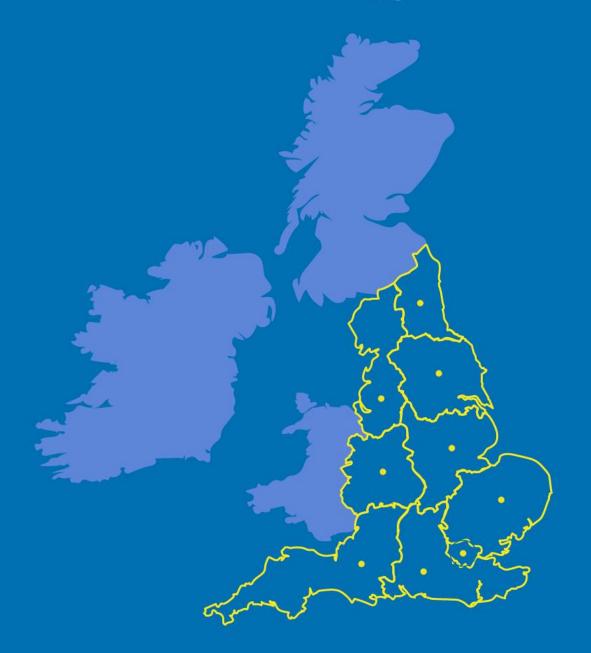
# CORONAVIRUS SITUATIONAL AWARENESS Summary

date: 12 January 2021

**Appendix** 



#### Contents

This situational awareness summary report appendix:

- Local authority information
  - Map of Positivity in testing
  - Map Testing rates
- Charts of case rate, Positivity and testing across selected age groups
- Hospitalisation
- Mortality
- Hospitalisation
  - Contact tracing
- Outbreak reports
  - Overall by geography

  - Other settings
- Acute respiratory infections
- Weekly positivity for other respiratory viruses
- Waste water

#### 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.

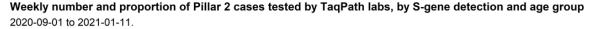
16/11/20 -PHE has updated the way it records the location of people who test positive or negative for COVID-19. It now prioritises addresses given at the point of testing over the details registered on a patient's record in the NHS Digital Patient Demographic Service. This better reflects the distribution 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.

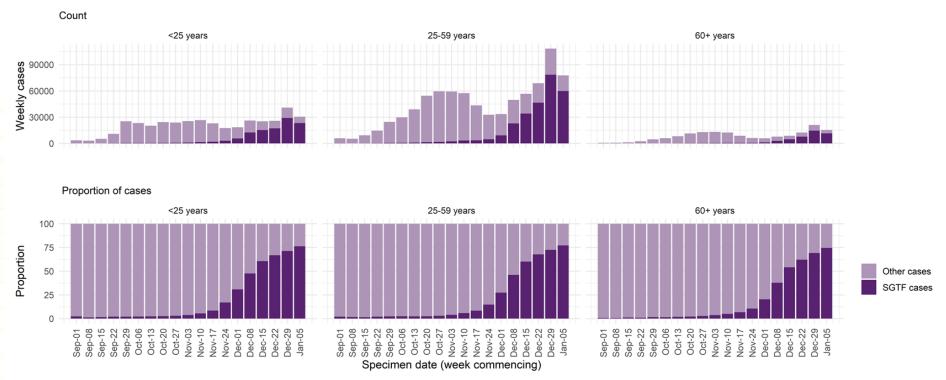
20/12/20 - due to the increasing use of asymptomatic mass testing with lateral flow devices (LFD), positivity and testing rates reported in the national situational awareness reports are now only presented for PCR tests. This change has been made retrospectively, and rates reported here for earlier time 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.

#### 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

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





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.

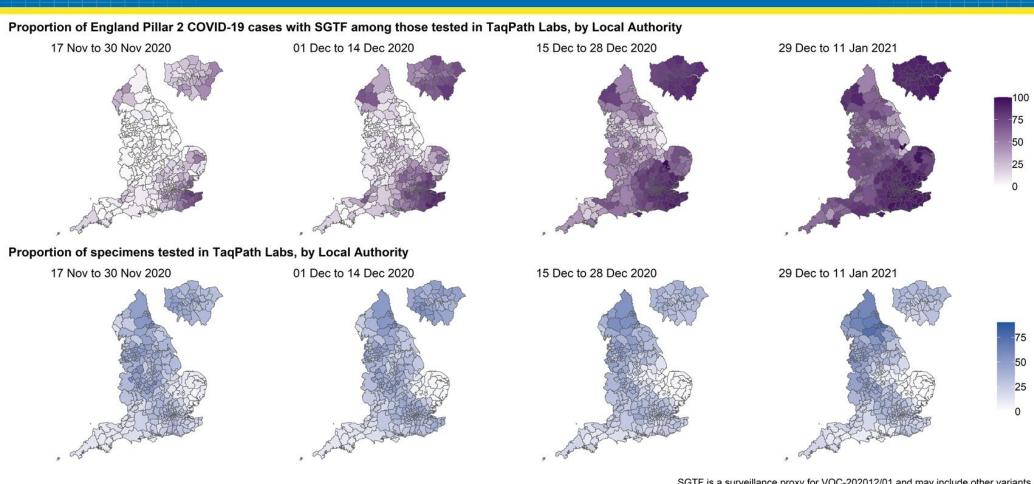
TaqPath labs = Alderley Park, Milton Keynes and Glasgow Lighthouse Labs, which use TaqPath COVID-19 RT-PRC.

Cases deduplicated to one positive test per person per week, prioritising SGTF tests.

Data source: SGSS. Age missing for 63 persons, excluded from figure.

**Note:** Daily routing 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.

#### Tracking SARS-COV-2 S-Gene Target Failure – geographical spread 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.

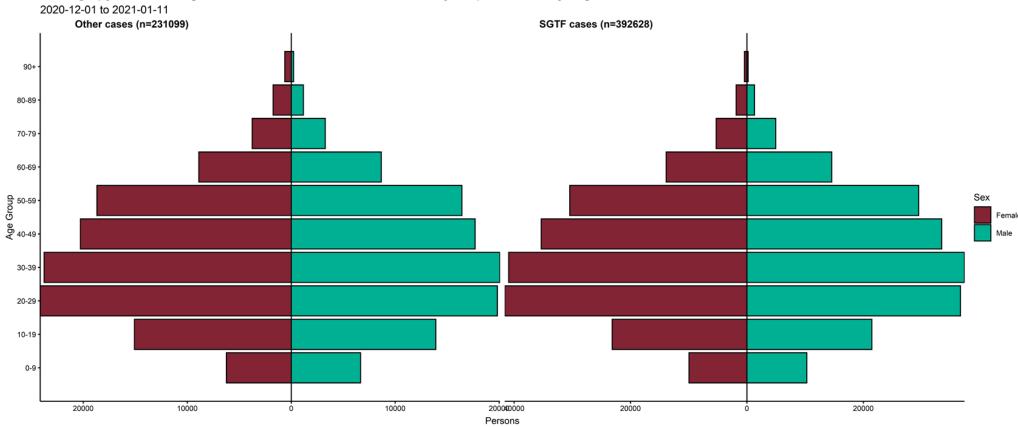
TaqPath labs = Alderley Park, Milton Keynes and Glasgow Lighthouse Labs, which use TaqPath COVID-19 RT-PRC.

Cases deduplicated to one positive test per person per week, prioritising SGTF tests.

Data source: SGSS.

#### Demographic breakdown of cases with and without S-Gene Target Failure

#### Sex-age pyramid of England Pillar 2 COVID-19 cases tested by TaqPath labs, by S-gene detection



SGTF is a surveillance proxy for VOC-202012/01 and may include other variants.

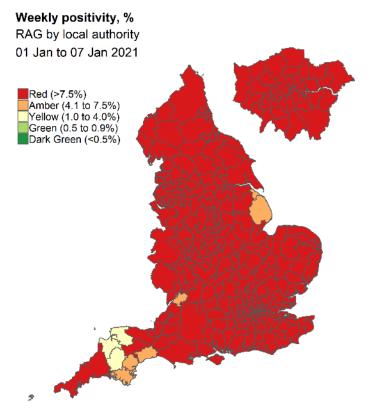
SGTF = Positive test with non-detectable S gene and <=30 CT values for N and ORF1ab genes respectively.

TaqPath labs = Alderley Park, Milton Keynes and Glasgow Lighthouse Labs, which use TaqPath COVID-19 RT-PRC.

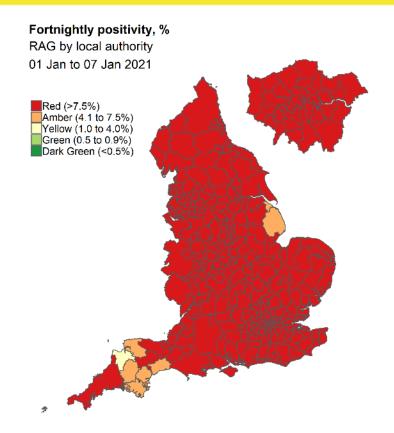
Cases deduplicated to one positive test per person per week, prioritising SGTF tests.

Data source: SGSS. 49 persons with missing age/sex excluded.

