

**Time-varying reproduction numbers of COVID-19 in Georgia, USA,**

**March 2-November 20, 2020**

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**Online Supplementary Materials**

## ADDITIONAL DETAILS FOR THE STATISTICAL ANALYSIS

### *The instantaneous reproduction number (EpiEstim package)*

The  $R_t$  estimated by the R package *EpiEstim* is also known as an instantaneous reproduction number.<sup>1</sup> This measure is defined by Cori et al.<sup>1</sup> as the ratio between  $I_t$ , the number of incident cases at time  $t$ , to  $\Lambda_t$ , the total infectiousness of all the infected individuals at time  $t$ . The latter is represented mathematically as  $\Lambda_t = \sum_{s=1}^t I_{t-s} w_s$ , i.e., the sum of infection incidence up to time  $t-1$ , weighted by an infectivity function  $w_s$ , which is a probability distribution describing the average infectiousness profile after infection and is usually represented by the serial interval distribution. Thus, the number of new cases at time  $t$  is Poisson-distributed with a mean of  $R_t \sum_{s=1}^t I_{t-s} w_s$ . Conditional on the number of new cases in previous time points,  $I_0, \dots, I_{t-1}$ , and given the reproduction number  $R_t$ , the likelihood of the incidence  $I_t$  is as follows:

$$P(I_t | I_0, \dots, I_{t-1}, w, R_t) = \frac{(R_t \Lambda_t)^{I_t} e^{-R_t \Lambda_t}}{I_t!}$$

where the total infectiousness of infected individuals at time  $t$ ,  $\Lambda_t = \sum_{s=1}^t I_{t-s} w_s$ .<sup>1</sup>

In other words,  $R_t = I_t / (\sum_{s=1}^t I_{t-s} w_s)$ . This can be interpreted as the average number of secondary cases that an infectious individual will infect at time  $t$ , if conditions remain the same at time  $t$ . As this formulation may result in a highly variable  $R_t$  estimate over time, the instantaneous reproduction number method as implemented in *EpiEstim* assumes that the  $R_t$  is constant over a specified time window of size  $\tau$  ending at time  $t$ . This will allow the estimate to be less variable and more precise. Given that transmissibility is assumed constant over a time period, from  $(t-\tau+1)$  to  $t$ , and is denoted by a reproduction number,  $R_{t,\tau}$ , the likelihood of the incidence during the time period, from  $I_{(t-\tau+1)}$  to  $I_t$ , conditional on incidence prior to the time

period, from  $I_0$ , to  $I_{(t-\tau)}$ , is as follows <sup>1</sup>:  $P(I_{t-\tau+1}, \dots, I_t | I_0, \dots, I_{t-\tau}, w, R_{t,\tau}) =$

$$\prod_{s=t-\tau+1}^t \left[ \frac{(R_{t,\tau} \Lambda_s)^{I_s} e^{-R_{t,\tau} \Lambda_s}}{I_s!} \right]$$

## **Sensitivity analysis**

### *Statistical analyses for asymptomatic infections*

Our main analysis does not differentiate between symptomatic and asymptomatic cases. We increased the incidence of confirmed COVID-19 cases for the studied jurisdictions by 11% using R Version 1.2.5033 Windows NT 10.0 basic functions (R Core Team, Vienna, Austria) to account for a reported 10% of infections that are asymptomatic, that is the lower bound as described in the pandemic planning scenario on CDC website,<sup>2</sup> and it approximates the lower 95% confidence interval bound estimated by Byambasuren and colleagues.<sup>3</sup>

### *Sensitivity analysis results for asymptomatic infections*

Our sensitivity analysis considers asymptomatic COVID-19 cases with an increase in the incidence by 11%. The state of Georgia and Metro Atlanta presented an estimated  $R_t$  of 1.03 (CrI: 1.03, 1.03) when increasing the incidence by 11%, while Dougherty county presented an  $R_t$  of 1.02 (CrI: 1.00, 1.04) (Table S23). These results reflect an ongoing transmission of SARS-CoV-2 for Georgia, Metro Atlanta, and Dougherty county. All of Metro Atlanta counties and that surround Dougherty county, except for Calhoun county, obtained  $R_t$  estimates higher than 1.00, indicating ongoing transmission in the area. Calhoun county obtained an  $R_t$  mean estimate of 0.99 (crI: 0.98, 1.01), which can be indicative of a slow-down in the transmission for SARS-CoV-2 in the county (Figure S7-Figure S13).



**Table S2.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, March 17—31, 2020.

Location	Date														
	3/17	3/18	3/19	3/20	3/21	3/22	3/23	3/24	3/25	3/26	3/27	3/28	3/29	3/30	3/31
Georgia	142	193	282	482	552	620	800	1095	1385	1641	2198	2447	2683	3032	4116
Metro Atlanta	114	158	215	348	379	425	547	697	843	968	1364	1506	1689	1972	2455
Dougherty	6	7	22	45	47	52	69	101	123	164	203	224	247	278	466
Baker	0	0	0	0	0	0	0	3	3	1	1	1	1	1	4
Bartow	11	20	27	54	55	56	61	76	82	93	107	117	119	125	137
Butts	0	0	0	0	0	2	2	2	3	3	3	5	5	6	8
Calhoun	0	0	0	0	0	0	0	0	0	1	2	3	3	6	9
Carroll	0	0	0	14	16	16	21	26	50	52	61	64	70	97	123
Cherokee	4	6	13	16	17	18	24	30	36	44	50	54	60	69	78
Clayton	5	6	6	10	12	13	19	21	29	37	53	57	59	62	112
Cobb	25	29	38	51	56	67	79	90	109	119	163	185	228	250	287
Coweta	3	3	3	6	8	9	9	10	10	14	19	20	23	37	41
Dawson	0	0	0	1	1	1	1	1	1	3	2	2	4	7	10
DeKalb	15	18	22	40	42	53	74	107	125	137	219	246	273	294	360
Douglas	0	0	0	1	4	4	7	12	18	18	32	35	38	43	51
Fayette	5	7	8	8	9	9	11	12	12	14	22	26	27	42	48
Forsyth	1	2	3	3	4	5	7	8	10	15	21	22	28	36	47
Fulton	33	49	68	95	100	111	152	191	204	231	347	378	425	503	599
Gwinnett	7	7	12	23	23	27	35	46	69	79	121	131	145	178	242
Hall	1	3	5	6	9	9	10	16	19	22	30	31	33	34	67
Haralson	0	0	0	0	0	0	0	0	0	1	1	2	2	4	5
Heard	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
Henry	2	2	3	6	7	7	9	13	20	29	44	50	56	68	86
Jasper	0	0	0	0	0	0	0	1	2	2	2	2	2	2	2
Lamar	0	0	0	1	1	3	3	3	3	3	3	3	3	3	3
Lee	2	2	4	13	14	16	19	24	25	30	37	39	43	44	90
Meriwether	0	0	0	0	0	0	0	1	1	3	3	3	5	6	6
Mitchell	0	0	0	0	0	0	0	4	4	10	14	15	15	16	34
Morgan	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2
Newton	1	3	3	4	4	4	4	6	8	12	15	15	18	22	31
Paulding	1	3	3	3	4	4	5	6	6	7	13	20	23	26	31
Pickens	0	0	0	2	2	2	3	4	4	4	4	5	5	6	7
Pike	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2
Rockdale	0	0	1	1	2	2	5	8	10	13	16	17	18	29	45
Spalding	0	0	0	2	2	2	4	5	10	11	11	11	12	14	15
Terrell	0	0	0	2	2	2	2	3	4	5	6	10	10	20	40
Walton	0	0	0	0	0	0	0	0	0	0	0	2	4	5	9
Worth	0	0	0	2	2	2	3	4	4	6	7	8	10	12	28

**Table S3.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, April 1—17, 2020.

Location	Date																
	4/1	4/2	4/3	4/4	4/5	4/6	4/7	4/8	4/9	4/10	4/11	4/12	4/13	4/14	4/15	4/16	4/17
Georgia	4747	5444	5967	6383	6742	7558	9156	10204	10885	11859	12261	12103	13125	13913	14583	15644	16658
Metro Atlanta	2609	2979	3535	3890	3973	4404	4986	5291	5596	5976	6143	6384	7026	7700	8183	8610	9252
Dougherty	490	521	607	685	688	722	973	1001	1042	1072	1102	1178	1245	1297	1320	1358	1385
Baker	4	4	4	5	5	5	10	9	11	11	13	14	16	16	17	18	16
Bartow	147	153	159	160	160	182	191	195	203	208	211	213	223	230	237	240	245
Butts	8	9	9	10	12	17	18	23	25	27	28	29	30	35	36	38	40
Calhoun	10	10	11	15	17	20	31	35	37	39	41	45	53	54	59	59	57
Carroll	133	139	147	158	158	163	183	184	195	200	204	210	229	235	242	258	261
Cherokee	85	94	114	120	124	141	147	155	167	177	186	187	204	219	232	245	274
Clayton	128	165	206	235	238	254	278	289	298	328	339	372	396	435	462	473	499
Cobb	304	341	422	453	474	517	566	608	653	681	705	728	816	895	950	1014	1085
Coweta	42	48	56	64	67	76	80	82	87	100	101	106	121	135	138	142	153
Dawson	11	11	13	16	16	18	20	23	24	25	25	26	32	36	37	39	42
DeKalb	360	409	483	539	549	600	673	732	766	826	848	893	1006	1144	1225	1260	1366
Douglas	56	66	78	84	91	105	117	124	134	148	151	159	177	189	201	209	222
Fayette	48	55	61	66	67	74	81	90	93	93	99	100	106	115	122	126	134
Forsyth	50	53	61	71	73	85	99	98	109	119	128	133	143	153	157	169	185
Fulton	638	747	910	959	970	1053	1185	1261	1336	1417	1446	1495	1635	1812	1902	1945	2037
Gwinnett	257	303	353	400	410	455	540	586	618	669	681	701	766	815	885	917	1037
Hall	71	72	81	117	117	138	215	233	247	273	276	282	319	363	402	526	605
Haralson	6	6	10	10	10	14	17	15	15	15	16	16	18	19	19	19	20
Heard	2	2	2	2	2	2	3	2	3	3	4	4	4	5	5	5	5
Henry	95	115	143	167	168	181	208	219	233	249	254	263	289	306	328	330	350
Jasper	2	2	2	4	3	4	6	5	6	6	6	8	9	9	10	10	14
Lamar	4	6	6	7	7	15	15	15	15	15	15	17	18	20	21	21	22
Lee	94	104	123	134	138	148	204	210	217	230	236	244	255	258	264	267	269
Meriwether	7	9	10	11	11	15	20	18	18	19	23	23	23	24	28	35	40
Mitchell	39	40	46	53	56	59	100	113	118	135	136	138	150	164	176	193	209
Morgan	2	2	2	2	2	6	10	12	13	14	14	14	15	15	17	19	19
Newton	34	37	42	52	55	65	67	67	70	77	78	82	93	100	113	115	121
Paulding	33	35	46	50	51	57	62	66	69	74	79	84	100	115	118	123	132
Pickens	7	9	9	9	9	9	10	10	10	10	11	11	11	13	14	15	16
Pike	2	2	4	5	5	9	10	11	12	15	16	16	19	22	25	28	29
Rockdale	47	57	67	75	77	82	86	85	85	89	92	97	101	106	107	111	117
Spalding	17	17	23	26	26	44	54	56	60	65	69	73	78	83	96	122	124
Terrell	46	47	50	57	58	66	92	95	98	103	106	109	118	134	137	137	142
Walton	13	15	16	18	21	23	25	27	32	34	38	42	45	52	54	56	58
Worth	28	28	33	36	37	39	60	65	70	78	80	87	96	99	111	114	116

**Table S4.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, April 18—30, 2020.

Location	Date												
	4/18	4/19	4/20	4/21	4/22	4/23	4/24	4/25	4/26	4/27	4/28	4/29	4/30
Georgia	17014	17619	18447	19189	20099	20905	21575	22225	22459	23229	23607	24300	25431
Metro Atlanta	9443	9827	10297	10543	10975	11643	11965	12314	12435	12904	13464	13937	14305
Dougherty	1409	1425	1436	1456	1479	1478	1465	1470	1470	1480	1493	1500	1506
Baker	16	17	20	20	18	19	19	19	19	21	21	22	23
Bartow	246	250	255	256	259	264	273	283	286	289	306	309	315
Butts	41	50	80	81	125	126	125	125	126	126	130	134	145
Calhoun	57	58	61	75	76	82	84	86	85	87	90	91	106
Carroll	271	282	305	313	304	314	320	325	326	329	342	348	358
Cherokee	285	300	317	324	340	365	367	368	374	393	436	457	467
Clayton	505	520	540	547	549	616	629	642	641	649	672	693	716
Cobb	1104	1148	1196	1230	1272	1326	1368	1395	1428	1483	1539	1581	1621
Coweta	160	164	169	169	168	177	187	187	188	190	191	195	195
Dawson	43	44	45	45	49	50	51	51	51	53	58	60	61
DeKalb	1408	1473	1520	1563	1609	1689	1721	1788	1800	1855	1907	1980	2027
Douglas	229	233	243	246	259	273	276	276	278	284	300	311	319
Fayette	136	139	143	144	146	156	158	161	161	169	171	176	176
Forsyth	197	202	211	216	227	235	241	249	252	271	284	292	299
Fulton	2065	2131	2198	2206	2255	2436	2500	2543	2545	2680	2753	2785	2821
Gwinnett	1059	1124	1181	1238	1273	1351	1382	1460	1504	1545	1620	1744	1793
Hall	607	625	702	756	907	963	1022	1032	1033	1098	1185	1261	1346
Haralson	20	20	22	25	25	26	26	26	26	27	28	28	27
Heard	7	7	7	8	8	9	9	9	9	10	10	9	10
Henry	355	371	382	384	386	413	419	436	451	464	488	495	492
Jasper	15	17	17	18	18	19	20	20	20	20	22	22	21
Lamar	24	25	27	29	28	31	31	33	33	34	35	37	38
Lee	272	274	276	277	294	298	297	299	302	307	312	314	319
Meriwether	40	42	46	47	48	49	49	49	49	49	53	54	54
Mitchell	212	203	210	254	280	290	288	287	290	290	293	304	310
Morgan	20	22	22	23	23	25	25	24	22	25	24	28	28
Newton	121	130	139	142	146	153	158	166	166	173	184	193	196
Paulding	133	137	141	141	145	148	156	159	160	166	172	176	189
Pickens	18	18	18	18	18	19	20	20	21	21	26	26	26
Pike	30	33	33	34	35	38	38	39	39	38	39	39	40
Rockdale	119	131	140	141	144	151	158	162	161	166	175	178	189
Spalding	126	128	135	136	136	140	144	189	190	197	201	205	210
Terrell	146	148	150	156	159	162	165	165	165	167	170	177	183
Walton	59	61	63	63	73	81	92	97	95	100	113	121	126
Worth	119	122	128	140	142	142	138	140	141	143	144	149	153

**Table S5.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, May 1—15, 2020.

Location	Date														
	5/1	5/2	5/3	5/4	5/5	5/6	5/7	5/8	5/9	5/10	5/11	5/12	5/13	5/14	5/15
Georgia	26436	27268	27618	28350	28876	29724	30524	31089	31481	32267	32448	33311	33866	34422	35242
Metro Atlanta	14771	15399	15638	16108	16497	17119	17382	17731	18089	18502	18668	18948	19155	19426	19749
Dougherty	1531	1534	1536	1543	1550	1555	1566	1583	1587	1593	1609	1643	1644	1643	1662
Baker	23	23	23	26	26	28	29	31	31	31	33	34	34	33	33
Bartow	323	324	325	341	351	359	359	361	361	363	364	368	377	382	385
Butts	153	151	150	152	158	163	167	171	172	180	189	191	192	196	196
Calhoun	103	103	107	107	106	109	110	113	116	117	117	117	117	117	124
Carroll	375	383	386	382	387	391	389	390	393	395	395	398	397	400	408
Cherokee	474	482	491	509	519	544	569	578	593	609	621	635	655	676	695
Clayton	733	777	793	804	813	849	878	888	901	921	944	951	955	983	999
Cobb	1679	1749	1768	1839	1887	1998	2024	2072	2128	2175	2186	2253	2280	2363	2395
Coweta	211	213	230	242	244	246	257	257	265	276	278	280	280	280	282
Dawson	61	66	66	67	67	72	73	75	75	81	81	76	81	84	84
DeKalb	2073	2148	2184	2255	2284	2357	2396	2445	2489	2536	2555	2605	2632	2664	2751
Douglas	329	335	341	343	353	363	366	398	400	414	417	417	422	429	433
Fayette	178	181	183	187	189	188	191	190	195	199	201	202	202	204	205
Forsyth	309	331	332	341	347	356	361	364	366	388	391	386	393	395	397
Fulton	2880	2928	2981	3057	3165	3250	3260	3317	3385	3509	3516	3595	3614	3625	3703
Gwinnett	1848	1934	1980	2057	2102	2222	2254	2322	2403	2447	2475	2495	2510	2552	2597
Hall	1482	1694	1700	1776	1846	1914	1956	1997	2002	2012	2039	2060	2112	2125	2140
Haralson	29	29	29	29	30	31	32	32	32	32	32	33	34	34	34
Heard	11	11	14	13	14	14	14	14	14	14	15	17	17	17	17
Henry	492	512	520	520	527	546	558	566	593	604	610	614	615	621	628
Jasper	22	23	24	25	25	26	26	26	25	25	25	26	26	26	26
Lamar	39	40	40	39	39	39	38	39	39	40	40	40	40	41	41
Lee	322	327	328	329	333	338	339	339	339	340	340	343	343	343	344
Meriwether	54	54	54	56	57	59	61	62	65	65	66	66	68	72	73
Mitchell	318	319	319	326	331	336	340	341	350	352	352	357	381	387	388
Morgan	27	27	28	29	30	30	30	30	32	33	33	33	33	33	33
Newton	200	205	208	215	222	232	236	240	252	258	260	261	262	263	262
Paulding	190	194	195	207	209	212	218	221	222	223	226	230	234	236	240
Pickens	25	27	29	29	28	29	31	32	33	33	33	35	36	35	35
Pike	40	40	40	40	40	40	41	41	41	44	44	47	45	44	44
Rockdale	191	194	195	199	204	223	226	228	230	239	243	245	248	249	249
Spalding	214	215	219	219	222	223	224	227	232	235	237	237	236	239	239
Terrell	184	185	186	189	191	193	195	198	198	198	197	198	199	199	199
Walton	129	132	133	136	138	143	147	148	151	152	152	152	159	158	158
Worth	159	162	163	167	173	175	179	180	182	183	183	188	191	191	195



