Public Health England

NHS Test and Trace

COVID-19 SITUATIONAL AWARENESS

SUMMARY

APPENDIX
2 May 2021

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- [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 22 April 2021 Week 16 report)

Overall case rates continued to decrease in week 16. Decreases in case rates were observed in the majority of age groups and ethnic groups, and all regions. Overall Pillar 1 and Pillar 2 positivity decreased slightly compared to the previous week.

As of 09:00 on 27 April 2021, a total of 3,852,904 have been confirmed positive for COVID-19 in England under Pillars 1 and 2.

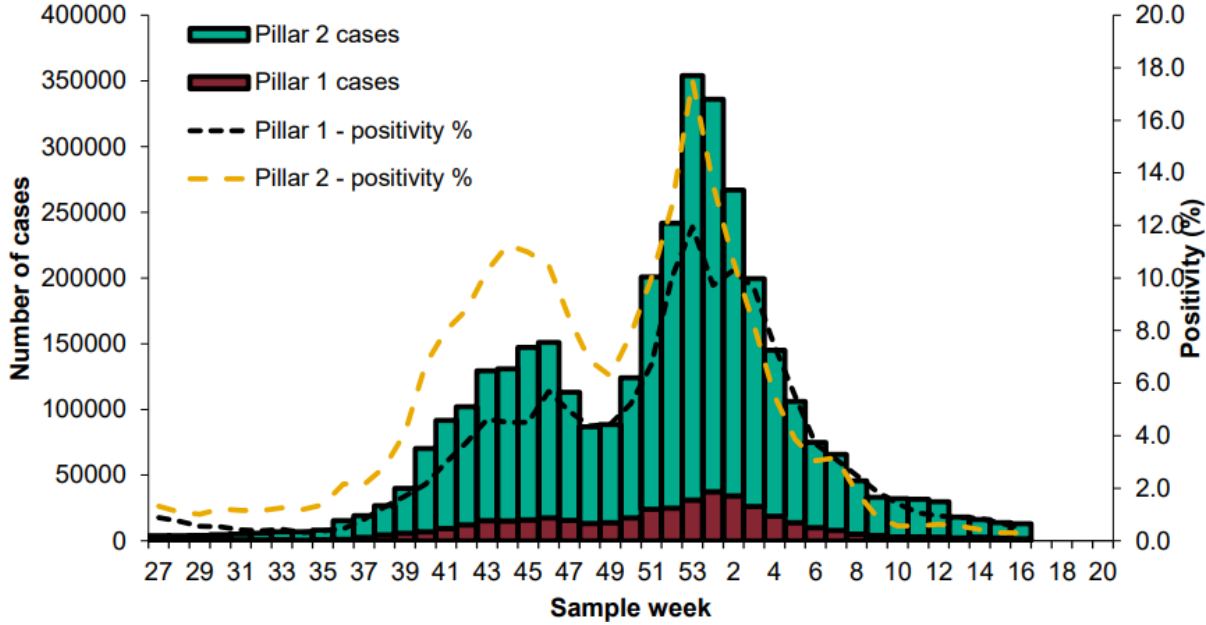
- The data are shown by the week the specimen was taken from the person being tested. This gives the most accurate analysis of this time progression, however, for the most recent week results for more samples are expected therefore this should be interpreted with caution.

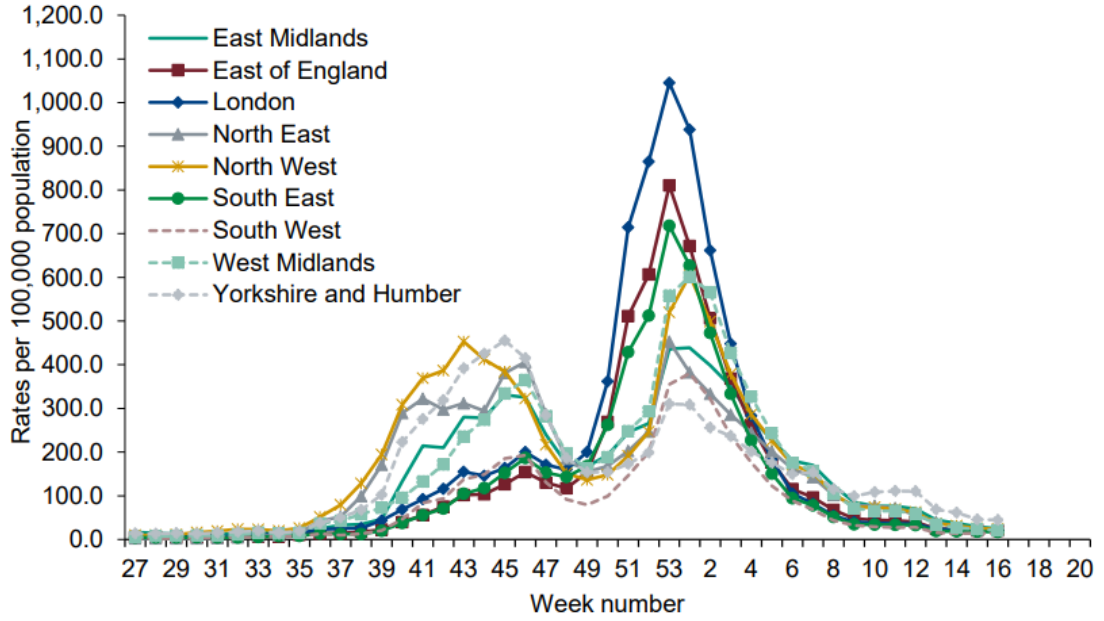
- Positivity is calculated as the number of individuals testing positive during the week divided by the number of individuals tested during the week based on PCR and lateral flow device (LFD) testing.

- 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

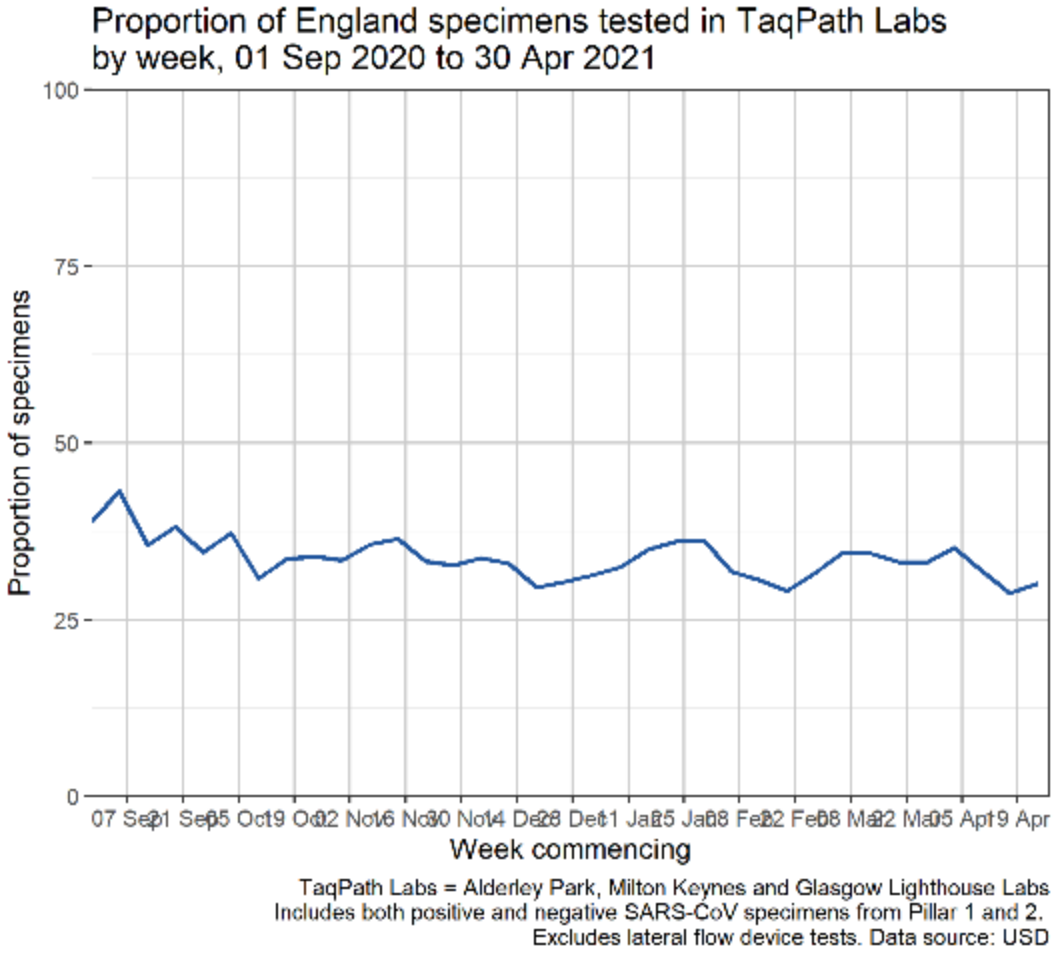
- Case rates have been calculated using mid-2019 ONS population estimates

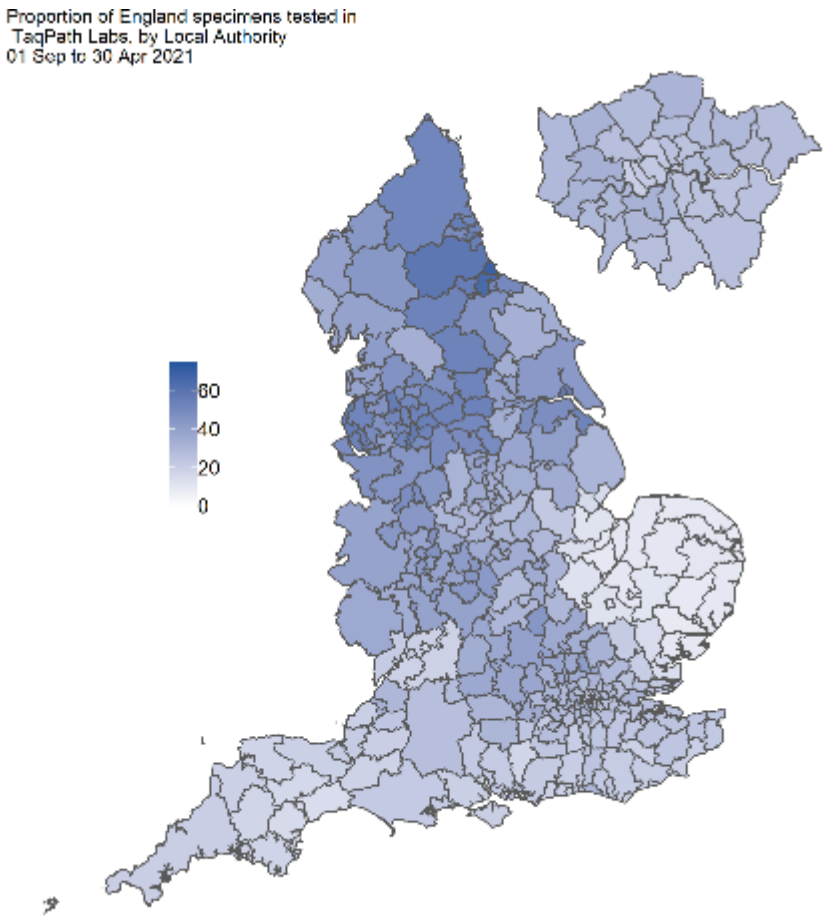




Variants

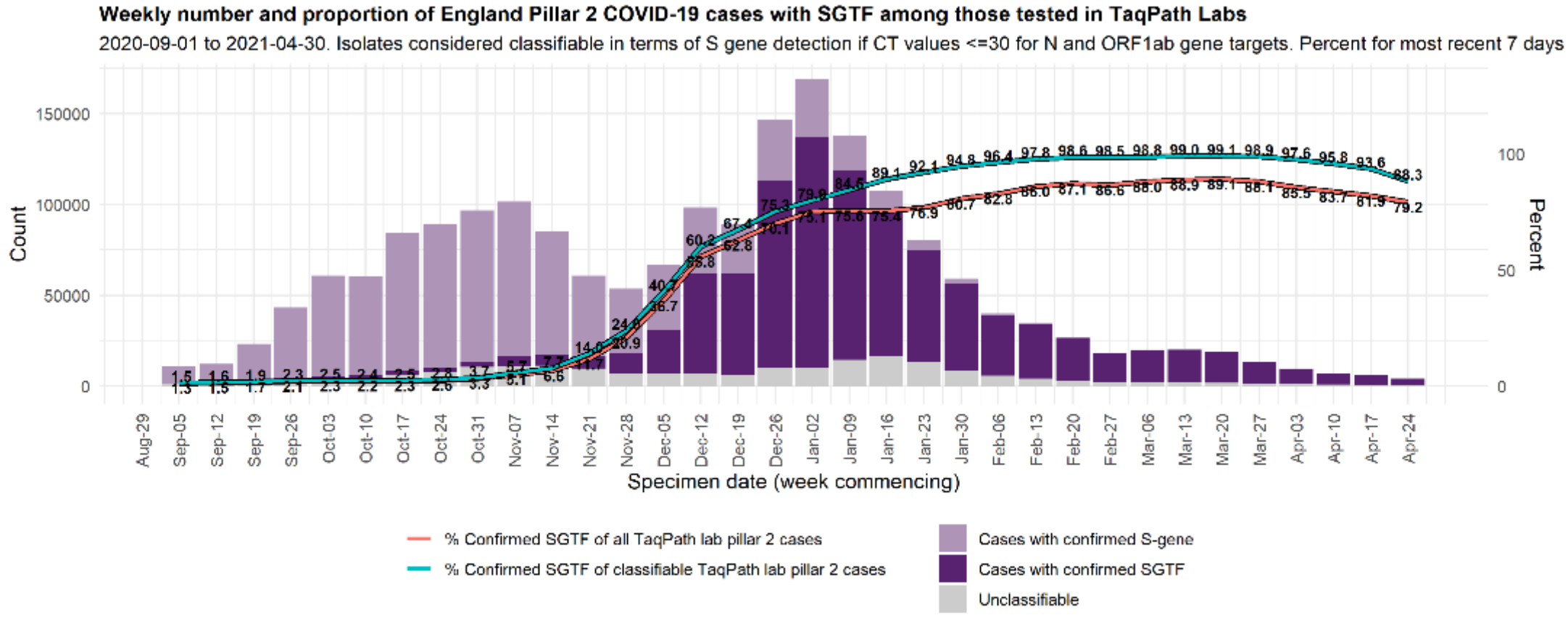
Tracking SARS-COV-2 S-Gene Target Failure – Taqpath lab coverage since 1/9/2020





