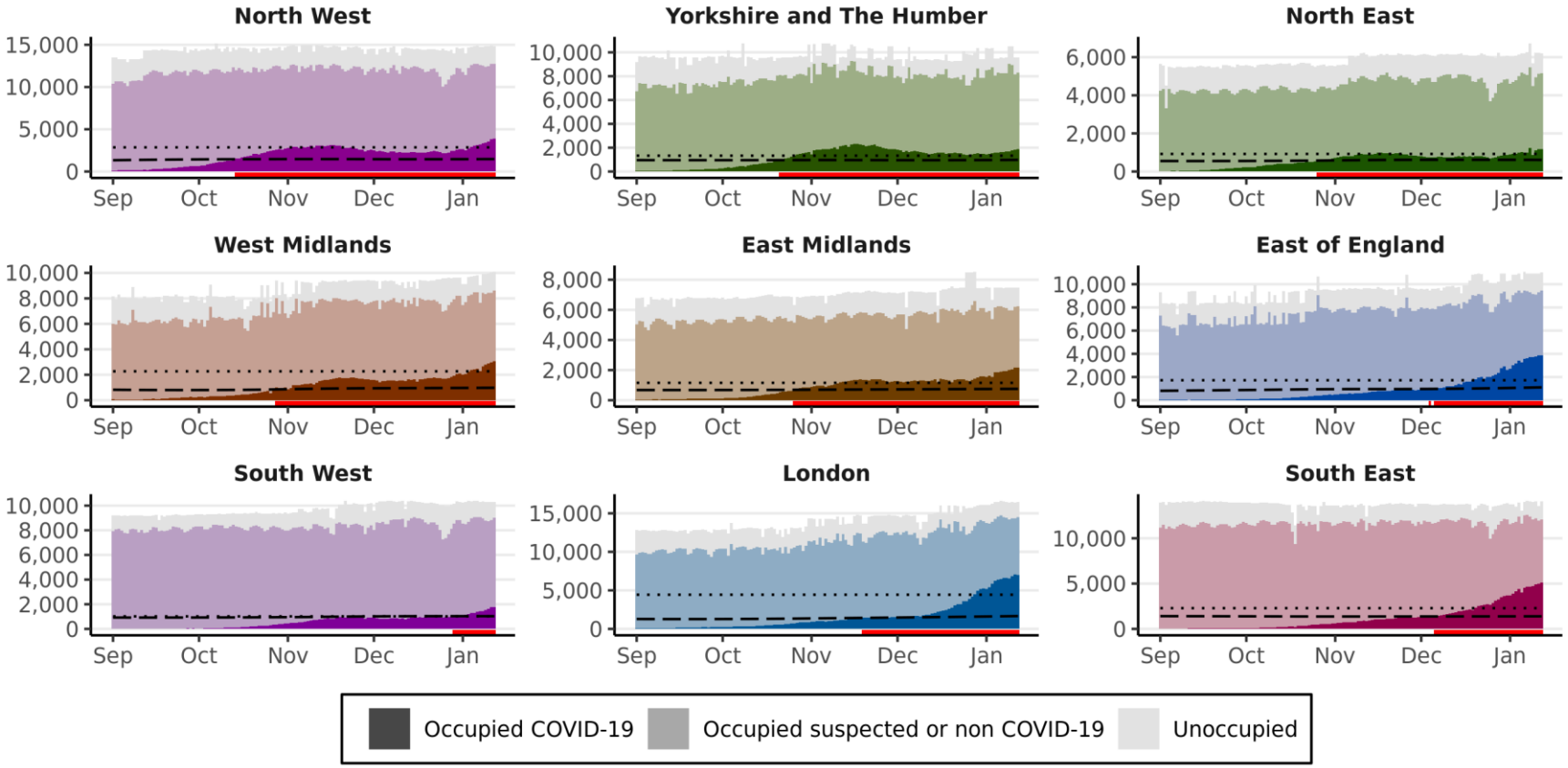
Source: NHS England & Improvement COVID-19 Hospital Activity Data, from 01 September 2020 to 12 January 2021. Produced by Joint Biosecurity Centre.