**Table S6.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, May 16—31, 2020.

Location	Date															
	5/16	5/17	5/18	5/19	5/20	5/21	5/22	5/23	5/24	5/25	5/26	5/27	5/28	5/29	5/30	5/31
Georgia	35655	35954	36634	37214	38162	38969	39734	40408	40989	41414	42066	42713	43363	43888	44336	45051
Metro Atlanta	19884	19899	20130	20502	20873	21239	21602	21878	22278	22799	23495	24170	24583	25099	25217	25308
Dougherty	1662	1661	1664	1668	1672	1716	1723	1725	1727	1730	1774	1784	1764	1763	1770	1770
Baker	33	33	33	32	32	32	32	33	33	33	36	34	34	34	34	34
Bartow	385	384	396	410	419	424	427	444	443	443	452	458	469	477	478	478
Butts	197	197	199	199	205	205	206	208	209	211	214	219	223	229	229	228
Calhoun	123	122	122	122	122	121	123	126	126	128	129	130	130	131	132	132
Carroll	409	406	408	418	425	437	439	440	445	472	490	512	516	517	518	525
Cherokee	700	714	723	745	758	769	790	807	810	831	850	861	869	885	890	909
Clayton	1002	1005	1009	1010	1034	1047	1071	1089	1119	1132	1173	1189	1204	1217	1216	1221
Cobb	2407	2406	2429	2503	2584	2625	2655	2661	2702	2795	2854	2907	2948	2987	3009	3027
Coweta	285	284	285	287	286	303	311	316	331	376	383	397	403	414	415	417
Dawson	84	83	84	86	95	99	101	101	101	103	104	108	108	109	109	109
DeKalb	2800	2802	2856	2918	2979	3038	3080	3146	3257	3305	3421	3573	3635	3718	3731	3734
Douglas	438	437	439	445	452	455	478	487	490	504	517	521	528	539	539	543
Fayette	206	207	210	212	215	212	215	219	220	221	232	235	231	234	235	235
Forsyth	398	399	405	412	434	443	444	446	449	480	492	502	507	512	512	512
Fulton	3749	3759	3751	3795	3793	3872	3931	3977	4054	4080	4230	4309	4367	4490	4507	4524
Gwinnett	2597	2594	2680	2771	2820	2882	2961	2997	3056	3198	3307	3480	3619	3733	3769	3780
Hall	2146	2150	2164	2191	2230	2248	2269	2305	2322	2327	2378	2422	2450	2465	2467	2467
Haralson	34	34	34	35	35	36	36	36	36	36	40	40	42	43	43	43
Heard	17	17	17	20	23	24	26	26	26	28	28	30	32	32	33	34
Henry	630	627	627	611	615	623	627	626	632	641	655	672	672	686	688	690
Jasper	26	26	26	26	26	26	31	31	31	31	32	32	32	33	36	36
Lamar	41	41	41	44	44	46	50	50	51	53	57	60	66	67	67	67
Lee	344	342	341	343	345	340	342	342	343	354	362	363	361	361	361	361
Meriwether	72	72	70	70	73	76	78	78	78	78	78	81	82	84	85	85
Mitchell	388	388	389	394	396	399	397	399	399	399	399	412	409	408	408	409
Morgan	33	33	34	34	34	34	35	36	36	37	37	37	37	37	37	37
Newton	261	257	264	266	275	280	286	289	304	311	335	341	344	351	352	352
Paulding	242	240	241	247	261	264	273	275	277	291	294	305	309	320	326	328
Pickens	35	35	38	39	39	40	41	43	43	43	43	43	45	47	47	48
Pike	44	44	44	44	45	45	48	48	49	50	52	54	54	54	54	54
Rockdale	249	249	250	252	251	254	257	258	265	267	268	276	278	283	285	285
Spalding	239	239	242	246	251	246	250	253	253	259	262	264	267	275	275	275
Terrell	199	199	199	199	203	204	209	211	211	211	213	215	213	213	213	213
Walton	158	158	164	166	172	186	186	186	189	196	217	242	246	261	265	265
Worth	195	196	197	201	206	207	204	204	209	210	213	209	208	209	210	211

**Table S7.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, June 1—15, 2020.

Location	Date														
	6/1	6/2	6/3	6/4	6/5	6/6	6/7	6/8	6/9	6/10	6/11	6/12	6/13	6/14	6/15
Georgia	45757	46063	46711	47528	48280	48943	49371	49995	50769	51465	52332	53201	54178	54874	55505
Metro Atlanta	25683	25786	26295	26872	27334	27567	27600	28039	28433	28838	29348	29740	29977	30092	30442
Dougherty	1780	1784	1790	1794	1796	1803	1803	1806	1818	1820	1827	1828	1833	1837	1839
Baker	35	34	34	35	35	36	36	37	37	37	37	37	37	37	37
Bartow	481	485	496	504	514	521	522	523	527	530	532	539	542	543	548
Butts	228	234	237	240	242	243	244	244	253	254	255	242	243	245	245
Calhoun	132	134	135	136	139	138	138	138	140	139	145	146	146	146	148
Carroll	526	524	535	568	578	580	580	585	587	591	593	602	611	614	614
Cherokee	910	911	923	934	944	958	959	975	978	990	1000	1014	1017	1029	1040
Clayton	1234	1238	1260	1282	1310	1323	1328	1343	1362	1378	1399	1413	1427	1431	1440
Cobb	3052	3056	3097	3165	3223	3242	3249	3298	3337	3370	3471	3522	3557	3581	3618
Coweta	421	422	432	440	458	463	463	468	474	476	488	507	509	511	515
Dawson	109	109	110	110	112	113	113	114	114	116	118	118	118	118	119
DeKalb	3795	3803	3874	3939	3986	4008	4012	4054	4120	4186	4229	4282	4303	4311	4355
Douglas	546	549	556	571	583	592	592	601	612	624	634	641	651	655	660
Fayette	235	237	239	241	244	245	245	247	254	254	258	259	260	261	261
Forsyth	523	532	534	535	541	546	546	556	575	579	579	589	594	595	598
Fulton	4621	4638	4688	4724	4790	4822	4823	4887	4925	4989	5031	5069	5100	5106	5157
Gwinnett	3870	3891	4063	4267	4372	4433	4440	4598	4692	4808	4980	5089	5141	5172	5308
Hall	2507	2508	2539	2566	2596	2615	2616	2642	2664	2686	2699	2727	2740	2747	2755
Haralson	45	47	49	50	51	52	52	52	54	56	56	57	57	57	57
Heard	34	35	35	37	36	36	36	36	37	39	41	42	42	43	43
Henry	693	695	716	742	751	756	756	767	779	787	810	829	839	841	852
Jasper	40	39	40	45	46	47	48	49	51	51	55	56	56	56	56
Lamar	71	71	73	75	76	76	76	76	76	78	79	79	79	79	79
Lee	361	361	361	361	361	365	366	367	368	369	370	371	372	372	374
Meriwether	86	87	95	99	105	106	106	109	110	114	119	123	125	125	127
Mitchell	413	413	415	416	416	417	417	419	425	425	427	427	428	431	432
Morgan	38	38	38	38	39	39	39	39	40	40	40	40	40	40	40
Newton	361	370	376	382	388	389	389	395	396	402	407	412	415	415	420
Paulding	328	330	334	340	347	351	352	354	371	382	397	401	402	405	408
Pickens	48	48	50	50	50	51	52	52	53	57	59	59	65	65	68
Pike	54	54	56	57	59	60	61	62	64	65	65	66	69	69	70
Rockdale	285	289	297	302	304	308	308	314	320	325	329	333	338	340	345
Spalding	277	277	280	281	292	294	294	296	301	302	308	309	313	314	317
Terrell	213	213	215	217	217	217	217	217	217	217	218	218	218	218	218
Walton	265	269	273	288	297	298	299	303	307	309	317	321	324	324	327
Worth	222	223	226	228	231	233	235	240	243	247	255	256	256	256	260

**Table S8.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, June 16—30, 2020.

Location	Date														
	6/16	6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30
Georgia	56302	57217	58040	59117	60669	61493	62705	64577	66290	67796	69542	71066	72800	74816	77280
Metro Atlanta	30852	31524	31933	32568	32838	33213	34039	35239	36387	37105	37903	38669	39150	39390	41131
Dougherty	1841	1845	1836	1844	1844	1848	1854	1865	1866	1870	1873	1883	1883	1887	1903
Baker	36	37	36	36	36	36	36	36	37	37	43	43	43	43	43
Bartow	562	570	573	583	587	596	604	625	633	639	645	659	671	677	688
Butts	246	247	248	250	246	246	247	249	254	260	261	263	264	265	274
Calhoun	149	152	154	155	157	158	159	162	161	161	161	161	161	162	162
Carroll	619	619	621	627	622	625	635	646	650	651	658	669	673	678	704
Cherokee	1052	1058	1064	1079	1093	1099	1114	1126	1156	1177	1189	1219	1253	1283	1315
Clayton	1461	1495	1518	1550	1567	1598	1631	1687	1726	1781	1825	1864	1884	1888	1939
Cobb	3679	3712	3751	3807	3841	3893	3969	4134	4269	4347	4433	4526	4607	4630	4877
Coweta	519	526	538	548	545	550	554	569	599	600	615	634	643	647	667
Dawson	121	121	123	124	124	124	124	125	127	128	131	131	133	136	141
DeKalb	4411	4489	4541	4637	4666	4694	4791	5042	5158	5258	5322	5404	5448	5469	5841
Douglas	669	682	698	708	712	724	740	778	793	821	843	864	878	879	917
Fayette	270	271	271	278	279	280	292	299	305	314	322	324	326	326	341
Forsyth	603	616	627	638	642	650	660	694	721	737	756	778	788	792	828
Fulton	5148	5292	5325	5400	5444	5496	5705	5885	6052	6163	6350	6506	6610	6648	6965
Gwinnett	5451	5658	5753	5958	6043	6151	6407	6636	7036	7223	7463	7604	7685	7755	8082
Hall	2787	2822	2874	2901	2922	2935	2946	2982	3032	3048	3075	3101	3117	3138	3187
Haralson	58	61	62	62	63	64	65	66	67	67	68	68	68	68	73
Heard	45	45	45	45	45	45	46	47	47	47	47	48	48	48	48
Henry	856	886	905	920	930	945	964	1013	1062	1077	1093	1128	1141	1141	1203
Jasper	56	59	61	61	61	61	63	65	65	64	65	67	66	66	68
Lamar	79	84	85	86	87	87	91	95	102	107	107	110	112	112	115
Lee	374	372	374	377	377	378	381	385	386	386	386	385	385	385	388
Meriwether	133	135	139	144	148	149	154	160	165	167	174	175	177	177	183
Mitchell	433	433	432	432	433	434	436	440	442	443	443	444	444	446	450
Morgan	41	42	42	44	44	45	45	45	45	46	46	46	49	49	52
Newton	425	440	452	466	466	474	493	516	525	538	541	561	571	571	599
Paulding	415	425	437	453	460	466	470	493	505	522	538	554	560	565	583
Pickens	71	73	75	78	78	80	80	83	84	85	85	88	89	92	93
Pike	71	76	76	81	81	81	81	84	86	87	87	87	87	88	90
Rockdale	347	353	353	359	362	371	379	390	401	415	419	430	436	436	459
Spalding	326	332	336	338	337	340	343	353	361	365	368	380	383	383	400
Terrell	218	220	217	217	217	218	218	219	219	222	224	224	225	225	225
Walton	331	335	340	343	343	344	346	352	361	371	377	381	383	383	399
Worth	265	269	270	278	282	285	288	291	294	295	296	300	303	305	315

**Table S9.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, July 1—10, 2020.

Location	Date									
	7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10
Georgia	79589	82475	85079	87592	89489	91015	93707	96538	98693	103597
Metro Atlanta	42537	43922	45771	47678	48635	49533	50771	52321	53363	55761
Dougherty	1914	1922	1939	1969	1991	2001	2030	2036	2042	2138
Baker	43	43	43	43	44	44	44	43	43	43
Bartow	714	727	746	765	774	788	807	844	859	879
Butts	276	280	288	291	293	297	320	325	329	334
Calhoun	163	163	165	166	167	168	169	168	168	169
Carroll	730	741	770	813	846	864	881	916	946	1008
Cherokee	1348	1368	1399	1434	1460	1491	1551	1593	1621	1674
Clayton	2002	2076	2181	2280	2344	2376	2439	2517	2580	2708
Cobb	5081	5301	5507	5679	5758	5857	6082	6255	6369	6708
Coweta	684	708	754	766	777	787	794	806	821	856
Dawson	144	146	148	153	153	153	159	162	167	170
DeKalb	5959	6172	6381	6689	6905	7050	7158	7362	7472	7973
Douglas	971	1021	1041	1079	1101	1137	1179	1230	1259	1347
Fayette	346	363	384	408	414	422	458	472	476	498
Forsyth	851	871	903	934	944	959	1006	1042	1057	1096
Fulton	7277	7527	7913	8433	8652	8883	9066	9358	9586	10021
Gwinnett	8362	8619	9085	9482	9645	9787	9972	10237	10415	10741
Hall	3252	3310	3357	3395	3404	3419	3475	3573	3620	3713
Haralson	76	79	83	83	85	87	87	95	101	105
Heard	51	54	57	63	64	66	72	75	79	78
Henry	1243	1285	1369	1415	1445	1460	1514	1568	1611	1692
Jasper	69	69	76	77	77	78	79	78	83	83
Lamar	121	125	128	130	130	133	136	139	140	144
Lee	390	393	397	398	402	405	410	413	414	418
Meriwether	187	195	204	213	216	218	225	230	233	241
Mitchell	451	451	452	455	459	459	468	475	477	486
Morgan	52	54	64	65	66	66	68	67	71	74
Newton	616	644	673	700	713	734	750	779	812	863
Paulding	627	638	659	671	679	697	724	765	778	812
Pickens	95	95	97	98	101	101	101	107	112	112
Pike	90	91	97	102	103	104	105	108	110	112
Rockdale	471	495	521	542	552	568	583	606	625	654
Spalding	425	441	444	459	467	476	490	515	527	538
Terrell	227	228	231	232	232	234	236	238	238	238
Walton	417	427	442	459	467	475	490	497	504	527
Worth	317	319	324	324	327	331	339	343	346	351

**Table S10.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, July 11—20, 2020.

Location	Date									
	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20
Georgia	106574	108389	111937	114579	118147	120848	124267	128341	130794	132788
Metro Atlanta	57349	58388	60449	61640	63355	64992	66961	68914	70152	71101
Dougherty	2146	2160	2173	2182	2195	2219	2243	2290	2305	2317
Baker	44	44	44	44	45	45	45	45	45	45
Bartow	926	960	1010	1013	1058	1089	1110	1131	1138	1142
Butts	339	342	345	349	352	355	358	363	364	375
Calhoun	169	170	169	167	170	171	173	175	177	175
Carroll	1024	1050	1101	1108	1145	1200	1260	1325	1359	1373
Cherokee	1734	1753	1799	1828	1868	1927	2014	2086	2110	2125
Clayton	2759	2811	2920	2984	3060	3132	3236	3331	3411	3455
Cobb	6940	7049	7235	7388	7571	7713	7972	8223	8370	8510
Coweta	881	888	897	914	927	938	963	988	1010	1019
Dawson	173	174	180	184	187	191	194	199	202	202
DeKalb	8144	8253	8618	8784	8980	9165	9308	9597	9732	9800
Douglas	1388	1409	1461	1499	1545	1576	1632	1692	1733	1750
Fayette	509	514	532	549	565	584	612	629	654	669
Forsyth	1123	1148	1193	1223	1257	1280	1312	1355	1372	1383
Fulton	10354	10595	11080	11354	11746	12184	12584	12872	13117	13379
Gwinnett	11074	11304	11691	11882	12217	12489	12897	13234	13444	13614
Hall	3774	3813	3874	3928	4012	4130	4242	4358	4394	4420
Haralson	105	108	114	114	120	124	128	132	134	135
Heard	80	82	84	85	90	89	93	97	101	102
Henry	1749	1769	1809	1851	1932	1976	2027	2098	2163	2213
Jasper	88	89	89	89	92	96	101	99	102	103
Lamar	147	148	149	152	154	157	159	164	165	166
Lee	418	423	426	432	436	439	441	446	448	449
Meriwether	248	251	254	259	262	266	277	280	282	282
Mitchell	488	491	501	501	506	513	515	522	518	521
Morgan	78	80	81	88	91	94	100	102	107	115
Newton	876	906	951	975	1010	1043	1098	1144	1177	1202
Paulding	838	854	879	892	912	932	966	1003	1043	1057
Pickens	113	115	119	122	130	134	138	162	166	166
Pike	113	115	116	119	124	128	135	140	140	141
Rockdale	679	700	721	743	756	783	803	840	865	895
Spalding	555	565	578	590	601	615	629	639	652	659
Terrell	245	248	249	249	252	259	260	260	260	260
Walton	538	543	569	574	591	602	613	631	645	649
Worth	354	356	355	357	360	366	371	372	374	374

