



Omicron daily overview: 17 December 2021

Summary

UK total case numbers

| | Confirmed Omicron cases | Change from previous report | SGTF cases* | Change from previous report |
|-------------------------|----------------------------|--------------------------------|---------------|--------------------------------|
| England | 13,741 | +3,001 | 43,076 | +14,039 |
| Northern Ireland | 313 | +103 | 0 | +0 |
| Scotland | 696 | +33 | 10,568 | +2,341 |
| Wales | 159 | +64 | 237 | +98 |
| Cumulative total | 14,909 | +3,201 | 53,881 | +16,478 |

Data up to 18h00 16 December 2021

Notes to table

* SGTF cases in the above table excludes persons ruled out as other variants
Changes in case definition have been applied and are reflected in the appendix 1

Hospitalisations and deaths

| | Hospitalisations (Confirmed and SGTF*) | Deaths |
|---------|-------------------------------------------|--------|
| England | 65 [^] | 1 |

Data provided 16 December 2021. Data covers period 24 November to 14 December 2021

Notes to table

* SGTF cases in the above table excludes persons ruled out as other variants
Changes in case definition have been applied and are reflected in the appendix 1 of this overview

[^] This number has increased due to a switch in data set as described in Appendix 2. This data is lagged and requires hospitals to submit their emergency care datasets to NHS Digital for analysis and linkage with testing data. Data from 10-14 December 2021 is incomplete.

Breakdown of England daily cases by region

| Region | Confirmed Omicron cases | Change from previous report | SGTF cases* | Change from previous report |
|----------------------|-------------------------|-----------------------------|--------------|-----------------------------|
| East Midlands | 2480 | +1003 | 2473 | +679 |
| East of England | 1162 | +176 | 6358 | +1853 |
| London | 4558 | +462 | 13626 | +4048 |
| North East | 668 | +283 | 308 | +84 |
| North West | 469 | +58 | 7251 | +2578 |
| South East | 2621 | +405 | 5097 | +1513 |
| South West | 1162 | +348 | 1199 | +411 |
| West Midlands | 198 | +37 | 3741 | +1538 |
| Yorkshire and Humber | 385 | +227 | 2971 | +1313 |
| Unknown | 38 | +2 | 52 | +22 |
| Total | 13741 | +3001 | 43076 | +14039 |