# Testing: Individuals testing positive per 100 tests Data for specimens taken between 1 January 2021 and 7 January 2021 (7 day) and 25 December 2020 and 7 January 2021 (14 day)



Local authorities with highest percentage positivity				
Newham	31.7%	Hounslow	27.5%	
Redbridge	29.9%	Ealing	27.5%	
Tower Hamlets	29.8%	Gravesham	27.3%	
Enfield	29.7%	Broxbourne	27.2%	
Brent	28.7%	Southwark	27.1%	

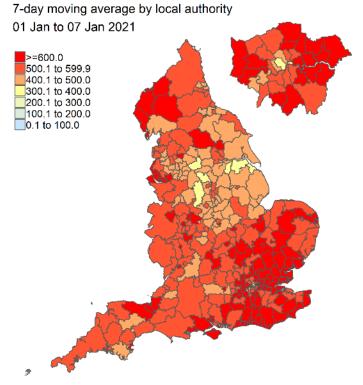


Local authorities with highest percentage positivity				
Newham	33.2%	Gravesham	29.2%	
Tower Hamlets	31.4%	Broxbourne	29.1%	
Enfield	30.9%	Dartford	28.9%	
Redbridge	30.1%	Hounslow	28.6%	
Brent	29.5%	Bexley	28.3%	

Data from SGSS; Pillar 1 and 2 testing (excludes LFD tests) Crown copyright and database right 2020

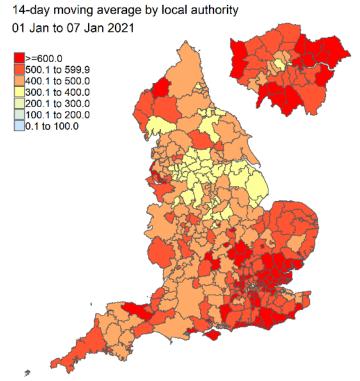
# Testing: Individuals tested per 100,000 population per day Data for specimens taken between 1 January 2021 and 7 January 2021 (7 day) and 25 December 2020 and 7 January 2021 (14 day)

#### Average number of individuals tested per 100,000 per day



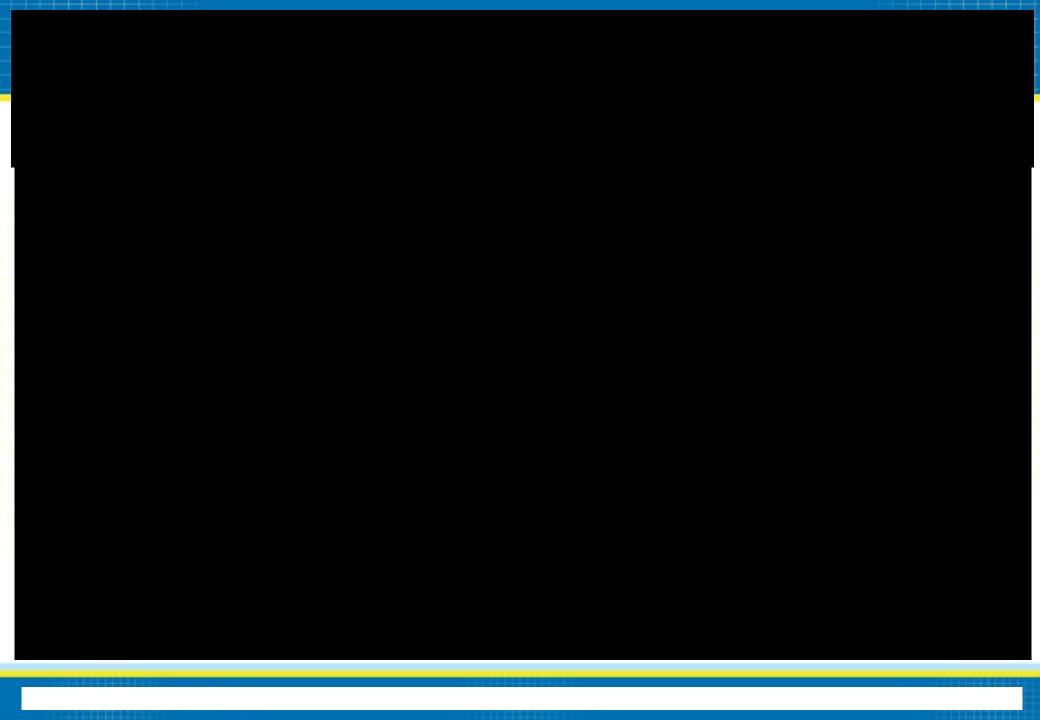
معر النام المنابع المن				
Local authorities with highest daily rate				
Southend-on-Sea	1065.4	Thurrock	929.4	
Harlow	975.4	Castle Point	923.1	
Tendring	965.7	Rushmoor	922.7	
Barking and Dagenham	963.1	Havering	880.3	
Isle of Wight	933.9	Brentwood	853.6	

#### Average number of individuals tested per 100,000 per day

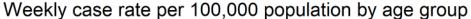


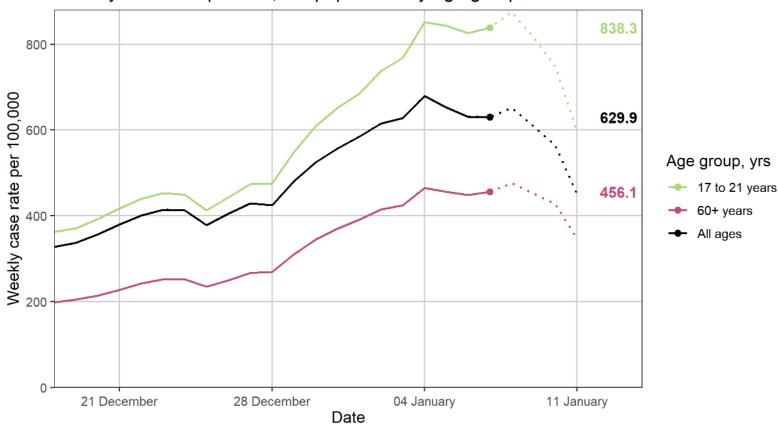
Local authorities with highest daily rate				
Southend-on-Sea	1010.5	Brentwood	853.5	
Harlow	904.4	Tendring	846.5	
Castle Point	897.2	Rushmoor	826.3	
Thurrock	880.2	Epping Forest	808.6	
Barking and Dagenham	866.1	Rochford	801.2	

Data from SGSS; Pillar 1 and 2 testing (excludes LFD tests) Crown copyright and database right 2020



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



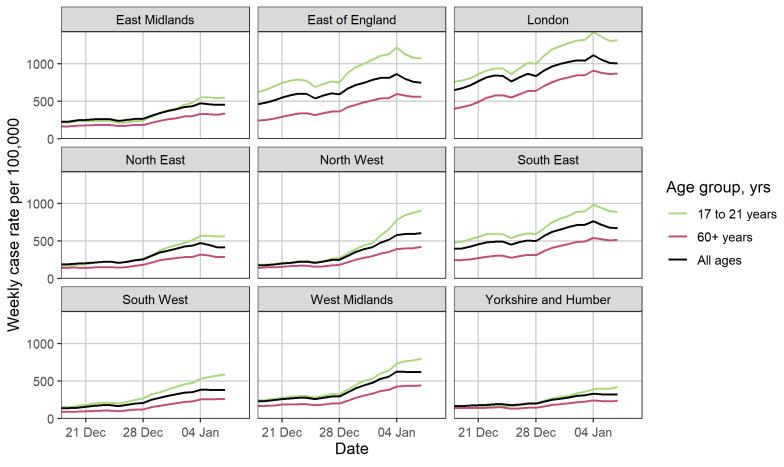


Labels show weekly case rate for 01 January 2021 to 07 January 2021

Dashed lines indicates period with incomplete data

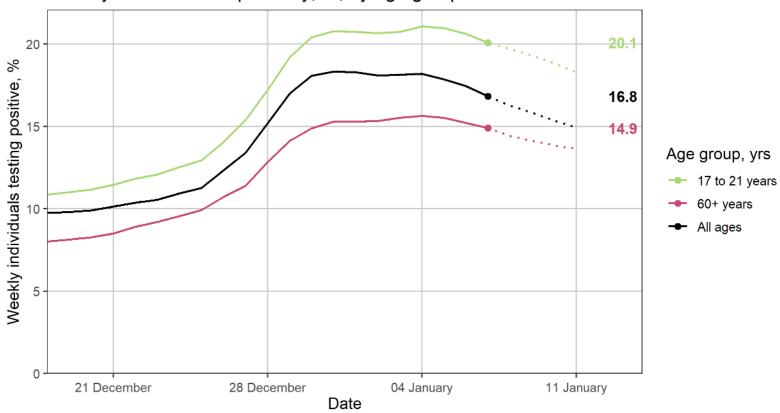
## Case rate across both pillars 1 and 2 (weekly) – selected ages Data up to the 7 January 2021

#### Weekly case rate per 100,000 population by age group



## Percentage of individuals testing positive across both pillars 1 and 2 (weekly) – selected ages Data up to the 7 January 2021





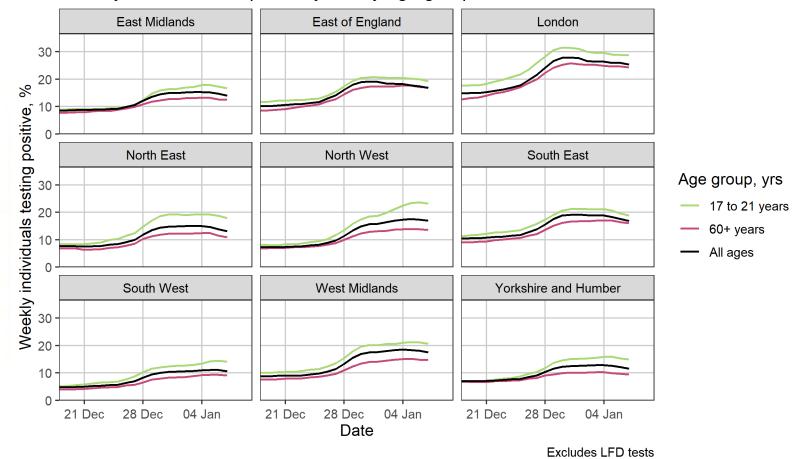
Labels show weekly positivity rate for 01 January 2021 to 07 January 2021

Dashed lines indicates period with incomplete data.

