



Daily COVID Infections Report

11 September 2023

Analysis by ZOE and King's College London

health-study.joinzoe.com

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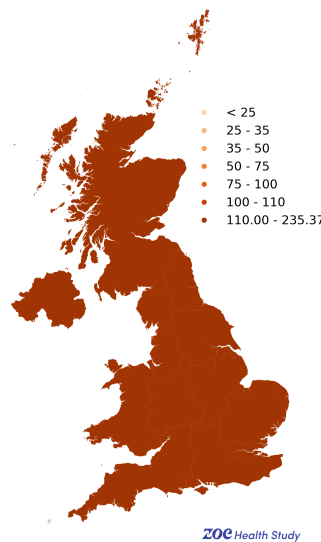
Incidence estimates

(based on 2 weeks up to 09 September 2023)

Daily new cases of symptomatic COVID

We estimate there have been 97904 daily new cases of symptomatic COVID in the UK on average over the two weeks up to 09 September 2023. 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 (09 September 2023) ^[1]

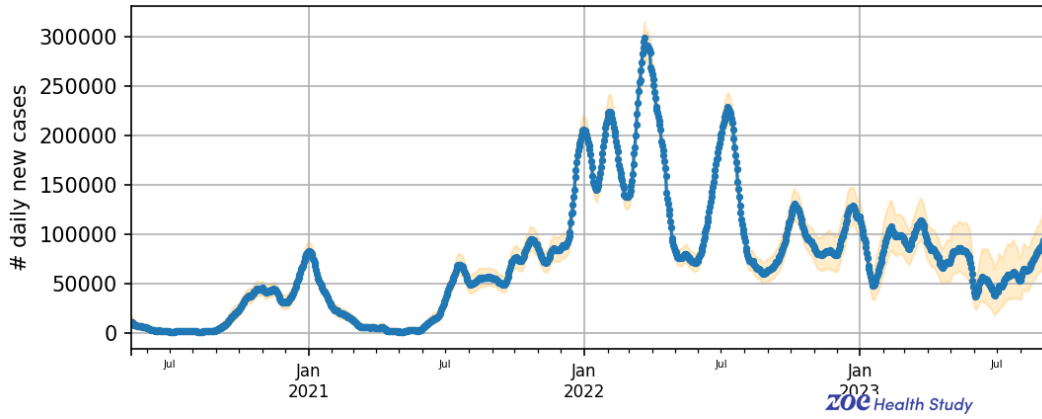


	Daily new cases per 100,000	R
East Midlands	97 - 188	1.1 (1.0 - 1.2)
East of England	102 - 164	1.0 (0.9 - 1.1)
England	107 - 177	1.0 (1.0 - 1.1)
London	102 - 160	1.0 (0.9 - 1.0)
North East	103 - 225	1.0 (0.9 - 1.1)
North West	97 - 170	1.0 (0.9 - 1.1)
Northern Ireland	105 - 399	1.1 (1.0 - 1.3)
Scotland	141 - 231	1.0 (0.9 - 1.1)
South East	110 - 157	1.1 (1.0 - 1.1)
South West	128 - 191	1.1 (1.0 - 1.2)
Wales	105 - 205	1.0 (0.9 - 1.1)
West Midlands	110 - 198	1.0 (1.0 - 1.1)
Yorkshire and The Humber	111 - 197	1.2 (1.1 - 1.4)
UK	109 - 189	1.0 (1.0 - 1.1)

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

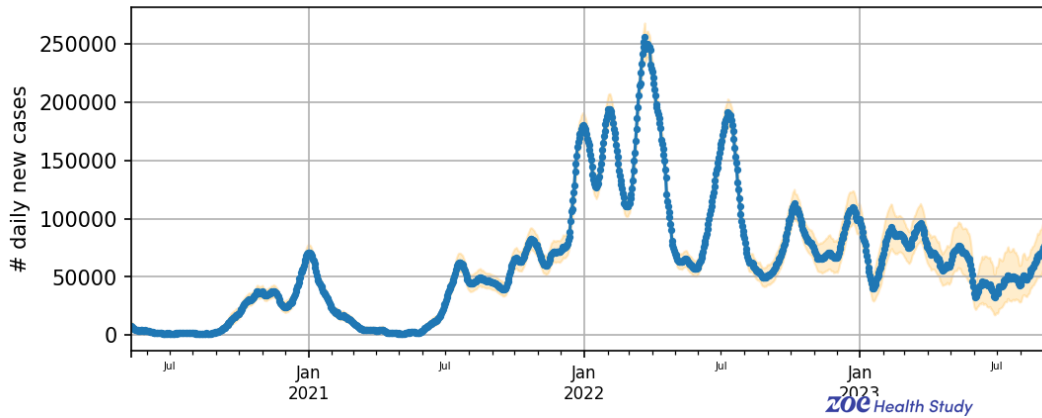
Daily new cases in the UK

97904 (72559 - 125731) new cases in UK on 09 September 2023
R = 1.0 (1.0 - 1.1)



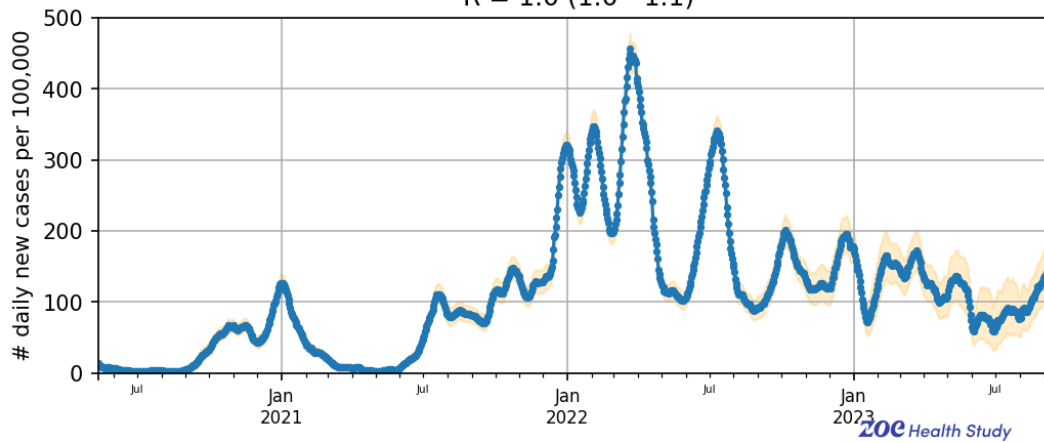
Daily new cases in England

78708 (59637 - 99268) new cases in England on 09 September 2023
R = 1.0 (1.0 - 1.1)