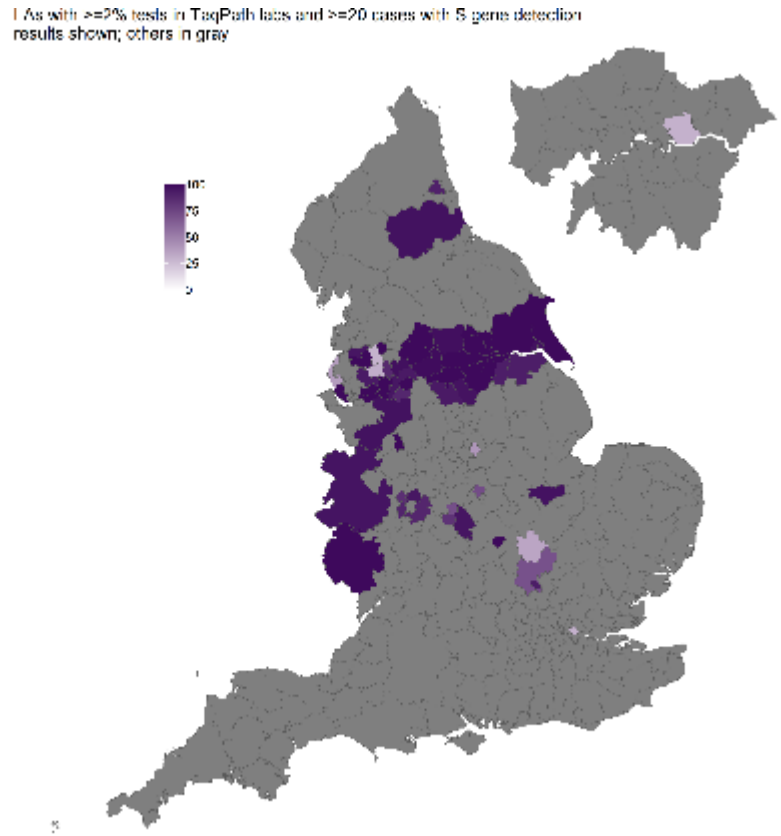
Note: LA coverage by TaqPath laboratories is relatively stable over time, although areas of EoE notably under-represented in recent data (see Appendix)

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



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

Proportion of England Pillar 2 COVID-19 cases with SGTF among those tested in TaqPath Labs and with S gene detection results, by Local Authority (24 Apr to 30 Apr 2021)



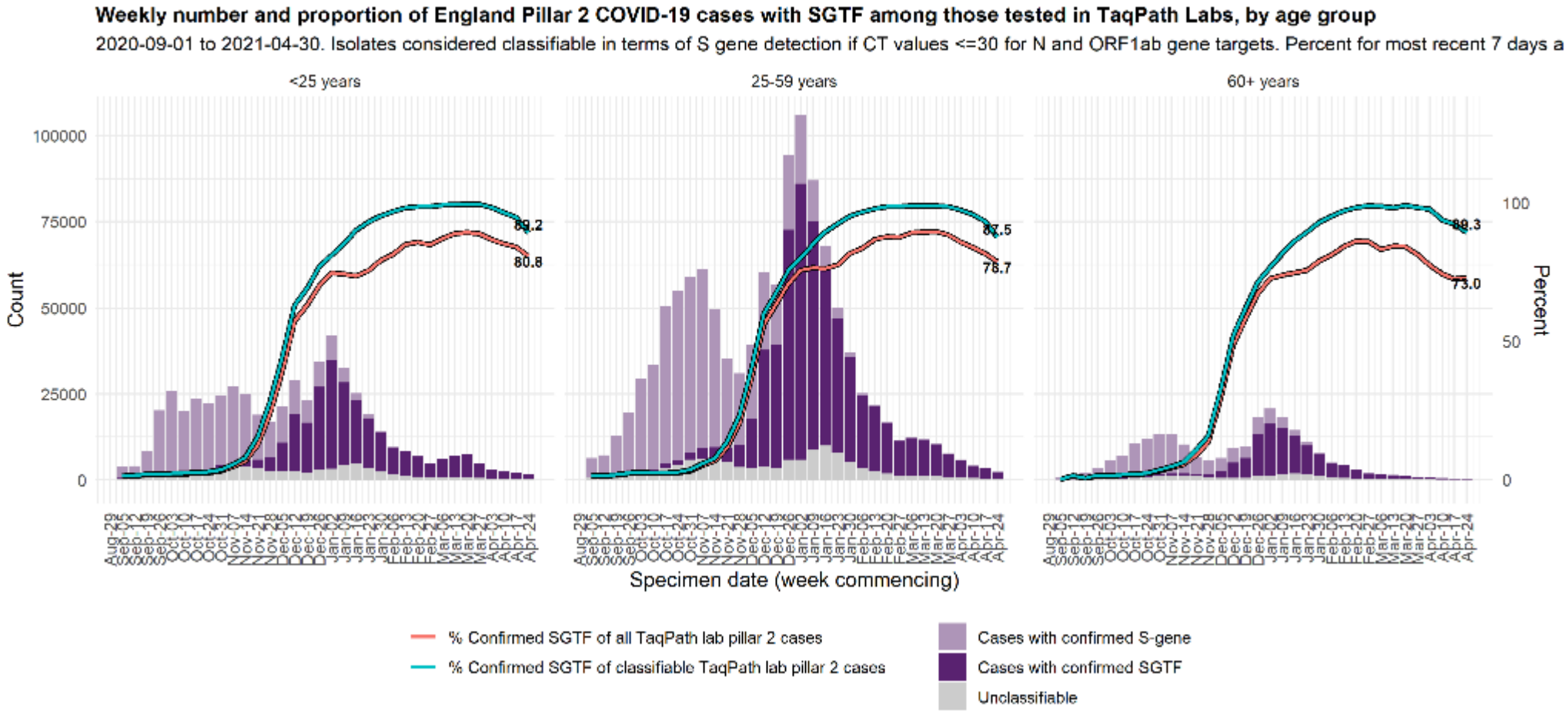
Only samples processed in TaqPath labs can be tested for SGTF.
As some (or in some areas, most) samples are processed in other labs, the proportion of cases from TaqPath labs with SGTF can only provide an estimate of the overall proportion.

Denominator is restricted to TaqPath lab Pillar 2 positive tests with CT values <=30 for non S gene targets. This restriction to CT values removes potential confounders around variable target performance at lower viral loads

For LTLAs where TaqPath lab coverage is low (<2%) or total classifiable cases processed in a TaqPath lab is low (<20) in current reporting period, SGTF proportion is a less reliable indication of incidence and data are not shown. These LTLAs are greyed out.

SGTF is a surveillance proxy for VOC-202012/01 and may include other variants.
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. 7 persons with missing LA of residence excluded.

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

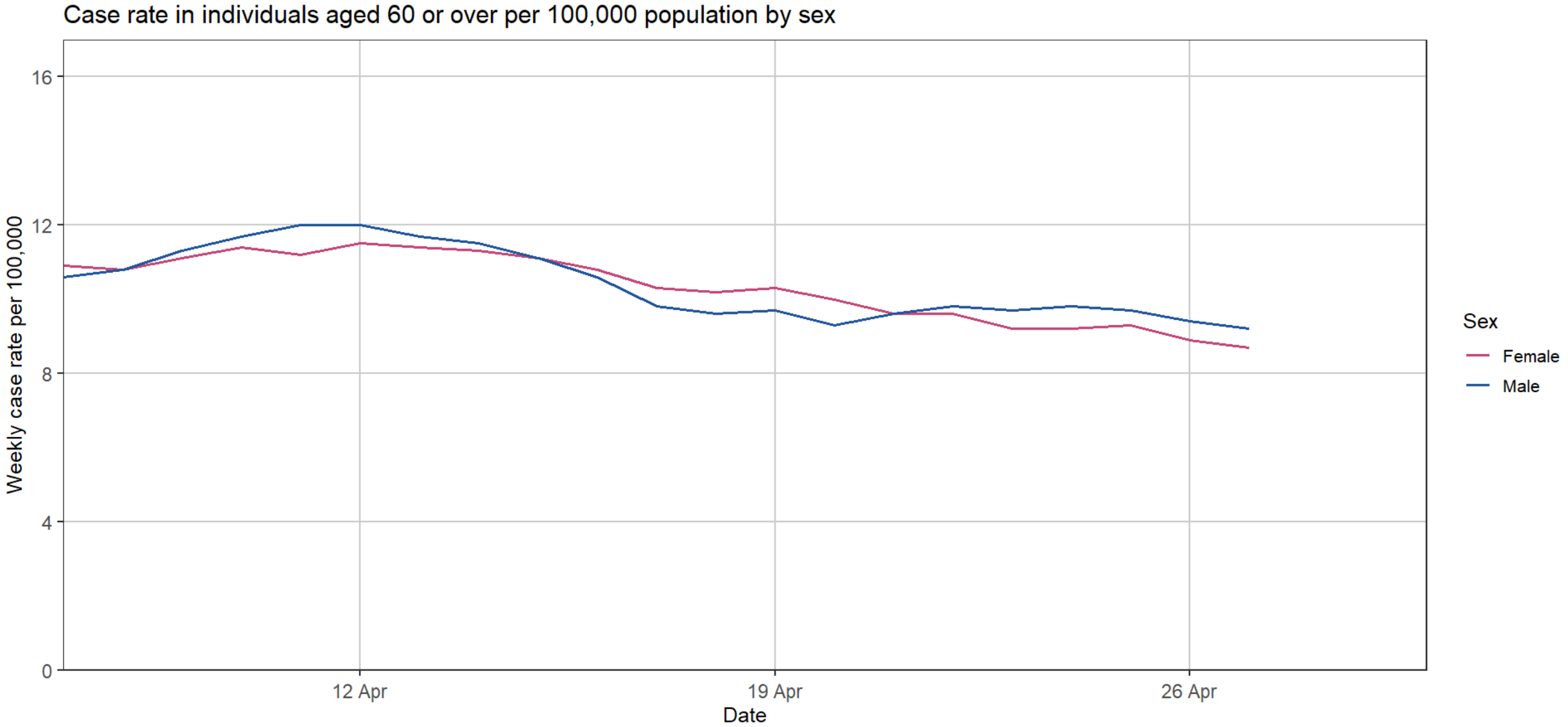


Note: Daily reporting of samples through the Pillar 2 laboratory network is complex and largely driven by geographical proximity and daily capacity to maximise turn-around time. There is no known systematic bias in the settings from which SGTF lab samples are sent but important to note that bulk testing 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

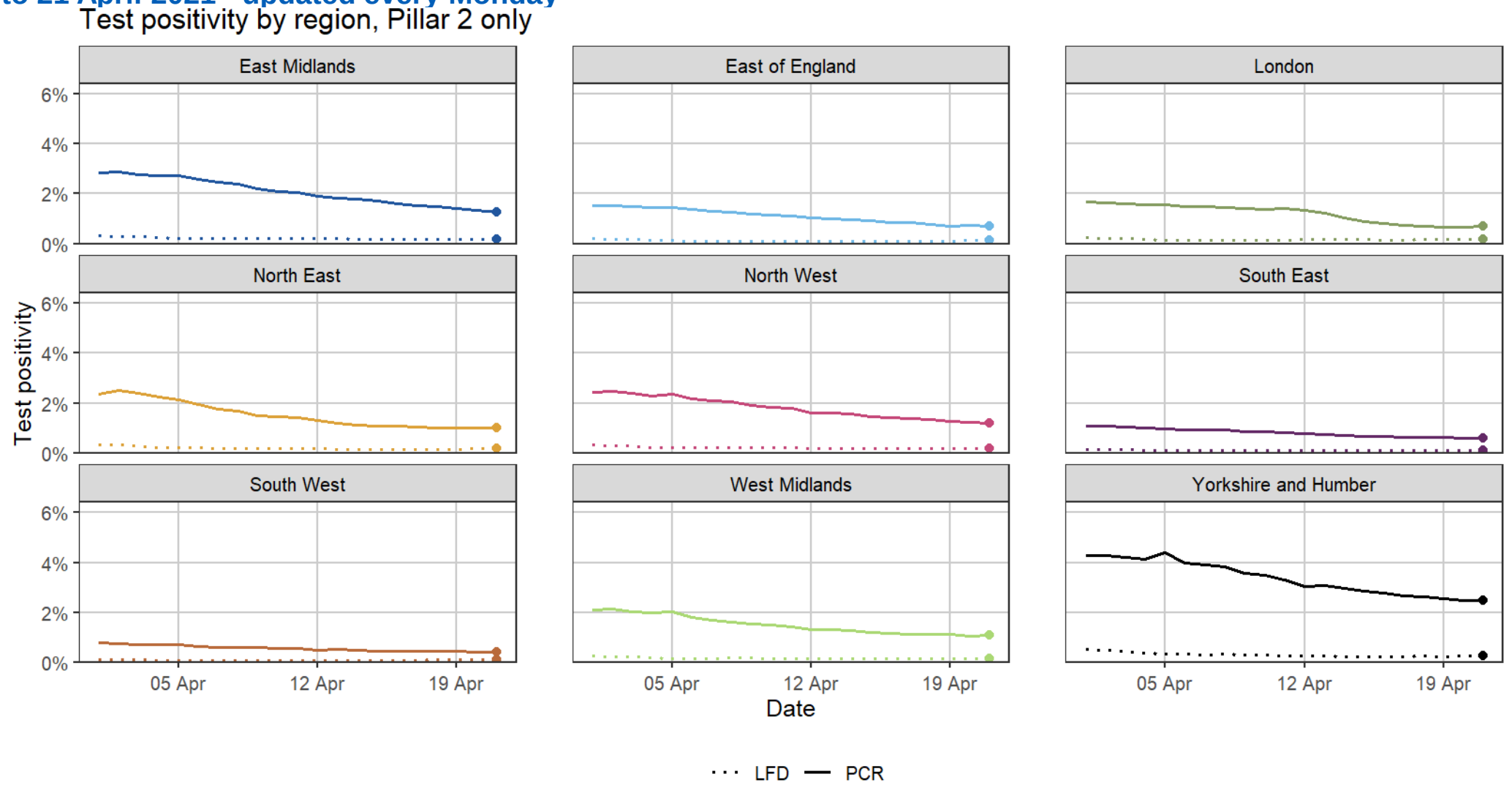
Case rate in England across both pillars 1 and 2 (weekly) aged 60 or over

