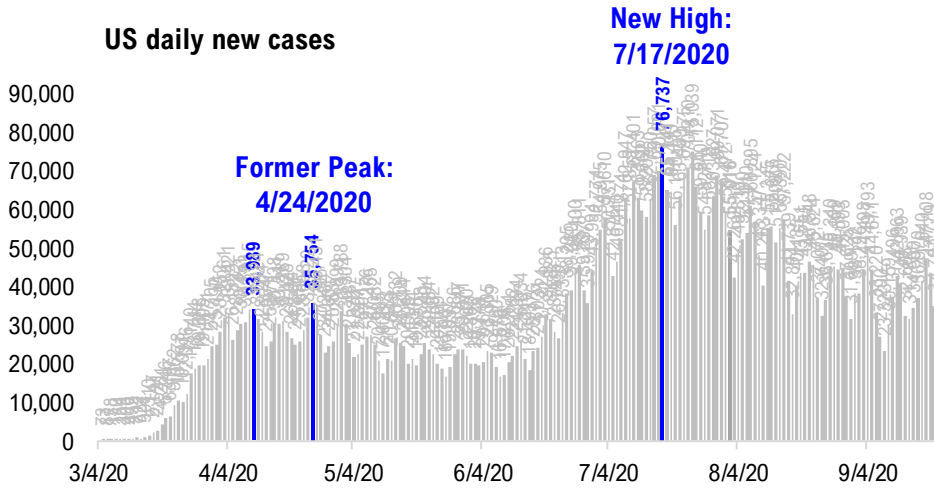


FSInsight Daily COVID-19 Chartbook

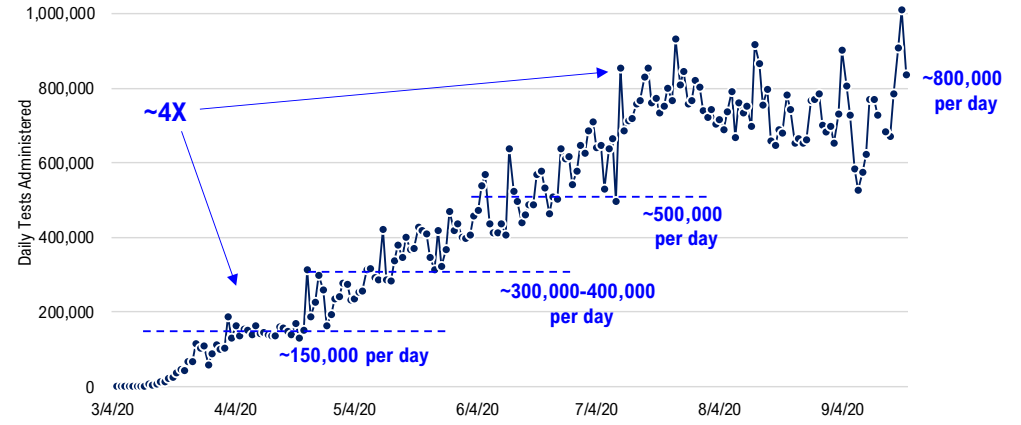


#1: USA COVID-19 Situation at a Glance...

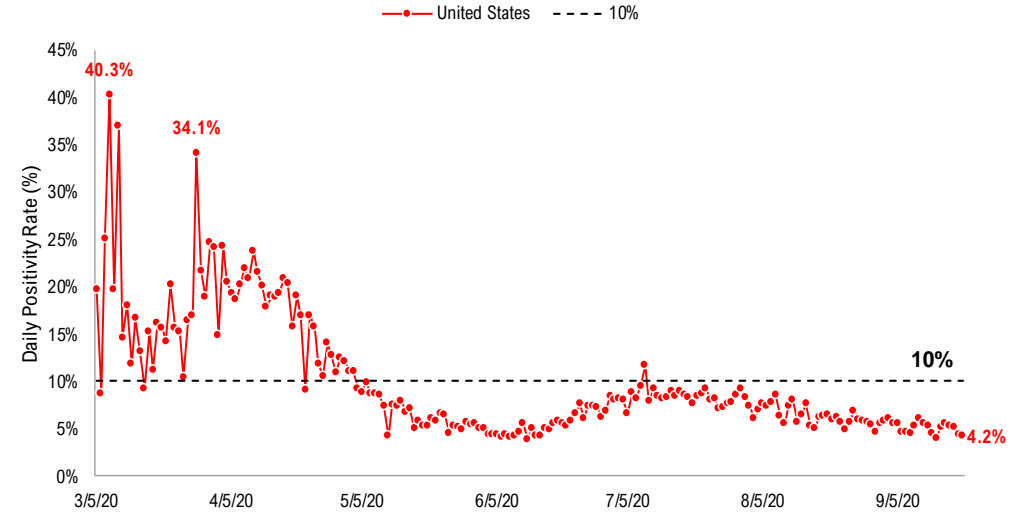
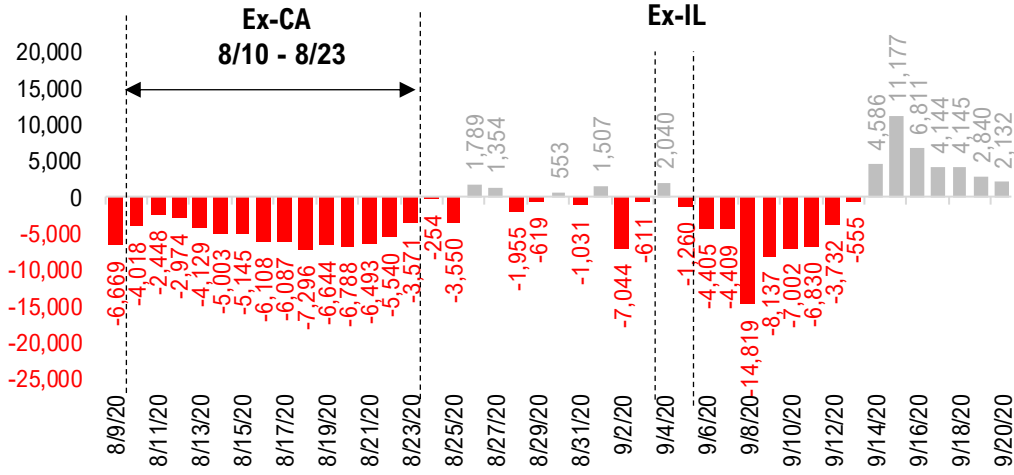
US daily new cases



