



ZOE COVID Study

Daily COVID Infections Report

22 August 2022

Analysis by ZOE and King's College London

covid.joinzoe.com

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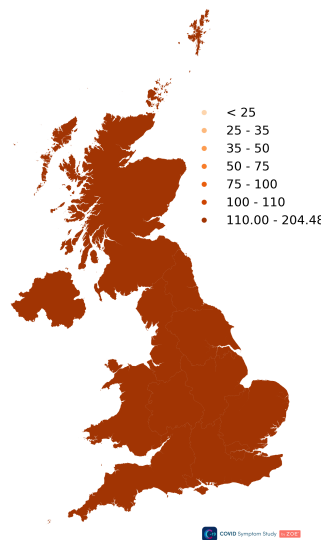
Incidence estimates

(based on 2 weeks up to 20 August 2022)

Daily new cases of symptomatic COVID

We estimate there have been 110267 daily new cases of symptomatic COVID in the UK on average over the two weeks up to 20 August 2022. This is based on the number of newly symptomatic app users per day, and the proportion of these who give positive swab tests.

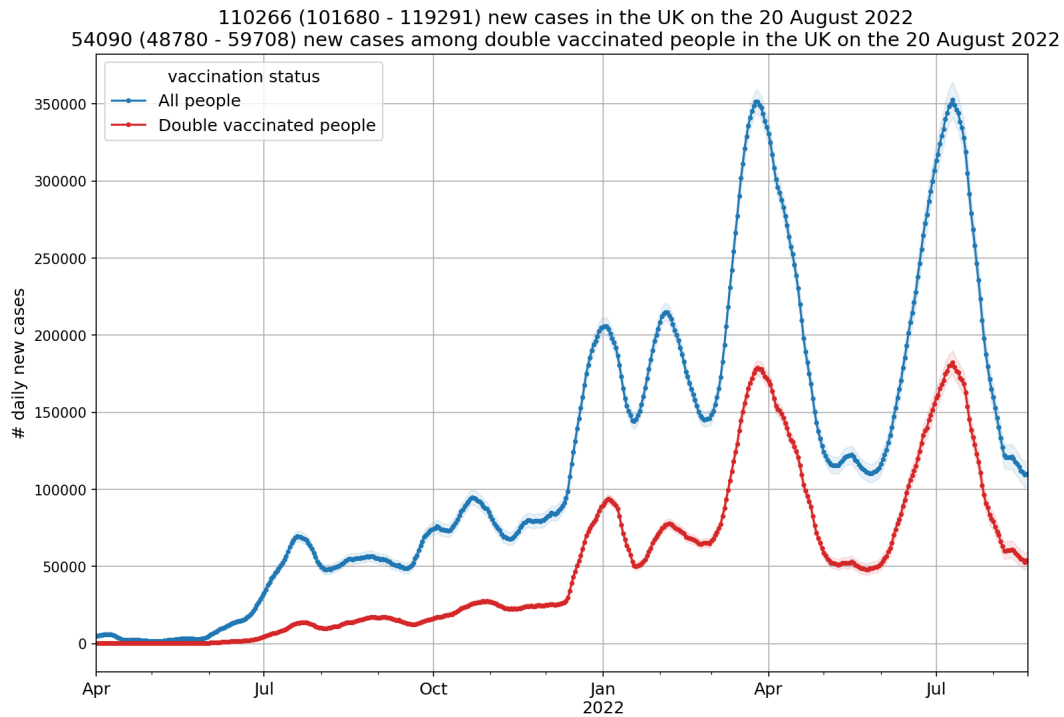
Daily new cases of COVID per 100,000 (20 August 2022) ^[1]



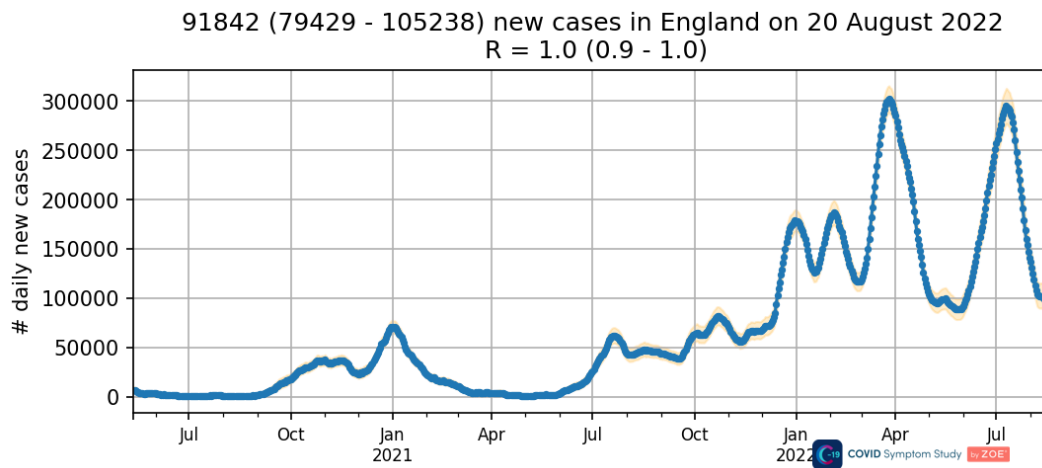
	Daily new cases per 100,000	R
East Midlands	152 - 210	1.0 (0.9 - 1.0)
East of England	143 - 184	0.9 (0.9 - 1.0)
England	142 - 188	1.0 (0.9 - 1.0)
London	130 - 167	0.9 (0.9 - 1.0)
North East	127 - 210	0.9 (0.8 - 1.0)
North West	144 - 193	0.9 (0.9 - 1.0)
Northern Ireland	60 - 219	0.8 (0.6 - 1.0)
Scotland	176 - 236	1.0 (1.0 - 1.1)
South East	151 - 181	1.0 (0.9 - 1.0)
South West	126 - 164	0.9 (0.9 - 1.0)
Wales	128 - 188	1.0 (0.9 - 1.0)
West Midlands	167 - 226	1.0 (1.0 - 1.0)
Yorkshire and The Humber	131 - 185	0.9 (0.8 - 1.0)
UK	142 - 193	1.0 (0.9 - 1.0)

[1] Please refer to the publication by [Varsavsky et al. \(2020\)](#) for details on how R values are calculated

