



Omicron daily overview: 21 December 2021

Summary

UK total case numbers

	Confirmed Omicron cases	Change from previous report	SGTF cases*	Change from previous report
England	56,041	+14,791	118,034	+14,614
Northern Ireland	2,349 [^]	+0 [^]	0	+0
Scotland	1,478	+367	24,119	+3,700
Wales	640	+205	1099	+342
Cumulative total	60,508	+15,363	143,252	+18,656

Data up to 6pm 20 December 2021 for England, Scotland and Wales

Data up to 4pm 20 December 2021 for Northern Ireland

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 Appendix 1

[^]Northern Ireland have reported no changes in case numbers, this is due to a changing in data cut off times to align more closely with England and other devolved administrations

Hospitalisations and deaths

	Hospitalisations (Confirmed and SGTF*)	Deaths
England	129**	14**

Data provided 20 December 2021 for dates up to 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 Appendix 1 of this overview

**Due to IT systems issues, the hospitalisation data have not been updated today

Data set and definitions as described in Appendix 2. The data is lagged and requires hospital staff to submit emergency care data sets 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	6,860	+1,012	7,949	+1,274
East of England	3,752	+1,136	14,797	+1,412
London	16,081	+3,860	38,729	+4,061
North East	2,075	+175	1,645	+505
North West	5,051	+1,736	17,436	+2,399
South East	12,288	+3,704	14,091	+1,332
South West	4,421	+1,075	4,066	+753
West Midlands	3,262	+1,221	8,682	+723
Yorkshire and Humber	2,125	+842	10,497	+2,200
Unknown	126	+30	142	-45
Total	56,041	+14,791	118,034	+14,614