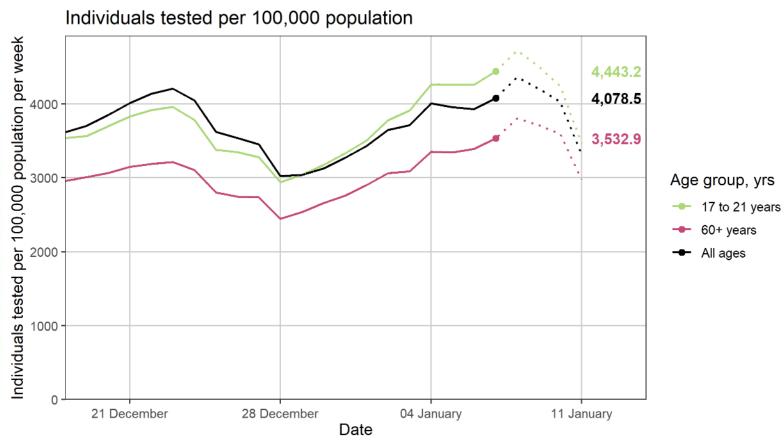
Excludes LFD tests

## Percentage of individuals testing positive across both pillars 1 and 2 (weekly) – selected ages Data up to the 7 January 2021

#### Weekly individual test positivity, %, by age group



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



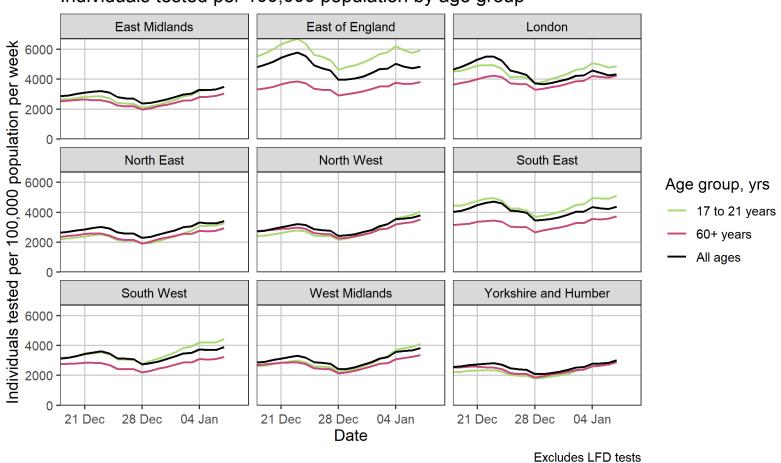
Labels show weekly testing rate for 01 January 2021 to 07 January 2021

Dashed lines indicates period with incomplete data.

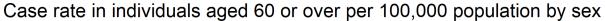
Excludes LFD tests

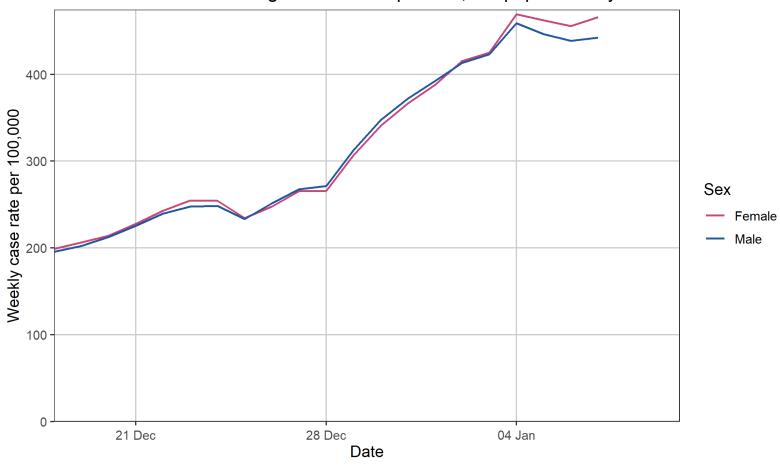
#### Individuals tested across both pillars 1 and 2 (weekly) - selected ages Data up to the 7 January 2021

#### Individuals tested per 100,000 population by age group



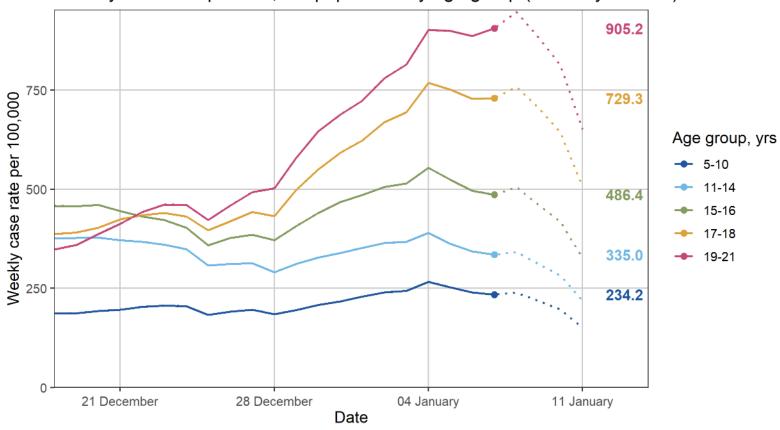
## Case rate across both pillars 1 and 2 (weekly) – aged 60 or over Data up to the 7 January 2021





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

Weekly case rate per 100,000 population by age group (5 to 21 year olds)

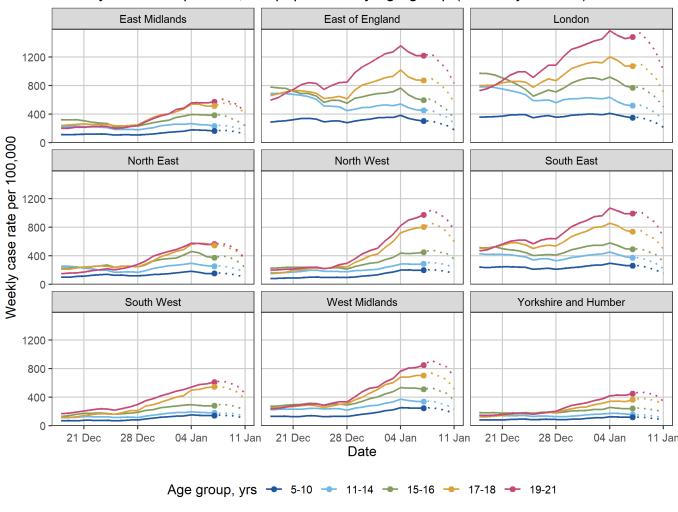


Labels show weekly case rate for 01 January 2021 to 07 January 2021

Dashed lines indicates period with incomplete data

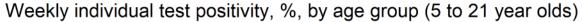
## Case rate across both pillars 1 and 2 (weekly) – young people Data up to the 7 January 2021

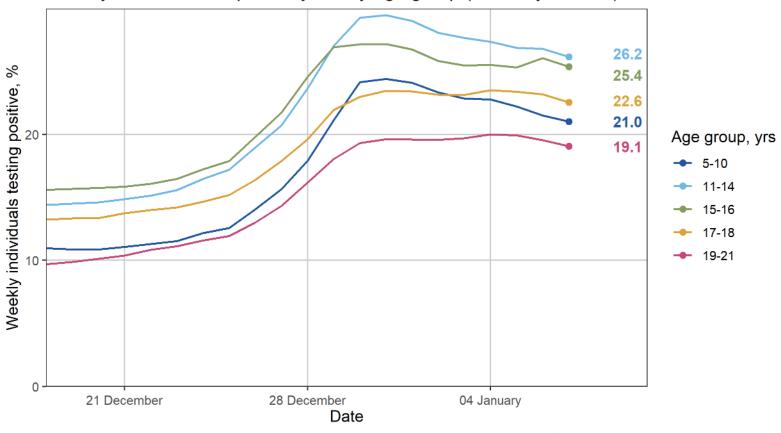




Dashed lines indicates period with incomplete data

## Percentage of individuals testing positive across both pillars 1 and 2 (weekly) – young people Data up to the 7 January 2021



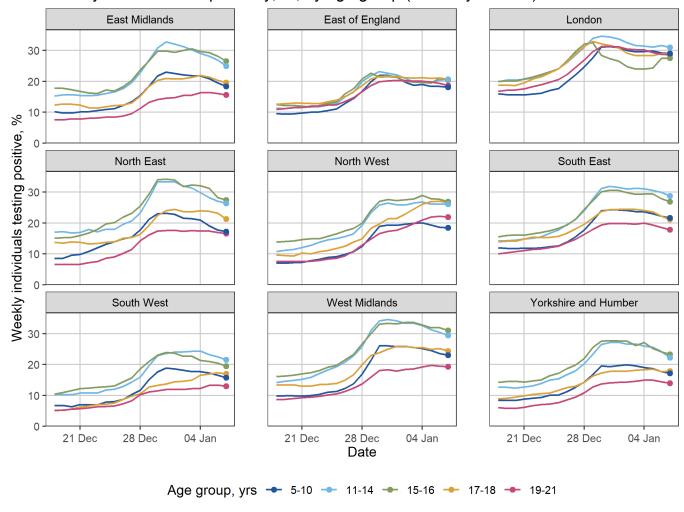


Labels show positivity rate for 01 January 2021 to 07 January 2021.

