Public Health England

NHS Test and Trace

COVID-19 SITUATIONAL AWARENESS

SUMMARY

APPENDIX
11 May 2021

Contents

This situational awareness summary report appendix:

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- [redacted]
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- [redacted]
- [redacted]
- Waste water

- Source of data & signposting
- [redacted]
- [redacted]

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

National context
(From 6 May 2021 Week 18 report)

Overall case rates continued to decrease in week 17. Decreases in case rates were observed in the majority of age groups, ethnic groups and regions. Overall Pillar 1 and Pillar 2 positivity decreased slightly compared to the previous week.

As of 09:00 on 04 May 2021, a total of 3,865,013 have been confirmed positive for COVID-19 in England under Pillars 1 and 2.

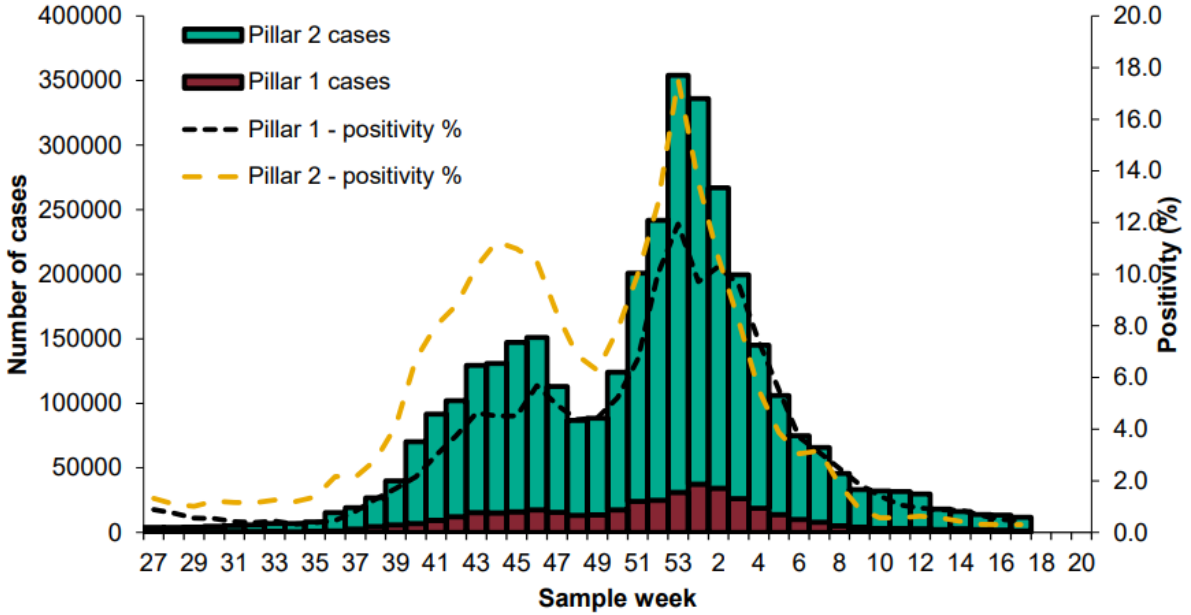
- The data are shown by the week the specimen was taken from the person being tested. This gives the most accurate analysis of this time progression, however, for the most recent week results for more samples are expected therefore this should be interpreted with caution.

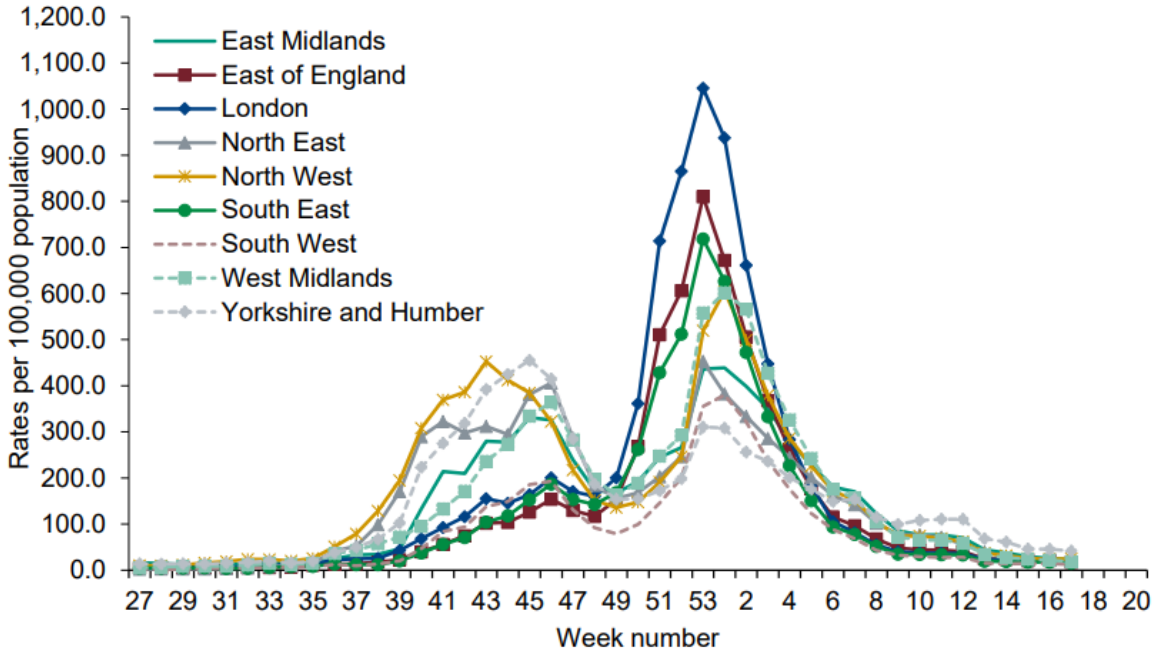
- Positivity is calculated as the number of individuals testing positive during the week divided by the number of individuals tested during the week based on PCR and lateral flow device (LFD) testing.

- Please note, From the 9 April 2021 there has been a change to the way cases are reported. Cases that have been identified through a positive rapid lateral flow device (LFD) test will be removed if the individual took Polymerase Chain Reaction (PCR) tests within 3 days that were all negative. This change has been applied retrospectively back to 1 November 2020, so you may notice slight decreases in retrospective figures. From 9 April onwards, individuals that have positive LFDs with all subsequent PCR tests within 3 days showing negative results will be removed on a rolling basis. This is most likely to impact the case numbers for the most recent week, which may see slight decreases in following weeks' reports. Some changes to earlier weeks might occur based on delayed reporting.

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

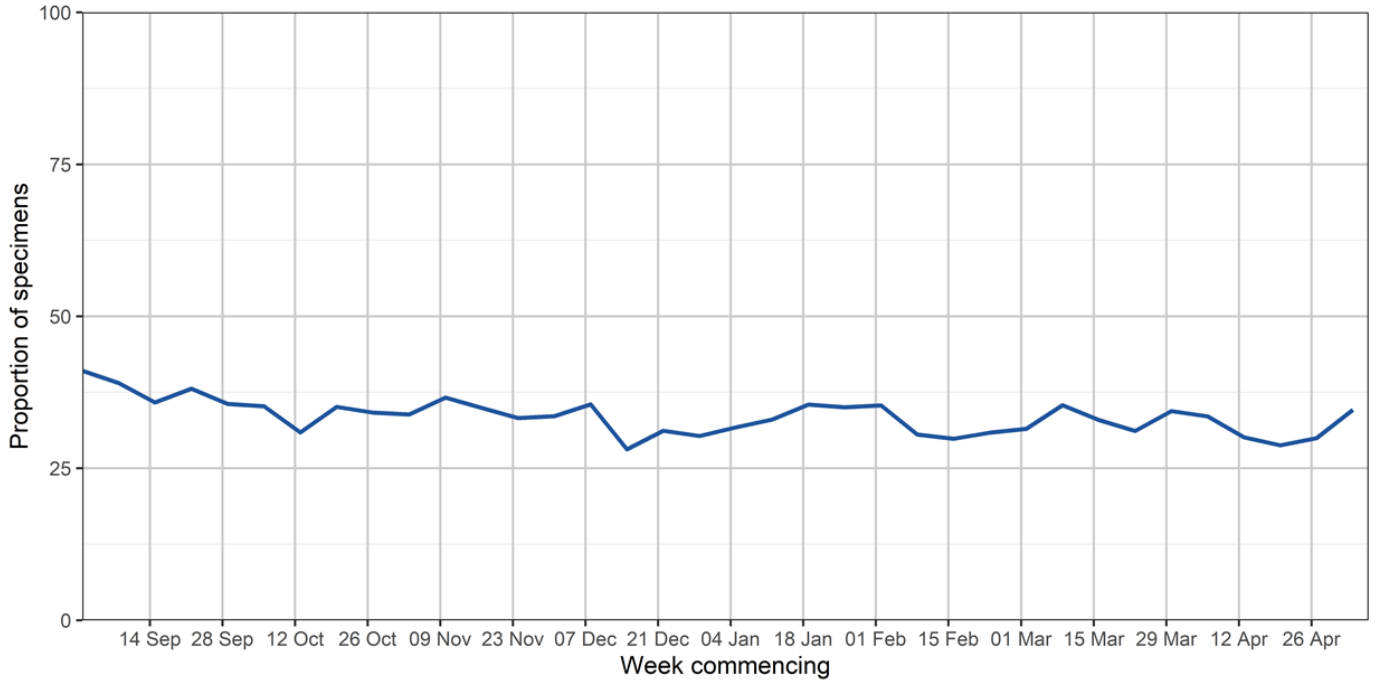




Variants

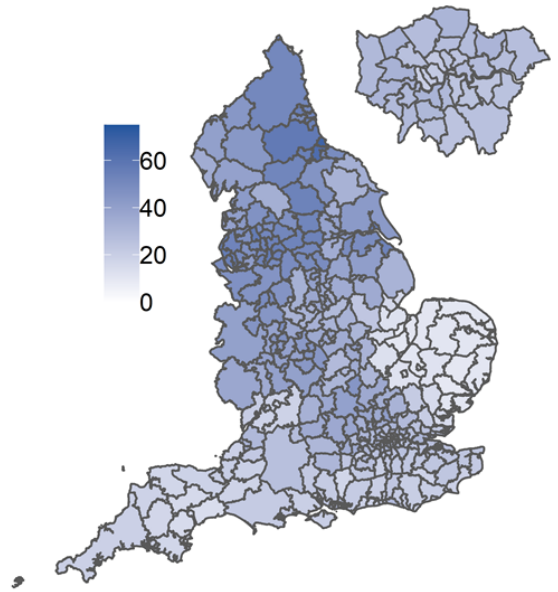
Tracking SARS-COV-2 S-Gene Target Failure – Taqpath lab coverage since 1/9/2020

Proportion of England specimens tested in TaqPath Labs
by week, 01 Sep 2020 to 10 May 2021



TaqPath Labs = Alderley Park, Milton Keynes and Glasgow Lighthouse Labs
Includes both positive and negative SARS-CoV specimens from Pillar 1 and 2.
Excludes lateral flow device tests. Data source: USD

Proportion of England specimens tested in
TaqPath Labs, by Local Authority
01 Sep to 10 May 2021

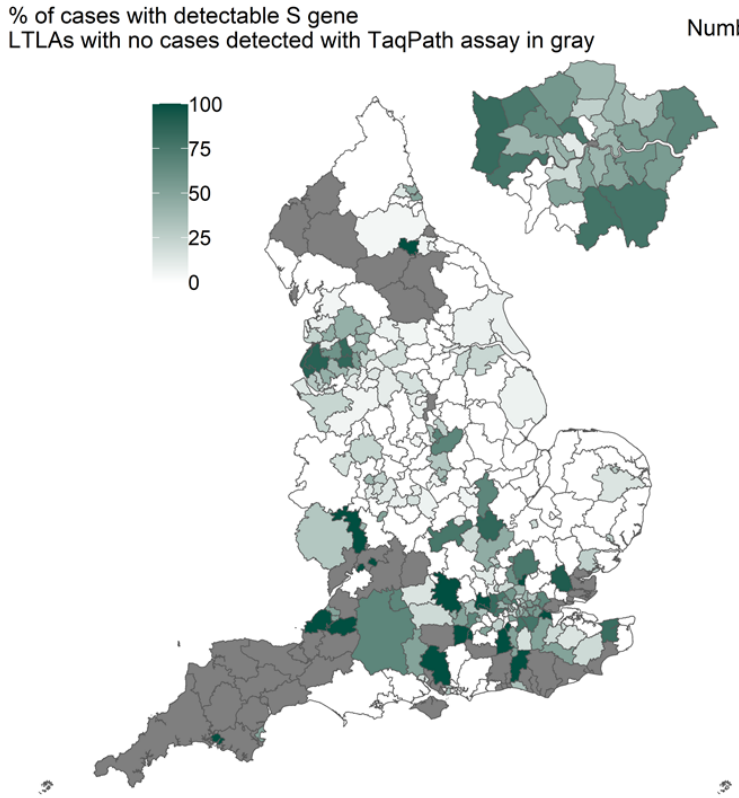


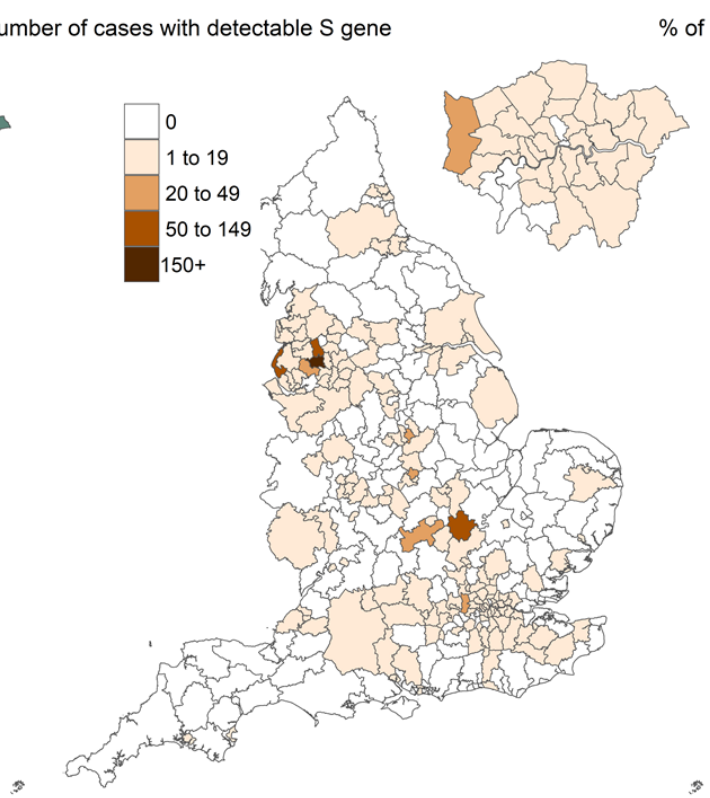
Note: LA coverage by TaqPath laboratories is relatively stable over time, although areas of EoE notably under-represented in recent data (see Appendix)

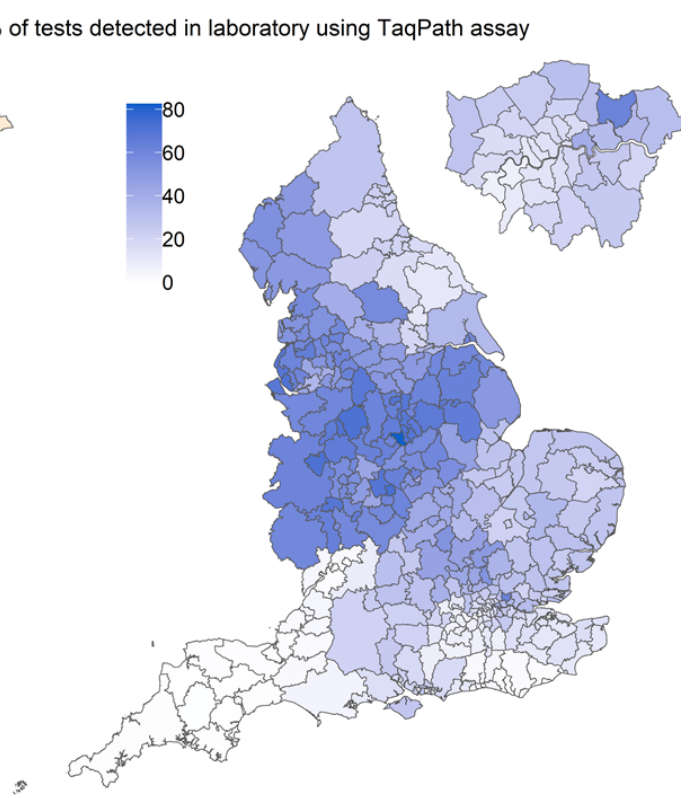
Tracking SARS-COV-2 S-Gene Target Failure – Most recent 7 days by local authority

Proportion and number of cases with detectable S gene and TaqPath lab test coverage by LTLA

Data as of 2021-05-11 for 7 day period between 2021-05-01 and 2021-05-07. 3 most recent days excluded due to reporting delay.