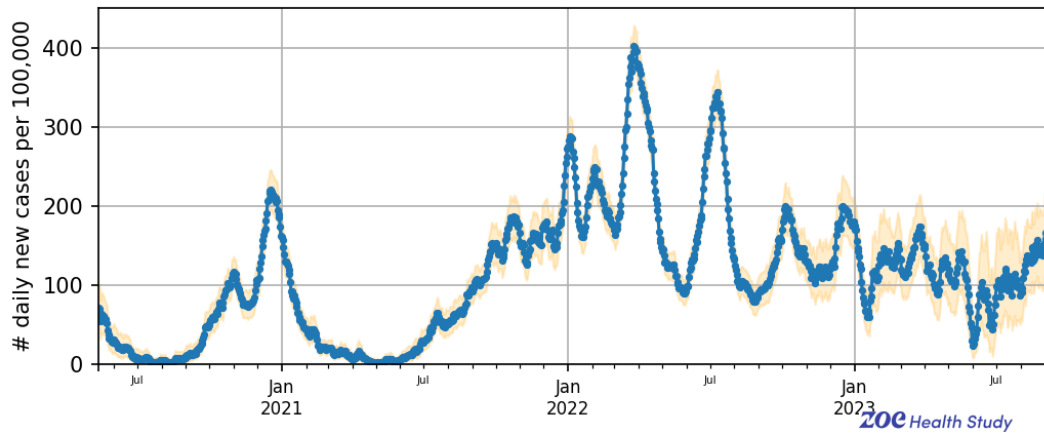


Daily incidence rates by nation and administrative region

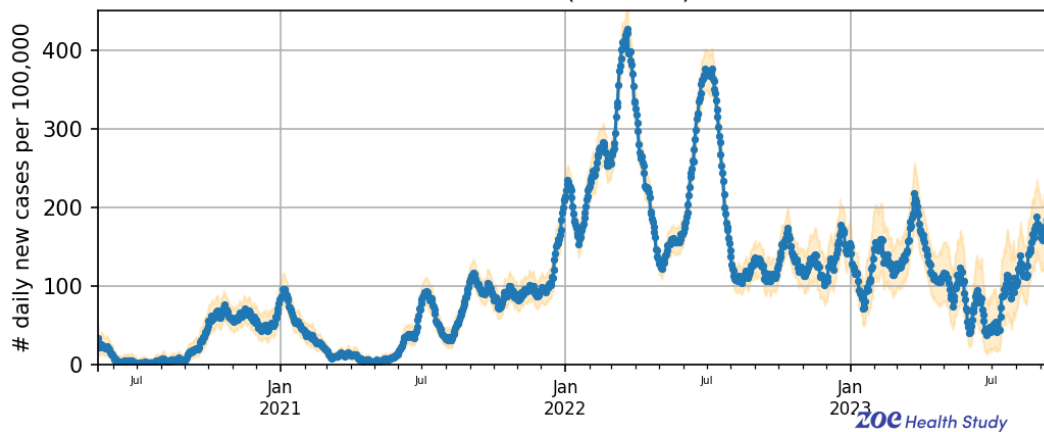
141 (107 - 177) new cases per 100,000 in England on 09 September 2023
R = 1.0 (1.0 - 1.1)



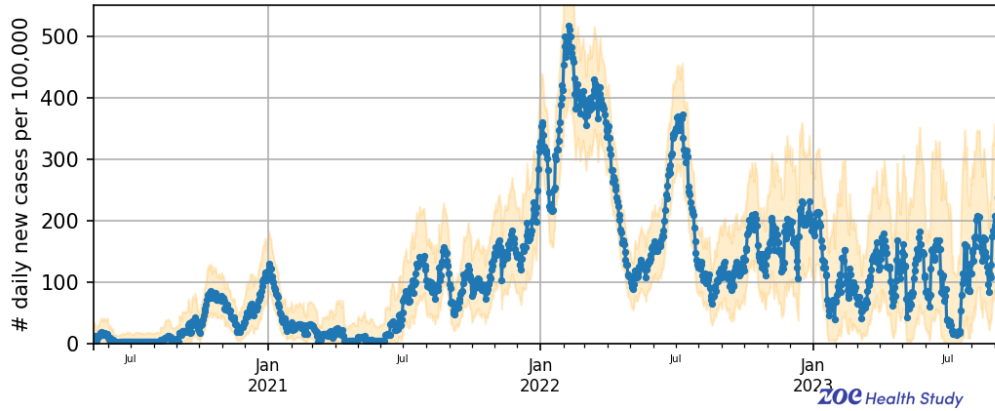
152 (105 - 205) new cases per 100,000 in Wales on 09 September 2023
R = 1.0 (0.9 - 1.1)



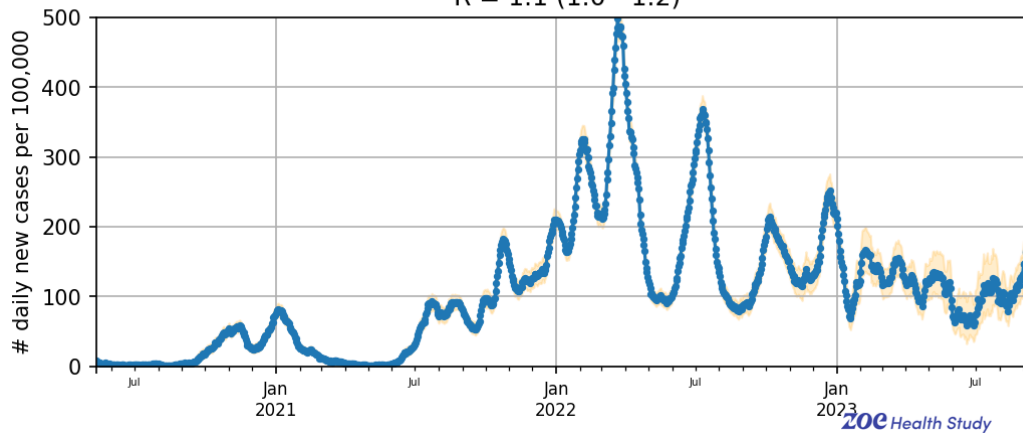
184 (141 - 231) new cases per 100,000 in Scotland on 09 September 2023
R = 1.0 (0.9 - 1.1)



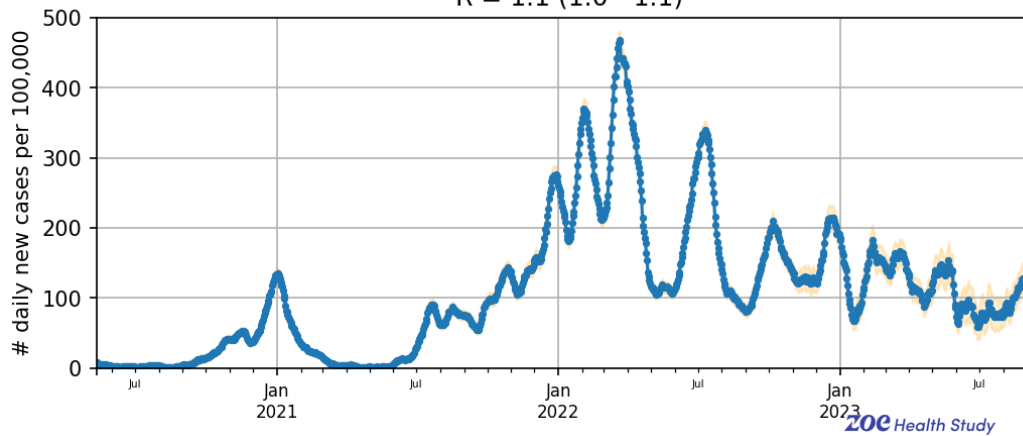
235 (105 - 399) new cases per 100,000 in Northern Ireland on 09 September 2023
 $R = 1.1 (1.0 - 1.3)$