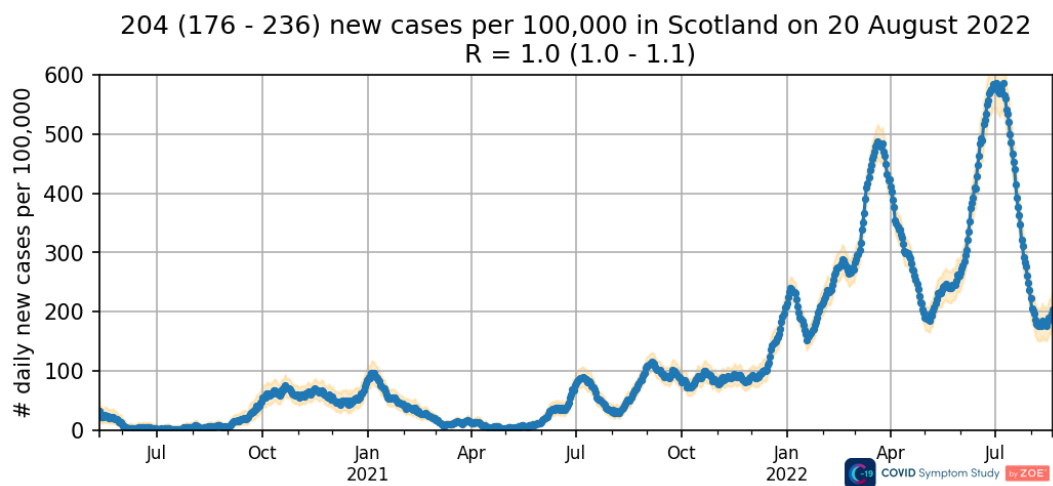
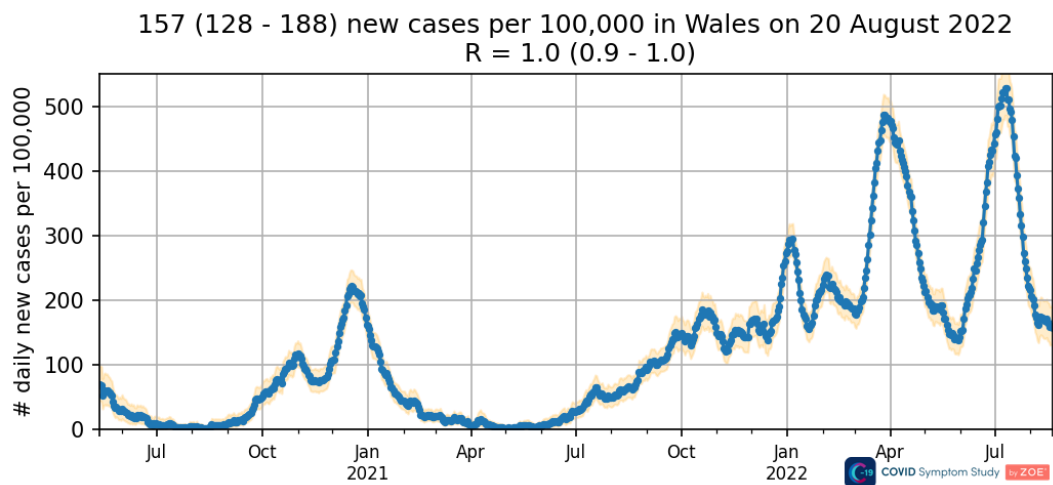
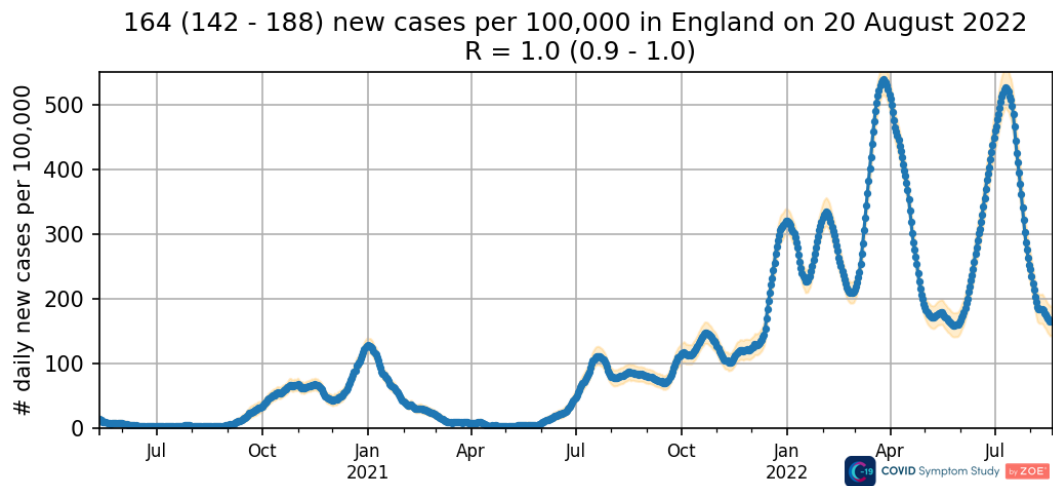
Daily new cases in the UK by vaccination status



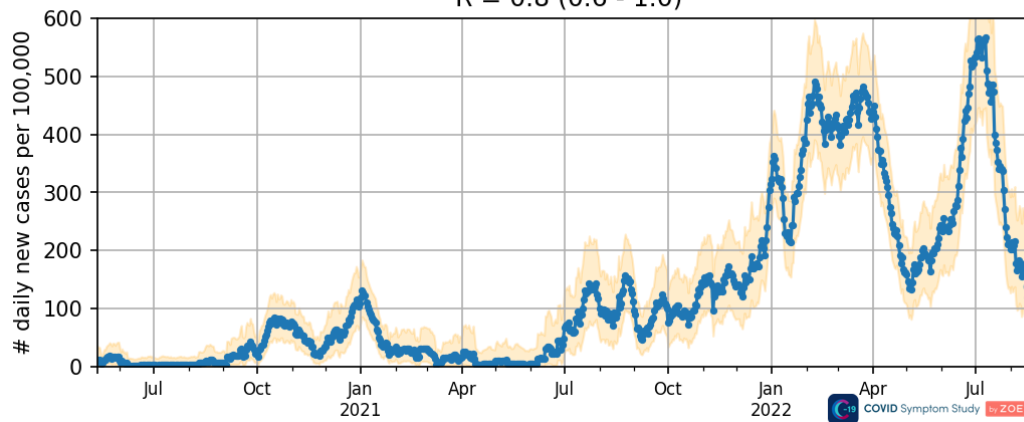
Daily new cases in England



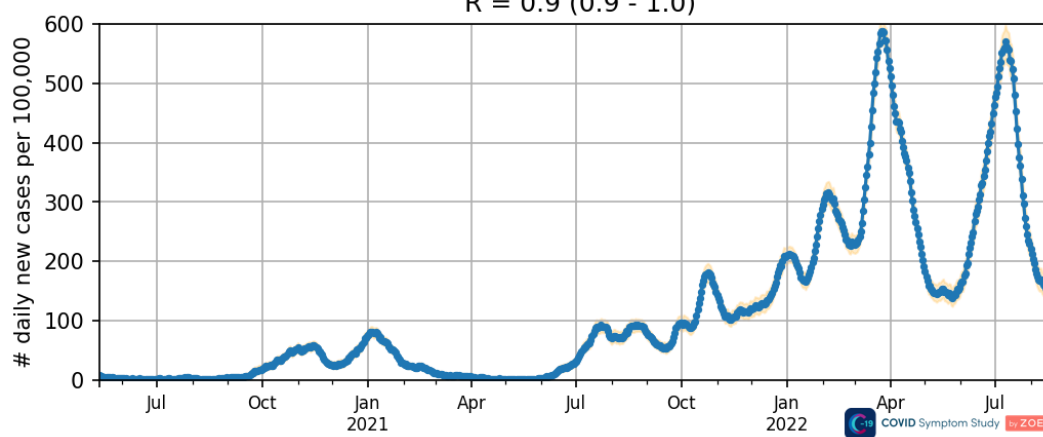
Daily incidence rates by nation and administrative region



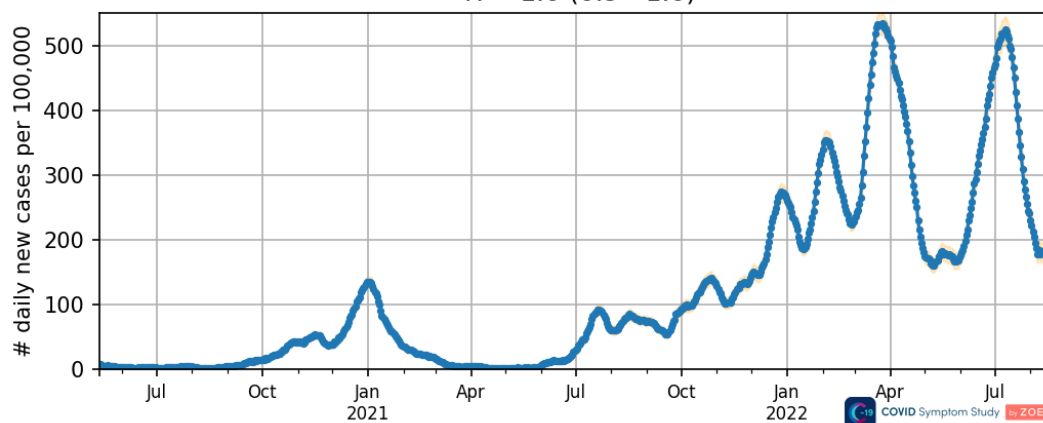
127 (60 - 219) new cases per 100,000 in Northern Ireland on 20 August 2022
 $R = 0.8$ (0.6 - 1.0)