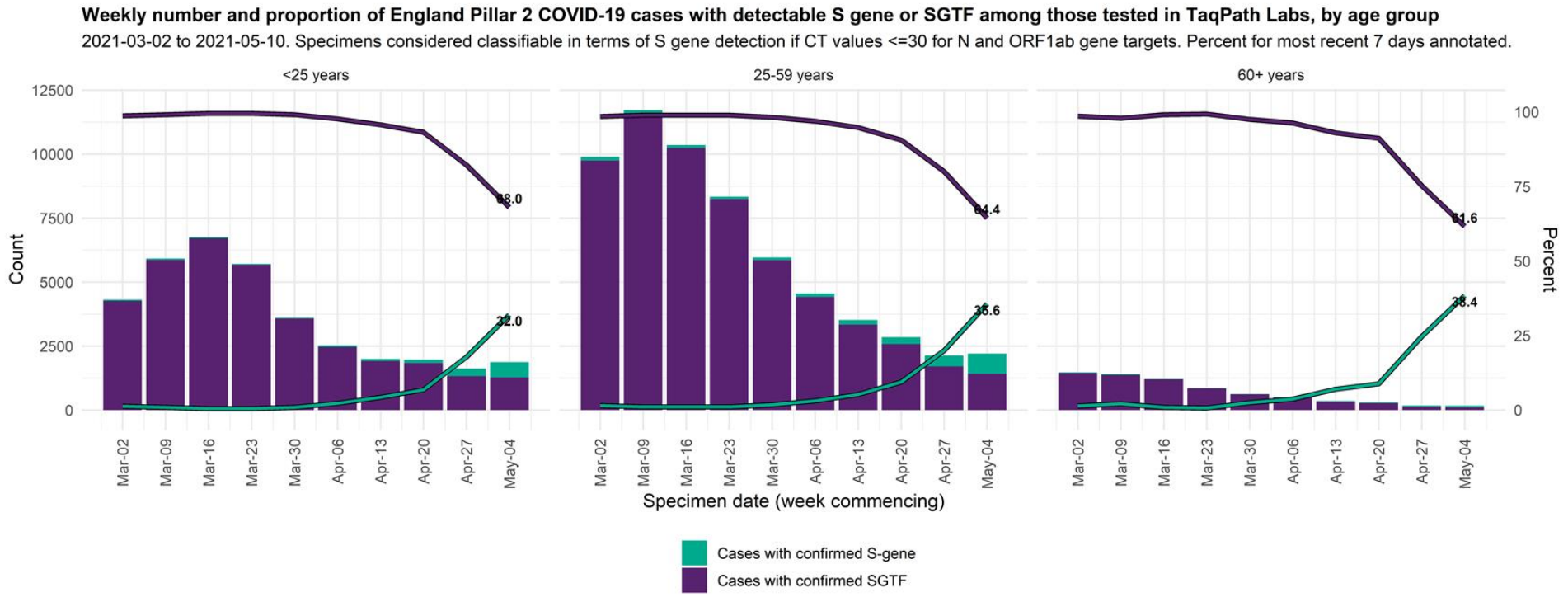






A detectable S gene may currently indicate a VOC case; this continues to be monitored.
SGTF: Non-detectable S gene and <=30 CT values for N and ORF1ab genes. S-gene positive: <=30 CT values for S, N, and ORF1ab genes.
TaqPath labs = Alderley Park, Milton Keynes and Glasgow Lighthouse Labs, which use TaqPath COVID-19 RT-PCR.
Cases deduplicated to one positive test per person per week, prioritising SGTF tests.
Data source: SGSS.

Weekly trends in proportion of cases with S-Gene Target Failure, by age group

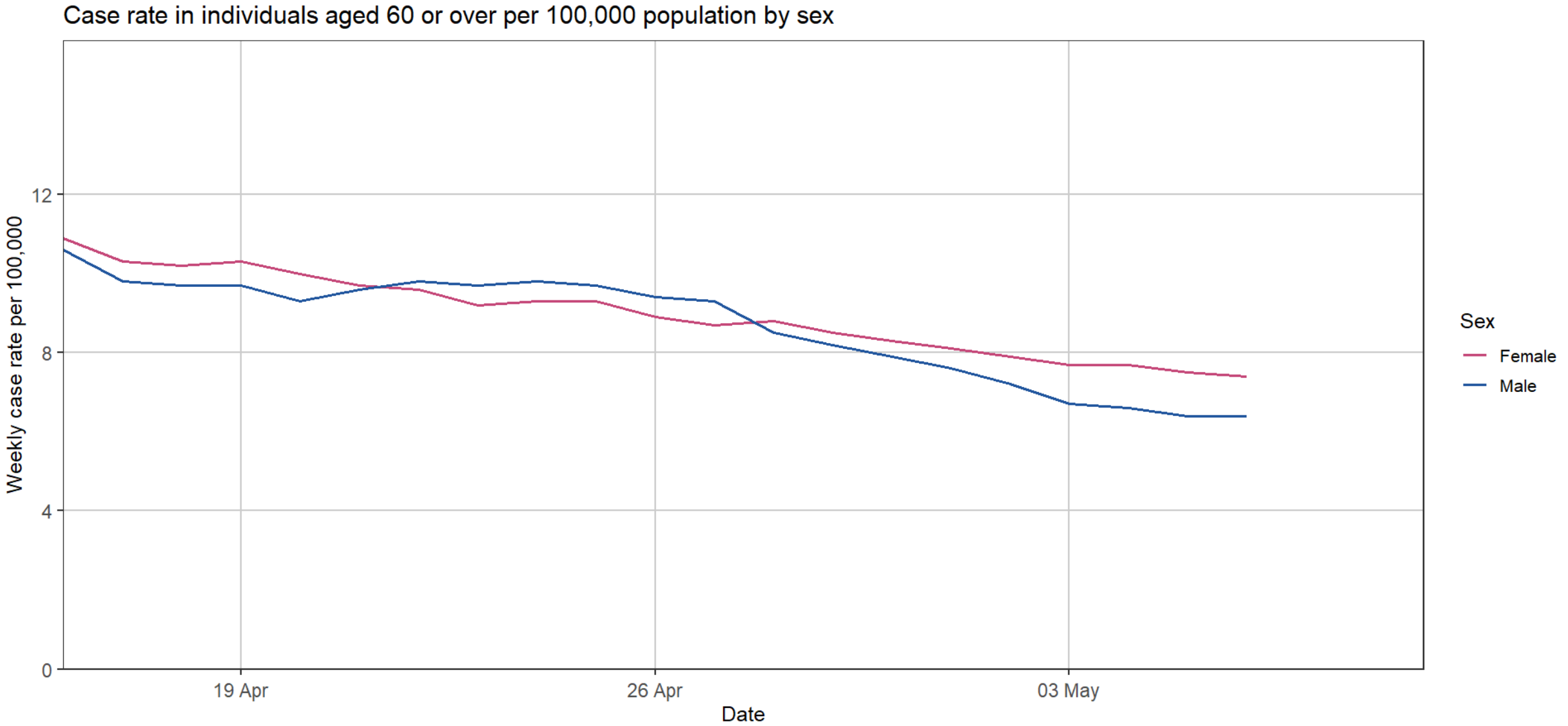


Note: Daily reporting of samples through the Pillar 2 laboratory network is complex and largely driven by geographical proximity and daily capacity to maximise turn-around time. There is no known systematic bias in the settings from which SGTF lab samples are sent but important to note that bulk testing from satellite channels (such as care homes) have less pressure on turn-around windows and are routinely processed outside of the SGTF lab network, meaning there may be some under-representation of SGTF in care home residents. NHS-hosted testing (e.g. of staff) is not represented in this data as processed through Pillar 1

Cases, positivity & testing

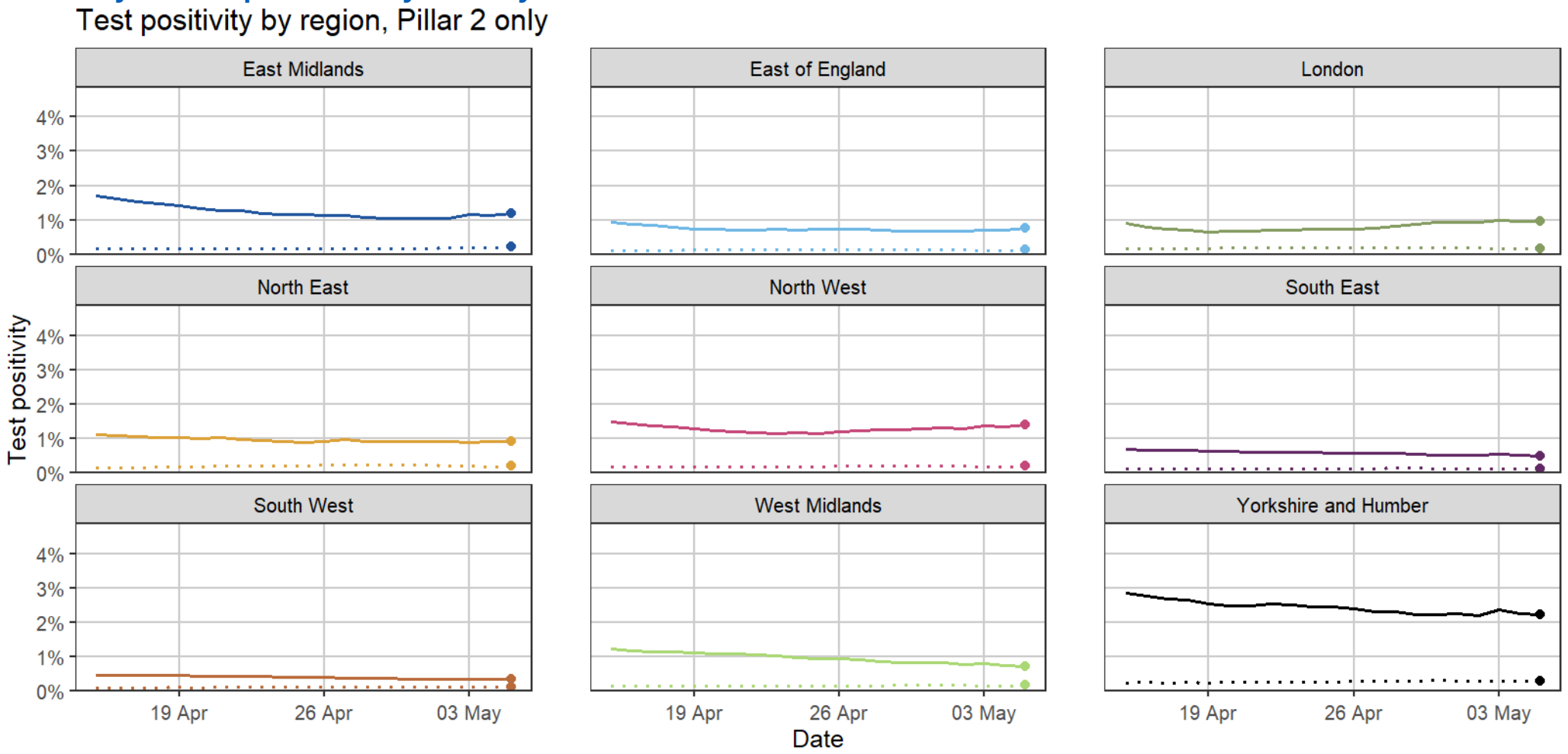
Case rate in England across both pillars 1 and 2 (weekly) aged 60 or over

Data up to 06 May 2021



Percentage of individuals testing positive in England across pillar 2 (weekly) by test type and region

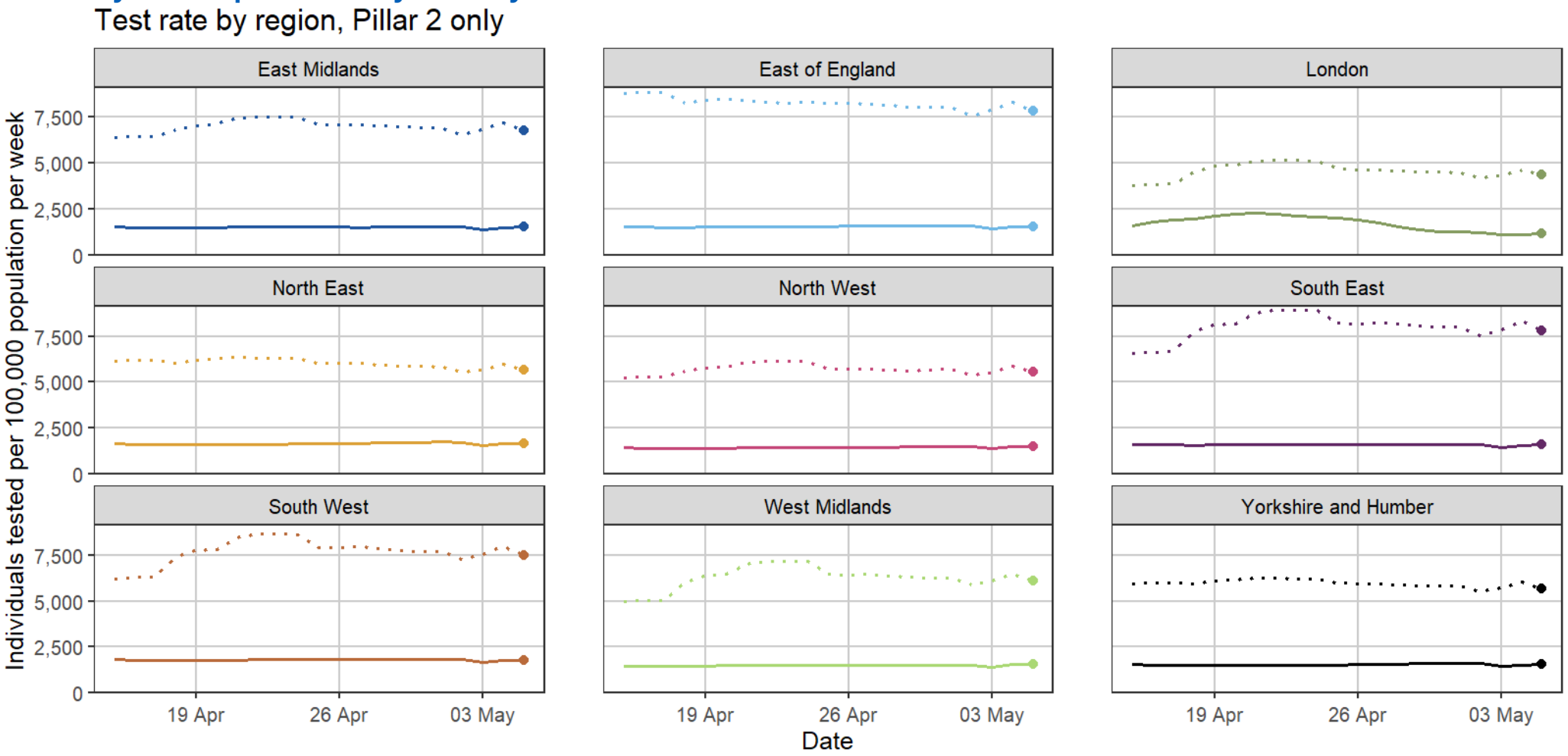
Data up to 05 May 2021 - updated every Monday



Data deduplicated by calendar week, PCR positivity rates will differ to those produced using a rolling 7 day deduplication.
Test type deduplicated separately, therefore rates for LFD and PCR cannot be summed to give PCR or LFD total.

