

UK Lineages report

This report gives summaries of UK specific lineages for week 2020-06-19. There are time lags due to batching, curation and analysis, the most recently sampled sequence is 2020-06-14. The analysis (eg time since last sample) is therefore undertaken from this date. 23786 sequences in the UK have been included in this analysis. 1061 lineages have been recorded, 525 of which only contain one sequence.

A few notes: the size of a lineage may be due to a low amount of transmission of this lineage, but it is likely also that it just hasn't been sampled as frequently, especially for newer lineages. It's also important to realise that these lineages are *estimates* of how we think the virus is spreading in the UK after being introduced from abroad, as the low evolutionary rate of the virus makes it difficult to separate lineages with certainty.

The minimum number of introductions is 512 and the maximum is 10001

Sequences which were replicates or too error-prone were removed from this analysis.

815 are lineages which only contained five sequences or fewer, and so have been left out of visualisation in the interests of clarity

Furthermore, those sequences which haven't been sampled in the last month are not shown.

Of the 83 that remain: 46 are pending extinction, ie last seen three weeks ago. 31 lineages have gone quiet, ie haven't been seen this week. 1 has reactivated. 5 lineages have been continuously circulating.

The following table contains information about the ten largest lineages and the number of sequences the dataset. Information about other lineages is found in the appendix, along with the raw data for all of the other figures.

Each entry is the count of sequences from each lineage in each country, with the percentage of the total sequences from that lineage that this count represents.

“Activity score” is calculated by taking the average gap between sampling for each lineage, and dividing it by the number of days since the lineage was last sampled. Therefore the higher the number, the more active the lineage is. If the score is above 1, then it has been sampled *more* recently than expected given its average gap size. We might interpret this as an increase in activity. If the score is below 1, it has been sampled *less* recently than expected given its average gap size, so we might interpret this as a decrease in activity.

The global lineages are correct as of the data release on 2020-05-19

It is written to “summary_files” as “lineage_summary.tsv” for further use, and the full list of lineages is available in the same directory as “all_lineages.csv”

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK5	5390 (80.17%)	821 (12.21%)	210 (3.12%)	302 (4.49%)	Feb-23, Jun-14	6723	B.1.1.p16, B.1.1.13, B.1.1.16, B.1.1.1, B.1.1.p15, B.1.1.p11, B.1.1.p12, B.1.1.10, B.1.1, B.1.1.14	0	active today
UK42	699 (53.4%)	371 (28.34%)	2 (0.15%)	237 (18.11%)	Feb-03, Jun-04	1309	B.1.67, B.1.35, B.1.5, B.1.p73, B.1.p11, B.1, B.1.71, B.1.72	10	0.0093
UK107	1183 (91.78%)	55 (4.27%)	11 (0.85%)	40 (3.1%)	Feb-09, Jun-02	1289	B.2.5, B.2.1, B.2	12	0.0074
UK5676	328 (62.24%)	57 (10.82%)	5 (0.95%)	137 (26.0%)	Feb-14, May-22	527	B.3, B.2	23	0.0081
UK2464	283 (57.99%)	80 (16.39%)	0 (0%)	125 (25.61%)	Mar-09, Jun-07	488	B.1.p11, B.1	7	0.0264

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK61	41 (9.36%)	397 (90.64%)	0 (0%)	0 (0%)	Mar-08, May-27	438	B.3	18	0.0102
UK199	243 (56.25%)	37 (8.56%)	1 (0.23%)	151 (34.95%)	Feb-26, Jun-08	432	B.1.p73, B.1, B.1.5.5, B.1.5	6	0.0398
UK36	59 (14.18%)	2 (0.48%)	2 (0.48%)	353 (84.86%)	Mar-18, Jun-03	416	B.1	11	0.0169
UK2913	307 (74.15%)	17 (4.11%)	11 (2.66%)	79 (19.08%)	Mar-07, Jun-01	414	B.1.p11, B.1	13	0.016
UK167	241 (61.48%)	115 (29.34%)	17 (4.34%)	19 (4.85%)	Jan-27, Jun-07	392	B.1.66, B.1	7	0.0482

These data is represented in the figure one. Note that the number of sequences is likely to be due more to differing sampling efforts in different regions, rather than genuine differences in numbers of cases.

The raw data for this bar chart are in the table above.

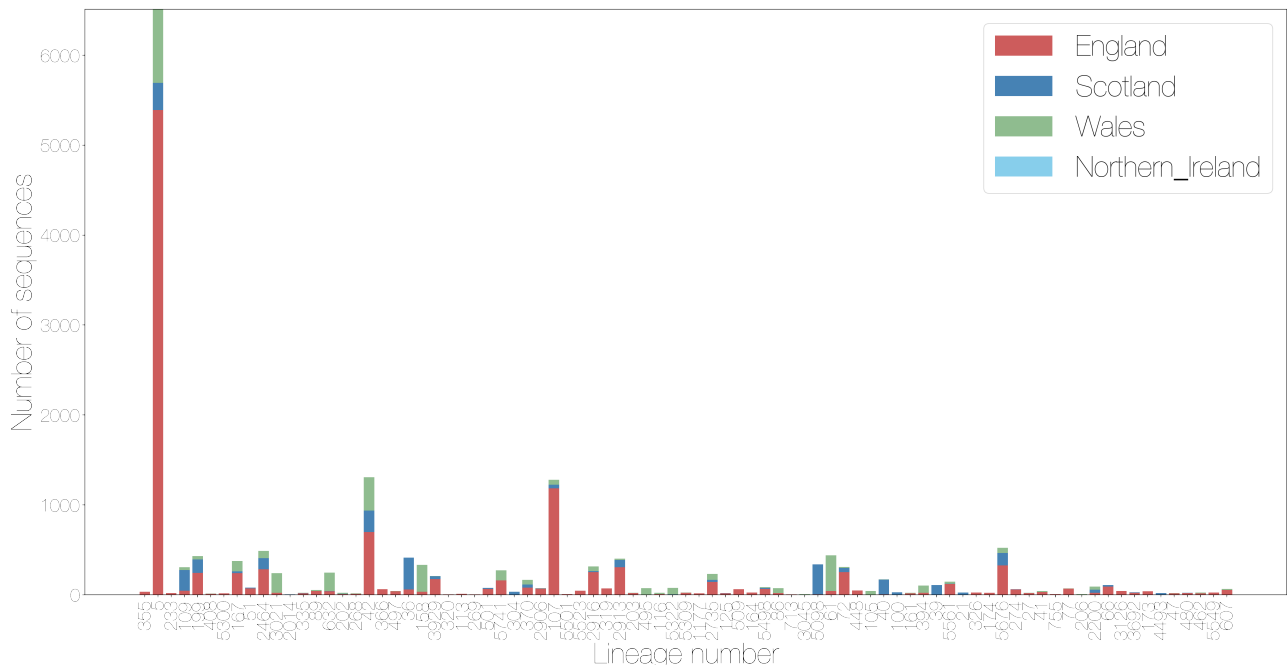


Figure 1: Number of sequences sampled in a lineage by country

Different sequencing centres have different delays in turn around from receipt of samples to submission of sequence data. This will affect all of the figures shown after this if lineages have geographical variation, as some regions have less up to date data.

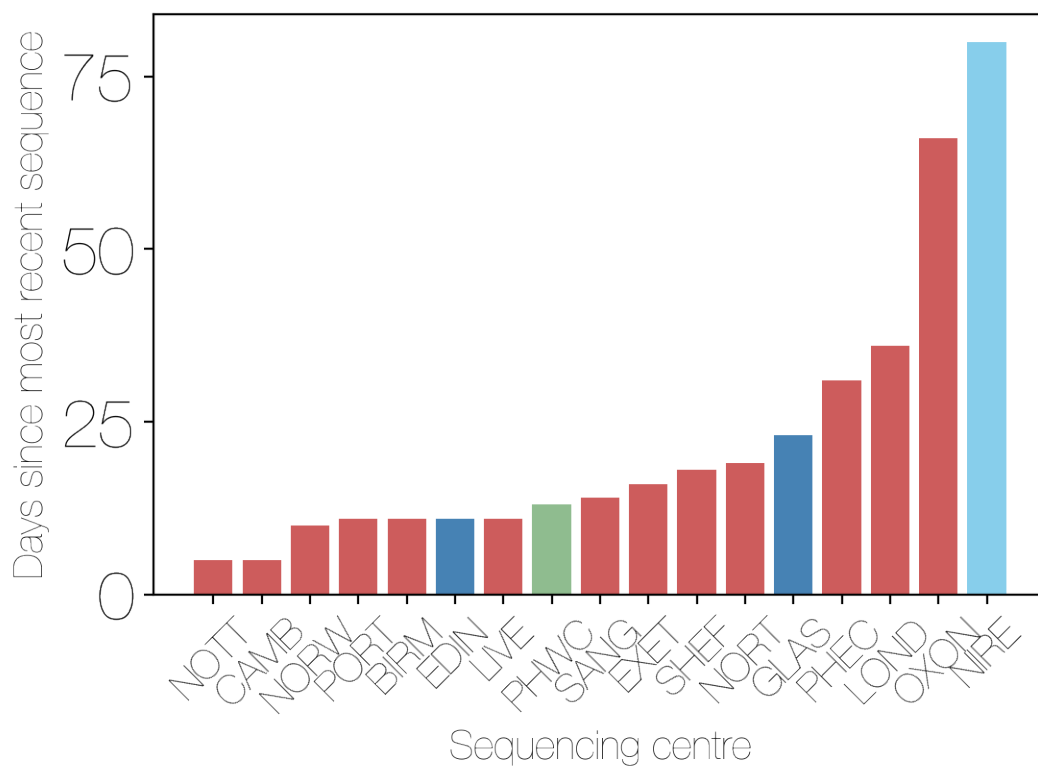


Figure 2: Lag since the most recent sequence from each sequencing centre to most current date

The relative growth and decline of the ten most sampled lineages in terms of number of counties they are present in is shown in figure three.