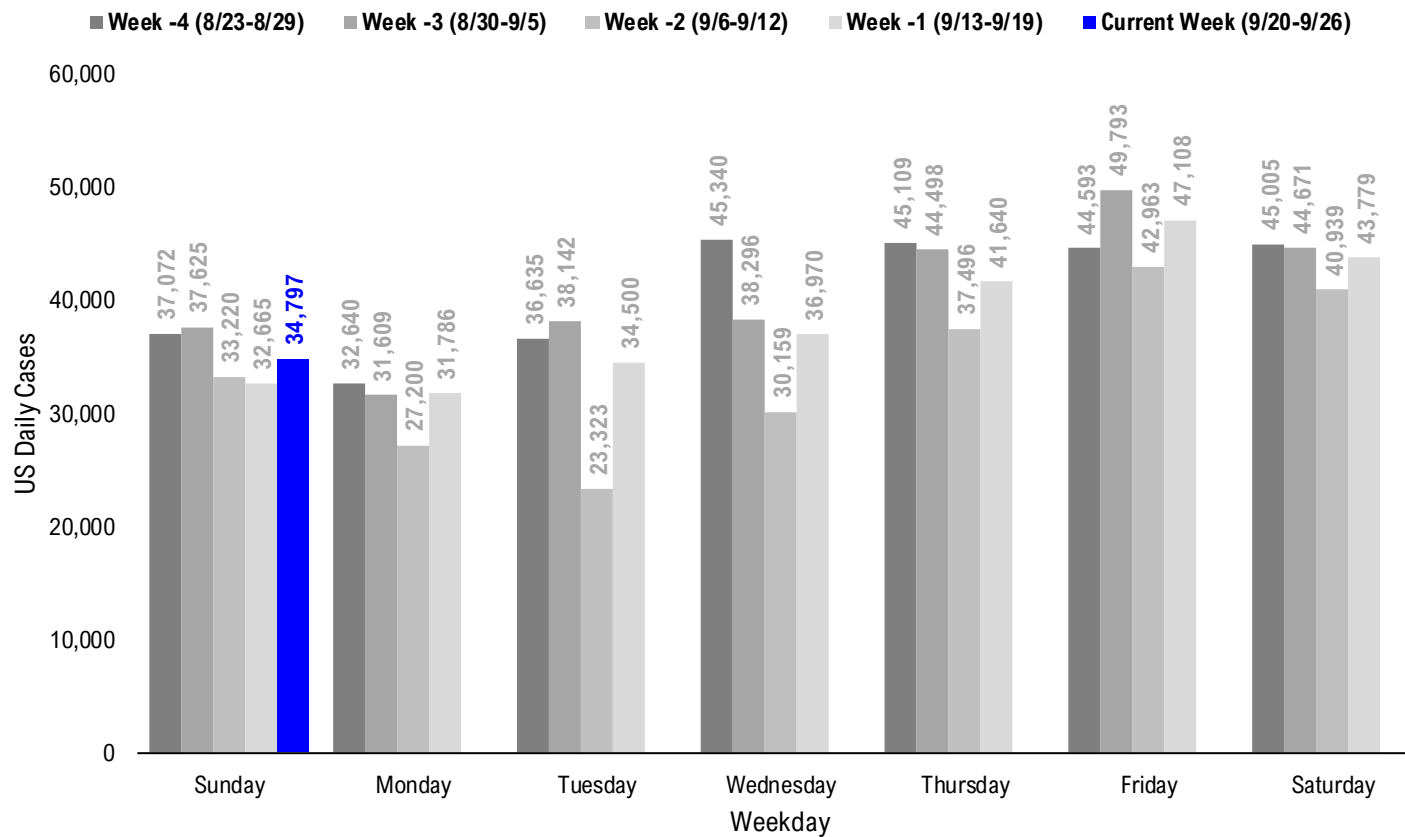
USA total COVID-19 tests administered



US daily new cases rolling 7D delta



#2: USA COVID-19 Daily Cases Weekday Seasonality (Past 4 Weeks) ...



#3: USA State COVID-19 Situation at a Glance...

	Sorted Daily Cases			Daily Cases (3D avg) per 1mm residents		Since Peak		% Decline in Daily Cases
	% US Pop	9/20/20	7D Delta	9/20/20	7D Delta	# Days	Cases	
United States	100%	34,797	+2,132	128	+9	65	-42%	

States:

1	California	11.9%	4,265	-360	103	+1	58	-65%
2	Florida	6.5%	2,521	+98	144	+1	69	-76%
3	Texas	8.7%	2,241	+401	111	+6	65	-73%
4	Tennessee	2.1%	2,075	+1,142	262	+87	54	-35%
5	Wisconsin	1.8%	1,665	+83	371	+125	1	-5%
6	Illinois	3.8%	1,402	-60	162	+7	14	-37%
7	North Carolina	3.2%	1,333	+137	127	-6	64	-40%
8	Missouri	1.8%	1,328	-285	245	-35	52	-22%
9	Minnesota	1.7%	1,296	+573	195	+73	0	0%
10	Georgia	3.2%	1,134	-275	165	+2	57	-59%
11	Oklahoma	1.2%	1,003	+308	294	+70	54	-6%
12	Louisiana	1.4%	936	-345	137	-9	61	-76%
13	Utah	1.0%	920	+292	324	+131	0	0%
14	New York	5.9%	862	+137	45	+3	163	-92%
15	Virginia	2.6%	856	-18	119	-9	42	-28%
16	Alabama	1.5%	798	-311	218	+1	57	-49%
17	Ohio	3.5%	762	-75	78	-17	51	-42%
18	Indiana	2.0%	746	-497	142	-35	7	-20%
19	Pennsylvania	3.9%	733	+657	69	+17	163	-51%
20	Iowa	1.0%	621	-163	280	+60	23	-28%
21	Arkansas	0.9%	549	+41	229	-19	57	-24%
22	Colorado	1.7%	501	+84	99	+33	147	-21%
23	South Carolina	1.6%	468	-99	146	-20	70	-62%
24	Arizona	2.2%	467	+83	73	+4	80	-88%
25	New Jersey	2.7%	453	+156	53	+7	168	-88%
26	Kentucky	1.3%	436	-94	162	-0	37	-13%
27	Maryland	1.8%	412	-165	90	-22	122	-57%
28	Nebraska	0.6%	410	+330	237	+97	141	-11%

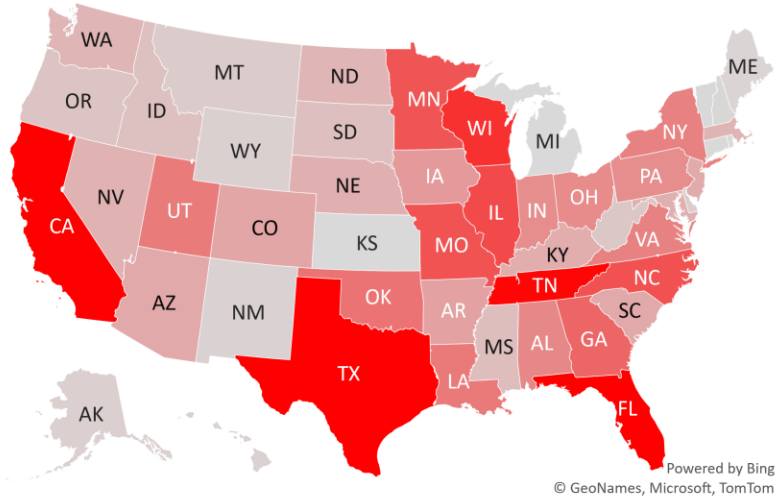
	Sorted Daily Cases			Daily Cases (3D avg) per 1mm residents		Since Peak		% Decline in Daily Cases
	% US Pop	9/20/20	7D Delta	9/20/20	7D Delta	# Days	Cases	
United States	100%	34,797	+2,132	128	+9	65	-42%	

States:

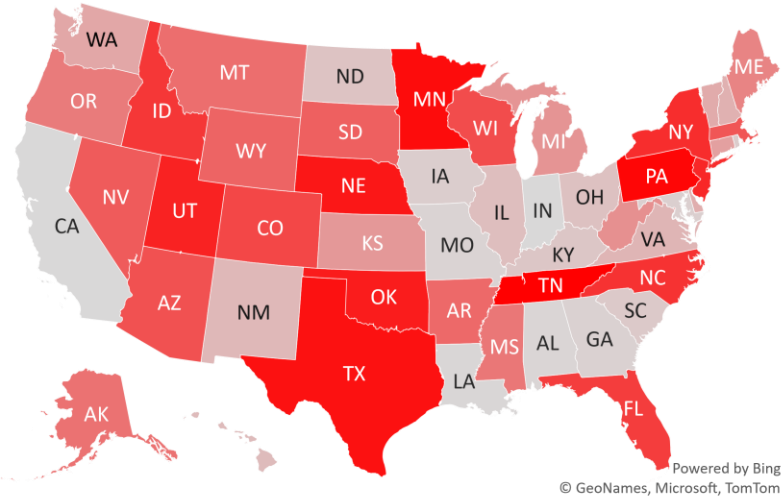
29	Nevada	0.9%	385	+68	131	+24	64	-70%
30	Massachusetts	2.1%	359	+73	68	+6	148	-86%
31	North Dakota	0.2%	351	-75	540	+44	1	-3%
32	Washington	2.3%	349	-1	59	-0	67	-56%
33	Mississippi	0.9%	277	+23	160	-14	52	-69%
34	Puerto Rico	1.0%	262	+91	150	+95	1	-8%
35	South Dakota	0.3%	252	+51	381	+78	1	-12%
36	Idaho	0.5%	244	+132	187	+63	65	-51%
37	Oregon	1.3%	202	+21	59	+5	50	-32%
38	West Virginia	0.5%	180	+2	116	-11	8	-12%
39	Montana	0.3%	136	+40	203	+92	1	-11%
40	Delaware	0.3%	117	-6	85	-46	145	-75%
41	Alaska	0.2%	93	+31	131	+13	49	-29%
42	Wyoming	0.2%	91	+42	126	+42	2	-29%
43	Hawaii	0.4%	77	-36	70	-26	22	-66%
44	New Mexico	0.6%	67	-33	60	+8	53	-65%
45	District of Columbia	0.2%	53	+13	78	-7	140	-76%
46	Maine	0.4%	44	+15	29	+3	121	-43%
47	U.S. Virgin Islands	0.0%	27	+18	97	+25	30	-77%
48	New Hampshire	0.4%	27	-17	33	+2	141	-65%
49	Northern Mariana Islands	0.0%	6	+6	35	+29	0	0%
50	Vermont	0.2%	5	-2	5	-7	168	-94%
51	Rhode Island	0.3%	0	-99	42	-58	148	-90%
52	Michigan	3.0%	0	+0	39	-28	149	-68%
53	Kansas	0.9%	0	+0	162	+50	25	-54%
54	Guam	0.0%	0	+0	145	+54	24	-78%
55	Connecticut	1.1%	0	+0	13	-9	151	-97%
56	American Samoa	0.0%	0	+0	0	+0	-	-

#4: USA COVID-19 Heat Map...