Individuals tested in England across pillar 2 (weekly) by test type and region

Data up to 05 May 2021- updated every Monday



Data deduplicated by calendar week, PCR rates will differ to those produced using a rolling 7 day deduplication.
Test type deduplicated separately, therefore rates for LFD and PCR cannot be summed to give PCR or LFD total.

Prevalence

Percentage prevalence of COVID-19 across England and Government Office regions – age breakdown

Date of report 7 May 2021 by PHE Joint Modelling Cell

Methodology

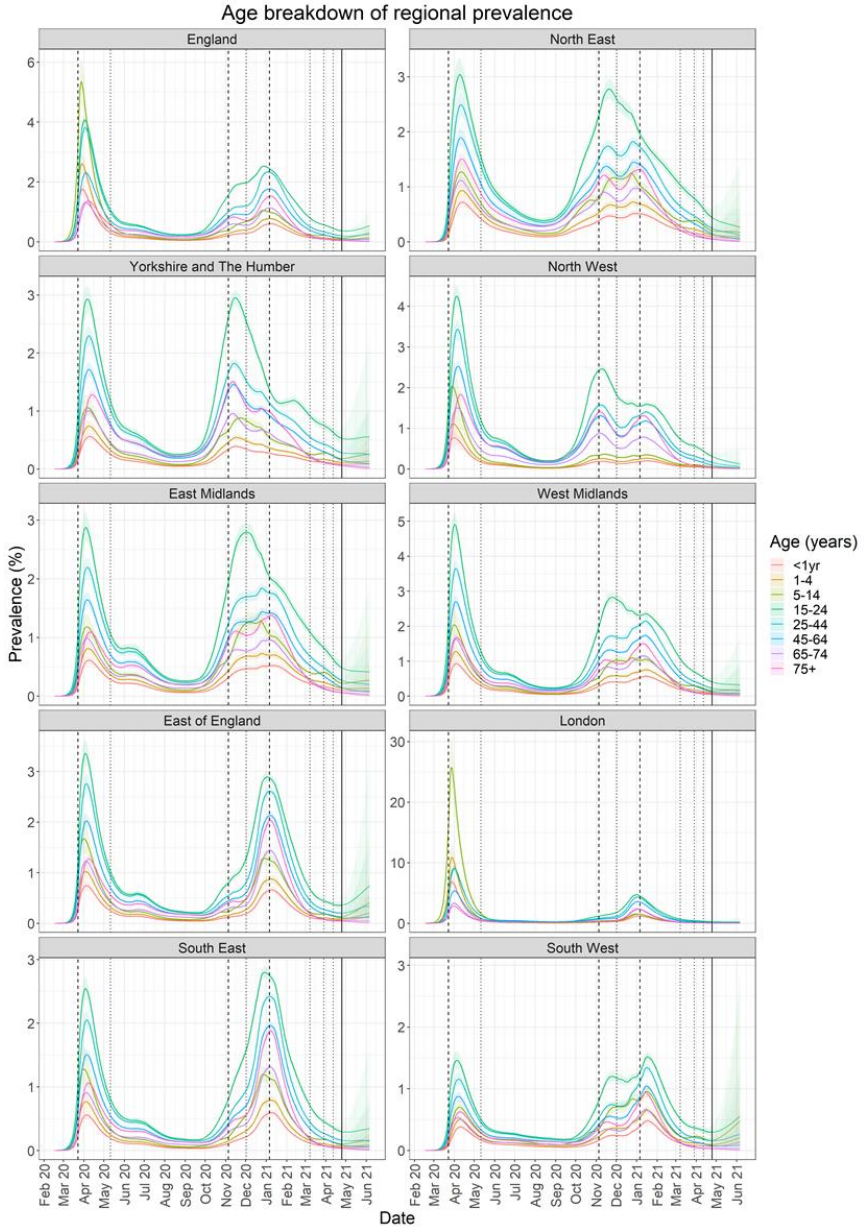
Prevalence estimates were generated by the Cambridge real-time model on **1 May 2021** using data up to **25 April 2021**.

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 here



ONS estimated positivity

ONS Regional Positivity in England 22 March – 02 May 2021

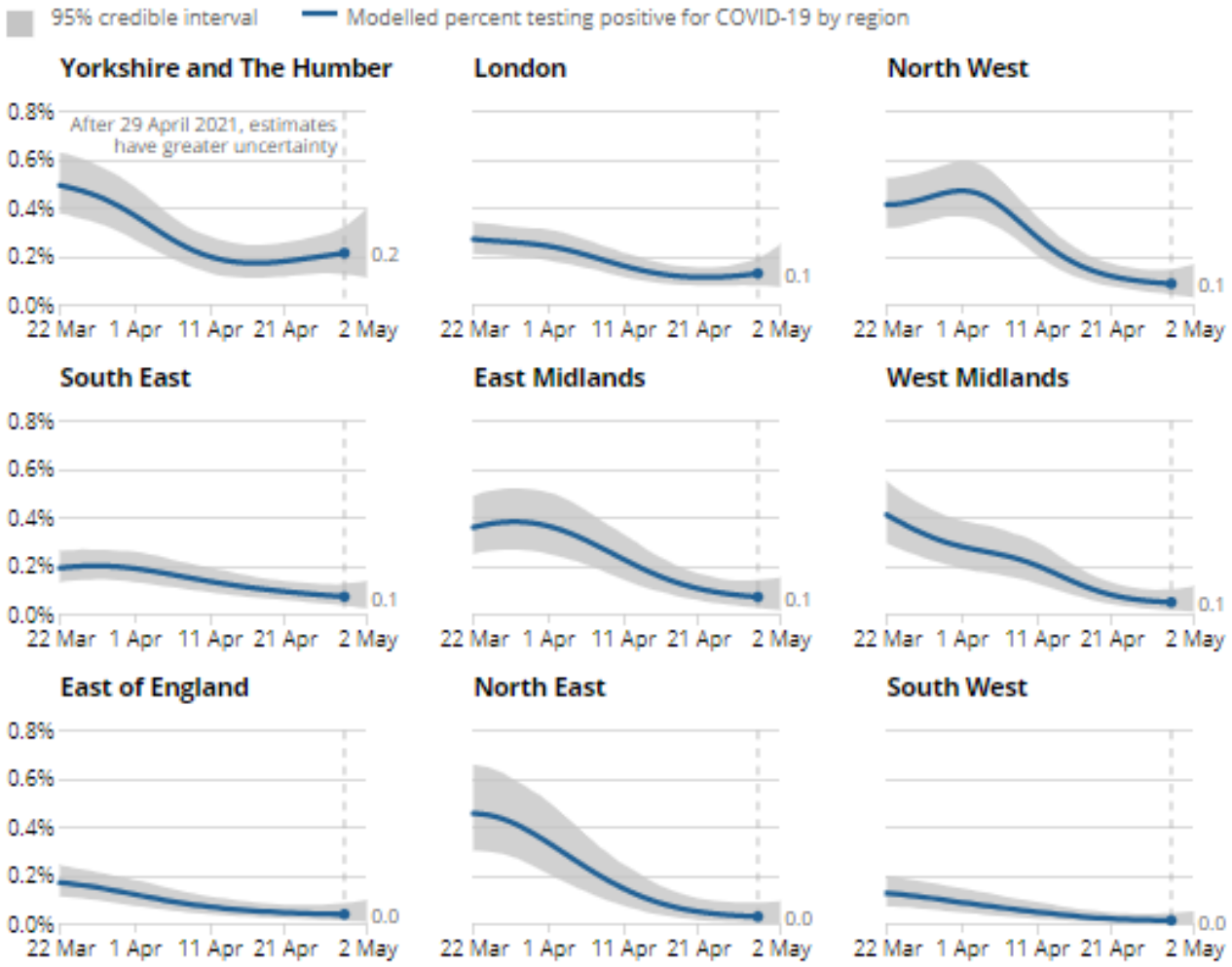
ONS: During the week ending 02 May 2021, the highest percentage of people testing positive was observed in Yorkshire and The Humber, although rates were low in all regions and credible intervals are wide.

In the week ending 02 May 2021, the percentage of people testing positive decreased in all regions except in Yorkshire and The Humber, the East of England and London.

In the East of England, the trend is uncertain in the week ending 02 May 2021, but the percentage testing positive decreased in the most recent two weeks.

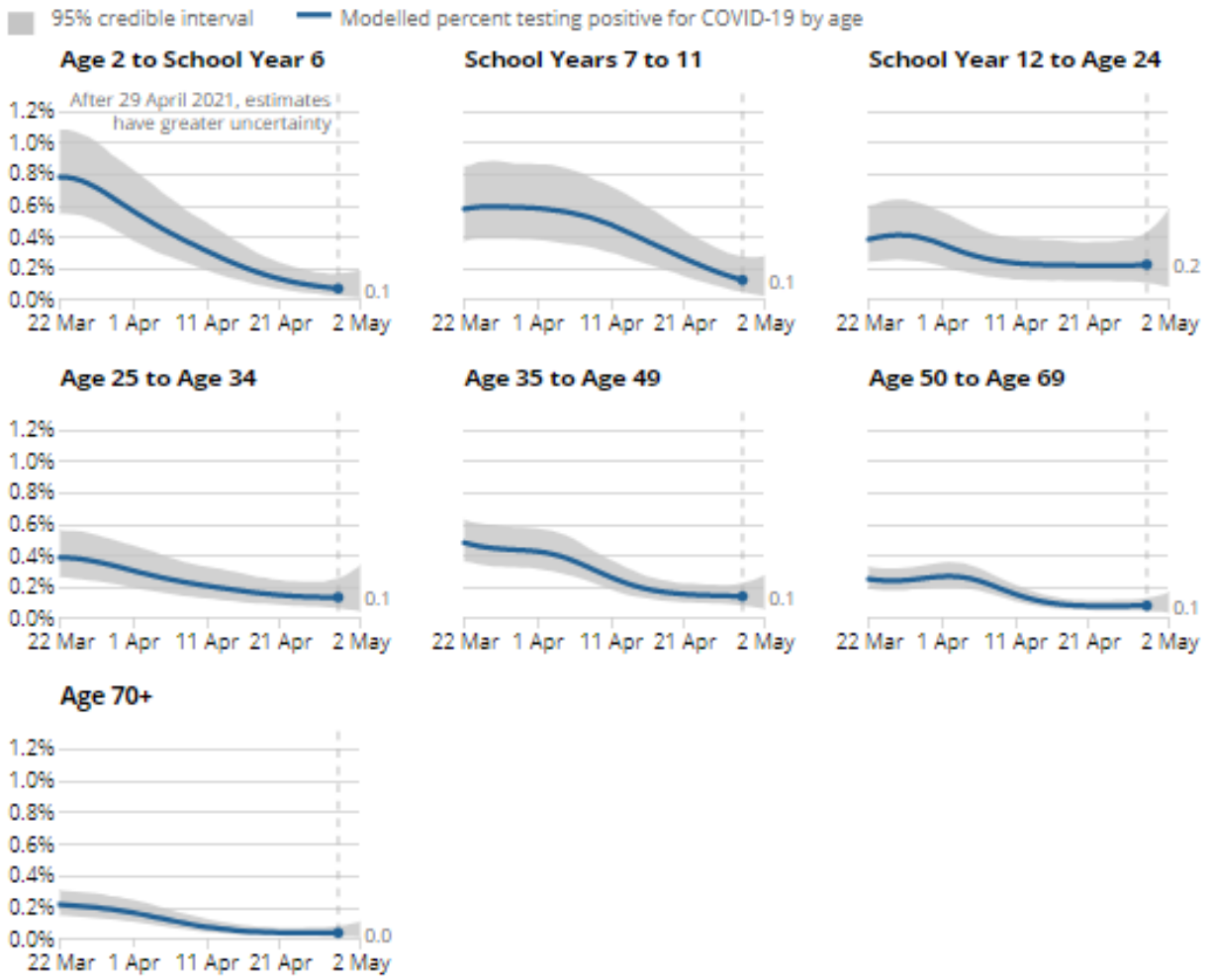
The trend is uncertain in Yorkshire and The Humber and London.

Estimated percentage of the population testing positive for COIVD-19 on nose and throat swabs by region since 22 March 2021 - 02 May 2021.



ONS Age Positivity in England 22 March – 02 May 2021

Estimated percentage of the population testing positive for COVID-19 on nose and throat swabs by age 22 March – 02 May 2021



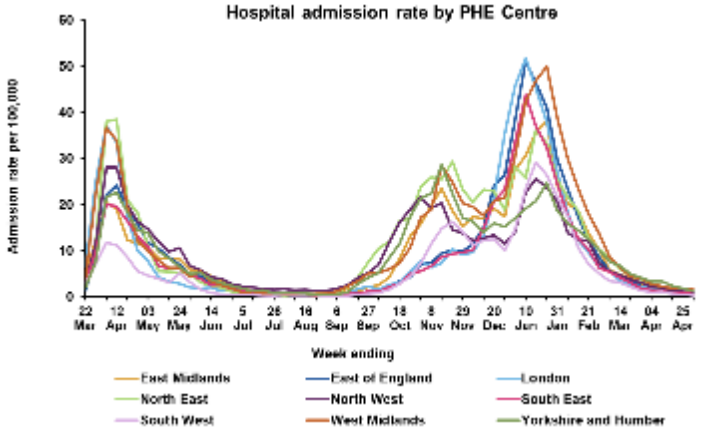
ONS: In the week ending 02 May 2021, the percentage of people testing positive continued to decrease in those aged 2 to 10/11 (School Year 11).

In the two weeks up to 02 May 2021, the percentage of people testing positive decreased for those aged 35 to 69 years, but the trend is uncertain in the most recent week.

In the week ending 02 May 2021, the trend is uncertain for all other age groups.