NOTE: slide shows bed occupancy, not new admissions.

Bed occupancy and capacity by region - general and acute beds

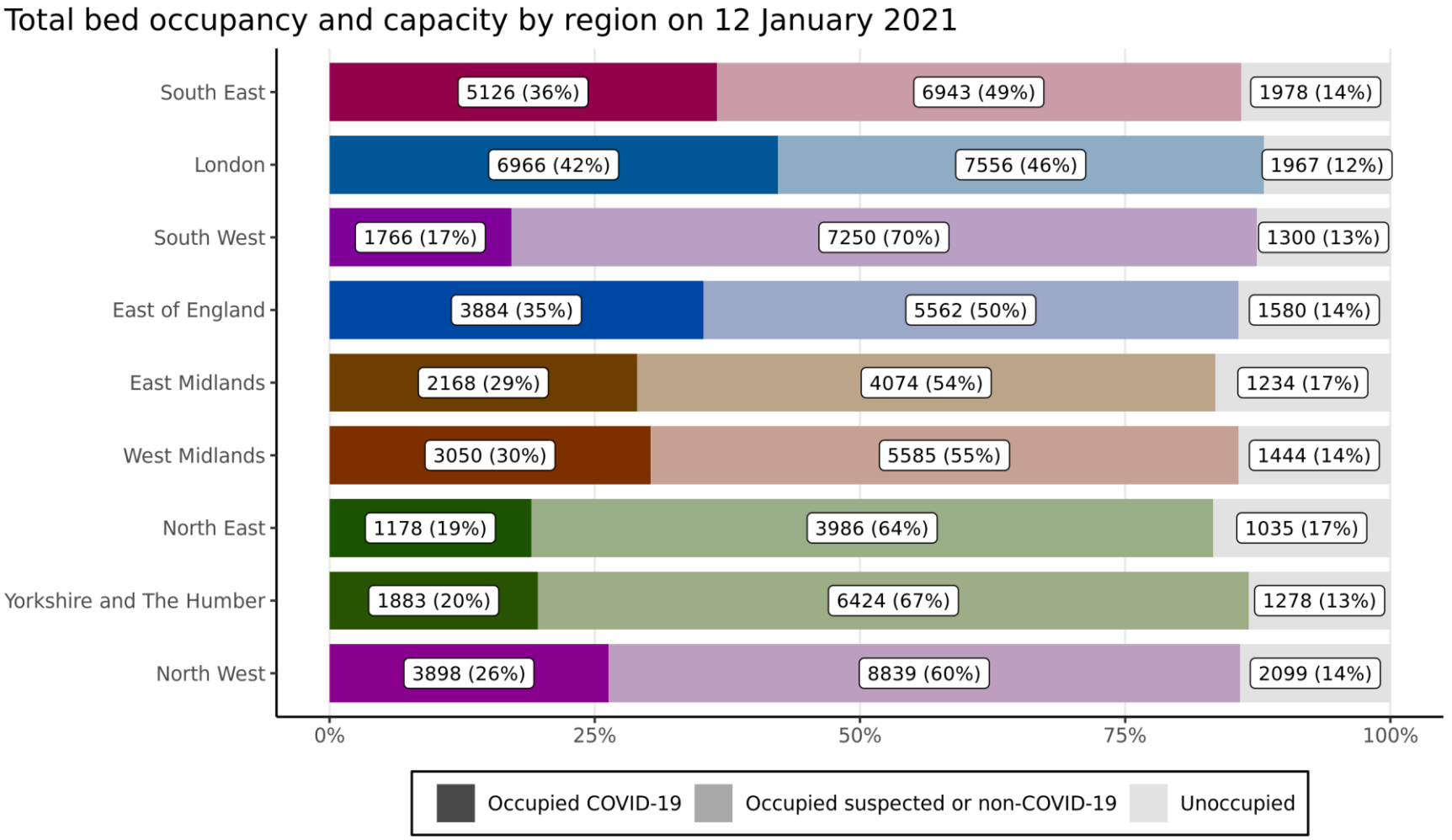
Total bed occupancy and capacity by region

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.