Data up to 6pm 20 December 2021

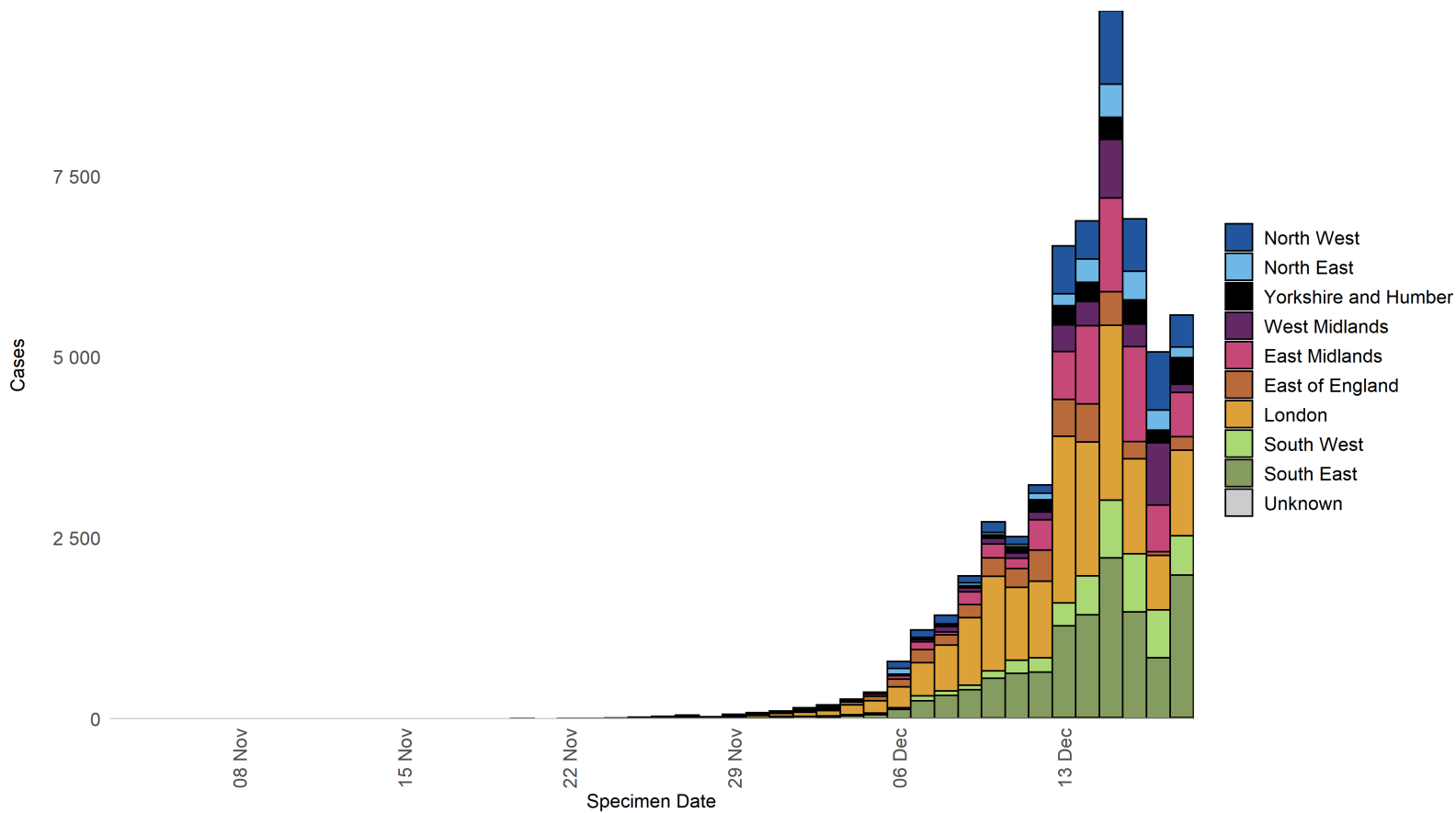
Notes to table

*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 20 December 2021



Samples with S gene target failure (SGTF)

Number and proportion of SARS-CoV-2 cases with SGTF by region, among those with specimen dates on 18 and 19 December 2021.

Region	Total COVID Cases with known S gene status**	SGTF cases	SGTF %
East Midlands	2,976	2,100	70.6
East of England	2,011	1,541	76.6
London	2,616	2,347	89.7
North East	1,386	667	48.1
North West	4,414	3,260	73.9
South East	2,062	1,512	73.3
South West	1,315	889	67.6

Region	Total COVID Cases with known S gene status**	SGTF cases	SGTF %
West Midlands	2,657	1,778	66.9
Yorkshire and Humber	3,135	2,032	64.8
England	22,621	16,167	71.5

SGSS data as of 6pm 20 December 2021.