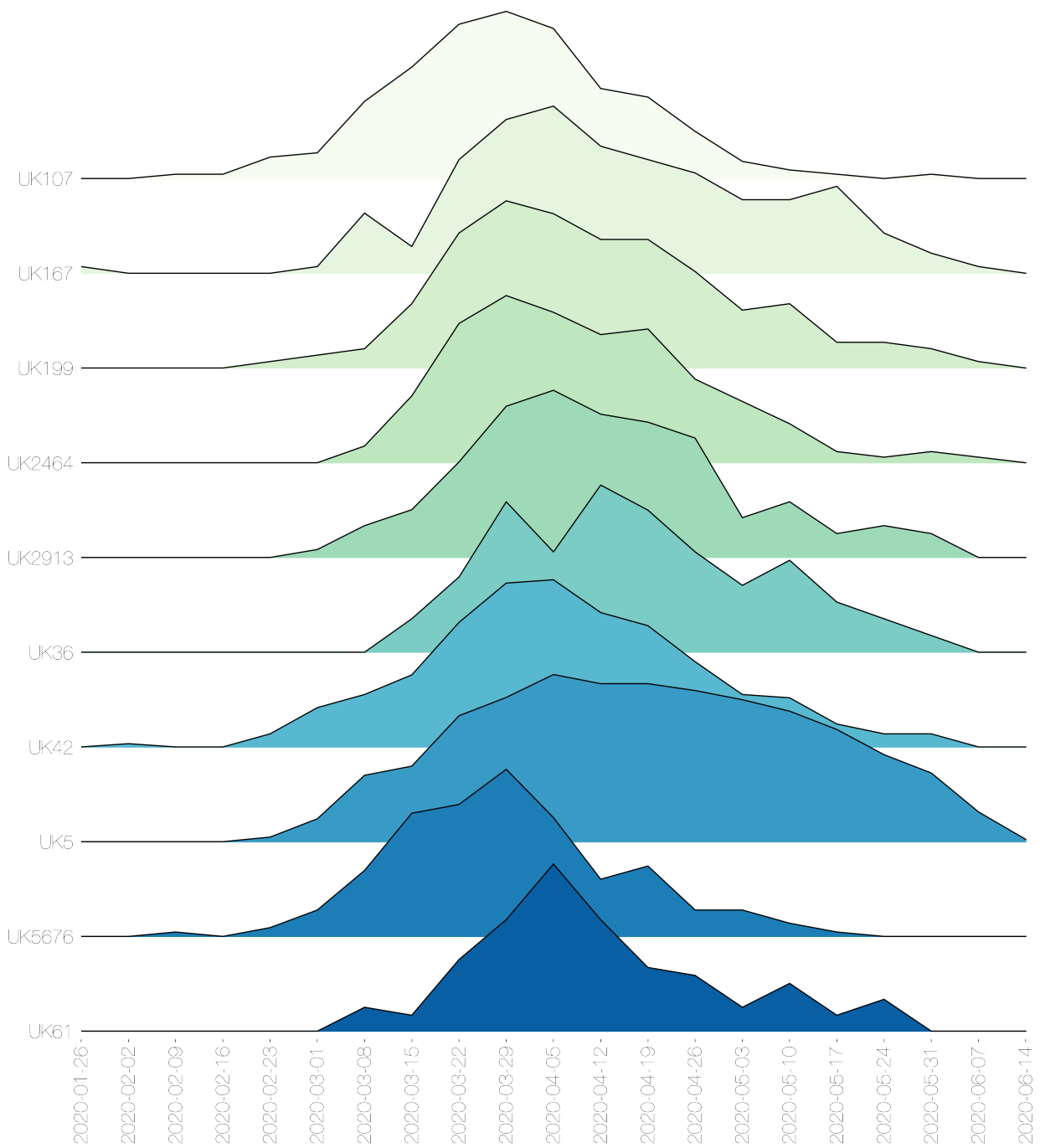


Figure 3: Lineages by number of adm2 regions present by epiweek

The growth and decline of diversity of lineages over time for each country is shown in the ridge plot in figure four. This is represented by the Shannon Diversity, calculated using the number of sequences from each country from each lineage.

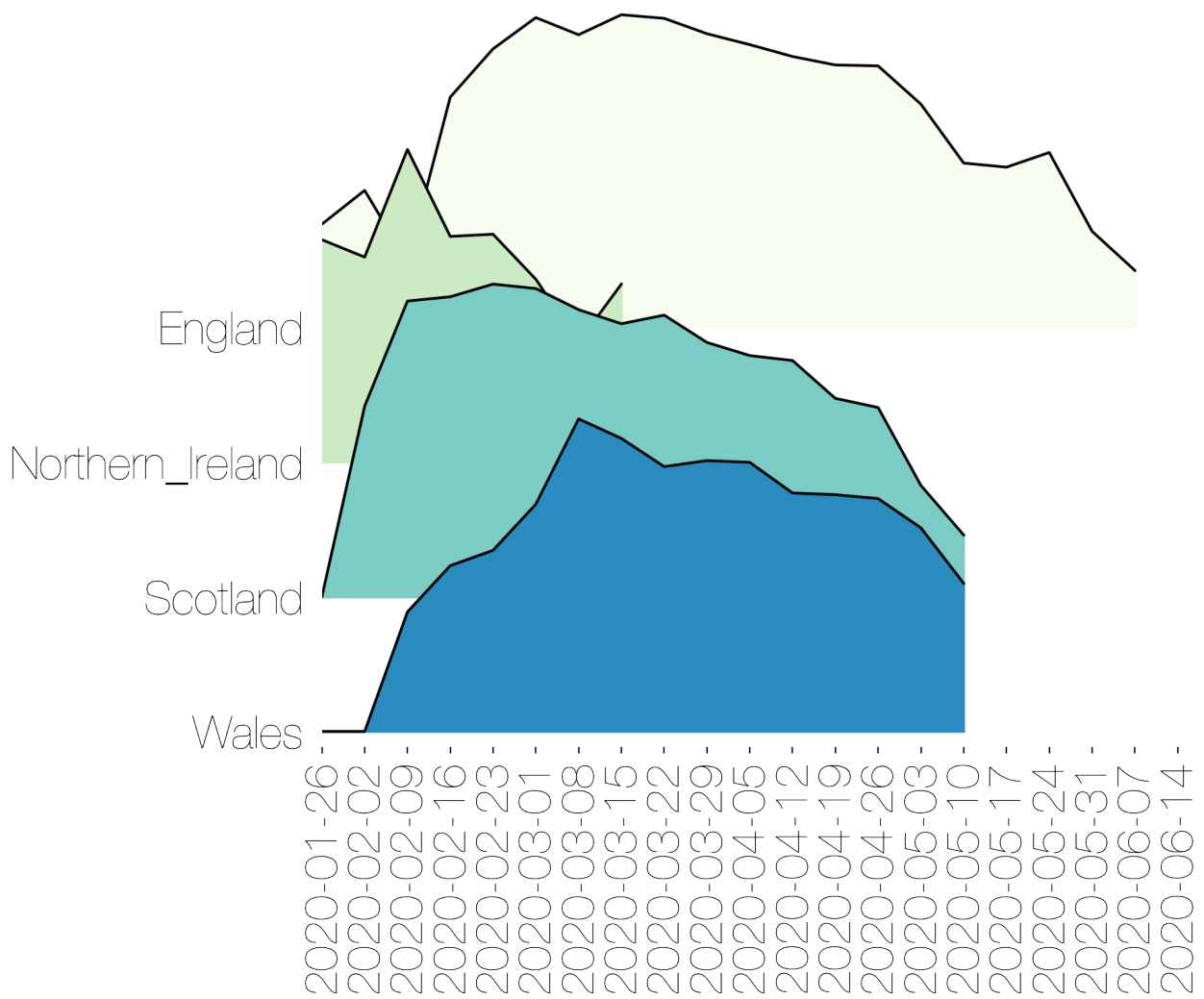


Figure 4: Shannon diversity of lineages in each adm1 region

These lineages are shown on the timeline. Each line represents the length of the cluster, from oldest to most recent sampling date. The dots are sized by the number of sequences taken on that date, and again are colour coded by country. The raw data has been written to a summary file.

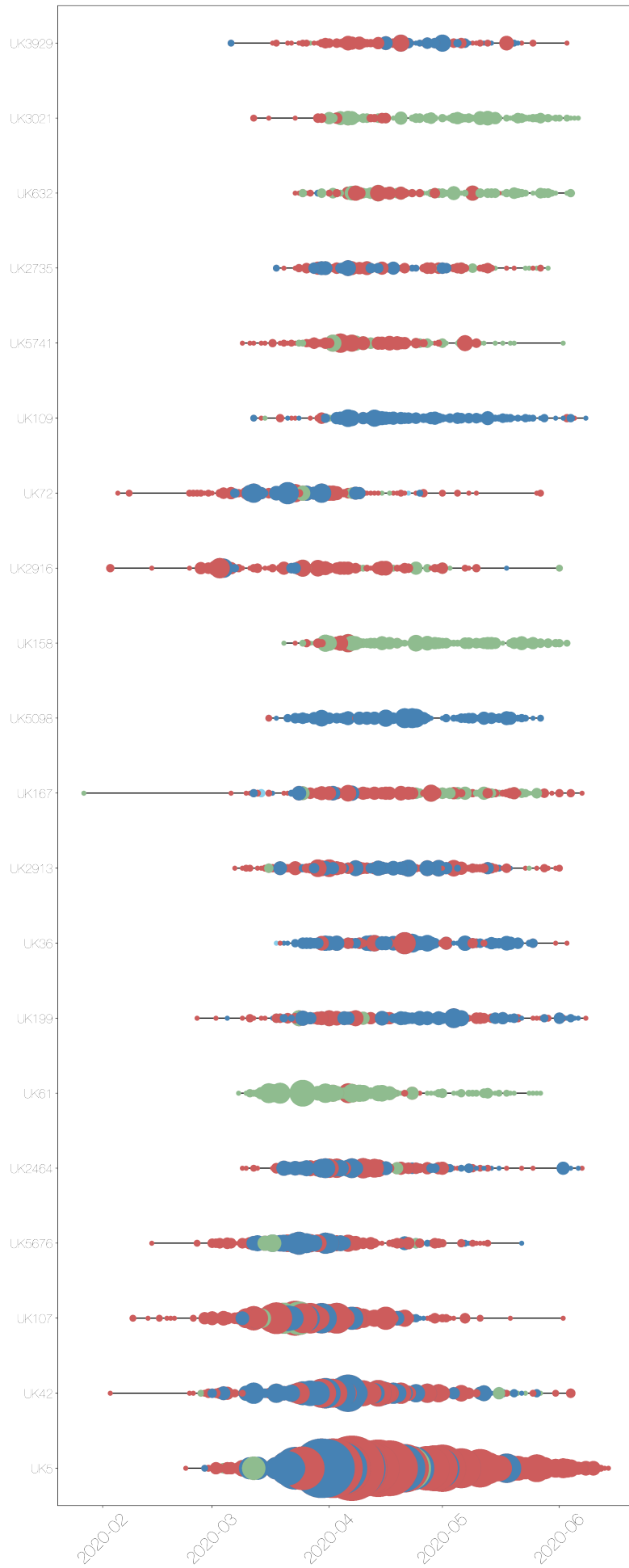


Figure 5: Timeline of lineages, sized by number of sequences from each country.

The date of first sequence in the cluster is shown in figure five for every cluster with date information.