Excludes LFD tests

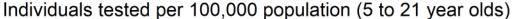
## Percentage of individuals testing positive across both pillars 1 and 2 (weekly) – young people Data up to the 7 January 2021

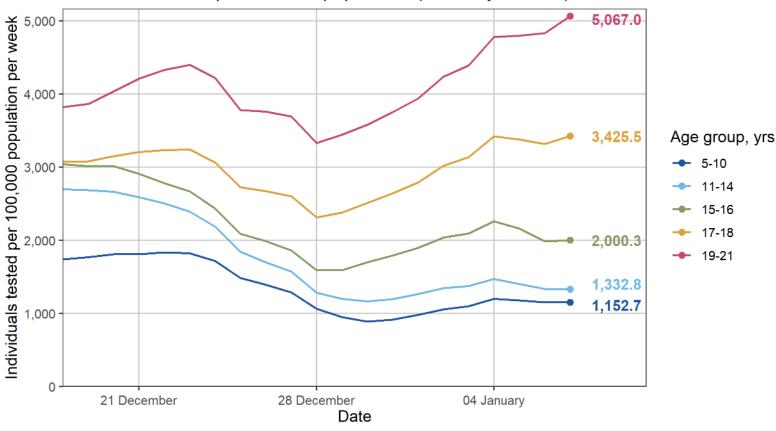
Weekly individual test positivity, %, by age group (5 to 21 year olds)



**Excludes LFD tests** 

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



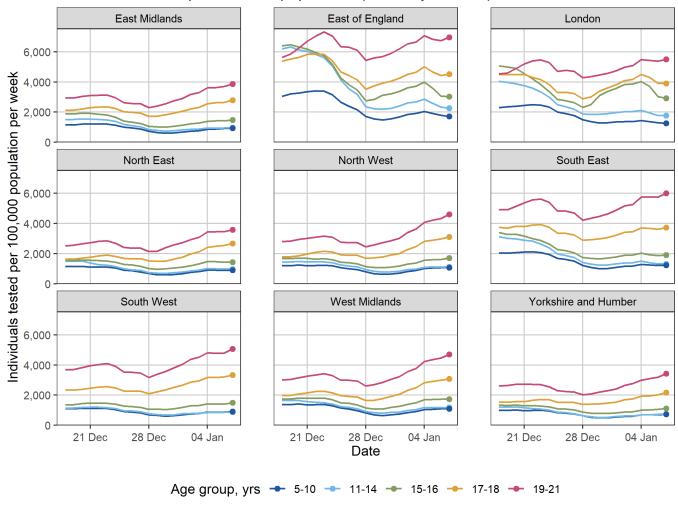


Labels show weekly testing rate for 01 January 2021 to 07 January 2021.

Excludes LFD tests

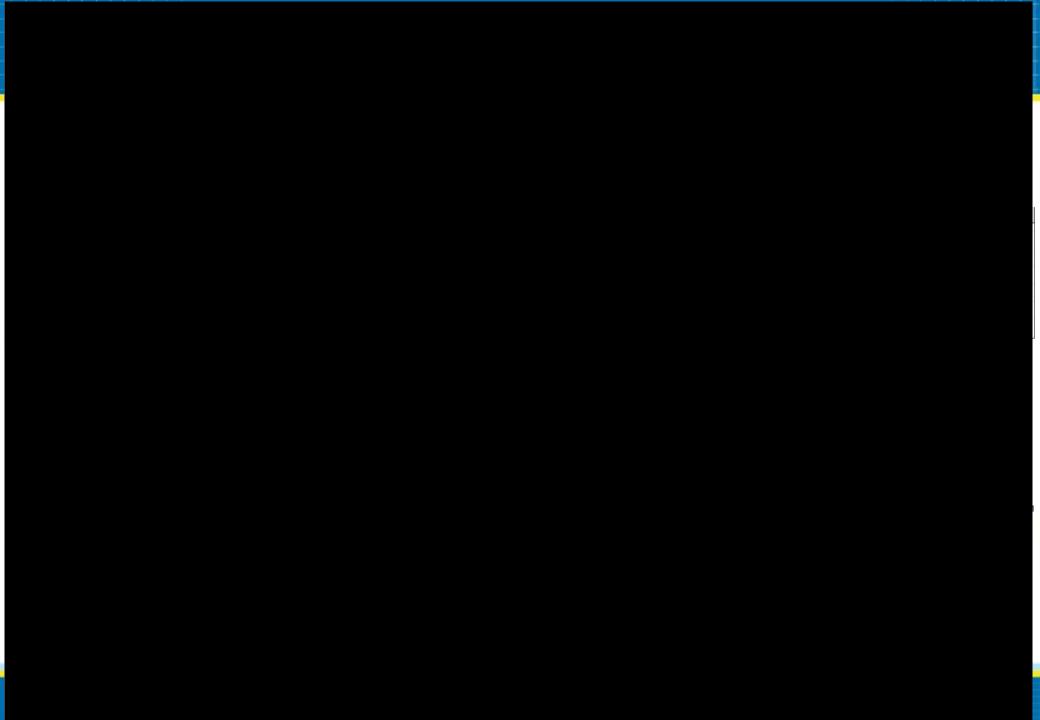
## Individuals tested across both pillars 1 and 2 (weekly) – young people Data up to the 7 January 2021

#### Individuals tested per 100,000 population (5 to 21 year olds)

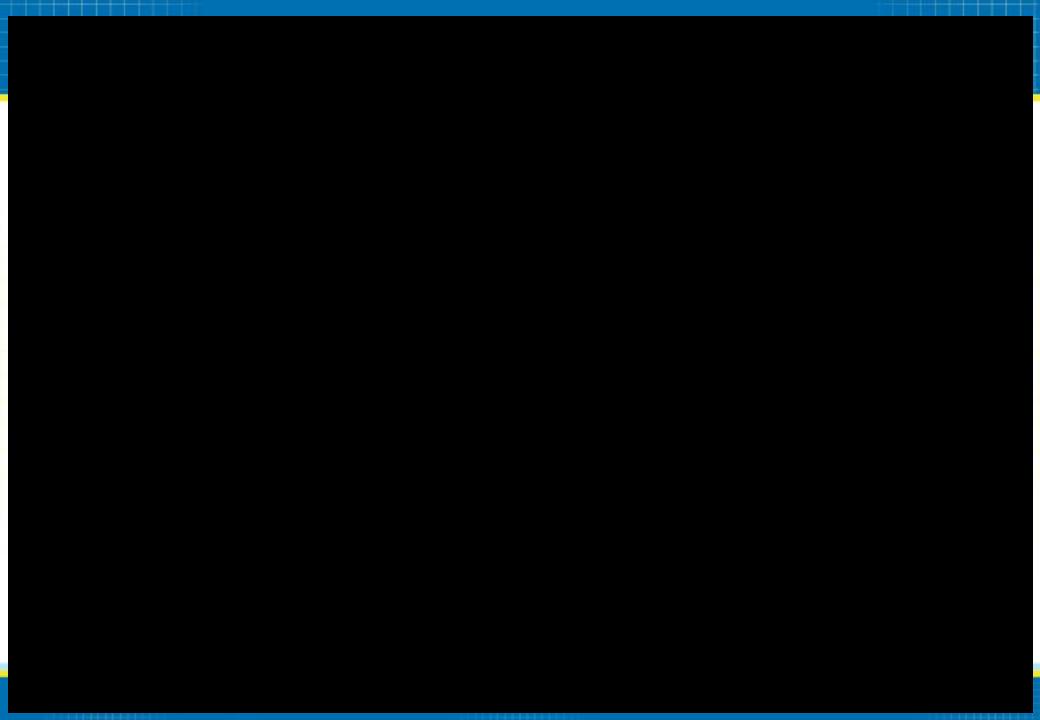


Excludes LFD tests



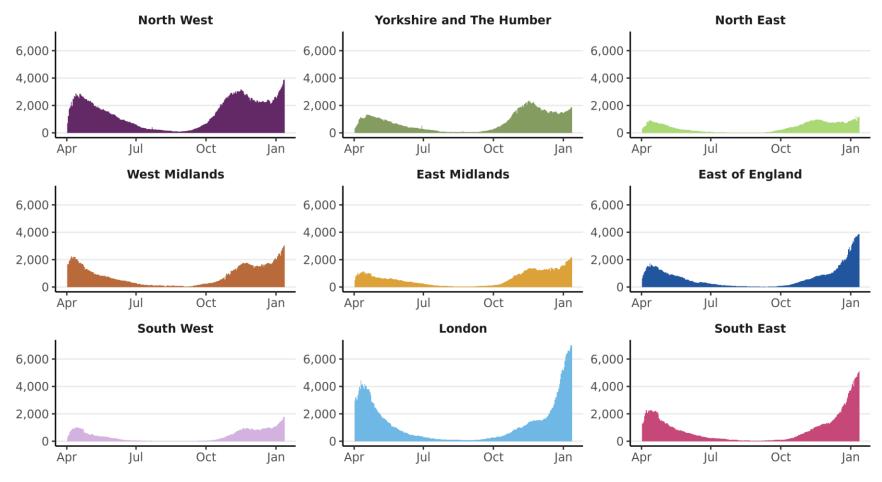






#### Patients in hospital by region

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



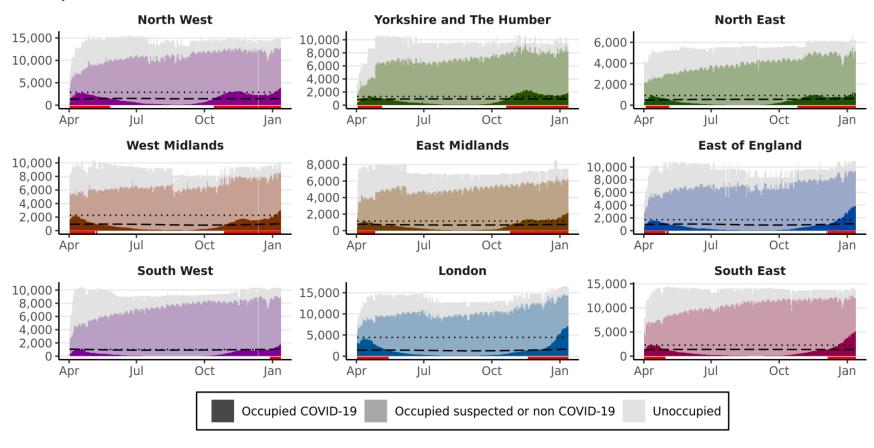
**Source:** NHS England & Improvement COVID-19 Hospital Activity Data, from 01 April 2020 to 12 January 2021. Produced by Joint Biosecurity Centre.

NOTE: slide shows bed occupancy, not new admissions.