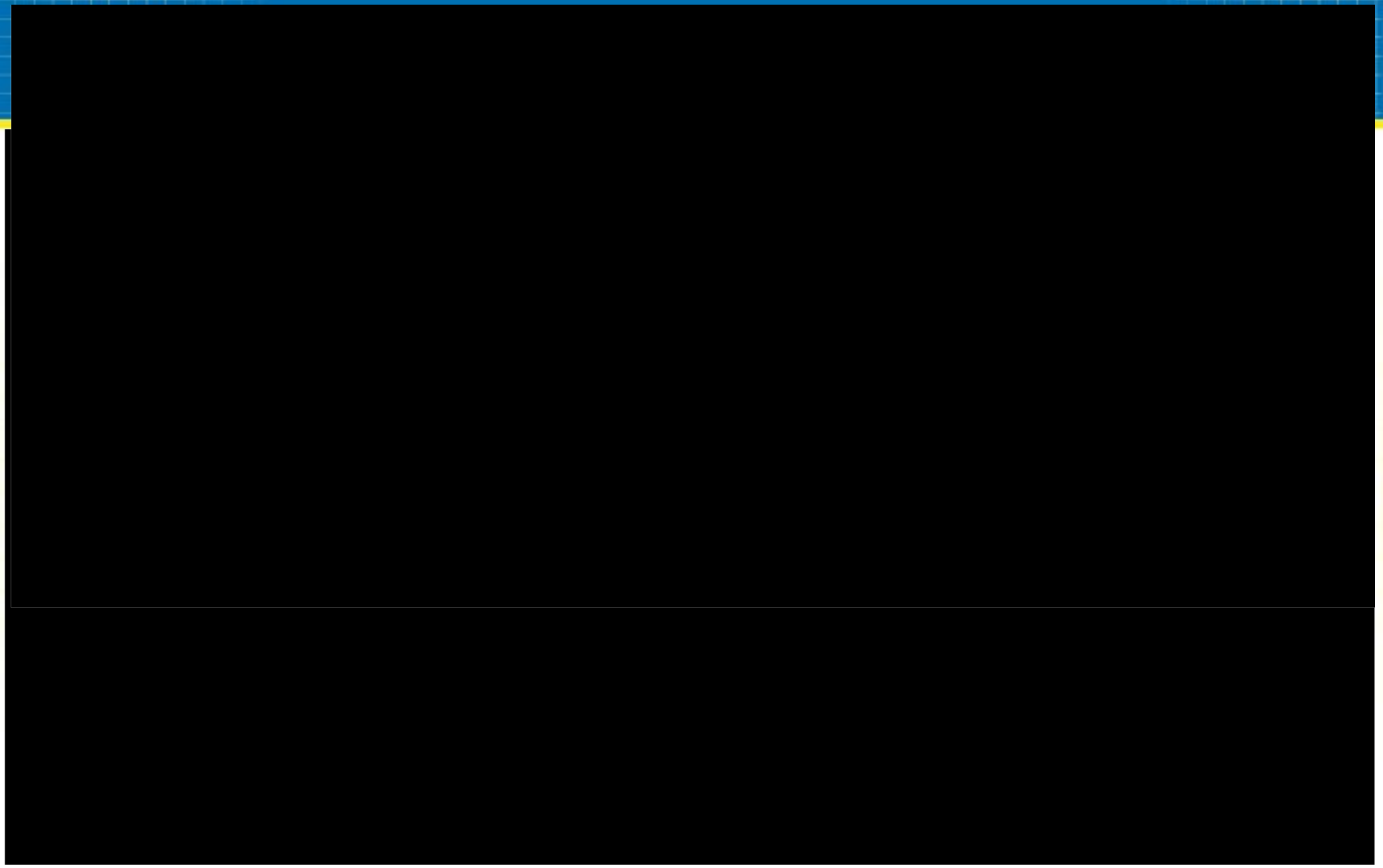


Source: NHS England & Improvement COVID-19 Hospital Activity Data, from 02 April 2020 to 12 January 2021. Produced by Joint Biosecurity Centre.