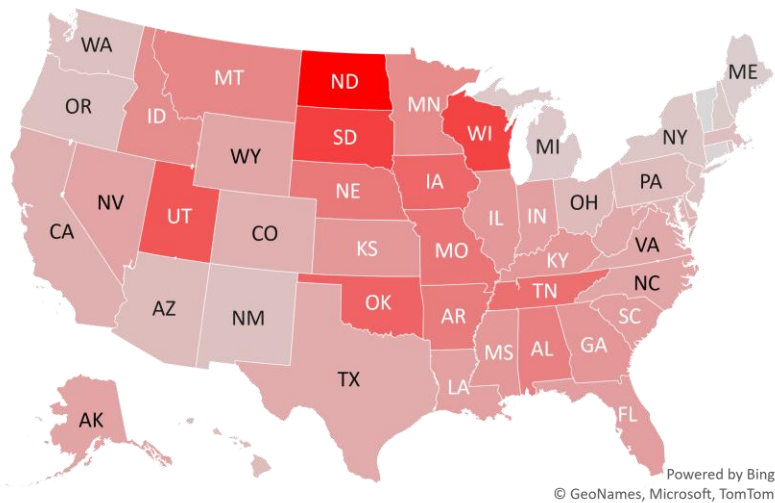
Daily Case Increases



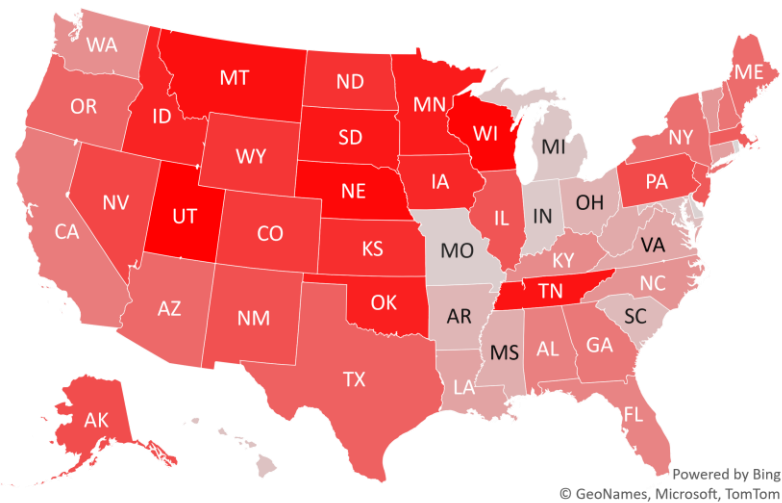
7D Delta in Daily New Cases



Daily Case Increases per 1mm Resident (3D Avg)



7D Delta in Daily New Cases per 1mm (3D Avg)



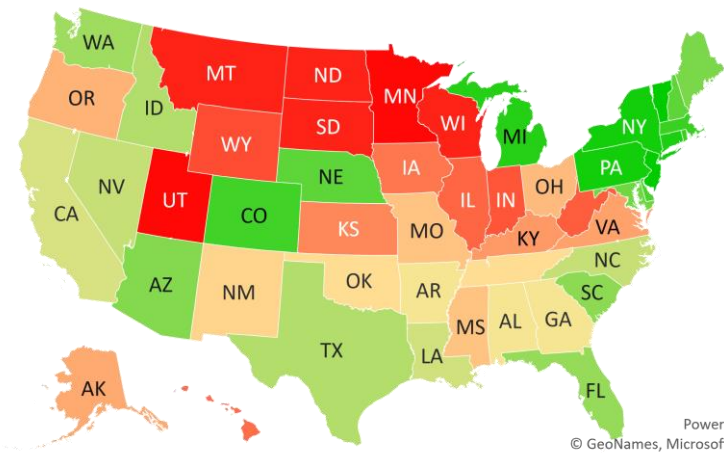
#5: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 9/20)

	Sorted			
	Peak Date	9/20/20	% off the Peak	% US Pop
United States	7/17/20	65	-42%	100%
States:				
Vermont	4/5/20	168	-94%	0.2%
New Jersey	4/5/20	168	-88%	2.7%
Pennsylvania	4/10/20	163	-51%	3.9%
New York	4/10/20	163	-92%	5.9%
Connecticut	4/22/20	151	-97%	1.1%
Michigan	4/24/20	149	-68%	3.0%
Rhode Island	4/25/20	148	-90%	0.3%
Massachusetts	4/25/20	148	-86%	2.1%
Colorado	4/26/20	147	-21%	1.7%
Delaware	4/28/20	145	-75%	0.3%
New Hampshire	5/2/20	141	-65%	0.4%
Nebraska	5/2/20	141	-11%	0.6%
District of Columbia	5/3/20	140	-76%	0.2%
Maryland	5/21/20	122	-57%	1.8%
Maine	5/22/20	121	-43%	0.4%
Arizona	7/2/20	80	-88%	2.2%
South Carolina	7/12/20	70	-62%	1.6%
Florida	7/13/20	69	-76%	6.5%
Washington	7/15/20	67	-56%	2.3%
Texas	7/17/20	65	-73%	8.7%
Idaho	7/17/20	65	-51%	0.5%
Nevada	7/18/20	64	-70%	0.9%
North Carolina	7/18/20	64	-40%	3.2%
Louisiana	7/21/20	61	-76%	1.4%
California	7/24/20	58	-65%	11.9%
Georgia	7/25/20	57	-59%	3.2%
Arkansas	7/25/20	57	-24%	0.9%
Alabama	7/25/20	57	-49%	1.5%

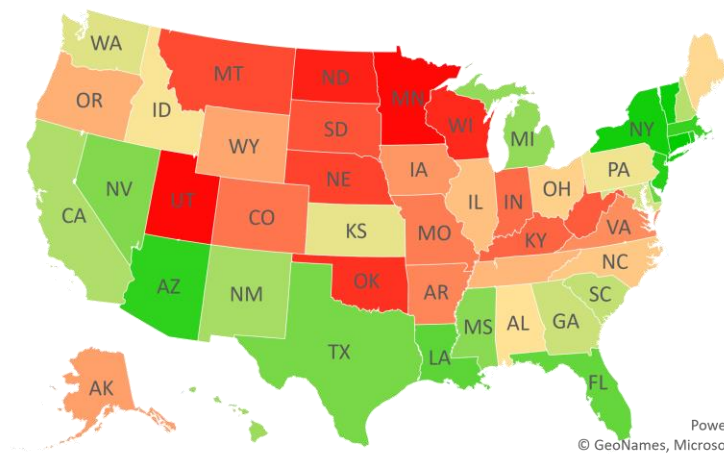
	Sorted			
	Peak Date	9/20/20	% off the Peak	% US Pop
United States	7/17/20	65	-42%	100%
States:				
Tennessee	7/28/20	54	-35%	2.1%
Oklahoma	7/28/20	54	-6%	1.2%
New Mexico	7/29/20	53	-65%	0.6%
Mississippi	7/30/20	52	-69%	0.9%
Missouri	7/30/20	52	-22%	1.8%
Ohio	7/31/20	51	-42%	3.5%
Oregon	8/1/20	50	-32%	1.3%
Alaska	8/2/20	49	-29%	0.2%
Virginia	8/9/20	42	-28%	2.6%
Kentucky	8/14/20	37	-13%	1.3%
U.S. Virgin Islands	8/21/20	30	-77%	0.0%
Kansas	8/26/20	25	-54%	0.9%
Guam	8/27/20	24	-78%	0.0%
Iowa	8/28/20	23	-28%	1.0%
Hawaii	8/29/20	22	-66%	0.4%
Illinois	9/6/20	14	-37%	3.8%
West Virginia	9/12/20	8	-12%	0.5%
Indiana	9/13/20	7	-20%	2.0%
Wyoming	9/18/20	2	-29%	0.2%
Wisconsin	9/19/20	1	-5%	1.8%
South Dakota	9/19/20	1	-12%	0.3%
Puerto Rico	9/19/20	1	-8%	1.0%
North Dakota	9/19/20	1	-3%	0.2%
Montana	9/19/20	1	-11%	0.3%
Utah	9/20/20	0	0%	1.0%
Northern Mariana Island	9/20/20	0	0%	0.0%
Minnesota	9/20/20	0	0%	1.7%

Days since Daily Case Peak: Greener = More Days



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Daily Cases % off the Peak: Greener = Larger Decline