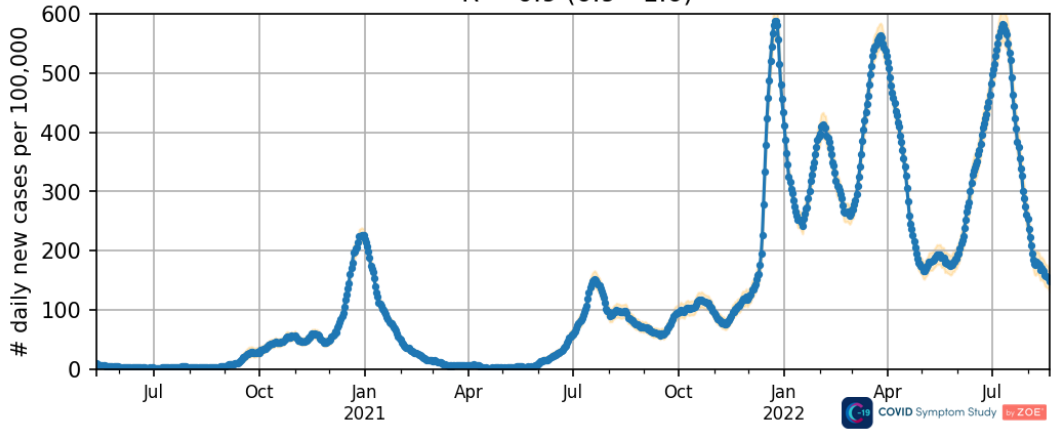
145 (126 - 164) new cases per 100,000 in South West on 20 August 2022
 $R = 0.9$ (0.9 - 1.0)



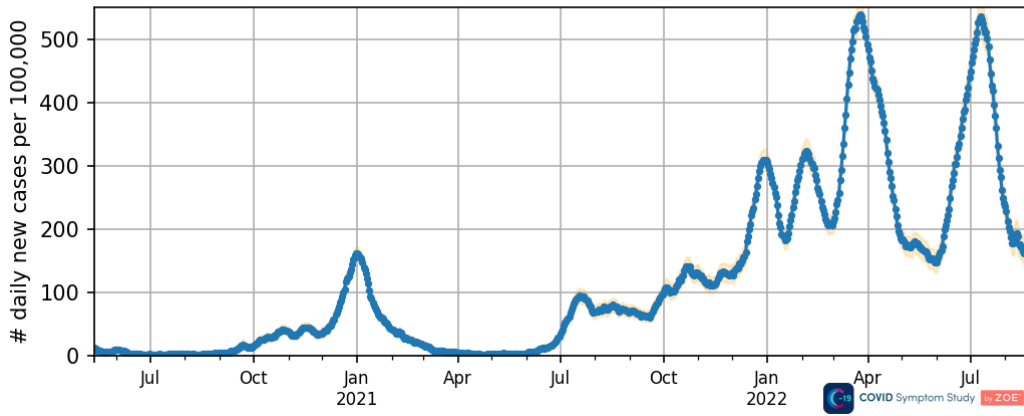
166 (151 - 181) new cases per 100,000 in South East on 20 August 2022
 $R = 1.0$ (0.9 - 1.0)



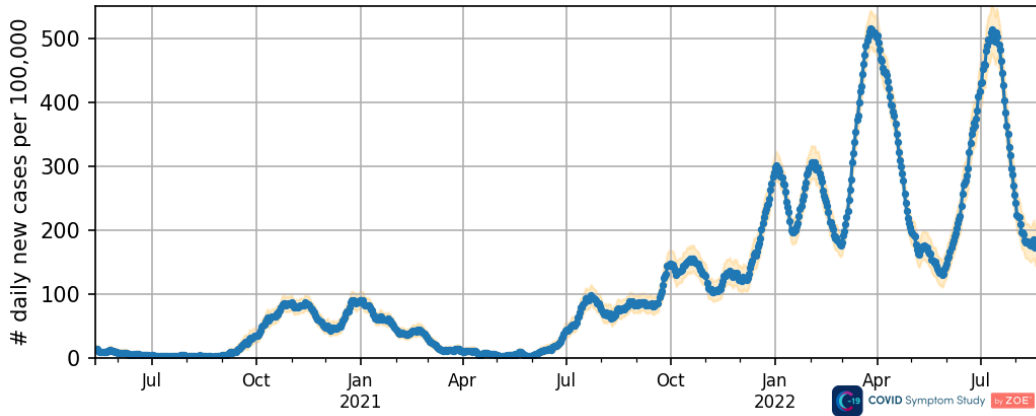
148 (130 - 167) new cases per 100,000 in London on 20 August 2022
R = 0.9 (0.9 - 1.0)



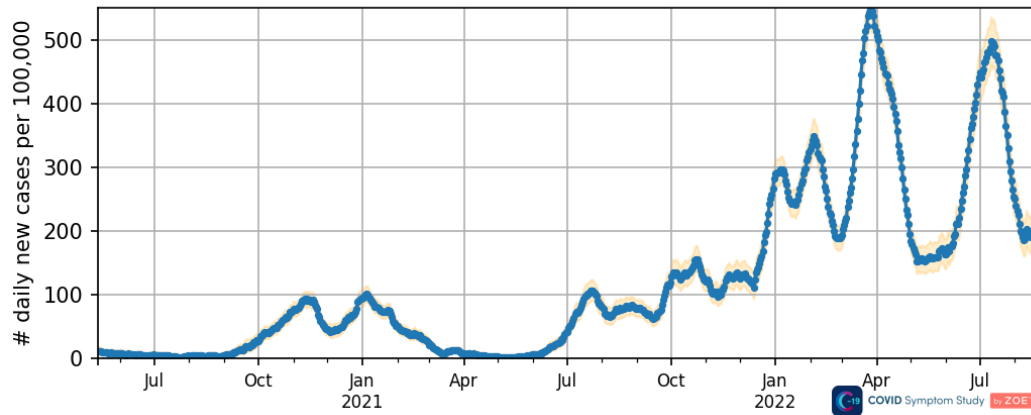
163 (143 - 184) new cases per 100,000 in East of England on 20 August 2022
R = 0.9 (0.9 - 1.0)