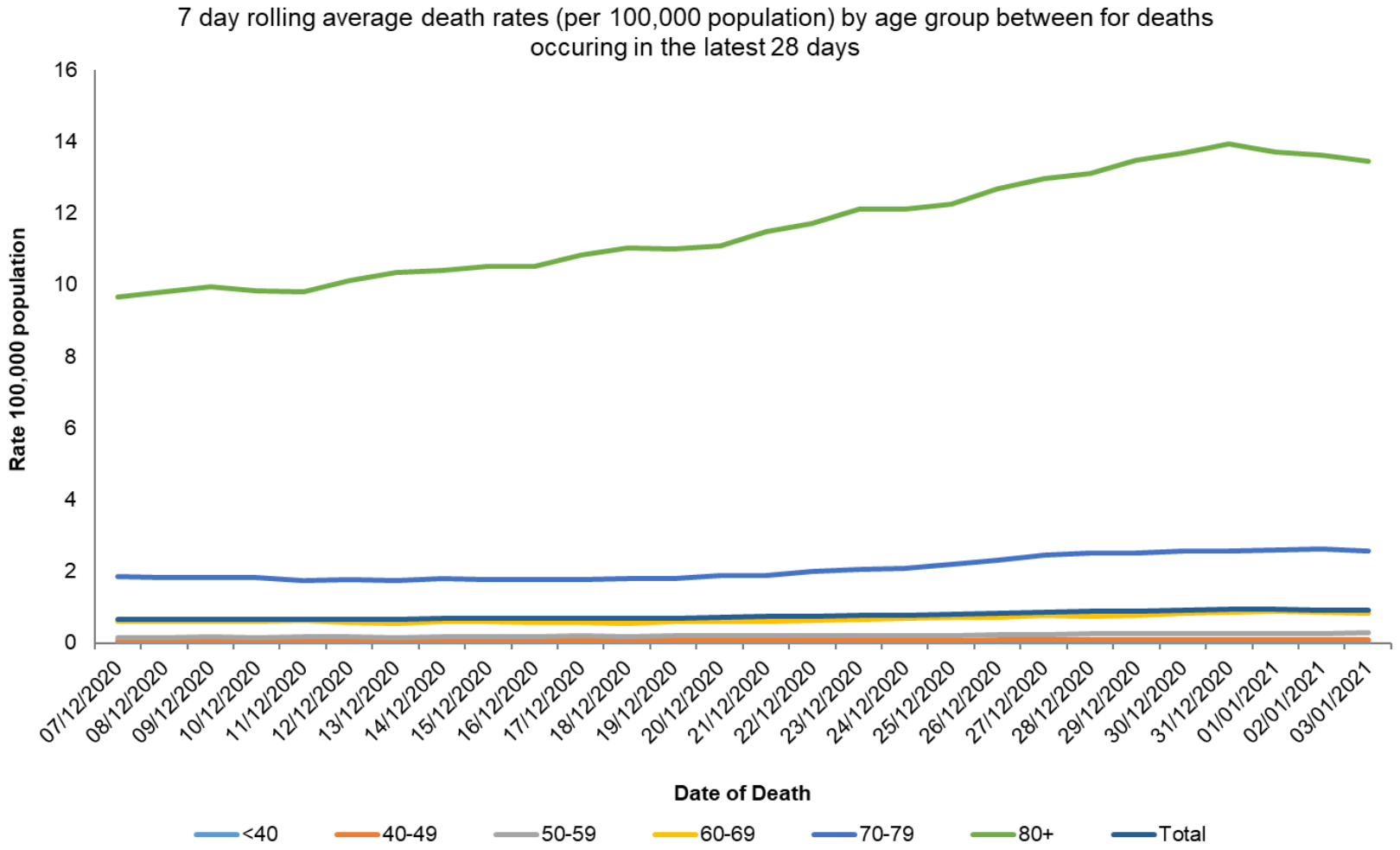
Bed occupancy and capacity by region - general and acute beds