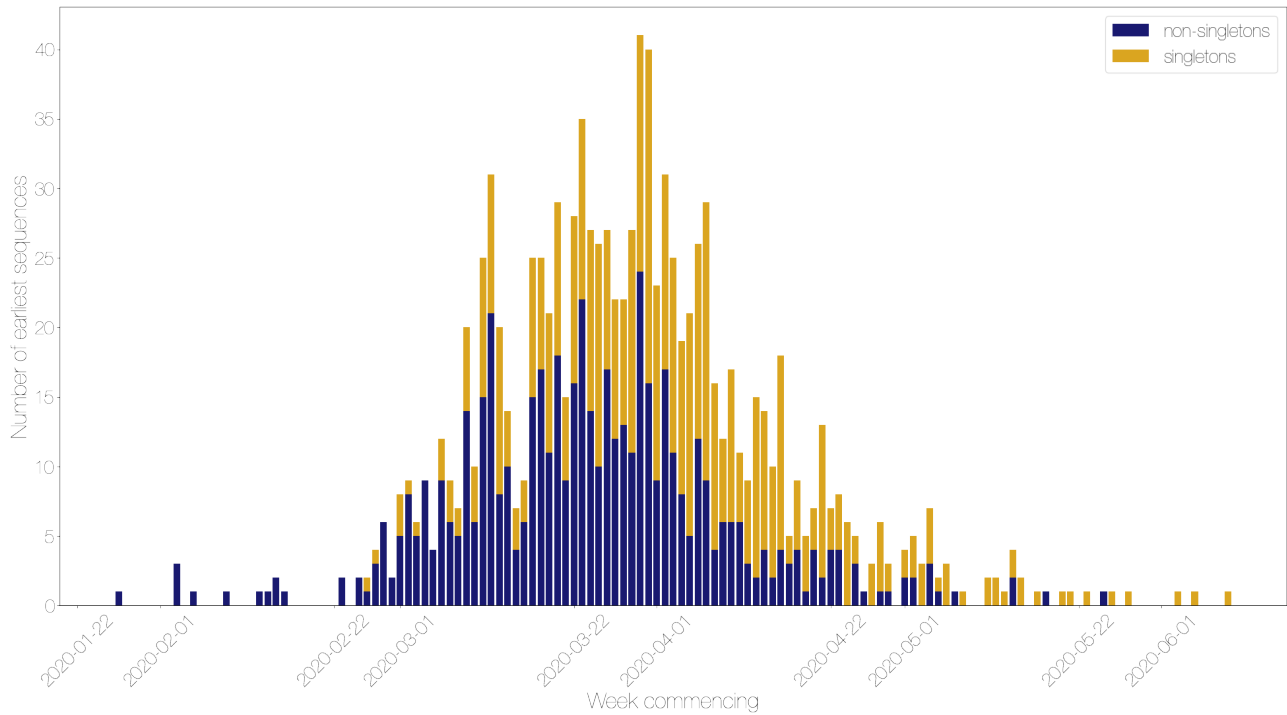


Figure 6: Lineage starts per week, split by singletons and non-singletons

For comparison, here is a plot of the day that every sequence was taken, coloured by country. Note that sequences without dates were not included.

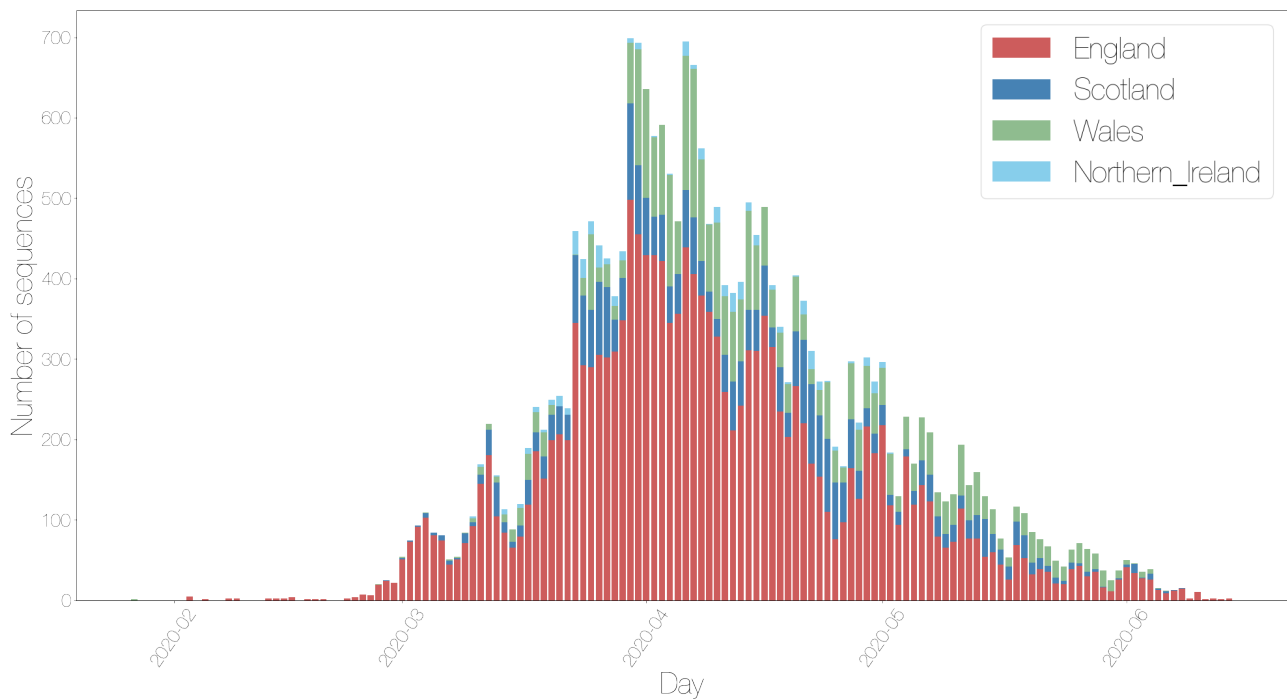


Figure 7: Sequences taken on each day by country

The map shows the number of sequences sampled in each admin2 region in the UK. The colour scale is the same for all four countries, but with different underlying base colours.

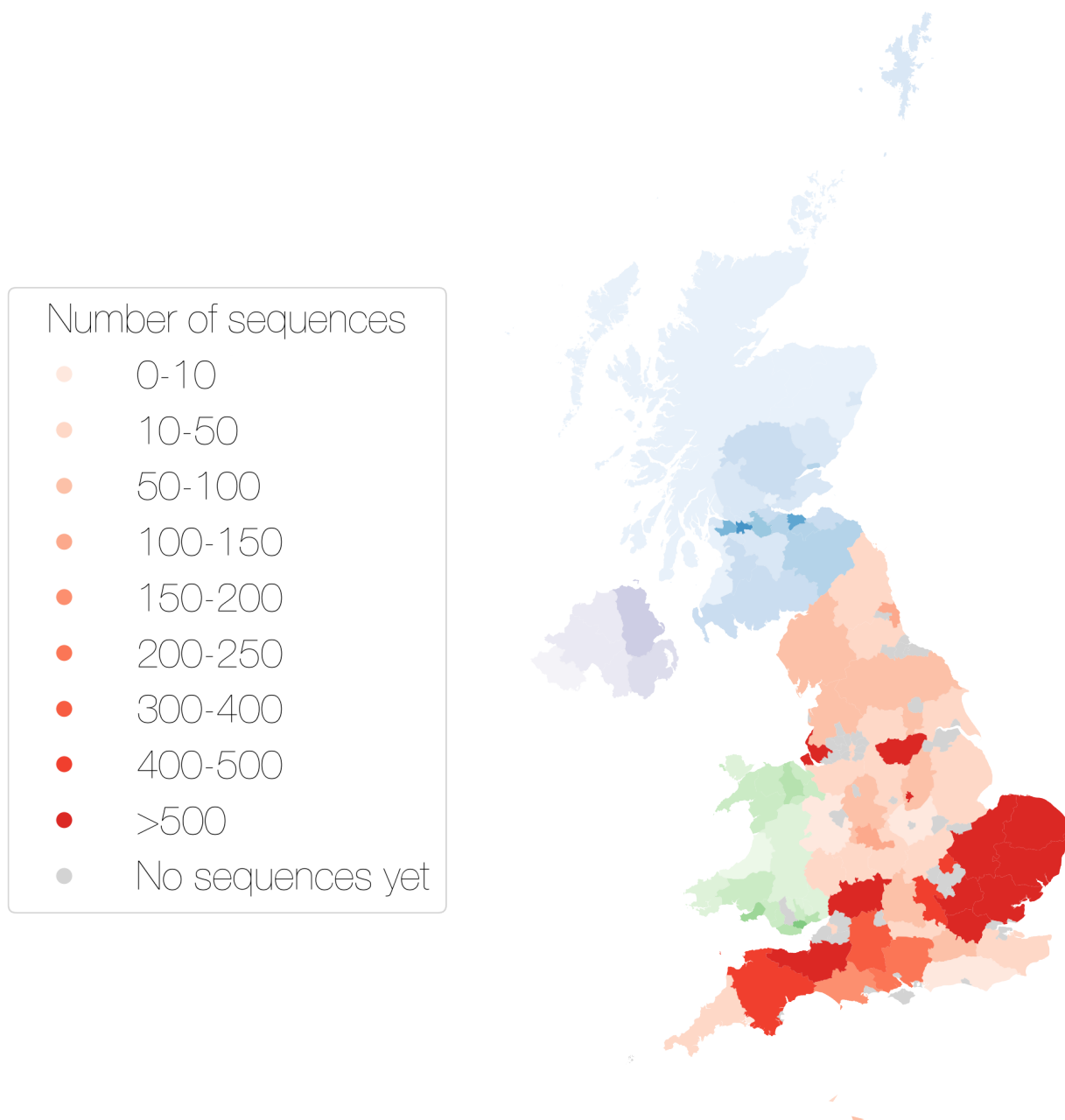


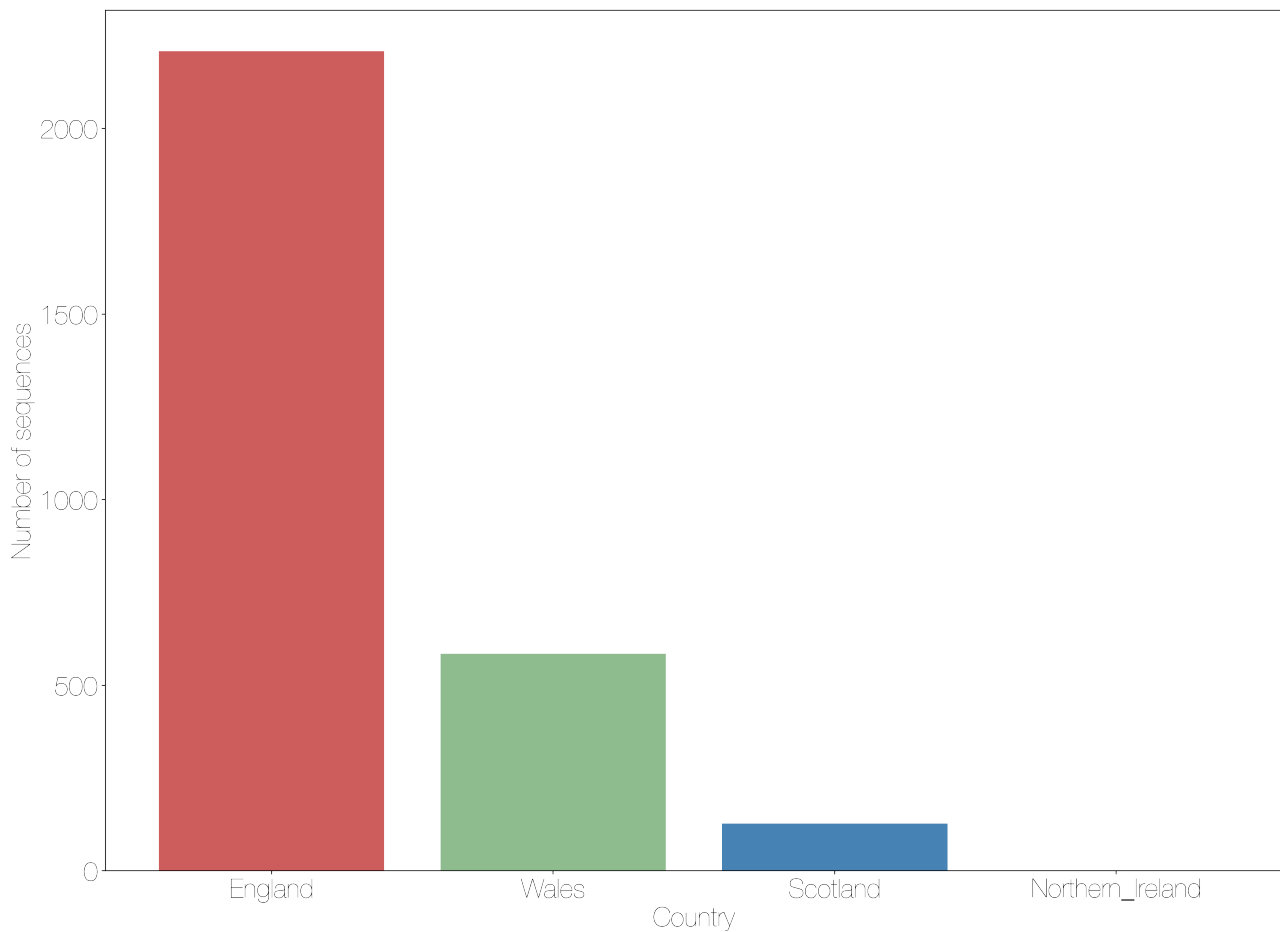
Figure 8: Map showing the number of sequences sampled by adm2 region