Data up to 27 April 2021



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

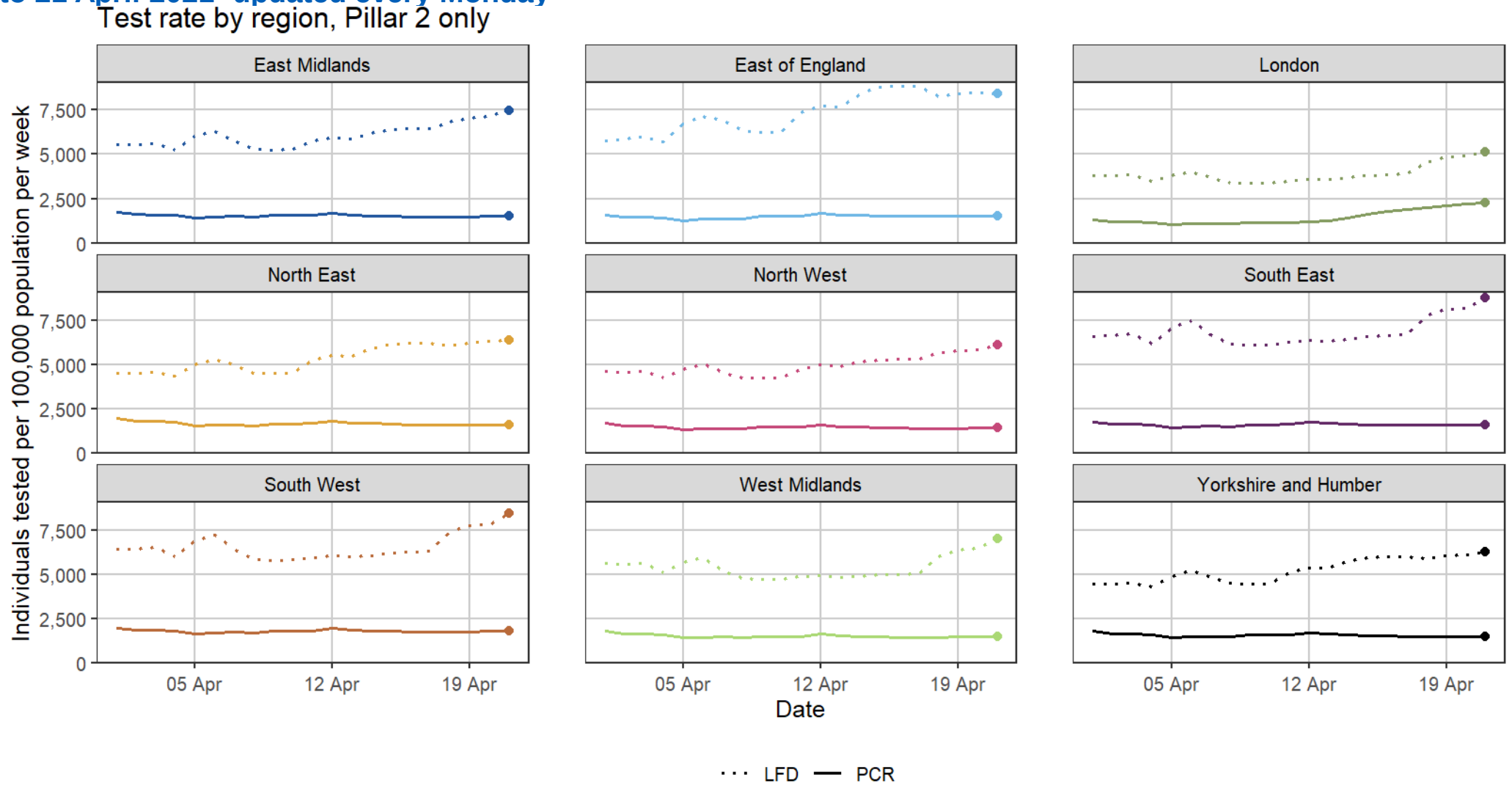
Data up to 21 April 2021 - updated every Monday



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 21 April 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 30 April 2021 by PHE Joint Modelling Cell

Methodology

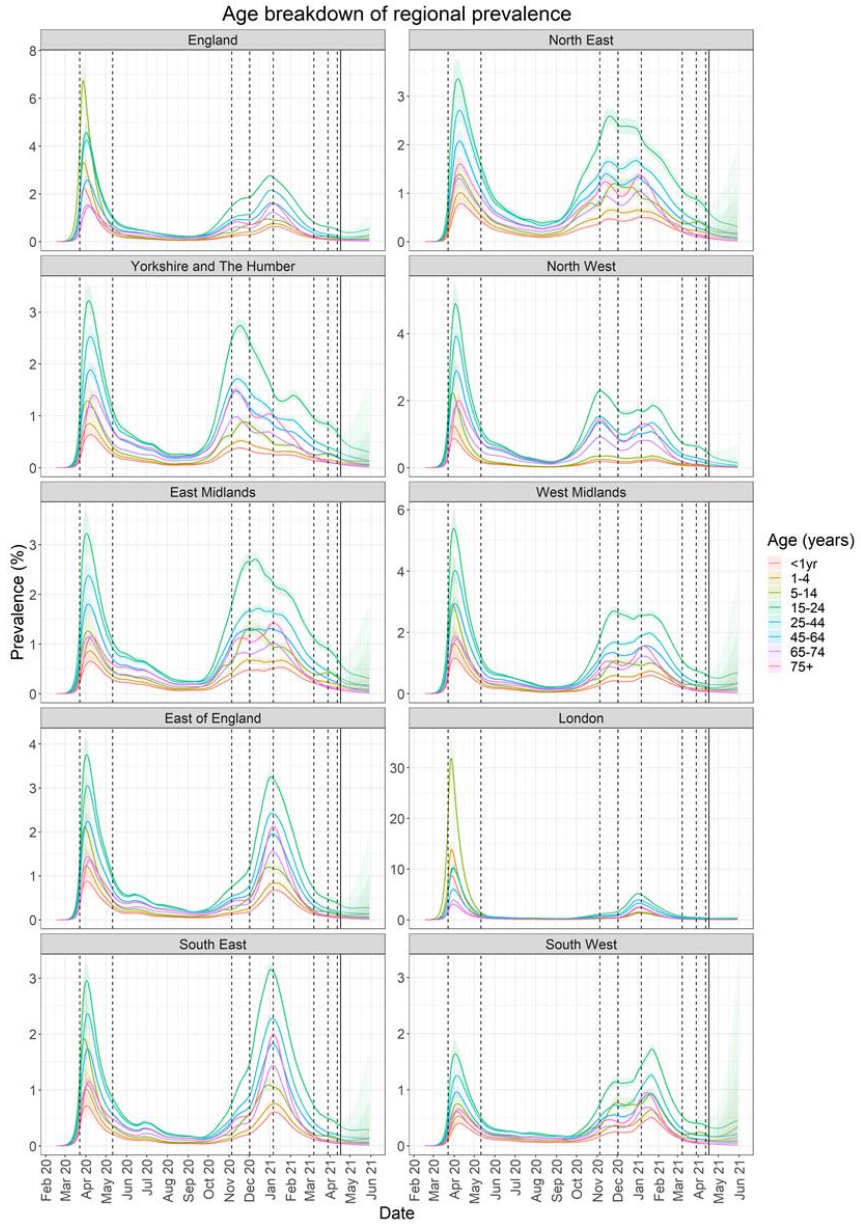
Prevalence estimates were generated by the Cambridge real-time model on **23 April 2021** using data up to **17 April 2021**.

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



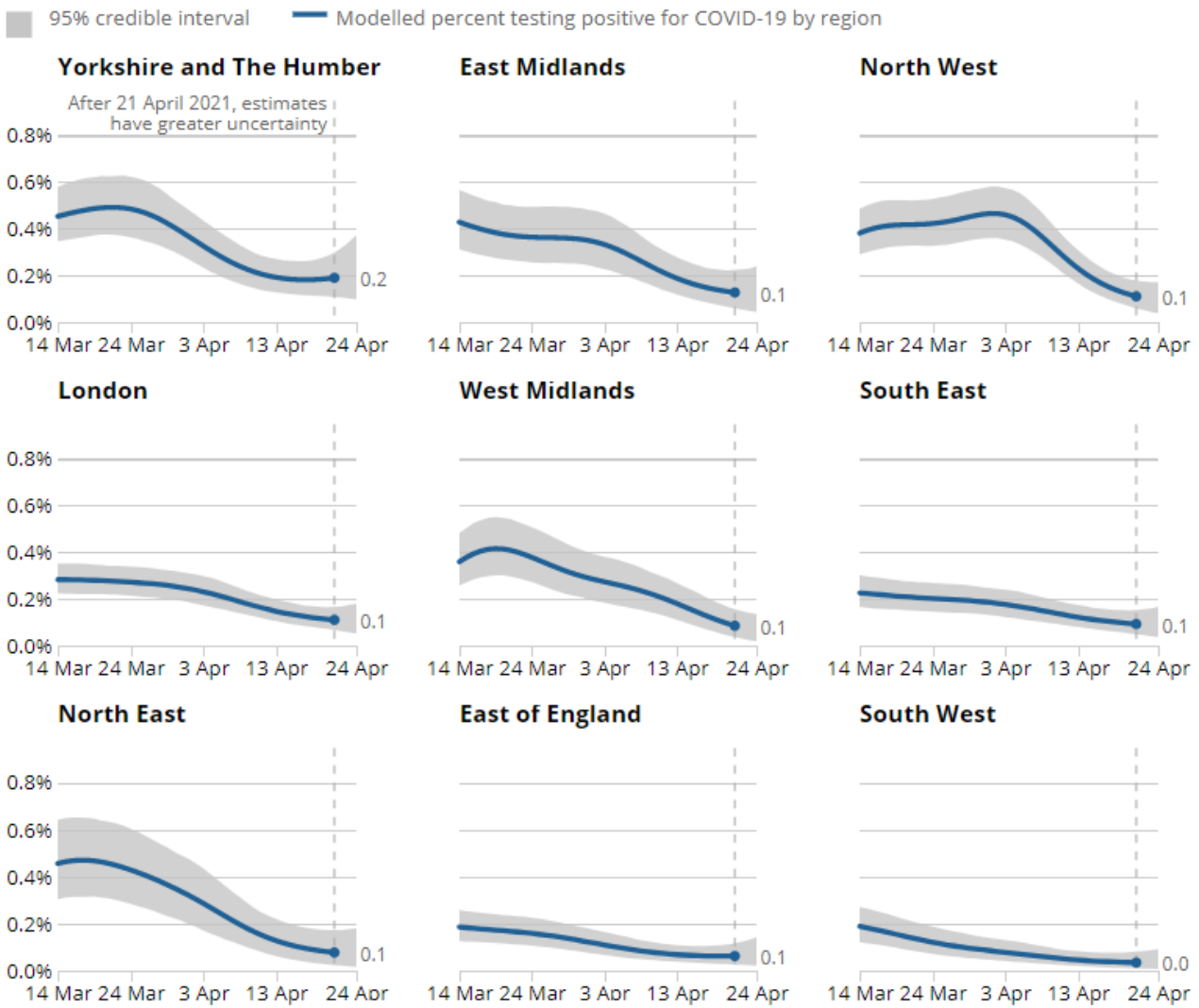
ONS estimated positivity

ONS Regional Positivity in England 14 March – 24 April 2021

ONS: The percentage of people testing positive decreased in all regions except in Yorkshire and The Humber and the East of England where the trends are uncertain in the week ending 24 April 2021.

During the week ending 24 April 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.

Estimated percentage of the population testing positive for COIVD-19 on nose and throat swabs by region since 14 March 2021 -24 April 2021.

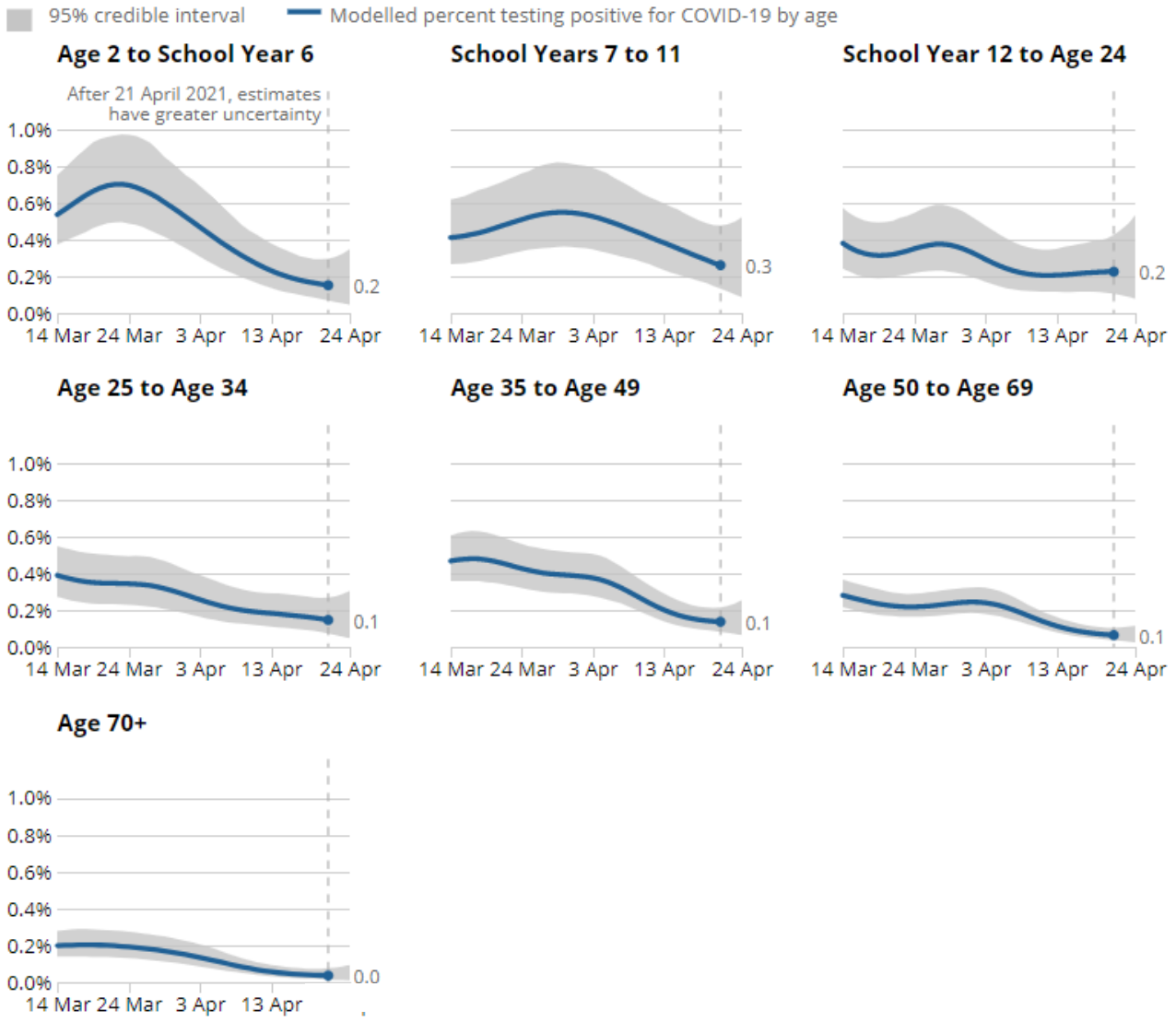


ONS Age Positivity in England 14 March – 24 April 2021

ONS: In the week ending 24 April 2021, rates have decreased in those aged 2 to 15/16 (School Year 11) and in those aged 35 and over. The trend is uncertain for those aged 16/17 (School Year 12) to age 34 in the week ending 24 April.