**Table S11.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, July 21—31, 2020.

Location	Date										
	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28	7/29	7/30	7/31
Georgia	135865	139120	143857	147732	151262	153476	155907	160038	163547	167545	171342
Metro Atlanta	72795	74458	76770	79048	81041	82071	83201	85243	87078	89283	91248
Dougherty	2343	2365	2411	2428	2451	2459	2476	2493	2523	2554	2571
Baker	45	46	47	47	50	52	52	53	53	55	55
Bartow	1172	1214	1252	1283	1318	1354	1367	1410	1440	1495	1545
Butts	378	379	380	393	402	405	411	428	432	444	460
Calhoun	178	178	177	179	180	181	182	182	183	185	189
Carroll	1392	1414	1452	1478	1511	1542	1587	1619	1653	1675	1687
Cherokee	2202	2267	2312	2364	2419	2453	2481	2579	2623	2687	2743
Clayton	3542	3630	3737	3838	3948	4002	4063	4151	4248	4339	4413
Cobb	8759	8966	9380	9717	10009	10120	10240	10453	10653	10920	11206
Coweta	1042	1056	1104	1136	1168	1184	1207	1233	1258	1275	1296
Dawson	205	210	217	226	229	237	241	244	256	265	290
DeKalb	9950	10203	10480	10767	11025	11159	11281	11494	11679	11916	12127
Douglas	1805	1853	1914	1970	2027	2057	2078	2117	2158	2203	2245
Fayette	693	702	742	764	788	805	825	855	873	898	918
Forsyth	1414	1454	1499	1556	1597	1617	1641	1691	1730	1796	1858
Fulton	13779	14169	14673	15221	15649	15843	16073	16482	16867	17286	17646
Gwinnett	13878	14099	14442	14801	15134	15315	15534	15915	16255	16711	17130
Hall	4528	4620	4706	4789	4845	4860	4924	5017	5165	5272	5372
Haralson	136	142	146	151	162	169	176	176	179	184	189
Heard	104	104	112	117	118	119	120	120	125	127	128
Henry	2260	2301	2389	2479	2547	2591	2630	2696	2751	2841	2895
Jasper	103	103	102	103	106	109	112	118	116	120	121
Lamar	168	173	178	184	192	196	200	208	212	217	219
Lee	454	457	464	472	480	480	483	488	490	496	501
Meriwether	290	293	301	307	320	321	323	332	338	344	347
Mitchell	525	528	544	548	552	556	555	563	572	594	604
Morgan	112	119	129	132	147	155	157	175	177	183	191
Newton	1239	1263	1294	1328	1355	1368	1386	1423	1455	1503	1533
Paulding	1080	1110	1146	1178	1205	1222	1231	1267	1306	1343	1370
Pickens	176	191	200	206	211	218	232	243	252	266	274
Pike	141	146	149	157	161	164	167	177	178	180	186
Rockdale	914	926	940	966	976	982	990	1027	1057	1090	1122
Spalding	664	676	689	708	735	750	762	791	802	823	837
Terrell	265	268	271	273	274	275	277	280	285	288	289
Walton	669	675	705	729	737	754	762	802	840	880	900
Worth	377	383	389	394	397	398	399	400	408	415	418

**Table S12.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, August 1—10, 2020.

Location	Date									
	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10
Georgia	174834	177556	179510	182462	186395	189300	193276	197308	200147	202276
Metro Atlanta	92918	94301	95207	96951	99185	100819	103050	105141	106511	107620
Dougherty	2589	2602	2621	2631	2652	2661	2661	2684	2694	2732
Baker	58	58	58	62	62	63	63	63	63	63
Bartow	1583	1607	1618	1675	1735	1772	1816	1853	1868	1885
Butts	463	465	466	468	469	476	482	487	490	497
Calhoun	193	194	194	195	199	200	201	203	203	203
Carroll	1701	1737	1756	1760	1779	1811	1842	1862	1881	1894
Cherokee	2791	2853	2885	2976	3085	3155	3269	3398	3462	3535
Clayton	4468	4518	4557	4626	4716	4790	4879	4952	5006	5059
Cobb	11436	11690	11844	12135	12489	12718	13049	13336	13564	13729
Coweta	1313	1338	1359	1373	1404	1425	1465	1485	1503	1514
Dawson	295	298	301	318	329	335	359	369	377	378
DeKalb	12348	12476	12604	12760	12998	13237	13509	13752	13923	14047
Douglas	2279	2317	2331	2400	2464	2493	2549	2602	2635	2678
Fayette	949	970	980	994	1028	1047	1078	1100	1120	1131
Forsyth	1898	1926	1942	1984	2035	2084	2143	2224	2270	2293
Fulton	17858	18079	18224	18566	18996	19230	19647	20049	20276	20468
Gwinnett	17511	17781	17927	18201	18550	18854	19187	19548	19808	19971
Hall	5482	5523	5547	5657	5759	5847	5947	6035	6080	6114
Haralson	191	192	196	199	201	206	207	208	213	222
Heard	129	130	131	134	136	139	140	142	143	143
Henry	2954	2987	3019	3055	3138	3184	3252	3320	3364	3411
Jasper	123	124	126	129	135	149	153	161	162	164
Lamar	221	223	237	239	252	257	269	273	274	275
Lee	506	515	520	522	526	527	530	535	539	544
Meriwether	347	355	358	358	367	373	379	384	390	396
Mitchell	609	619	617	631	633	634	642	648	650	652
Morgan	216	219	226	231	236	246	253	271	274	279
Newton	1566	1596	1618	1645	1688	1693	1736	1764	1787	1823
Paulding	1401	1430	1452	1495	1538	1578	1615	1651	1678	1694
Pickens	276	290	295	321	335	341	362	369	380	390
Pike	187	192	195	196	198	200	203	210	215	216
Rockdale	1152	1169	1176	1198	1221	1242	1270	1302	1318	1347
Spalding	846	861	868	876	884	893	913	931	937	949
Terrell	291	292	292	293	296	296	295	301	302	302
Walton	934	955	969	982	1020	1044	1077	1103	1113	1118
Worth	421	424	427	429	436	440	440	444	447	449

**Table S13.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, August 11—20, 2020.

Location	Date									
	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20
Georgia	205920	209683	212009	215328	218344	220165	221841	224681	227255	230288
Metro Atlanta	109722	111516	112770	114436	116003	116810	117542	119117	120512	122218
Dougherty	2754	2774	2776	2786	2805	2826	2837	2837	2845	2863
Baker	65	67	68	70	71	72	72	73	73	73
Bartow	1914	1953	1968	1999	2033	2057	2063	2083	2114	2159
Butts	494	495	497	502	507	511	512	515	521	526
Calhoun	207	210	211	211	213	214	215	215	215	220
Carroll	1905	1910	1933	1997	2035	2043	2052	2082	2093	2136
Cherokee	3609	3707	3796	3861	3939	3981	4005	4065	4126	4186
Clayton	5154	5245	5301	5380	5450	5522	5570	5640	5712	5827
Cobb	14006	14279	14463	14690	14826	14893	14962	15086	15247	15449
Coweta	1539	1568	1625	1688	1750	1768	1793	1832	1875	1925
Dawson	401	431	450	458	481	484	486	504	528	548
DeKalb	14292	14485	14563	14746	14926	15030	15101	15312	15422	15605
Douglas	2728	2773	2812	2838	2859	2874	2892	2911	2928	2963
Fayette	1159	1187	1210	1243	1263	1277	1305	1341	1365	1388
Forsyth	2357	2416	2455	2507	2554	2569	2586	2625	2681	2710
Fulton	20874	21140	21373	21601	21867	21993	22107	22484	22760	23068
Gwinnett	20382	20685	20900	21175	21411	21534	21655	21936	22196	22455
Hall	6206	6298	6339	6420	6512	6552	6581	6687	6764	6848
Haralson	230	231	237	241	247	251	256	256	257	269
Heard	147	148	149	151	153	152	152	153	154	157
Henry	3457	3513	3537	3588	3694	3735	3786	3819	3886	3948
Jasper	168	170	171	175	176	176	183	185	186	186
Lamar	280	280	283	288	292	294	296	298	299	303
Lee	551	565	569	597	603	607	611	616	617	624
Meriwether	403	409	411	421	430	436	440	442	441	447
Mitchell	657	658	659	660	664	673	674	676	676	677
Morgan	283	295	301	308	318	320	329	335	341	361
Newton	1865	1895	1914	1944	1987	2012	2038	2060	2078	2095
Paulding	1744	1789	1809	1851	1868	1886	1894	1916	1945	1982
Pickens	410	420	430	434	442	444	446	450	452	463
Pike	224	228	232	239	241	241	246	254	258	261
Rockdale	1371	1395	1411	1439	1455	1471	1487	1503	1522	1548
Spalding	967	983	990	1019	1028	1036	1039	1049	1052	1075
Terrell	301	306	307	307	307	307	308	310	311	310
Walton	1153	1188	1210	1233	1259	1268	1280	1294	1309	1330
Worth	450	457	461	465	468	471	472	473	476	480



**Table S14.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, August 21—31, 2020.

Location	Date										
	8/21	8/22	8/23	8/24	8/25	8/26	8/27	8/28	8/29	8/30	8/31
Georgia	233169	235783	237402	239612	241865	244494	247017	249317	251676	252813	254238
Metro Atlanta	123829	125097	125914	126517	127574	129213	130466	131550	132764	133191	133778
Dougherty	2869	2888	2904	2922	2925	2939	2949	2962	2969	2977	2985
Baker	73	72	72	73	73	73	73	72	71	71	72
Bartow	2189	2225	2240	2256	2292	2325	2361	2376	2407	2426	2431
Butts	526	530	532	535	541	546	550	556	562	564	566
Calhoun	221	224	225	225	226	226	227	229	229	227	227
Carroll	2175	2193	2208	2232	2216	2227	2260	2286	2295	2310	2320
Cherokee	4262	4319	4369	4412	4459	4565	4653	4720	4791	4817	4856
Clayton	5914	5980	6042	6087	6124	6283	6344	6366	6430	6458	6478
Cobb	15687	15816	15931	16055	16144	16369	16536	16630	16840	16896	16966
Coweta	1944	1972	2014	2025	2041	2107	2153	2201	2230	2244	2249
Dawson	564	589	590	590	599	614	632	650	666	669	670
DeKalb	15731	15860	15959	16004	16086	16193	16278	16368	16443	16498	16555
Douglas	2992	3015	3029	3048	3060	3092	3105	3123	3149	3154	3167
Fayette	1394	1404	1412	1419	1434	1453	1492	1539	1564	1568	1573
Forsyth	2754	2797	2808	2814	2884	2938	2975	3015	3057	3079	3091
Fulton	23375	23622	23751	23825	23987	24211	24378	24586	24747	24801	24891
Gwinnett	22786	22991	23096	23178	23411	23636	23812	23972	24137	24182	24252
Hall	6916	6981	7004	7020	7116	7266	7365	7475	7589	7605	7714
Haralson	280	284	289	293	296	301	307	319	327	330	332
Heard	157	159	161	161	161	164	165	168	169	169	171
Henry	4006	4087	4117	4145	4166	4263	4310	4335	4391	4399	4417
Jasper	187	187	187	189	191	193	194	195	195	195	195
Lamar	307	311	311	313	315	317	321	322	322	323	323
Lee	630	632	635	637	643	643	646	656	657	660	663
Meriwether	447	452	455	459	463	469	475	477	480	481	484
Mitchell	679	686	688	688	694	698	705	700	707	710	710
Morgan	373	379	381	381	394	396	406	410	411	414	415
Newton	2127	2148	2159	2168	2189	2208	2234	2252	2277	2295	2306
Paulding	2016	2032	2063	2082	2106	2147	2184	2214	2255	2262	2269
Pickens	464	475	476	477	490	492	502	506	513	517	521
Pike	261	262	263	266	267	268	271	271	275	276	277
Rockdale	1569	1583	1590	1597	1613	1622	1630	1626	1634	1638	1651
Spalding	1079	1089	1111	1115	1126	1137	1144	1152	1160	1163	1172
Terrell	309	309	309	311	313	313	314	318	317	318	319
Walton	1347	1355	1366	1371	1403	1411	1429	1440	1448	1458	1466
Worth	482	483	483	487	488	492	494	496	499	497	498

**Table S15.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, September 1—10, 2020.

Location	Date									
	9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10
Georgia	256544	258482	261056	263047	265215	266707	267238	268684	270624	272588
Metro Atlanta	134888	135718	136861	137615	138522	139182	139421	139930	140763	141597
Dougherty	2993	3005	2993	3001	3010	3021	3029	3043	3045	3049
Baker	71	71	71	71	71	72	72	72	73	73
Bartow	2450	2479	2506	2520	2542	2557	2560	2568	2599	2621
Butts	569	569	571	571	579	579	579	585	591	596
Calhoun	225	227	227	228	229	229	229	229	229	229
Carroll	2336	2346	2372	2404	2424	2434	2439	2445	2463	2472
Cherokee	4895	4962	5056	5095	5144	5200	5211	5227	5271	5338
Clayton	6529	6561	6596	6618	6647	6664	6671	6695	6721	6761
Cobb	17097	17210	17375	17479	17595	17734	17792	17850	18005	18155
Coweta	2266	2284	2297	2308	2325	2337	2339	2346	2357	2375
Dawson	680	694	703	711	723	726	728	729	740	745
DeKalb	16650	16716	16837	16900	17004	17089	17100	17169	17237	17314
Douglas	3179	3192	3216	3227	3238	3250	3260	3269	3293	3308
Fayette	1585	1595	1606	1613	1624	1628	1628	1632	1644	1653
Forsyth	3154	3200	3240	3281	3324	3353	3358	3384	3422	3463
Fulton	25063	25150	25339	25439	25540	25631	25681	25756	25861	25934
Gwinnett	24477	24608	24763	24870	25019	25107	25127	25215	25376	25495
Hall	7801	7869	7946	8023	8118	8143	8149	8177	8189	8266
Haralson	333	333	345	350	359	365	366	367	375	378
Heard	172	173	174	176	179	180	180	180	180	180
Henry	4442	4467	4492	4529	4567	4583	4592	4609	4633	4649
Jasper	195	190	191	192	193	194	195	200	200	201
Lamar	325	325	325	328	331	332	333	334	334	337
Lee	666	668	669	641	651	654	654	657	658	662
Meriwether	488	492	497	499	500	501	505	506	508	510
Mitchell	714	717	720	721	728	727	729	734	741	742
Morgan	419	420	425	429	434	436	436	440	441	442
Newton	2325	2342	2360	2371	2375	2380	2381	2390	2406	2417
Paulding	2300	2336	2377	2403	2423	2438	2456	2464	2491	2530
Pickens	525	527	531	533	538	538	542	551	558	563
Pike	280	283	285	287	288	288	288	290	291	291
Rockdale	1665	1678	1688	1695	1701	1709	1711	1718	1724	1729
Spalding	1182	1190	1198	1202	1210	1217	1217	1221	1230	1238
Terrell	320	320	321	321	321	322	322	324	324	324
Walton	1506	1527	1550	1562	1578	1589	1597	1613	1623	1636
Worth	504	509	509	511	513	514	514	514	516	517

**Table S16.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, September 11—20, 2020.

Location	Date									
	9/11	9/12	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20
Georgia	274242	276319	277715	278699	280356	282363	284219	286170	288059	289096
Metro Atlanta	142278	143162	143706	144146	144855	145785	146605	147418	148252	148740
Dougherty	3051	3064	3067	3074	3076	3090	3097	3100	3122	3124
Baker	73	73	73	73	73	74	74	75	78	78
Bartow	2645	2666	2677	2685	2713	2741	2762	2779	2790	2801
Butts	600	608	608	609	613	614	614	623	625	630
Calhoun	230	231	229	227	229	230	231	232	233	233
Carroll	2495	2509	2523	2530	2540	2551	2578	2606	2624	2644
Cherokee	5395	5473	5513	5545	5573	5632	5675	5712	5738	5770
Clayton	6786	6819	6850	6877	6914	6960	7010	7024	7010	7015
Cobb	18255	18433	18495	18550	18601	18719	18839	18941	19000	19041
Coweta	2379	2396	2402	2412	2428	2446	2465	2483	2499	2505
Dawson	745	752	754	755	757	769	772	776	790	792
DeKalb	17380	17477	17536	17610	17698	17777	17849	17907	18006	18072
Douglas	3319	3343	3350	3358	3373	3389	3410	3423	3432	3440
Fayette	1657	1667	1675	1681	1693	1701	1715	1725	1734	1745
Forsyth	3482	3515	3528	3545	3568	3611	3629	3665	3705	3731
Fulton	26022	26108	26225	26289	26360	26517	26620	26778	26910	26992
Gwinnett	25611	25726	25806	25863	26019	26133	26280	26403	26550	26618
Hall	8306	8341	8362	8379	8444	8533	8587	8634	8757	8785
Haralson	383	394	401	402	408	412	418	425	433	438
Heard	180	181	181	183	184	186	186	188	189	189
Henry	4679	4710	4734	4751	4777	4813	4850	4895	4947	4977
Jasper	201	202	202	203	202	206	208	209	209	210
Lamar	341	342	343	343	344	349	349	350	350	351
Lee	662	667	672	673	677	682	687	689	690	693
Meriwether	513	516	518	519	523	525	525	530	532	534
Mitchell	744	747	752	756	759	762	765	770	775	779
Morgan	446	448	451	452	454	459	465	467	468	470
Newton	2418	2435	2439	2451	2466	2482	2489	2501	2519	2529
Paulding	2552	2576	2588	2594	2620	2642	2663	2693	2707	2716
Pickens	564	568	571	571	577	581	588	592	600	602
Pike	296	297	297	297	298	300	304	305	311	314
Rockdale	1739	1745	1751	1760	1766	1777	1781	1792	1806	1811
Spalding	1240	1248	1249	1251	1257	1265	1270	1273	1278	1279
Terrell	324	324	325	325	325	325	325	325	326	326
Walton	1649	1667	1677	1681	1685	1695	1704	1719	1733	1739
Worth	514	516	513	513	514	515	517	519	520	522

