



Omicron daily overview: 20 December 2021

Summary

UK total case numbers

	Confirmed Omicron cases	Change from previous report	SGTF cases*	Change from previous report
England	41,250	+6,777	103,420	+21,211
Northern Ireland	2349	+1068	0	+0
Scotland	1111	+36	20,777	+4,089
Wales	435	+163	757	+234
Cumulative total	45,145	+8,044	124,954	+25,534

Data up to 6pm 19 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	129	14

Data provided 19 December 2021 for dates up to 18 December 2021

Notes to table

*SGTF cases in the above table exclude cases confirmed with other variants
Changes in case definition have been applied and are reflected in the appendix 1 of this overview

Data set and definitions as described in Appendix 2. The data are lagged and require hospital staff to submit emergency care datasets to NHS Digital for analysis and linkage with testing data

Breakdown of England daily cases by region

Region	Confirmed Omicron cases	Change from previous report	SGTF cases*	Change from previous report
East Midlands	5848	+801	6675	+1593
East of England	2616	+361	13385	+2425
London	12221	+2129	34668	+6159
North East	1900	+395	1140	+220
North West	3315	+158	15037	+3264
South East	8584	+1650	12759	+2776
South West	3346	+772	3313	+1001
West Midlands	2041	+136	7959	+1790
Yorkshire and Humber	1283	+358	8297	+1929
Unknown	96	+17	187	+54
Total	41250	+21211	103420	+21211