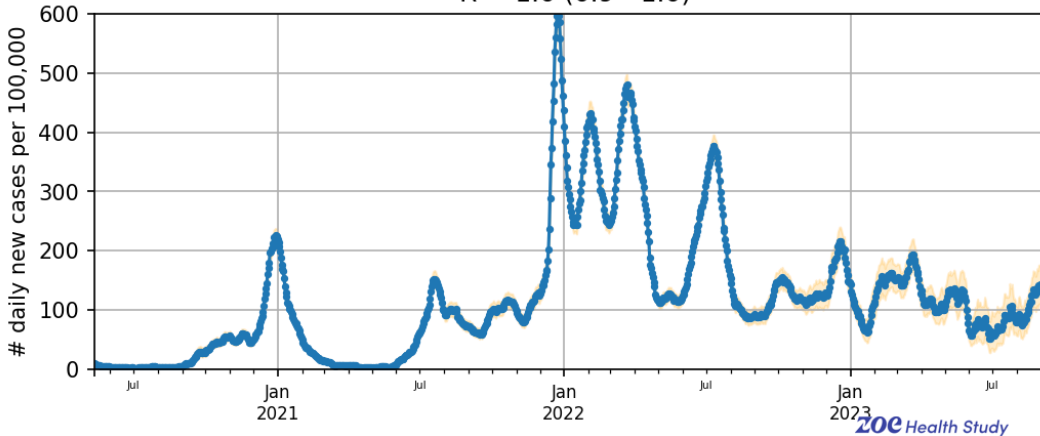
158 (128 - 191) new cases per 100,000 in South West on 09 September 2023
 $R = 1.1 (1.0 - 1.2)$



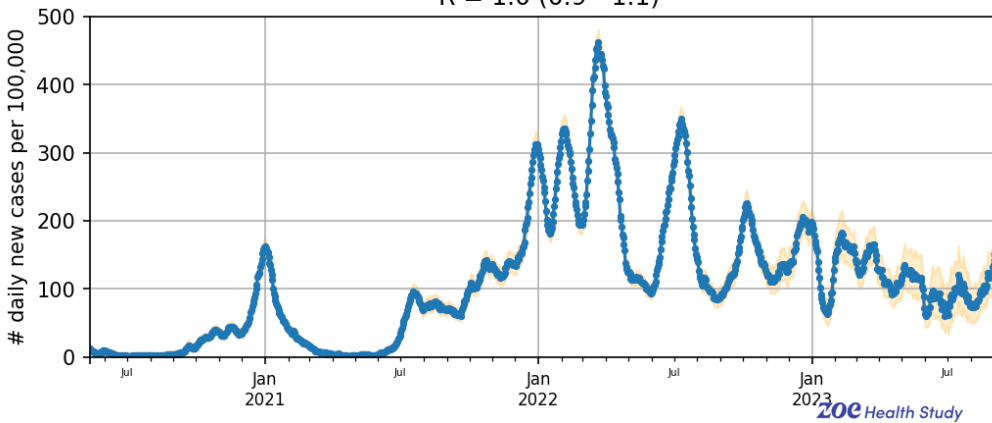
133 (110 - 157) new cases per 100,000 in South East on 09 September 2023
 $R = 1.1 (1.0 - 1.1)$



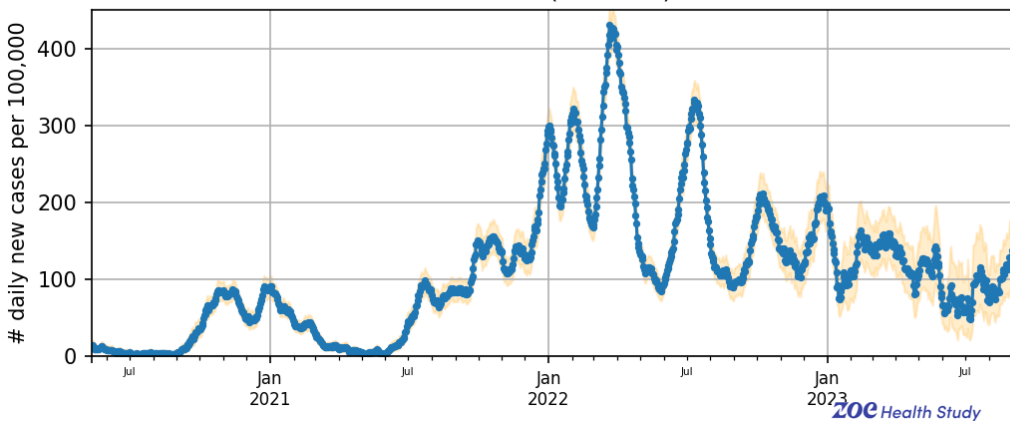
130 (102 - 160) new cases per 100,000 in London on 09 September 2023
R = 1.0 (0.9 - 1.0)



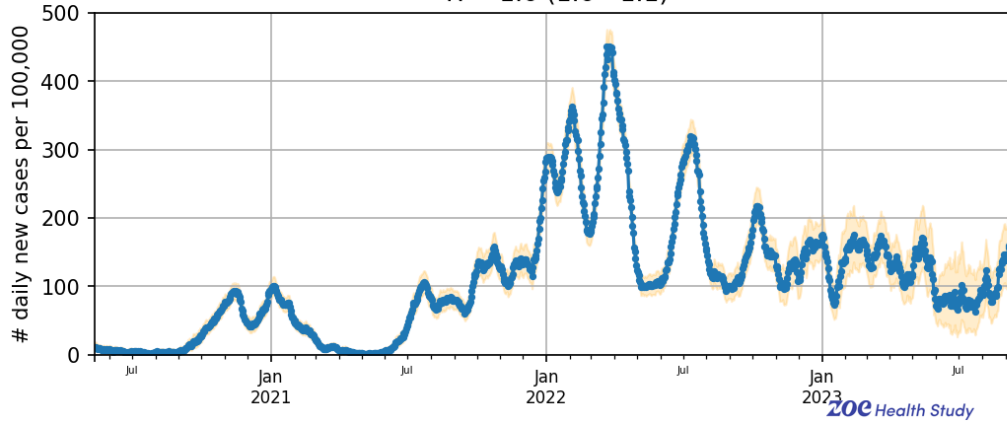
132 (102 - 164) new cases per 100,000 in East of England on 09 September 2023
R = 1.0 (0.9 - 1.1)



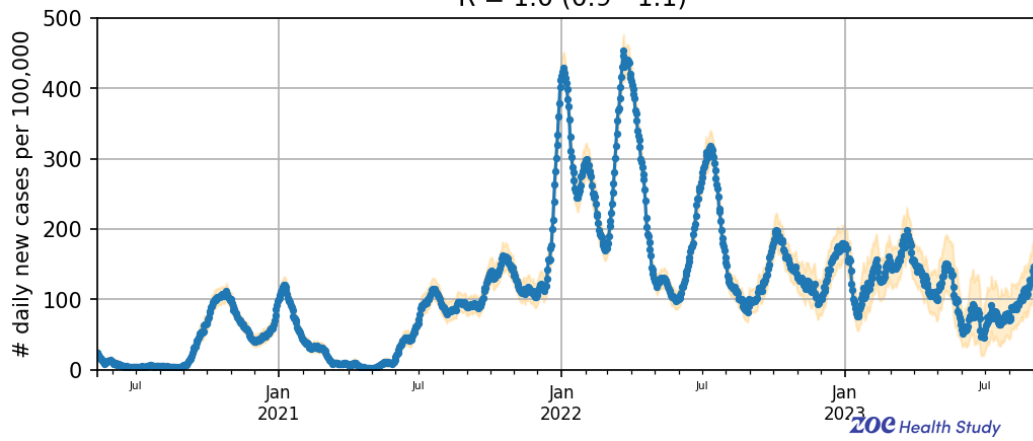
141 (97 - 188) new cases per 100,000 in East Midlands on 09 September 2023
R = 1.1 (1.0 - 1.2)