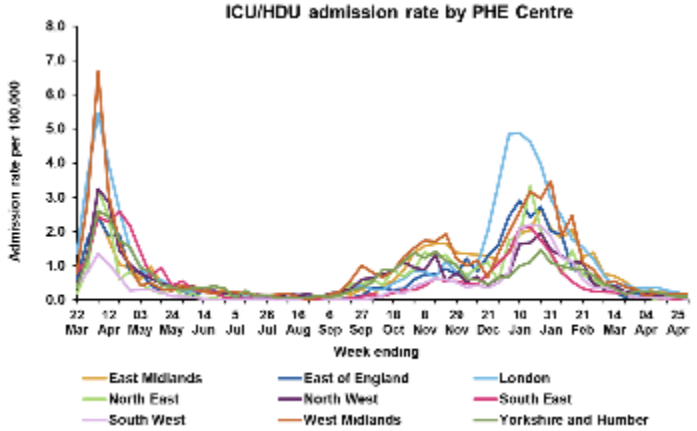
Hospitalisation

Hospitalisations by PHE Centre



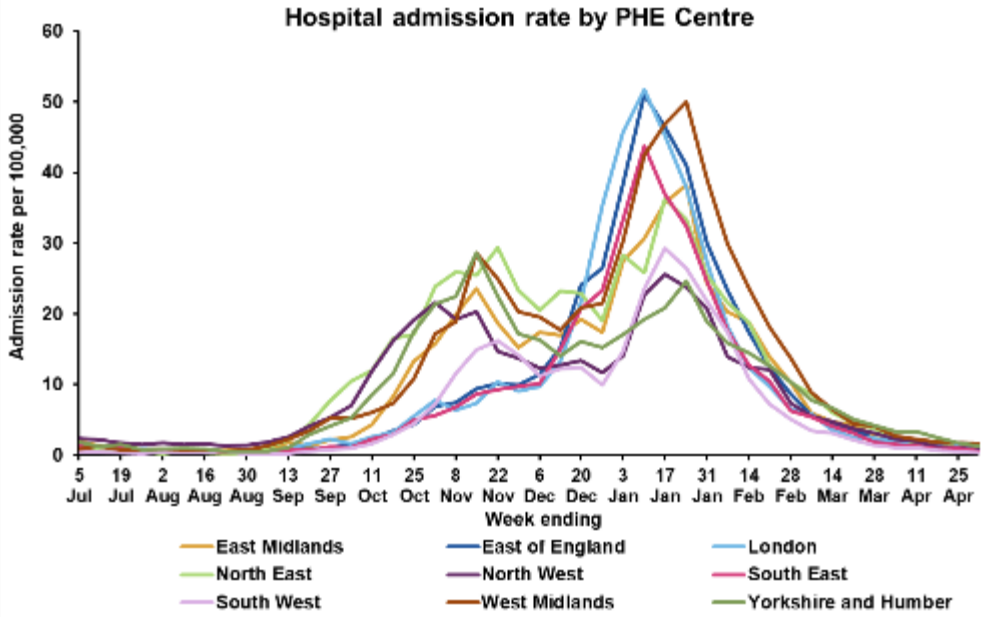
Weeks 12 to 17

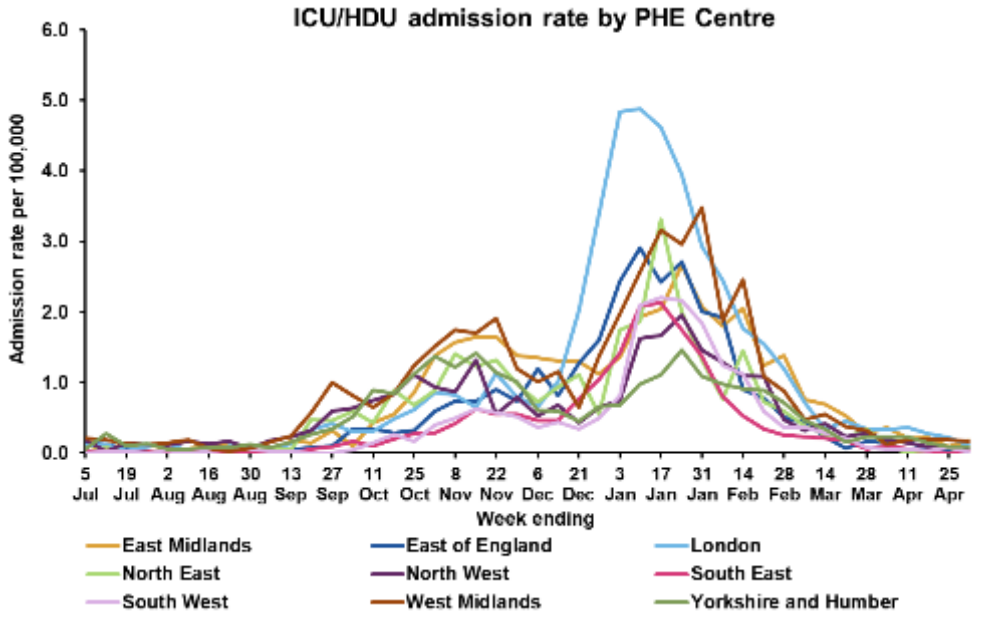
Weeks 27 to 17



Weeks 12 to 17

Weeks 27 to 17

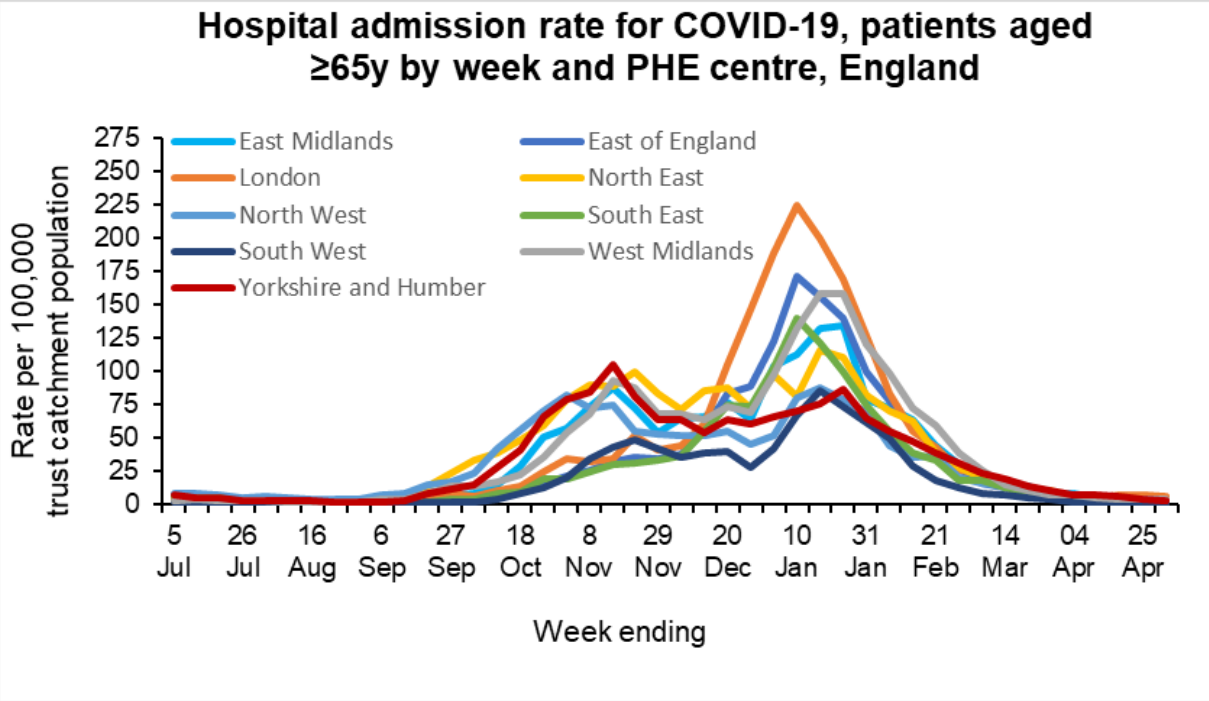


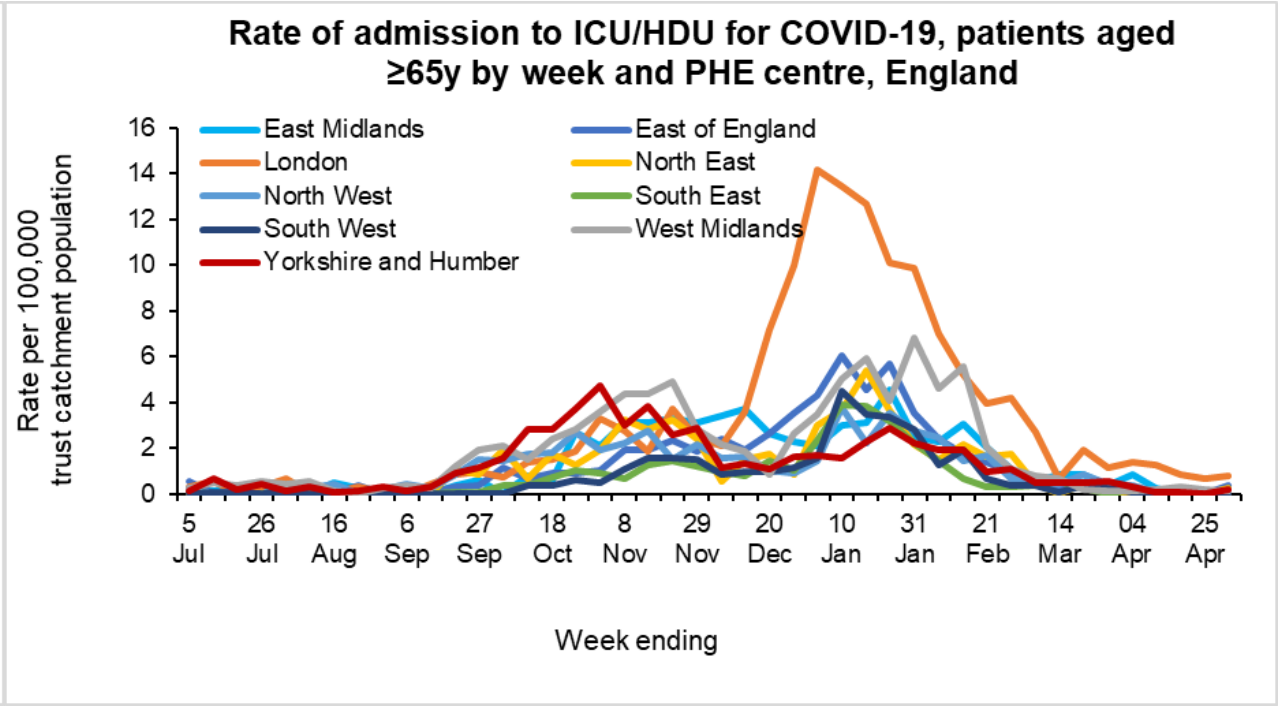


Hospital admissions refers to admissions to all levels of care inclusive of ICU/HDU admissions

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

Hospitalisations by PHE Centre and age 65 years and over

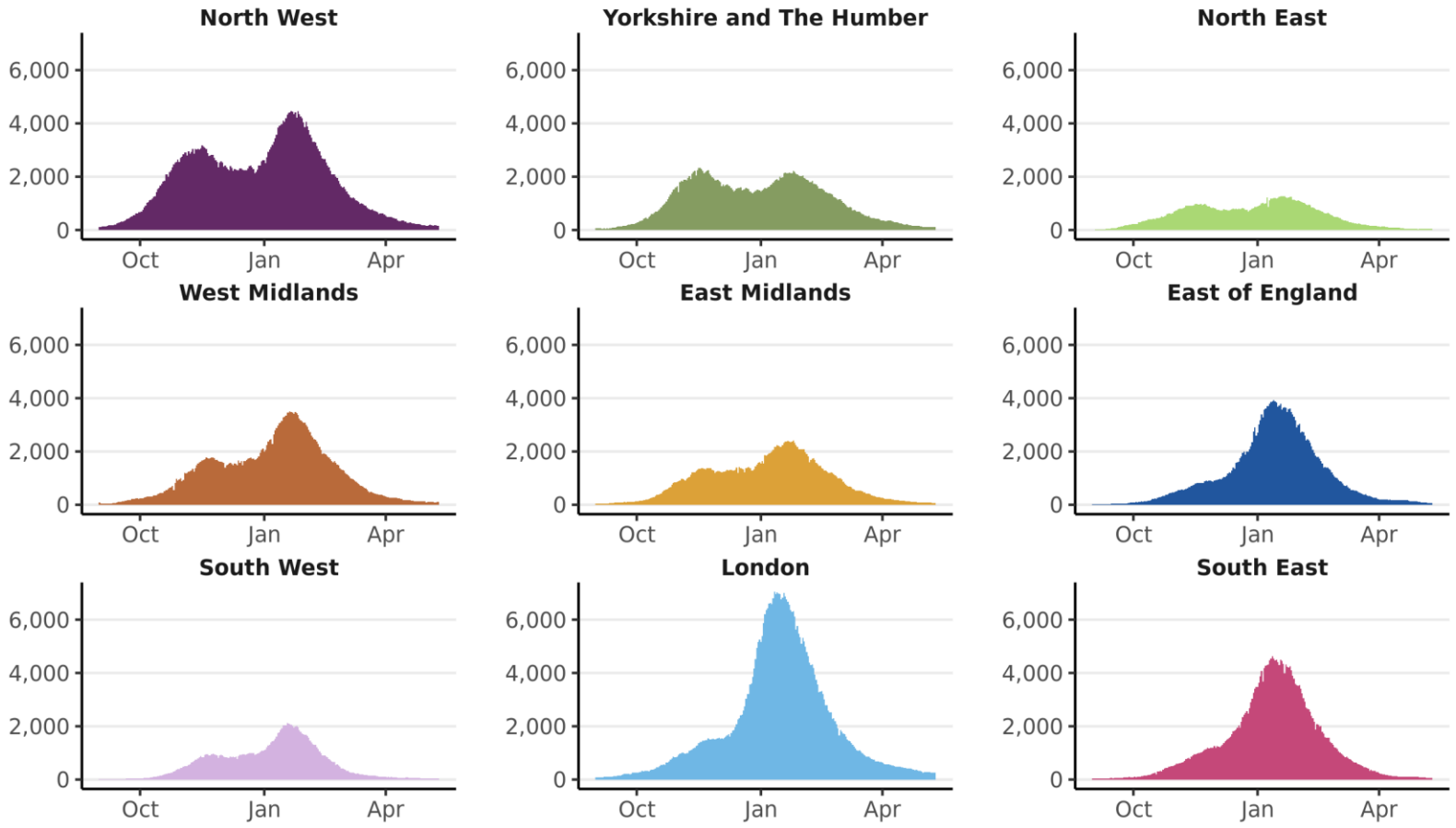




Hospital admissions refers to admissions to all levels of care inclusive of ICU/HDU admissions
Source: PHE Severe Acute Respiratory Infection surveillance web tool - SARI-Watch