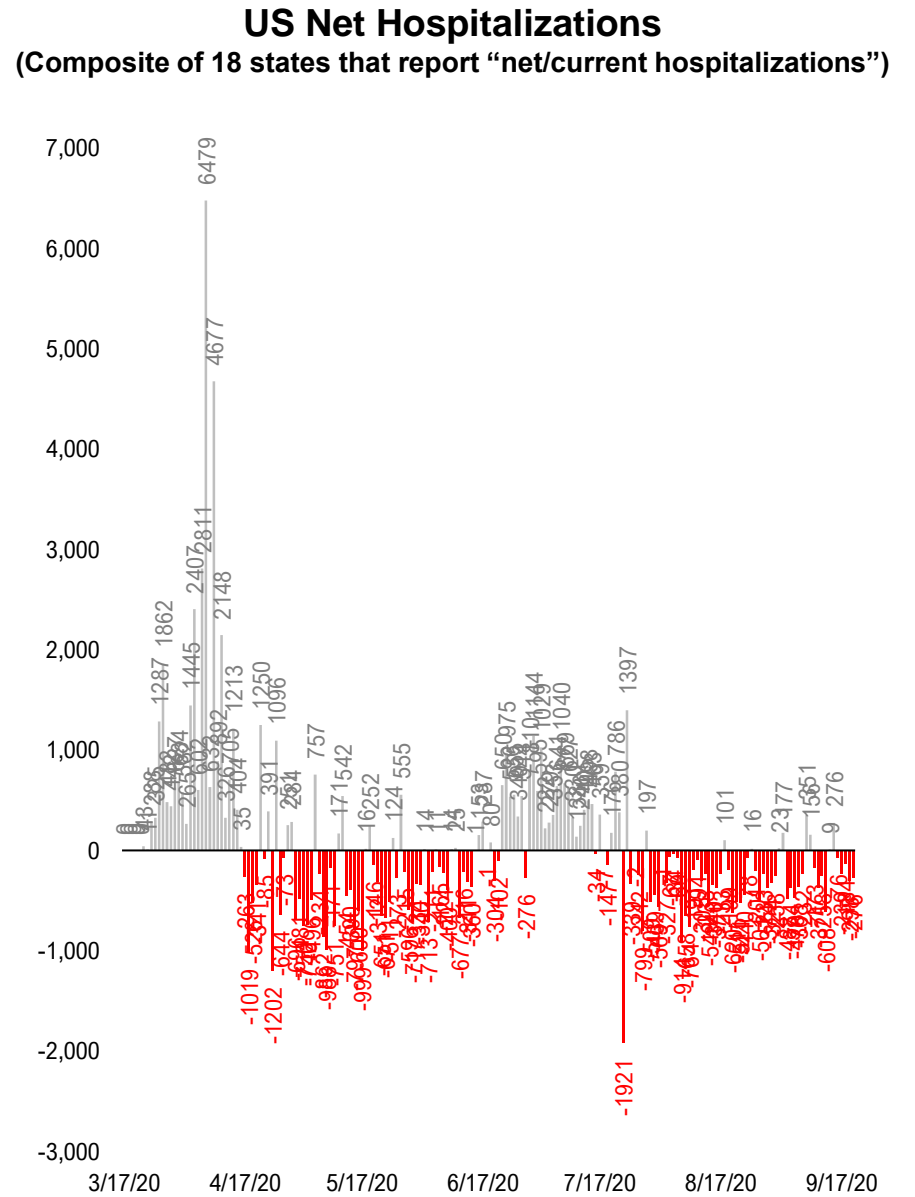
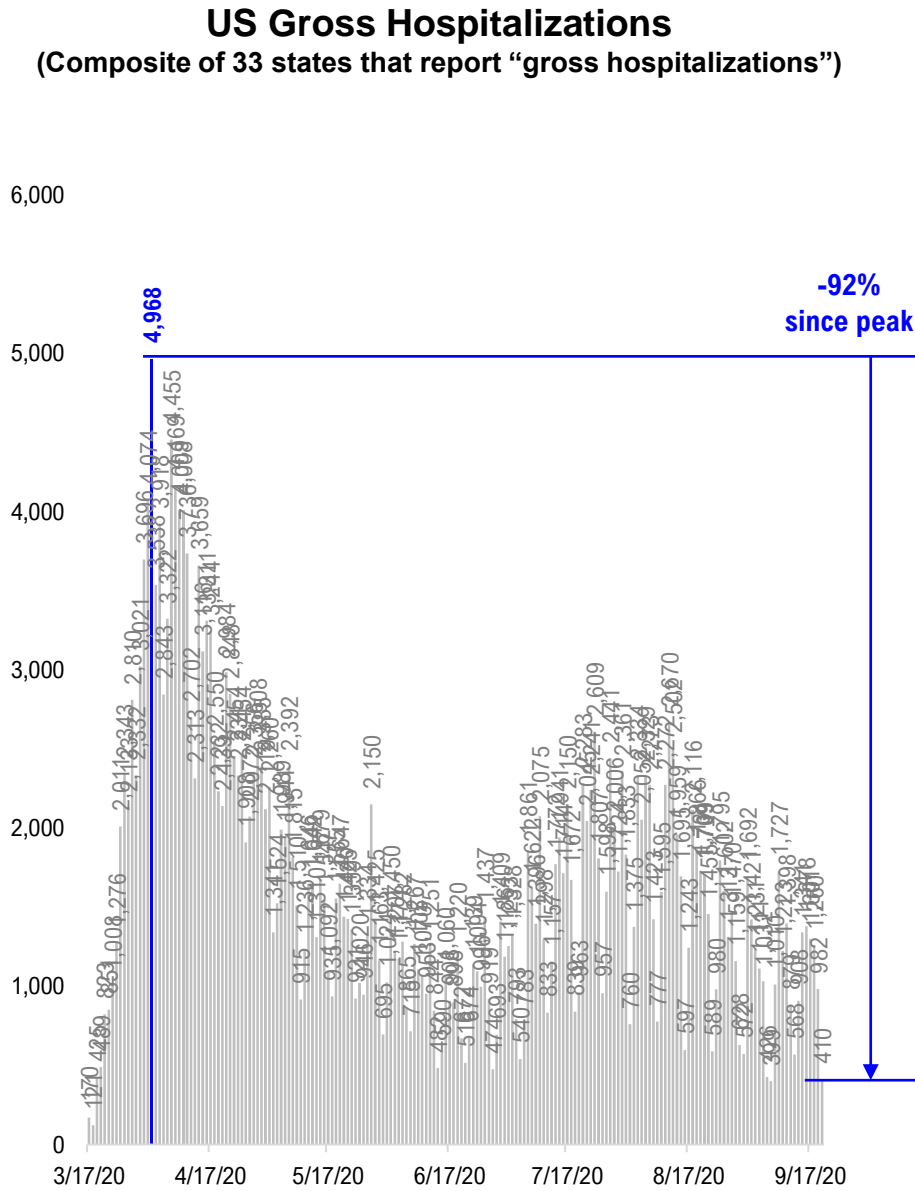
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#6: US New Cases by States... (sorted by today's new cases)

	Sorted				
	7D Ago	Last 3-day Trend			
	9/13/20	9/18/20	9/19/20	9/20/20	vs 7D ago
United States	32,665	47,108	43,779	34,797	+2,132
States:					
California	4,625	3,630	4,304	4,265	
Florida	2,423	3,204	3,573	2,521	
Texas	1,840	3,978	3,433	2,241	<--higher
Tennessee	933	2,357	942	2,075	<--higher
Wisconsin	1,582	2,533	2,283	1,665	
Illinois	1,462	2,223	2,529	1,402	
North Carolina	1,196	1,443	1,229	1,333	
Missouri	1,613	1,795	1,387	1,328	
Minnesota	723	1,085	914	1,296	<--higher
Georgia	1,409	1,834	2,284	1,134	
Oklahoma	695	1,249	1,237	1,003	<--higher
Louisiana	1,281	979	0	936	
Utah	628	1,117	1,077	920	<--higher
New York	725	790	986	862	
Virginia	874	1,242	953	856	
Alabama	1,109	1,106	1,301	798	
Ohio	837	1,011	951	762	
Indiana	1,243	1,037	1,076	746	
Pennsylvania	76	760	1,162	733	<--higher
Iowa	784	1,183	847	621	
Arkansas	508	724	803	549	
Colorado	417	605	606	501	<--higher
South Carolina	567	872	922	468	
Arizona	384	518	609	467	<--higher
New Jersey	297	487	461	453	<--higher
Kentucky	530	758	978	436	
Maryland	577	543	682	412	
Nebraska	80	502	466	410	<--higher