**Table S17.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, September 21—30, 2020.

Location	Date									
	9/21	9/22	9/23	9/24	9/25	9/26	9/27	9/28	9/29	9/30
Georgia	289975	290930	292797	294334	296089	297553	298321	298963	300019	301485
Metro Atlanta	149175	149684	150640	151360	152231	153010	153375	153731	154220	154978
Dougherty	3126	3128	3128	3129	3137	3141	3147	3149	3152	3159
Baker	78	79	79	81	83	84	84	84	84	84
Bartow	2808	2821	2835	2859	2888	2905	2910	2913	2924	2938
Butts	630	631	631	633	642	649	654	657	659	661
Calhoun	233	234	236	237	239	243	244	244	246	246
Carroll	2649	2661	2682	2709	2734	2755	2769	2788	2798	2807
Cherokee	5786	5811	5868	5912	5959	5994	6021	6033	6066	6118
Clayton	7043	7069	7086	7049	7061	7094	7078	7094	7090	7107
Cobb	19092	19174	19283	19354	19430	19513	19551	19576	19634	19740
Coweta	2513	2527	2546	2568	2578	2601	2605	2614	2617	2628
Dawson	795	795	797	802	810	812	814	814	821	830
DeKalb	18110	18192	18302	18418	18521	18600	18647	18699	18773	18859
Douglas	3447	3457	3485	3499	3520	3543	3550	3558	3571	3595
Fayette	1752	1754	1763	1789	1808	1840	1850	1855	1860	1877
Forsyth	3751	3772	3832	3868	3926	3979	4007	4022	4052	4114
Fulton	27080	27122	27247	27305	27389	27480	27529	27605	27650	27684
Gwinnett	26678	26744	26931	27051	27187	27296	27358	27424	27519	27647
Hall	8827	8864	8949	9035	9147	9225	9247	9248	9279	9373
Haralson	444	446	454	455	460	469	473	478	486	487
Heard	189	189	189	190	192	194	194	194	195	197
Henry	4994	5026	5073	5115	5156	5181	5208	5218	5248	5281
Jasper	210	210	211	211	216	220	221	221	221	222
Lamar	351	353	354	355	362	364	365	367	369	372
Lee	698	696	690	693	697	699	698	698	699	700
Meriwether	536	535	537	542	544	544	544	544	545	546
Mitchell	782	781	780	790	793	799	806	808	813	811
Morgan	472	473	476	476	478	481	481	481	485	485
Newton	2535	2540	2552	2563	2575	2579	2581	2588	2602	2610
Paulding	2717	2728	2739	2751	2760	2770	2776	2780	2789	2806
Pickens	603	610	611	613	615	618	618	618	619	619
Pike	315	315	316	320	323	324	326	329	329	333
Rockdale	1817	1818	1828	1833	1842	1846	1852	1856	1858	1865
Spalding	1289	1295	1305	1314	1327	1332	1333	1336	1335	1341
Terrell	326	327	327	327	328	329	329	329	329	329
Walton	1742	1752	1758	1771	1781	1802	1813	1821	1826	1836
Worth	523	523	523	525	528	530	530	532	535	535

**Table S18.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, October 1—10, 2020.

Location	Date									
	10/1	10/2	10/3	10/4	10/5	10/6	10/7	10/8	10/9	10/10
Georgia	303010	304406	305941	306778	328127	329101	330769	332142	333934	335351
Metro Atlanta	155762	156373	157175	157623	168692	169212	170128	170936	171879	172643
Dougherty	3163	3164	3170	3170	3343	3344	3347	3352	3364	3375
Baker	84	84	84	84	94	94	94	95	95	95
Bartow	2960	2983	3000	3007	3168	3195	3211	3237	3261	3284
Butts	669	674	683	684	778	795	802	802	804	806
Calhoun	247	250	250	250	265	265	266	266	267	270
Carroll	2819	2840	2862	2874	3311	3321	3338	3362	3383	3407
Cherokee	6159	6185	6218	6239	6708	6722	6768	6792	6826	6856
Clayton	7114	7121	7159	7178	7575	7557	7620	7664	7722	7783
Cobb	19829	19872	19968	20010	21540	21606	21710	21780	21853	21925
Coweta	2637	2646	2662	2669	3301	3313	3325	3333	3344	3369
Dawson	838	839	847	848	872	871	873	876	879	882
DeKalb	18938	19030	19084	19128	19962	20059	20185	20269	20367	20409
Douglas	3621	3633	3656	3671	3916	3927	3981	3995	4013	4043
Fayette	1896	1906	1914	1922	2196	2202	2208	2218	2225	2224
Forsyth	4160	4182	4200	4211	4526	4552	4586	4612	4634	4656
Fulton	27790	27855	27994	28096	29916	29976	30110	30299	30552	30660
Gwinnett	27733	27844	27986	28074	29575	29653	29774	29907	30039	30158
Hall	9498	9567	9617	9618	9745	9783	9839	9879	9954	10047
Haralson	493	500	511	518	609	611	615	629	632	635
Heard	199	200	201	201	233	233	233	233	234	235
Henry	5307	5352	5399	5416	5852	5892	5933	5974	6010	6041
Jasper	221	222	224	225	330	331	331	332	333	334
Lamar	374	377	380	381	457	458	459	462	464	466
Lee	703	705	709	710	779	781	783	785	789	789
Meriwether	546	548	556	558	647	647	647	647	647	649
Mitchell	818	820	823	824	857	858	861	864	864	871
Morgan	487	487	489	489	611	612	618	619	620	622
Newton	2617	2620	2627	2639	2862	2864	2869	2881	2886	2897
Paulding	2827	2834	2854	2860	3221	3226	3241	3248	3264	3279
Pickens	621	623	628	632	667	669	675	678	679	686
Pike	343	347	347	348	498	499	502	506	510	510
Rockdale	1872	1882	1892	1896	1976	1977	1985	1991	2003	2015
Spalding	1347	1354	1355	1364	1573	1581	1589	1595	1607	1615
Terrell	329	329	330	331	364	366	366	366	366	366
Walton	1847	1850	1862	1867	2067	2080	2101	2116	2134	2150
Worth	536	538	545	547	599	602	612	613	615	619

**Table S19.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, October 11—20, 2020.

Location	Date									
	10/11	10/12	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20
Georgia	336586	339577	340758	342302	344093	345879	347468	348773	350654	351990
Metro Atlanta	173378	175181	175889	176717	177632	178604	179459	180198	180881	181607
Dougherty	3376	3389	3393	3403	3411	3417	3420	3428	3439	3443
Baker	95	96	96	96	97	97	97	98	101	102
Bartow	3303	3367	3392	3433	3471	3498	3539	3564	3604	3649
Butts	807	820	824	824	814	815	823	825	825	826
Calhoun	270	271	271	273	275	276	276	276	276	276
Carroll	3419	3545	3562	3575	3608	3656	3677	3700	3782	3792
Cherokee	6904	7000	7021	7074	7128	7183	7218	7249	7270	7292
Clayton	7841	7944	8004	8051	8121	8189	8234	8277	8286	8324
Cobb	22031	22299	22368	22527	22613	22730	22807	22847	22865	22924
Coweta	3383	3491	3506	3514	3538	3564	3568	3582	3629	3637
Dawson	882	883	885	892	903	904	910	911	911	918
DeKalb	20498	20584	20638	20698	20810	20929	21023	21116	21133	21221
Douglas	4072	4105	4119	4132	4151	4166	4188	4200	4212	4224
Fayette	2233	2242	2255	2263	2281	2288	2295	2316	2316	2329
Forsyth	4675	4677	4699	4739	4765	4801	4826	4849	4863	4878
Fulton	30790	31070	31174	31229	31329	31462	31578	31719	31795	31906
Gwinnett	30242	30470	30624	30766	30904	31027	31167	31298	31421	31539
Hall	10070	10104	10147	10217	10282	10352	10428	10450	10467	10537
Haralson	637	660	666	674	681	687	704	709	735	739
Heard	235	238	239	239	240	242	245	245	249	249
Henry	6072	6184	6214	6238	6285	6331	6368	6420	6465	6486
Jasper	335	339	342	343	344	346	347	345	350	349
Lamar	466	472	472	472	475	476	481	484	489	489
Lee	789	792	794	796	797	800	803	803	811	811
Meriwether	650	656	658	659	662	662	664	667	669	671
Mitchell	872	873	874	874	874	876	877	877	880	881
Morgan	625	627	628	631	633	636	635	638	640	641
Newton	2911	2946	2953	2968	2985	2997	3007	3018	3046	3055
Paulding	3290	3357	3366	3388	3396	3402	3427	3431	3448	3458
Pickens	689	697	698	700	710	714	728	730	737	747
Pike	511	533	535	536	538	540	541	542	559	561
Rockdale	2025	2043	2051	2061	2069	2089	2098	2111	2123	2127
Spalding	1623	1647	1656	1666	1679	1687	1691	1701	1717	1736
Terrell	368	369	369	369	370	369	371	372	373	373
Walton	2159	2181	2193	2208	2217	2231	2242	2254	2275	2303
Worth	620	624	626	628	631	634	634	636	641	643

**Table S20.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, October 21—31, 2020.

Location	Date										
	10/21	10/22	10/23	10/24	10/25	10/26	10/27	10/28	10/29	10/30	10/31
Georgia	353449	355156	357319	359001	360344	364275	365498	367126	368840	370157	372631
Metro Atlanta	182355	183167	184475	185387	186139	188288	188917	189846	190698	191466	192866
Dougherty	3449	3454	3461	3465	3467	3470	3468	3474	3479	3481	3486
Baker	102	103	104	104	105	105	105	105	106	106	106
Bartow	3680	3721	3748	3775	3808	3862	3896	3919	3949	3971	3996
Butts	826	829	835	840	840	850	848	851	854	854	855
Calhoun	277	278	280	281	281	281	285	285	287	290	292
Carroll	3806	3841	3895	3908	3930	4087	4071	4075	4094	4104	4151
Cherokee	7334	7395	7464	7512	7551	7652	7677	7756	7814	7837	7913
Clayton	8375	8410	8464	8529	8564	8628	8660	8713	8758	8822	8877
Cobb	23036	23122	23232	23345	23419	23727	23780	23890	23972	24045	24255
Coweta	3649	3661	3683	3696	3717	3843	3850	3857	3869	3886	3899
Dawson	922	925	928	932	933	936	938	942	949	952	953
DeKalb	21309	21410	21596	21710	21804	22012	22064	22194	22298	22404	22550
Douglas	4247	4266	4303	4317	4330	4412	4418	4448	4469	4481	4531
Fayette	2340	2354	2368	2371	2383	2414	2420	2420	2426	2436	2463
Forsyth	4890	4910	4950	4977	4990	5055	5090	5127	5147	5178	5243
Fulton	32051	32174	32450	32601	32748	32990	33102	33284	33379	33492	33719
Gwinnett	31589	31632	31782	31877	31979	32228	32334	32441	32591	32739	32947
Hall	10566	10607	10651	10696	10717	10762	10815	10851	10897	10942	10994
Haralson	745	751	760	765	767	808	815	823	832	834	845
Heard	250	254	259	261	262	270	271	272	277	280	283
Henry	6503	6528	6579	6625	6665	6741	6782	6801	6847	6882	6937
Jasper	349	349	351	351	352	358	358	359	361	361	361
Lamar	490	489	490	492	506	511	512	513	514	516	520
Lee	812	815	816	818	818	822	821	823	823	827	830
Meriwether	673	675	678	685	687	696	699	697	698	699	700
Mitchell	881	882	884	886	886	895	890	892	893	895	894
Morgan	641	644	646	649	649	662	665	668	672	673	676
Newton	3061	3073	3087	3097	3100	3121	3127	3139	3149	3163	3189
Paulding	3471	3486	3512	3526	3534	3613	3631	3660	3677	3688	3729
Pickens	757	764	772	778	796	806	818	828	848	850	859
Pike	561	564	565	566	569	589	591	593	597	599	599
Rockdale	2135	2140	2164	2192	2199	2213	2219	2233	2245	2248	2266
Spalding	1745	1764	1781	1793	1806	1843	1855	1866	1878	1884	1896
Terrell	373	373	375	375	375	377	378	378	377	378	378
Walton	2354	2429	2482	2521	2534	2599	2611	2626	2637	2646	2660
Worth	651	652	654	655	655	665	665	668	670	670	671

**Table S21.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, November 1—9, 2020.

Location	Date								
	11/1	11/2	11/3	11/4	11/5	11/6	11/7	11/8	11/9
Georgia	373700	377261	378894	382113	384531	387202	389257	390617	392246
Metro Atlanta	193445	195395	196334	198281	199517	201070	202089	202992	203904
Dougherty	3492	3508	3509	3516	3523	3535	3543	3548	3552
Baker	106	107	108	111	112	113	114	116	117
Bartow	3996	4042	4066	4127	4167	4203	4239	4256	4281
Butts	857	876	883	887	899	913	915	917	919
Calhoun	292	294	294	300	303	305	297	297	297
Carroll	4162	4284	4300	4384	4425	4475	4499	4538	4583
Cherokee	7959	8078	8133	8196	8241	8342	8418	8469	8570
Clayton	8927	8978	9025	9092	9130	9176	9230	9276	9309
Cobb	24288	24528	24685	24930	25090	25303	25435	25521	25624
Coweta	3904	4005	4013	4096	4114	4158	4175	4204	4230
Dawson	954	955	959	965	970	973	976	978	980
DeKalb	22641	22776	22914	23178	23332	23495	23584	23733	23836
Douglas	4538	4604	4626	4694	4724	4778	4805	4819	4833
Fayette	2484	2533	2547	2584	2596	2613	2622	2637	2649
Forsyth	5261	5311	5329	5388	5423	5476	5516	5537	5556
Fulton	33817	34027	34155	34388	34605	34801	34940	35109	35229
Gwinnett	33063	33346	33471	33740	33883	34131	34266	34402	34514
Hall	11002	11053	11111	11185	11253	11297	11347	11371	11405
Haralson	846	862	864	901	931	939	958	968	999
Heard	284	290	291	300	304	309	309	310	312
Henry	6973	7078	7100	7182	7255	7317	7367	7385	7416
Jasper	361	371	373	375	377	379	380	381	382
Lamar	522	528	534	542	546	556	562	562	567
Lee	831	842	842	845	847	849	854	854	855
Meriwether	700	706	708	711	712	714	718	724	730
Mitchell	895	903	903	910	912	913	920	922	923
Morgan	677	705	704	714	719	724	726	726	725
Newton	3196	3228	3235	3264	3278	3309	3334	3349	3371
Paulding	3735	3808	3838	3902	3931	4001	4029	4038	4050
Pickens	863	869	876	892	899	906	914	917	920
Pike	599	627	629	636	640	644	652	656	657
Rockdale	2272	2305	2315	2337	2347	2364	2377	2394	2409
Spalding	1898	1929	1947	1965	1989	2010	2023	2029	2040
Terrell	378	380	380	380	380	382	383	385	387
Walton	2666	2693	2703	2726	2737	2764	2773	2786	2808
Worth	673	680	680	680	680	683	683	683	683



**Table S22.** Cumulative number of reported COVID-19 cases in the state of Georgia, Metro Atlanta counties, Dougherty County and surrounding counties, November 10—20, 2020.

Location	Date										
	11/10	11/11	11/12	11/13	11/14	11/15	11/16	11/17	11/18	11/19	11/20
Georgia	396498	398769	401750	404577	407596	409504	410581	414821	417934	421381	424759
Metro Atlanta	206585	207774	209316	210705	212410	213524	213926	216746	218521	220363	222296
Dougherty	3560	3567	3575	3587	3597	3603	3605	3607	3622	3637	3646
Baker	117	116	119	119	119	119	119	120	120	120	121
Bartow	4359	4390	4421	4460	4494	4524	4546	4619	4680	4730	4772
Butts	929	932	940	949	965	971	971	980	979	985	996
Calhoun	302	305	305	304	306	306	306	293	295	294	292
Carroll	4658	4717	4778	4822	4855	4880	4919	4974	5012	5078	5156
Cherokee	8713	8782	8871	8978	9097	9162	9207	9366	9464	9578	9665
Clayton	9405	9449	9517	9558	9621	9669	9686	9752	9830	9906	9967
Cobb	26016	26167	26328	26468	26705	26857	26939	27265	27528	27754	28012
Coweta	4332	4354	4379	4395	4427	4454	4471	4567	4624	4691	4747
Dawson	987	990	995	1002	1009	1012	1014	1030	1048	1063	1076
DeKalb	24094	24250	24457	24626	24848	25020	25071	25353	25578	25784	26027
Douglas	4906	4932	4960	4995	5030	5051	5070	5109	5167	5204	5262
Fayette	2676	2684	2705	2714	2731	2762	2767	2808	2825	2860	2916
Forsyth	5669	5709	5752	5792	5849	5884	5892	6032	6122	6189	6244
Fulton	35605	35783	36039	36277	36549	36708	36592	37250	37477	37734	38026
Gwinnett	34903	35105	35339	35572	35835	36018	36118	36516	36744	37004	37267
Hall	11502	11535	11605	11641	11696	11733	11744	11858	11937	11998	12059
Haralson	1026	1052	1068	1116	1129	1134	1141	1164	1181	1207	1220
Heard	317	319	324	327	330	334	338	338	340	342	347
Henry	7527	7561	7631	7683	7754	7791	7802	7893	7954	8018	8110
Jasper	387	390	392	396	401	402	405	414	421	430	435
Lamar	574	580	585	591	597	600	601	613	614	622	634
Lee	859	859	862	867	873	873	873	877	892	897	911
Meriwether	736	737	738	740	743	744	745	747	748	749	754
Mitchell	925	929	934	940	942	942	942	943	947	948	947
Morgan	725	739	751	753	755	755	761	765	775	779	789
Newton	3404	3417	3435	3452	3480	3490	3504	3547	3572	3600	3620
Paulding	4175	4192	4231	4252	4290	4309	4314	4374	4428	4496	4547
Pickens	929	933	942	965	981	993	1015	1034	1048	1052	1065
Pike	670	681	693	696	707	708	709	721	722	732	749
Rockdale	2427	2440	2456	2469	2485	2489	2493	2520	2533	2557	2574
Spalding	2093	2097	2107	2118	2129	2136	2140	2161	2174	2196	2212
Terrell	387	388	388	388	389	389	388	388	390	389	392
Walton	2841	2857	2877	2898	2918	2934	2951	2976	2996	3025	3048
Worth	684	686	686	689	692	692	692	696	701	704	704

**Table S23.** Sensitivity analysis: Median  $R_t$  as of the assumed date of infection of November 11, 2020 with credible intervals and standard deviation with an increase in the cumulative incidence by 11% for Georgia, Metro Atlanta, Metro Atlanta counties, Dougherty county, and counties surrounding Dougherty county.