Patients in hospital by region

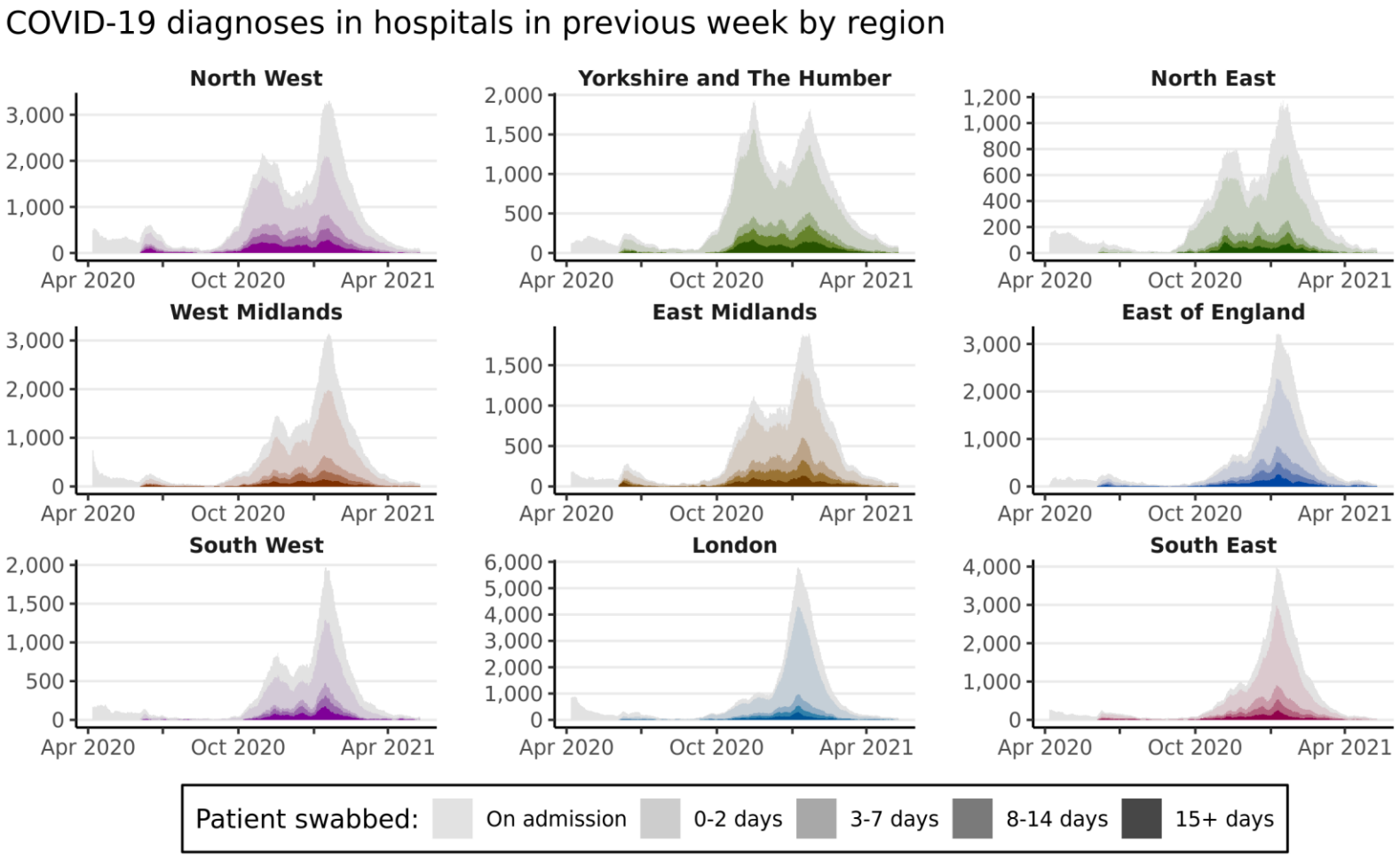
Daily count of confirmed COVID-19 patients in hospital at 8am by region



NOTE: Counts are based on bed occupancy, not new admissions.

Source: NHS England & Improvement COVID-19 Hospital Activity Data, from 01 September 2020 to 10 May 2021. Produced by Joint Biosecurity Centre.

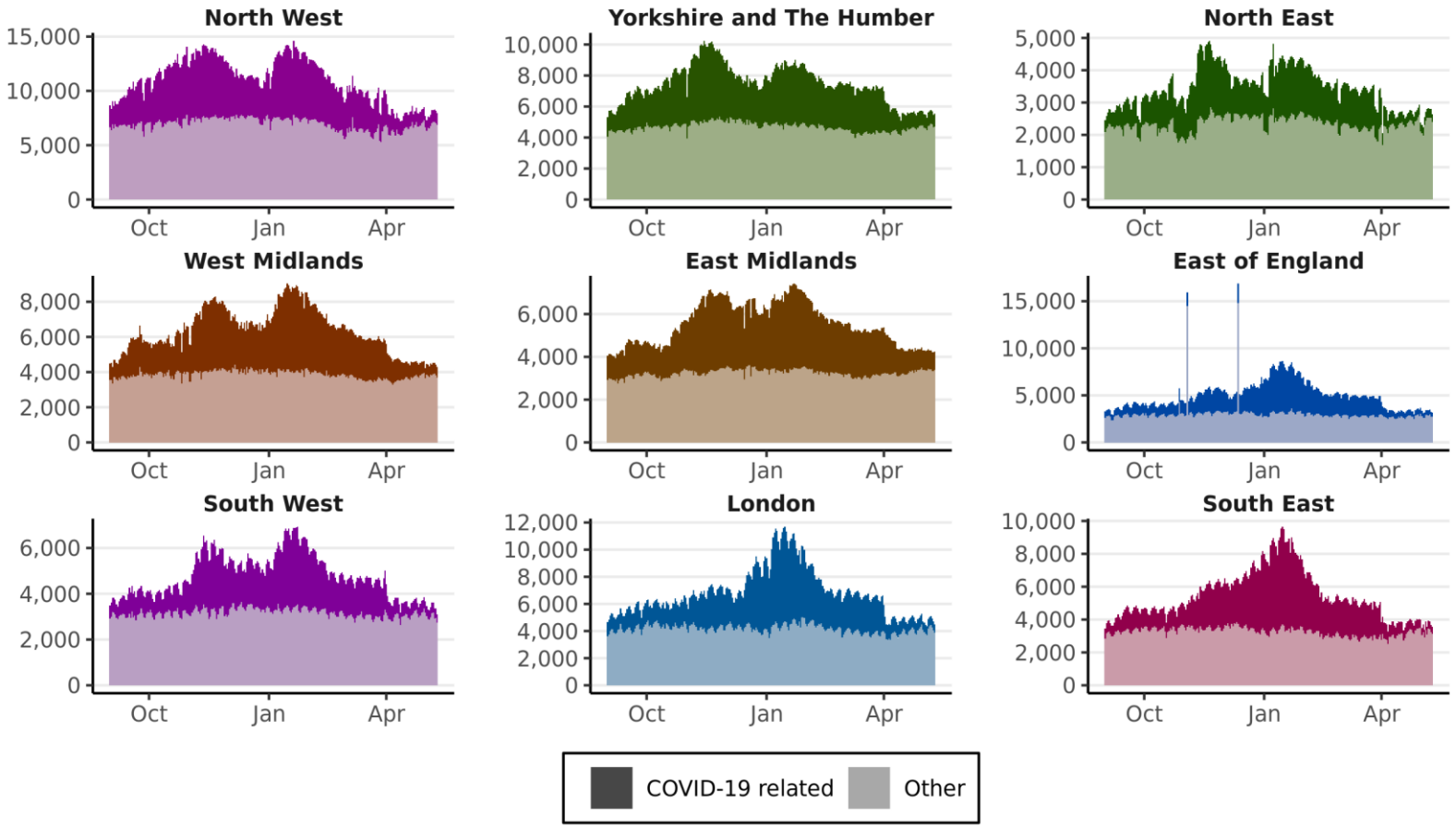
COVID-19 diagnoses in hospitals by region



Source: NHS England & Improvement COVID-19 Hospital Activity Data, from 07 April 2020 to 10 May 2021. Produced by Joint Biosecurity Centre.

NHS staff absences by region (COVID-19 related and other)

Daily NHS staff absences by region

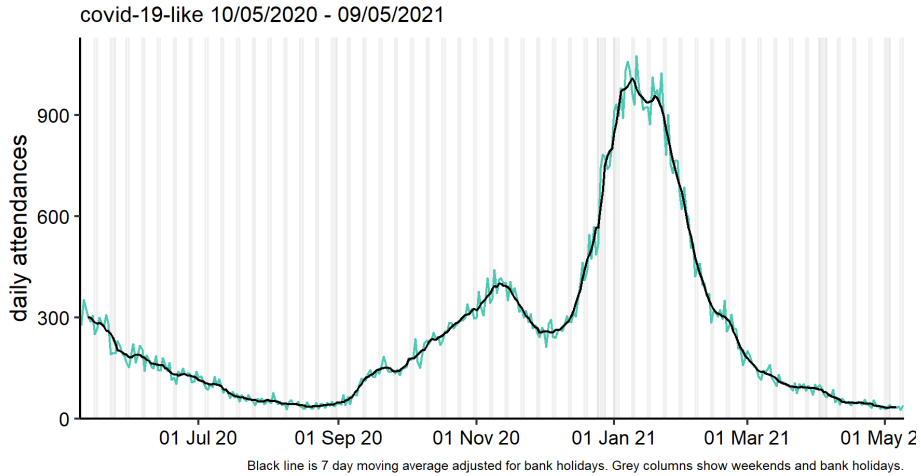


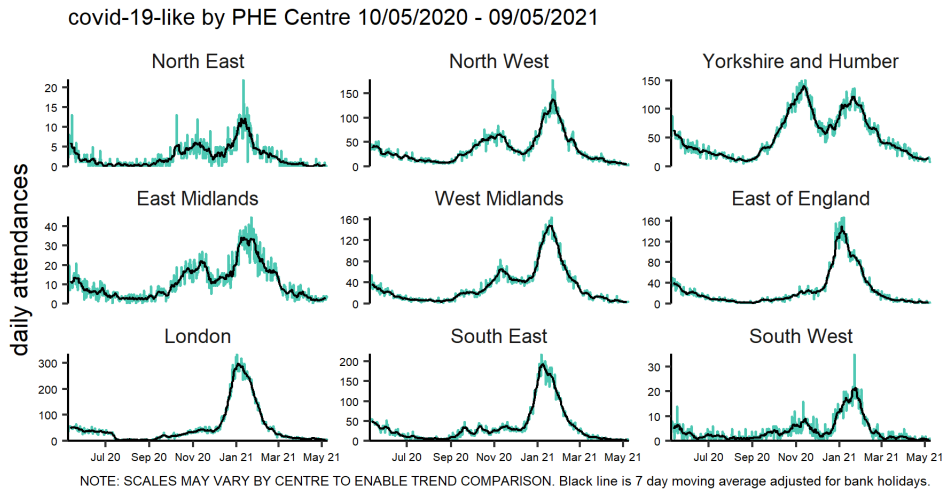
Source: NHS England & Improvement COVID-19 Hospital Activity Data, from 01 September 2020 to 10 May 2021. Produced by Joint Biosecurity Centre.

EDSS attendances

Emergency Department Syndromic Surveillance System COVID-19-like attendances

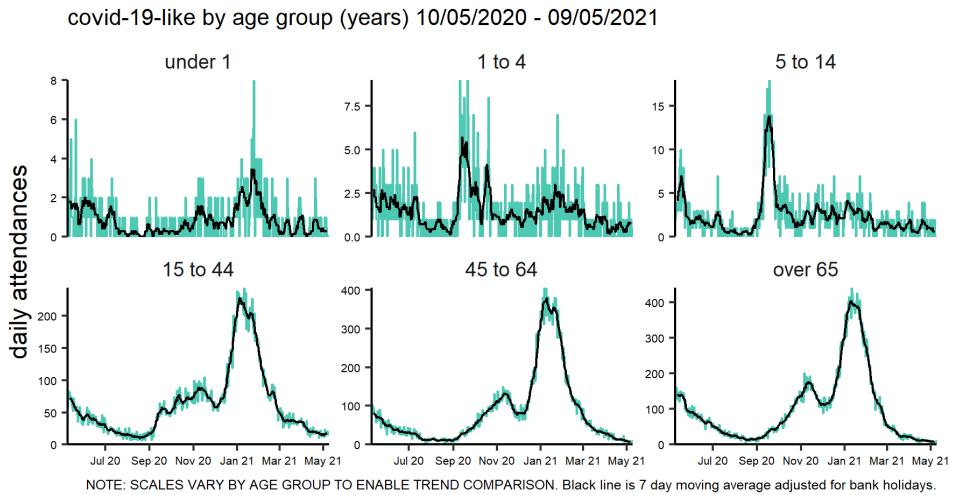
Trends in daily ED COVID-19-like attendances, national, PHE Centre and by age (to 9 May 2021)



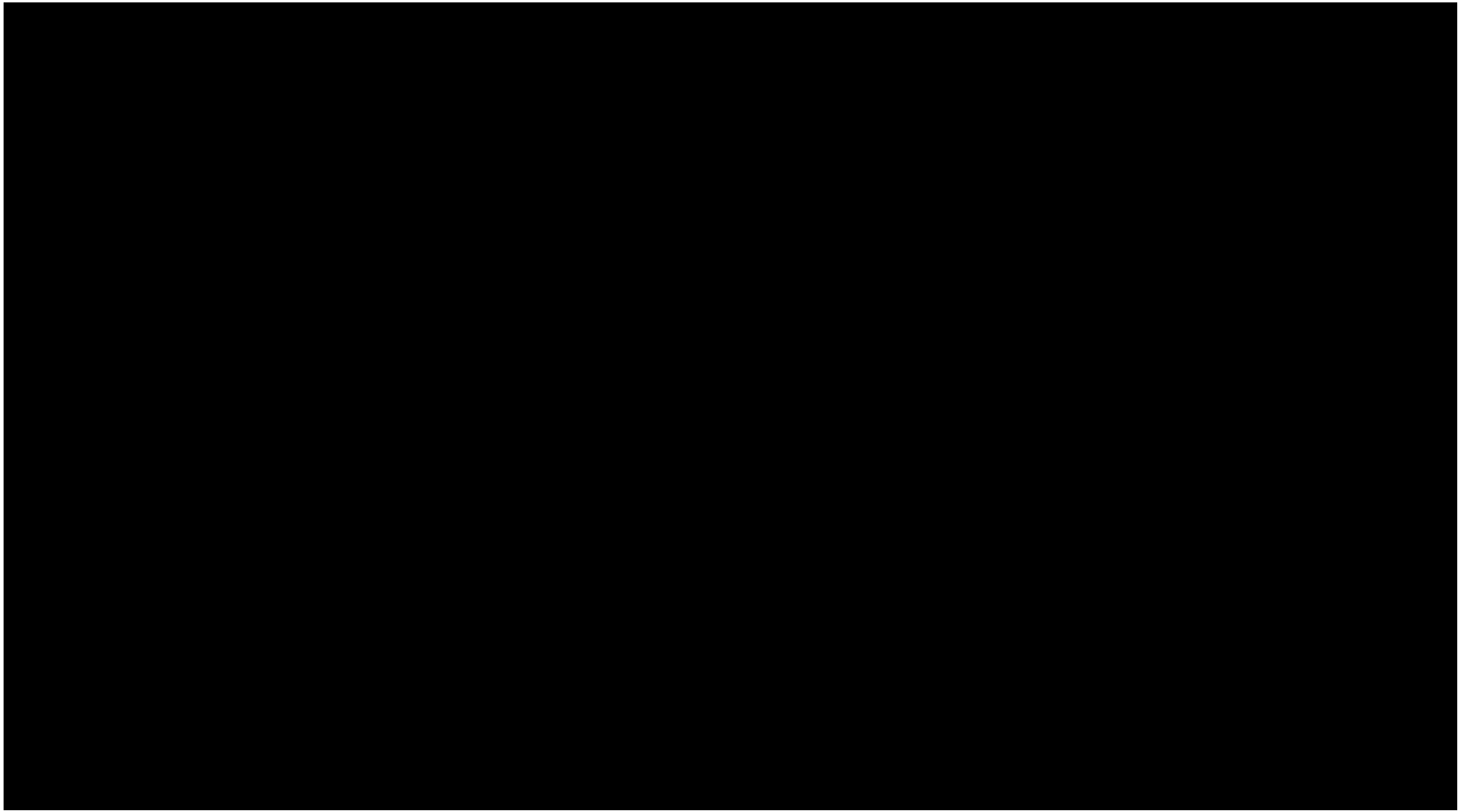


Emergency Department Syndromic Surveillance System (EDSSS) COVID-19-like attendances.