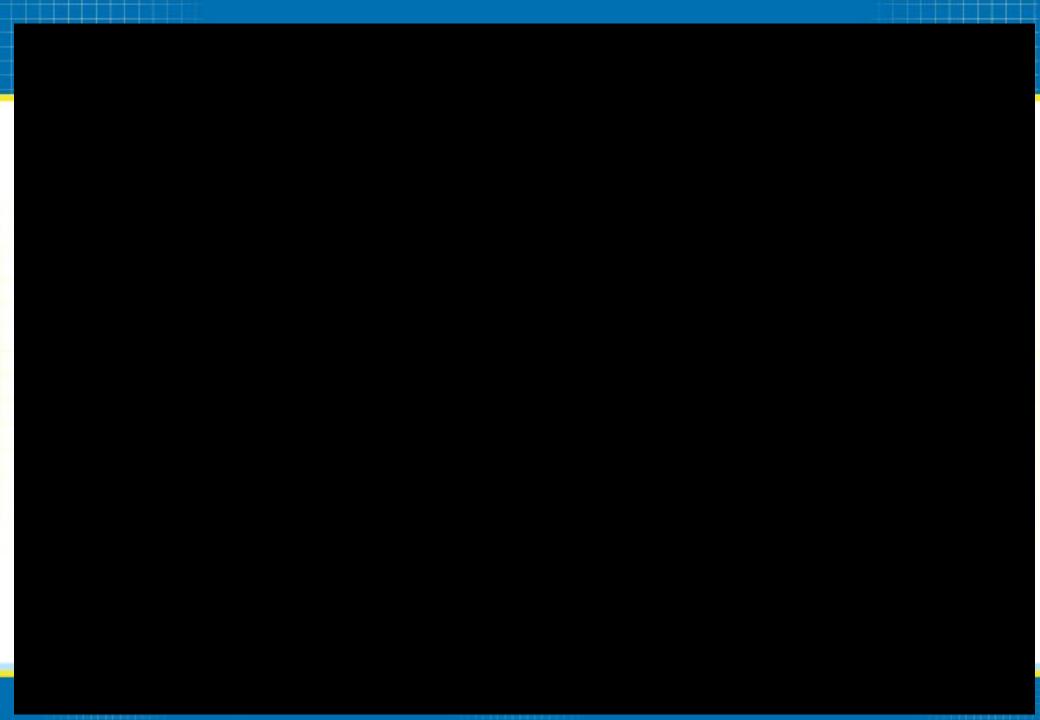
#### Bed occupancy and capacity by region - general and acute beds

#### 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.

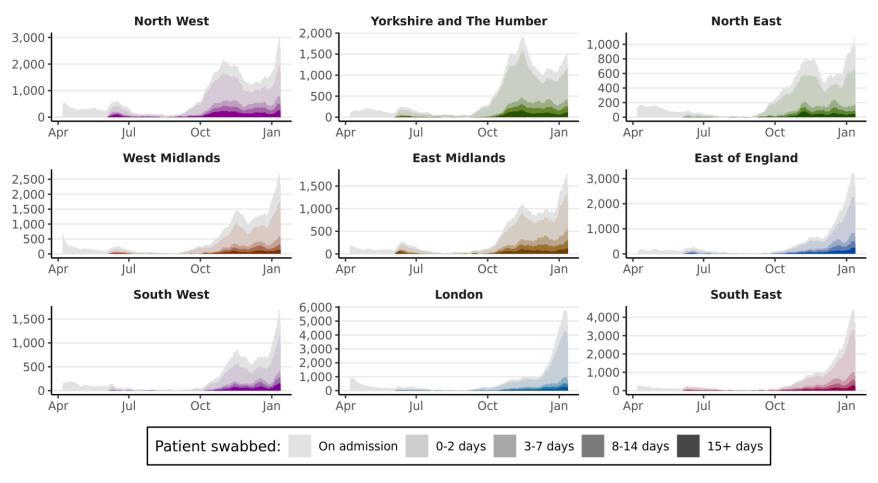


**Source:** NHS England & Improvement COVID-19 Hospital Activity Data, from 02 April 2020 to 12 January 2021. Produced by Joint Biosecurity Centre.



#### COVID-19 diagnoses in hospitals by region

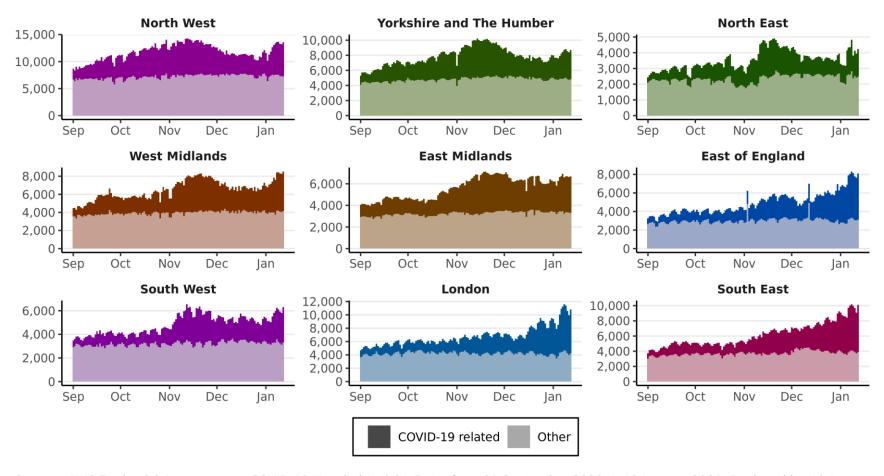
COVID-19 diagnoses in hospitals in previous week by region



**Source:** NHS England & Improvement COVID-19 Hospital Activity Data, from 07 April 2020 to 12 January 2021. Produced by Joint Biosecurity Centre.

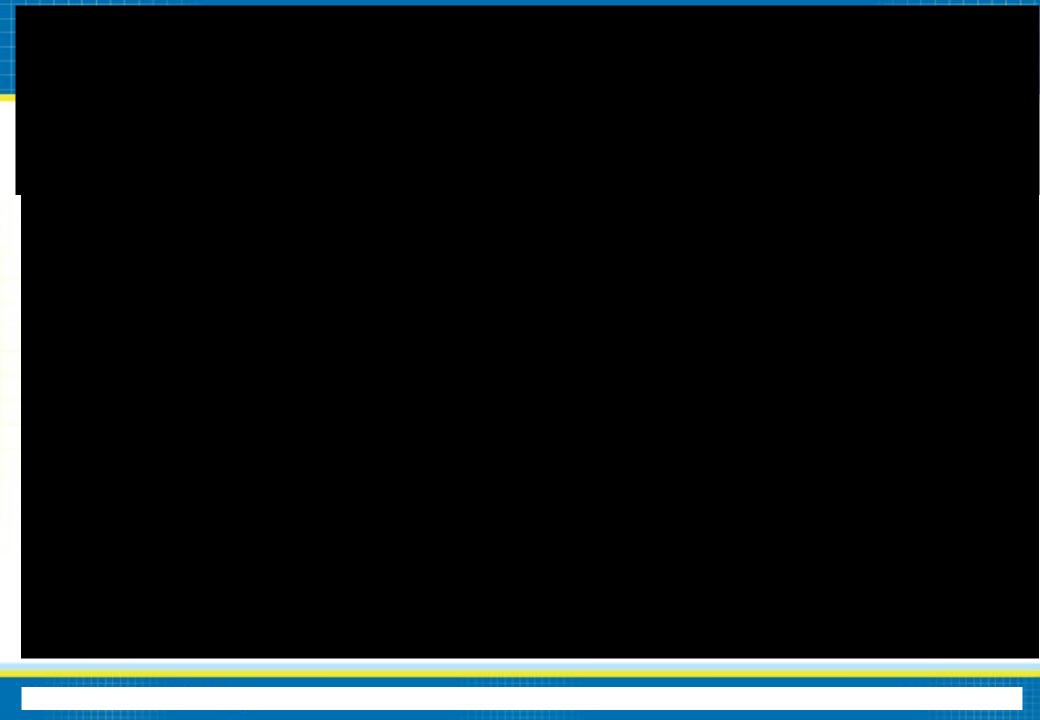
#### NHS staff absences by region (COVID-19 related and other)

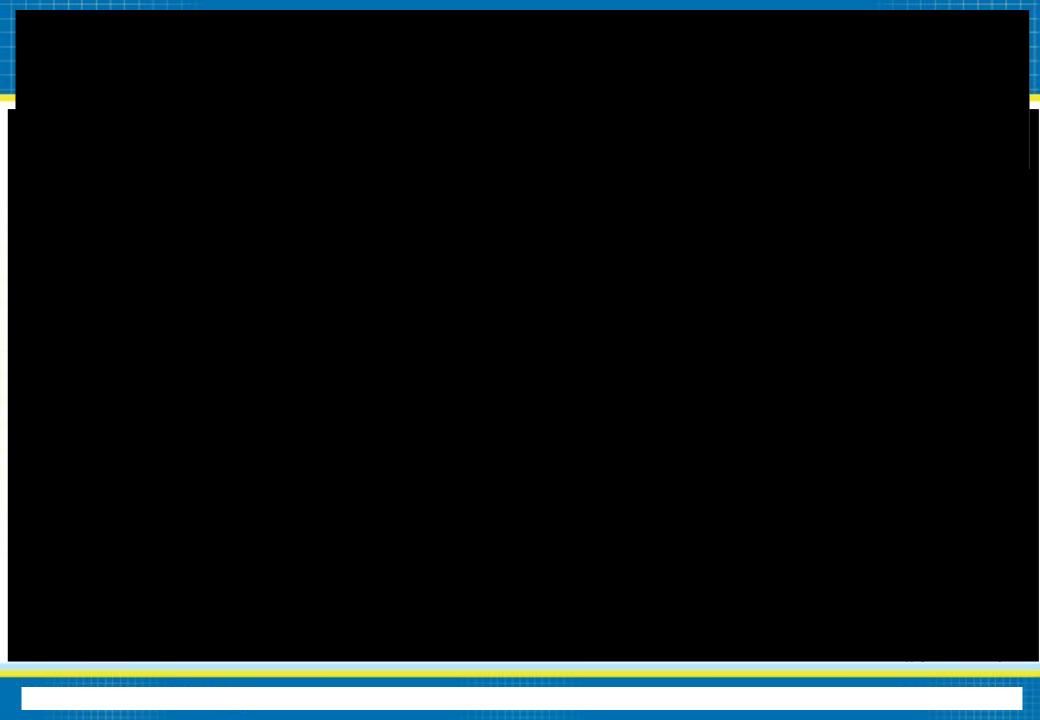
#### Daily NHS staff absences by region



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

Hospital admissions include both patients admitted with confirmed COVID-19 and inpatients newly diagnosed with COVID-19.