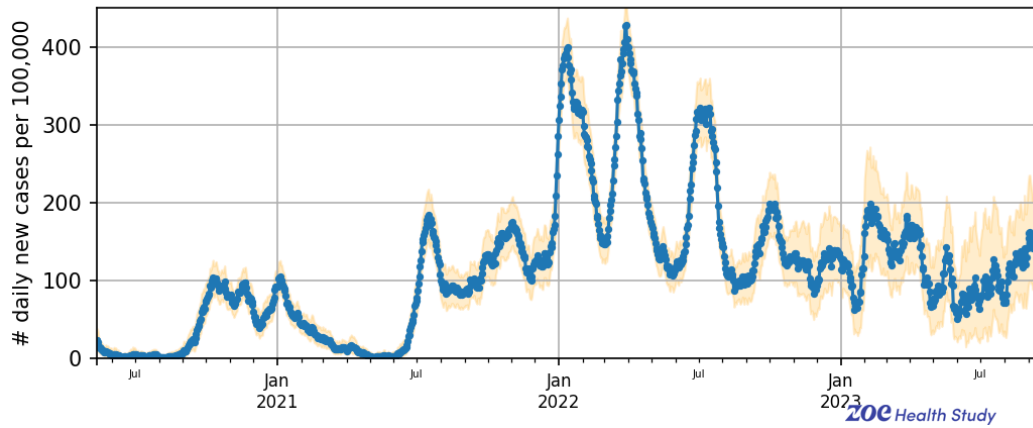
153 (110 - 198) new cases per 100,000 in West Midlands on 09 September 2023
R = 1.0 (1.0 - 1.1)



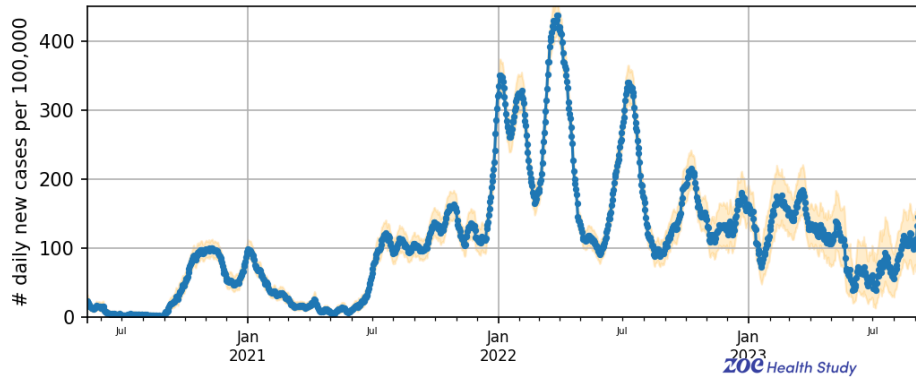
132 (97 - 170) new cases per 100,000 in North West on 09 September 2023
R = 1.0 (0.9 - 1.1)



161 (103 - 225) new cases per 100,000 in North East on 09 September 2023
R = 1.0 (0.9 - 1.1)



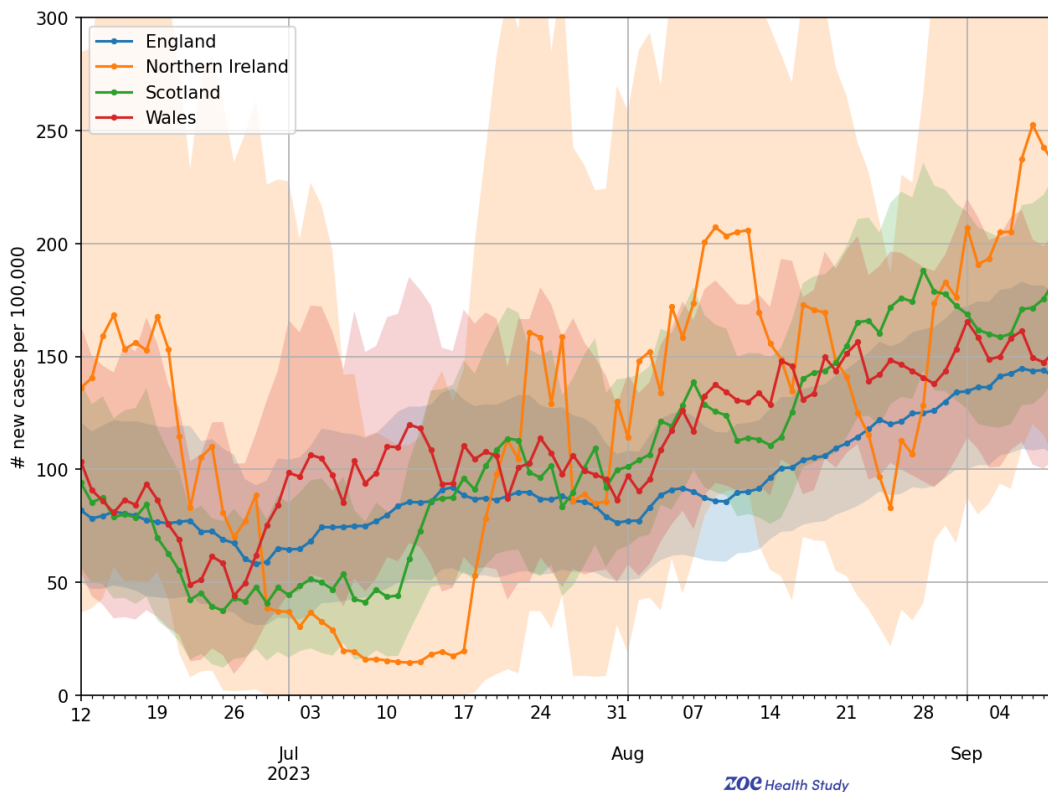
152 (111 - 197) new cases per 100,000 in Yorkshire and The Humber on 09 September 2023
R = 1.2 (1.1 - 1.4)