- 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

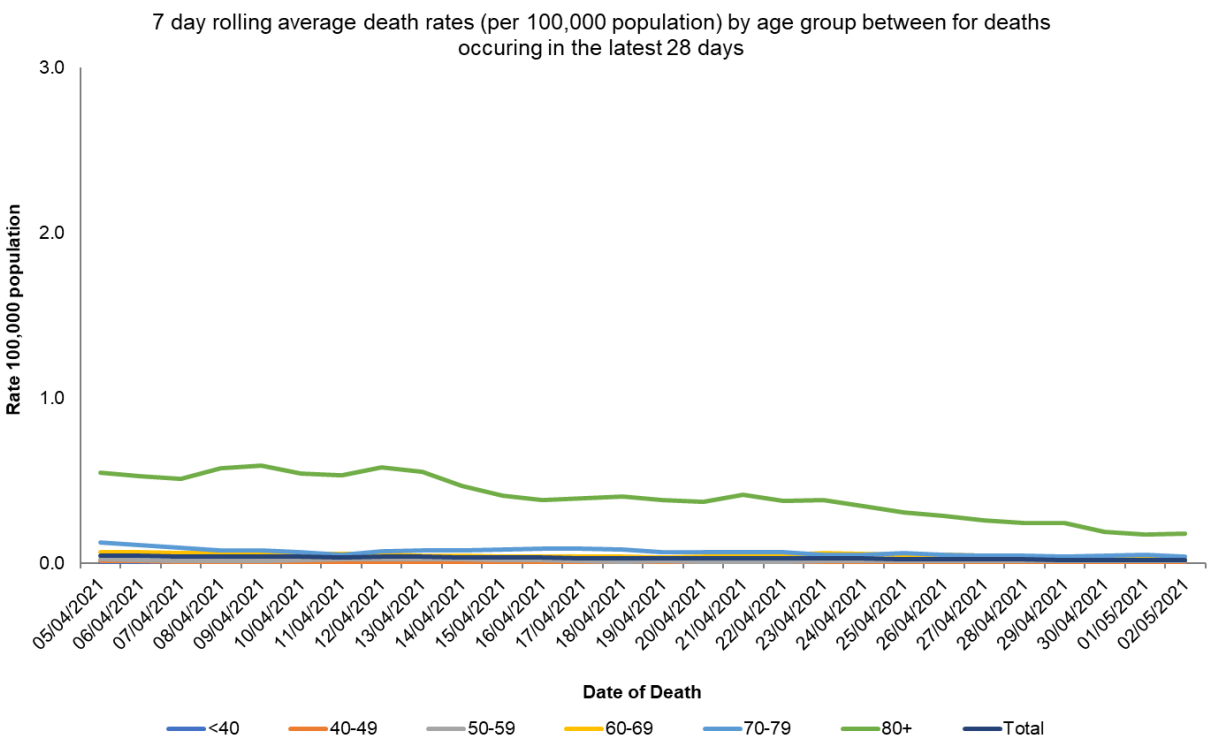


Further information and weekly EDSSS reports containing COVID-19-like attendance surveillance data is available from the PHE EDSSS bulletin.

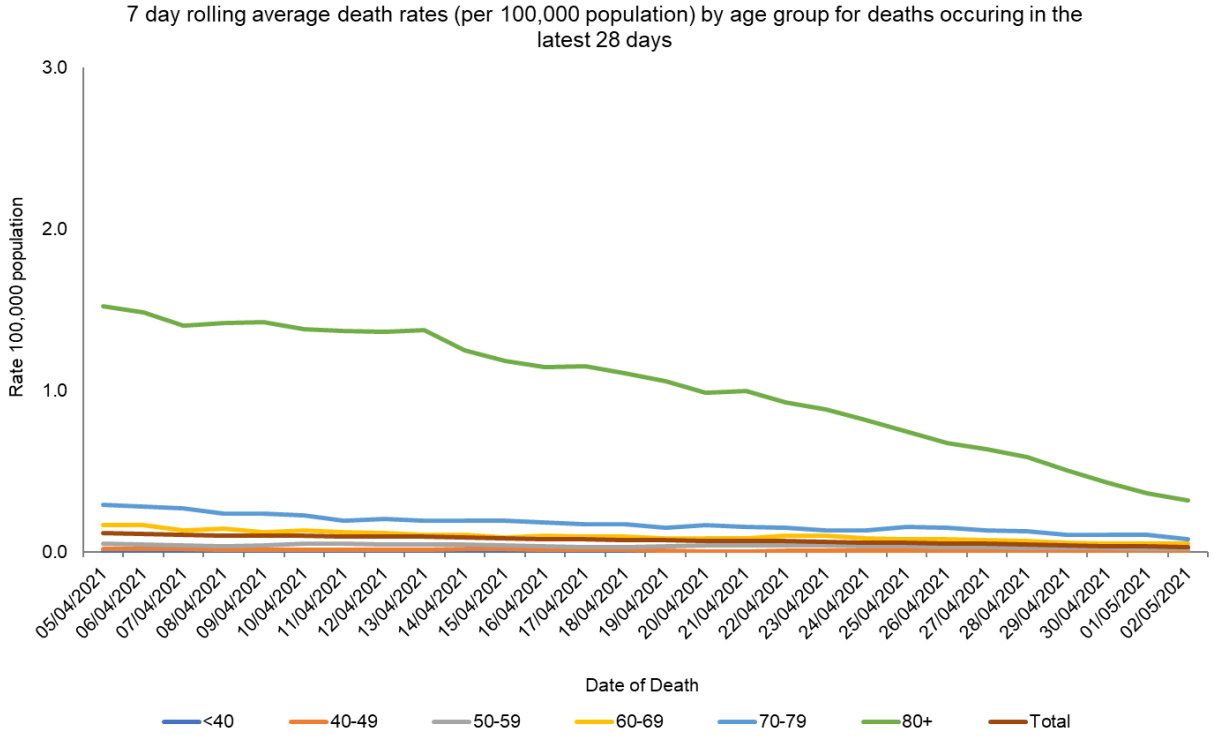


Mortality rate per 100,000 population by age group (seven day rolling average)

Deaths within 28 days of a positive specimen



Deaths within 60 days of a positive specimen or on death certificate

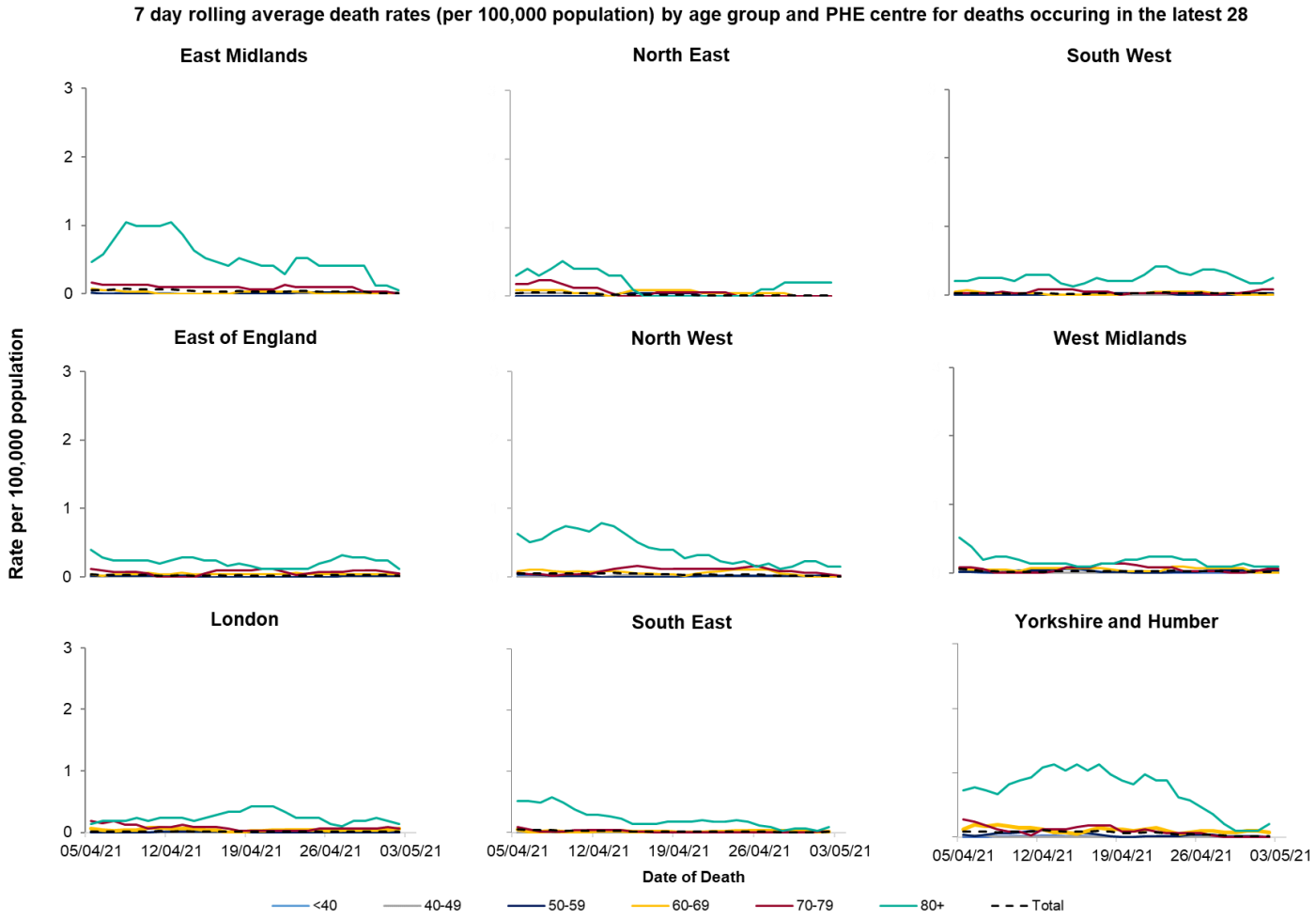


*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

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



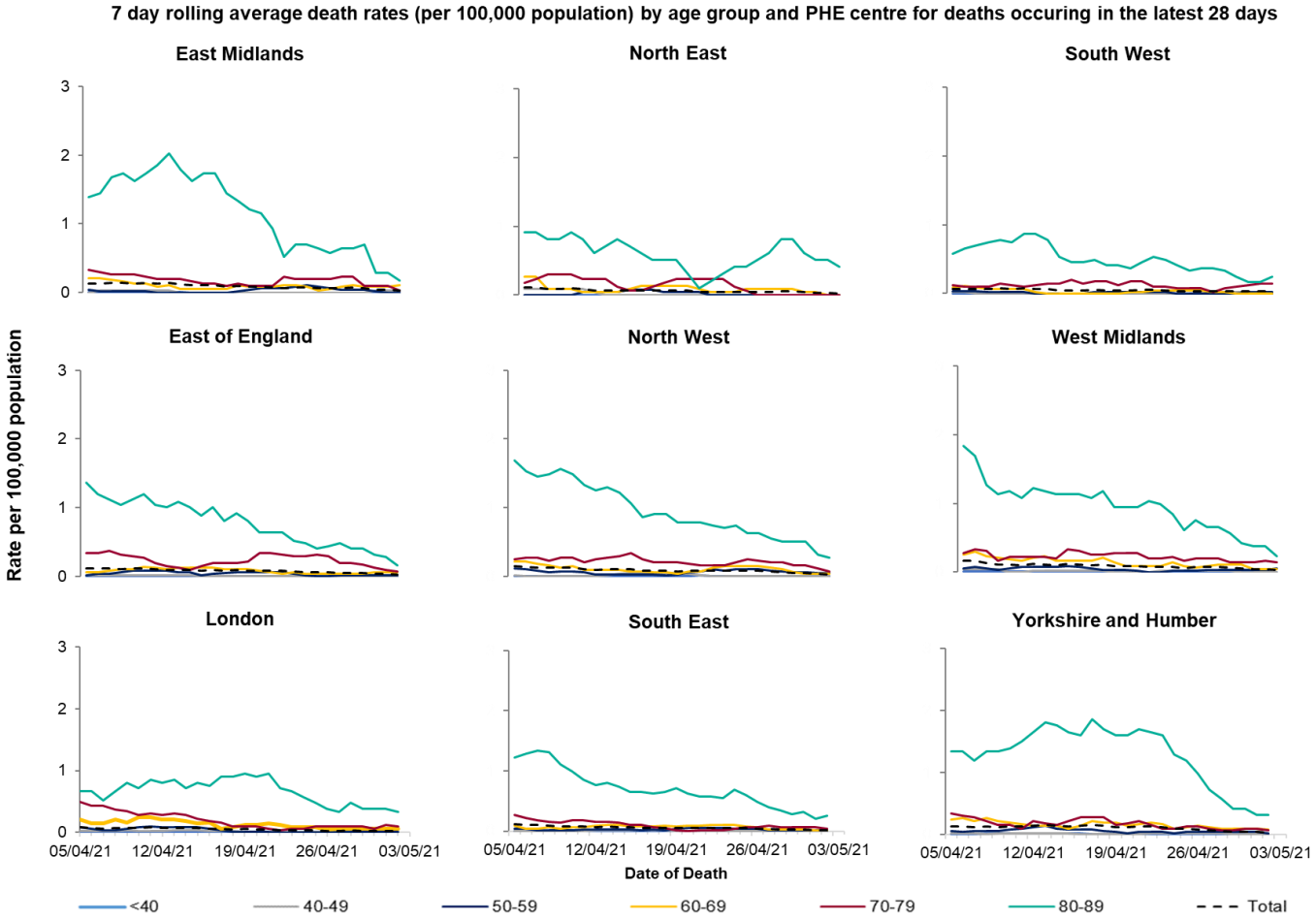
*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

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 and region (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