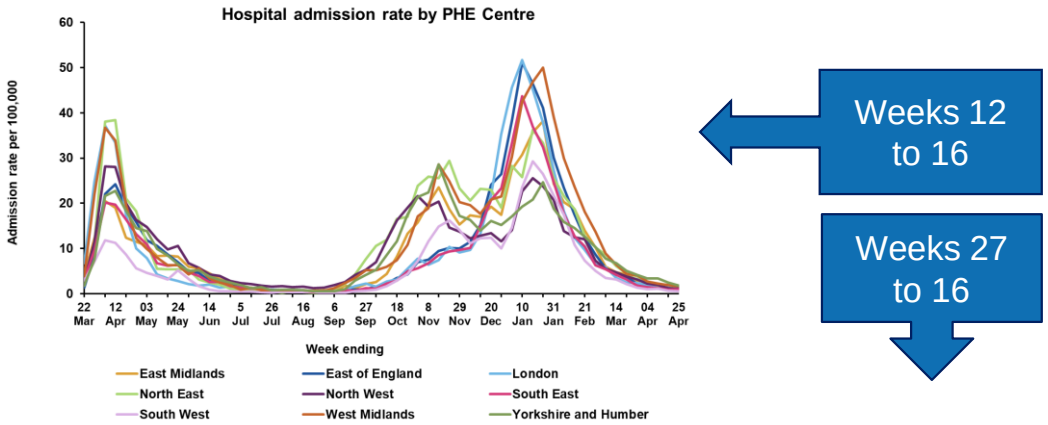
Caution should be taken in over-interpreting small movements in the latest trend

Estimated percentage of the population testing positive for COVID-19 on nose and throat swabs by age 14 February – 24 April 2021



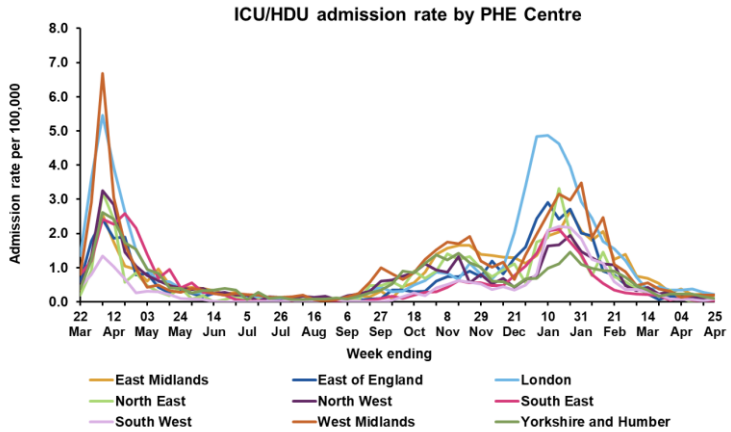
Hospitalisation

Hospitalisations by PHE Centre



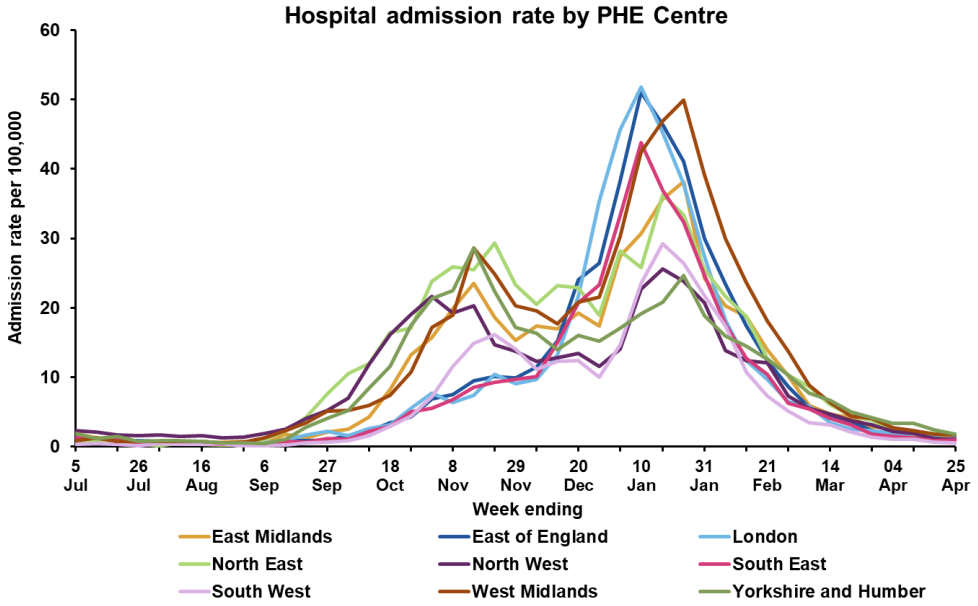
Weeks 12 to 16

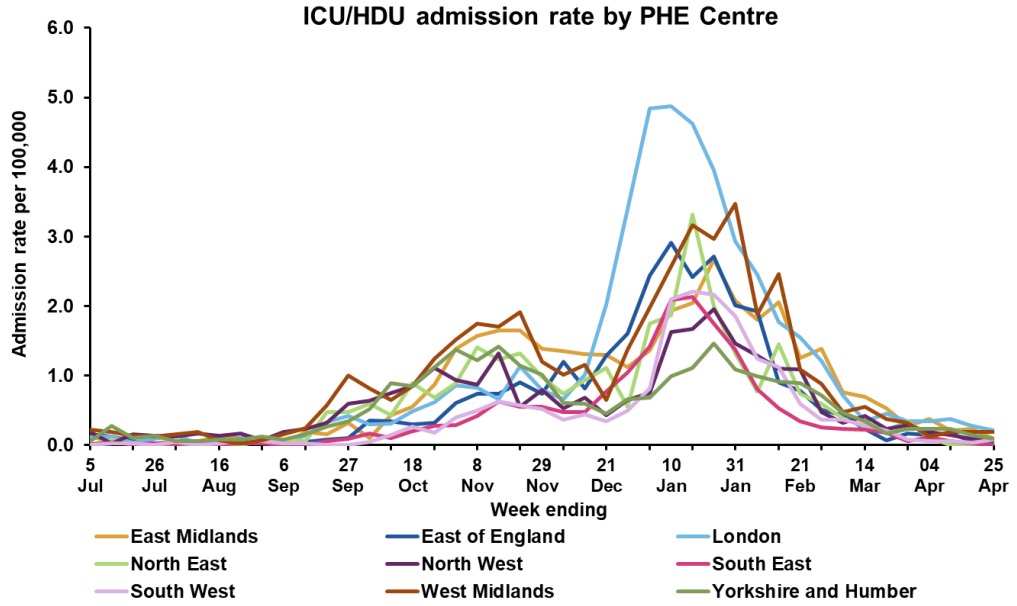
Weeks 27 to 16



Weeks 12 to 16

Weeks 27 to 16

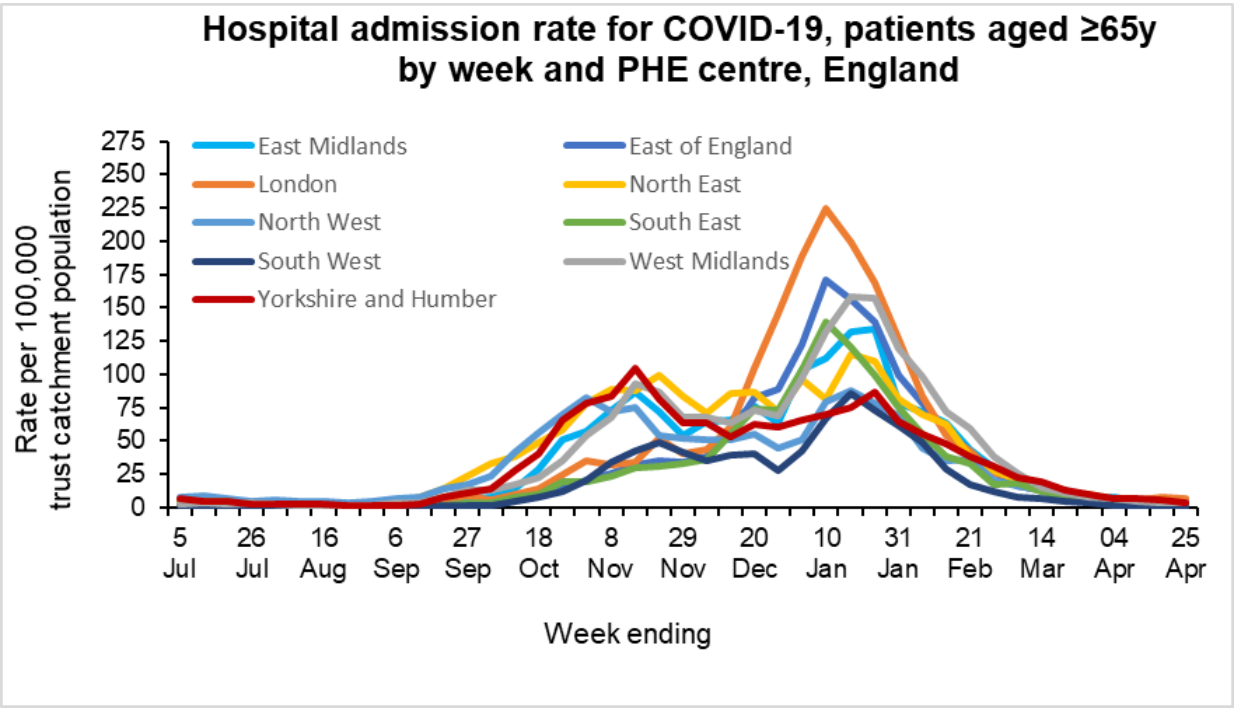


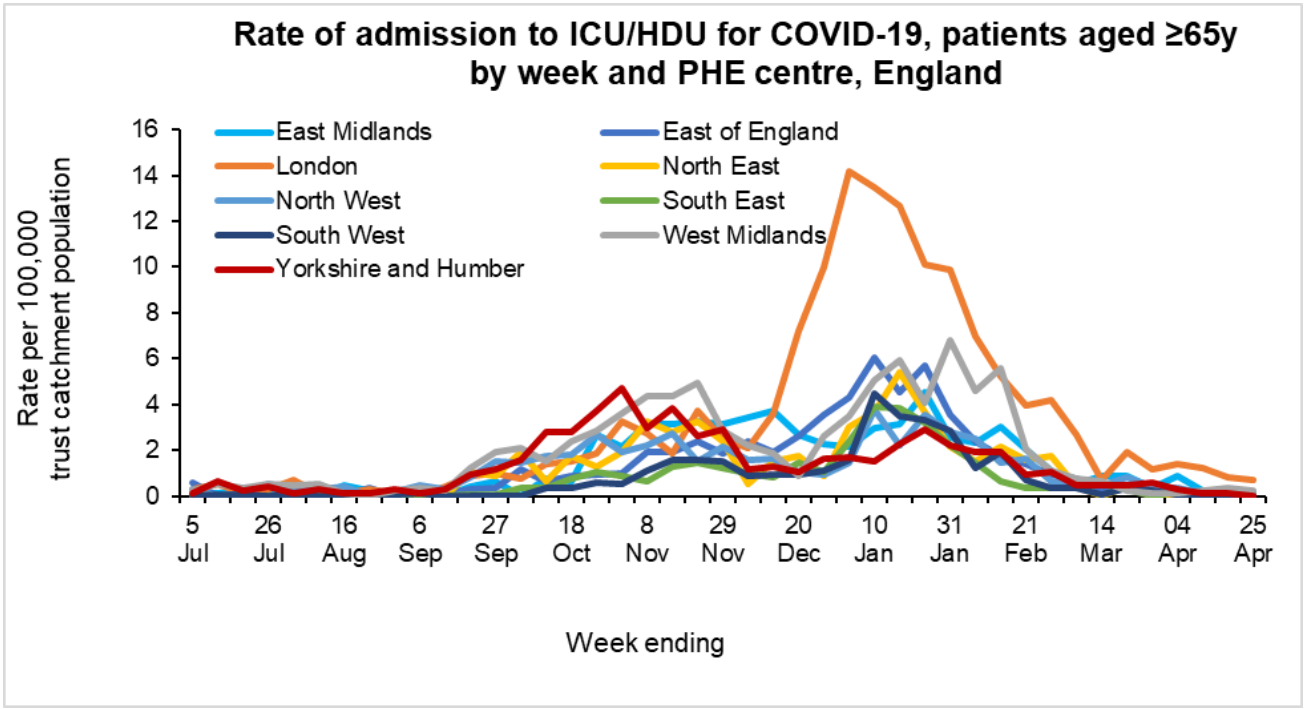


Hospital admissions refers to admissions to all levels of care inclusive of ICU/HDU admissions