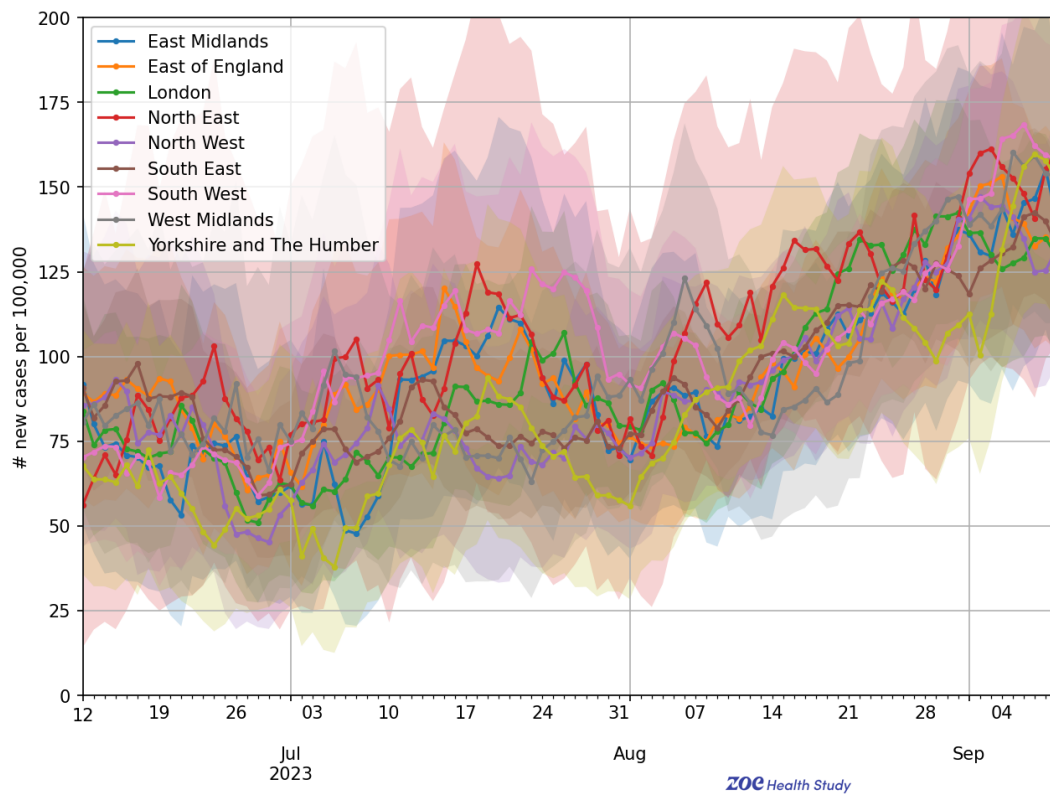
Breakdown of daily incidence rates

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.

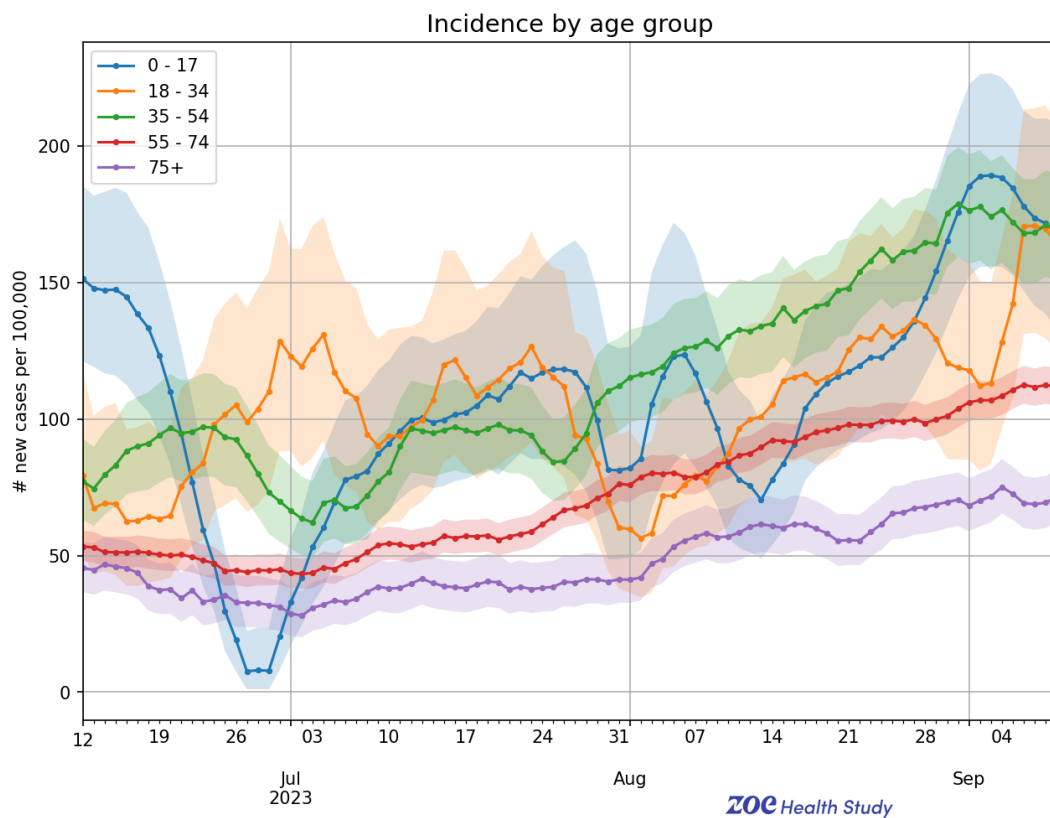
Daily incidence rates across nations



Daily incidence rates across English administrative regions

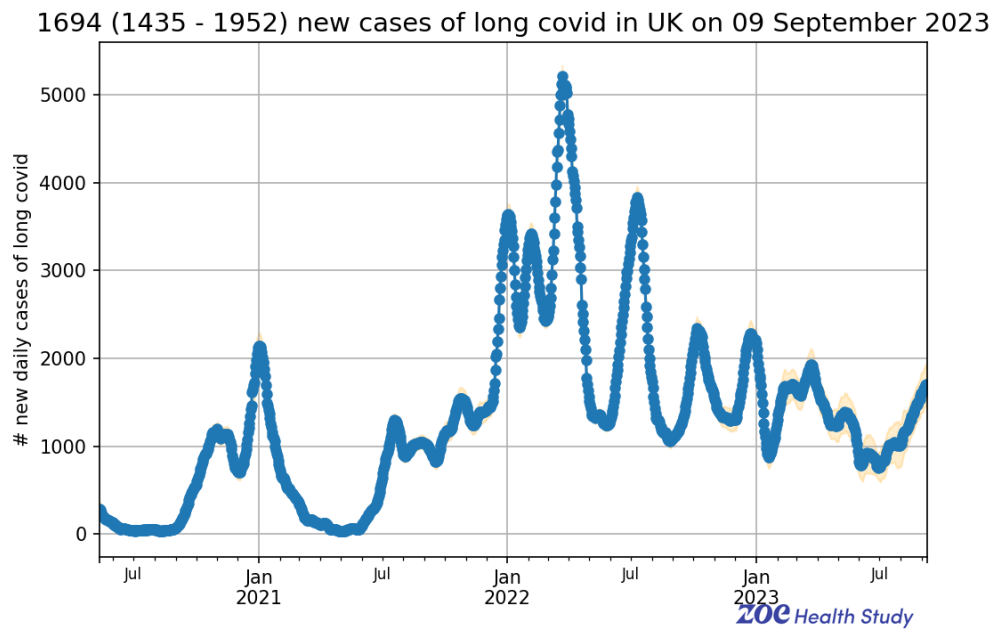


Daily incidence rates across age groups



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 10 September 2023)