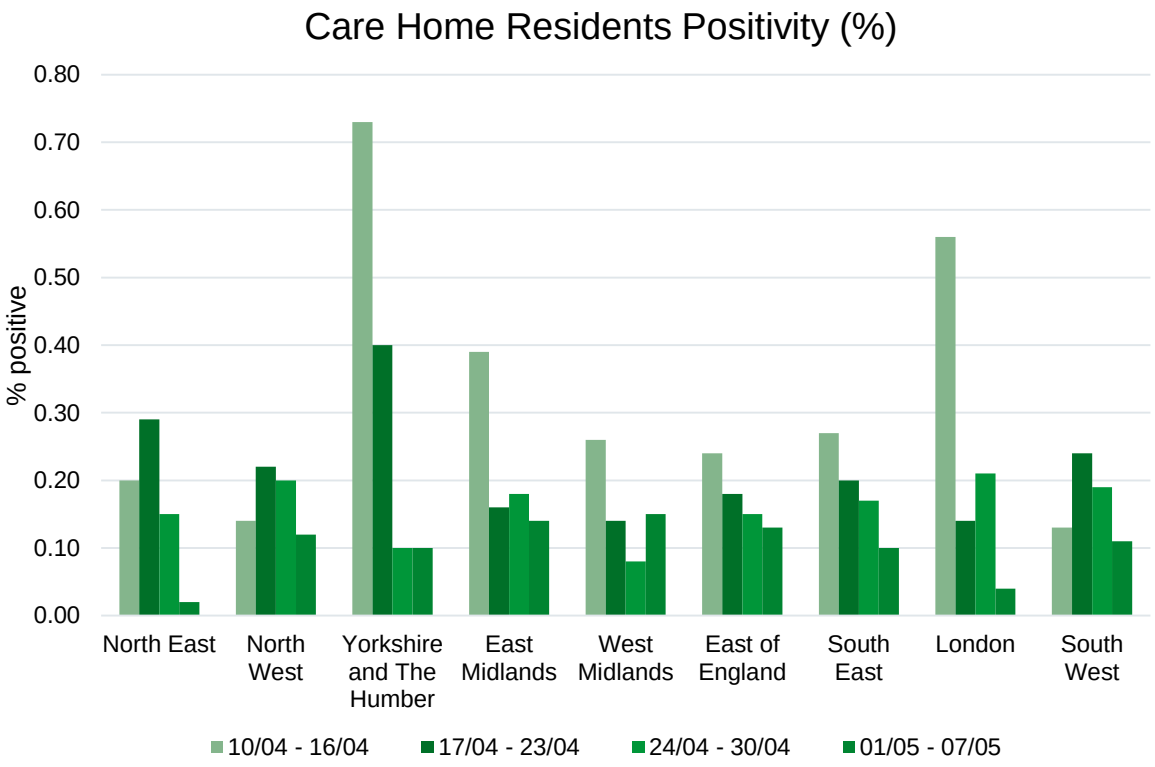
*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

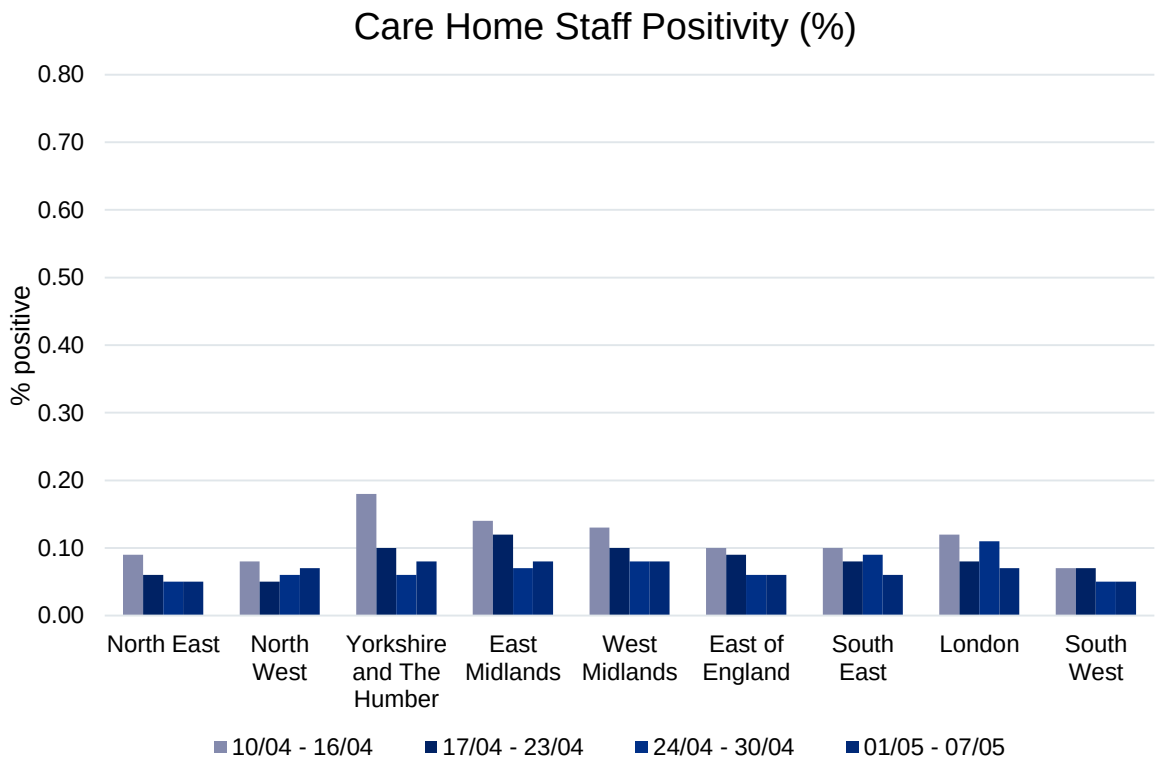
Death definition: a death within 60 days of a positive specimen or on death certificate

Prepared by PHE Epidemiology Cell

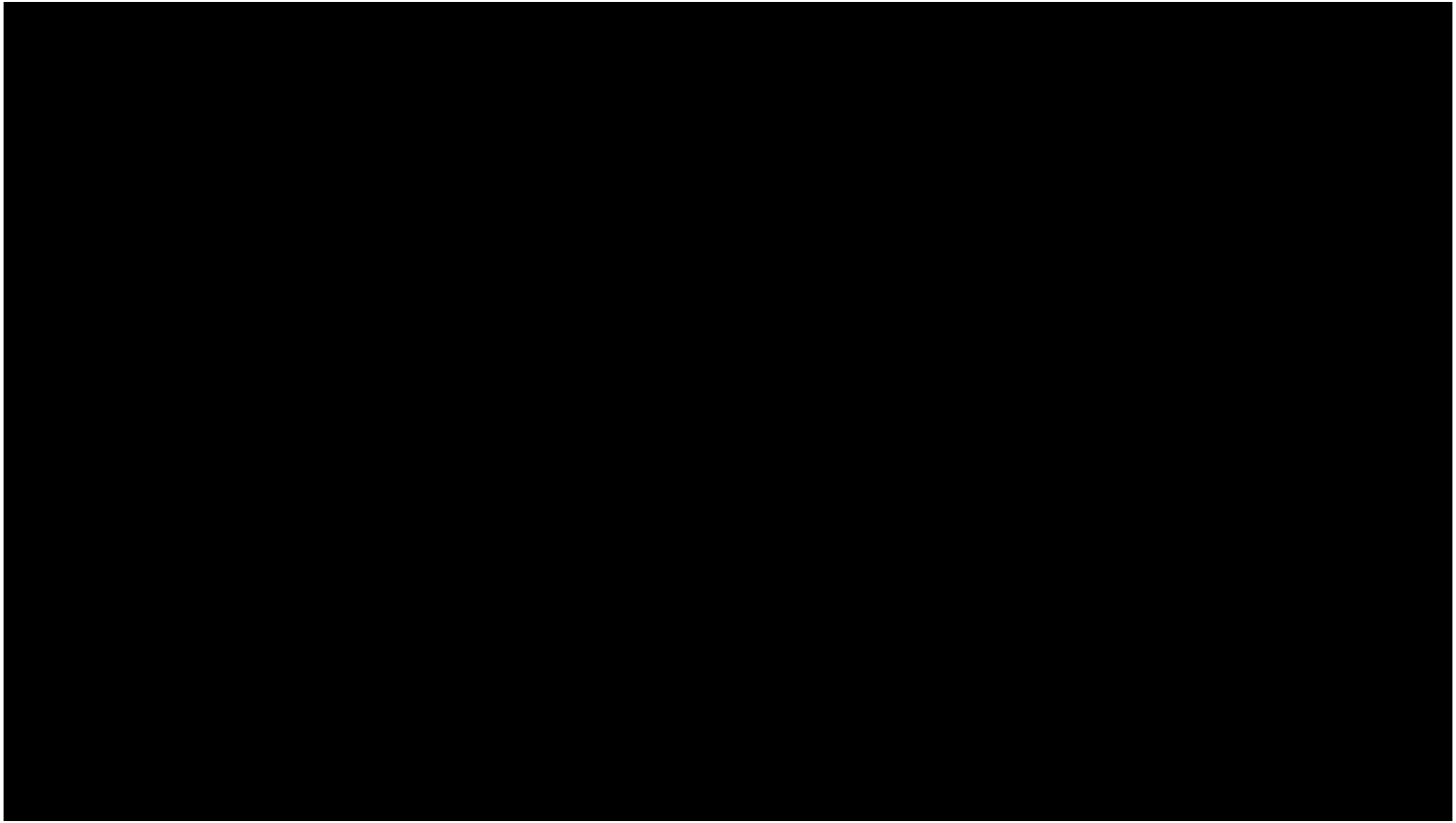
Care homes – cases & positivity

Care home resident and staff test positivity





Source: Foundry DHSC ASC Covid-19 Dashboard. Extracted 10/05/2021
Data presented by test date with a 3-day time lag applied to the most recent data.
Data from PCR tests conducted through the Whole Care Home Testing Programme. Care home residents are PCR-tested once every month and staff once every week under pillar 2. Only when a positive PCR result comes back do they test the whole care home under pillar 1.
Care home staff are identified as those where the patient has explicitly listed their occupation as one of: Care worker or home carer; Residential, day or domiciliary care manager or proprietor; or Senior care worker.
No deduplication has been applied. Staff undergo mid-week LFD testing in-between PCR tests and further enhanced tested may be carried out following identification of a positive case in a care home.



Waste water

National Summary

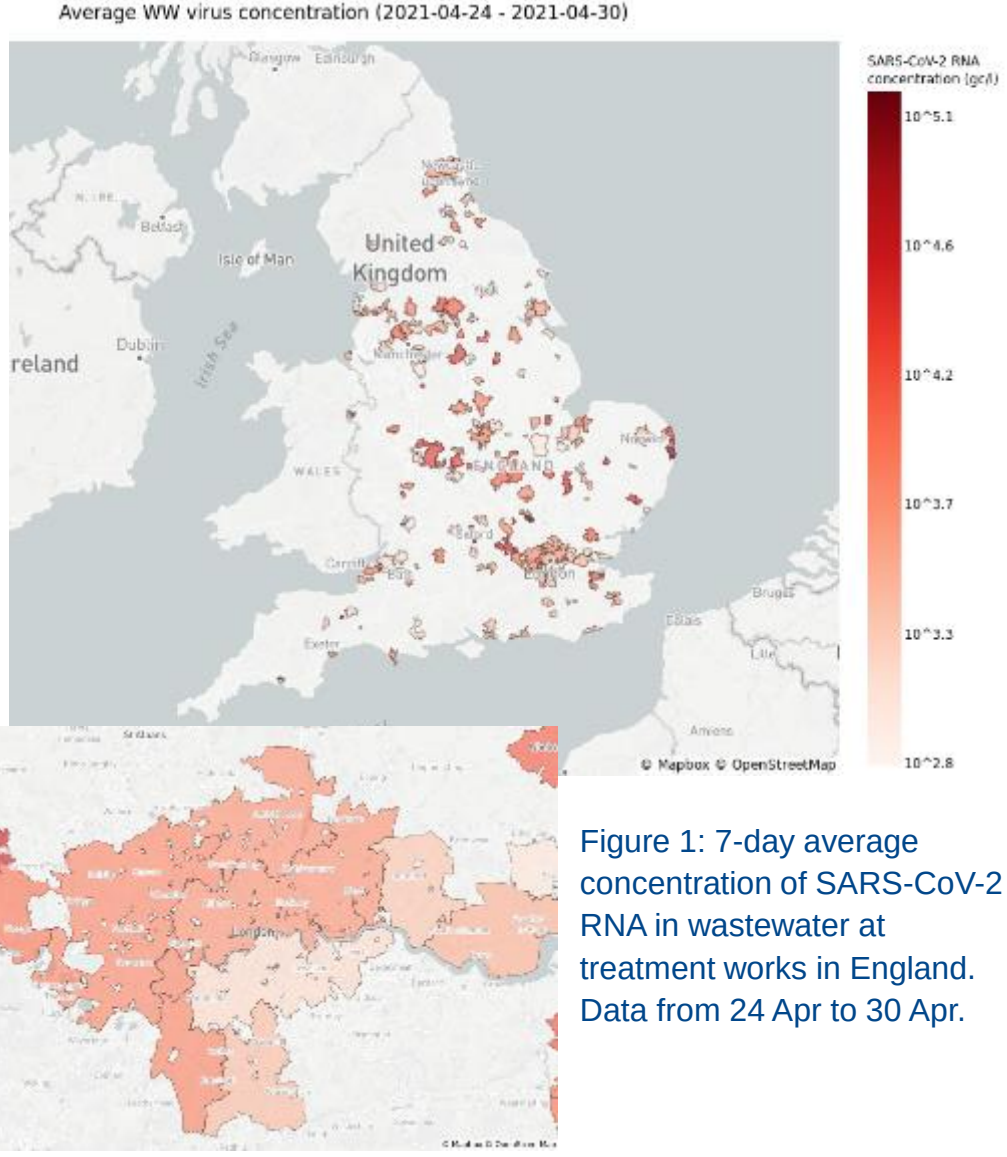


Figure 1: 7-day average concentration of SARS-CoV-2 RNA in wastewater at treatment works in England. Data from 24 Apr to 30 Apr.

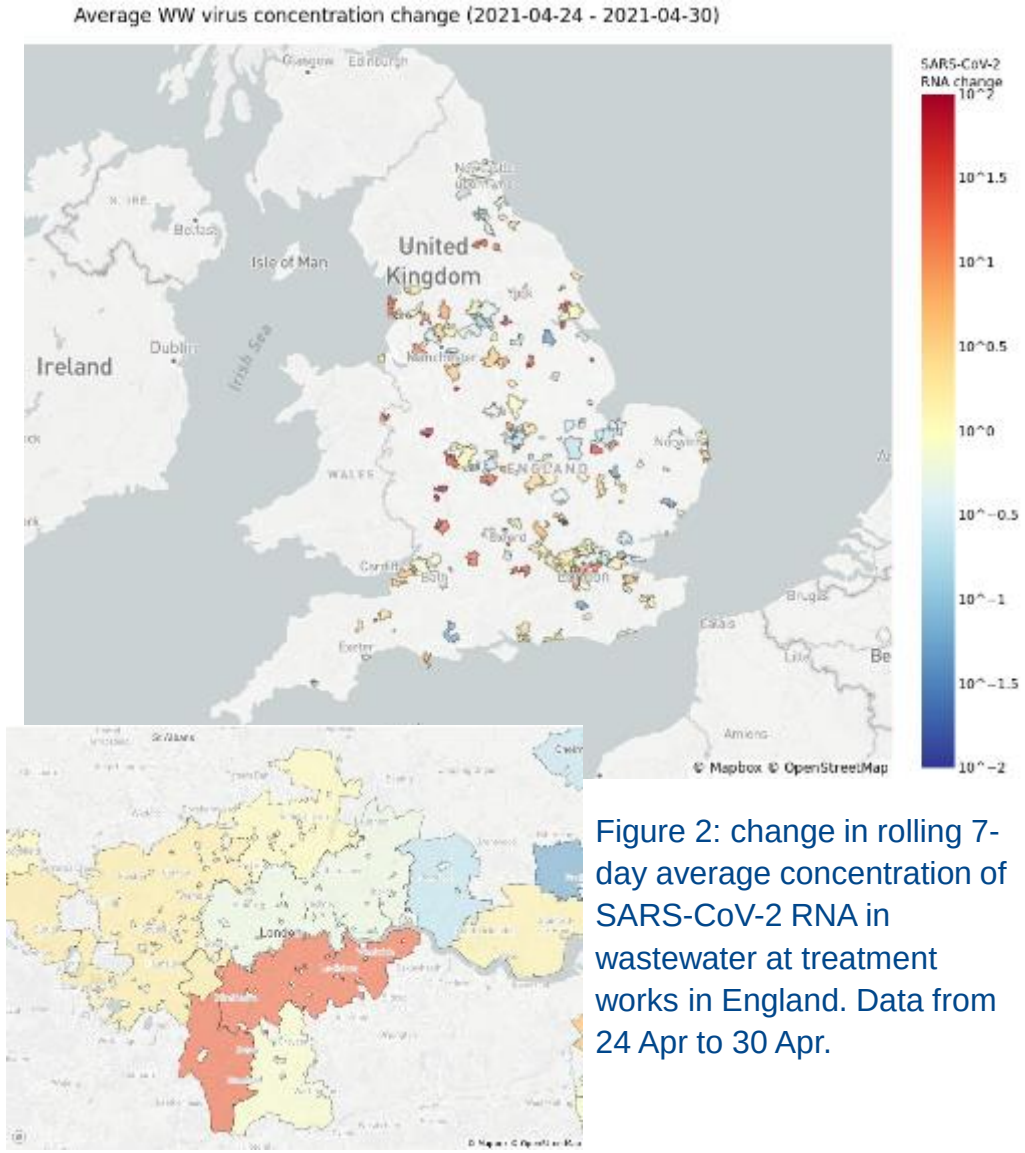


Figure 2: change in rolling 7-day average concentration of SARS-CoV-2 RNA in wastewater at treatment works in England. Data from 24 Apr to 30 Apr.