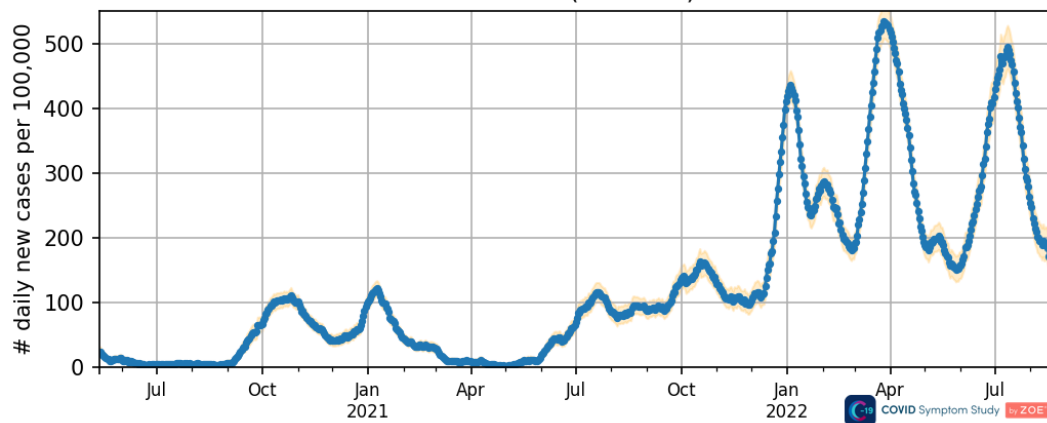
179 (152 - 210) new cases per 100,000 in East Midlands on 20 August 2022
R = 1.0 (0.9 - 1.0)



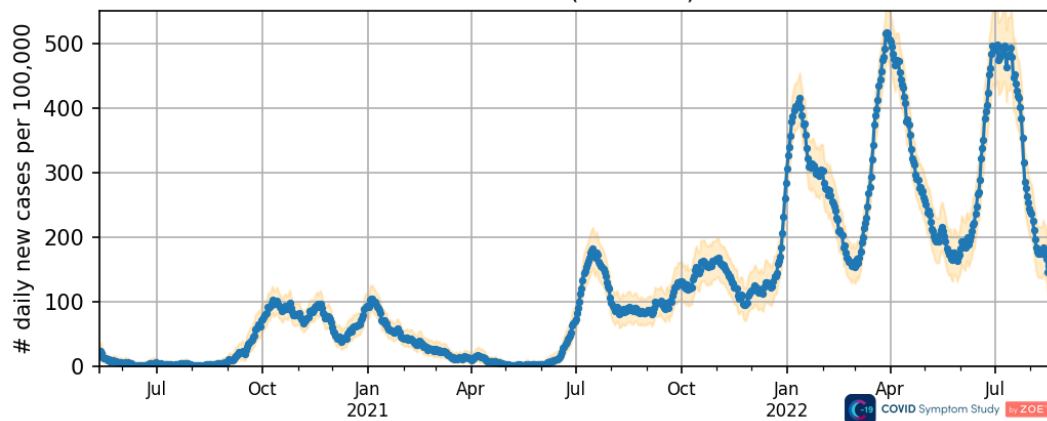
195 (167 - 226) new cases per 100,000 in West Midlands on 20 August 2022
 $R = 1.0$ (1.0 - 1.0)



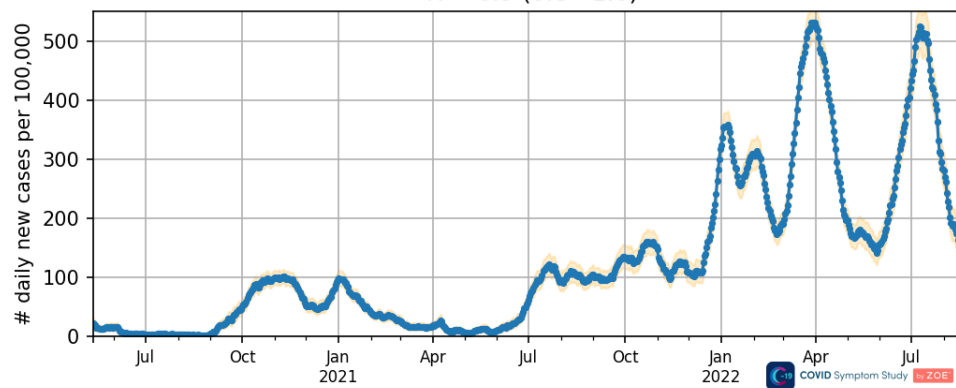
167 (144 - 193) new cases per 100,000 in North West on 20 August 2022
 $R = 0.9$ (0.9 - 1.0)



167 (127 - 210) new cases per 100,000 in North East on 20 August 2022
 $R = 0.9$ (0.8 - 1.0)



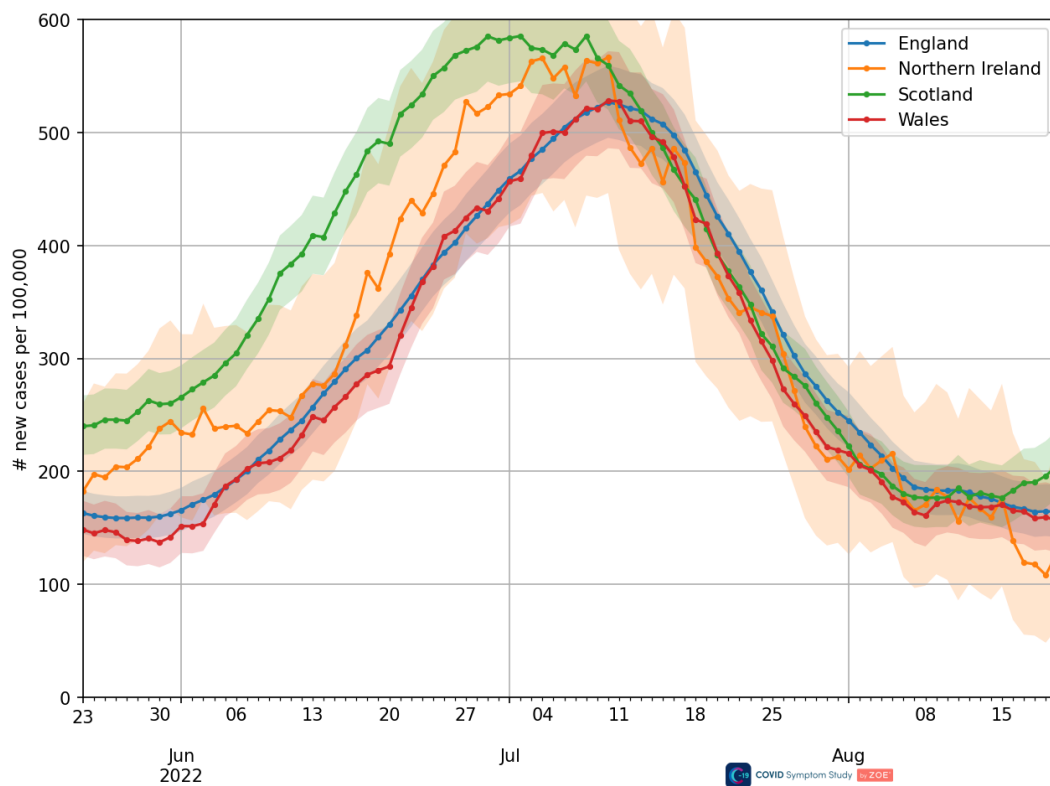
158 (131 - 185) new cases per 100,000 in Yorkshire and The Humber on 20 August 2022
 $R = 0.9$ (0.8 - 1.0)