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

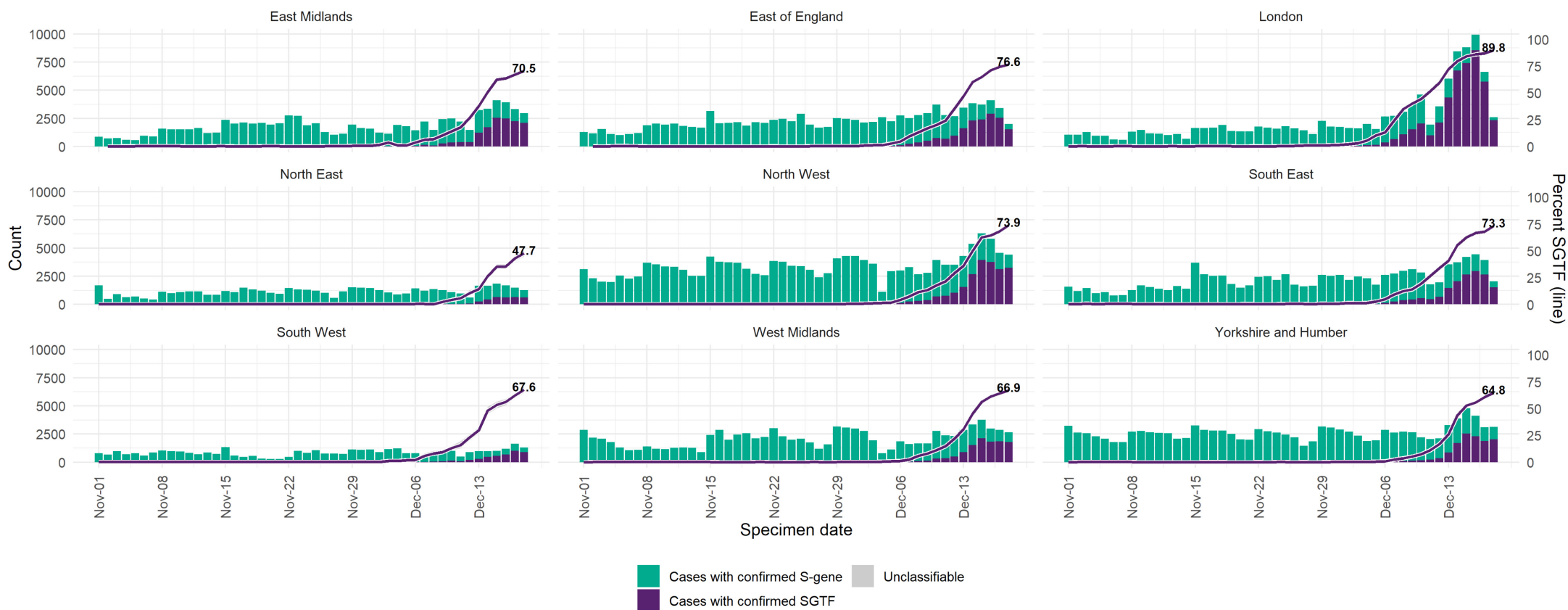
Notes to tables

** 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

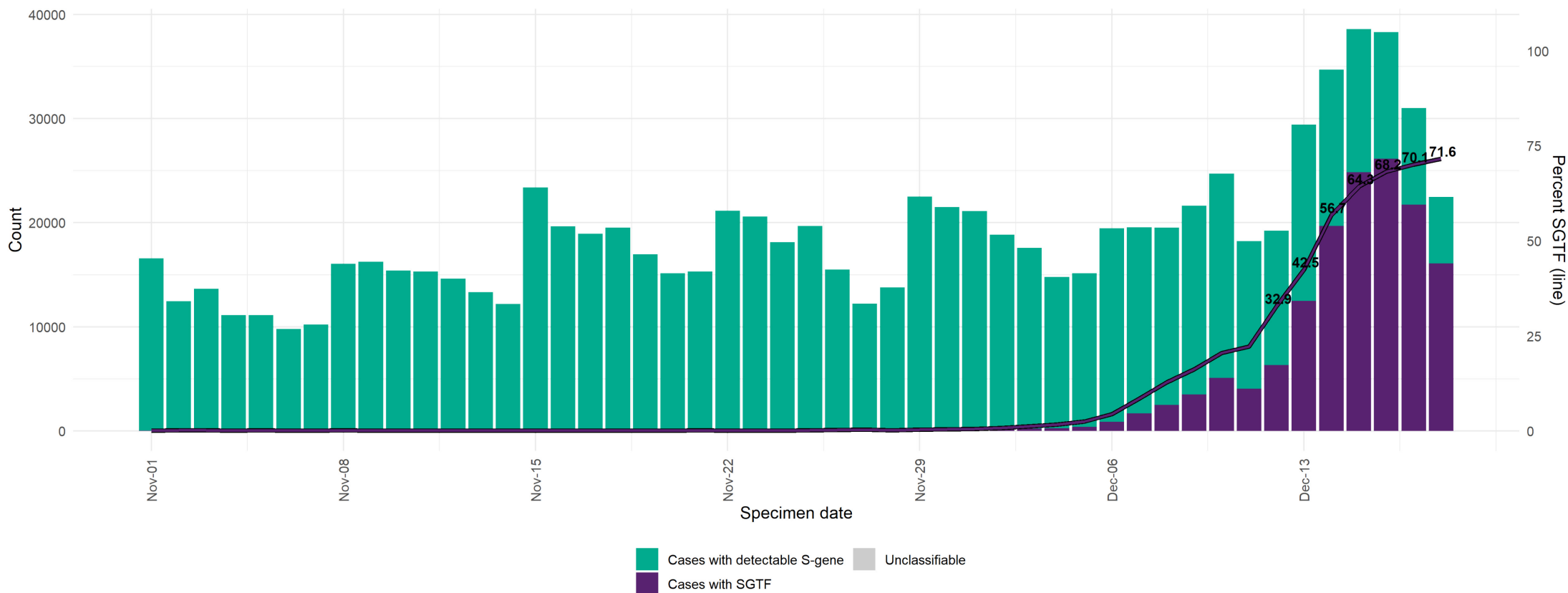
(95% confidence intervals indicated by grey shading).

