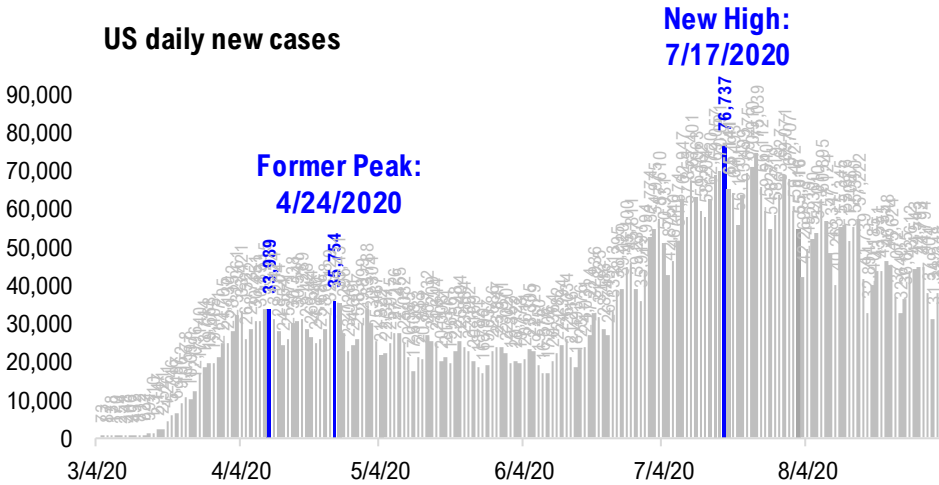


FSInsight Daily COVID-19 Chartbook

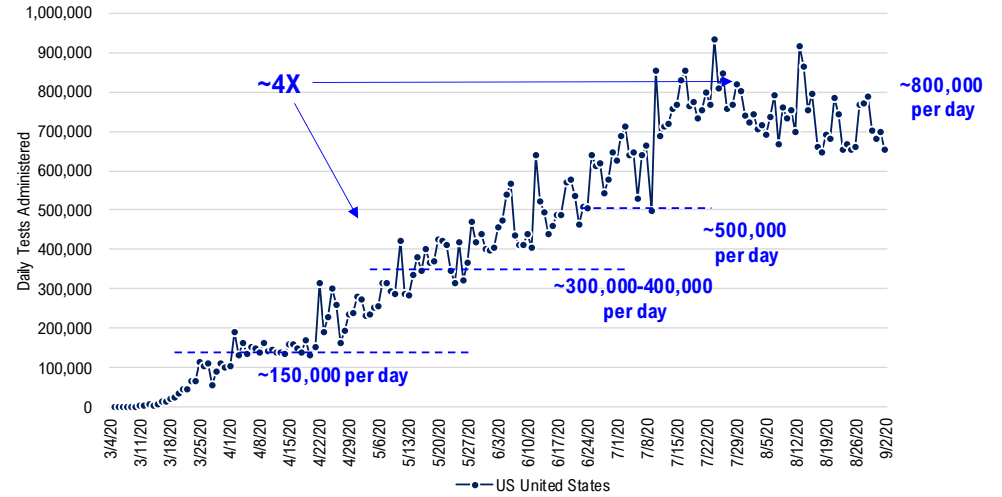


#1: USA COVID-19 Situation at a Glance...