Data up to 6pm 19 December 2021

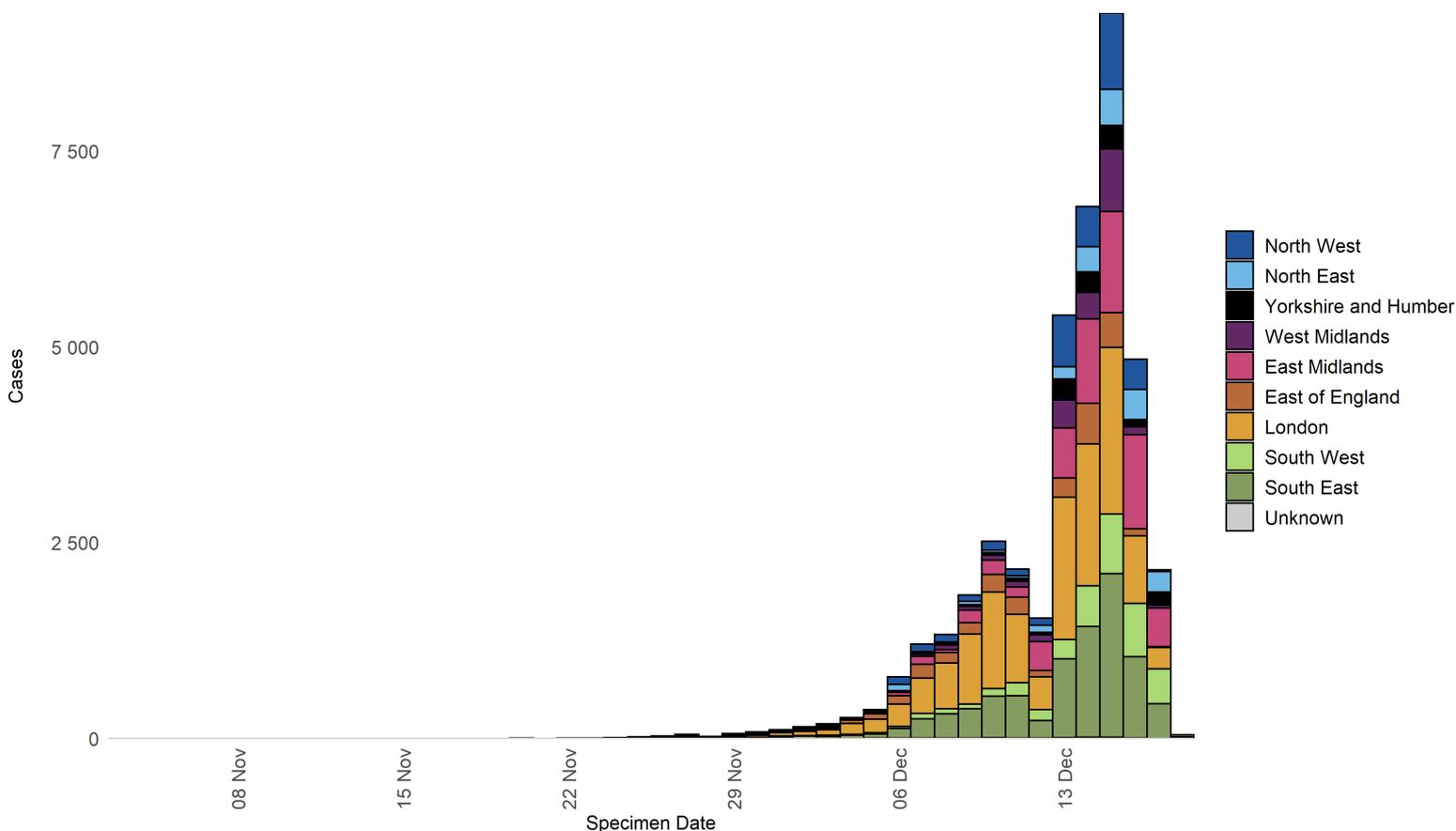
Notes to table

*SGTF cases in the above table exclude cases confirmed with 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 as of 19 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 17 and 18 December 2021.

Region	Total COVID Cases with known S gene status**	SGTF cases	SGTF %
East Midlands	3171	2128	67.1
East of England	2774	2109	76
London	3640	3181	87.4
North East	1479	657	44.4
North West	4287	2918	68.1
South East	3313	2236	67.5
South West	1542	960	62.3
West Midlands	2882	1838	63.8
Yorkshire and Humber	1924	1217	63.3
England	25046	17267	68.9

SGSS data as of 6pm 19 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

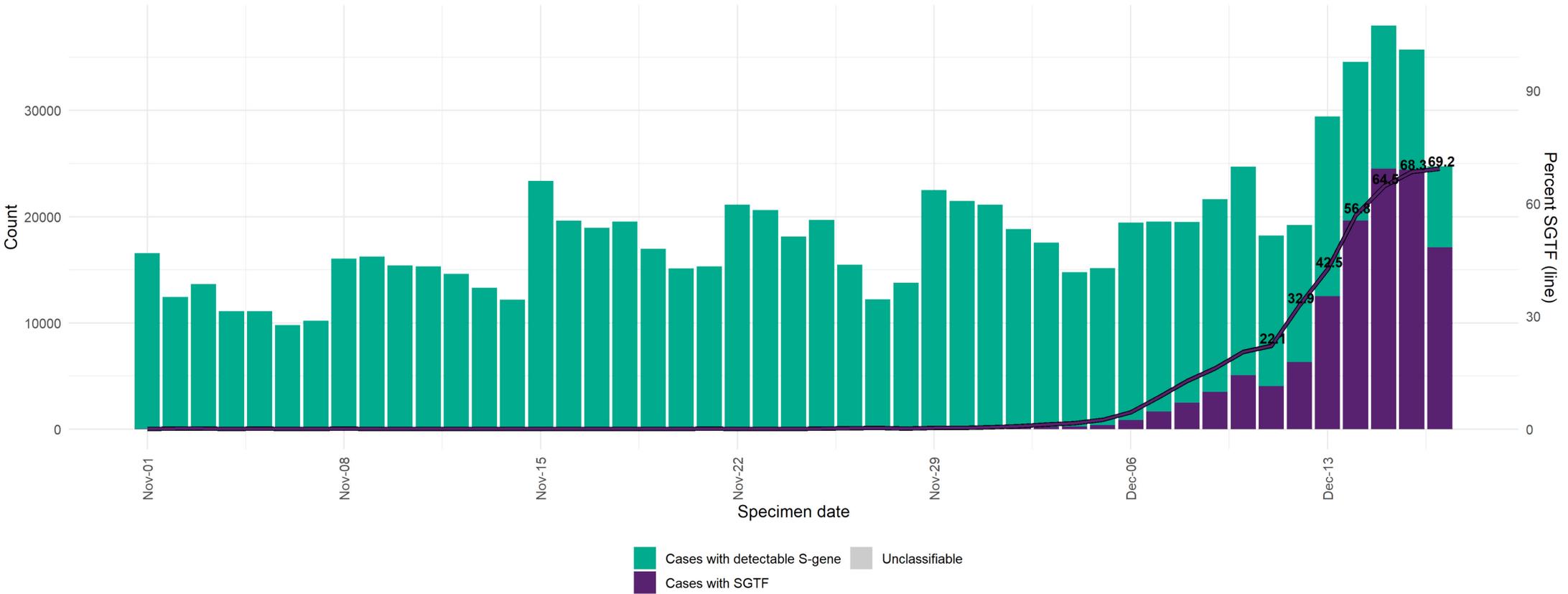
(95% confidence intervals indicated by grey shading).