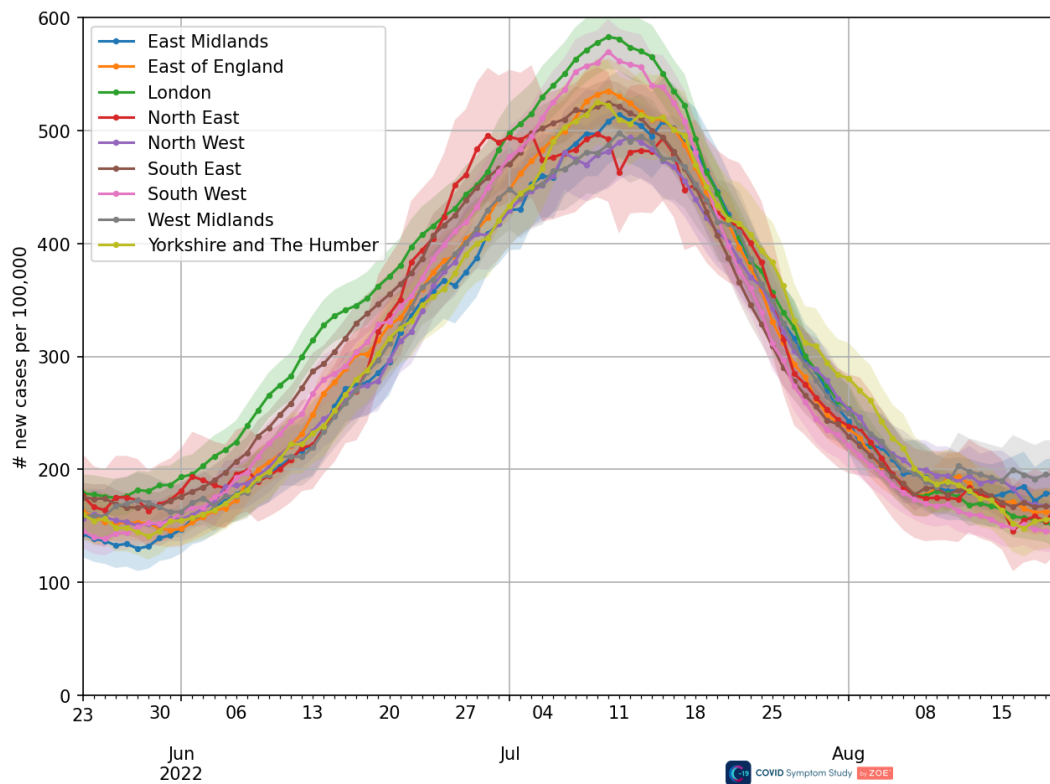
Breakdown of daily incidence rates

In this Section, we provide daily incidence rates broken down by nations, administrative regions and age groups. This is done to enable the reader to compare easily incidence rates across different geographic and demographic groups.

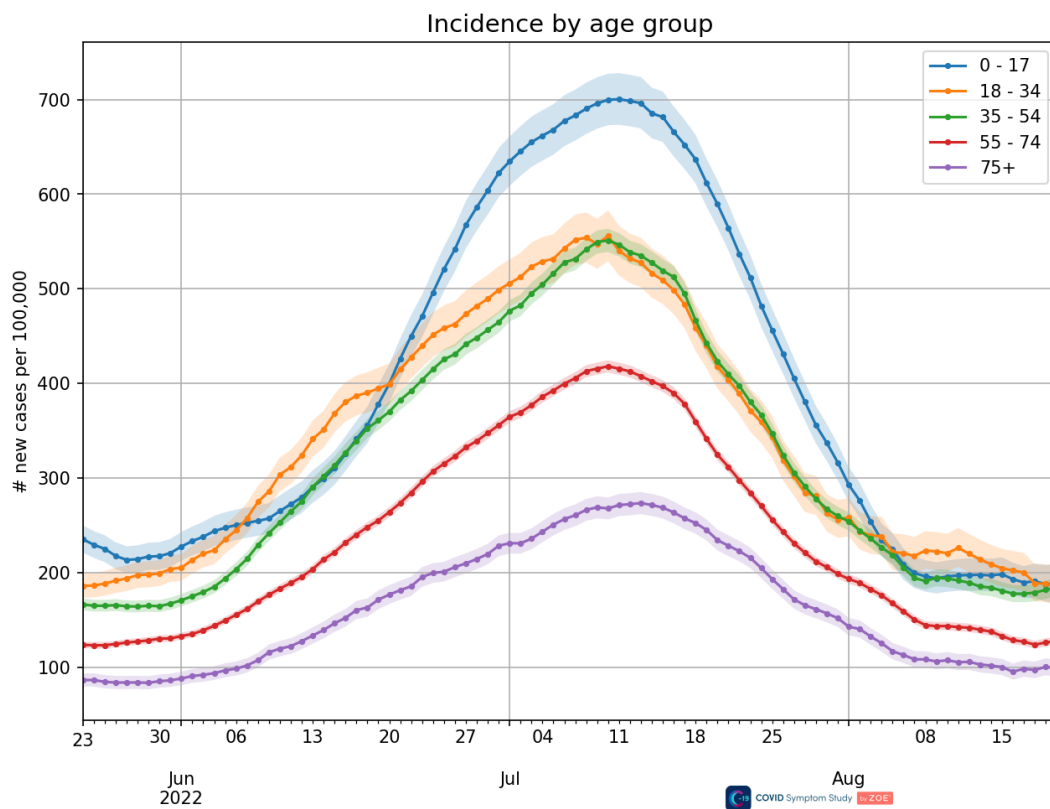
Daily incidence rates across nations



Daily incidence rates across English administrative regions

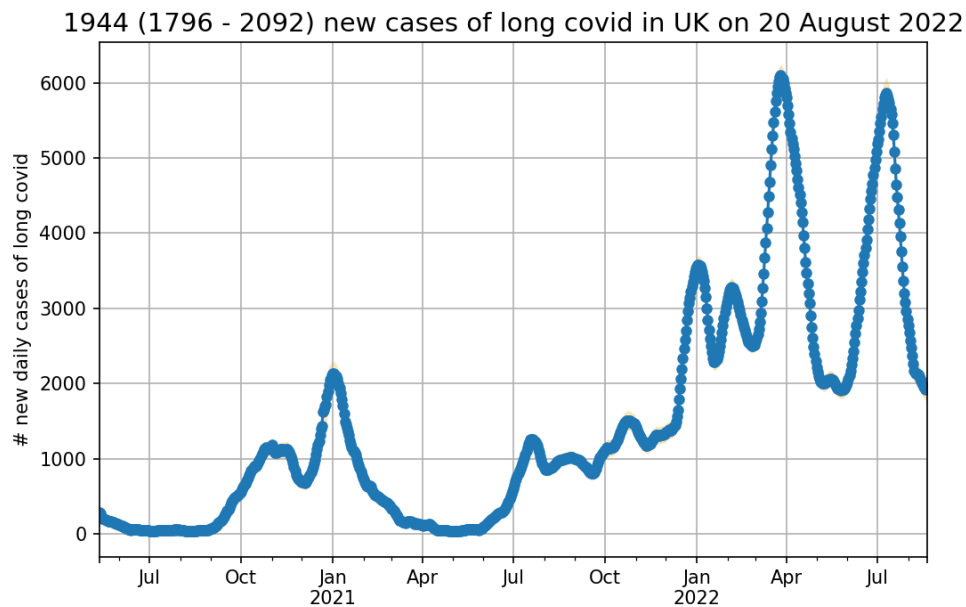


Daily incidence rates across age groups



Daily new cases of people living with Long Covid

This subsection includes estimates on new daily cases of people living with Long Covid. This estimate refers to the number of people in the UK who fell ill on a specific day and are predicted to have COVID-like symptoms for more than 12 weeks [\[2\]](#).