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

Hospitalisations by PHE Centre and age

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

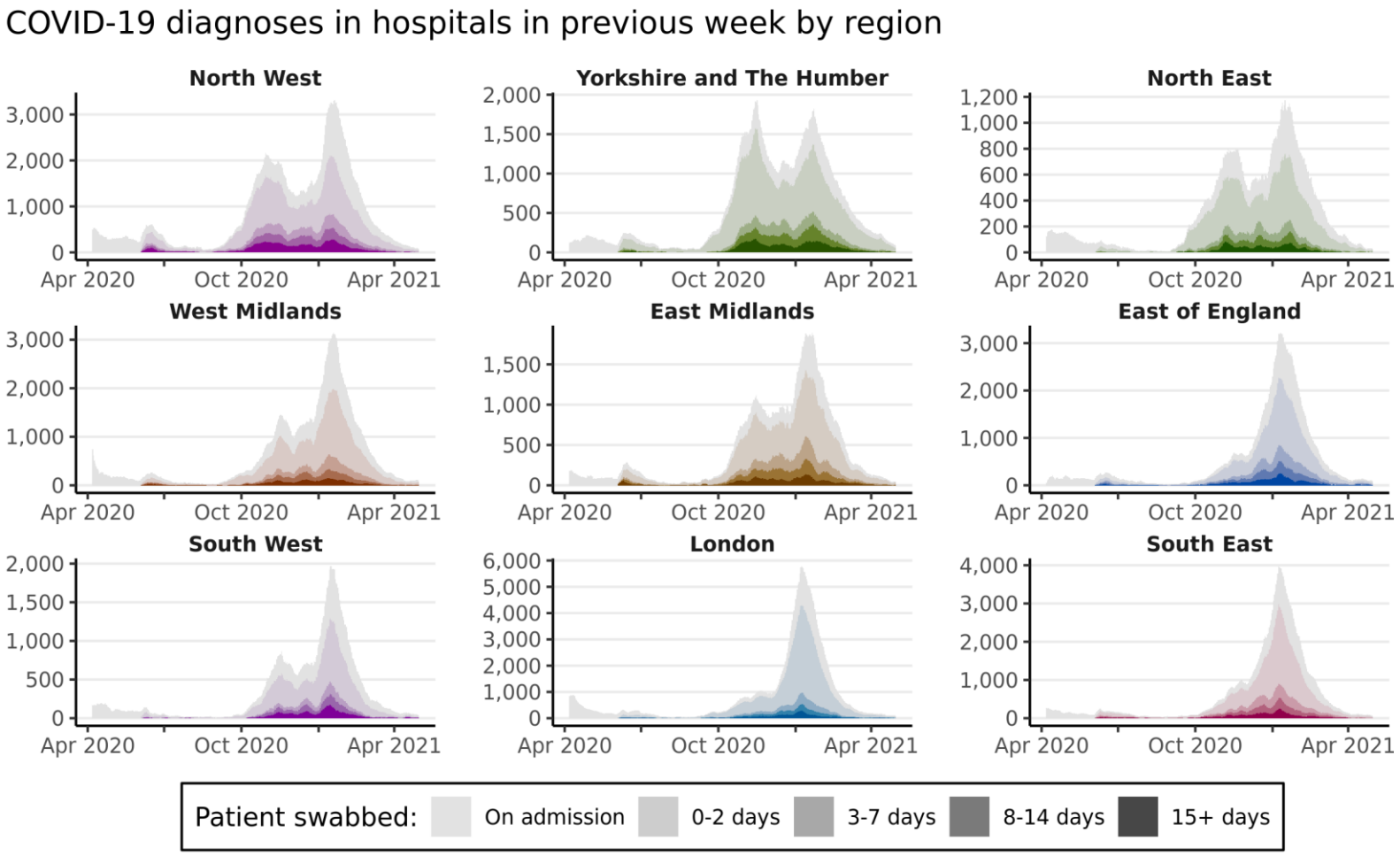
Patients in hospital by region

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 30 April 2021. Produced by Joint Biosecurity Centre.

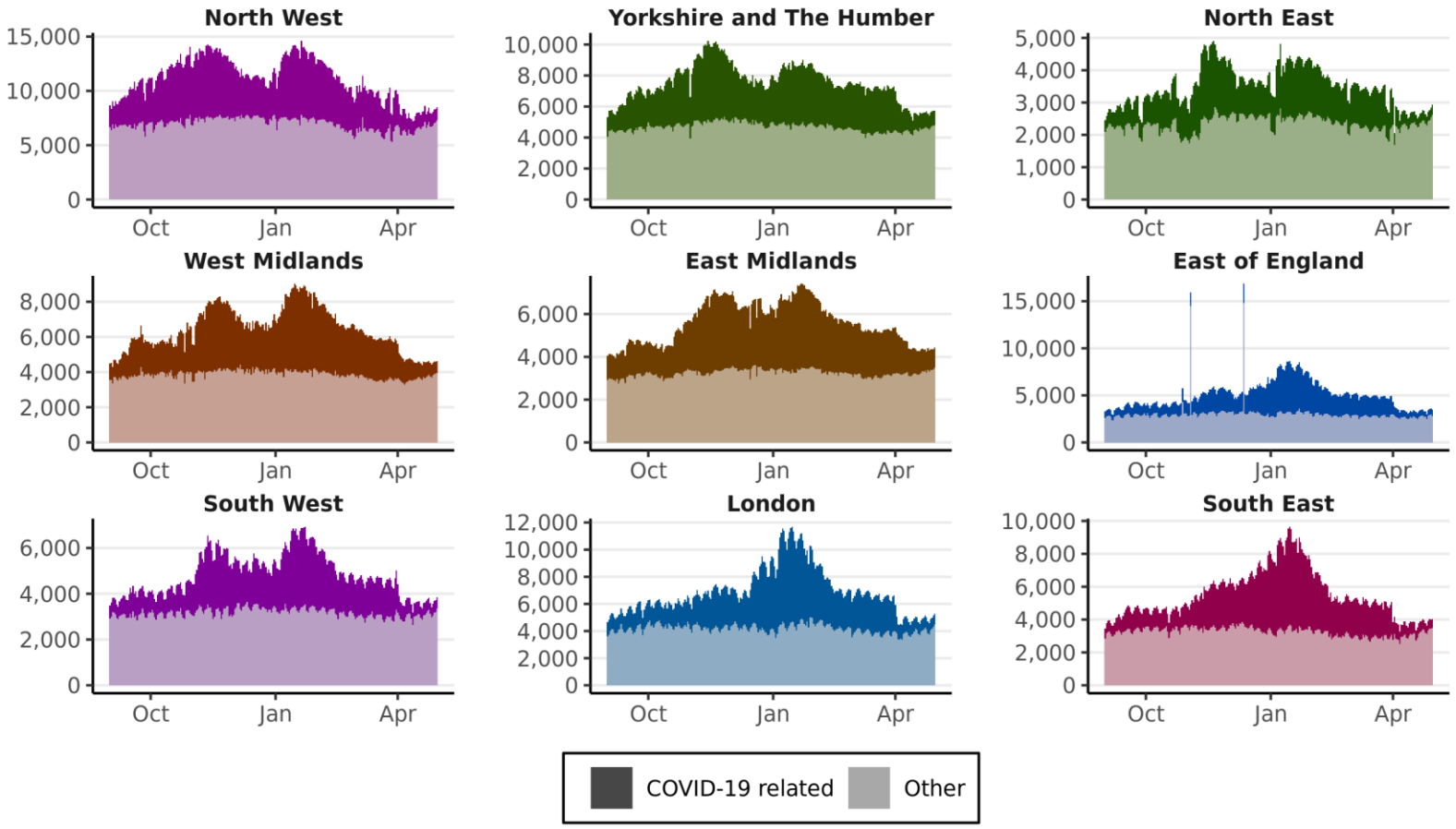
COVID-19 diagnoses in hospitals by region



Source: NHS England & Improvement COVID-19 Hospital Activity Data, from 07 April 2020 to 30 April 2021. Produced by Joint Biosecurity Centre.

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

Daily NHS staff absences by region

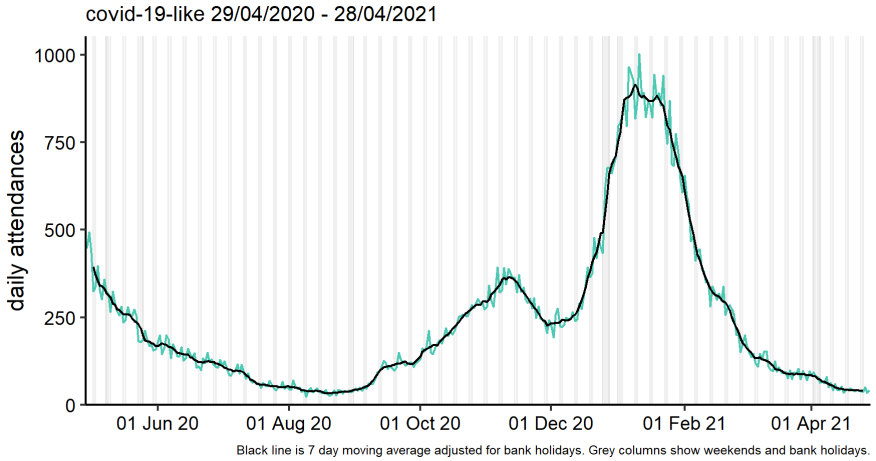


Source: NHS England & Improvement COVID-19 Hospital Activity Data, from 01 September 2020 to 30 April 2021. Produced by Joint Biosecurity Centre.

EDSS attendances

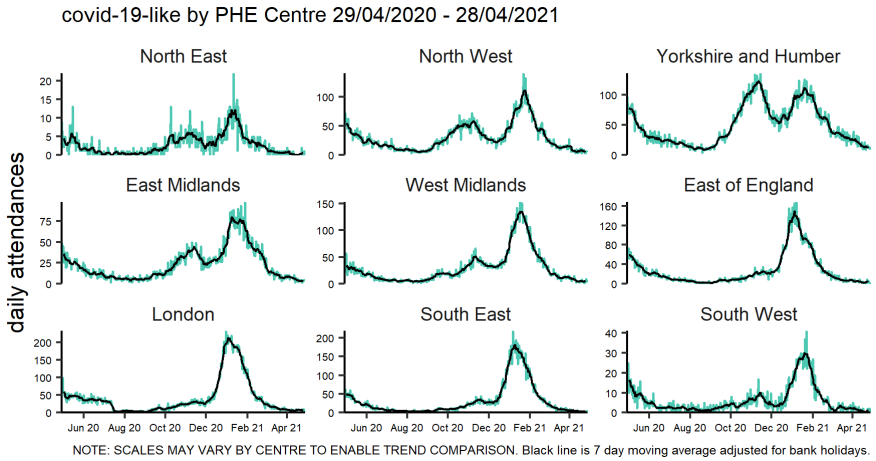
Emergency Department Syndromic Surveillance System COVID-19-like attendances

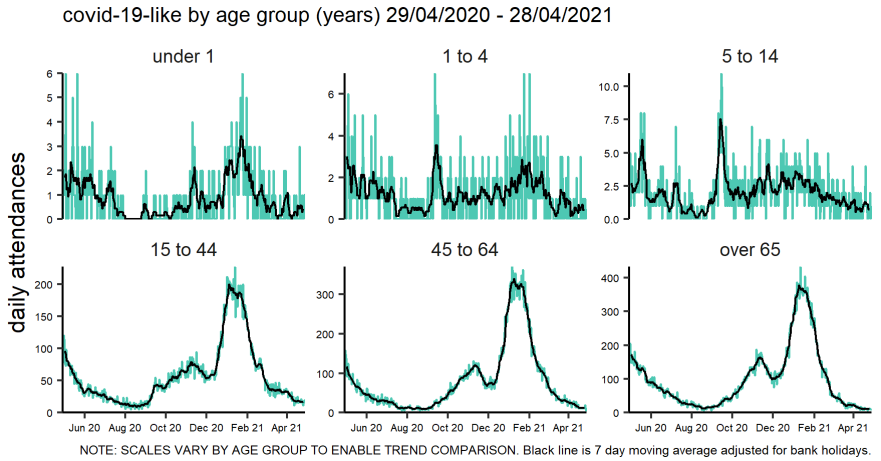
Trends in daily ED COVID-19-like attendances, national, PHE Centre and by age (to 28 April 2021)