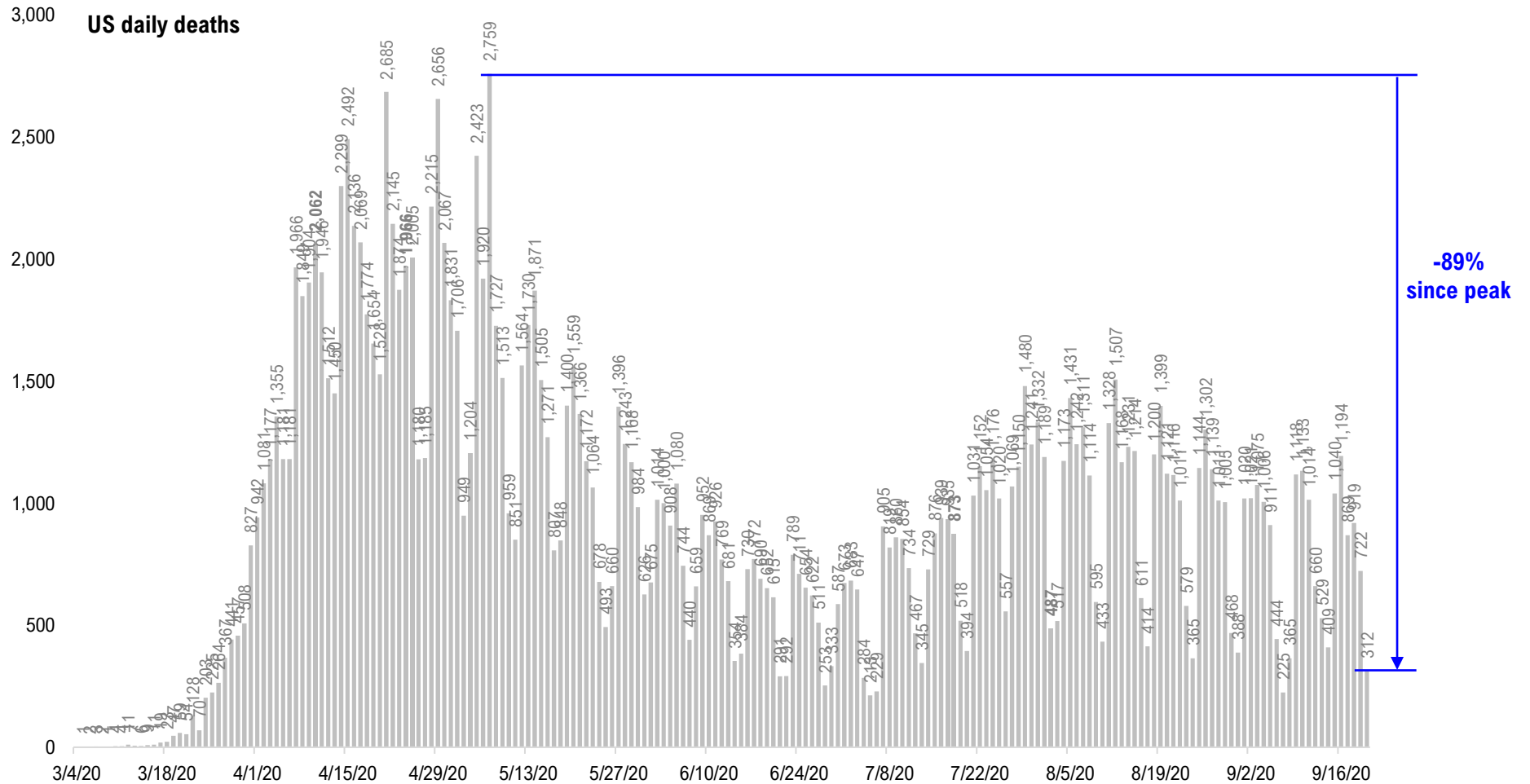
	Sorted				
	7D Ago	Last 3-day Trend			
	9/13/20	9/18/20	9/19/20	9/20/20	vs 7D ago
United States	32,665	47,108	43,779	34,797	+2,132
States:					
Nevada	317	501	323	385	<--higher
Massachusetts	286	454	599	359	<--higher
North Dakota	426	507	377	351	
Washington	350	404	597	349	
Mississippi	254	497	655	277	
Puerto Rico	171	479	694	262	<--higher
South Dakota	201	389	369	252	<--higher
Idaho	112	470	288	244	<--higher
Oregon	181	282	257	202	
West Virginia	178	253	191	180	
Montana	96	224	292	136	<--higher
Delaware	123	48	83	117	
Alaska	62	109	85	93	<--higher
Wyoming	49	95	33	91	<--higher
Hawaii	113	111	110	77	
New Mexico	100	151	162	67	
District of Columbia	40	62	50	53	<--higher
Maine	29	43	30	44	<--higher
U.S. Virgin Islands	9	4	0	27	<--higher
New Hampshire	44	47	59	27	
Northern Mariana Islands	0	0	0	6	
Vermont	7	1	4	5	
Rhode Island	99	132	0	0	
Michigan	0	695	483	0	
Kansas	0	1,415	0	0	
Guam	0	29	43	0	
Connecticut	0	141	0	0	
American Samoa	0	0	0	0	

#7: US Daily Hospitalizations...(aggregated by data type)



#8: US Daily New Fatalities...

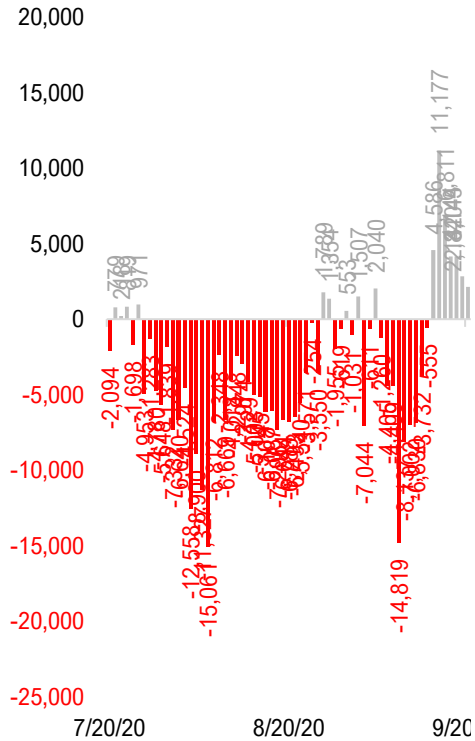
US daily COVID-19 Fatalities



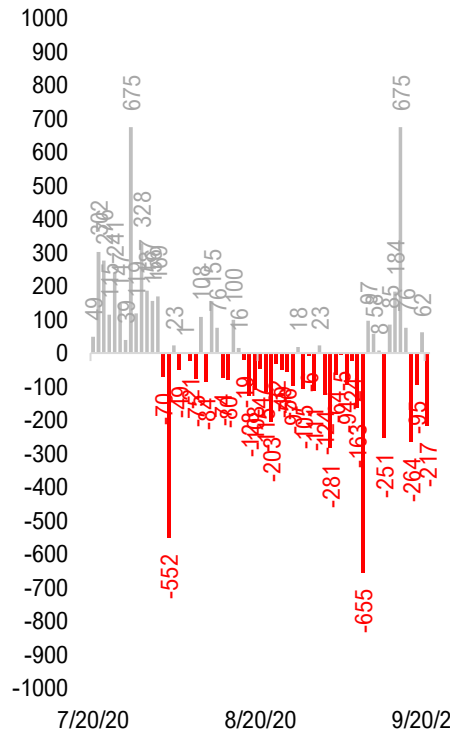
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

#9: Rolling 7-Day Change in the Key Metrics... (Past 8 Weeks)

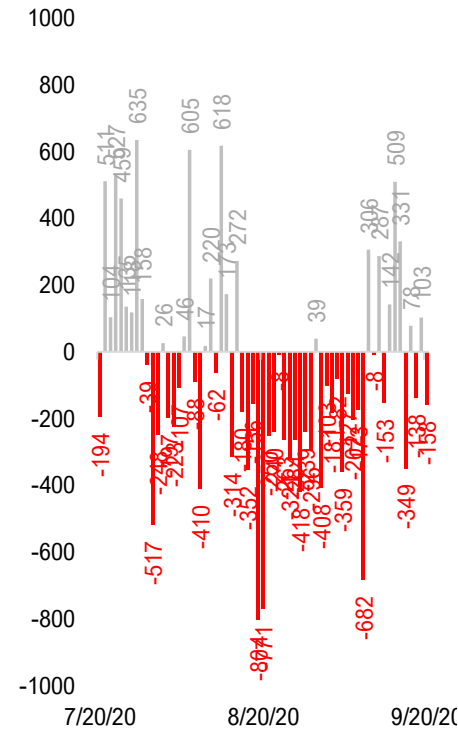
Daily New Cases
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



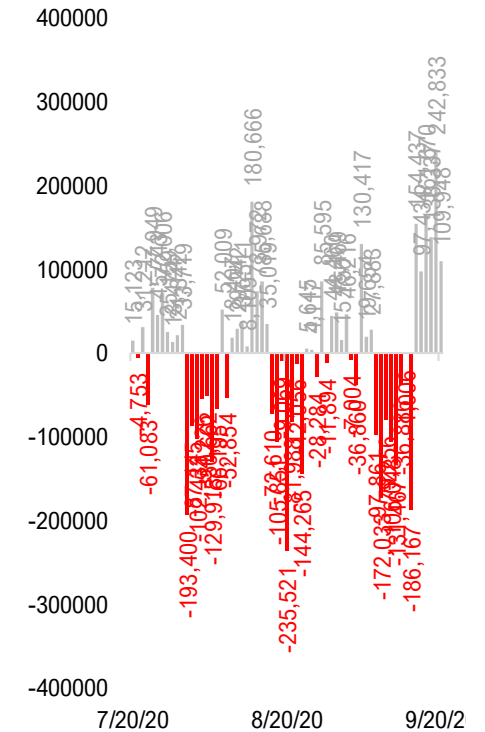
Daily Deaths



Daily New Gross hospitalization
(aggregate of 33 states)