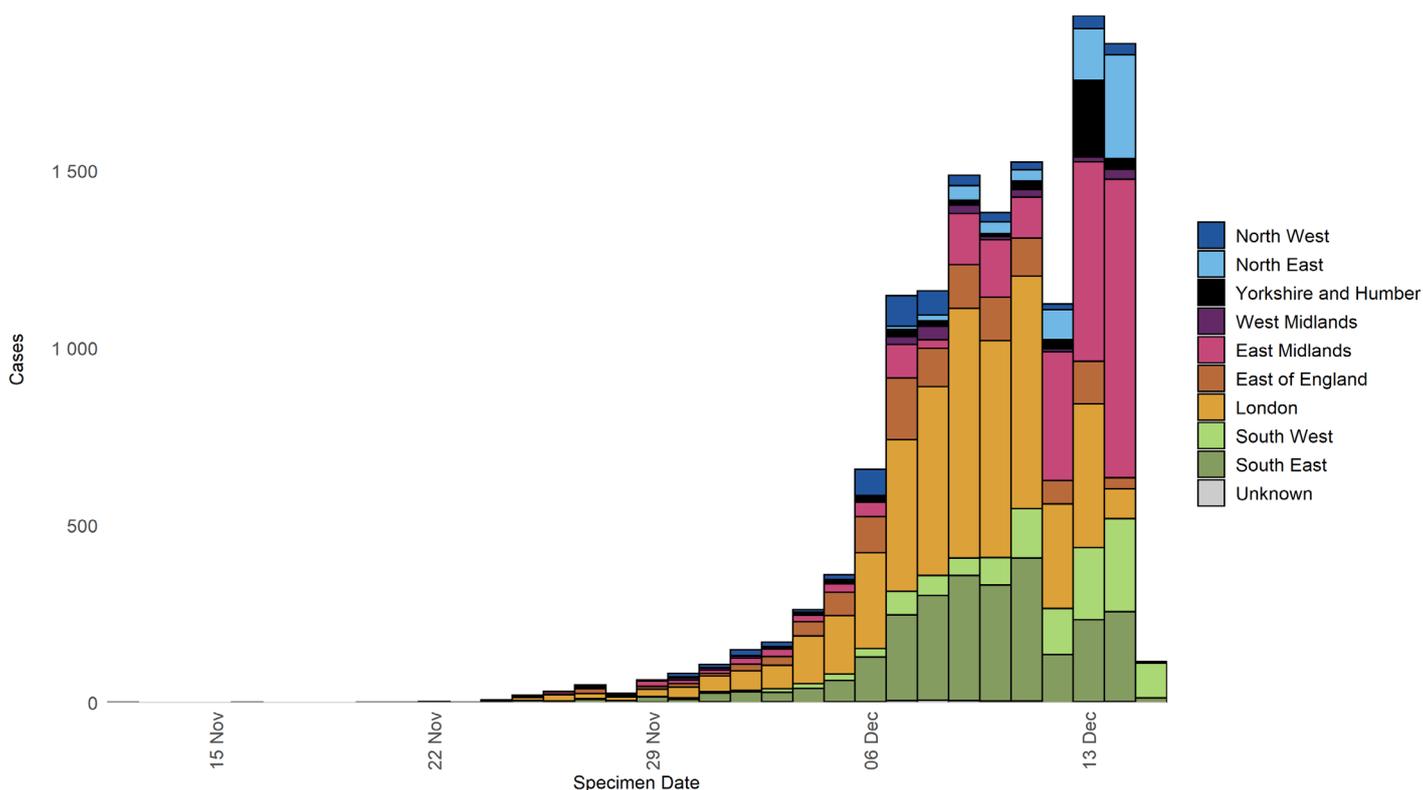
Data up to 18h00 16 December 2021

Notes to table

* SGTF cases in the above table excludes persons ruled out as other variants
Changes in case definition have been applied and are reflected in the appendix 1

Epidemiology curve of Confirmed Omicron cases by region

Data up to 18h00 16 December 2021



Samples with S Gene Target Failure

Number and proportion of SARS-CoV-2 cases with S gene Target failure by region, among those with specimen dates on 14 and 15 December 2021.

| Region | Total COVID Cases with known S gene status** | SGTF cases | SGTF % |
|----------------------|----------------------------------------------|------------|--------|
| East Midlands | 3148 | 1606 | 51 |
| East of England | 2915 | 1808 | 62 |
| London | 3437 | 2777 | 80.8 |
| North East | 1576 | 417 | 26.5 |
| North West | 4656 | 2448 | 52.6 |
| South East | 2666 | 1489 | 55.9 |
| South West | 846 | 408 | 48.2 |
| West Midlands | 3242 | 1482 | 45.7 |
| Yorkshire and Humber | 3038 | 1397 | 46 |
| England | 25570 | 13859 | 54.2 |

SGSS data as of 18h00 16 December 2021.

The SGTF % is plotted below by region ([Figure 1](#)) and nationally ([Figure 2](#)).

Notes to tables

** Known S gene status based on those tested by TaqPath laboratories (Alderley Park, Milton Keynes, Glasgow, and Newcastle Lighthouse Laboratories).

Figure 1. COVID-19 cases with detectable S gene/SGTF and percentage with SGTF among those tested in TaqPath Labs by day, by region

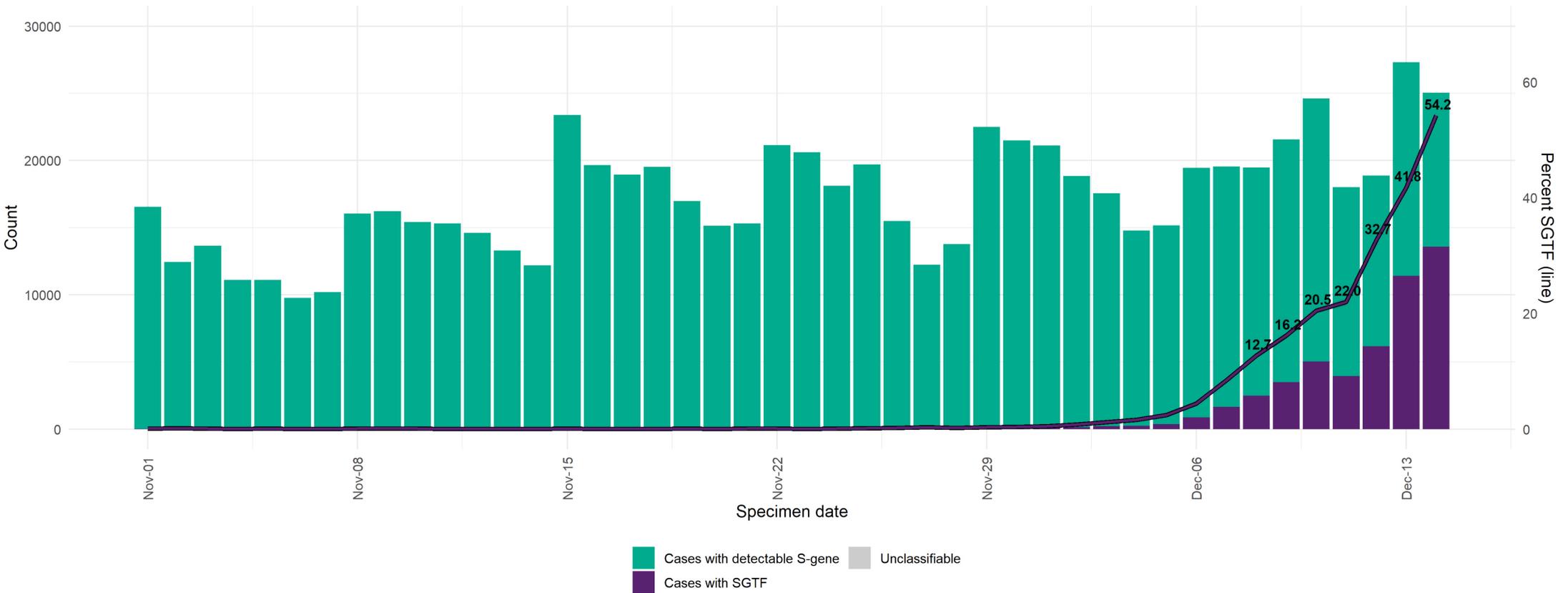
(95% confidence intervals indicated by grey shading).