		As of the date of infection of November 11, 2020 Sensitivity analysis: Incidence increased by 11%	
Location	Assumed date of infection (dd-mmm-yy)	Median $R_t$ (2.5%, 97.5% quantiles)	Mean $R_t$ (Standard Deviation)
Georgia	22-Feb-20	1.03 (1.03, 1.03)	1.03 (0.0002)
Metro Atlanta	22-Feb-20	1.03 (1.03, 1.03)	1.03 (0.0003)
Dougherty	6-Mar-20	1.02 (1.00, 1.04)	1.02 (0.01)
Baker	15-Mar-20	1.01 (1.01, 1.01)	1.01 (0.002)
Bartow	2-Mar-20	1.04 (1.04, 1.04)	1.04 (0.001)
Butts	13-Mar-20	1.03 (1.01, 1.06)	1.03 (0.01)
Calhoun	17-Mar-20	0.99 (0.98, 1.01)	0.99 (0.01)
Carroll	11-Mar-20	1.04 (1.04, 1.05)	1.04 (0.002)
Cherokee	28-Feb-20	1.05 (1.04, 1.05)	1.05 (0.001)
Clayton	6-Mar-20	1.03 (1.02, 1.03)	1.03 (0.001)
Cobb	27-Feb-20	1.03 (1.03, 1.03)	1.03 (0.0007)
Coweta	5-Mar-20	1.04 (1.04, 1.05)	1.04 (0.002)
Dawson	11-Mar-20	1.03 (1.02, 1.04)	1.03 (0.004)
DeKalb	29-Feb-20	1.03 (1.03, 1.03)	1.03 (0.0007)
Douglas	11-Mar-20	1.03 (1.03, 1.04)	1.03 (0.002)
Fayette	29-Feb-20	1.04 (1.03, 1.04)	1.04 (0.003)
Forsyth	7-Mar-20	1.04 (1.04, 1.05)	1.04 (0.002)
Fulton	22-Feb-20	1.03 (1.03, 1.03)	1.03 (0.0006)
Gwinnett	27-Feb-20	1.03 (1.03, 1.03)	1.03 (0.0006)
Hall	7-Mar-20	1.02 (1.02, 1.02)	1.02 (0.001)
Haralson	17-Mar-20	1.08 (1.07, 1.09)	1.08 (0.004)
Heard	11-Mar-20	1.04 (1.03, 1.06)	1.04 (0.006)
Henry	4-Mar-20	1.03 (1.03, 1.04)	1.03 (0.001)
Jasper	15-Mar-20	1.05 (1.03, 1.06)	1.05 (0.006)
Lamar	11-Mar-20	1.04 (1.03, 1.05)	1.04 (0.005)
Lee	2-Mar-20	1.02 (1.01, 1.03)	1.02 (0.004)
Meriwether	15-Mar-20	1.01 (1.01, 1.02)	1.01 (0.004)
Mitchell	15-Mar-20	1.01 (1.00, 1.02)	1.01 (0.003)
Morgan	14-Mar-20	1.03 (1.02, 1.04)	1.03 (0.004)
Newton	6-Mar-20	1.03 (1.02, 1.03)	1.03 (0.002)
Paulding	7-Mar-20	1.04 (1.04, 1.04)	1.04 (0.002)
Pickens	11-Mar-20	1.06 (1.05, 1.07)	1.06 (0.004)

Pike	19-Mar-20	1.04 (1.04, 1.05)	1.04 (0.004)
Rockdale	10-Mar-20	1.03 (1.02, 1.03)	1.03 (0.002)
Spalding	11-Mar-20	1.03 (1.03, 1.04)	1.03 (0.003)
Terrell	11-Mar-20	1.01 (0.99, 1.02)	1.01 (0.01)
Walton	19-Mar-20	1.03 (1.03, 1.04)	1.03 (0.002)
Worth	11-Mar-20	1.01 (1.00, 1.02)	1.01 (0.004)

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### Legends of Supplementary Figures: Results for Counties in Metro Atlanta and those surrounding Dougherty County, GA, USA.

**Figure S1.** Comparison of cumulative incidence for counties surrounding Dougherty County, February 22—November 11, 2020, as assumed date of infection.

**Figure S2.** Comparison between  $R_t$  for Bartow County, Butts County, Carroll County, Cherokee County, Clayton County, Cobb County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

**Figure S3.** Comparison between  $R_t$  for Coweta County, Dawson County, DeKalb County, Douglas County, Fayette County, Forsyth County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

**Figure S4.** Comparison between  $R_t$  for Fulton County, Gwinnett County, Hall County, Haralson County, Heard County, Heard County, Henry County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

**Figure S5.** Comparison between  $R_t$  for Jasper County, Lamar County, Meriwether County, Morgan County, Newton County, Paulding County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

**Figure S6.** Comparison between  $R_t$  for Pickens County, Pike County, Rockdale County, Spalding County, Walton County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

**Figure S7.** Sensitivity analysis: Comparison between  $R_t$  calculated with an increased incidence by 11% for Georgia, Metro Atlanta and Dougherty County from February 22—November 11, 2020, as assumed

date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

**Figure S8.** Sensitivity analysis: Comparison between  $R_t$  calculated with an increased incidence by 11% for Baker County, Bartow County, Butts County, Calhoun County, Carroll County, Cherokee County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

**Figure S9.** Sensitivity analysis: Comparison between  $R_t$  calculated with an increased incidence by 11% for Clayton County, Cobb County, Coweta County, DeKalb County, Douglas County, Fayette County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

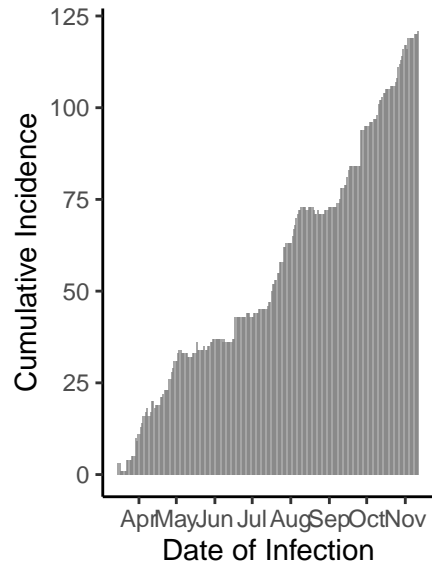
**Figure S10.** Sensitivity analysis: Comparison between  $R_t$  calculated with an increased incidence by 11% for Forsyth County, Fulton County, Gwinnett County, Hall County, Haralson County, and Heard County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

**Figure S11.** Sensitivity analysis: Comparison between  $R_t$  calculated with an increased incidence by 11% for Henry County, Jasper County, Lamar County, Lee County, Meriwether County, and Mitchell County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

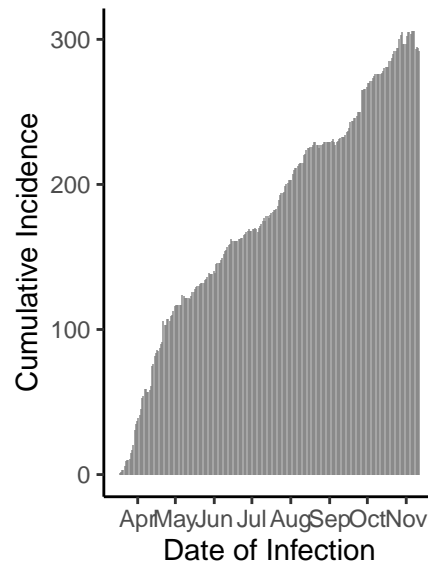
**Figure S12.** Sensitivity analysis: Comparison between  $R_t$  calculated with an increased incidence by 11% for Morgan County, Newton County, Paulding County, Pickens County, Pike County, Rockdale County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

**Figure S13.** Sensitivity analysis: Comparison between  $R_t$  calculated with an increased incidence by 11% for Spalding County, Terrell County, Walton County, Worth County from February 22—November 11, 2020, as assumed date of infection, estimated using the instantaneous reproduction number method implemented in *EpiEstim* package.