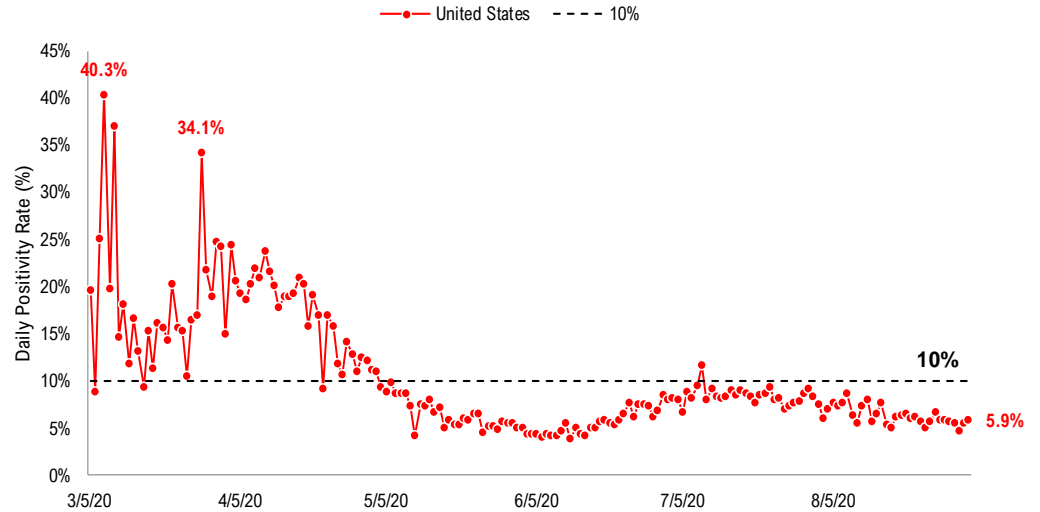
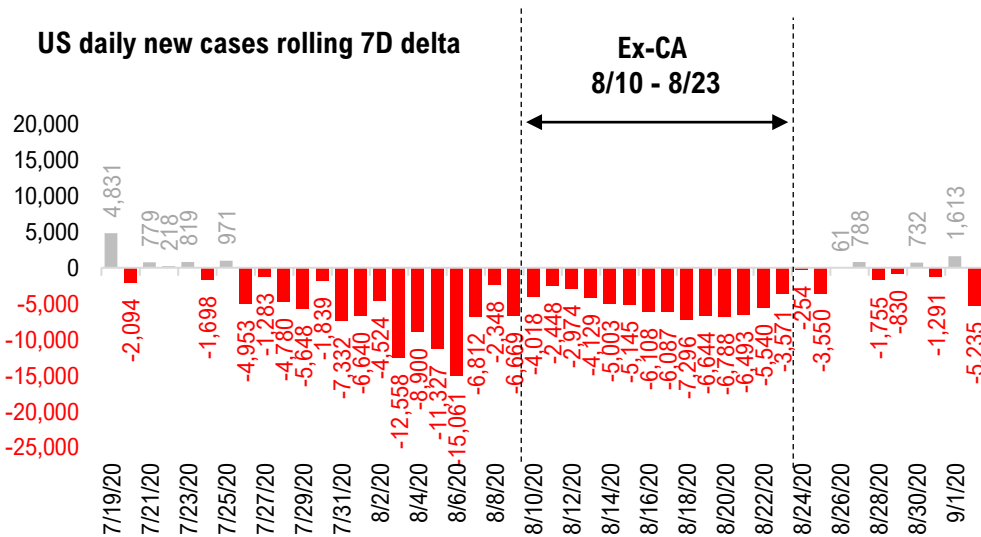
US daily new cases