Data updated 18h00 16 December 2021.



A detectable S gene is a proxy for Delta since April 2021. SGTF was a surveillance proxy for VOC-20DEC-01 however has largely consisted of Delta since August 2021. Local trends in these data may be affected by decisions to direct the processing of samples via a TaqPath laboratory. Only tests carried out with the TaqPath PCR assay and with confirmed SGTF or S gene results included, from Newcastle, Alderley Park, Milton Keynes and Glasgow Lighthouse Labs. SGTF refers to non-detectable S gene and ≤ 30 CT values for N and ORF1ab genes. Detectable S-gene refers to ≤ 30 CT values for S, N, and ORF1ab genes. Produced by Outbreak Surveillance Team, UKHSA.

Figure 2. Number of COVID-19 cases with S gene positive/SGTF by day, among those tested in TaqPath labs
 (95% confidence intervals indicated by grey shading).
 Data updated 18h00 16 December 2021.



A detectable S gene is a proxy for Delta since April 2021. SGTF was a surveillance proxy for VOC-20DEC-01 however has largely consisted of Delta since August 2021. Local trends in these data may be affected by decisions to direct the processing of samples via a TaqPath laboratory. Only tests carried out with the TaqPath PCR assay and with confirmed SGTF or S gene results included, from Newcastle, Alderley Park, Milton Keynes and Glasgow Lighthouse Labs. SGTF refers to non-detectable S gene and ≤ 30 CT values for N and ORF1ab genes. Detectable S-gene refers to ≤ 30 CT values for S, N, and ORF1ab genes. Produced by Outbreak Surveillance Team, UKHSA.

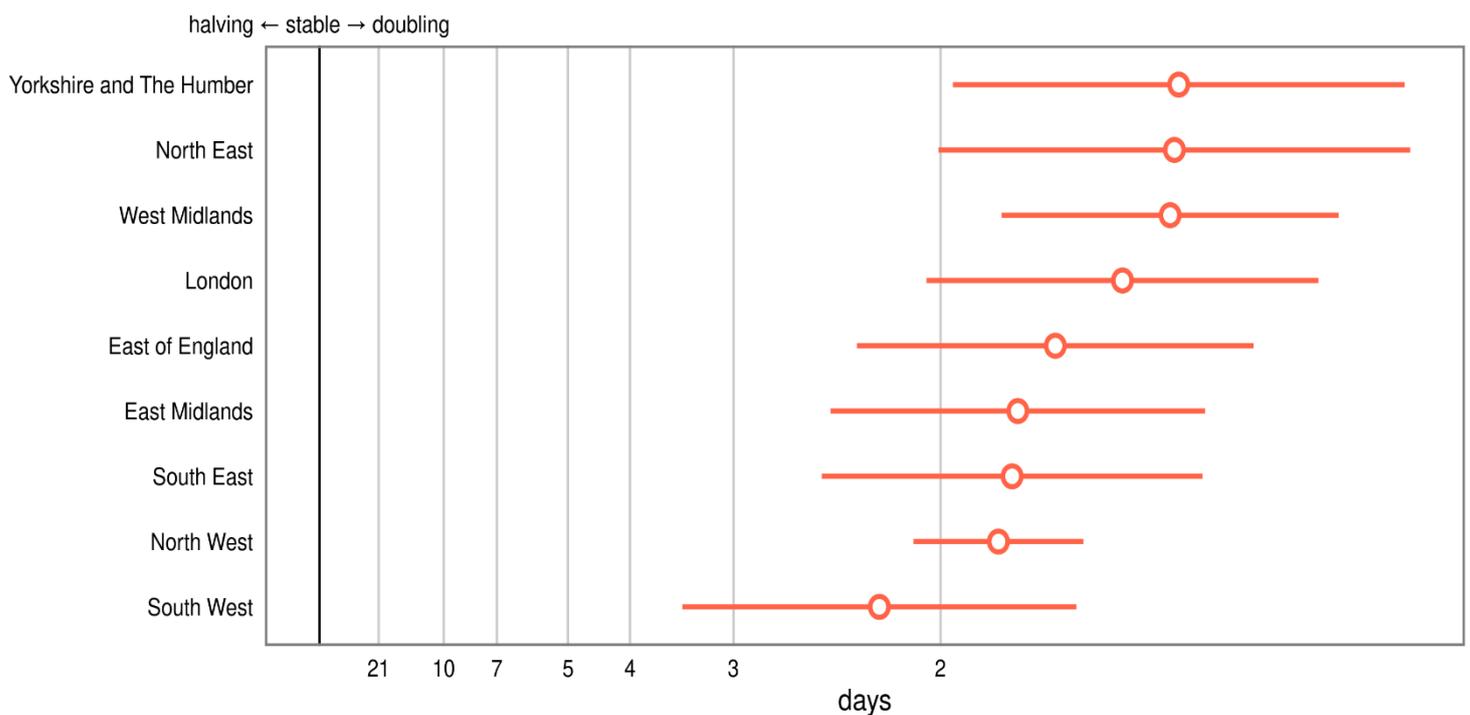
Regional doubling times for the number of test with SGTF