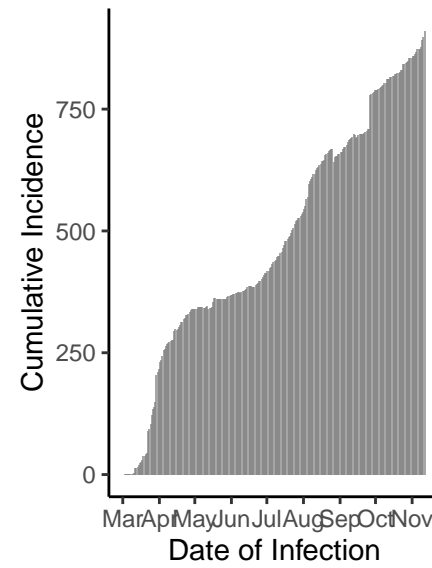
*Baker County*



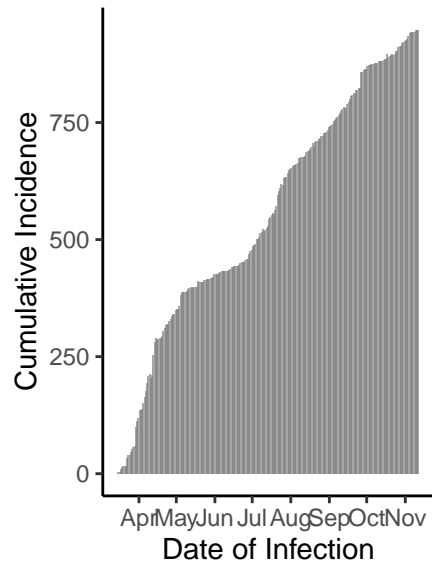
*Calhoun County*



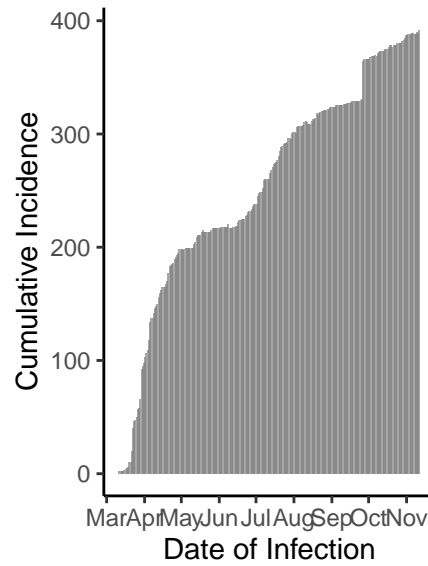
*Lee County*



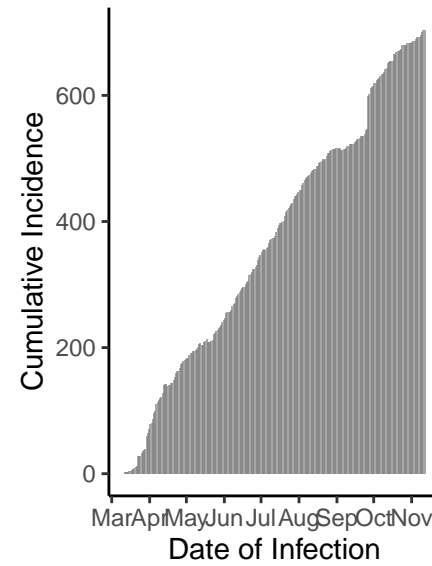
*Mitchell County*



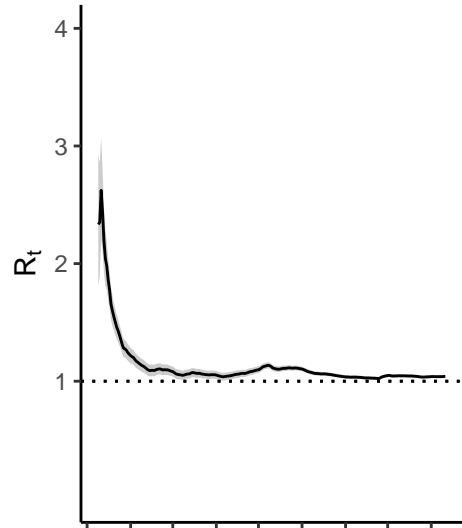
*Terrell County*



*Worth County*

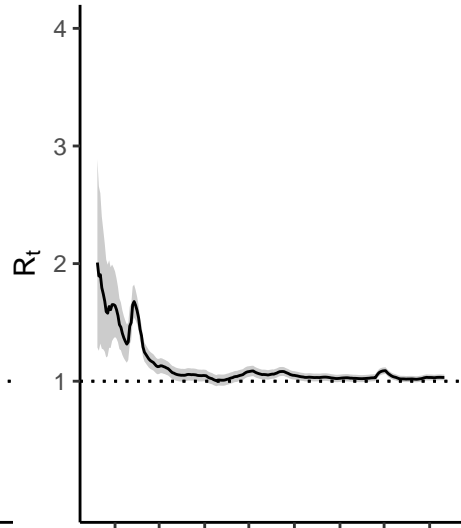


*Bartow County*



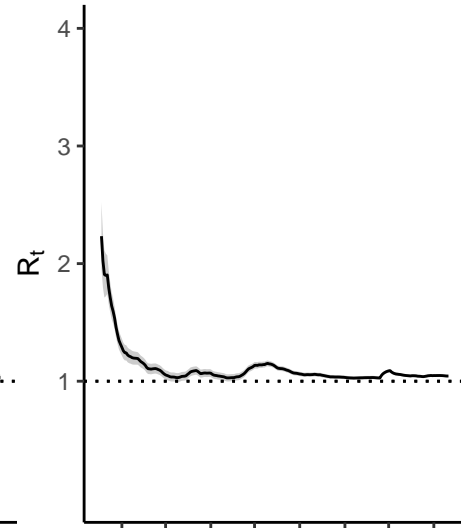
Date of infection  
*Cherokee County*

*Butts County*

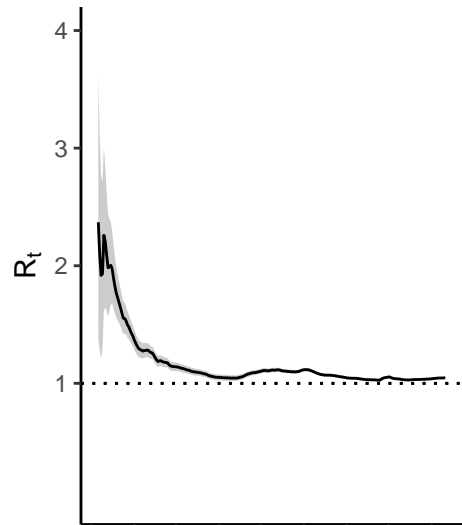


Date of infection  
*Clayton County*

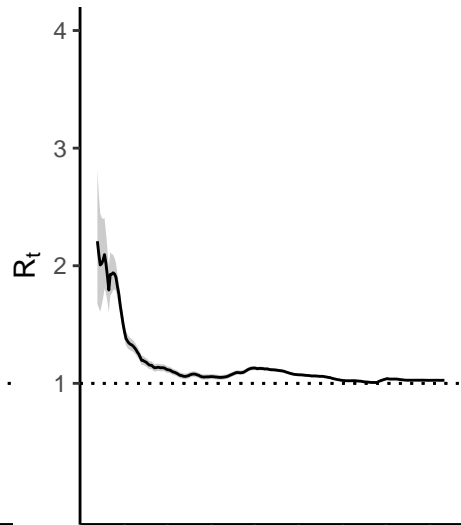
*Carroll County*



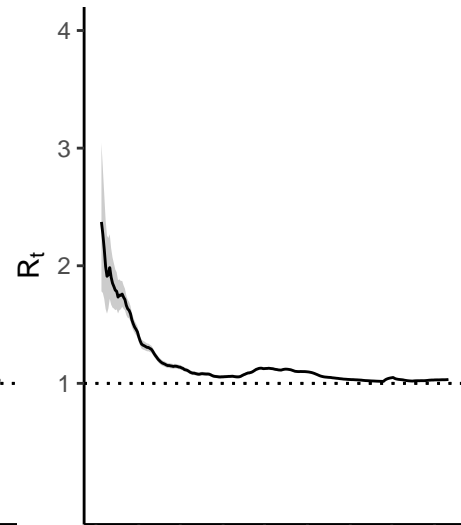
Date of infection  
*Cobb County*



Date of infection

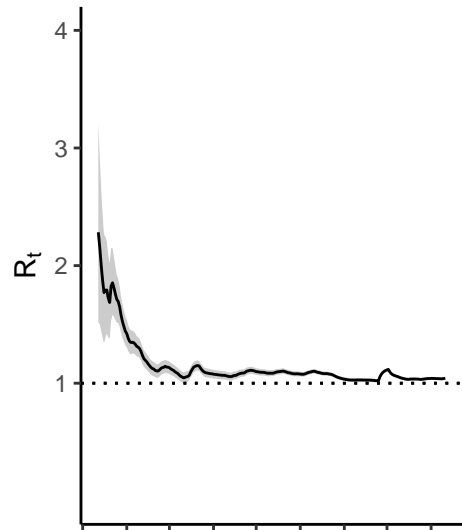


Date of infection



Date of infection

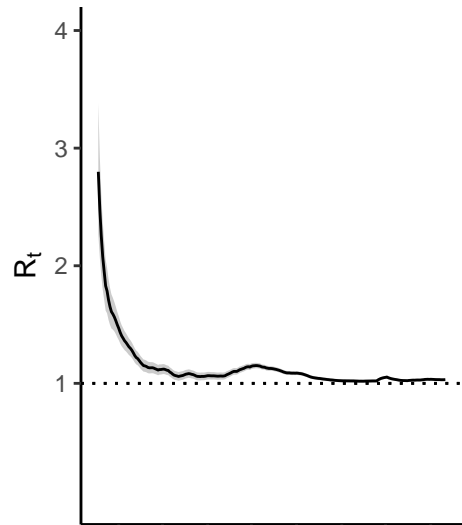
*Coweta County*



Mar Apr May Jun Jul Aug Sep Oct Nov

Date of infection

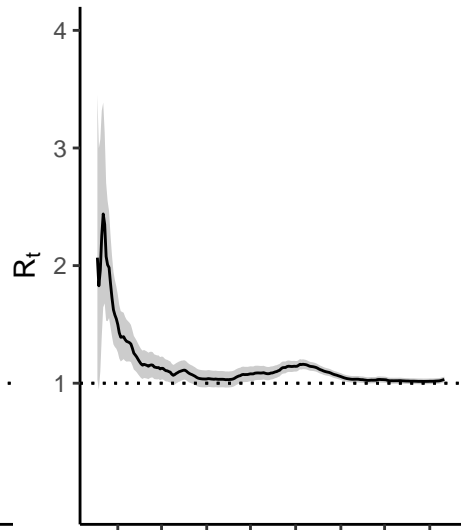
*Douglas County*



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Date of infection

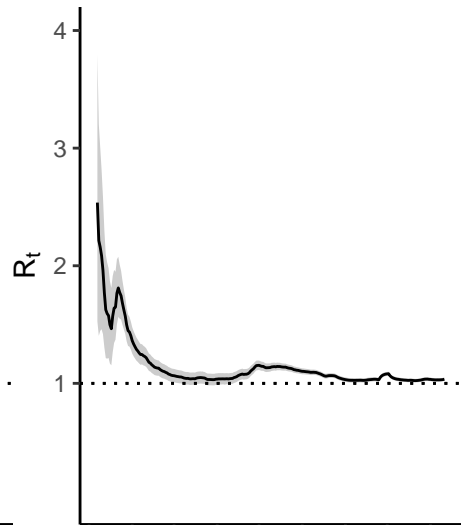
*Dawson County*



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Date of infection

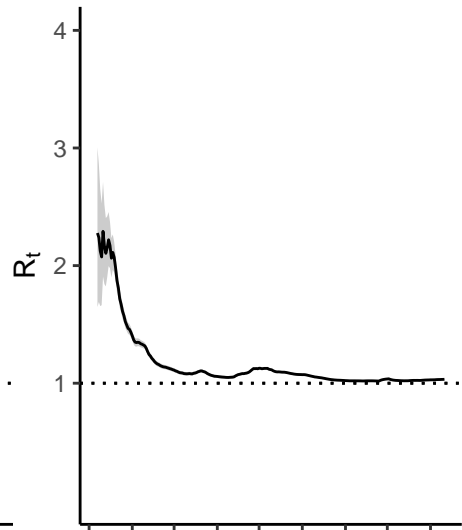
*Fayette County*



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Date of infection

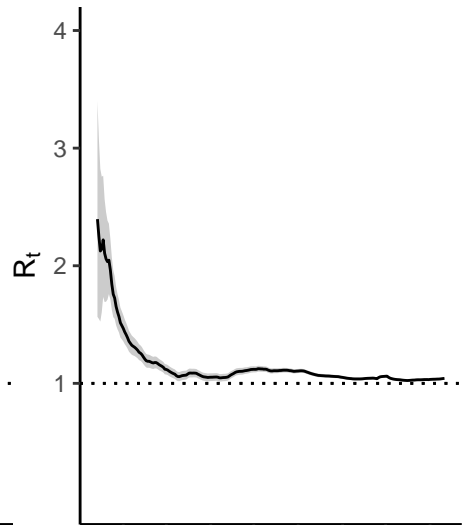
*DeKalb County*



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Date of infection

*Forsyth County*

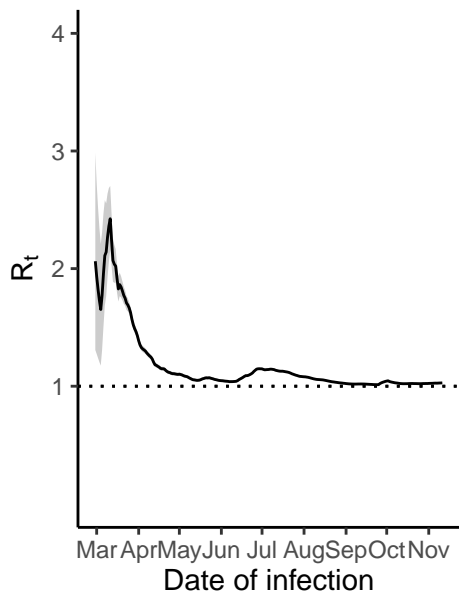


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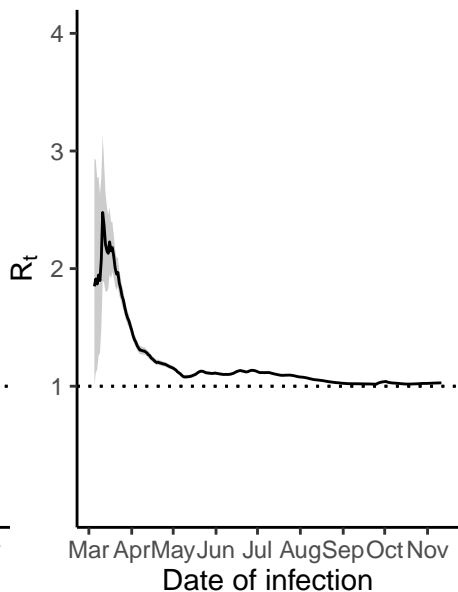
Date of infection



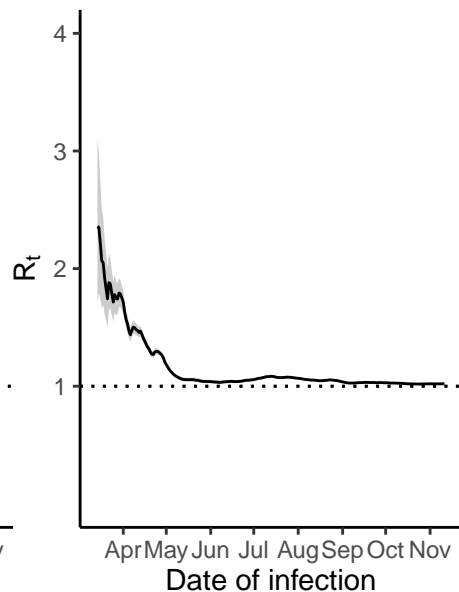
*Fulton County*



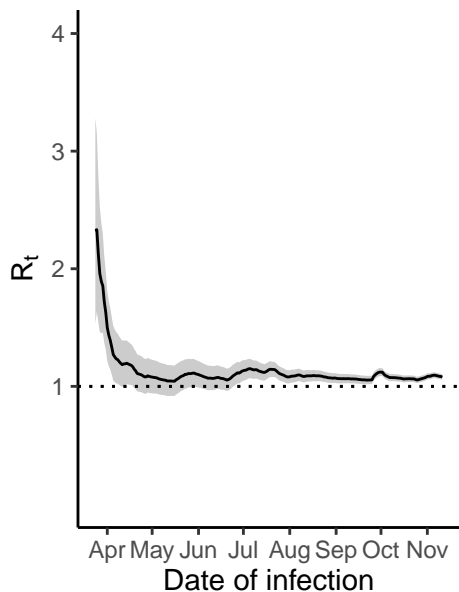
*Gwinnett County*



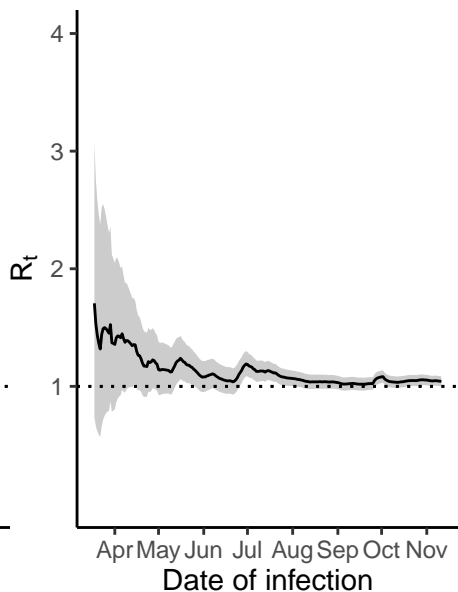
*Hall County*



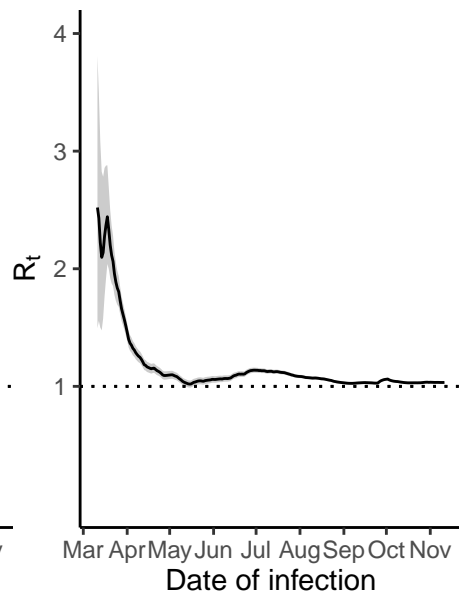
*Haralson County*



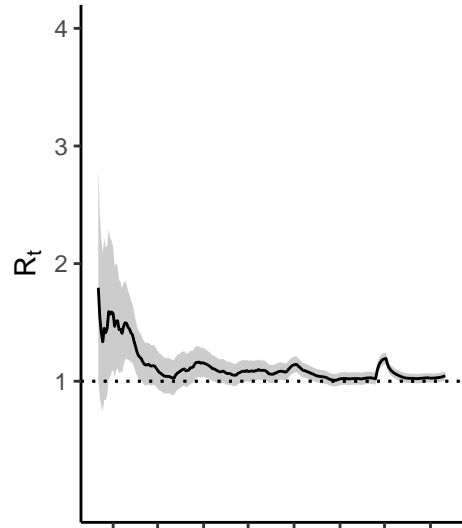
*Heard County*



*Henry County*

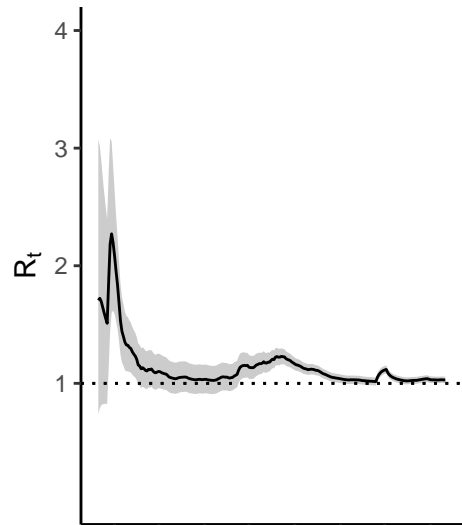


*Jasper County*



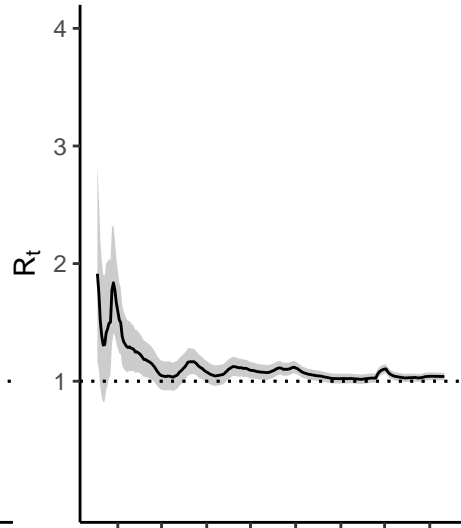
Apr May Jun Jul Aug Sep Oct Nov  
Date of infection

*Morgan County*



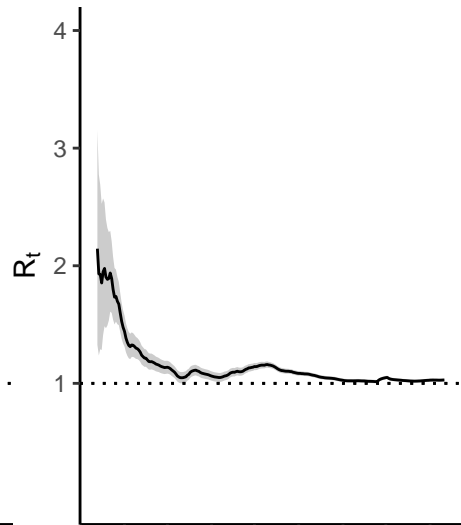
Apr May Jun Jul Aug Sep Oct Nov  
Date of infection

*Lamar County*



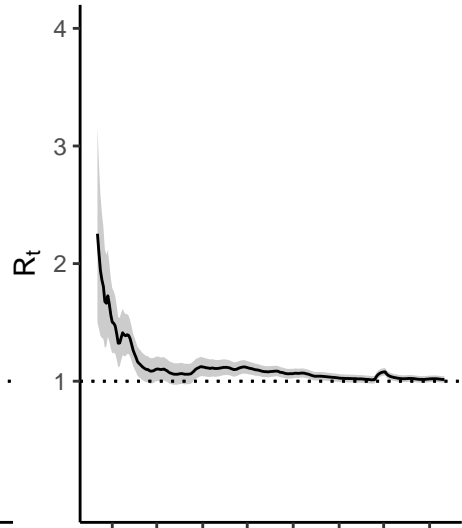
Apr May Jun Jul Aug Sep Oct Nov  
Date of infection

*Newton County*



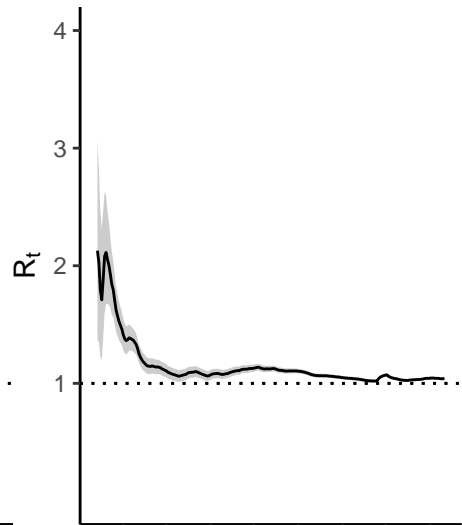
Mar Apr May Jun Jul Aug Sep Oct Nov  
Date of infection

*Meriwether County*



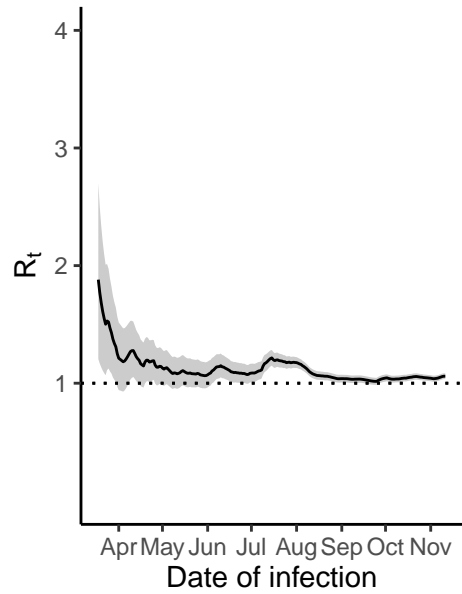
Apr May Jun Jul Aug Sep Oct Nov  
Date of infection