There are some sequences with locations that are not matched to real Admin2 regions, some manual curation required.

Other results modules for UK lineage analysis can be added in here if required.

Appendix

The plot below shows the number of sequences from each country that don't have specific enough location data to plot on the map.



Below are the raw data tables for each of the figures in the report.

Table S1 Description of all lineages that have been circulating in the last month, and have more than 5 sequences.

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK5	5390 (80.17%)	821 (12.21%)	210 (3.12%)	302 (4.49%)	Feb-23, Jun-14	6723	B.1.1.p16, B.1.1.13, B.1.1.16, B.1.1.1, B.1.1.p15, B.1.1.p11, B.1.1.p12, B.1.1.10, B.1.1, B.1.1.14	0	active today
UK42	699 (53.4%)	371 (28.34%)	2 (0.15%)	237 (18.11%)	Feb-03, Jun-04	1309	B.1.67, B.1.35, B.1.5, B.1.p73, B.1.p11, B.1, B.1.71, B.1.72	10	0.0093
UK107	1183 (91.78%)	55 (4.27%)	11 (0.85%)	40 (3.1%)	Feb-09, Jun-02	1289	B.2.5, B.2.1, B.2	12	0.0074
UK5676	328 (62.24%)	57 (10.82%)	5 (0.95%)	137 (26.0%)	Feb-14, May-22	527	B.3, B.2	23	0.0081

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK2464	283 (57.99%)	80 (16.39%)	0 (0%)	125 (25.61%)	Mar-09, Jun-07	488	B.1.p11, B.1	7	0.0264
UK61	41 (9.36%)	397 (90.64%)	0 (0%)	0 (0%)	Mar-08, May-27	438	B.3	18	0.0102
UK199	243 (56.25%)	37 (8.56%)	1 (0.23%)	151 (34.95%)	Feb-26, Jun-08	432	B.1.p73, B.1, B.1.5.5, B.1.5	6	0.0398
UK36	59 (14.18%)	2 (0.48%)	2 (0.48%)	353 (84.86%)	Mar-18, Jun-03	416	B.1	11	0.0169
UK2913	307 (74.15%)	17 (4.11%)	11 (2.66%)	79 (19.08%)	Mar-07, Jun-01	414	B.1.p11, B.1	13	0.016
UK167	241 (61.48%)	115 (29.34%)	17 (4.34%)	19 (4.85%)	Jan-27, Jun-07	392	B.1.66, B.1	7	0.0482
UK5098	6 (1.78%)	0 (0%)	0 (0%)	332 (98.22%)	Mar-16, May-27	338	B.1.p73, B.1.8, B.1	18	0.0119
UK158	33 (9.88%)	301 (90.12%)	0 (0%)	0 (0%)	Mar-20, Jun-03	334	B.1.1.2, B.1.1	11	0.0205
UK2916	252 (77.54%)	52 (16.0%)	9 (2.77%)	12 (3.69%)	Feb-03, Jun-01	325	B.1	13	0.0283
UK72	251 (77.71%)	14 (4.33%)	12 (3.72%)	46 (14.24%)	Feb-05, May-27	323	B, B.2.2, B.2	18	0.0193
UK109	46 (14.84%)	31 (10.0%)	4 (1.29%)	229 (73.87%)	Mar-12, Jun-08	310	B.1.5.5, B.1.5	6	0.0475
UK5741	161 (59.19%)	111 (40.81%)	0 (0%)	0 (0%)	Mar-09, Jun-02	272	B.1.44, B.1	12	0.0261
UK2735	142 (57.49%)	67 (27.13%)	15 (6.07%)	23 (9.31%)	Mar-18, May-29	247	B.1.1	16	0.0183
UK632	38 (15.45%)	205 (83.33%)	0 (0%)	3 (1.22%)	Mar-23, Jun-04	246	B.1.1	10	0.0298

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK3021	23 (9.58%)	217 (90.42%)	0 (0%)	0 (0%)	Mar-12, Jun-06	240	B.1	8	0.045
UK9	213 (99.53%)	1 (0.47%)	0 (0%)	0 (0%)	Mar-09, May-15	214	B.1.1.3	30	0.0105
UK3929	175 (82.94%)	3 (1.42%)	2 (0.95%)	31 (14.69%)	Mar-06, Jun-03	211	B.1.1.4, B.1.1.3, B.1.1	11	0.0385
UK370	81 (46.29%)	54 (30.86%)	8 (4.57%)	32 (18.29%)	Mar-06, Jun-02	175	B.1.1.10	12	0.0421
UK40	6 (3.49%)	2 (1.16%)	0 (0%)	164 (95.35%)	Mar-03, May-26	172	B, B.16	19	0.0228
UK15	128 (76.19%)	11 (6.55%)	1 (0.6%)	28 (16.67%)	Feb-27, May-06	168	B.1.1	39	0.0106
UK5561	119 (80.41%)	23 (15.54%)	1 (0.68%)	5 (3.38%)	Feb-25, May-24	148	B.2.2, B.2	21	0.0288
UK6	133 (96.38%)	0 (0%)	0 (0%)	5 (3.62%)	Mar-06, May-13	138	B.1	32	0.0155
UK4	124 (97.64%)	0 (0%)	1 (0.79%)	2 (1.57%)	Feb-28, Apr-29	127	B	46	0.0105
UK494	121 (97.58%)	1 (0.81%)	0 (0%)	2 (1.61%)	Mar-19, May-05	124	B.1.p11	40	0.0096
UK63	121 (99.18%)	1 (0.82%)	0 (0%)	0 (0%)	Mar-18, May-10	122	B.1.1	35	0.0125
UK565	102 (91.07%)	5 (4.46%)	1 (0.89%)	4 (3.57%)	Mar-11, May-14	112	B.1.1	31	0.0186
UK66	92 (83.64%)	0 (0%)	1 (0.91%)	17 (15.45%)	Mar-08, May-20	110	B.1.1.8	25	0.0231
UK39	2 (1.83%)	0 (0%)	0 (0%)	107 (98.17%)	Mar-02, May-24	109	A.2	21	0.0322

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK394	21 (20.39%)	79 (76.7%)	1 (0.97%)	2 (1.94%)	Mar-17, May-24	103	B.1.1.10, B.1.1	21	0.0317
UK2200	22 (23.16%)	33 (34.74%)	5 (5.26%)	35 (36.84%)	Feb-28, May-20	95	B.1.5.6, B.1.5	25	0.0349
UK601	21 (22.58%)	0 (0%)	64 (68.82%)	8 (8.6%)	Mar-11, May-04	93	B.10	41	0.0143
UK240	84 (91.3%)	2 (2.17%)	0 (0%)	6 (6.52%)	Feb-25, May-08	92	B, B.3, B.2, B.2.5, B.2.1	37	0.0217
UK28	89 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-13, May-08	89	B.1.1.10	37	0.0172
UK5180	81 (91.01%)	4 (4.49%)	4 (4.49%)	0 (0%)	Mar-07, May-09	89	B.1.1.7	36	0.0199
UK5498	66 (78.57%)	7 (8.33%)	0 (0%)	11 (13.1%)	Mar-06, May-28	84	B, B.2	17	0.0588
UK829	80 (98.77%)	0 (0%)	0 (0%)	1 (1.23%)	Mar-03, Apr-29	81	B.2.5	46	0.0155
UK51	72 (90.0%)	0 (0%)	1 (1.25%)	7 (8.75%)	Mar-21, Jun-07	80	B.1.36	7	0.141
UK339	61 (76.25%)	15 (18.75%)	1 (1.25%)	3 (3.75%)	Feb-23, Apr-16	80	B.3	59	0.0114
UK501	66 (84.62%)	1 (1.28%)	0 (0%)	11 (14.1%)	Mar-02, Jun-02	78	B.1	12	0.0996
UK5322	1 (1.28%)	73 (93.59%)	0 (0%)	4 (5.13%)	Mar-23, May-30	78	B.1.1	15	0.0589
UK2906	68 (91.89%)	2 (2.7%)	0 (0%)	4 (5.41%)	Mar-04, Jun-02	74	B.1	12	0.1027
UK86	18 (24.32%)	56 (75.68%)	0 (0%)	0 (0%)	Mar-05, May-28	74	B.1, B.1.5	17	0.0677

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK495	1 (1.35%)	73 (98.65%)	0 (0%)	0 (0%)	Apr-01, May-30	74	B.1.p11	15	0.0539
UK77	67 (93.06%)	5 (6.94%)	0 (0%)	0 (0%)	Mar-11, May-20	72	B.2	25	0.0394
UK319	71 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-28, Jun-01	71	B.1	13	0.0714
UK85	63 (90.0%)	5 (7.14%)	1 (1.43%)	1 (1.43%)	Mar-09, Apr-27	70	B, B.3	48	0.0148
UK120	52 (78.79%)	0 (0%)	0 (0%)	14 (21.21%)	Feb-03, May-05	66	B, B.14	40	0.0354
UK37	63 (96.92%)	1 (1.54%)	0 (0%)	1 (1.54%)	Mar-17, May-04	65	B.1.30, B.1	41	0.0183
UK607	53 (81.54%)	12 (18.46%)	0 (0%)	0 (0%)	Mar-02, May-18	65	B	27	0.0446
UK31	60 (93.75%)	0 (0%)	0 (0%)	4 (6.25%)	Mar-11, Apr-23	64	B.3	52	0.0131
UK274	60 (95.24%)	2 (3.17%)	0 (0%)	1 (1.59%)	Mar-06, May-21	63	B, B.3	24	0.0511
UK384	60 (95.24%)	1 (1.59%)	0 (0%)	2 (3.17%)	Feb-28, Apr-23	63	B.2.1, B.2	52	0.0171
UK366	63 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-04, Jun-03	63	B.1.1	11	0.088
UK509	62 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-07, May-29	62	B.1.1	16	0.0533
UK198	5 (8.33%)	15 (25.0%)	3 (5.0%)	37 (61.67%)	Mar-07, May-07	60	B.1, B.1.5	38	0.0227
UK13	55 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-13, May-13	55	B.1.1	32	0.0353