Data updated 6pm 19 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 6pm 19 December 2021.



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Regional doubling times for the number of test with SGTF

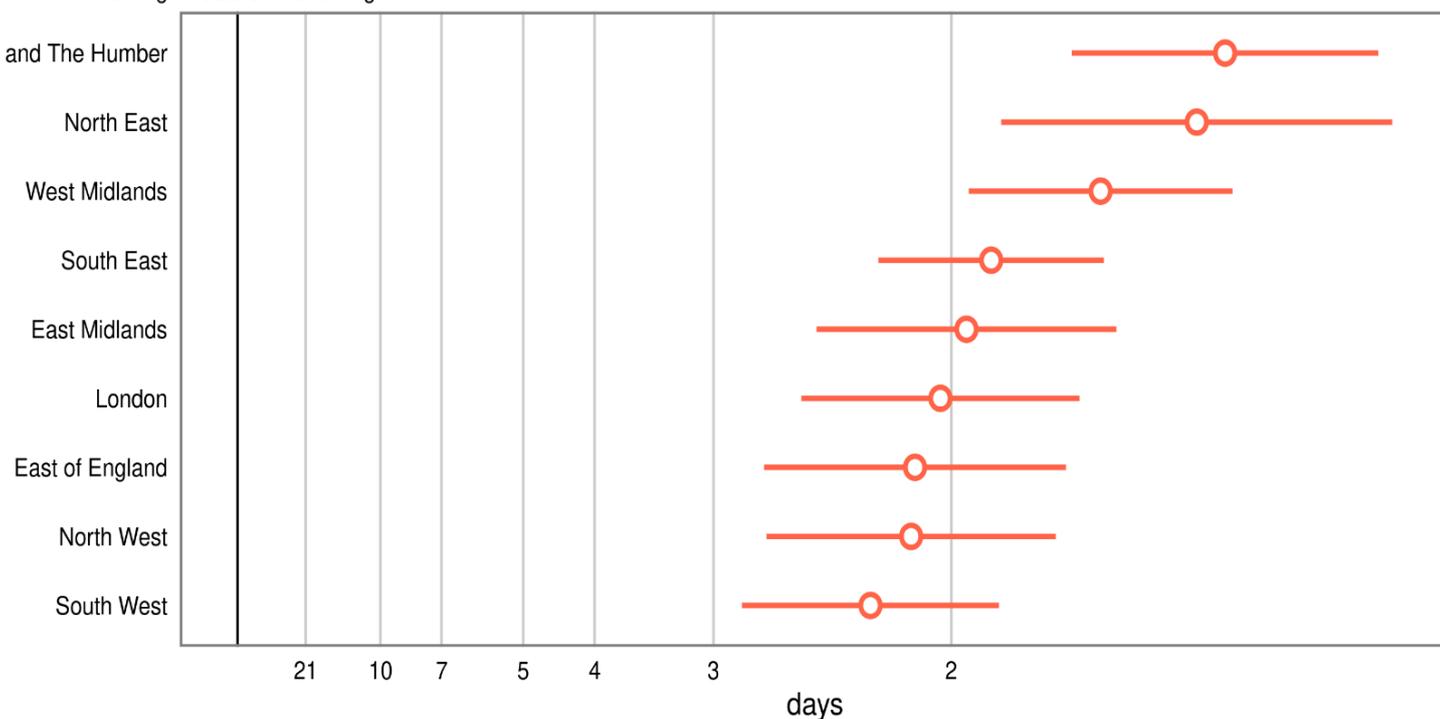
Region	Doubling Time	Doubling Time Lower CI	Doubling Time Upper CI
East Midlands	1.96	1.62	2.47
East of England	2.11	1.72	2.71
London	2.03	1.7	2.53
North East	1.49	1.24	1.87
North West	2.12	1.74	2.7
South East	1.89	1.65	2.23
South West	2.26	1.87	2.83
West Midlands	1.65	1.43	1.95
Yorkshire and Humber	1.45	1.25	1.71

Data up to 6pm 19 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

halving ← stable → doubling



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 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.