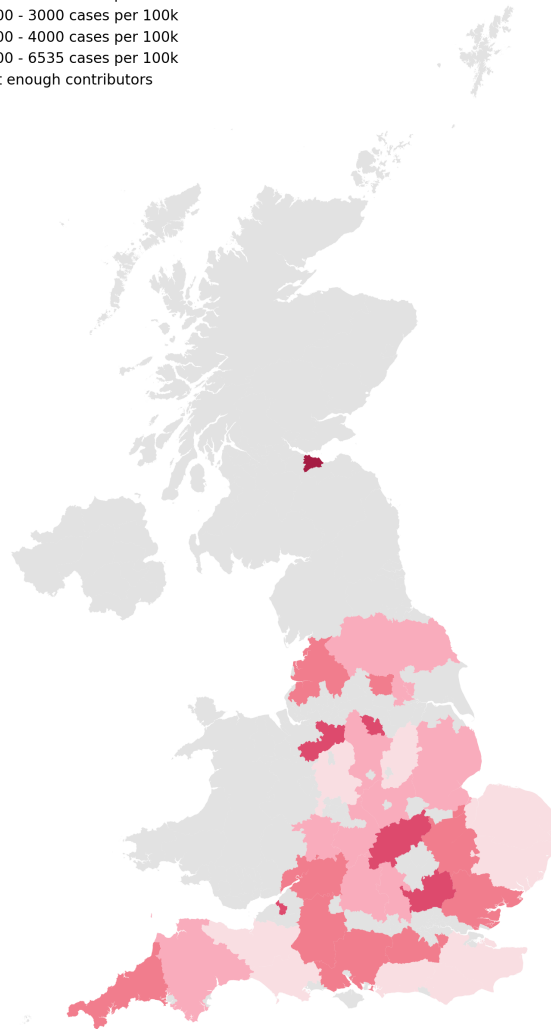
Daily active cases of symptomatic COVID

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 87401 contributors that logged from 3 September 2023 to 10 September 2023

- 0 - 1000 cases per 100k
- 1000 - 2000 cases per 100k
- 2000 - 3000 cases per 100k
- 3000 - 4000 cases per 100k
- 4000 - 6535 cases per 100k
- Not enough contributors



ZOE Health 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	88857	1866	1 in 54
East of England	115264	1879	1 in 53
London	163402	1846	1 in 54
North East	53557	2033	1 in 49
North West	132681	1835	1 in 55
(*) Northern Ireland	50208	2690	1 in 37
Scotland	127263	2363	1 in 42
South East	163520	1809	1 in 55
South West	111838	2021	1 in 49
Wales	65910	2120	1 in 47
West Midlands	115924	1982	1 in 50
Yorkshire and The Humber	96824	1782	1 in 56
England	1041866	1878	1 in 53
TOTAL	1285247	1952	1 in 51

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

Prevalence rates by socioeconomic status (IMD)

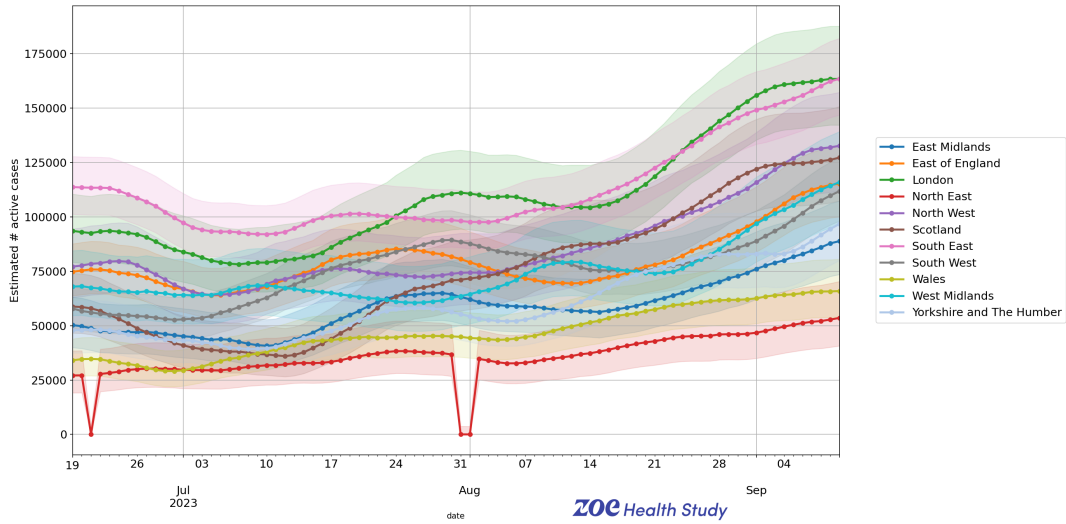
	Cases	Rates (cases per 100,000 people)	Rates (1 in X people)
LOW (1st - 3rd decile)	205546	1033	1 in 97
MEDIUM (4th - 6th decile)	336349	1677	1 in 60
HIGH (7th - 10th decile)	743351	2873	1 in 35
TOTAL	1285247	1952	1 in 51

Prevalence rates by age group

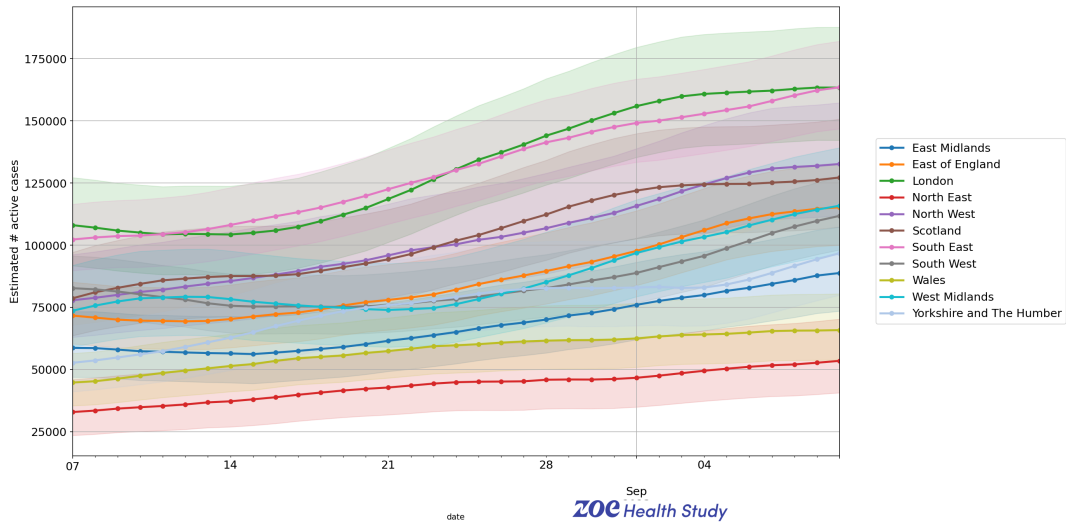
	Cases	Rates (cases per 100,000 people)	Rates (1 in X people)
Age 0 - 17	322857	2299	1 in 44
Age 18 - 34	281347	1913	1 in 52
Age 35 - 54	412465	2351	1 in 43
Age 55 - 74	215675	1476	1 in 68
Age 75+	52902	1073	1 in 93
TOTAL	1285247	1952	1 in 51