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



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

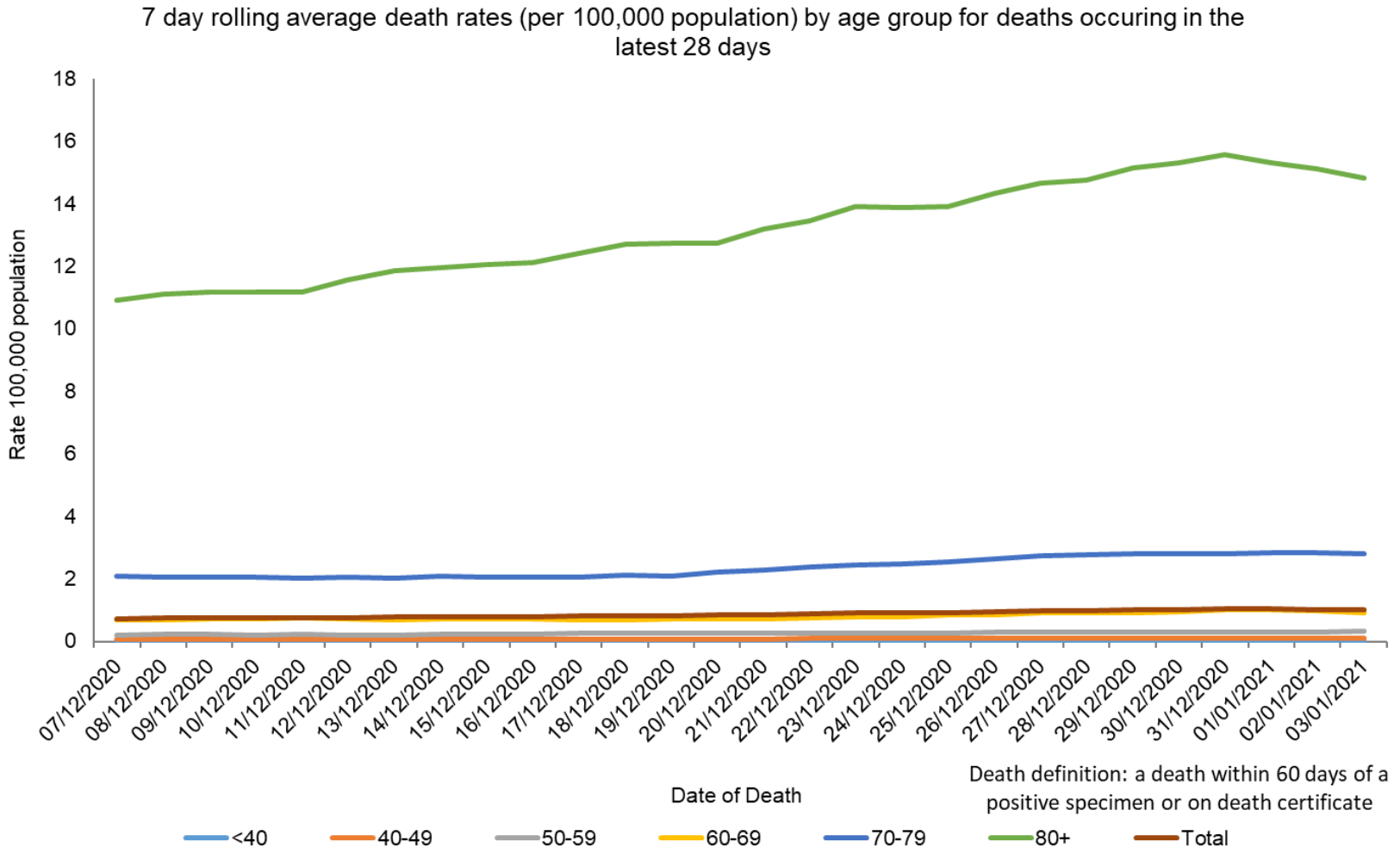


*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

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