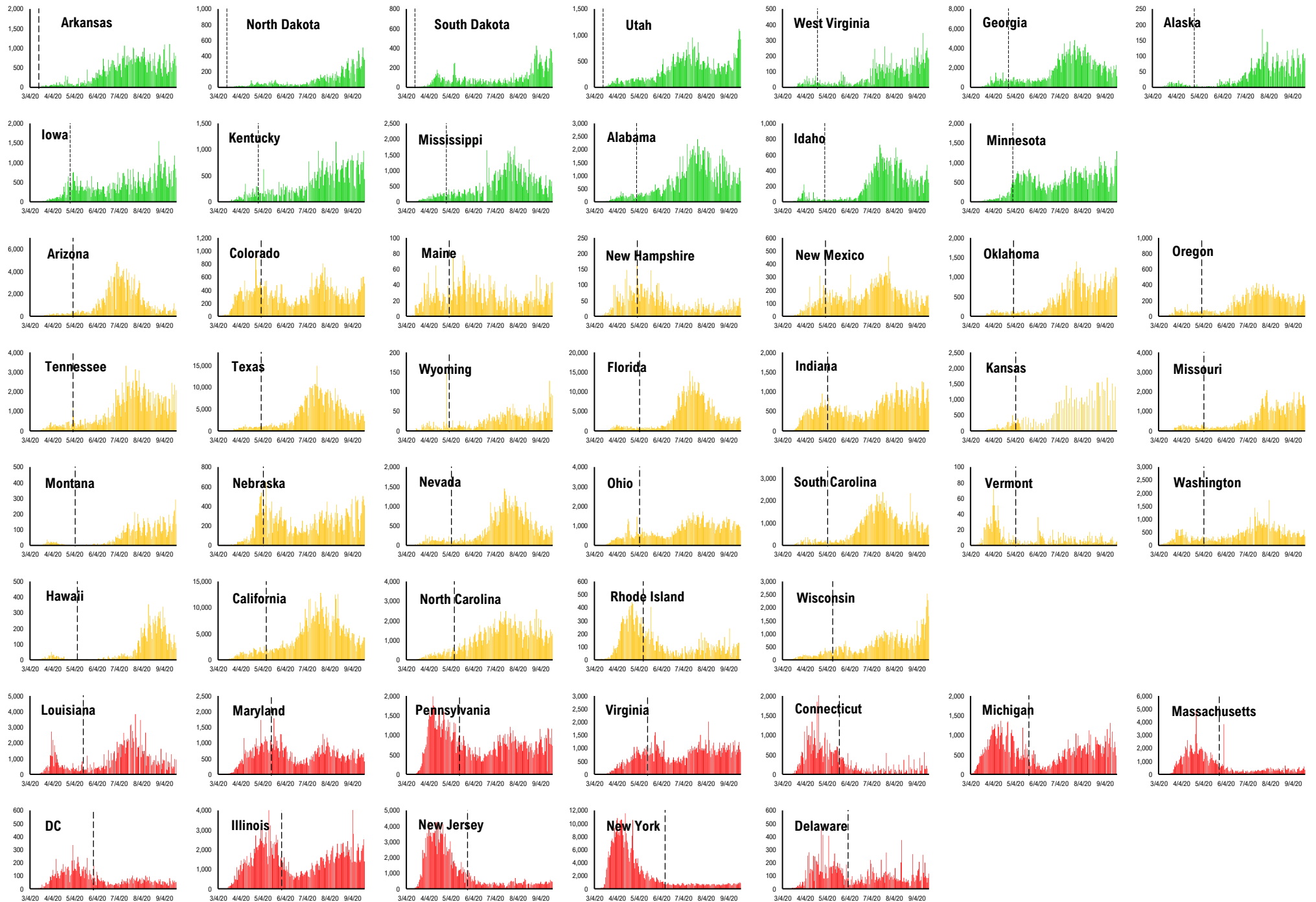


Daily Tests

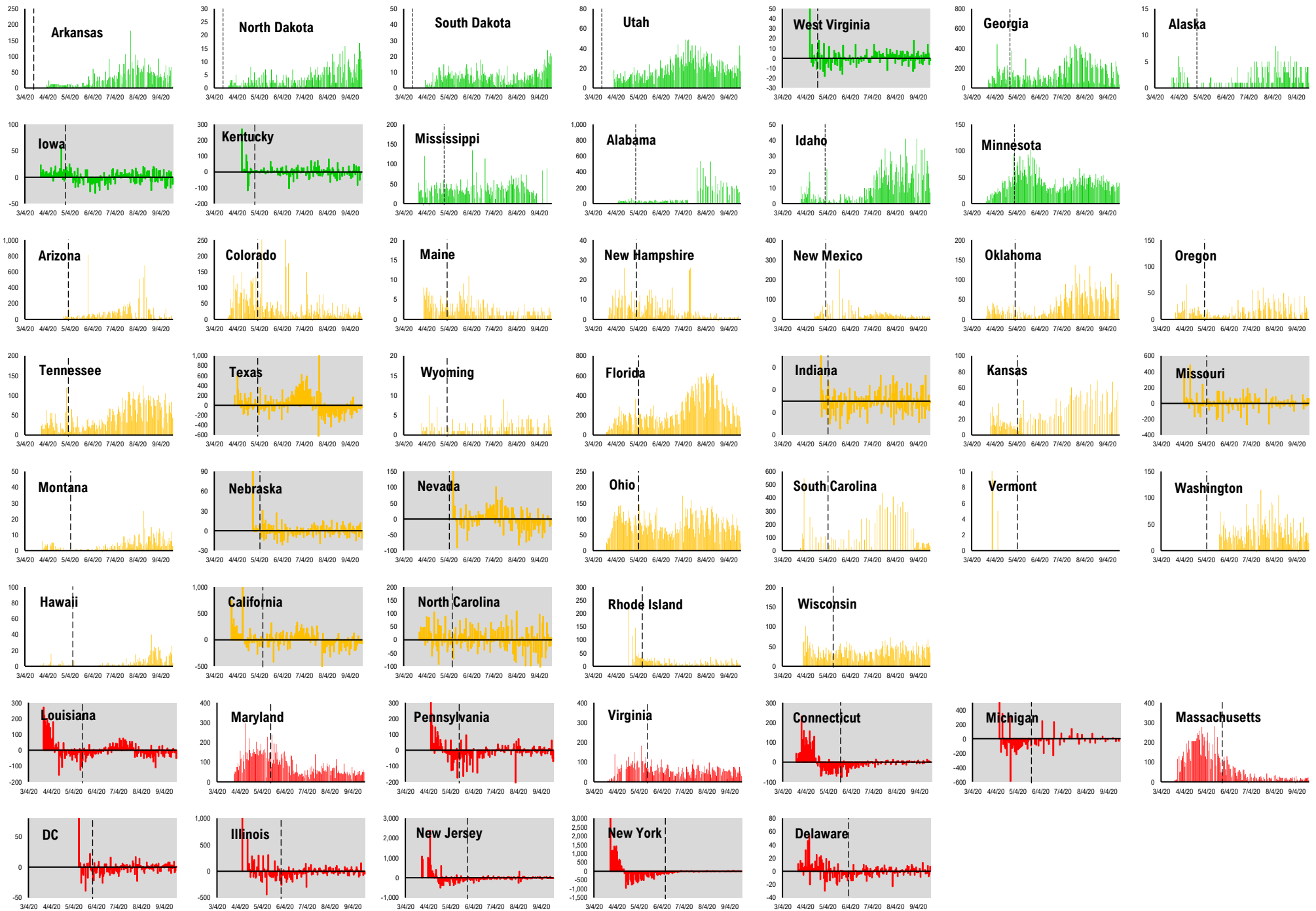


* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

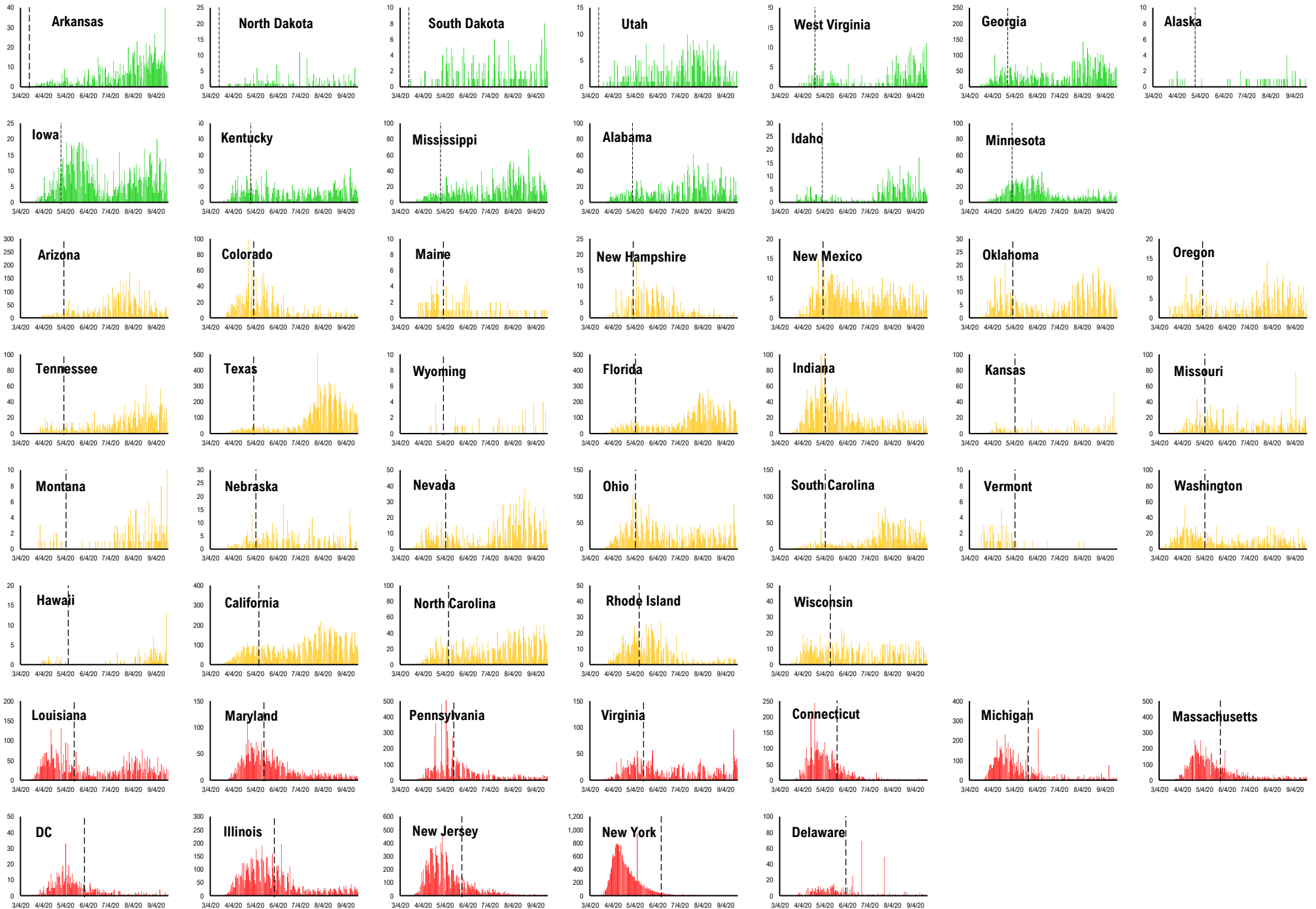
#10: Daily New Cases by States... (sorted by "open" date)



#11: Daily Hospitalizations by States... (sorted by "open" date)



#12: Daily New Deaths by States... (sorted by "open" date)



#13: State COVID-19 situation by Reopen Date...

Daily Cases