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK476	55 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-30, May-06	55	B.1.1	39	0.0176
UK89	42 (77.78%)	12 (22.22%)	0 (0%)	0 (0%)	Mar-21, Jun-05	54	B.1.1.9, B.1.1	9	0.1593
UK371	50 (98.04%)	1 (1.96%)	0 (0%)	0 (0%)	Mar-12, May-09	51	B.1.1	36	0.0322
UK513	50 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-12, Apr-29	50	B.1.p11	46	0.0213
UK448	47 (97.92%)	1 (2.08%)	0 (0%)	0 (0%)	Apr-04, May-26	48	B.1.1	19	0.0582
UK187	4 (8.51%)	29 (61.7%)	7 (14.89%)	7 (14.89%)	Mar-23, Apr-30	47	B.1	45	0.0184
UK275	38 (80.85%)	8 (17.02%)	0 (0%)	1 (2.13%)	Mar-09, Apr-27	47	B.1.13	48	0.0222
UK5523	46 (100.0%)	0 (0%)	0 (0%)	0 (0%)	May-01, Jun-01	46	B.1	13	0.053
UK517	43 (93.48%)	1 (2.17%)	0 (0%)	2 (4.35%)	Mar-02, Apr-30	46	B.1.1	45	0.0291
UK41	30 (69.77%)	13 (30.23%)	0 (0%)	0 (0%)	Feb-29, May-21	43	B.1	24	0.0813
UK105	1 (2.33%)	42 (97.67%)	0 (0%)	0 (0%)	Mar-27, May-26	43	B.1.p11	19	0.0752
UK497	38 (90.48%)	4 (9.52%)	0 (0%)	0 (0%)	Mar-13, Jun-03	42	A.2	11	0.1818
UK3126	41 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-06, May-19	41	B.1.1	26	0.0413
UK64	26 (65.0%)	12 (30.0%)	0 (0%)	2 (5.0%)	Mar-12, May-05	40	B.1.p73, B.1	40	0.0346

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK276	37 (94.87%)	0 (0%)	1 (2.56%)	1 (2.56%)	Mar-10, May-13	39	B.1.1	32	0.0526
UK179	16 (41.03%)	23 (58.97%)	0 (0%)	0 (0%)	Mar-17, May-07	39	B.1.1, B.1.1.p11	38	0.0353
UK131	34 (89.47%)	4 (10.53%)	0 (0%)	0 (0%)	Mar-11, Apr-14	38	B.15	61	0.0151
UK173	38 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-14, May-19	38	B	26	0.0686
UK376	38 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-11, Apr-30	38	B.1.1.9	45	0.03
UK404	37 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-01, Apr-19	37	B.1	56	0.0243
UK12	36 (97.3%)	0 (0%)	1 (2.7%)	0 (0%)	Mar-12, May-07	37	B.1.p11	38	0.0409
UK355	35 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-22, Jun-14	35	B.1.1	0	active today
UK119	27 (77.14%)	7 (20.0%)	0 (0%)	1 (2.86%)	Mar-11, Apr-24	35	B.2.5	51	0.0254
UK79	35 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-24, May-05	35	B.1	40	0.0309
UK304	0 (0%)	0 (0%)	0 (0%)	34 (100.0%)	Apr-06, Jun-02	34	B.1.1.14	12	0.1187
UK18	31 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-11, Apr-14	31	B.1.1.7	61	0.0186
UK1207	30 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-23, May-12	30	B.1.1	33	0.0522
UK14	2 (6.67%)	0 (0%)	0 (0%)	28 (93.33%)	Mar-02, Apr-27	30	B	48	0.033

Lineage name	England & Wales		Northern Ireland		Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK241	30 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-22, Apr-16	30	B.1.5.3	59	0.0146
UK43	1 (3.45%)	0 (0%)	0 (0%)	28 (96.55%)	Mar-12, Apr-26	29	A.5	49	0.0328
UK100	0 (0%)	0 (0%)	0 (0%)	29 (100.0%)	Mar-30, May-25	29	B.1, B.1.5	20	0.1
UK3692	22 (75.86%)	1 (3.45%)	0 (0%)	6 (20.69%)	Mar-09, May-19	29	B.1.1	26	0.0975
UK44	0 (0%)	0 (0%)	1 (3.45%)	28 (96.55%)	Mar-07, Apr-19	29	B	56	0.021
UK5549	24 (88.89%)	0 (0%)	2 (7.41%)	1 (3.7%)	Mar-04, May-18	27	B.2.2	27	0.1068
UK5649	24 (88.89%)	2 (7.41%)	0 (0%)	1 (3.7%)	Mar-15, May-04	27	B.2.6	41	0.0469
UK567	4 (14.81%)	18 (66.67%)	1 (3.7%)	4 (14.81%)	Mar-20, May-15	27	B.2.2	30	0.0718
UK1721	26 (96.3%)	1 (3.7%)	0 (0%)	0 (0%)	Mar-19, May-08	27	B.1	37	0.052
UK101	26 (96.3%)	0 (0%)	0 (0%)	1 (3.7%)	Mar-21, Apr-25	27	B.1.5	50	0.0269
UK5309	23 (88.46%)	3 (11.54%)	0 (0%)	0 (0%)	Mar-20, May-30	26	B.1.1.10, B.1.1	15	0.1893
UK94	26 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-12, Apr-19	26	B.2.1, B.2	56	0.0271
UK326	24 (96.0%)	0 (0%)	0 (0%)	1 (4.0%)	Mar-22, May-22	25	B.1.1.10	23	0.1105
UK23	25 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-21, May-09	25	B.9	36	0.0567

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK317	11 (44.0%)	12 (48.0%)	0 (0%)	2 (8.0%)	Mar-13, Apr-20	25	B.3	55	0.0288
UK164	24 (96.0%)	1 (4.0%)	0 (0%)	0 (0%)	Apr-08, May-28	25	B.1	17	0.1225
UK462	17 (70.83%)	7 (29.17%)	0 (0%)	0 (0%)	Apr-01, May-18	24	B.1	27	0.0757
UK1667	4 (16.67%)	0 (0%)	0 (0%)	20 (83.33%)	Mar-30, May-14	24	B.1.9, B.1.p9	31	0.0631
UK46	23 (95.83%)	1 (4.17%)	0 (0%)	0 (0%)	Mar-02, May-08	24	B.2.1	37	0.0787
UK491	16 (66.67%)	8 (33.33%)	0 (0%)	0 (0%)	Mar-03, Apr-14	24	B, B.2.1, B.2	61	0.0299
UK21	0 (0%)	0 (0%)	0 (0%)	24 (100.0%)	Mar-08, May-23	24	B.1.40	22	0.1304
UK202	9 (39.13%)	13 (56.52%)	0 (0%)	1 (4.35%)	Mar-10, Jun-04	23	B.1.1	10	0.3909
UK87	0 (0%)	0 (0%)	0 (0%)	23 (100.0%)	Mar-03, Apr-24	23	B.1.70	51	0.0374
UK203	19 (86.36%)	2 (9.09%)	0 (0%)	1 (4.55%)	Mar-22, May-30	22	B.1.1	15	0.219
UK116	8 (38.1%)	13 (61.9%)	0 (0%)	0 (0%)	Mar-24, May-30	21	B.1	15	0.2233
UK2045	21 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-17, May-09	21	B.1	36	0.0736
UK335	16 (76.19%)	1 (4.76%)	0 (0%)	4 (19.05%)	Mar-07, Jun-05	21	B.1.1	9	0.5
UK161	16 (76.19%)	5 (23.81%)	0 (0%)	0 (0%)	Mar-10, May-25	21	B.1.1	20	0.19

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK27	18 (85.71%)	2 (9.52%)	0 (0%)	1 (4.76%)	Mar-05, May-21	21	B.1.1	24	0.1604
UK480	19 (90.48%)	0 (0%)	0 (0%)	2 (9.52%)	Mar-20, May-18	21	B.1.1	27	0.1093
UK174	21 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-19, May-22	21	B.1.5	23	0.1391
UK24	21 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-14, Apr-10	21	B.2.1	65	0.0208
UK75	20 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-17, Apr-26	20	B.1.34, B.1	49	0.043
UK5503	20 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-20, May-13	20	B.1	32	0.0888
UK233	20 (100.0%)	0 (0%)	0 (0%)	0 (0%)	May-25, Jun-08	20	B.1	6	0.1228
UK47	15 (75.0%)	5 (25.0%)	0 (0%)	0 (0%)	Mar-17, May-18	20	B.1.1	27	0.1209
UK134	15 (78.95%)	0 (0%)	0 (0%)	4 (21.05%)	Mar-04, Apr-07	19	B.1	68	0.0278
UK1703	19 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-02, May-01	19	B.1	44	0.0366
UK146	18 (94.74%)	0 (0%)	0 (0%)	1 (5.26%)	Mar-24, May-07	19	B.1.1	38	0.0643
UK502	0 (0%)	0 (0%)	0 (0%)	18 (100.0%)	Mar-06, Mar-30	18	B.1.69	76	0.0186
UK4493	0 (0%)	0 (0%)	0 (0%)	18 (100.0%)	Apr-23, May-19	18	B.1	26	0.0588
UK425	4 (22.22%)	14 (77.78%)	0 (0%)	0 (0%)	Mar-28, May-15	18	B.1.1	30	0.0941

Lineage name	England		Wales		Northern Ireland		Scotland		Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK4237	18	0	0	0 (0%)	0	0	0	0	Apr-02, Apr-20	18	B.1.1	55	0.0193
	(100.0%)	(0%)			(0%)								
UK125	17	0	0	0 (0%)	1	1	1	1	Mar-30, May-29	18	B.1.1	16	0.2206
	(94.4%)	(0%)			(5.56%)								
UK2539	18	0	0	0 (0%)	0	0	0	0	Mar-24, May-14	18	B.1.1.5	31	0.0968
	(100.0%)	(0%)			(0%)								
UK5300	16	0	0	0 (0%)	1	1	1	1	Apr-17, Jun-07	17	B.1.1	7	0.4554
	(94.12%)	(0%)			(5.88%)								
UK71	16	1	0	0 (0%)	0	0	0	0	Mar-08, May-06	17	B	39	0.0946
	(94.12%)	(5.88%)			(0%)								
UK604	12	2	0	0 (0%)	3	3	3	3	Mar-06, Mar-17	17	B.1.1	89	0.0077
	(70.59%)	(11.76%)			(17.65%)								
UK706	3	0	13	0 (0%)	0	0	0	0	Mar-26, Apr-29	16	B.1.1	46	0.0493
	(18.75%)	(0%)	(81.25%)		(0%)								
UK268	12	4	0	0 (0%)	0	0	0	0	Mar-23, Jun-04	16	B.1.1	10	0.4867
	(75.0%)	(25.0%)			(0%)								
UK5660	16	0	0	0 (0%)	0	0	0	0	Apr-25, May-08	16	B.1.1	37	0.0234
	(100.0%)	(0%)			(0%)								
UK3781	16	0	0	0 (0%)	0	0	0	0	Mar-09, May-08	16	B.1.1	37	0.1081
	(100.0%)	(0%)			(0%)								
UK527	10	5	0	0 (0%)	1	1	1	1	Mar-19, Apr-18	16	B.1	57	0.0351
	(62.5%)	(31.25%)			(6.25%)								
UK553	11	5	0	0 (0%)	0	0	0	0	Feb-28, Apr-29	16	B.1	46	0.0884
	(68.75%)	(31.25%)			(0%)								
UK5715	14	0	0	0 (0%)	1	1	1	1	Feb-13, Apr-22	15	B.2	53	0.093
	(93.33%)	(0%)			(6.67%)								
UK569	15	0	0	0 (0%)	0	0	0	0	Mar-23, May-12	15	B.1.1	33	0.1082
	(100.0%)	(0%)			(0%)								