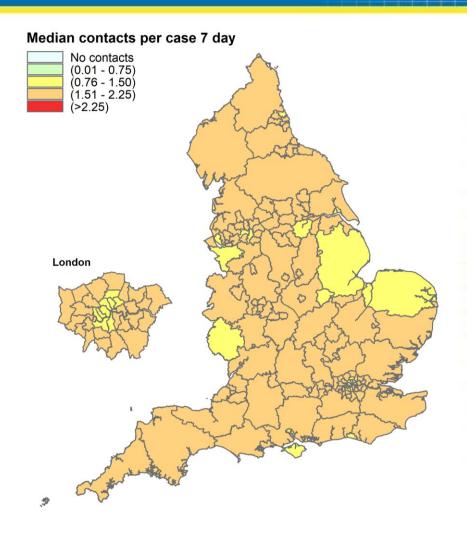




## Contact tracing – 7 day Data extracted 11 January 2021 – data up to 10 January 2021

Median number of individual contacts per case by lower-tier local authority, England, overall from **4 January 2020** to **10 January 2021** (NHS Test and Trace).

Note this excludes contacts identified as part of complex situations managed by Level 1.

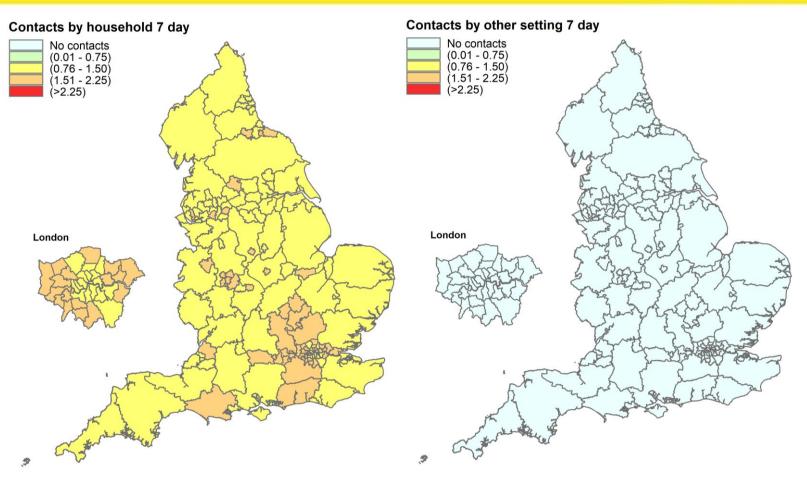


Contains National Statistics data © Crown copyright and database right 2021

### Contact tracing – 7 day Data extracted 11 January 2021 – data up to 10 January 2021

Median number of contacts per case by setting (household or other) by lower-tier local authority, England, overall from 4 January 2020 to 10 January 2021 (NHS Test and Trace).

Note that contacts with unknown geography are assigned to the upper-tier local authority of the case that identified them.

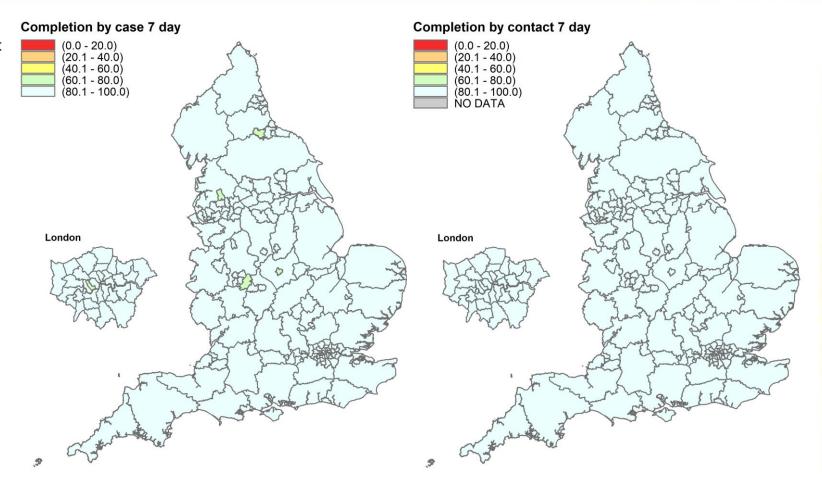


Contains National Statistics data © Crown copyright and database right 2021

# Contact tracing – 7 day Data extracted 11 January 2021 – data up to 10 January 2021

Proportion of cases and contacts completing contact tracing by lower-tier local authority, England, overall from 4 January 2020 to 10 January 2021 (NHS Test and Trace).

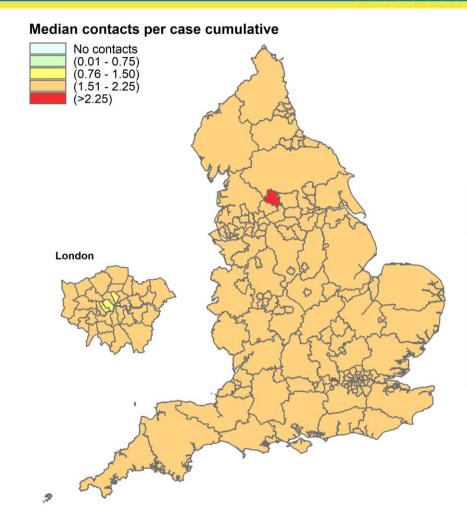
Note that contacts with unknown geography are assigned to the upper-tier local authority of the case that identified them.



# Contact tracing – cumulative Data extracted 11 January 2021 – data up to 10 January 2021

Median number of individual contacts per case by lower-tier local authority, England, overall from **28 May 2020** to **10 January 2021** (NHS Test and Trace).

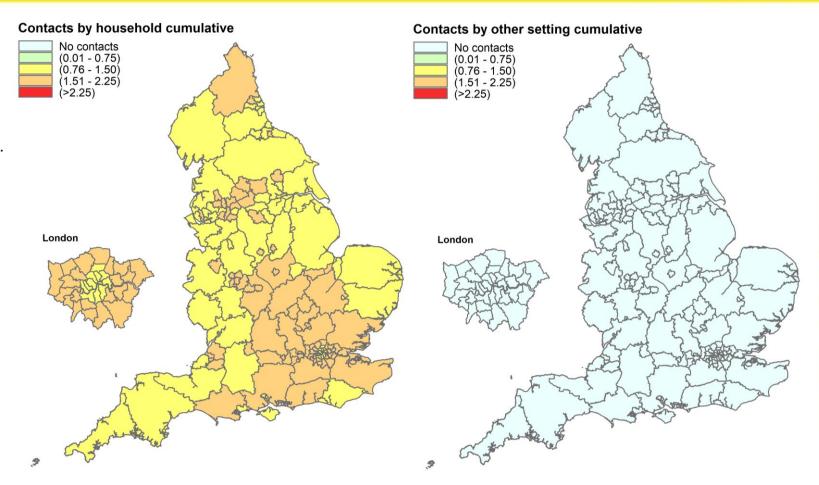
Note this excludes contacts identified as part of complex situations managed by Level 1.



# Contact tracing – cumulative Data extracted 11 January 2021 – data up to 10 January 2021

Median number of contacts per case by setting (household or other) by lower-tier local authority, England, overall from 28 May 2020 to 10 January 2021 (NHS Test and Trace).

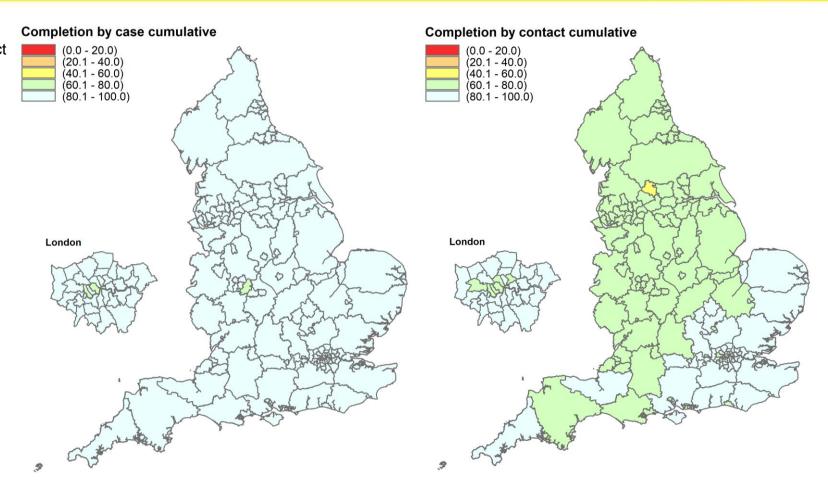
Note that contacts with unknown geography are assigned to the upper-tier local authority of the case that identified them.



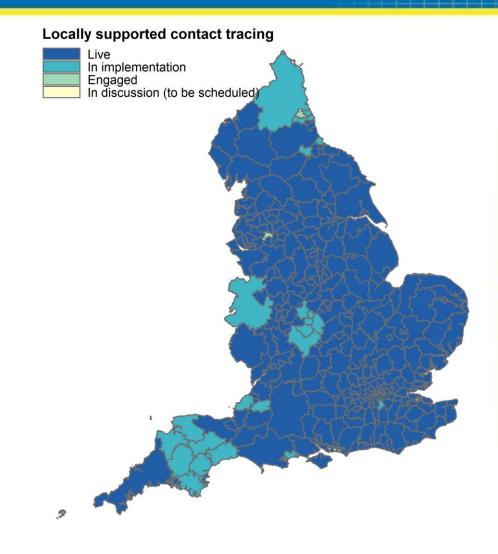
# Contact tracing – cumulative Data extracted 11 January 2021 – data up to 10 January 2021

Proportion of cases and contacts completing contact tracing by lower-tier local authority, England, overall from 28 May 2020 to 10 January 2021 (NHS Test and Trace).