*Paulding County*

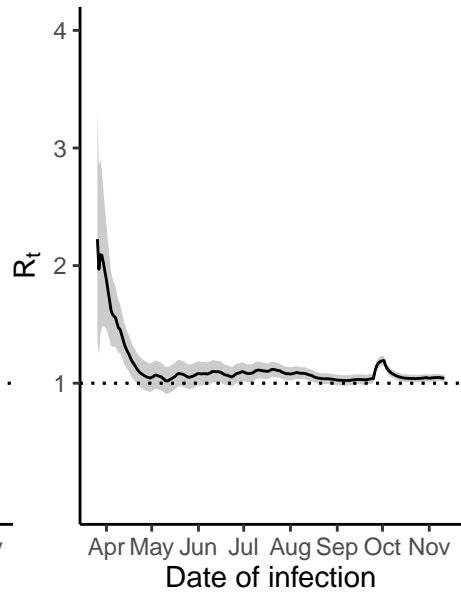


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Date of infection

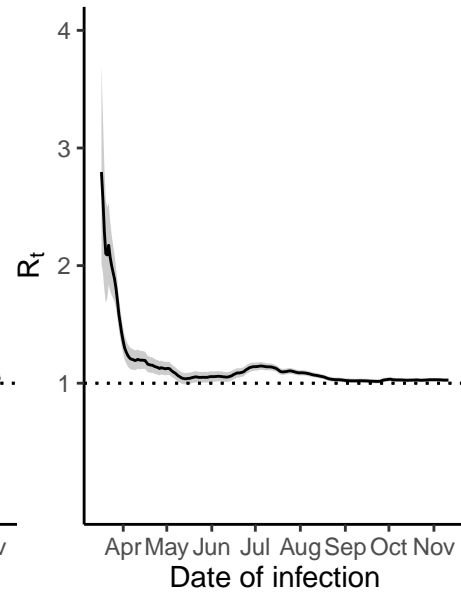
*Pickens County*



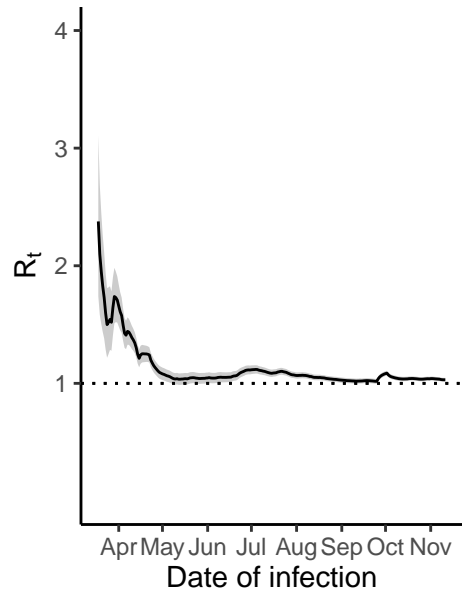
*Pike County*



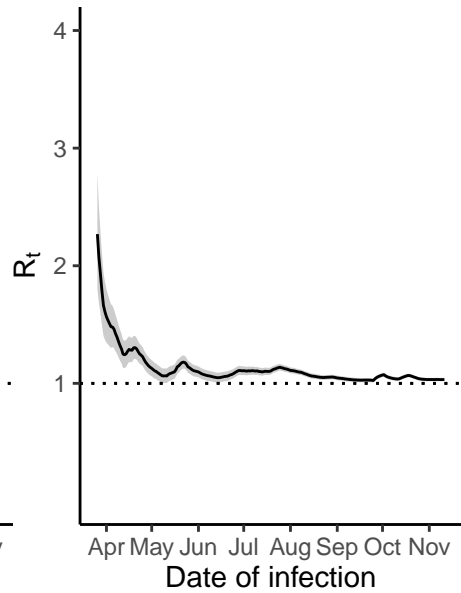
*Rockdale County*



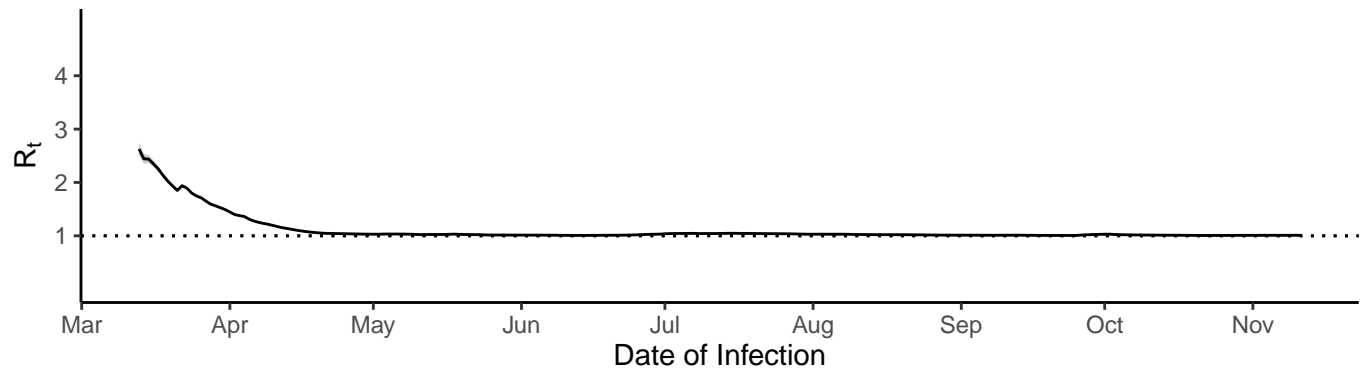
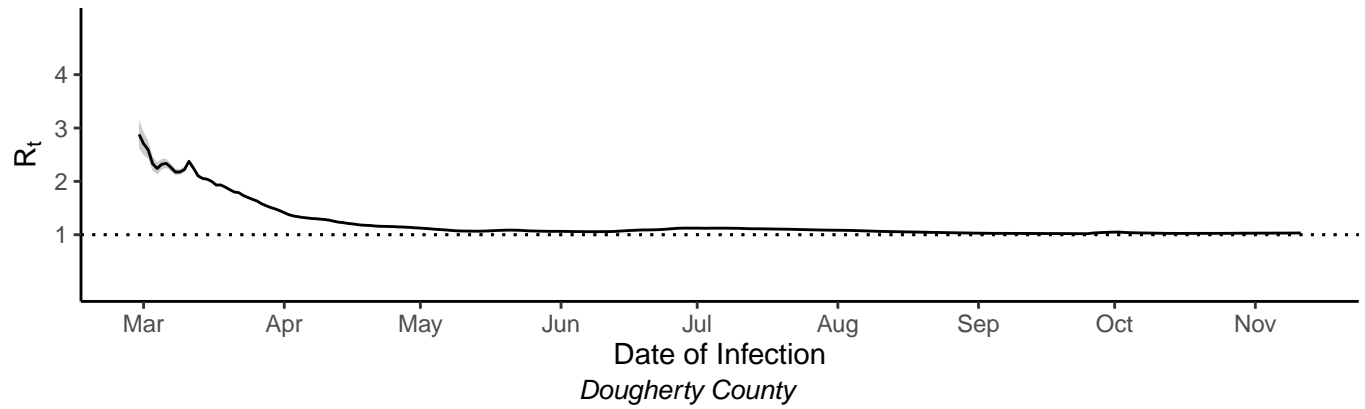
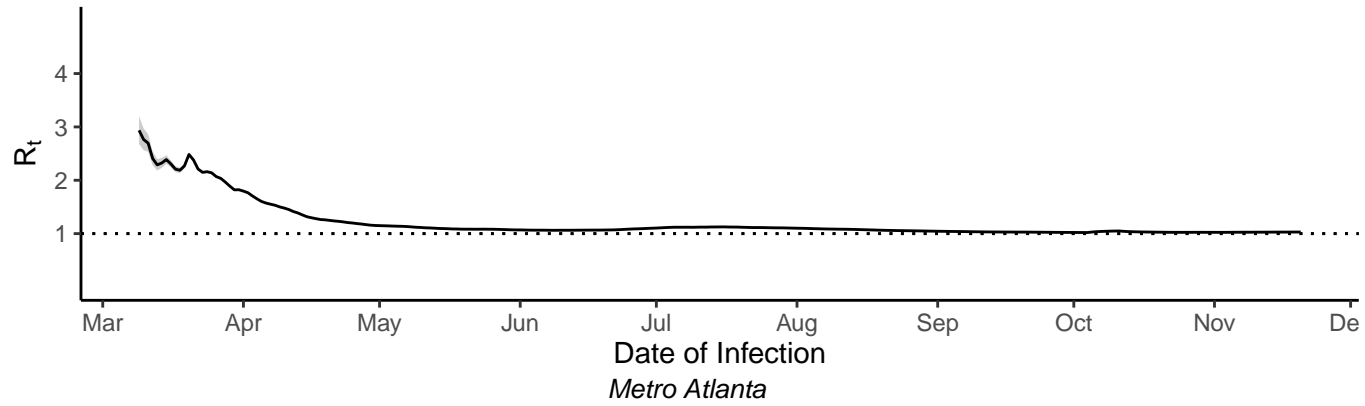
*Spalding County*