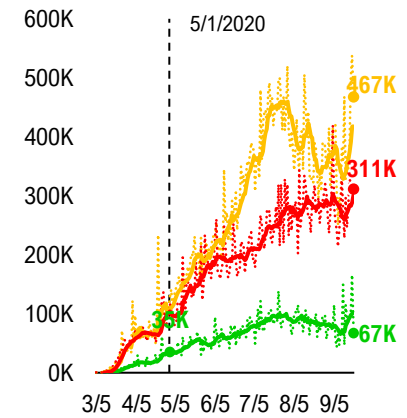
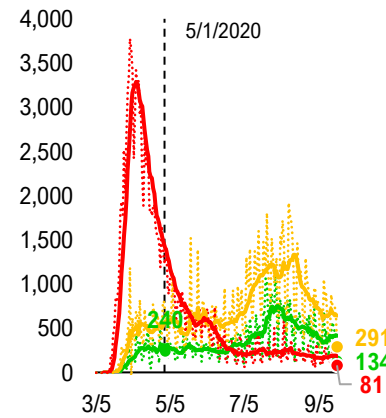
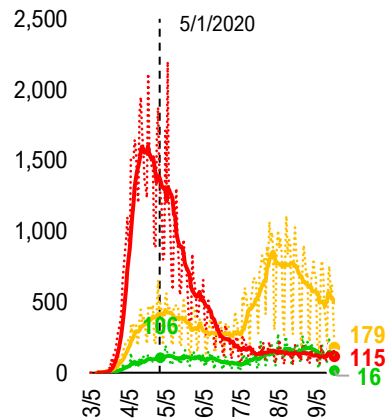
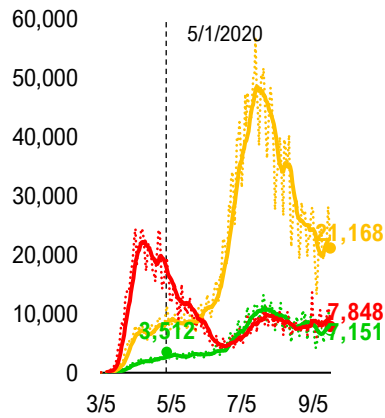
Daily Deaths

Daily Hospitalization

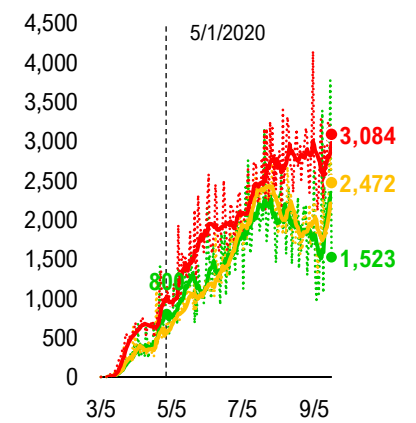
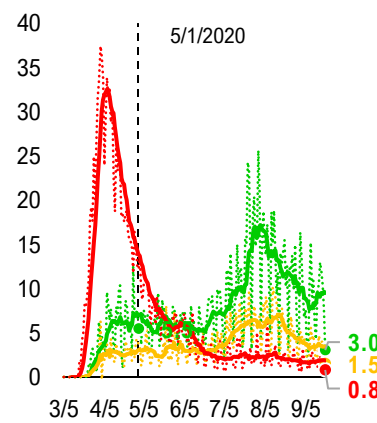
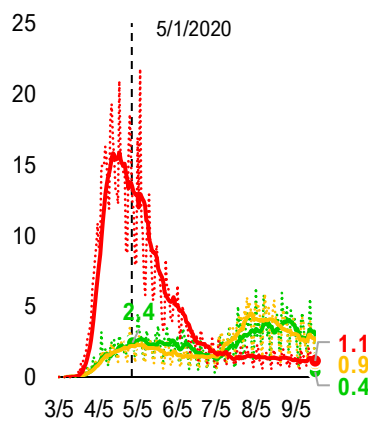
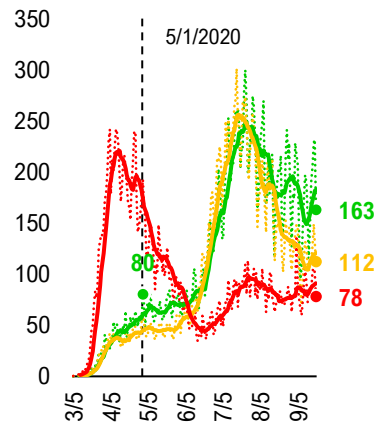
Daily Testing

— States Open Before 5/1 — States Open between 5/1 and 5/11 — States Open after 5/11