[2] Please refer to the publication by [Thompson et al. \(2021\)](#) for details on how long covid rates in the population are modelled

Prevalence estimates

(up to 21 August 2022)

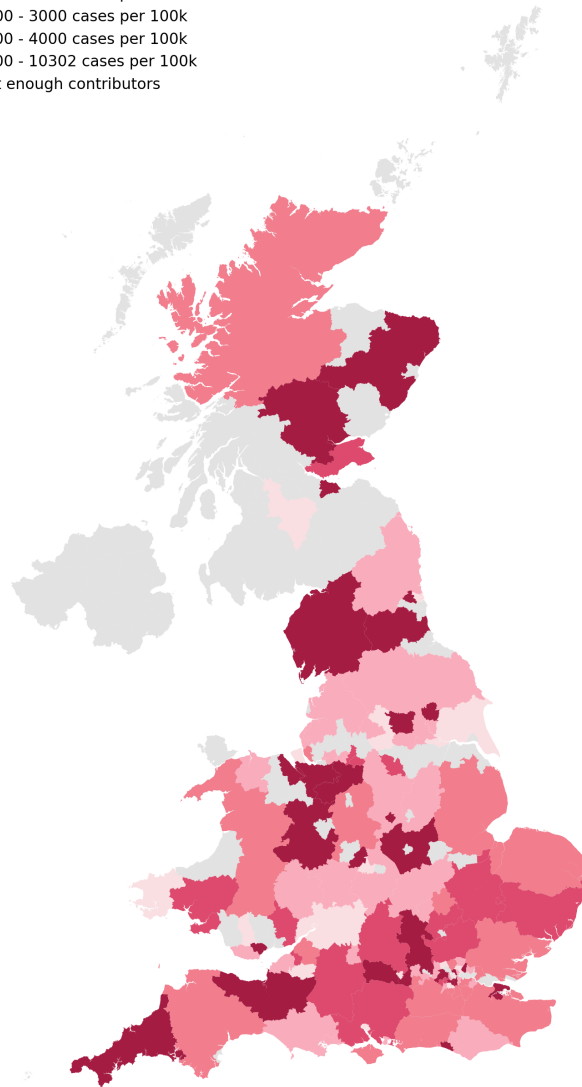
Daily active cases of symptomatic COVID

The COVID active cases (prevalence) or Symptomatic COVID estimate is based on the most recent report for each contributor that logged during the previous 7 days.

Average estimated rate of people with Symptomatic COVID over the last week ^[3]

Based on data from 313603 contributors that logged from 14 August 2022 to 21 August 2022

- 0 - 1000 cases per 100k
- 1000 - 2000 cases per 100k
- 2000 - 3000 cases per 100k
- 3000 - 4000 cases per 100k
- 4000 - 10302 cases per 100k
- Not enough contributors



 COVID Symptom Study 

[3] Please note, the map of COVID prevalence in the UK is currently being computed on 20% of user reports due to an app update, so some areas have too small a sample size to offer accurate COVID estimates. This is a temporary measure and reports will be back to normal within the next few weeks.

Prevalence rates by sociodemographic characteristics

Prevalence rates by nation and administrative region

	Cases	Rates (cases per 100,000 people)	Rates (1 in X people)
East Midlands	128565	2700	1 in 37
East of England	159396	2598	1 in 38
London	221685	2504	1 in 40
North East	66406	2520	1 in 40
North West	198655	2747	1 in 36
(*) Northern Ireland	42461	2275	1 in 44
Scotland	145277	2697	1 in 37
South East	233679	2586	1 in 39
South West	130299	2355	1 in 42
Wales	76112	2448	1 in 41
West Midlands	167747	2868	1 in 35
Yorkshire and The Humber	142754	2628	1 in 38
England	1449187	2613	1 in 38
TOTAL	1713036	2602	1 in 38

(*) The number of respondents in Northern Ireland is low to generate a good estimate.

Prevalence rates by socioeconomic status (IMD)

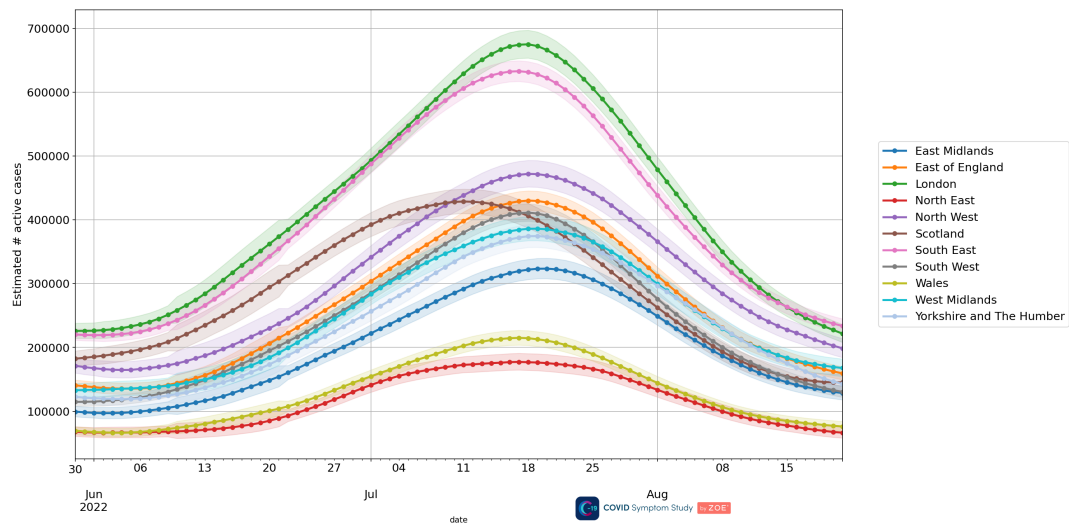
	Cases	Rates (cases per 100,000 people)	Rates (1 in X people)
LOW (1st - 3rd decile)	424054	2131	1 in 47
MEDIUM (4th - 6th decile)	541518	2700	1 in 37
HIGH (7th - 10th decile)	747464	2889	1 in 35
TOTAL	1713036	2602	1 in 38

Prevalence rates by age group

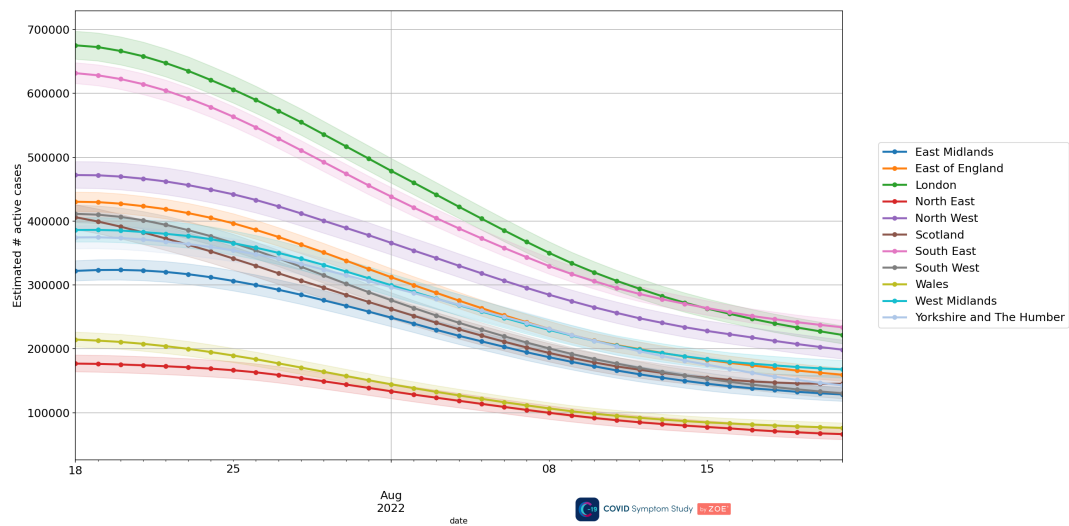
	Cases	Rates (cases per 100,000 people)	Rates (1 in X people)
Age 0 - 17	413380	2943	1 in 34
Age 18 - 34	440447	2995	1 in 33
Age 35 - 54	480829	2741	1 in 36
Age 55 - 74	294879	2019	1 in 50
Age 75+	83502	1693	1 in 59
TOTAL	1713036	2602	1 in 38