| Region | Doubling Time | Doubling Time Lower CI | Doubling Time Upper CI |
|----------------------|---------------|------------------------|------------------------|
| East Midlands | 1.96 | 1.7 | 2.33 |
| East of England | 1.74 | 1.52 | 2.03 |
| London | 1.89 | 1.62 | 2.27 |
| North East | 1.3 | 1.11 | 1.55 |
| North West | 1.88 | 1.68 | 2.11 |
| South East | 1.74 | 1.54 | 2.01 |
| South West | 2.1 | 1.88 | 2.39 |
| West Midlands | 1.49 | 1.33 | 1.69 |
| Yorkshire and Humber | 1.35 | 1.22 | 1.51 |

Data up to 18h00 16 December 2021

We are observing doubling time central estimates of less than 2 days for every region except the South West. This may be related to poor PCR gene target reporting coverage in this region. This data is plotted in figure 3 below. Methodology for this is included in appendix 3.

Figure 3. Most recent regional doubling times for the number of tests with SGTF



APPENDIX 1

Counts below are based on case definitions agreed on 13 December 2021 (Implemented on data 18h00 14 December 2021):

- **confirmed case:** Omicron (B.1.1.529) by sequencing or genotyping (i) 417N and 681R failure; ii) 69-70 deletion plus 417N; iii) 69-70 deletion plus 501Y; iv) Q493R, vi) other relevant genotyping results)
- **probable case:** COVID-19 PCR positive and i) SGTF^^ or ii) 69-70 deletion with specimen dates from 1 December**
- **possible case:** COVID-19 PCR positive and SGTF^^ with specimen dates from November 1 up to and including November 30*

^^S-Gene Target Failure (SGTF): A positive SARS CoV2 PCR test carried out on the TaqPath assay with undetectable S gene and CT values ≤ 30 for both N and Orf1ab gene targets. Currently reported into SGSS by Milton Keynes, Alderley Park, Glasgow, and Newcastle lighthouse laboratories.

*Excludes those confirmed as non-Omicron variant.

APPENDIX 2

Definitions of hospitalisation

Cases with presentation to a type 1 A&E and are admitted or transferred at the end of their emergency care stay, who have a positive SARS-CoV-2 test either:

- within 14 days prior to admission
- Within 1 day post admission

Data source: NHS England provide this data from the NHS Digital Emergency Care Data Set (ECDS). This data is subject to delays.

APPENDIX 3

Methodology for calculating doubling times for Omicron:

The plot was produced fitting a GAM (generalized additive model) with a Negative Binomial error structure to positivity within the sample of tests that detect S gene target failure from NPEx. The dashed lines represent uncertainty (95% CI), which grows as we approach the plot edges because the number of data points used for the estimation becomes smaller. Note that, if an epidemic trend changes from growth to decay, the growth rates change from positive to negative, while the doubling times become longer and longer, cross infinity when the trend is temporarily flat, and turn into halving times (ie number of days it takes for cases/deaths to halve), represented as negative doubling times.