Daily active cases by nation and administrative region

Last 3 months

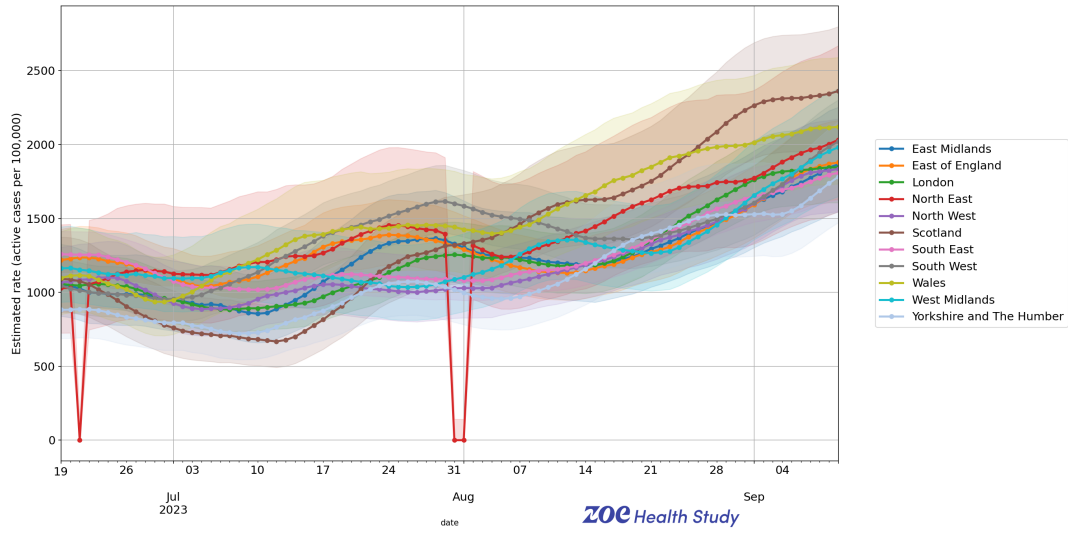


Last month

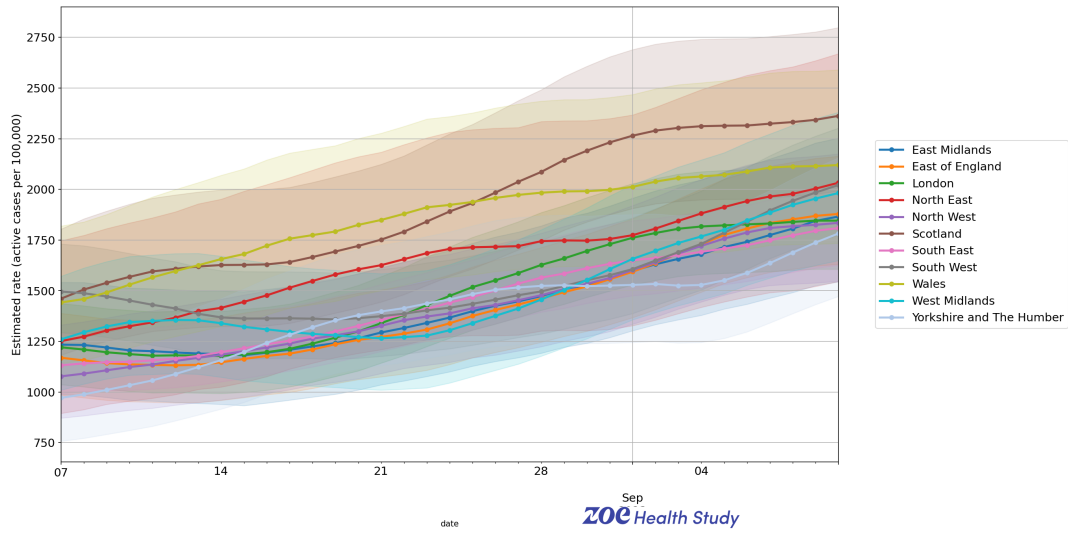


Daily prevalence rates by nation and administrative region

Last 3 months

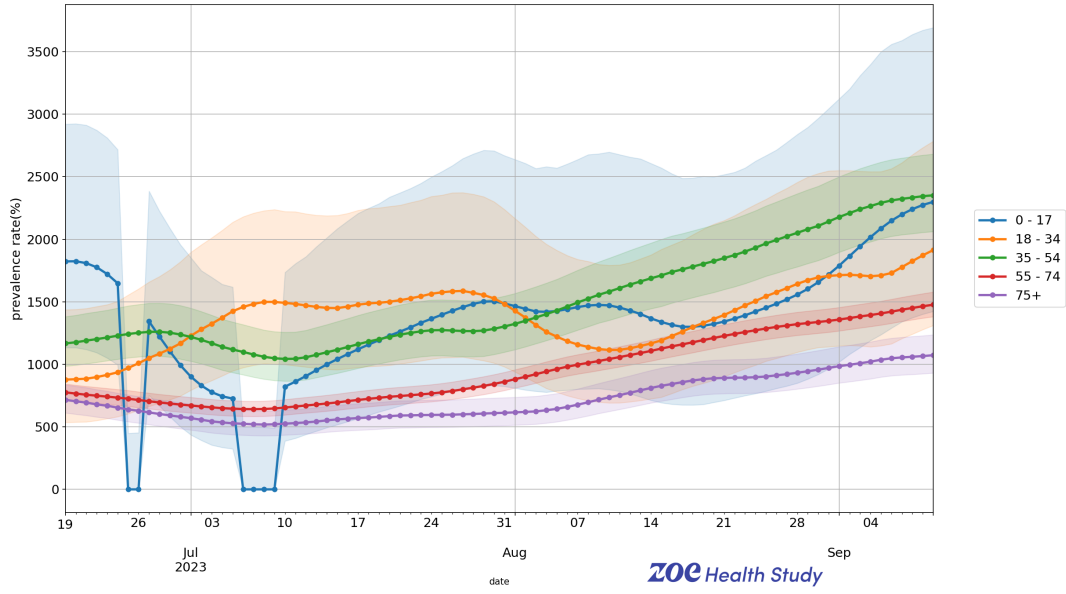


Last month



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.

region	UTLA region	Last Week Trend	Rates & 95% CI (cases per 100,000 people)	# of App Users
East Midlands	Derbyshire	●	1613 (1010 - 2568)	1054
	Leicestershire	▼	1184 (673 - 2076)	981
	Lincolnshire	●	1246 (695 - 2224)	874
	Northamptonshire	▲	3295 (2338 - 4626)	957
East of England	Cambridgeshire	▼	2652 (1943 - 3611)	1454
	Essex	▲	2173 (1637 - 2879)	2156
	Hertfordshire	▲	3365 (2713 - 4167)	2384
London	Bromley	▲	2278 (1470 - 3516)	851
North West	Cheshire East	▲	3671 (2580 - 5198)	812
	Lancashire	●	2510 (1769 - 3548)	1218
Scotland	City of Edinburgh	▼	6535 (5197 - 8187)	1058
South East	Buckinghamshire	▲	1962 (1326 - 2893)	1245
	Hampshire	●	2291 (1822 - 2878)	3118
	Oxfordshire	▼	1127 (727 - 1743)	1734
	Surrey	●	2174 (1702 - 2773)	2884
South West	Bristol, City of	▼	3213 (2202 - 4665)	810
	Cornwall	▲	2702 (1912 - 3804)	1156
	Devon	▼	1723 (1205 - 2459)	1703
	Gloucestershire	▲	2362 (1667 - 3336)	1305
	Wiltshire	▲	2880 (2060 - 4014)	1152

region	UTLA region	Last Week Trend	Rates & 95% CI (cases per 100,000 people)	# of App Users
West Midlands	Warwickshire	▼	1106 (613 - 1989)	962
	Worcestershire	●	1404 (822 - 2386)	927
Yorkshire and The Humber	Leeds	●	2254 (1454 - 3478)	861
	North Yorkshire	▲	1539 (979 - 2411)	1189
	Sheffield	▲	3969 (2819 - 5559)	797