Figures 1 & 2 show analyses of wastewater from 244 sewage treatment works across England.

NHS Test and Trace

Areas with the highest levels of SARS-CoV-2 RNA in wastewater from treatment works.

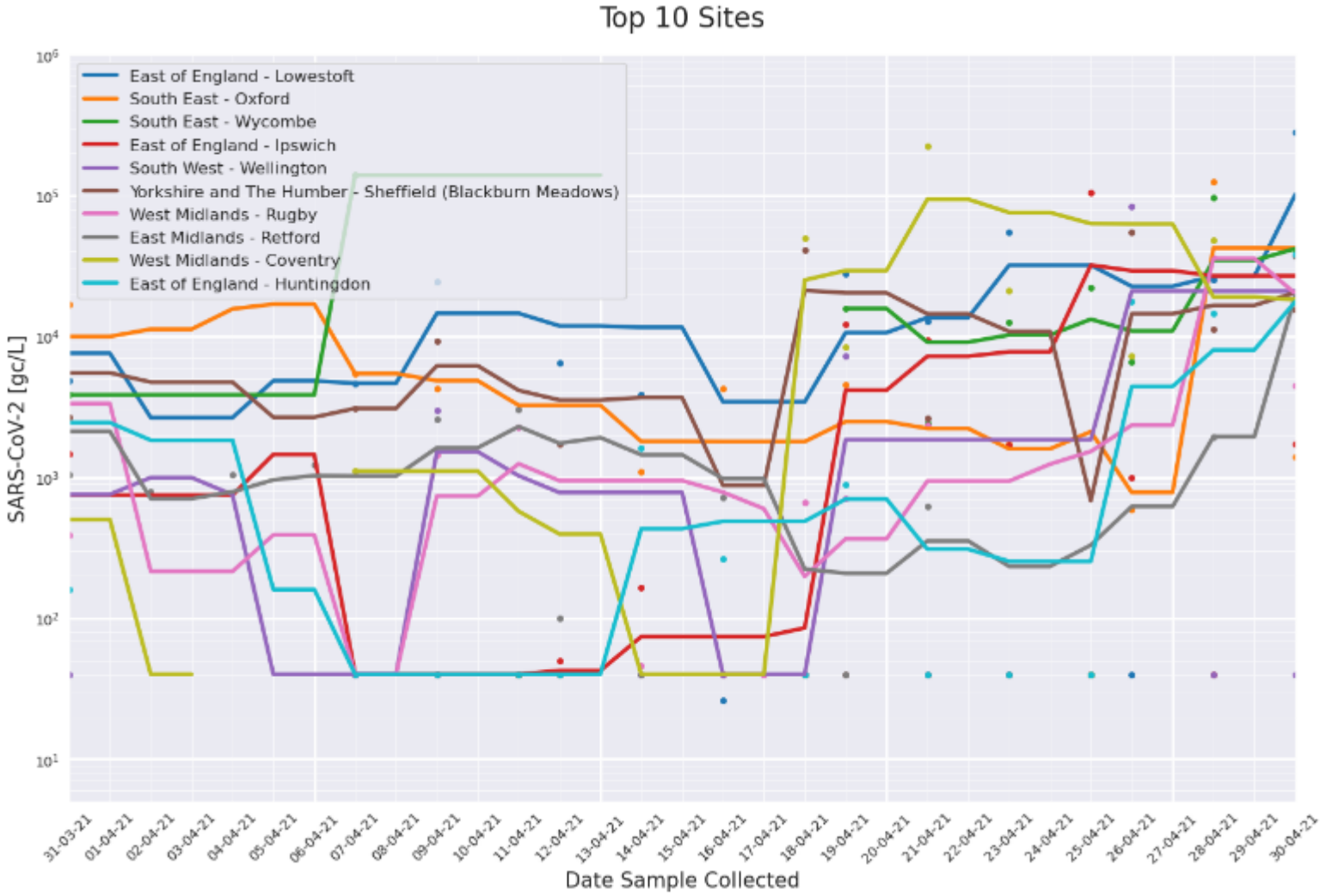


Figure 4: The ten areas with the highest concentrations of SARS-CoV-2 RNA detected in wastewater (7-day average). Data to 22 April 2021.

Coventry, Lowestoft, and Sheffield (Blackburn Meadows) were in the top-ten last week, indicating persistence in these areas.

NHS Test and Trace

Source of data & signposting

Sources of data and signposting

Internal reports/updates

- Weekly COVID19_Epidemiological Internal Update report
- COVID-19 Exceedance Daily Review
- All regions PHE Situations of Interest daily update
- PHE NHS Test and Trace: Weekly Contact Tracing Report
- PHE Daily Care Home Report
- PHE Educational settings weekly report for NERVTAG
- COVID-19: nowcast and forecast

Published reports

- National flu and COVID-19 surveillance reports
- Weekly Coronavirus Disease 2019 (COVID-19) Surveillance Report
- Monthly COVID-19: reported SARS-CoV-2 deaths in England
- ONS - Coronavirus (COVID-19) Infection Survey, UK
- REACT-1 round 7 updated report

Data sources

Second Generation Surveillance System (SGSS)

Data as of **10 May 2021** 00:00hrs

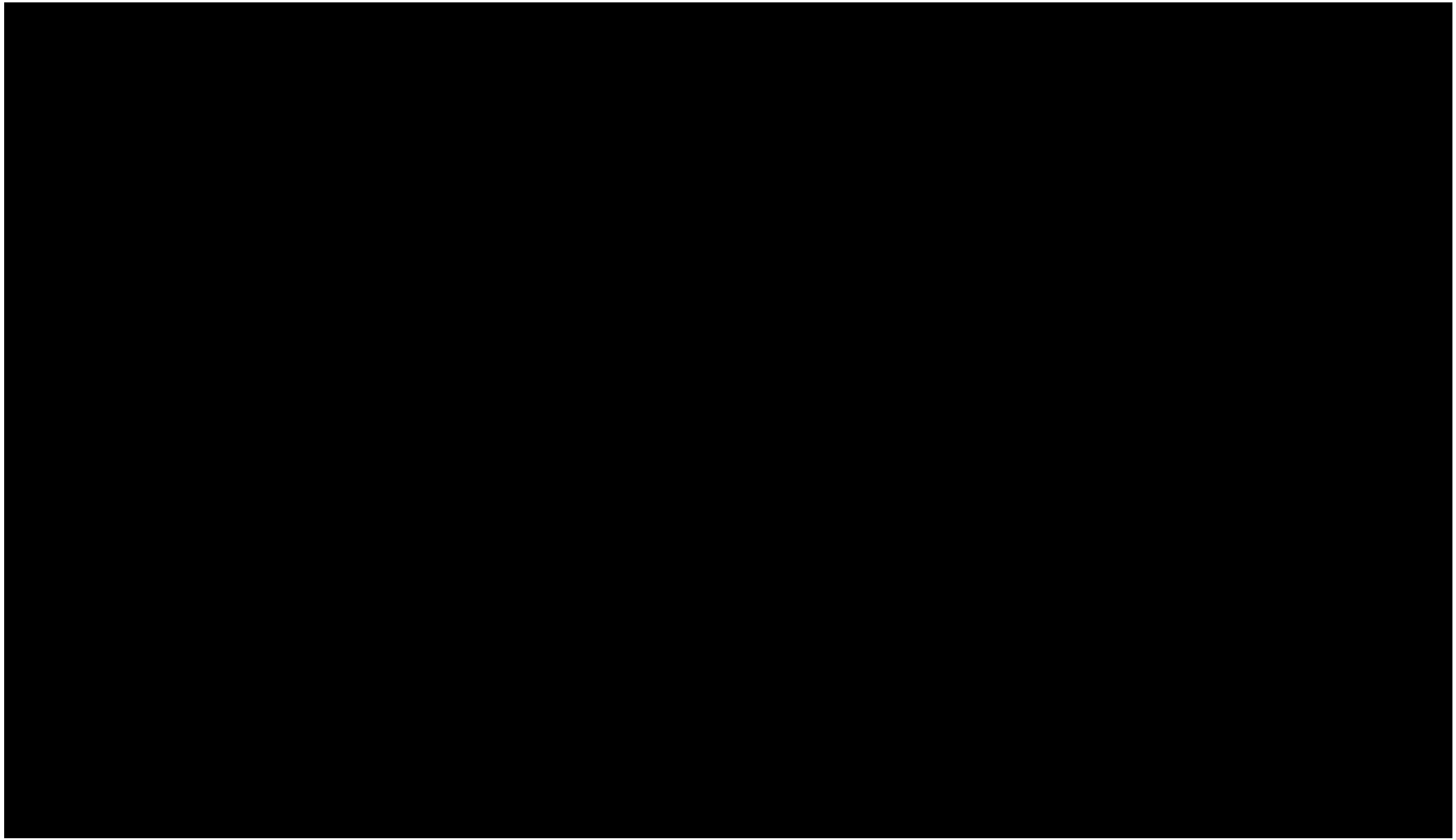
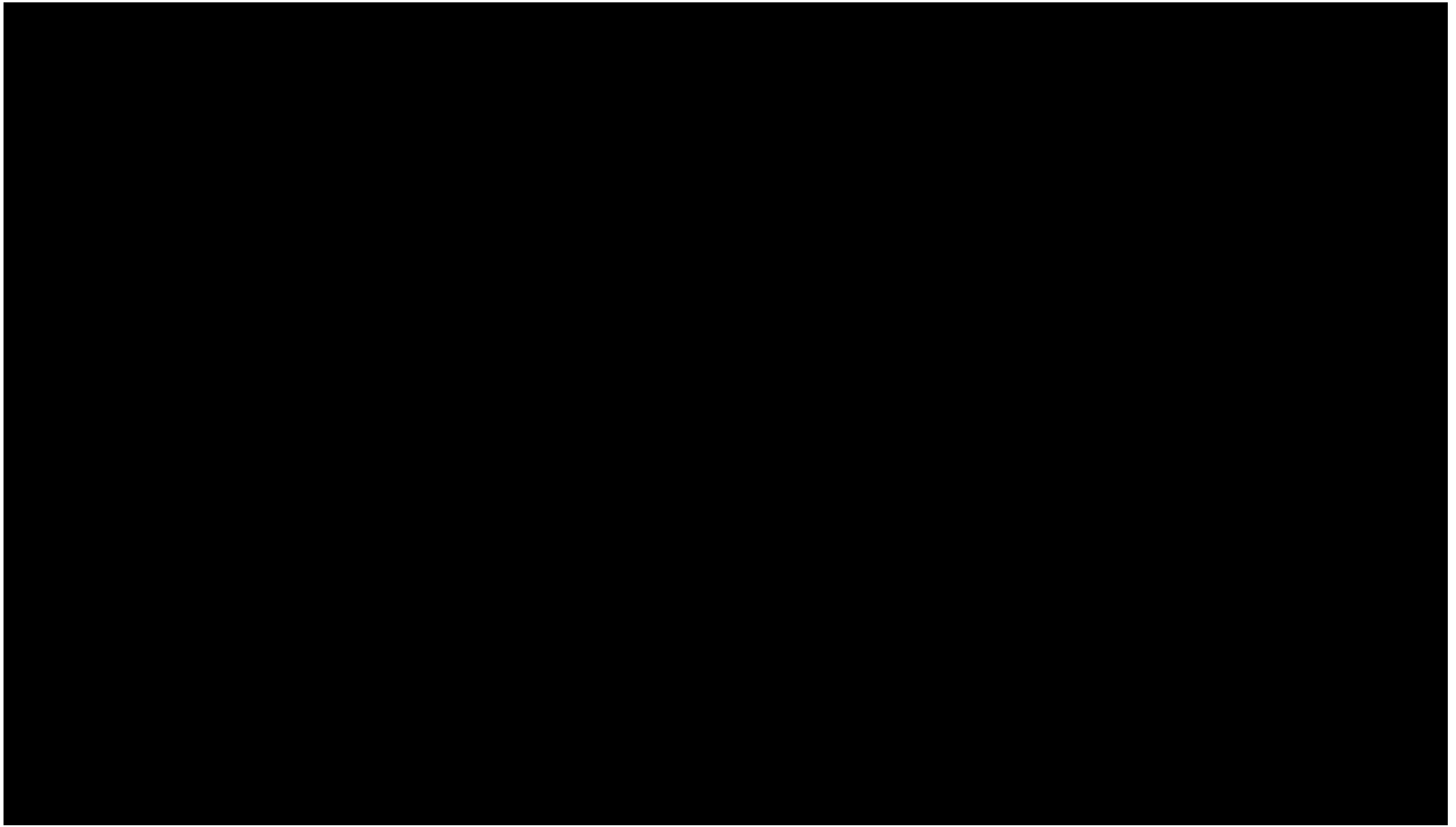
Laboratory-confirmed cases reported to PHE. SGSS data is further de-duplicated and cleaned by the PHE ICC Epidemiology Cell. The dataset includes all positive COVID-19 cases reported through both Pillar 1 and Pillar 2 testing. Numbers in most recent days may rise due to potential delays to data reporting and validation. The number of confirmed cases reflects both the case rate of infection and testing rates.

PHE Unified Sample Dataset (USD)

Data as of **11 May 2021** 00:00hrs

Data on individuals testing negative for SARS-CoV2 in both Pillar 1 and 2. This data is deduplicated to only include one record for any individual who has had only negative samples

HPZone case and incident management system

Data as of **11 May 2021** 08:00hrs

Only outbreaks reported to PHE are included. Absolute numbers should be interpreted with caution. Reporting practice is known to vary with time and geography. Community outbreaks exclude outbreaks reported from secondary care and care home settings.