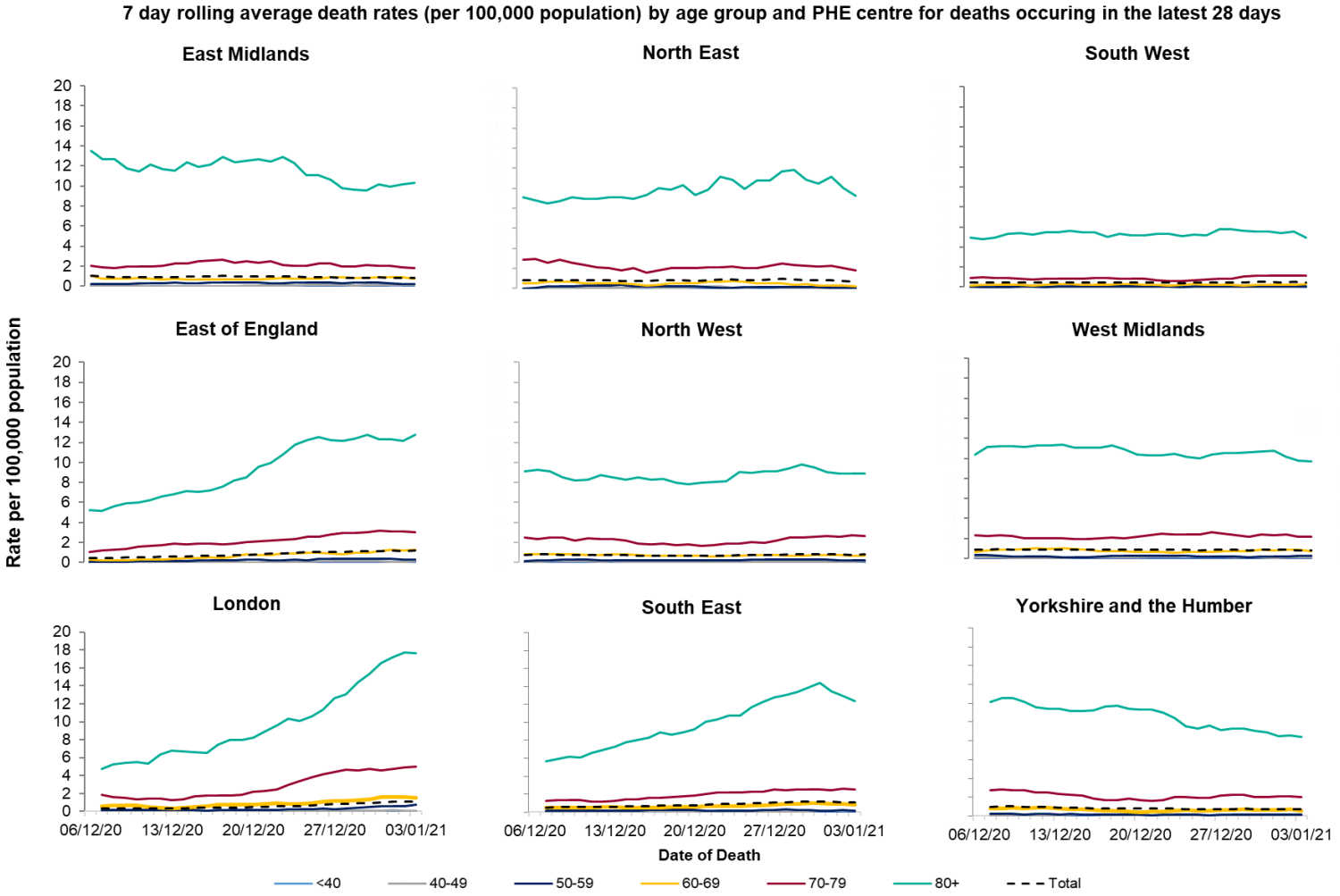


*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

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 age group and region (seven day rolling average) for deaths within 28 days of first positive specimen