Lineage name	England		Wales		Northern Ireland		Scotland		Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK1177	15	0	0	0 (0%)	0	0 (0%)	0	0 (0%)	Apr-22, May-29	15	B.1.1	16	0.1652
UK1006	15	0	0	0 (0%)	0	0 (0%)	0	0 (0%)	Apr-02, May-03	15	B.1.1	42	0.0527
UK70	12	1	2	(80.0%)(6.67%)(13.33%)	0	0 (0%)	0	0 (0%)	Mar-06, Apr-18	15	B.2	57	0.0539
UK34	15	0	0	0 (0%)	0	0 (0%)	0	0 (0%)	Feb-15, Apr-02	15	B.4	73	0.046
UK38	14	0	0	0 (0%)	1	(6.67%)(0%)	0	0 (0%)	Mar-04, Apr-20	15	B.2.1	55	0.061
UK186	13	1	0	(92.86%)(7.14%)	0	0 (0%)	0	0 (0%)	Mar-27, May-15	14	B	30	0.1256
UK49	12	0	1	(85.71%)(0%)(7.14%)	1	(7.14%)(0%)	1	(7.14%)(0%)	Mar-12, May-01	14	B.9	44	0.0874
UK153	14	0	0	0 (0%)	0	0 (0%)	0	0 (0%)	Mar-13, Apr-14	14	B.2	61	0.0404
UK408	12	1	0	(92.31%)(7.69%)	0	0 (0%)	0	0 (0%)	Apr-13, Jun-08	13	B.1.1	6	0.7778
UK58	6	0	0	(46.15%)(0%)(0%)	0	0 (0%)	7	(53.85%)(0%)	Mar-02, Apr-09	13	B.1	66	0.0354
UK137	1	0	1	(7.69%)(0%)(7.69%)	1	(7.69%)(0%)	11	(84.62%)(0%)	Mar-09, Mar-31	13	B.1.1	75	0.0244
UK832	12	0	0	(92.31%)(0%)(0%)	0	0 (0%)	1	(7.69%)(0%)	Mar-09, Apr-26	13	A.5	49	0.0816
UK378	13	0	0	(100.0%)(0%)(0%)	0	0 (0%)	0	0 (0%)	Feb-15, Mar-05	13	B.1.1	101	0.0157
UK436	0	1	0	(0%)(8.33%)(0%)	0	0 (0%)	11	(91.67%)(0%)	Mar-30, May-14	12	B.1.5	31	0.132

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK141	12 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-22, Apr-24	12	B.1.1	51	0.0588
UK261	0 (0%)	0 (0%)	0 (0%)	12 (100.0%)	Mar-05, Apr-08	12	A.3	67	0.0326
UK178	11 (91.67%)	0 (0%)	1 (8.33%)	0 (0%)	Mar-14, Apr-29	12	B.1.1	46	0.0909
UK5663	12 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-11, May-02	12	B.2	43	0.0444
UK193	11 (91.67%)	1 (8.33%)	0 (0%)	0 (0%)	Mar-30, May-01	12	B.1.1	44	0.0661
UK759	11 (91.67%)	1 (8.33%)	0 (0%)	0 (0%)	Mar-28, Apr-27	12	B.1.1	48	0.0568
UK132	11 (91.67%)	0 (0%)	0 (0%)	1 (8.33%)	Mar-27, Apr-30	12	B.1	45	0.0687
UK83	9 (75.0%)	1 (8.33%)	0 (0%)	2 (16.67%)	Feb-29, Apr-08	12	B.1.1	67	0.0529
UK507	12 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-18, Apr-30	12	B.1.1.10	45	0.0869
UK287	11 (91.67%)	1 (8.33%)	0 (0%)	0 (0%)	Mar-28, Apr-24	12	B.1	51	0.0481
UK5446	12 (100.0%)	0 (0%)	0 (0%)	0 (0%)	May-05, May-16	12	B.1.1	29	0.0345
UK445	11 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-14, Apr-27	11	B.1.1	48	0.0917
UK5084	9 (81.82%)	2 (18.18%)	0 (0%)	0 (0%)	Mar-29, Apr-16	11	B.1	59	0.0305
UK415	11 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-19, May-06	11	B.1	39	0.0436

Lineage name	England		Wales		Northern Ireland		Scotland		Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK566	11	0	0	0 (0%)	0	0	0	0	Apr-02, Apr-21	11	B.1.1.10, B.1.1	54	0.0352
UK53079	9	2	0	0 (0%)	0	0	0	0	Mar-08, May-12	11	B.1.1	33	0.197
UK572	11	0	0	0 (0%)	0	0	0	0	Mar-16, Apr-11	11	B.2	64	0.0406
UK523	11	0	0	0 (0%)	0	0	0	0	Apr-14, May-14	11	B.1.1	31	0.0968
UK266	11	0	0	0 (0%)	0	0	0	0	Apr-06, Apr-30	11	B.1	45	0.0533
UK801	0	10	0	0 (0%)	0	0	0	0	Apr-05, May-05	10	B.1	40	0.0833
UK291	10	0	0	0 (0%)	0	0	0	0	Mar-29, May-14	10	B.1.5	31	0.1649
UK22	10	0	0	0 (0%)	0	0	0	0	Mar-02, Apr-21	10	B	54	0.1029
UK788	10	0	0	0 (0%)	0	0	0	0	Feb-28, Mar-05	10	B.4	101	0.0066
UK320	6	0	4	0 (0%)	0	0	0	0	Mar-22, Jun-02	10	B.1	12	0.6667
UK56539	9	0	0	0 (0%)	1	0	0	0	Mar-10, Apr-01	10	B.2.6	74	0.033
UK242	10	0	0	0 (0%)	0	0	0	0	Mar-26, Apr-20	10	B.1.5	55	0.0505
UK113	10	0	0	0 (0%)	0	0	0	0	Mar-22, Jun-02	10	B.1.1	12	0.6667
UK206	0	9	0	0 (0%)	0	0	0	0	Apr-02, May-20	9	B.1	25	0.24

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK3509	4 (44.44%)	3 (33.33%)	0 (0%)	2 (22.22%)	Mar-12, Apr-24	9	B.1.1.10	51	0.1054
UK506	2 (22.22%)	7 (77.78%)	0 (0%)	0 (0%)	Apr-02, Apr-20	9	B.1.1	55	0.0409
UK696	0 (0%)	9 (100.0%)	0 (0%)	0 (0%)	Apr-10, May-01	9	B.1, B.1.5	44	0.0597
UK340	9 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-23, May-17	9	B.1.1	28	0.2455
UK454	9 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-22, Apr-29	9	B.1.1	46	0.1033
UK133	2 (22.22%)	0 (0%)	0 (0%)	7 (77.78%)	Mar-22, Apr-25	9	B.1	50	0.085
UK59	9 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-24, Apr-21	9	B.1	54	0.0648
UK5348	8 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-14, Apr-24	8	B.1.1	51	0.1148
UK570	8 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-24, Apr-29	8	B.1.1	46	0.1118
UK244	7 (87.5%)	1 (12.5%)	0 (0%)	0 (0%)	Mar-12, Apr-06	8	B.1.1	69	0.0518
UK739	8 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-01, Mar-08	8	B.4	98	0.0102
UK594	0 (0%)	0 (0%)	0 (0%)	8 (100.0%)	Apr-20, May-01	8	B	44	0.0357
UK55	4 (50.0%)	0 (0%)	0 (0%)	4 (50.0%)	Mar-23, May-06	8	B.1.1	39	0.1612
UK756	8 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Feb-27, Mar-05	8	B.1.1	101	0.0099

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK271	1 (12.5%)	0 (0%)	0 (0%)	7 (87.5%)	Apr-02, Apr-26	8	B.1	49	0.07
UK548	0 (0%)	0 (0%)	0 (0%)	8 (100.0%)	Mar-04, Mar-30	8	B.2.1	76	0.0301
UK342	8 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-02, Apr-23	8	B.1.1	52	0.0577
UK5308	8 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-29, May-01	8	B.1.1	44	0.0065
UK584	7 (87.5%)	0 (0%)	0 (0%)	1 (12.5%)	Mar-17, May-08	8	B.2.1, B.2	37	0.2008
UK479	8 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-01, Apr-27	8	B.1.1	48	0.0774
UK284	8 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-02, Apr-25	8	B.1.1	50	0.0657
UK243	5 (62.5%)	0 (0%)	0 (0%)	3 (37.5%)	Mar-18, Apr-15	8	B.1.p11, B.1, B.1.5	60	0.0667
UK633	0 (0%)	8 (100.0%)	0 (0%)	0 (0%)	Apr-03, Apr-28	8	B.1.1.p16, B.1.1.16	47	0.076
UK65	7 (87.5%)	0 (0%)	0 (0%)	1 (12.5%)	Mar-07, Apr-21	8	B.1.1	54	0.119
UK2888	8 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-09, May-14	8	B.1.1	31	0.1613
UK755	7 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-06, May-21	7	B.1.1	24	0.5278
UK490	7 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-03, May-02	7	B.1.1	43	0.1124
UK122	7 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-23, May-07	7	B.1	38	0.1974