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

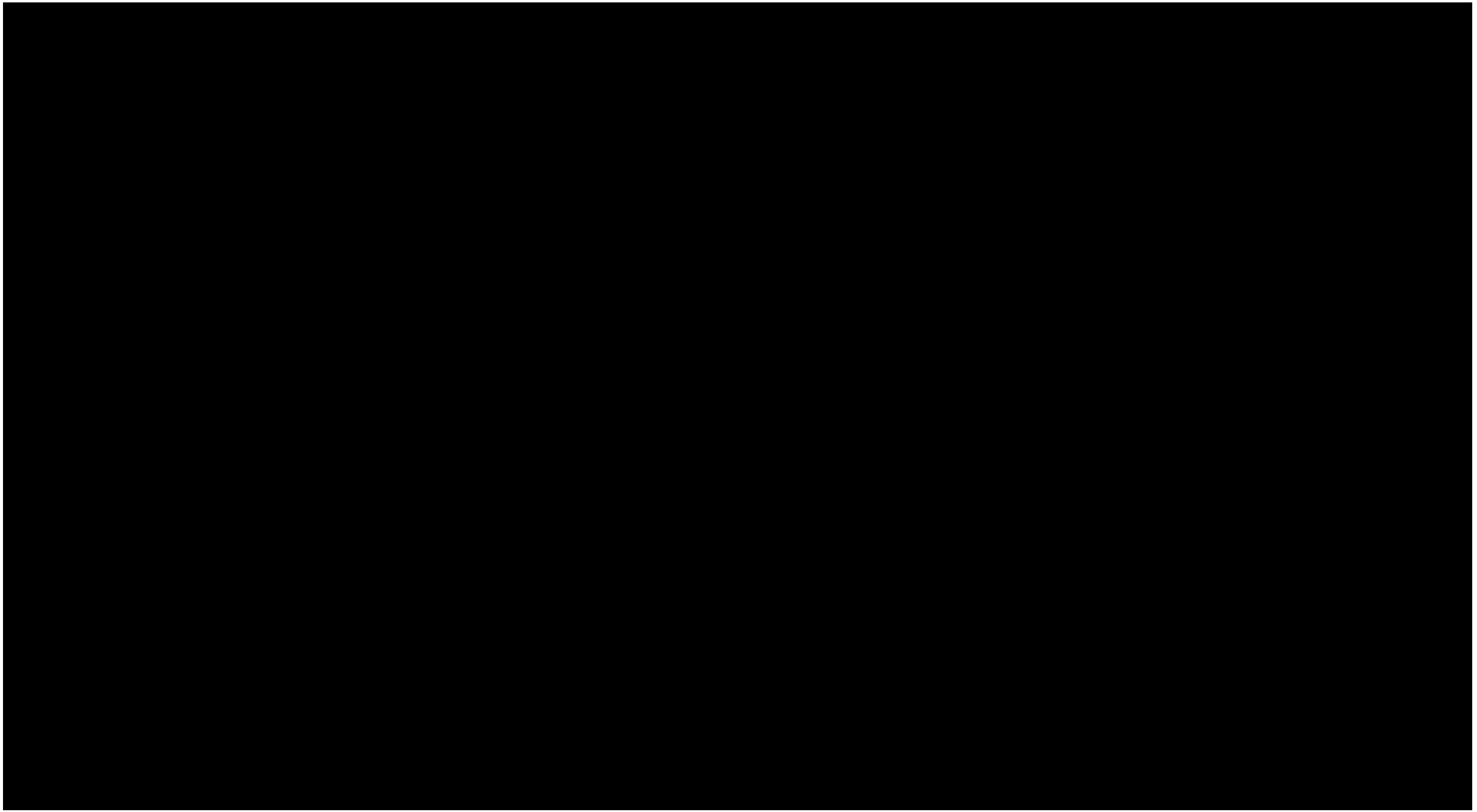
- EDs are included in surveillance based on the speed and frequency of reporting in the most recent 7 days
- EDs included can change on a day by day basis
- These data are based on COVID-19-like primary diagnoses (patients may have multiple diagnoses listed)
- These data are not based on outcomes of 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





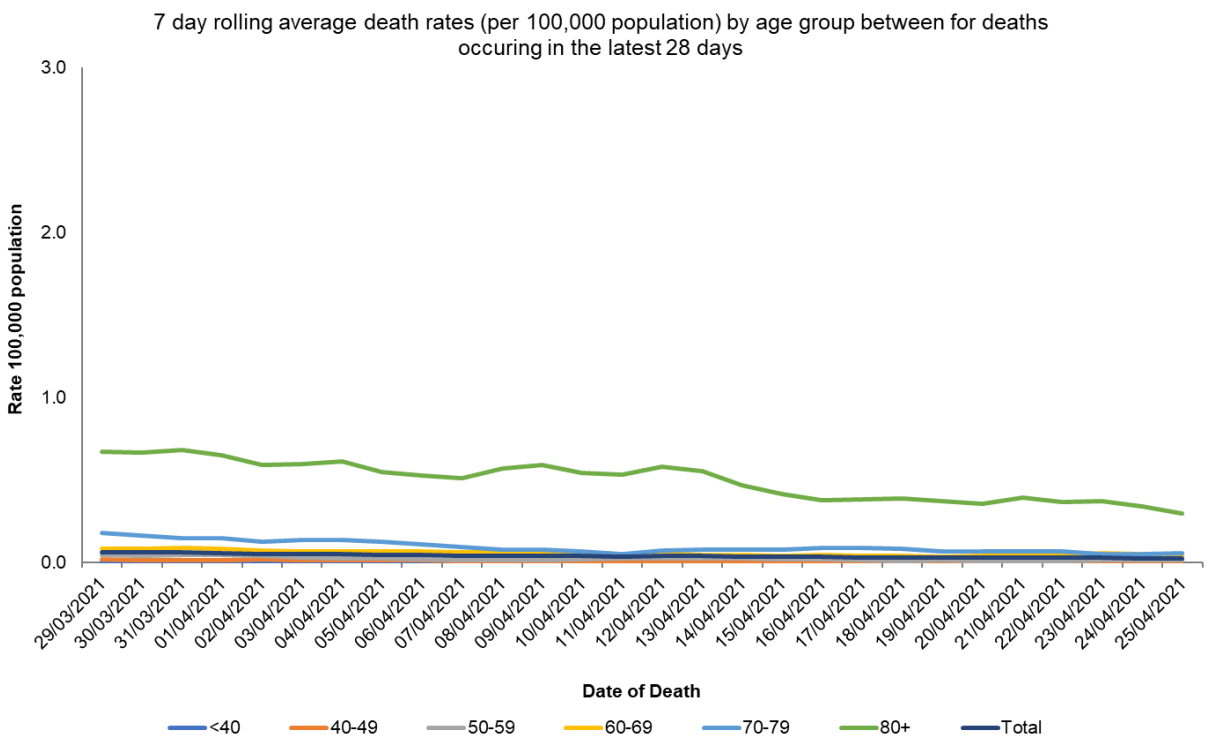
Further information and weekly EDSSS reports containing COVID-19-like attendance surveillance data is available from the PHE EDSSS bulletin.

Mortality

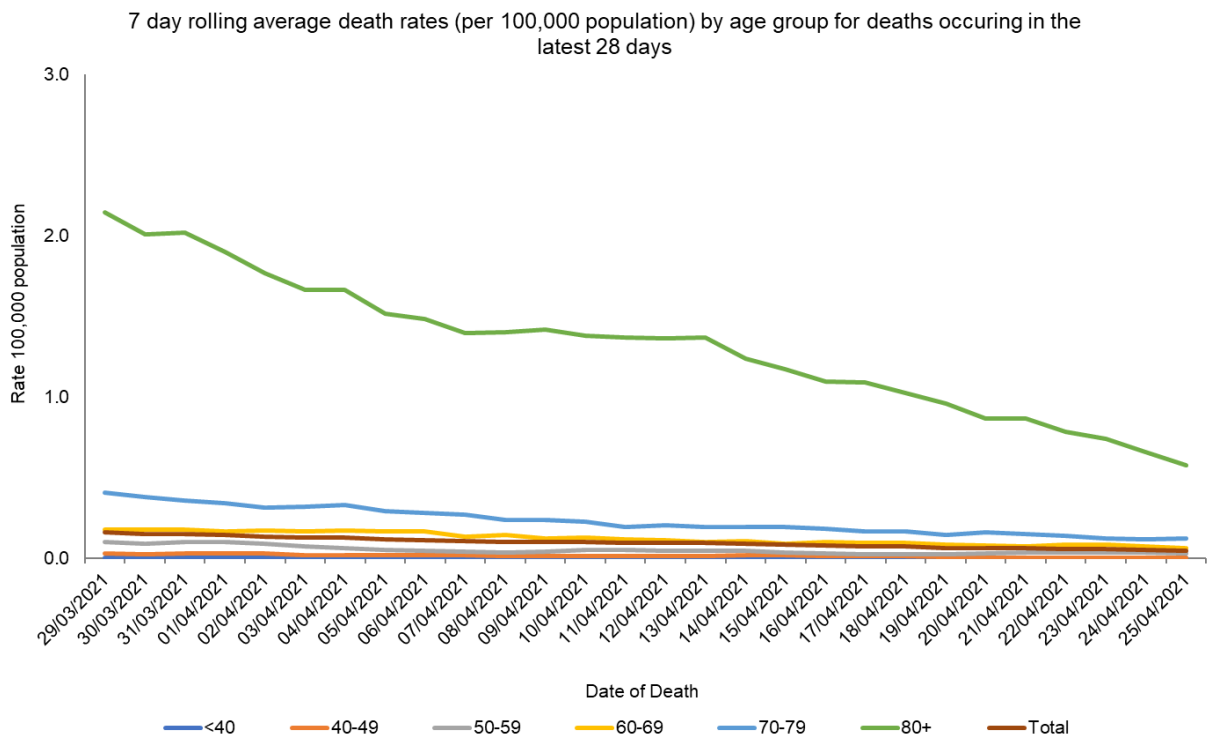


Mortality rate per 100,000 population by age group (seven day rolling average)

Deaths within 28 days of a positive specimen



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

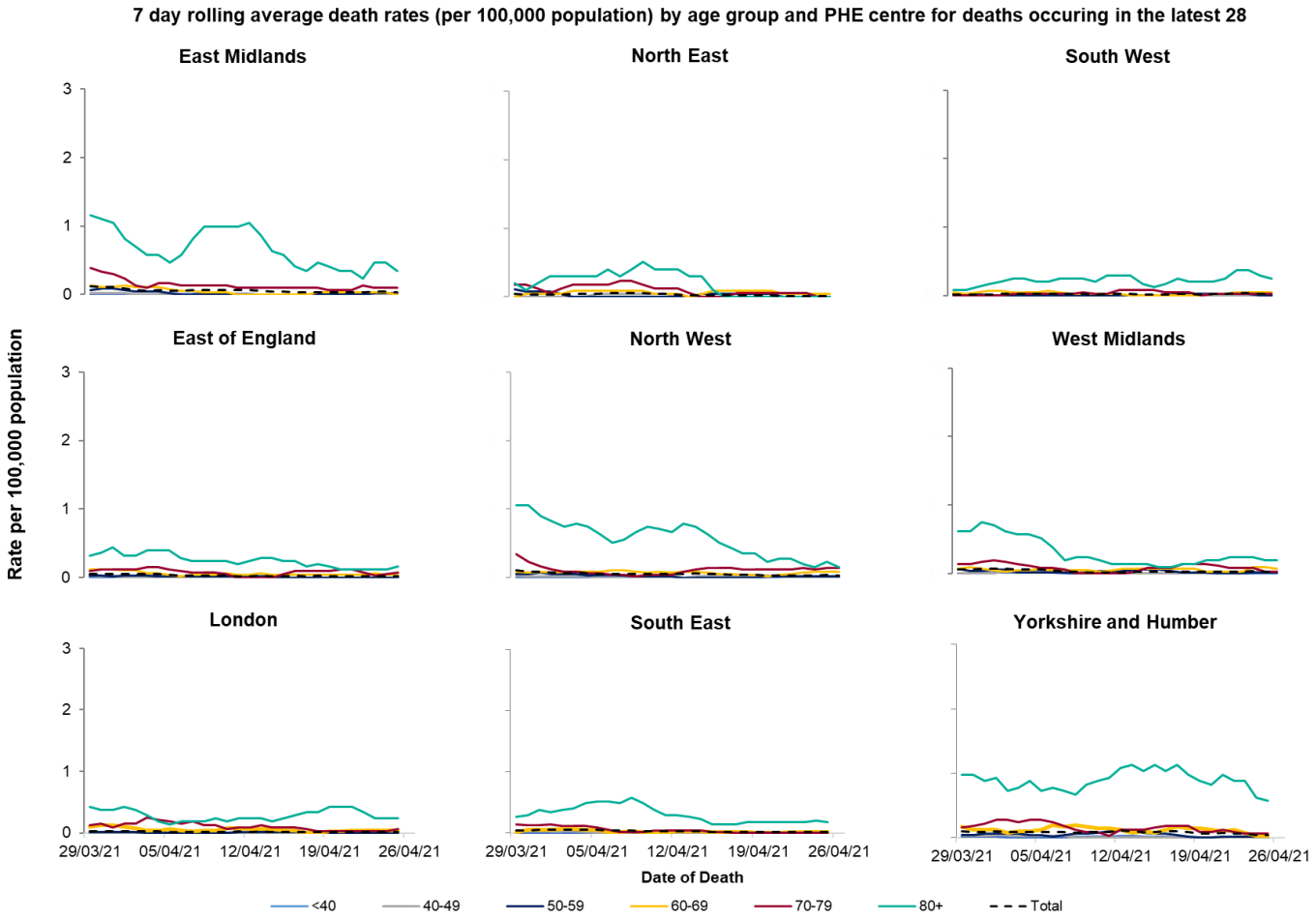


*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

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



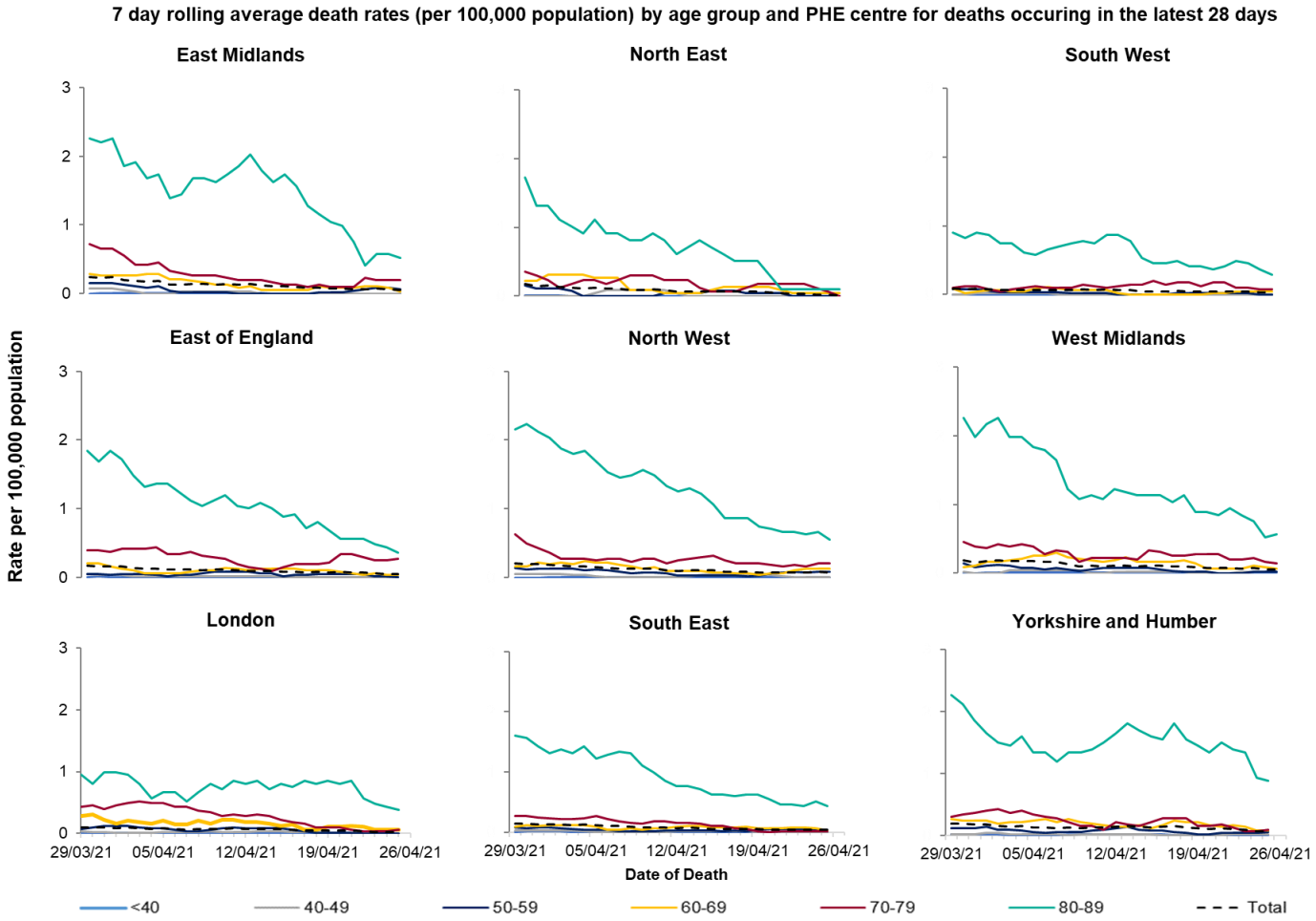
*These data contains a 4 day delay from the day it was produced to allow time for reporting delay