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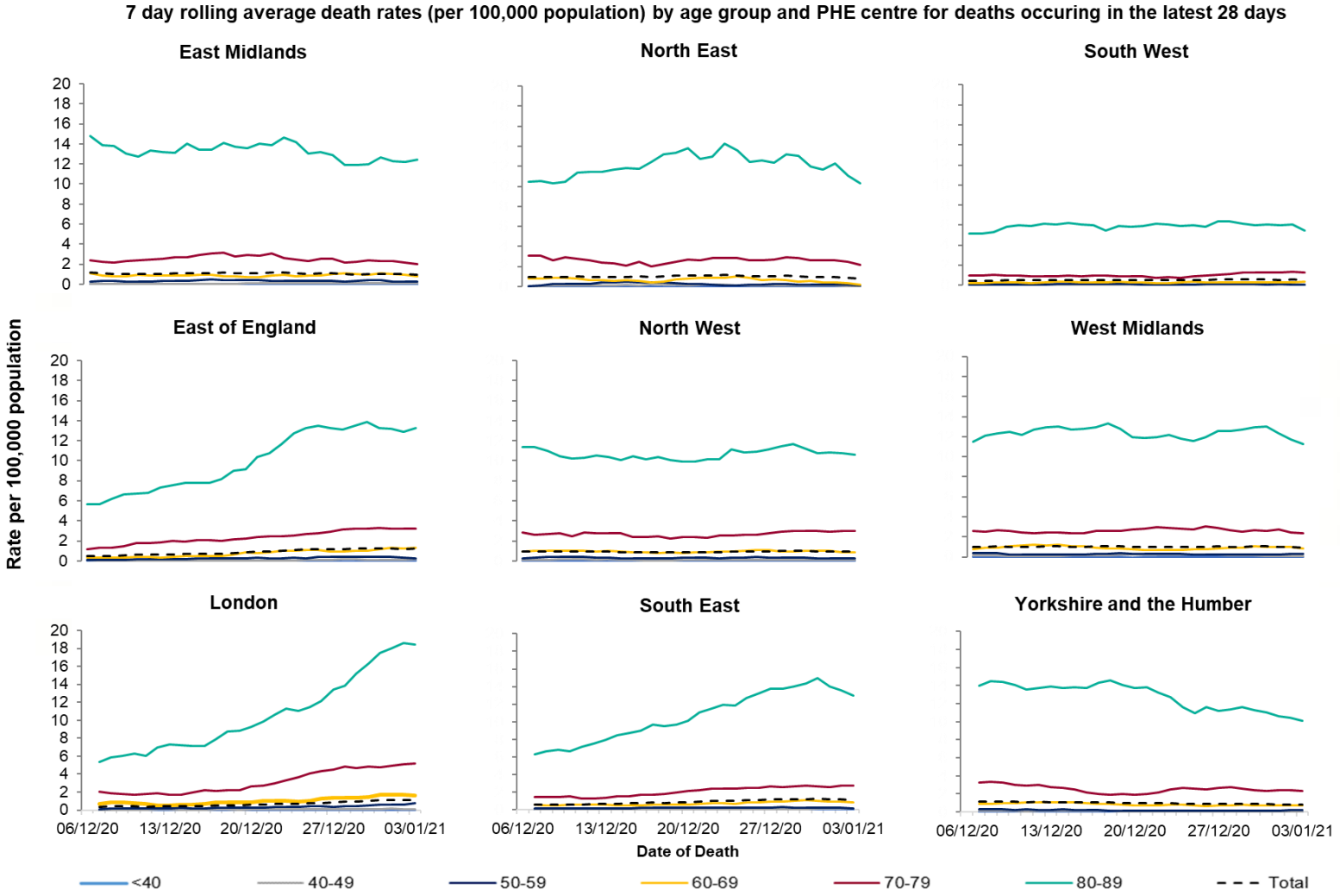

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