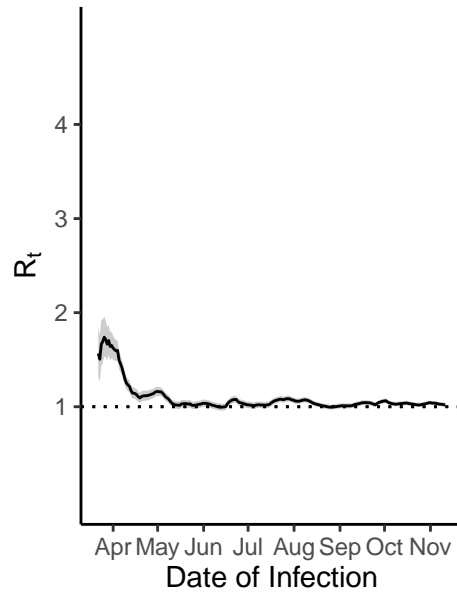
*Walton County*



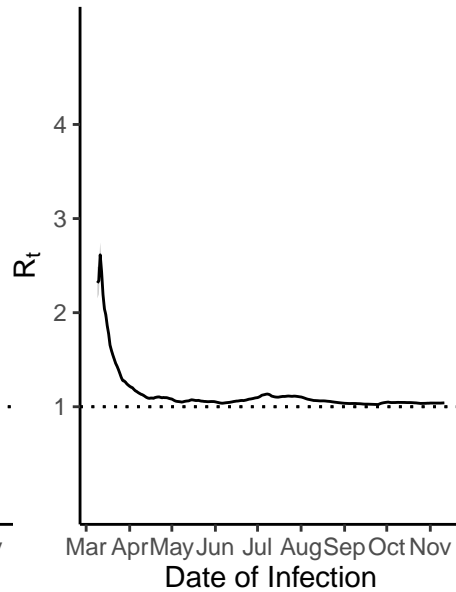
Georgia



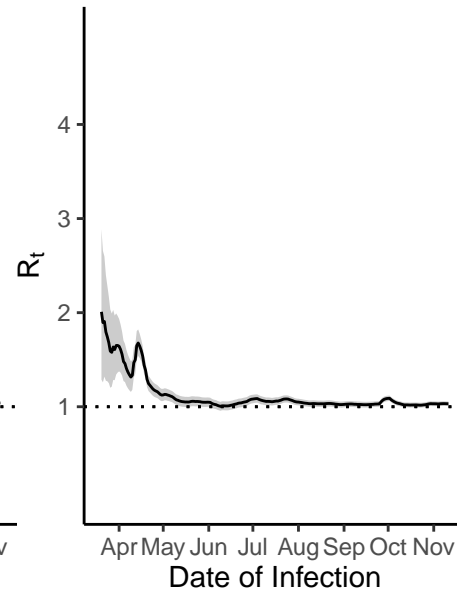
*Baker County*



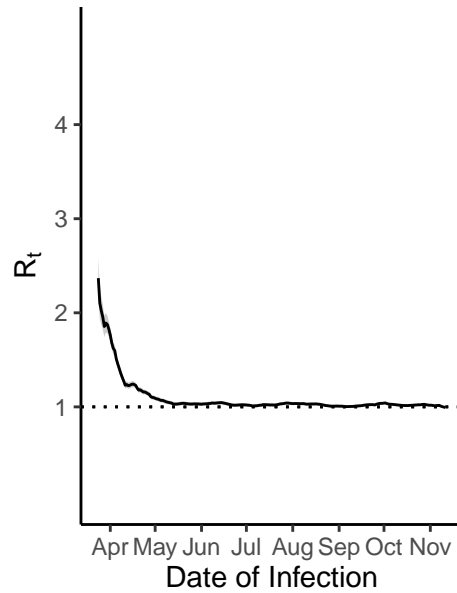
*Bartow County*



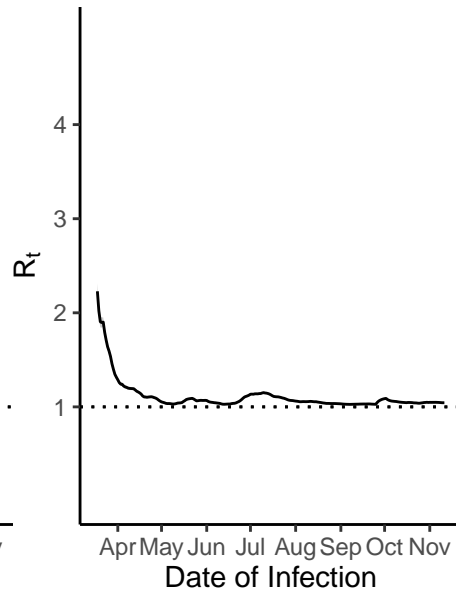
*Butts County*



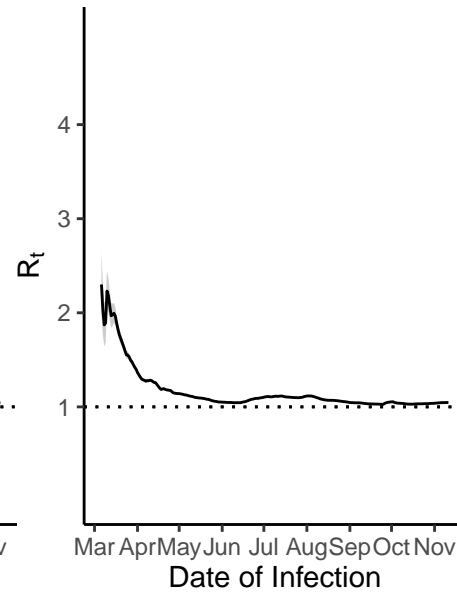
*Calhoun County*



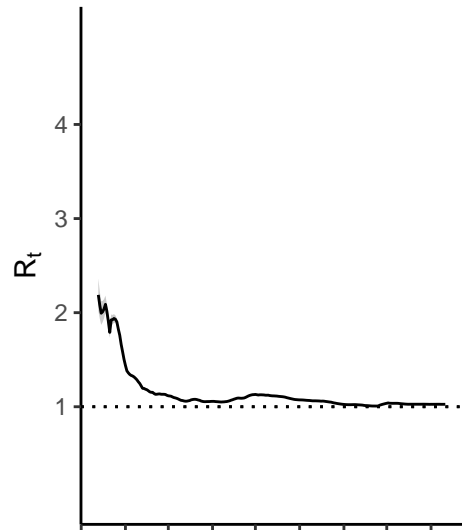
*Carroll County*



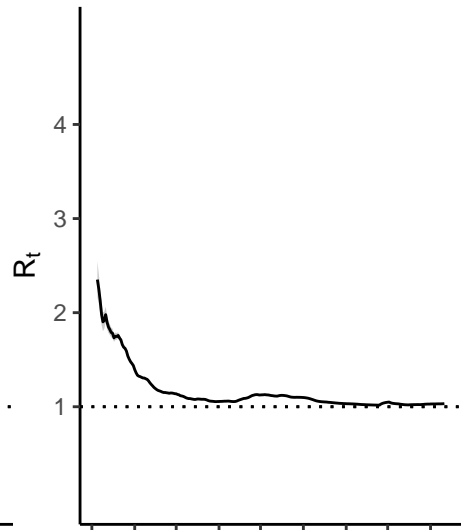
*Cherokee County*



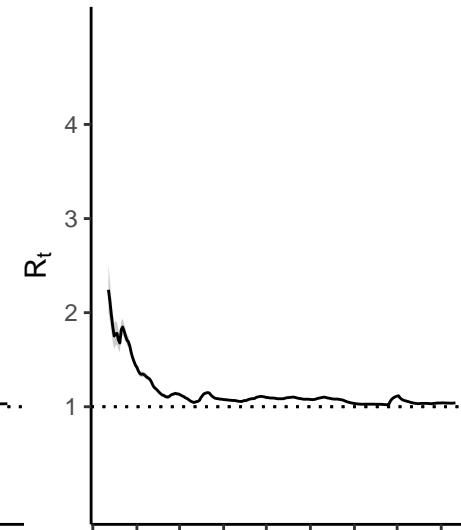
*Clayton County*



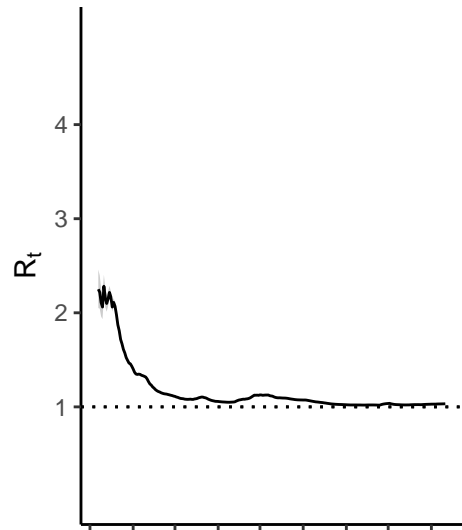
*Cobb County*



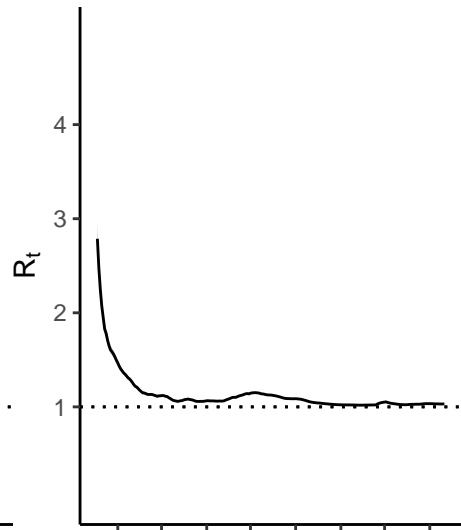
*Coweta County*



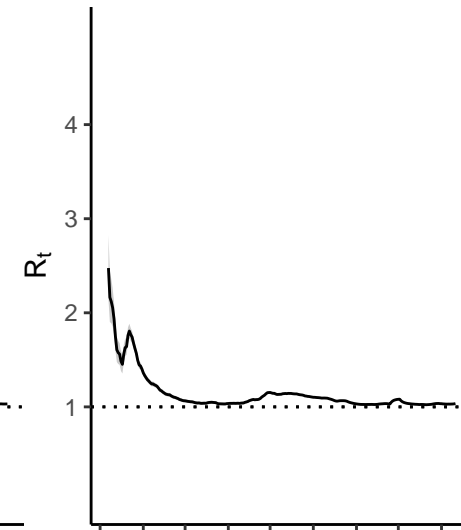
*DeKalb County*



*Douglas County*



*Fayette County*

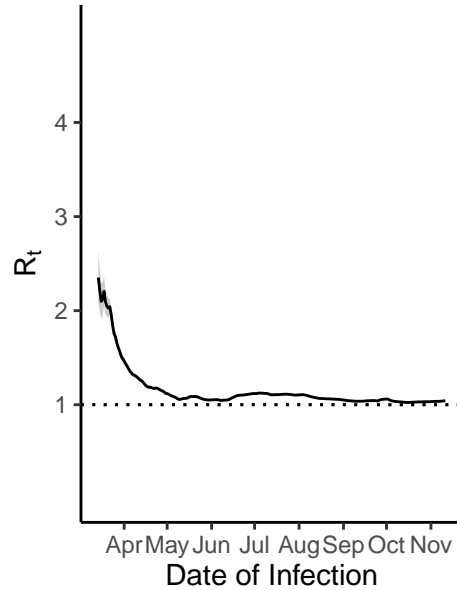


*Date of Infection*

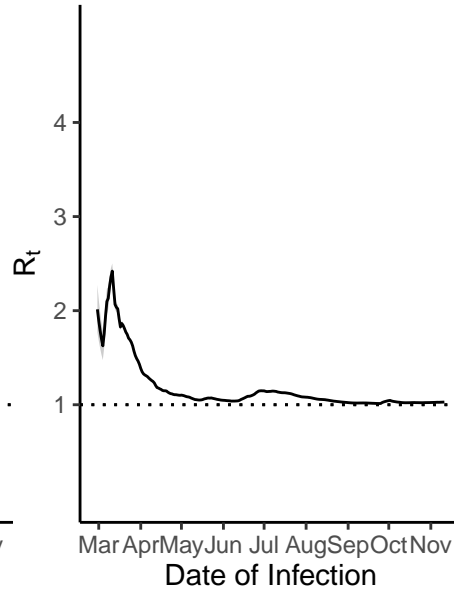
*Date of Infection*

*Date of Infection*

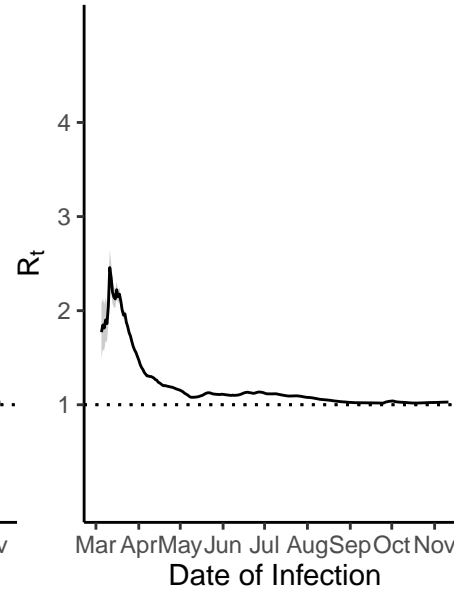
*Forsyth County*



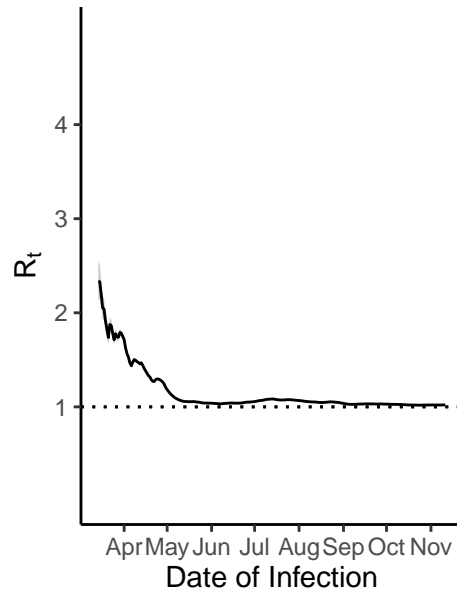
*Fulton County*



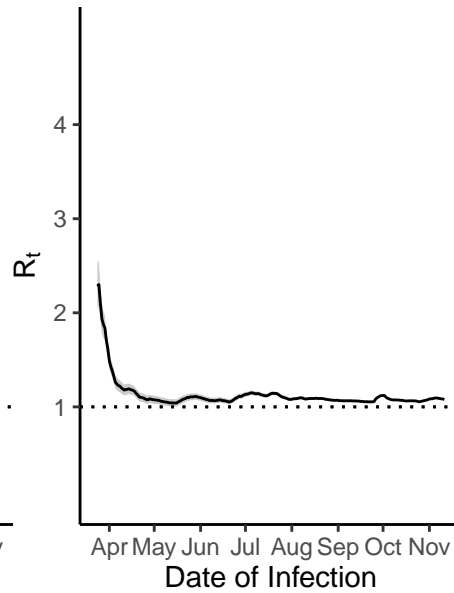
*Gwinnett County*



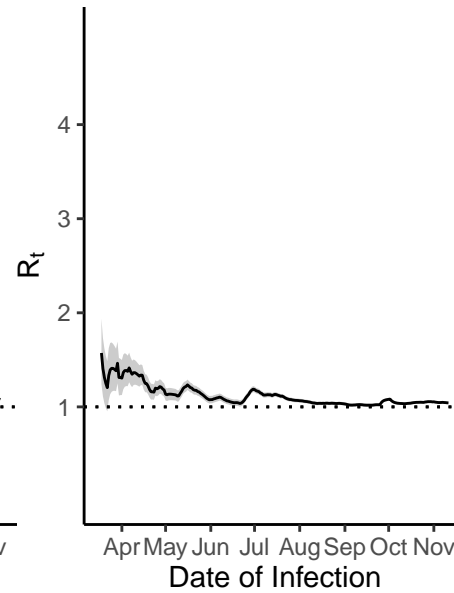
*Hall County*



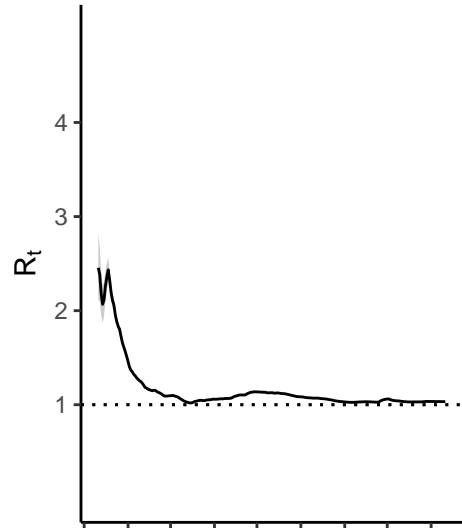
*Haralson County*



*Heard County*



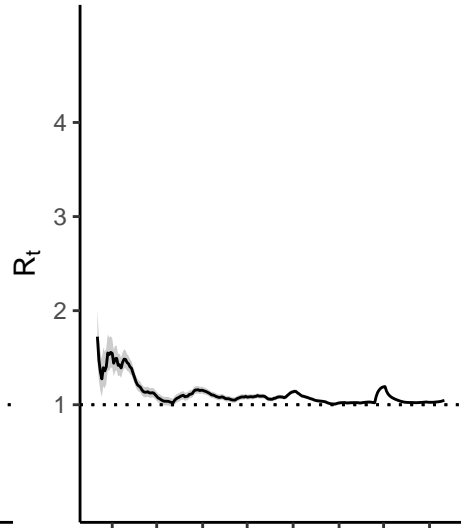
*Henry County*



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*Lee County*

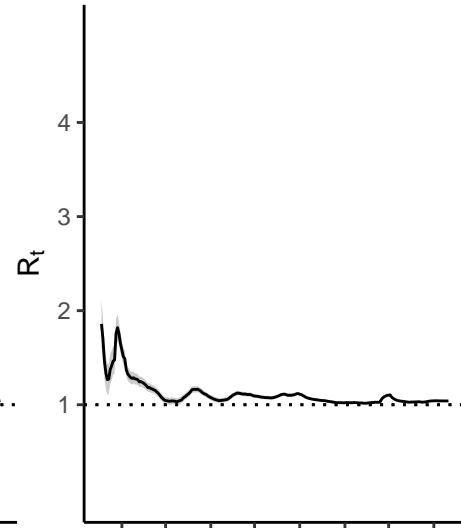
*Jasper County*



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Date of Infection

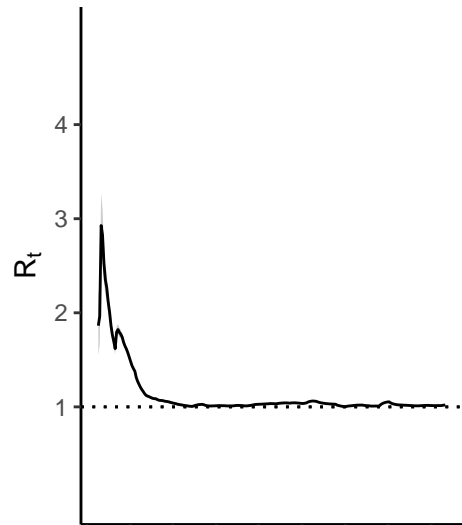
*Meriwether County*

*Lamar County*



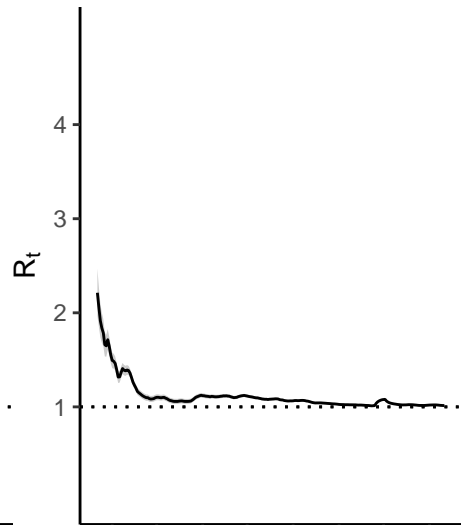
Apr May Jun Jul Aug Sep Oct Nov  
Date of Infection

*Mitchell County*



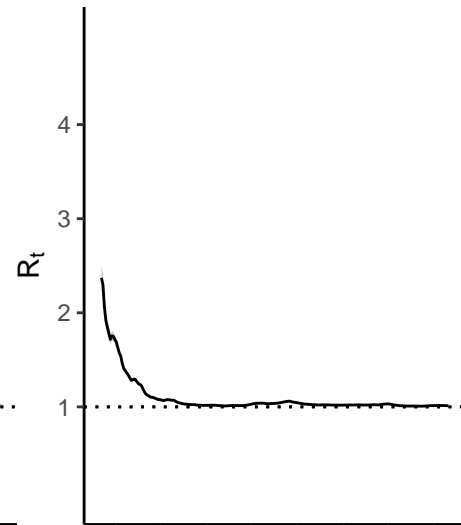
Mar Apr May Jun Jul Aug Sep Oct Nov  
Date of Infection

*Lee County*



Apr May Jun Jul Aug Sep Oct Nov  
Date of Infection

*Meriwether County*

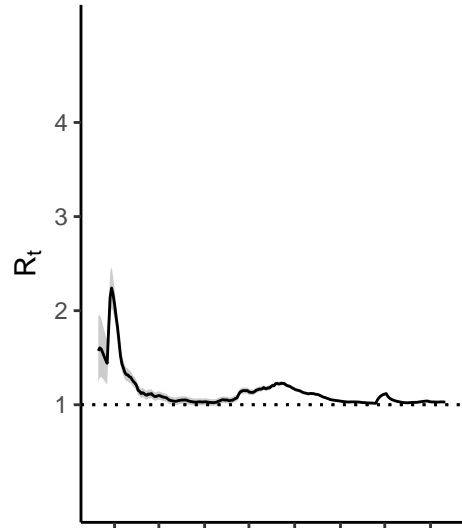


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Date of Infection

*Mitchell County*

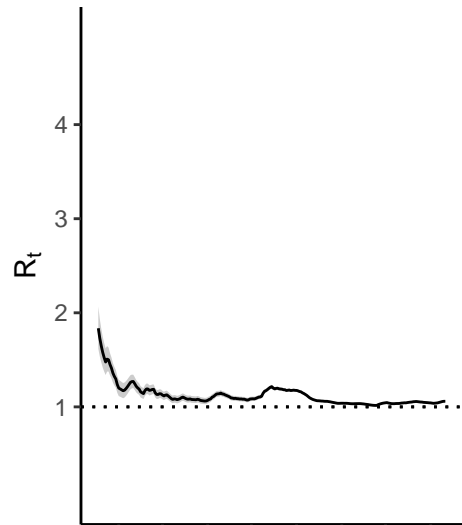


*Morgan County*



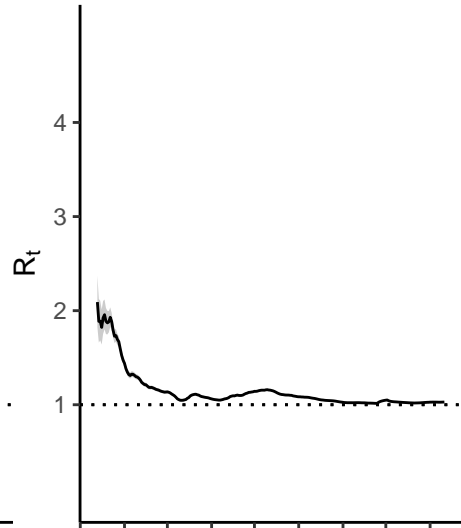
Apr May Jun Jul Aug Sep Oct Nov  
Date of Infection

*Pickens County*



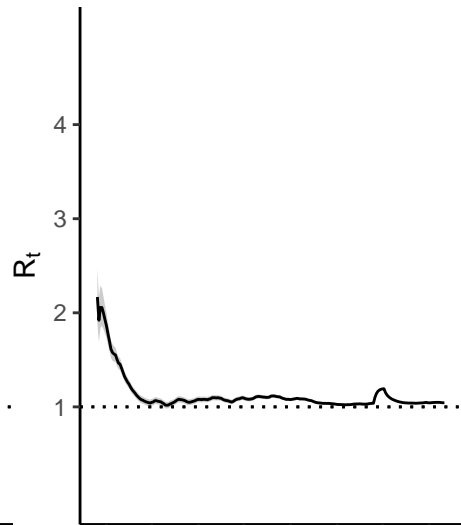
Apr May Jun Jul Aug Sep Oct Nov  
Date of Infection

*Newton County*



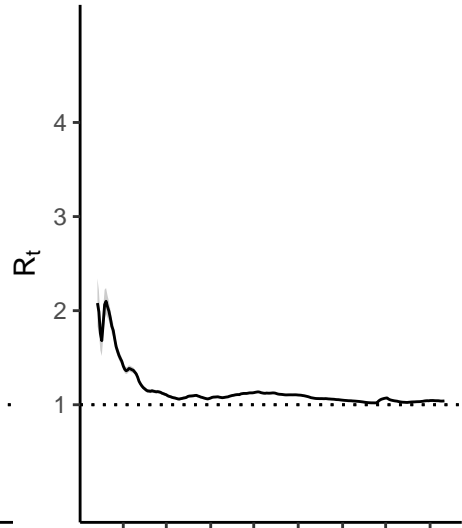
Mar Apr May Jun Jul Aug Sep Oct Nov  
Date of Infection

*Pike County*



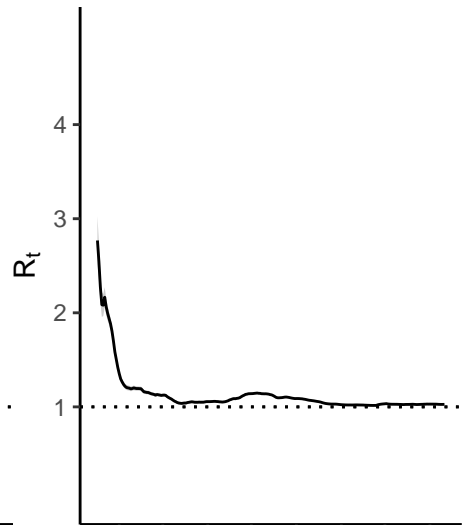
Apr May Jun Jul Aug Sep Oct Nov  
Date of Infection

*Paulding County*



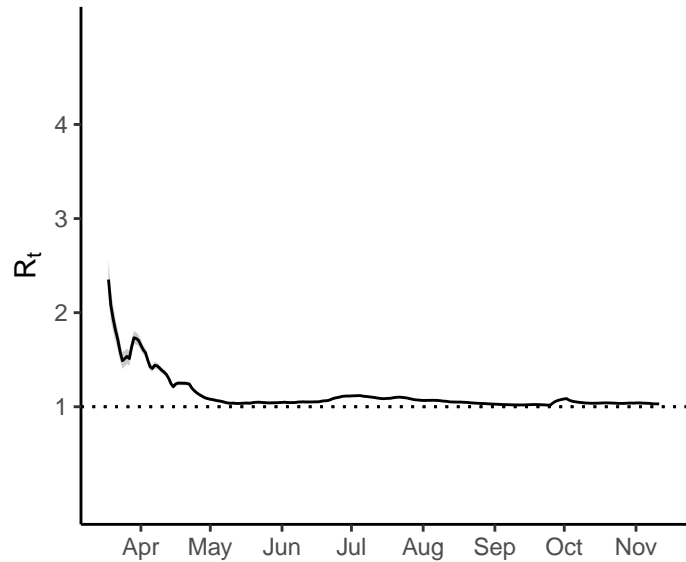
Apr May Jun Jul Aug Sep Oct Nov  
Date of Infection

*Rockdale County*

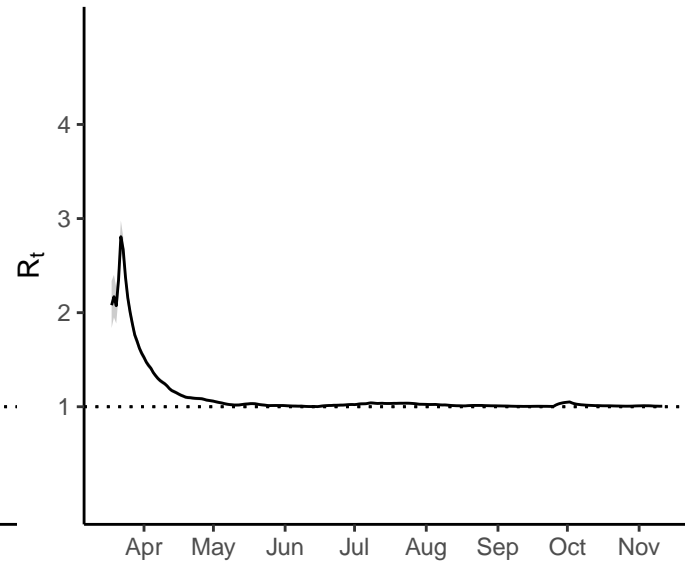


Apr May Jun Jul Aug Sep Oct Nov  
Date of Infection

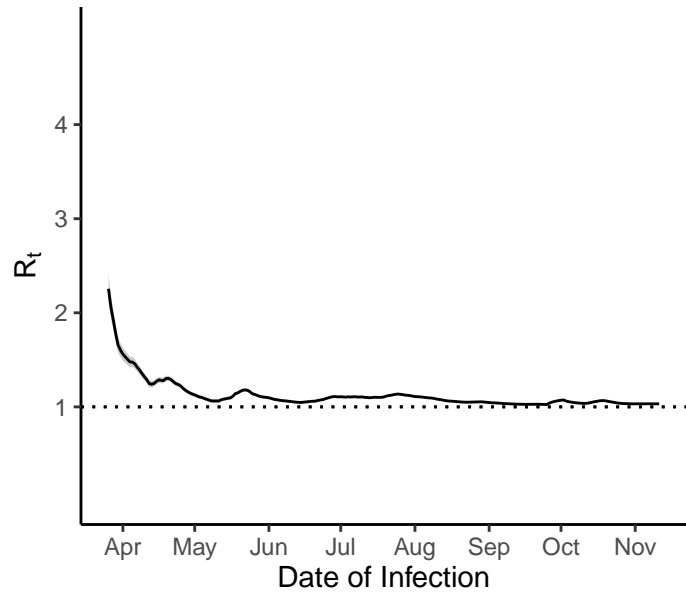
*Spalding County*



*Terrell County*



*Walton County*



*Worth County*