Daily active cases by nation and administrative region

Last 3 months

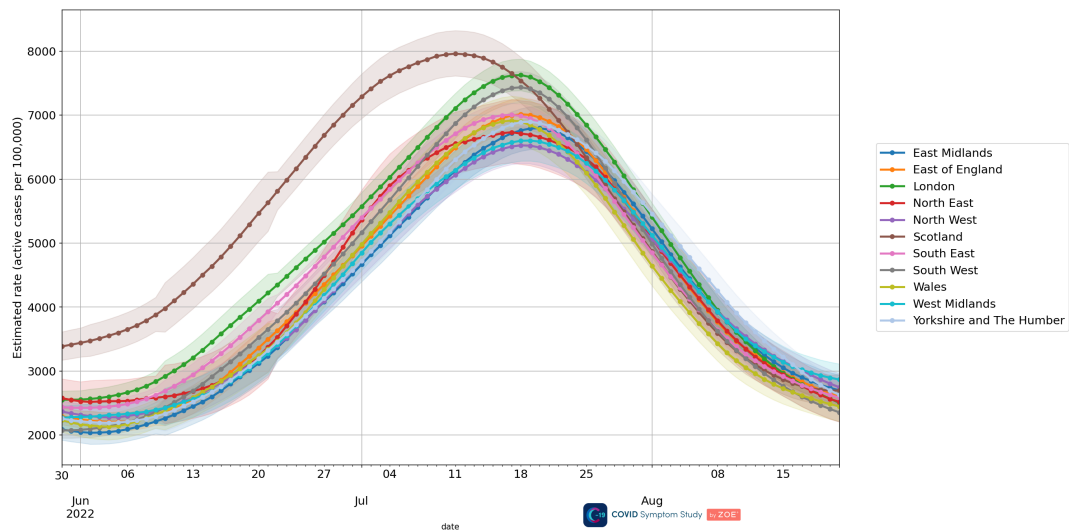


Last month

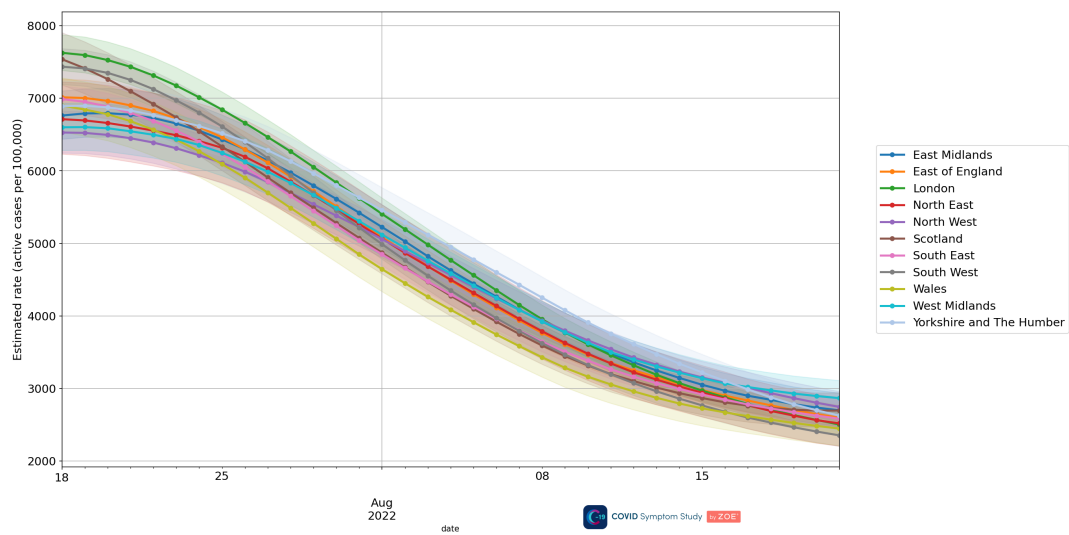


Daily prevalence rates by nation and administrative region

Last 3 months

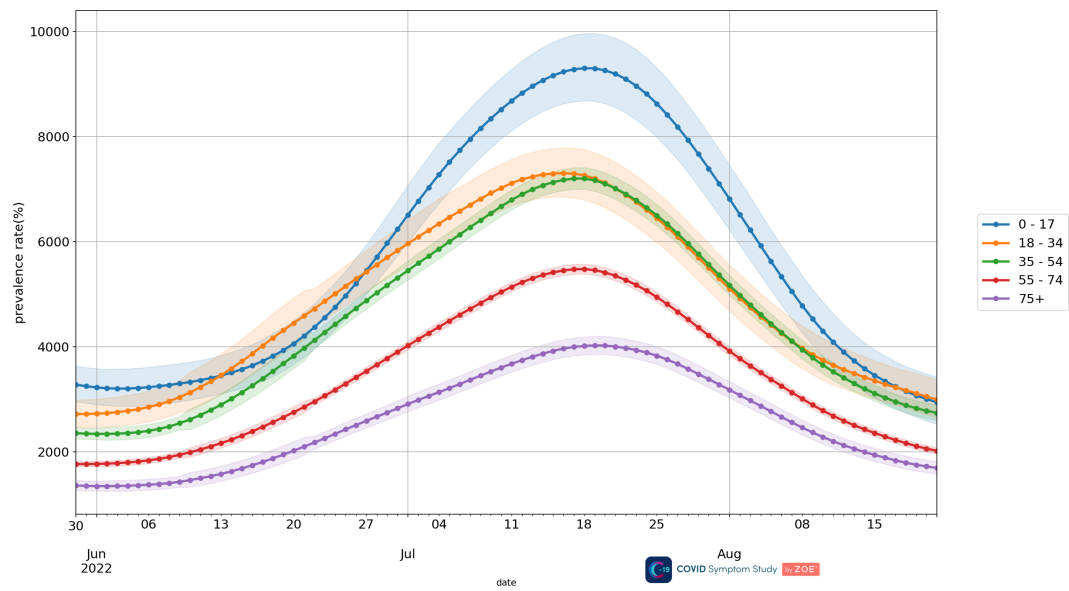


Last month



Daily prevalence rates by age group

Last 3 months



Last month

Local Authorities' Watch list for Active Cases of COVID-19

The following are UTLA regions with the highest estimates of prevalence rates averaged over the past week. Note that the local authorities' watchlist is intended to be an early indication system of areas where cases might be rising, but local authority-level prevalence estimates might be volatile due to the limited amount of responders and positive cases in the area.

		Last Week Trend	Rates & 95% CI (cases per 100,000 people)	# of App Users
region	UTLA region			
East Midlands	Derby	▼	6334 (4829 - 8266)	780
	Leicestershire	●	4375 (3739 - 5113)	3422
London	Camden	●	5430 (4364 - 6736)	1413
	Hounslow	▲	4486 (3356 - 5972)	977
	Lambeth	▲	5899 (4862 - 7139)	1654
	Waltham Forest	▲	7294 (5791 - 9149)	928
	Wandsworth	▼	5064 (4159 - 6154)	1867
North East	County Durham	●	4972 (4017 - 6139)	1624
	Newcastle upon Tyne	▲	6201 (4948 - 7746)	1150
North West	Cheshire East	▲	10302 (9187 - 11535)	2579
	Cheshire West and Chester	●	5038 (4166 - 6081)	2017
Scotland	Aberdeenshire	▲	5019 (3832 - 6549)	1005
	City of Edinburgh	▲	5992 (5241 - 6842)	3386
	Perth and Kinross	▲	4402 (3157 - 6106)	758
South East	Brighton and Hove	●	5854 (4963 - 6892)	2284
	Buckinghamshire	▲	4300 (3761 - 4912)	4791
	West Berkshire	▼	4961 (3915 - 6268)	1321
	Wokingham	●	4899 (3939 - 6078)	1577
South West	Cornwall	●	4333 (3729 - 5031)	3771
	Somerset	▲	4653 (4039 - 5355)	3951