Note that contacts with unknown geography are assigned to the upper-tier local authority of the case that identified them.

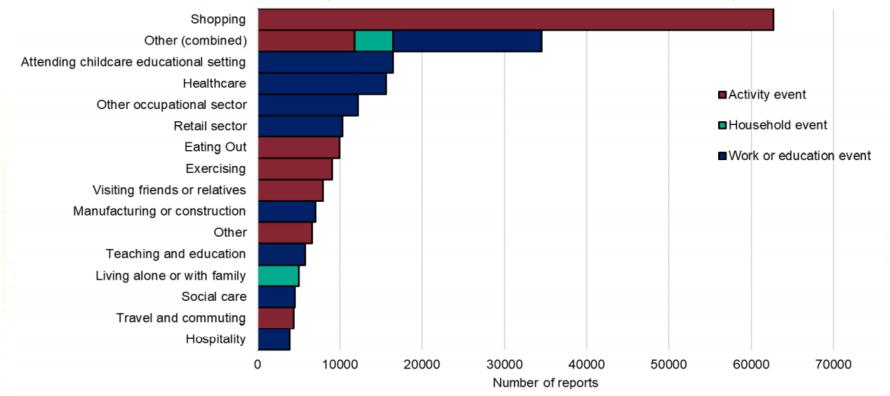


# Locally supported contact tracing Data extracted 12 January 2021



# Enhanced contact tracing Exposure setting for all reported contacts (Data source: NHS Test and Trace)

Events and activities reported by people testing positive, prior to symptom onset in week 53, England



Note: 'Other' includes a wide range of different activities and settings, each of which has small numbers of individuals, as well as activities which did not fit any specific category and were added as Other by the case. This includes: (all within 'activities': Arts entertainment or recreation; Civil service or government; Close contact services; Community and charity activities; Critical national infrastructure; Emergency services; Financial services; Food production; Hospitality; Immigration border services; Information and communication; Military; Personal care; Prison; Private events and celebrations; Public events and mass gathering; event within a shared household; Sport events; Supported living; Teaching and education; Transport; 'Other (combined)' includes all exposure group types that have small counts such as "went to church", "went to the zoo" within that event type.

Data extracted 7 January 2021

# Contact tracing Common locations reported by people testing positive in week 53, England (Data source: NHS Test and Trace)

Common Exposure Reports use NHS Test and Trace enhanced contact tracing data to identify locations or activities reported by 2 or more cases. Once a case enters the NHS Test and Trace system, enhanced contact tracing information is collected on household, workplace, education and activities in the 7-2 day period before symptom onset (or date of test if onset date is not provided). Data collected for this period is primarily used to identify where someone may have caught their infection.

Data presented are for common exposures within the enhanced contact tracing data with a known postcode only. Activities, household and workplace events reported by cases are grouped based on a shared postcode. Any event with >=2 cases associated with it (>=2 persons declaring the same postcode with onsets (or date tested if unavailable) the last 7 days) is defined as a common exposure and is included in this report.

Locations with more visitors are more likely to be identified as common exposures. No adjustment has been made for how commonly a location is visited. The exposure category selected is the most commonly identified among all individuals with an event at that postcode. The exposure category can change retrospectivity therefore, changing the most common exposure as reported here.

Common exposures identified in this way are not always indicative of epidemiological linkage between the cases and require further investigation. Some will be coincidental rather than relating to potential/actual transmission events.

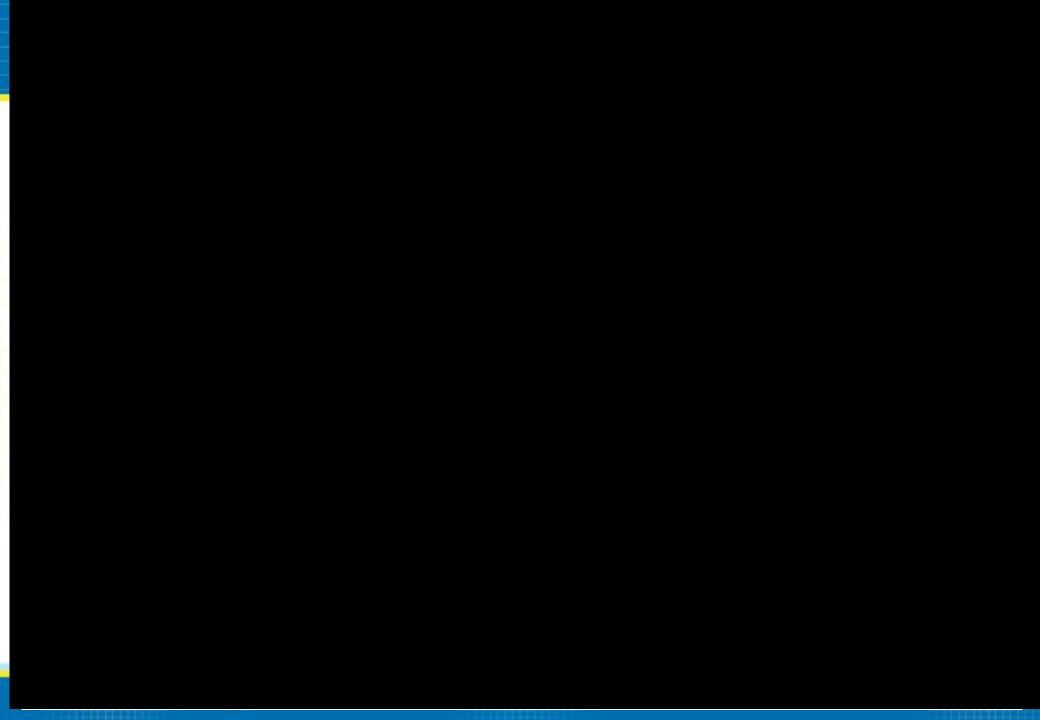
Excludes 46 common exposures classed as 'other' at the third level of classification (these could be from several 2nd level categories such as Eating out, Entertainment and day trips, Sport events etc). Also excludes 38 where no third level categorization was available (includes second level categories such as Prison / detention facility, other occupational sector, information and communication).

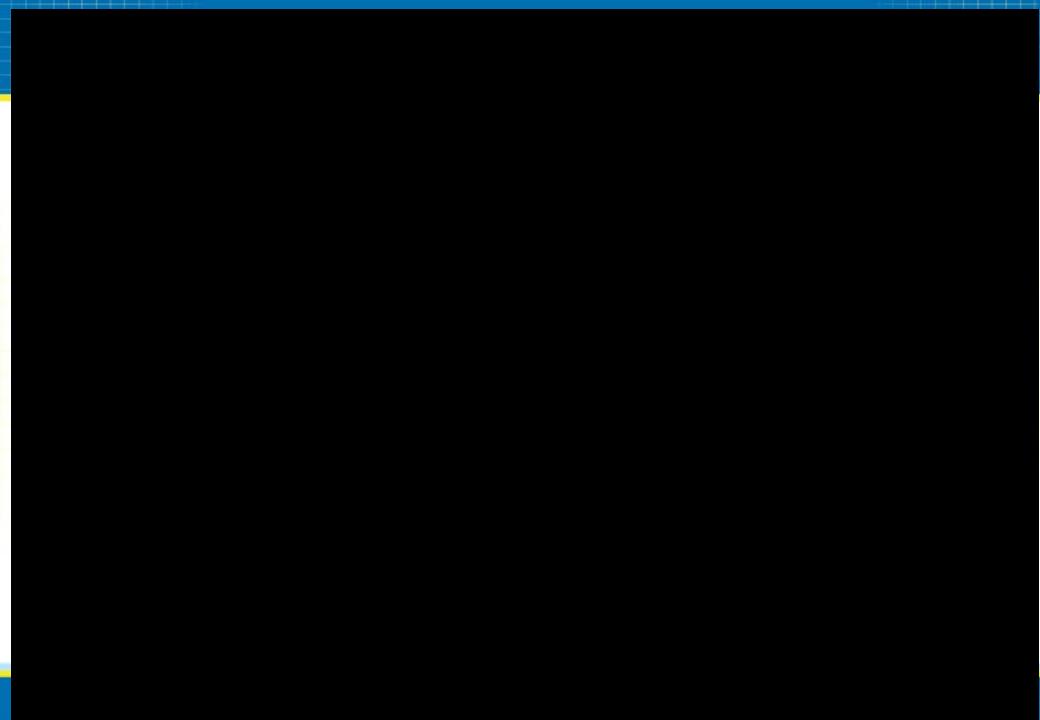
The data is based on a revised definition for common exposures. Previously, >2 cases in the same location were counted as common exposures. The revised definition further splits this into separate common exposures if the event's settings are different. Additionally, the revised definition excludes exposure events without a known event date.

Furthermore, this data now only includes common exposures identified during the reporting week. This differs from the previous version where a common exposure could be included in multiple reporting weeks depending on its exposure duration. As a result of these differences, the data will not be comparable with previous versions.