Composite Daily Aggregate

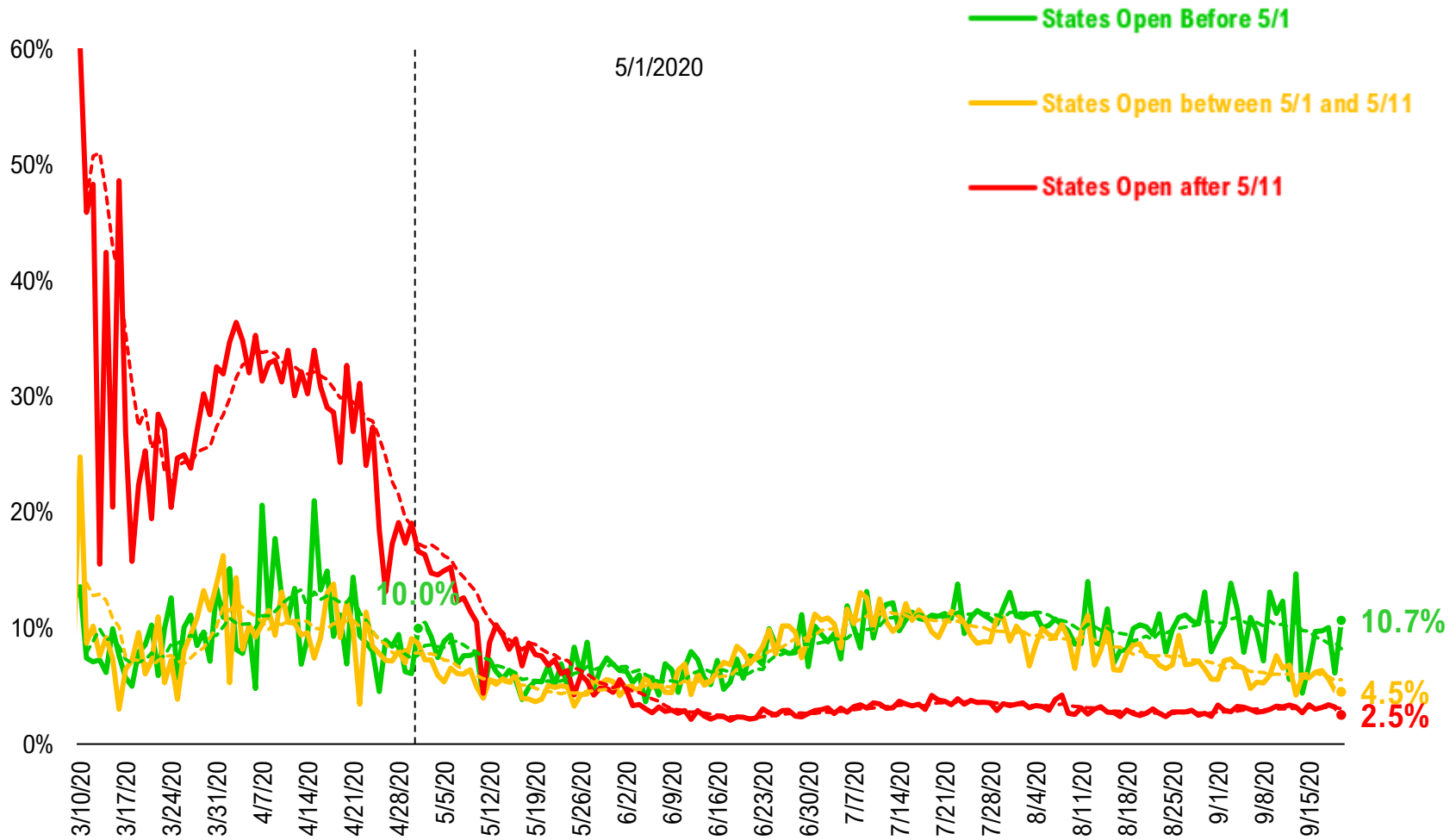


Composite Daily Aggregate Per 1mm Pop

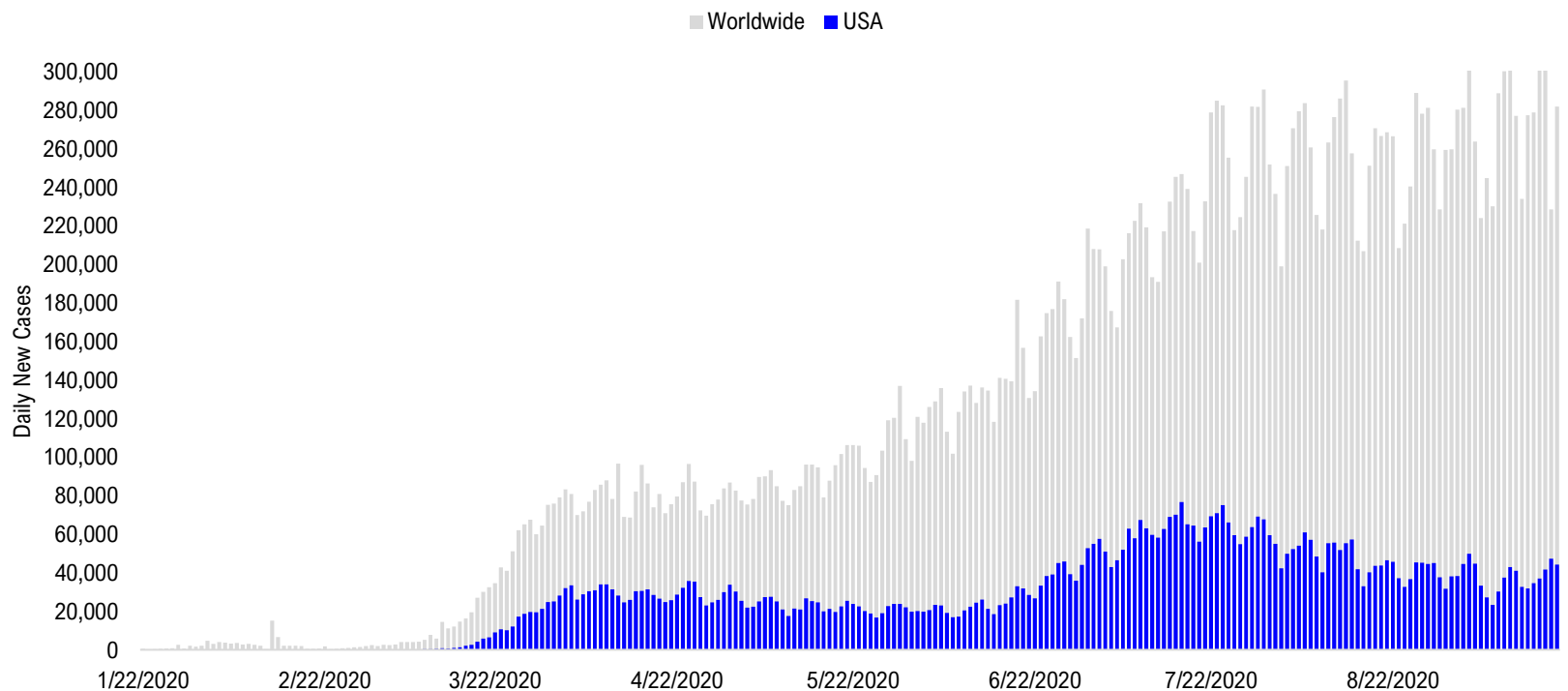


#14: State COVID-19 Daily Positivity Rate by Reopen Date...

Composite Daily Positivity Rate



#15: Global COVID-19 Situation at a Glance...



5/1/2020	5/15/2020	5/29/2020	6/12/2020	6/26/2020	7/10/2020	7/24/2020	8/7/2020	8/21/2020	9/4/2020	9/19/2020
US + Canada 31,572	US + Canada 25,443	Latin America 42,759	Latin America 51,123	Latin America 68,227	Latin America 73,176	Latin America 97,008	Latin America 97,310	Latin America 85,471	Latin America 88,295	Latin America 75,752
Europe 25,405	Latin America 25,394	US + Canada 22,796	US + Canada 22,798	US + Canada 41,092	US + Canada 63,055	US + Canada 72,289	Pakistan + India + Bangladesh 63,674	Pakistan + India + Bangladesh 72,740	Pakistan + India + Bangladesh 87,400	Pakistan + India + Bangladesh 65,500
Latin America 13,595	Europe 22,177	Europe 19,130	Pakistan + India + Bangladesh 18,309	Pakistan + India + Bangladesh 24,668	Pakistan + India + Bangladesh 32,386	Pakistan + India + Bangladesh 52,184	US + Canada 56,150	US + Canada 45,030	US + Canada 44,769	Europe 51,313
Pakistan + India + Bangladesh 3,762	Pakistan + India + Bangladesh 6,133	Pakistan + India + Bangladesh 12,032	Europe 18,149	Europe 17,889	Africa 17,127	Africa 20,063	Europe 23,878	Europe 32,513	Europe 40,013	US + Canada 45,295
Asia ex- India+Pakistan 2,022	Africa 2,942	Africa 5,307	Africa 7,322	Africa 11,684	Europe 16,204	Europe 18,765	Africa 14,390	Africa 10,566	Asia ex- India+Pakistan 8,720	Asia ex- India+Pakistan 11,016
Africa 1,926	Asia ex- India+Pakistan 2,033	Asia ex- India+Pakistan 2,762	Asia ex- India+Pakistan 3,064	Asia ex- India+Pakistan 3,866	Asia ex- India+Pakistan 7,373	Asia ex- India+Pakistan 8,636	Asia ex- India+Pakistan 10,424	Asia ex- India+Pakistan 10,047	Africa 8,318	Africa 8,469

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