		Last Week Trend	Rates & 95% CI (cases per 100,000 people)	# of App Users
region	UTLA region			
Wales	Flintshire	▲	5630 (4288 - 7359)	876
West Midlands	Birmingham	●	4253 (3491 - 5172)	2230
	Shropshire	▼	4499 (3684 - 5483)	2055
Yorkshire and The Humber	Leeds	▲	8104 (7188 - 9125)	3057
	York	●	6988 (5797 - 8403)	1477

▲ implies an increase in prevalence in the past week

● implies that prevalence has been fairly constant in the past week

▼ implies a decrease in prevalence in the past week

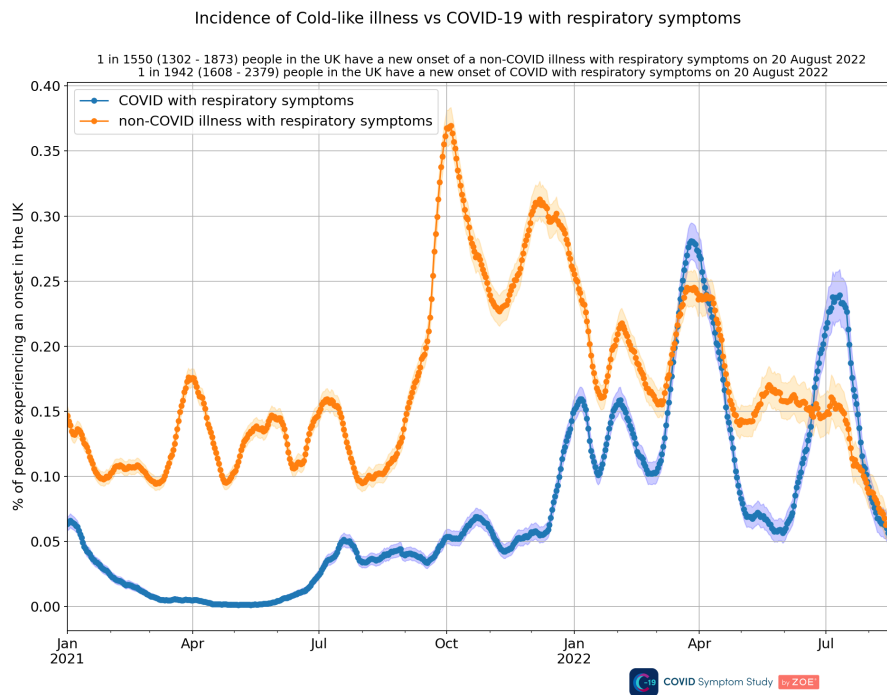
Non-COVID respiratory illnesses

(up to 20 August 2022)

Cold-like illness incidence estimates

This section provides daily tracking of cold-like illness (CLI) in the UK. To be considered as a newly sick individual for CLI, someone must experience an onset of some of the following symptoms: fever, persistent cough, hoarse voice, headache, sneezing, runny nose, severe fatigue, chest pain or shortness of breath over a period of two weeks and be COVID negative.

To assess the relative levels of COVID and cold-like illness in the UK, an extrapolated COVID incidence computed from respiratory symptoms is employed to compare equivalent estimates.



Raw Figures

(up to 21 August 2022)

Number of users logging feeling well/unwell

This section reports raw data by day, with no temporal averaging or rebalancing/
extrapolation to the UK population.

	# users who logged feeling well	# users who logged feeling unwell	% users who logged feeling unwell
East Midlands	9767	402	3.95 %
East of England	17522	729	3.99 %
London	17604	836	4.53 %
North East	4215	187	4.25 %
North West	12033	492	3.93 %
Northern Ireland	894	46	4.89 %
Scotland	8794	458	4.95 %
South East	32293	1362	4.05 %
South West	18689	809	4.15 %
Wales	7858	360	4.38 %
West Midlands	9553	427	4.28 %
Yorkshire and The Humber	9860	425	4.13 %
TOTAL	149082	6533	4.20 %

Location of positive PCR tests results

Location of positive test results reported in the UK
in the 2 weeks up to 20 August 2022



Changelog

- [...]
- 2021-05-12: Changed methodology to adjust for vaccination status (see [blog post](#))
- 2021-05-26: Updated infection report format and included contents and changelog pages
- 2021-06-08: Incidence figures are now smoothed over a 7-day rolling window
- 2021-06-09: Included UK incidence trend by vaccination status
- 2021-06-10: Fixed bug in the local authorities' watch list which prevented authorities with rates above 1000 per 100k to be displayed.
- 2021-06-17: Changes in the local authorities' watch list: Included confidence intervals around the prevalence estimate. Reformatted the table. Extra paragraph explaining that the watchlist is an early indication system.
- 2021-07-16: Removed incidence graph by vaccination status from the report as there are very few unvaccinated users in the infection survey, the Confidence Intervals are very wide and the trend for unvaccinated people is no longer representative.
- 2021-07-21: Released the latest version of incidence. This new estimate adjusts for the decreasing number of unvaccinated users in our initial cohort by relaxing the inclusion criteria of newly sick and incorporating LFTs. An age weighting was also employed to have a reliable representation of the UK population in our estimates over all age segments. Incidence figures broken down by vaccination status were also rolled out. We have written a comprehensive blog on this to help explain this change further, read more [here](#).
- 2021-07-29: Replaced absolute incidence figures by vaccination status with incidence rates.
- 2021-08-26: Changed the incidence by vaccination status plot to show estimates only on the whole and the fully vaccinated populations. Added a plot depicting daily estimates of Long Covid incidence.
- 2021-09-08: Changed the incidence plot for England to show the rate of new daily cases rather than the absolute figure.
- 2021-09-14: Added a plot on the daily new cases in England.
- 2021-09-23: Changed the prevalence map and the hotspot table to use 14-days smoothed prevalence estimates.
- 2021-10-07: Released the latest version of incidence which accounts for the diminishing number of unvaccinated users across age groups. Read more [here](#).
- 2021-10-14: Fixed a minor bug affecting population figures across vaccination status.

- 2021-11-11: Added a new Section on non-COVID respiratory illness incidence estimates in the ZOE COVID Study cohort.
- 2021-11-22: Extrapolated the cold-like and COVID with respiratory symptoms incidence estimates to the UK population.
- 2022-01-28: Added confidence intervals to prevalence estimates, split North East & Yorkshire and The Humber and Midlands and fixed end data of the prevalence figures.
- 2022-02-08: Added Figures showing breakdowns of daily incidence estimates across nations, English administrative regions and age groups.
- 2022-02-15: Aligned prevalence age breakdowns to the ones used in incidence. Now the age groups 'Age 0 - 17', 'Age 18 - 34', 'Age 35 - 54', 'Age 55 - 74', 'Age 75+' are used throughout the report.
- 2022-03-22: Updated the cold-like incidence plot to include positive LFT tests in the calculation of the incidence rate.
- 2022-06-10: The new symptom reporting flow is available to 80% of App users who consented to the ZOE Health Study. While we transition to this new flow, COVID figures will be computed on the remaining 20% of users. As a result, during the transition period, there may be greater uncertainty around our COVID figures due to the smaller sample size. We will provide a further update once we have fully migrated the COVID figures to the new symptom reporting flow..
- 2022-06-22: From 22nd June, the new symptom reporting flow is available to 100% of App users who consented to the ZOE Health Study. We have fully migrated the COVID figures to the new symptom reporting flow and from this day, we compute our estimates on 100% of the eligible user base, except for local prevalence figures which are smoothed over two weeks and they will be gradually including more users.