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



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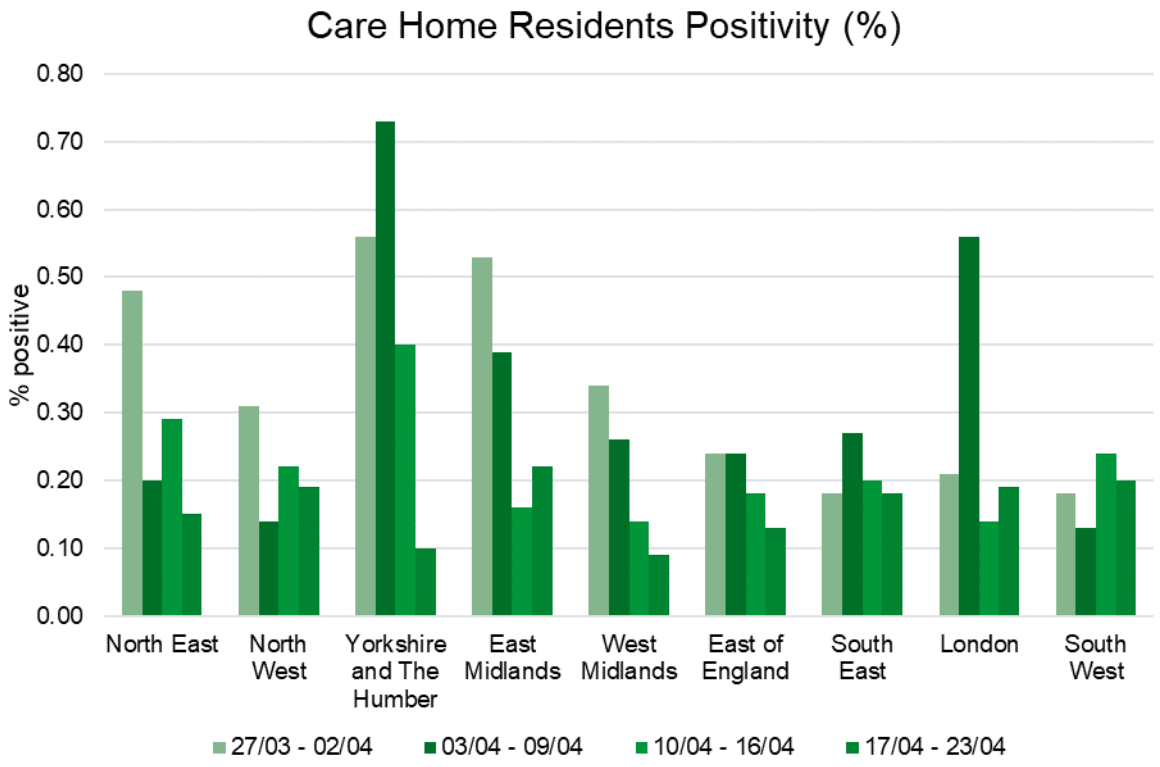
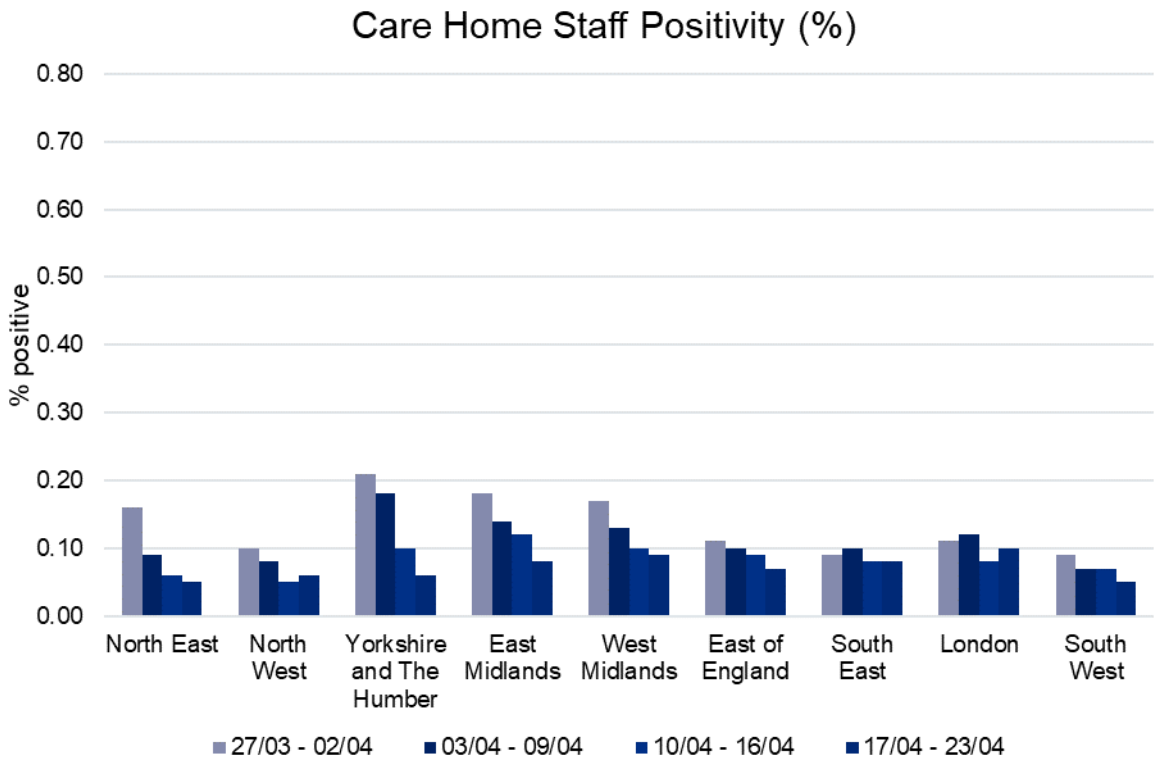
Death definition: a death within 60 days of a positive specimen or on death certificate

Prepared by PHE Epidemiology Cell

Care homes – cases & positivity

Care home resident and staff test positivity

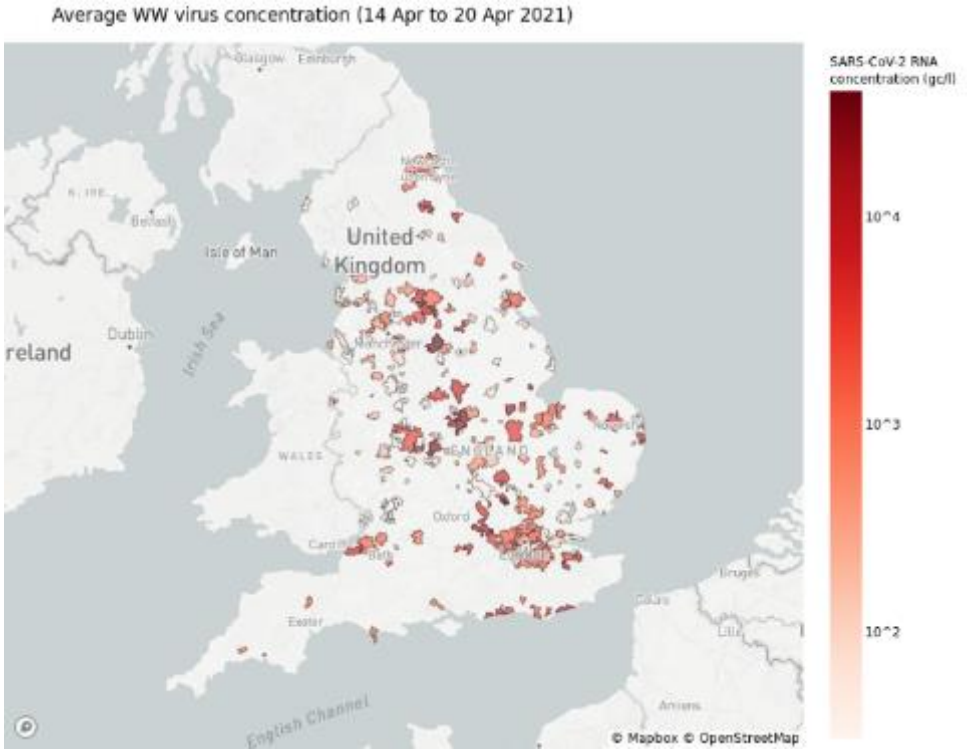




Source: Foundry DHSC ASC Covid-19 Dashboard. Extracted 26/04/2021
Data presented by test date with a 3-day time lag applied to the most recent data.
Data from PCR tests conducted through the Whole Care Home Testing Programme. Care home residents are PCR-tested once every month and staff once every week 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



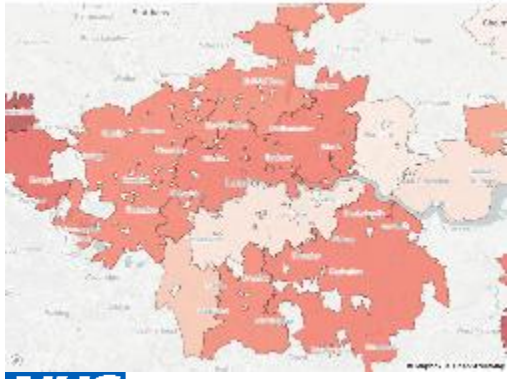
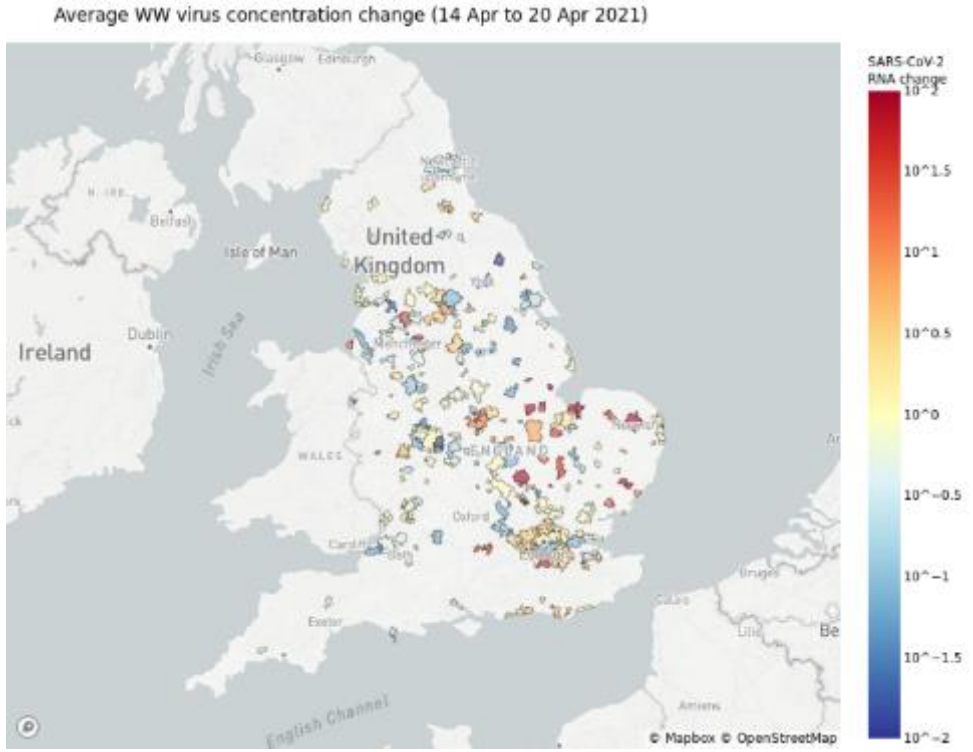


Figure 1: 7-day average concentration of SARS-CoV-2 RNA in wastewater at treatment works in England. Data from 16 Apr to 22 Apr



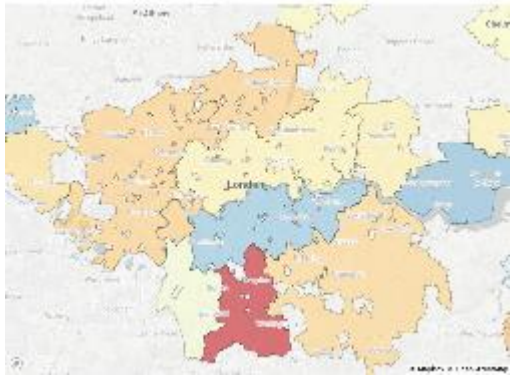


Figure 2: change in rolling 7-day average concentration of SARS-CoV-2 RNA in wastewater at treatment works in England. Data from 16 Apr to 22 Apr

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

NHS
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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.