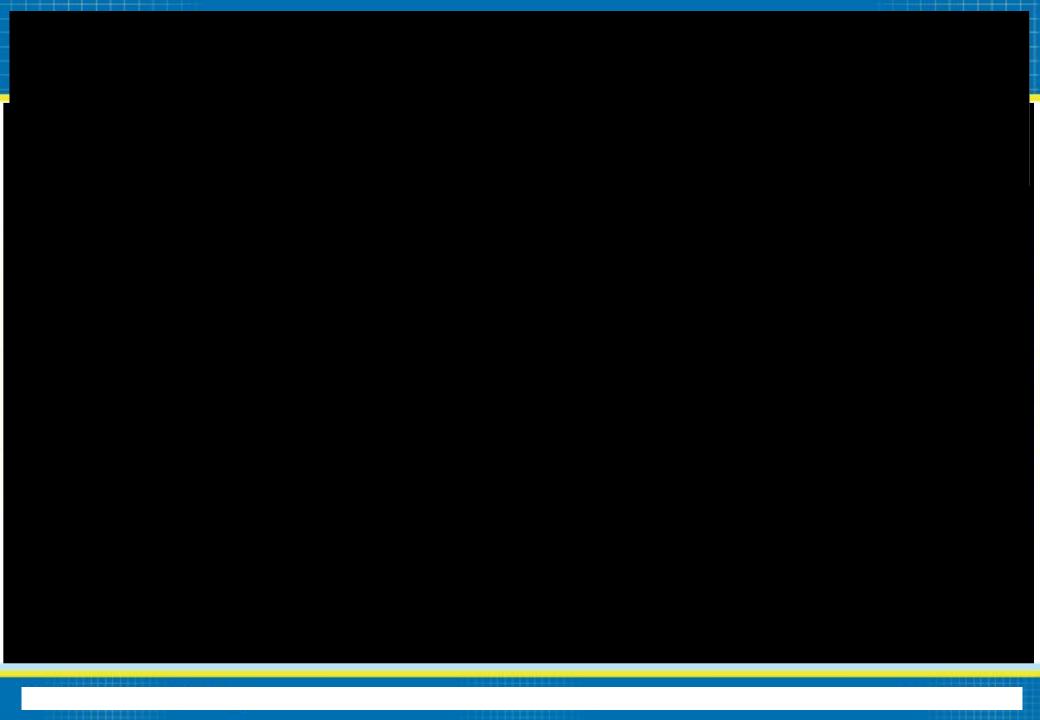
Setting	All ages**	%
Supermarket (visting and working)		12.90%
General practice (visting and working)		5.80%
Care home (working)		3.80%
Home (visting and working)		3.80%
Restaurant or cafe (visting)		3.30%
Clothes shopping (visting)		2.90%
Nursery preschool (attending and working)		2.90%
Gym (visting)		2.50%
Logistics (working)		2.50%
Pub or bar (visting)		2.10%
Warehouse (working)		2.10%
Food (working)		1.70%
Hospital (visting and working)		1.70%
Outdoor setting (visting)		1.70%
Police (working)		1.70%
Barbers and hairdressers (visting and working)		1.30%
Department store (visting)		1.30%
Food and drink (working)		1.30%
Household fewer than 5 (home/shared)		1.30%

Data extracted 7 January 2021











# Weekly report on Acute Respiratory Infection (ARI) Situations 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 and Workplaces 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, Workplaces, Other settings and Food Outlets/ Restaurants 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.
- The denominator (the overall number of settings in each category) will differ by the setting category, for example there are fewer hospitals than workplaces, as will the propensity to report incidents to PHE. Therefore these data are more useful for monitoring trends over time than making comparisons across setting categories.
- 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.

## 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



## Wastewater Summary Board with 5 Highest Values until 22 November 2020

Figure 1: 7 day rolling average

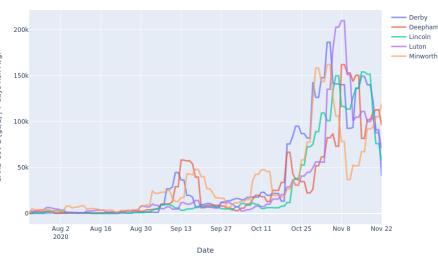
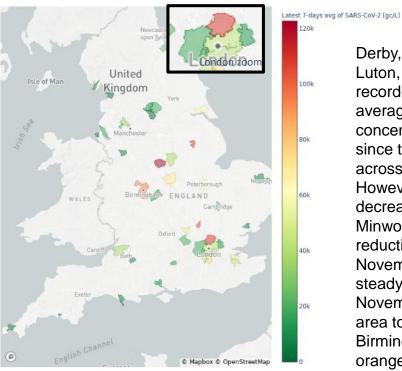


Figure 2: 7 day average of levels of SARS-CoV-2 RNA



Derby, Deepham, Lincoln, Luton, and Minworth have recorded the highest 7-day average of SARS-CoV-2 concentrations in Wastewater since the 22nd November across all of England. However, all are now decreasing apart from Minworth, which saw an initial reduction in the first week of November, but has now seen a steady increase since November 11th, Minworth is an area to the North-East of Birmingham, highlighted in orange in Figure 2, and will be an area of increased vigilance going forward.

Table 1: areas sampled with highest levels of SARS-CoV-2 over the last week

Site Name	Latest 7-days avg of SARS-CoV-2 [gc/L]	Rank
Derby	122669	1
Deepham	109555	2
Lincoln	108013	3
Luton	105070	4
Minworth	93757	5

Updated 4 December 2020

## Dashboard View of WW Levels of SARS-CoV-2 for Derby contrasted against Pillar 2 Data

There is a strong association between SARS-CoV-2 levels in WW and Pillar 2 data.

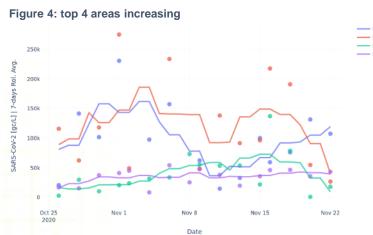
This relationship is represented across the majority of sites.

The timeseries shows high levels in Derby, which are starting to decline.

Figure 3: dashboard extract for Derby

## Top 4 Areas Increasing and Decreasing Levels of SARS-CoV-2 RNA in Wastewater

### Top 4 Areas with Increasing Levels of SARS-CoV-2 RNA in WW over the last 2 weeks



Site Name	Percent Change 7 day
Minworth	78.3
Derby	31.1
Hull	27.2
Hogsmill	20.9

Minworth, Derby, Hull, and Hogsmill are ranked as the top 4 areas with increasing levels of SARS-CoV-2 RNA in wastewater over the last 2 weeks as defined by percentage change between the two last weekly-averaged values. However, it should be noted that Derby and Hull, since around the 18th and 19th are starting to experience a decline over their 7 day averages. Hogsmill appears to be levelling off, but Minworth, at the North-East of Birmingham, as noted previously, is sharply increasing.

### Top 4 Areas with Decreasing Levels of SARS-CoV-2 RNA over the last 2 weeks

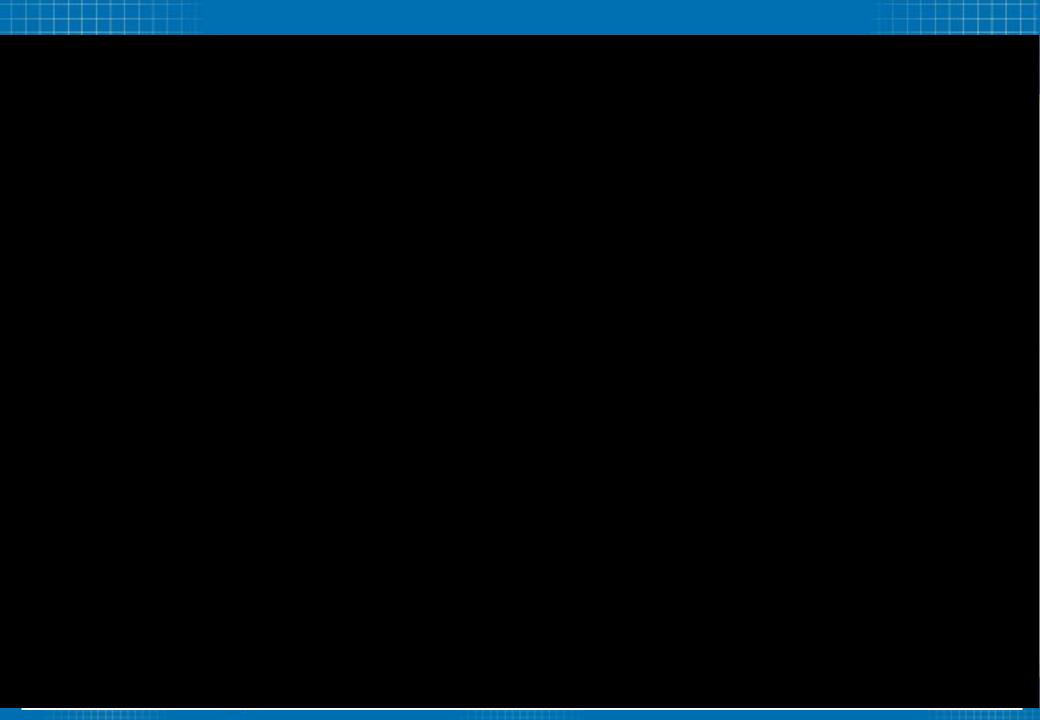
Figure 5: top 4 areas decreasing



Site Name	<sub>7 day</sub> Percent Change
Riverside	-72.7
Trowbridge	-73
Barston	-76.3
Dewsbury	-92.3

Riverside, Trowbridge, Barston, and Dewsbury are ranked as the top 4 areas with decreasing levels of SARS-CoV-2 RNA in wastewater over the last 2 weeks as defined by percentage change between the two last weekly-averaged values. Dewsbury has fallen so much so since November 6th, the instigation of the National Lockdown, that its SARS-CoV-2 RNA levels have fallen below the limit of detection (the threshold for detecting SARS-CoV-2 RNA via wastewater), indicating low prevalence in the area. Barston also demonstrates a steep decrease in SARS-CoV-2 RNA levels. Finally, Trowbridge and Riverside have also seen significant decreases since the 6th November. Together these data demonstrating the effectiveness of Lockdown measures.





## 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
- ONS Coronavirus (COVID-19) Infection Survey, UK
- REACT-1 round 7 updated report

## Data sources

#### Second Generation Surveillance System (SGSS)

Data as of 11 January 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 12 January 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 12 January 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.