▲ 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

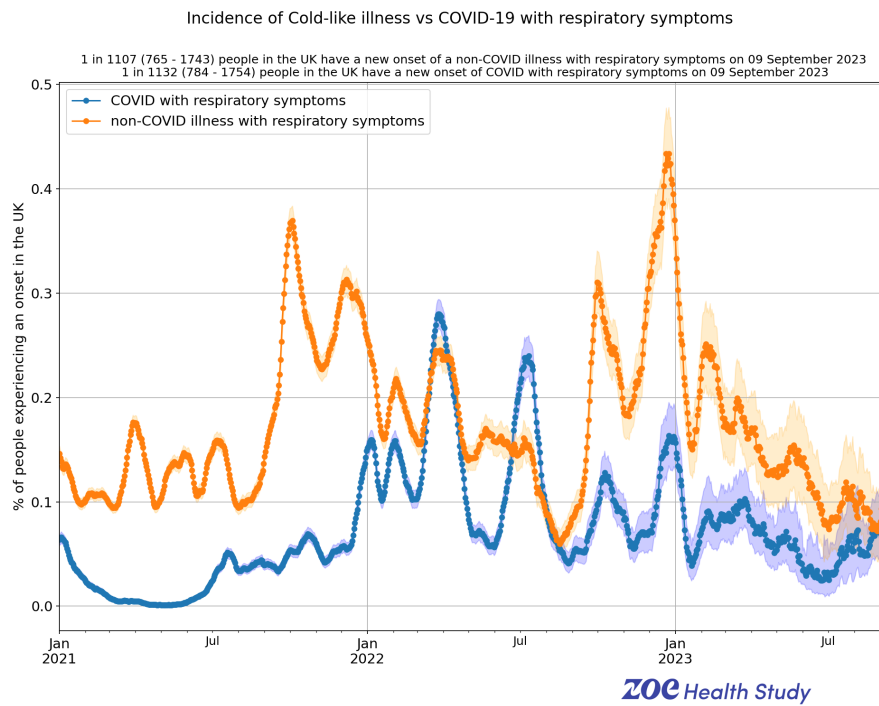
Non-COVID respiratory illnesses

(up to 09 September 2023)

Cold-like illness incidence estimates

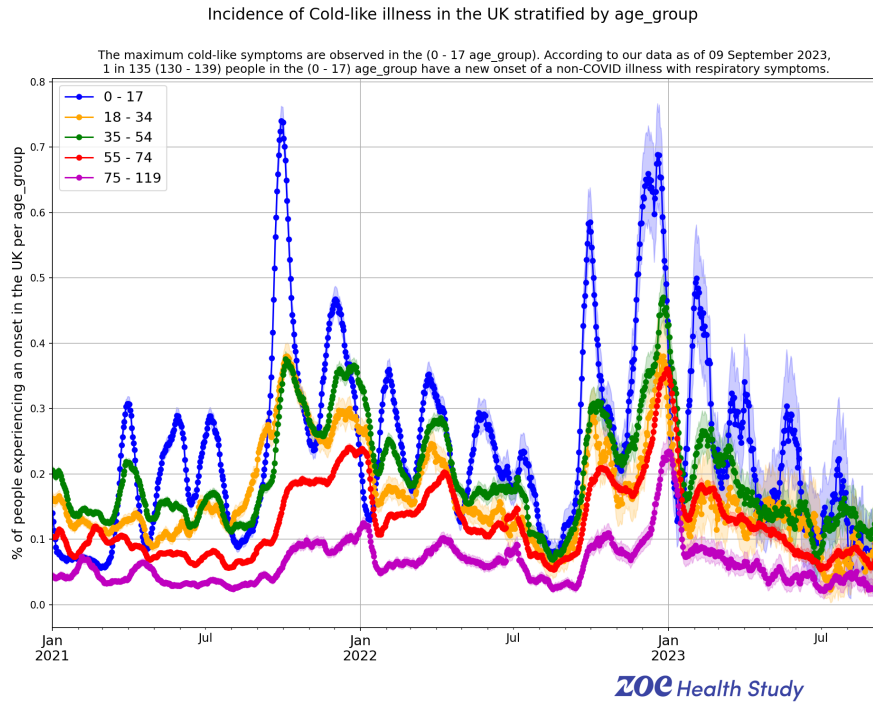
This section provides daily tracking of cold-like illness (CLI) in the UK. To be considered as a newly sick individual for CLI, someone must experience an onset of some of the following symptoms: fever, persistent cough, hoarse voice, headache, sneezing, runny nose, severe fatigue, chest pain or shortness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

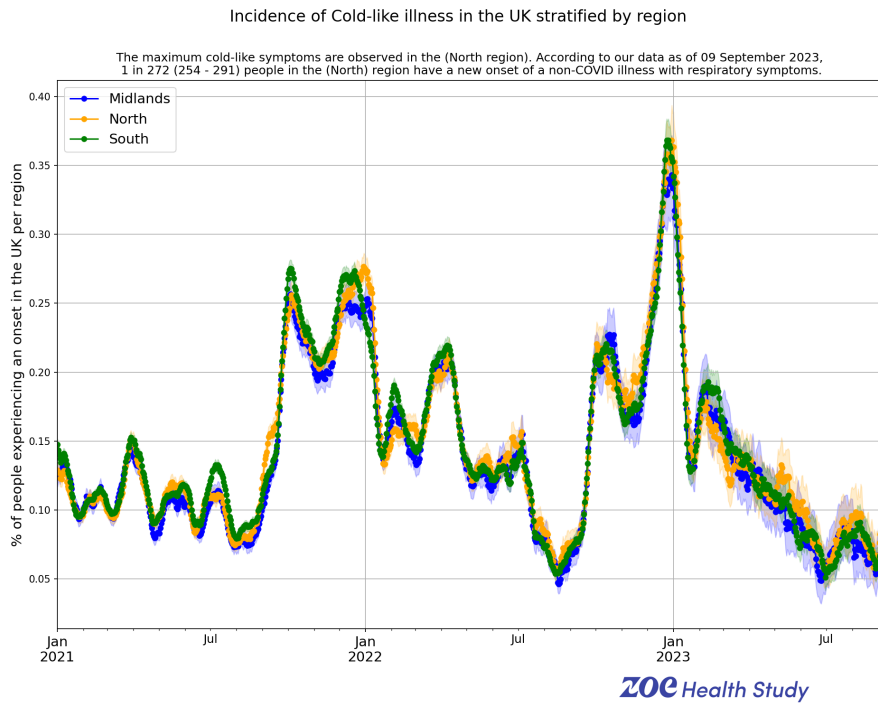


Cold-like illness incidence stratified by age and region

Non-Covid cold-like illnesses stratified by age:



Non-Covid cold-like illness stratified by region:



Raw Figures

(up to 10 September 2023)

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	3494	179	4.87 %
East of England	6077	346	5.39 %
London	6098	343	5.33 %
North East	1496	78	4.96 %
North West	4367	225	4.90 %
Northern Ireland	334	17	4.84 %
Scotland	3285	246	6.97 %
South East	10601	587	5.25 %
South West	6567	373	5.37 %
Wales	2766	161	5.50 %
West Midlands	3407	179	4.99 %
Yorkshire and The Humber	3622	180	4.73 %
TOTAL	52114	2914	5.30 %

Location of positive PCR tests results

Location of positive test results reported in the UK
in the 2 weeks up to 09 September 2023



ZOE Health Study

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 Health 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.
- 2022-09-29: Replaced UK incidence graph by vaccination status with overall UK incidence graph.
- 2022-10-03: Stratified UK cold-like incidence by age and region.
- 2023-01-03: Changed covid estimates (incidence & prevalence) by adjusting according the ONS prevalence data.