Data updated 6pm 20 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 20 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.

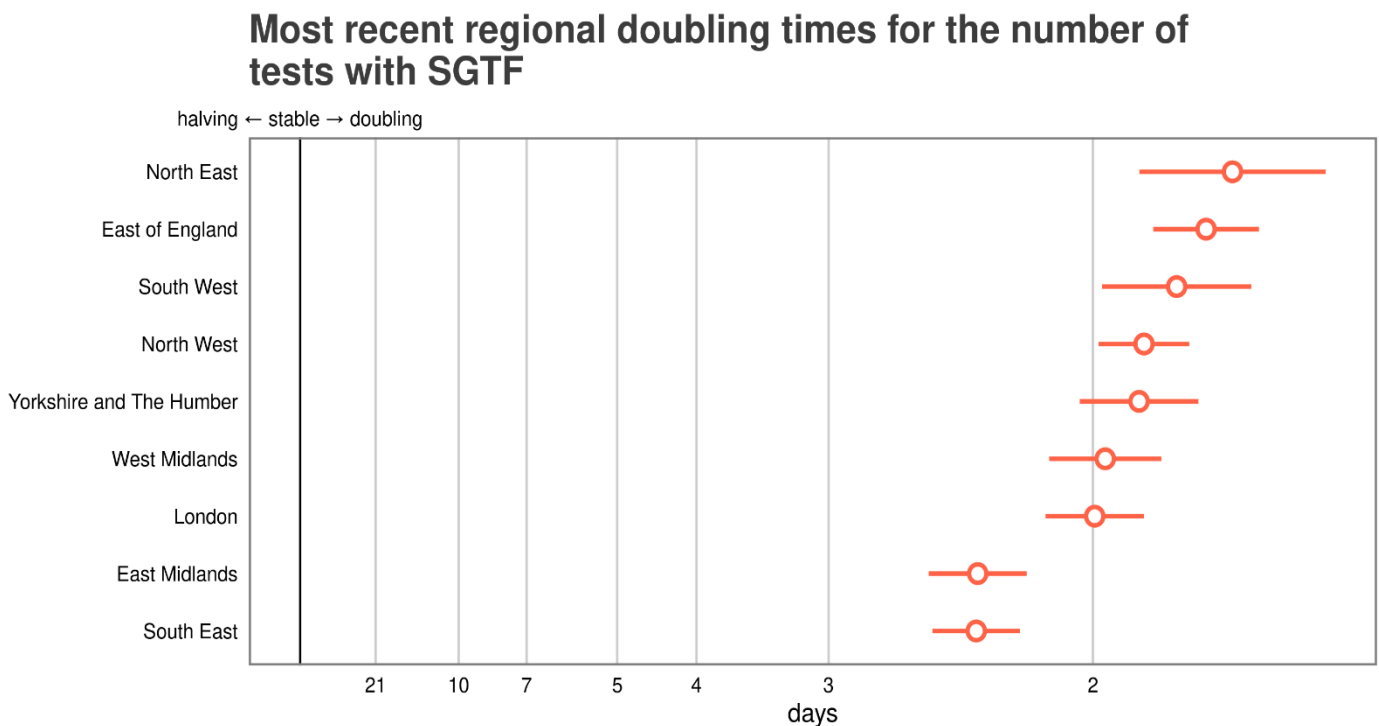
Regional doubling times for the number of tests with SGTF

Region	Doubling Time	Doubling Time Lower CI	Doubling Time Upper CI
East Midlands	2.34	2.18	2.52
East of England	1.75	1.65	1.86
London	2.00	1.88	2.13
North East	1.70	1.55	1.89
North West	1.88	1.78	1.99
South East	2.34	2.20	2.51
South West	1.81	1.67	1.98
West Midlands	1.97	1.84	2.12
Yorkshire and Humber	1.89	1.76	2.03

Data up to 6pm 20 December 2021

We are observing doubling time central estimates of less than 2.5 days for every region, though we are now seeing much tighter confidence intervals (CI's). The NHS regions 'North East' and the 'East of England' showing the highest current absolute growth. 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 6pm 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-CoV-2 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 generalised additive model with a Negative Binomial error structure to positivity within the sample of tests that detect SGTF 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.