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK232	7 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-04, Mar-30	7	B.1.1	76	0.057
UK151	0 (0%)	0 (0%)	0 (0%)	7 (100.0%)	Mar-23, Apr-24	7	B.1	51	0.1046
UK171	2 (28.57%)	0 (0%)	0 (0%)	5 (71.43%)	Mar-31, Apr-21	7	B.1	54	0.0648
UK3045	1 (14.29%)	6 (85.71%)	0 (0%)	0 (0%)	Apr-15, May-27	7	B.1.1, B.1.1.p11	18	0.3889
UK581	1 (14.29%)	0 (0%)	6 (85.71%)	0 (0%)	Apr-06, May-01	7	B.1.1	44	0.0947
UK32	7 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-10, May-01	7	B.1.1	44	0.0795
UK5501	7 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Apr-16, Jun-01	7	B.1.12	13	0.5897
UK323	2 (28.57%)	1 (14.29%)	0 (0%)	4 (57.14%)	Mar-23, May-06	7	B.1.35, B.1, B.1.5	39	0.188
UK520	7 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-14, Apr-08	7	B.2.1, B.2	67	0.0622
UK390	7 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-27, May-01	7	B.1.5	44	0.1326
UK451	0 (0%)	6 (85.71%)	0 (0%)	1 (14.29%)	Mar-20, Apr-05	7	B.2.1	70	0.0381
UK80	4 (57.14%)	3 (42.86%)	0 (0%)	0 (0%)	Mar-31, Apr-20	7	B.1.1.p15	55	0.0606
UK5640	2 (28.57%)	0 (0%)	1 (14.29%)	4 (57.14%)	Mar-20, Apr-27	7	B.1.1	48	0.1319
UK433	4 (57.14%)	0 (0%)	0 (0%)	3 (42.86%)	Mar-22, May-03	7	B	42	0.1667

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK263	6 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-20, Apr-13	6	B.1.p11	62	0.0774
UK364	1 (16.67%)	4 (66.67%)	1 (16.67%)	0 (0%)	Mar-19, May-14	6	B.1	31	0.3613
UK485	5 (83.33%)	0 (0%)	1 (16.67%)	0 (0%)	Mar-02, Apr-06	6	B.1.1	69	0.1014
UK521	2 (33.33%)	4 (66.67%)	0 (0%)	0 (0%)	Mar-27, Apr-08	6	B.1.1	67	0.0358
UK2014	2 (33.33%)	0 (0%)	0 (0%)	4 (66.67%)	Apr-01, Jun-05	6	B.1	9	1.2222
UK799	6 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-01, Mar-07	6	B.1	99	0.0121
UK713	5 (83.33%)	1 (16.67%)	0 (0%)	0 (0%)	Apr-03, May-27	6	B.1.1	18	0.6
UK629	6 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-23, Apr-13	6	B.1	62	0.0677
UK464	4 (66.67%)	2 (33.33%)	0 (0%)	0 (0%)	Mar-25, Apr-19	6	B.1	56	0.0893
UK185	4 (66.67%)	0 (0%)	1 (16.67%)	1 (16.67%)	Mar-00, May-15	6	B.3	30	0.44
UK5903	5 (83.33%)	0 (0%)	0 (0%)	1 (16.67%)	Mar-25, Apr-18	6	B.2	57	0.0842
UK270	5 (83.33%)	0 (0%)	0 (0%)	1 (16.67%)	Mar-04, Apr-01	6	B	74	0.0757
UK552	1 (16.67%)	0 (0%)	0 (0%)	5 (83.33%)	Mar-08, Mar-30	6	A.1	76	0.0316
UK5215	5 (83.33%)	0 (0%)	1 (16.67%)	0 (0%)	Mar-29, May-13	6	B.1.1	32	0.2812

Lineage name	England	Wales	Northern Ireland	Scotland	Date range	Total sequences	Global lineage	Time since last sample (days)	Activity score
UK269	6 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Mar-25, Jun-02	6	B.1.1	12	1.15
UK574	4 (66.67%)	2 (33.33%)	0 (0%)	0 (0%)	Mar-26, Apr-13	6	B.2.1	62	0.0581
UK330	5 (83.33%)	1 (16.67%)	0 (0%)	0 (0%)	Mar-23, Apr-08	6	B.1.1	67	0.0478
UK654	6 (100.0%)	0 (0%)	0 (0%)	0 (0%)	Feb-27, Mar-08	6	B.2.5	98	0.0204

Table S2 Raw data for figure two showing lags between the most recent sequence and current date for each sequencing centre

	Centre	Lag in days
0	NOTT	5
1	CAMB	5
2	NORW	10
3	PORT	11
4	BIRM	11
5	EDIN	11
6	LIVE	11
7	PHWC	13
8	SANG	14
9	EXET	16
10	SHEF	18
11	NORT	19
12	GLAS	23
13	PHEC	31
14	LOND	36
15	OXON	66
16	NIRE	80

Table S3 Raw data for figure three showing the number of admin2 regions a lineage is present in over time

Week commencing	UK5	UK42	UK107	UK5676	UK2464	UK61	UK199	UK36	UK2913	UK167
2020-01-26	0	0	0	0	0	0	0	0	0	1
2020-02-02	0	1	0	0	0	0	0	0	0	0
2020-02-09	0	0	1	1	0	0	0	0	0	0
2020-02-16	0	0	1	0	0	0	0	0	0	0
2020-02-23	2	4	5	2	0	0	1	0	0	0
2020-03-01	10	12	6	6	0	0	2	0	1	1
2020-03-08	29	16	18	15	3	3	3	0	4	9
2020-03-15	33	22	26	28	12	2	10	4	6	4
2020-03-22	55	38	36	30	25	9	21	9	12	17
2020-03-29	63	50	39	38	30	14	26	18	19	23
2020-04-05	73	51	35	27	27	21	24	12	21	25
2020-04-12	69	41	21	13	23	14	20	20	18	19
2020-04-19	69	37	19	16	24	8	20	17	17	17
2020-04-26	66	26	11	6	15	7	15	12	15	15
2020-05-03	62	16	4	6	11	3	9	8	5	11
2020-05-10	57	15	2	3	7	6	10	11	7	11
2020-05-17	49	7	1	1	2	2	4	6	3	13
2020-05-24	38	4	0	0	1	4	4	4	4	6
2020-05-31	30	4	1	0	2	0	3	2	3	3
2020-06-07	13	0	0	0	1	0	1	0	0	1
2020-06-14	1	0	0	0	0	0	0	0	0	0

Table S4 Raw data for figure four showing the Shannon diversity per admin1 region over time

Week	England	Wales	Scotland	Northern Ireland
2020-01-26	0	-0	0	0
2020-02-02	1.25548	0	0	0
2020-02-09	1.66746	0	0	0
2020-02-16	0.796312	0	0	0
2020-02-23	2.80211	-0	-0	0
2020-03-01	3.38983	1.33218	2.13833	0
2020-03-08	3.77071	1.84732	3.31772	1.9792
2020-03-15	3.56184	2.01829	3.36593	1.82452
2020-03-22	3.80546	2.53207	3.50744	2.78284
2020-03-29	3.76128	3.48345	3.45855	2.00866
2020-04-05	3.5745	3.26534	3.22123	2.02811
2020-04-12	3.44145	2.95106	3.06333	1.62747
2020-04-19	3.29698	3.01851	3.15986	1.06588
2020-04-26	3.19389	2.999	2.8534	1.58445
2020-05-03	3.1828	2.65735	2.70626	0
2020-05-10	2.71692	2.63827	2.65054	0
2020-05-17	1.9998	2.59537	2.22607	0
2020-05-24	1.94991	2.2692	2.12343	0
2020-05-31	2.12849	1.65076	1.24908	0
2020-06-07	1.17005	0	0.693147	0
2020-06-14	0.693147	0	0	0

Table S5 Raw data for figure five showing when lineages started per day, divided by singletons and non-singletons

Day	Number of singleton starts	Number of non-singleton starts	Total
2020-01-27	0	1	1
2020-02-03	0	3	3
2020-02-05	0	1	1
2020-02-09	0	1	1
2020-02-13	0	1	1
2020-02-14	0	1	1
2020-02-15	0	2	2
2020-02-16	0	1	1
2020-02-23	0	2	2
2020-02-25	0	2	2
2020-02-26	1	1	2
2020-02-27	1	3	4
2020-02-28	0	6	6
2020-02-29	0	2	2
2020-03-01	3	5	8
2020-03-02	1	8	9
2020-03-03	1	5	6
2020-03-04	0	9	9
2020-03-05	0	4	4
2020-03-06	3	9	12
2020-03-07	3	6	9
2020-03-08	2	5	7
2020-03-09	6	14	20
2020-03-10	4	6	10
2020-03-11	10	15	25
2020-03-12	10	21	31
2020-03-13	12	8	20
2020-03-14	4	10	14
2020-03-15	3	4	7
2020-03-16	3	6	9
2020-03-17	10	15	25
2020-03-18	8	17	25
2020-03-19	10	11	21
2020-03-20	11	18	29
2020-03-21	6	9	15
2020-03-22	12	16	28
2020-03-23	13	22	35
2020-03-24	13	14	27
2020-03-25	16	10	26
2020-03-26	10	17	27
2020-03-27	10	12	22
2020-03-28	9	13	22
2020-03-29	16	11	27
2020-03-30	17	24	41
2020-03-31	24	16	40
2020-04-01	14	9	23
2020-04-02	14	17	31
2020-04-03	14	11	25
2020-04-04	11	8	19
2020-04-05	16	5	21
2020-04-06	14	12	26
2020-04-07	20	9	29
2020-04-08	12	4	16
2020-04-09	6	6	12
2020-04-10	11	6	17
2020-04-11	5	6	11
2020-04-12	6	3	9

Day	Number of singleton starts	Number of non-singleton starts	Total
2020-04-13	13	2	15
2020-04-14	10	4	14
2020-04-15	8	2	10
2020-04-16	14	4	18
2020-04-17	2	3	5
2020-04-18	5	4	9
2020-04-19	4	1	5
2020-04-20	3	4	7
2020-04-21	11	2	13
2020-04-22	3	4	7
2020-04-23	4	4	8
2020-04-24	6	0	6
2020-04-25	2	3	5
2020-04-26	0	1	1
2020-04-27	3	0	3
2020-04-28	5	1	6
2020-04-29	2	1	3
2020-05-01	2	2	4
2020-05-02	3	2	5
2020-05-03	3	0	3
2020-05-04	4	3	7
2020-05-05	1	1	2
2020-05-06	3	0	3
2020-05-07	0	1	1
2020-05-08	1	0	1
2020-05-11	2	0	2
2020-05-12	2	0	2
2020-05-13	1	0	1
2020-05-14	2	2	4
2020-05-15	2	0	2
2020-05-17	1	0	1
2020-05-18	0	1	1
2020-05-20	1	0	1
2020-05-21	1	0	1
2020-05-23	1	0	1
2020-05-25	0	1	1
2020-05-26	1	0	1
2020-05-28	1	0	1
2020-06-03	1	0	1
2020-06-05	1	0	1
2020-06-09	1	0	1

Table S6 Raw data for figure six showing the number of sequences taken over time.