Concentrations measured in Blandford Forum have increased since the 11th April. This contrasts with the general trend in the South West, where average concentrations have declined.

Concentrations in Leicester have been consistently increasing since 10th April.

Blandford Forum, Leicester, and Doncaster 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 **1 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)

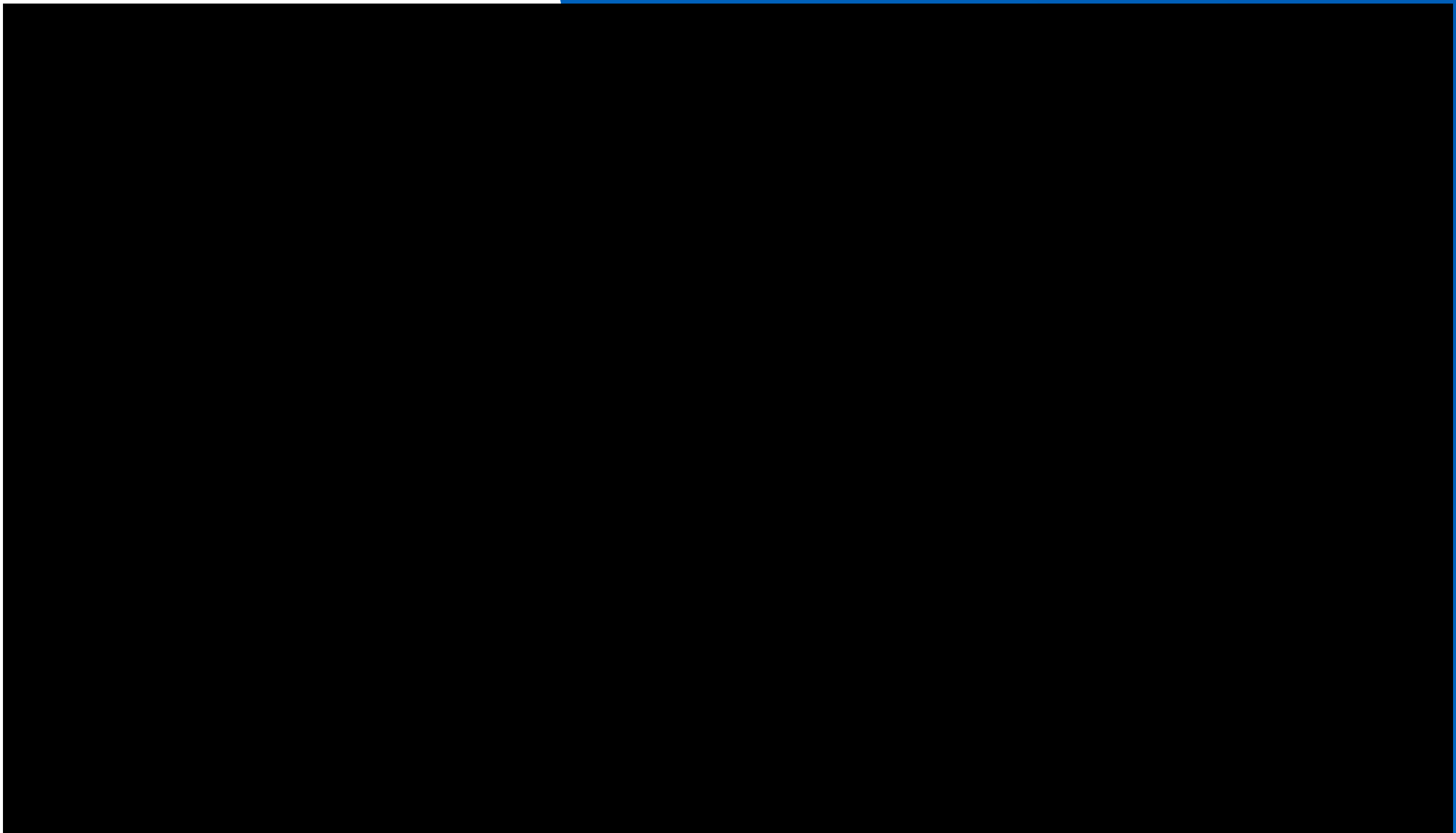
Data as of **2 May 2021** 00:00hrs

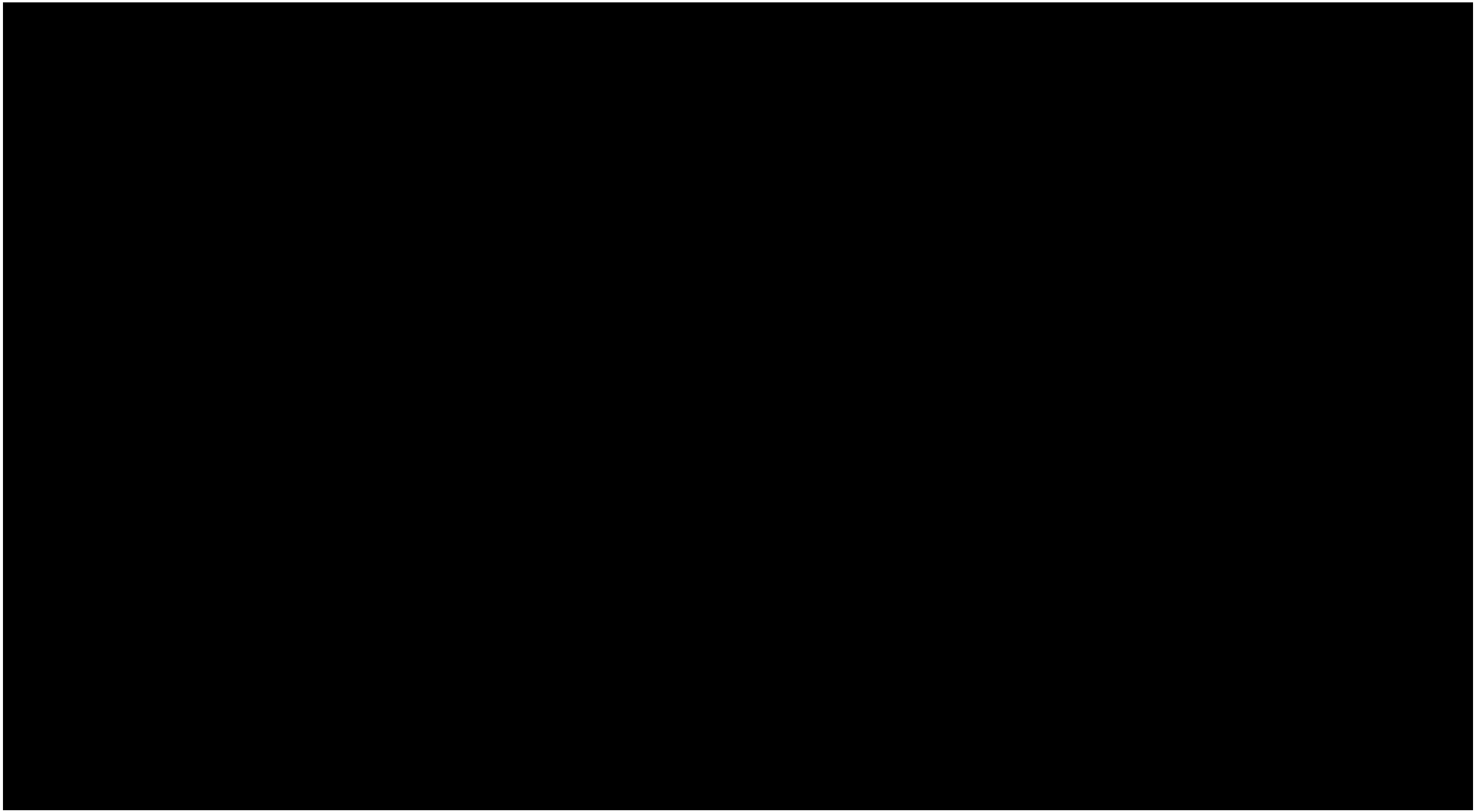
Data on individuals testing negative for SARS-CoV2 in both Pillar 1 and 2. This data is deduplicated to only include one record for any individual who has had only negative samples

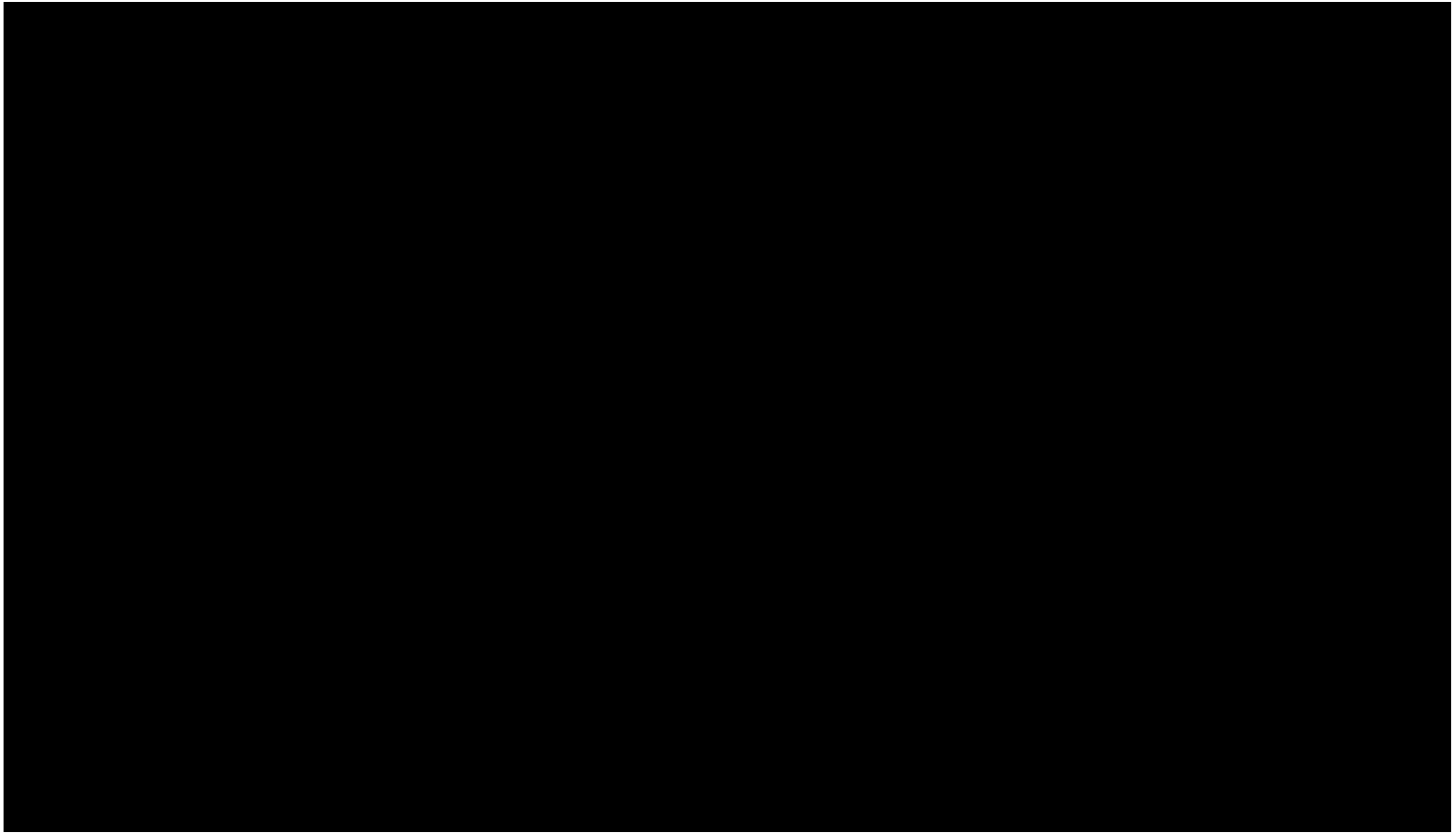
HPZone case and incident management system

Data as of **2 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.







Weekly report on Acute Respiratory Infection (ARI) Situations in Educational Settings as reported to PHE. Methodology, data sources and limitations

- We report on new acute respiratory infection (ARI) situations reported to Health Protection Teams (HPTs) and entered on HPZone in the previous reporting week by setting and locality.
- Daily and weekly aggregated surveillance reports are extracted from HPZone to generate the line listing.
- The weekly extracts include situations reported in the previous epidemiological week (Monday to Sunday) by locality and context (setting e.g. school)
- Situations associated with Educational settings undergo further investigation. Individual case notes are reviewed by an epidemiologist and an assessment made about whether the criteria for a confirmed COVID-19 cluster or outbreak are met. See definitions.
- Situations associated with Educational settings are also further classified into sub-categories by review of individual records.
- It is important to note that many of these situations remain live and so the description presented here may not necessarily be final.
- Of note a national school helpline started operating on 17 September 2020 and a Universities helpline started operating on 7 October. This is likely to have had an impact on the number of situations/outbreaks being reported to HPTs in these settings.
- Schools in England were closed for half-term during weeks 43 or/ and 44.
- The situations captured on HPZone represent a subset of all ongoing clusters and outbreaks in England rather than an exhaustive listing. A variety of arrangements are in place with local authorities and other stakeholders supporting HPTs, however data are not routinely documented on HPZone. As a result, the number of outbreaks reported for some of the regions are underestimates.
- From Week 1 2021 the third national lockdown came into effect and schools were closed with the exception of vulnerable children and children of key workers.

Weekly report on Acute Respiratory Infection (ARI) Situations in Educational Settings as reported to PHE. Methodology, data sources and limitations

Definitions

- **Cluster:** two or more test-confirmed cases of COVID-19 among individuals associated with a specific non-residential setting with illness onset dates within a 14-day period (in the absence of detailed information about the type of contact between the cases).

- **Outbreak:** two or more test-confirmed cases of COVID-19 among individuals associated with a specific non-residential setting with illness onset dates within 14 days, and one of:
  - Identified direct exposure between at least 2 of the test-confirmed cases in that setting (for example under one metre face to face, or spending more than 15 minutes within 2 metres) during the infectious period of one of the cases
  - When there is no sustained local community transmission - absence of an alternative source of infection outside the setting for the initially identified cases