Day	England	Scotland	Wales	Northern Ireland
2020-01-27	0	0	1	0
2020-02-03	5	0	0	0
2020-02-05	1	0	0	0
2020-02-08	2	0	0	0
2020-02-09	2	0	0	0
2020-02-13	2	0	0	0
2020-02-14	2	0	0	0
2020-02-15	2	0	0	0
2020-02-16	4	0	0	0
2020-02-18	1	0	0	0
2020-02-19	1	0	0	0
2020-02-20	1	0	0	0
2020-02-23	2	0	0	0
2020-02-24	4	0	0	0
2020-02-25	7	0	0	0
2020-02-26	6	0	0	0
2020-02-27	19	0	1	0
2020-02-28	24	1	0	0
2020-02-29	22	0	0	0
2020-03-01	51	1	2	0
2020-03-02	73	1	0	0
2020-03-03	91	2	0	0
2020-03-04	103	5	1	0
2020-03-05	81	3	0	0
2020-03-06	74	7	0	0
2020-03-07	44	5	2	0
2020-03-08	51	1	2	0
2020-03-09	71	12	1	0
2020-03-10	92	5	5	2
2020-03-11	145	11	10	3
2020-03-12	180	32	7	0
2020-03-13	104	42	8	1
2020-03-14	84	13	10	6
2020-03-15	65	8	15	0
2020-03-16	79	14	22	5
2020-03-17	119	31	32	7
2020-03-18	185	24	25	6
2020-03-19	151	28	30	3
2020-03-20	199	32	12	6
2020-03-21	206	35	0	13
2020-03-22	199	32	0	8
2020-03-23	345	84	1	29
2020-03-24	292	87	22	23
2020-03-25	290	71	94	16
2020-03-26	305	91	18	27
2020-03-27	302	87	29	7
2020-03-28	309	40	17	12
2020-03-29	348	53	22	11
2020-03-30	498	120	75	6
2020-03-31	455	86	144	8
2020-04-01	429	71	136	0
2020-04-02	429	48	99	1
2020-04-03	422	57	112	0
2020-04-04	345	45	139	1
2020-04-05	356	50	65	0
2020-04-06	439	71	167	18
2020-04-07	406	70	185	5

Day	England	Scotland	Wales	Northern Ireland
2020-04-08	379	43	126	14
2020-04-09	359	25	83	1
2020-04-10	328	22	120	19
2020-04-11	259	46	73	14
2020-04-12	211	61	87	23
2020-04-13	242	55	77	22
2020-04-14	311	50	123	11
2020-04-15	310	51	80	13
2020-04-16	354	62	73	0
2020-04-17	315	24	47	6
2020-04-18	235	55	43	7
2020-04-19	203	30	36	2
2020-04-20	266	68	68	2
2020-04-21	220	104	31	17
2020-04-22	170	99	18	23
2020-04-23	154	76	31	11
2020-04-24	110	91	70	2
2020-04-25	76	70	40	5
2020-04-26	97	49	19	2
2020-04-27	164	61	70	2
2020-04-28	126	35	51	9
2020-04-29	216	23	52	11
2020-04-30	183	24	50	15
2020-05-01	218	25	46	7
2020-05-02	118	13	51	2
2020-05-03	94	16	19	0
2020-05-04	179	9	40	0
2020-05-05	119	17	34	0
2020-05-06	143	31	53	0
2020-05-07	123	33	53	0
2020-05-08	79	25	30	0
2020-05-09	65	17	41	0
2020-05-10	73	21	38	0
2020-05-11	114	16	63	0
2020-05-12	77	22	44	0
2020-05-13	77	29	53	0
2020-05-14	54	47	28	0
2020-05-15	60	22	31	0
2020-05-16	44	19	14	0
2020-05-17	26	16	11	0
2020-05-18	69	29	18	0
2020-05-19	52	29	27	0
2020-05-20	32	15	38	0
2020-05-21	39	13	24	0
2020-05-22	35	8	24	0
2020-05-23	21	7	21	0
2020-05-24	20	4	18	0
2020-05-25	39	8	16	0
2020-05-26	43	3	25	0
2020-05-27	30	5	29	0
2020-05-28	35	4	19	0
2020-05-29	16	1	20	0
2020-05-30	11	0	14	0
2020-05-31	26	1	10	0
2020-06-01	41	3	6	0
2020-06-02	34	11	1	0
2020-06-03	27	1	7	0
2020-06-04	26	7	6	0
2020-06-05	13	1	1	0

Day	England	Scotland	Wales	Northern Ireland
2020-06-06	9	2	1	0
2020-06-07	12	1	0	0
2020-06-08	14	1	0	0
2020-06-09	2	0	0	0
2020-06-10	10	0	0	0
2020-06-11	1	0	0	0
2020-06-12	2	0	0	0
2020-06-13	1	0	0	0
2020-06-14	2	0	0	0

Table S7 Raw data for the figure seven with the number of sequences assigned to each admin2 region.

Admin2	Country	Number of sequences	Sequence group
ABERDEEN	Scotland	22	10-50
ABERDEENSHIRE	Scotland	5	1-10
ANGLESEY	Wales	71	50-100
ANGUS	Scotland	38	10-50
ANTRIM	Northern Ireland	243	200-250
ARGYLL AND BUTE	Scotland	6	1-10
ARMAGH	Northern Ireland	15	10-50
BATH AND NORTH EAST SOMERSET	England	0	0
BEDFORDSHIRE	England	449	400-500
BERKSHIRE	England	10	10-50
BLACKBURN WITH DARWEN	England	0	0
BLACKPOOL	England	0	0
BLAENAU GWENT	Wales	60	50-100
BOLTON	England	0	0
BOURNEMOUTH	England	0	0
BRIDGEND	Wales	115	100-150
BRIGHTON AND HOVE	England	0	0
BRISTOL	England	18	10-50
BUCKINGHAMSHIRE	England	400	400-500
BURY	England	0	0
CAERPHILLY	Wales	142	100-150
CAMBRIDGESHIRE	England	706	>500
CARDIFF	Wales	563	>500
CARMARTHENSHIRE	Wales	144	100-150
CENTRAL BEDFORDSHIRE	England	0	0
CEREDIGION	Wales	16	10-50
CHESHIRE	England	43	10-50
CLACKMANNANSHIRE	Scotland	2	1-10
CONWY	Wales	143	100-150
CORNWALL	England	23	10-50
CUMBRIA	England	58	50-100
DARLINGTON	England	0	0
DENBIGHSHIRE	Wales	168	150-200
DERBY	England	0	0
DERBYSHIRE	England	28	10-50
DEVON	England	400	400-500
DORSET	England	183	150-200
DOWN	Northern Ireland	161	150-200
DUMFRIES AND GALLOWAY	Scotland	68	50-100
DUNDEE	Scotland	140	100-150
DURHAM	England	21	10-50
EAST AYRSHIRE	Scotland	84	50-100
EAST DUNBARTONSHIRE	Scotland	36	10-50
EAST LOTHIAN	Scotland	55	50-100
EAST RENFREWSHIRE	Scotland	21	10-50
EAST RIDING OF YORKSHIRE	England	33	10-50
EDINBURGH	Scotland	456	400-500
EILEAN SIAR	Scotland	2	1-10
ESSEX	England	1375	>500
FALKIRK	Scotland	92	50-100
FERMANAGH	Northern Ireland	4	1-10
FIFE	Scotland	45	10-50
FLINTSHIRE	Wales	120	100-150
GATESHEAD	England	0	0
GLASGOW	Scotland	988	>500
GLOUCESTERSHIRE	England	626	>500
GREATER LONDON	England	2368	>500

Admin2	Country	Number of sequences	Sequence group
GUERNSEY	Channel_islands	41	10-50
GWYNEDD	Wales	115	100-150
HALTON	England	0	0
HAMPSHIRE	England	226	200-250
HARTLEPOOL	England	0	0
HEREFORDSHIRE	England	39	10-50
HERTFORDSHIRE	England	1003	>500
HIGHLAND	Scotland	9	1-10
INVERCLYDE	Scotland	15	10-50
ISLE OF WIGHT	England	0	0
ISLES OF SCILLY	England	0	0
JERSEY	Channel_islands	77	50-100
KENT	England	29	10-50
KINGSTON UPON HULL	England	0	0
LANCASHIRE	England	53	50-100
LEICESTER	England	0	0
LEICESTERSHIRE	England	5	1-10
LINCOLNSHIRE	England	37	10-50
LONDONDERRY	Northern Ireland	22	10-50
LUTON	England	0	0
MANCHESTER	England	30	10-50
MEDWAY	England	0	0
MERSEYSIDE	England	541	>500
MERTHYR TYDFIL	Wales	91	50-100
MIDDLESBROUGH	England	0	0
MIDLOTHIAN	Scotland	134	100-150
MILTON KEYNES	England	0	0
MONMOUTHSHIRE	Wales	77	50-100
MORAY	Scotland	6	1-10
NEATH PORT TALBOT	Wales	114	100-150
NEWPORT	Wales	164	150-200
NORFOLK	England	607	>500
NORTH AYRSHIRE	Scotland	5	1-10
NORTH LANARKSHIRE	Scotland	200	200-250
NORTH LINCOLNSHIRE	England	0	0
NORTH SOMERSET	England	0	0
NORTH YORKSHIRE	England	96	50-100
NORTHAMPTONSHIRE	England	24	10-50
NORTHUMBERLAND	England	12	10-50
NOTTINGHAM	England	662	>500
NOTTINGHAMSHIRE	England	58	50-100
OLDHAM	England	0	0
ORKNEY ISLANDS	Scotland	1	1-10
OXFORDSHIRE	England	98	50-100
PEMBROKESHIRE	Wales	70	50-100
PERTHSHIRE AND KINROSS	Scotland	57	50-100
PETERBOROUGH	England	0	0
PLYMOUTH	England	1	1-10
POOLE	England	0	0
PORTSMOUTH	England	0	0
POWYS	Wales	77	50-100
REDCAR AND CLEVELAND	England	0	0
RENFREWSHIRE	Scotland	272	250-300
RHONDDA, CYNON, TAFF	Wales	0	0
ROCHDALE	England	0	0
RUTLAND	England	0	0
SALFORD	England	0	0
SCOTTISH BORDERS	Scotland	143	100-150
SHETLAND ISLANDS	Scotland	14	10-50

Admin2	Country	Number of sequences	Sequence group
SHROPSHIRE	England	6	1-10
SOMERSET	England	602	>500
SOUTH AYRSHIRE	Scotland	3	1-10
SOUTH GLOUCESTERSHIRE	England	0	0
SOUTH LANARKSHIRE	Scotland	28	10-50
SOUTH YORKSHIRE	England	1425	>500
SOUTHAMPTON	England	0	0
SOUTHEND-ON-SEA	England	0	0
STAFFORDSHIRE	England	59	50-100
STIRLING	Scotland	11	10-50
STOCKPORT	England	0	0
STOCKTON-ON-TEES	England	0	0
STOKE-ON-TRENT	England	0	0
SUFFOLK	England	569	>500
SURREY	England	65	50-100
SUSSEX	England	1	1-10
SWANSEA	Wales	269	250-300
SWINDON	England	0	0
TAMESIDE	England	0	0
TELFORD AND WREKIN	England	0	0
THURROCK	England	0	0
TORBAY	England	0	0
TORFAEN	Wales	91	50-100
TRAFFORD	England	0	0
TYNE AND WEAR	England	106	100-150
TYRONE	Northern Ireland	19	10-50
VALE OF GLAMORGAN	Wales	187	150-200
WARRINGTON	England	0	0
WARWICKSHIRE	England	10	10-50
WEST DUNBARTONSHIRE	Scotland	20	10-50
WEST LOTHIAN	Scotland	119	100-150
WEST MIDLANDS	England	120	100-150
WEST YORKSHIRE	England	20	10-50
WIGAN	England	0	0
WILTSHIRE	England	348	300-400
WORCESTERSHIRE	England	12	10-50
WREXHAM	Wales	149	100-150
YORK	England	0	0