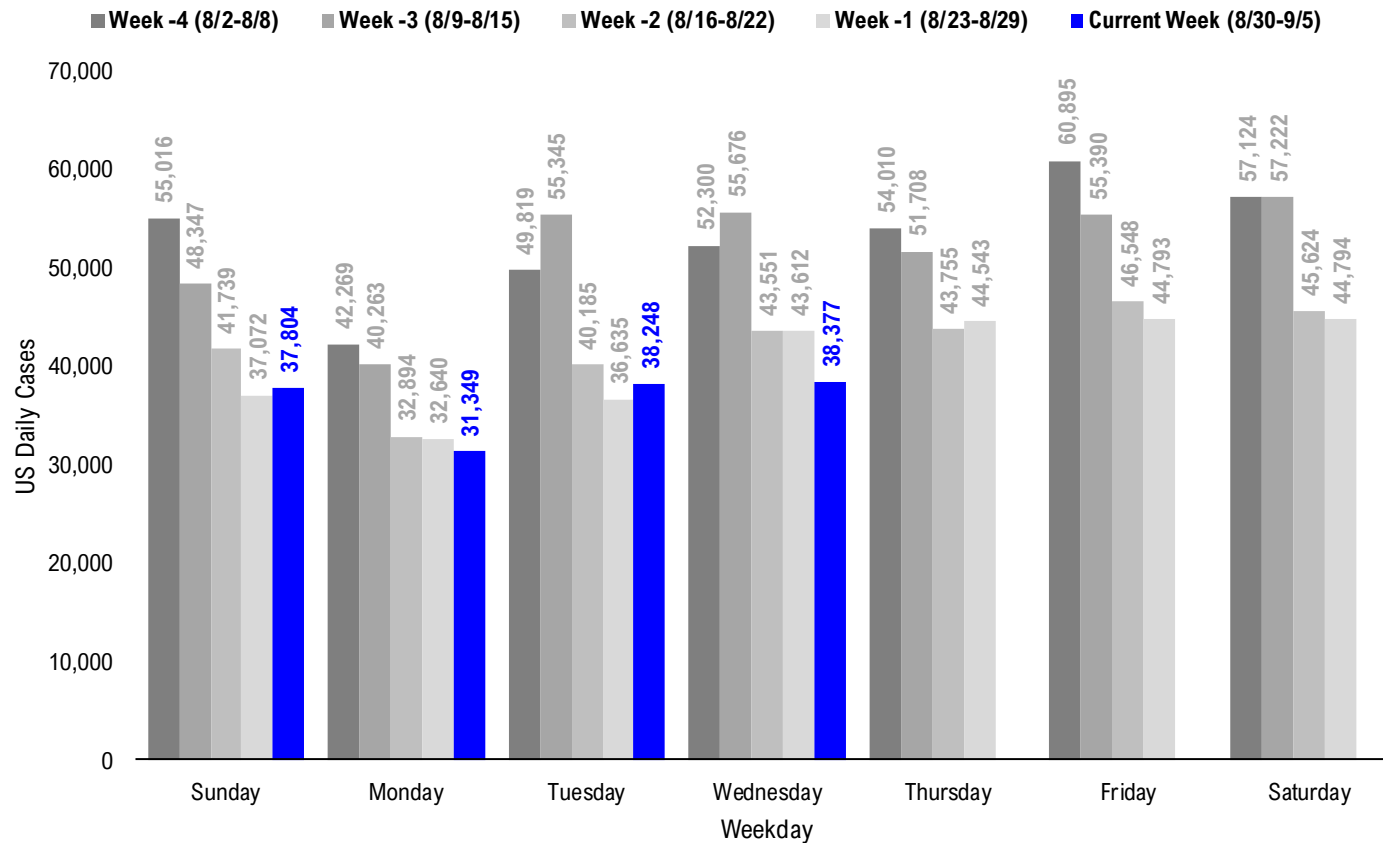
USA total COVID-19 tests administered



US daily new cases rolling 7D delta



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



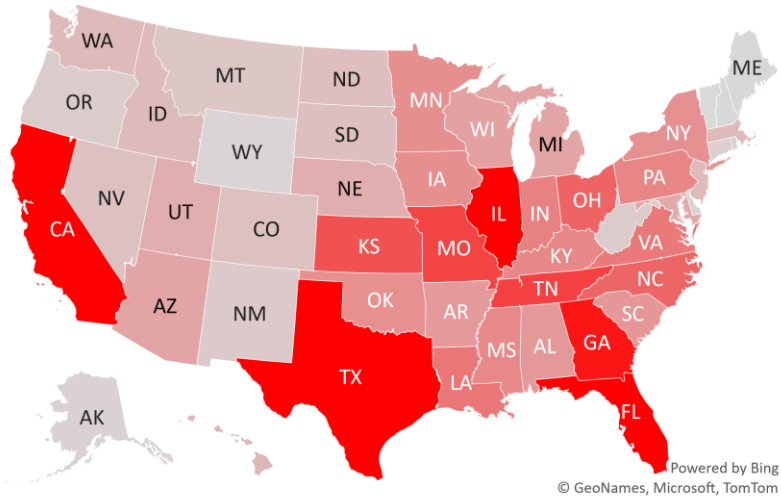
#3: USA State COVID-19 Situation at a Glance...

		Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents		Since Peak		% Decline in Daily Cases	
		% US Pop	9/2/20	7D Delta	9/2/20	7D Delta	# Days	% Decline	
United States		100%	38,377	-5,235	110	-5	47	-50%	
United States (ex-CA)		88%	34,665	-3,486	107	-2	47	-46%	
States:									
1	California	11.9%	4,255	-1,749	102	-28	40	-65%	
2	Texas	8.7%	4,157	-1,156	122	-40	47	-70%	
3	Florida	6.5%	2,575	-645	125	-1	51	-79%	
4	Illinois	3.8%	2,128	-29	139	-4	111	-41%	
5	Georgia	3.2%	1,916	-320	177	-31	39	-56%	
6	Tennessee	2.1%	1,502	-434	230	+63	36	-43%	
7	Missouri	1.8%	1,458	+32	193	+31	34	-38%	
8	Kansas	0.9%	1,328	-208	331	-22	7	-6%	
9	Ohio	3.5%	1,157	+68	100	+21	33	-25%	
10	North Carolina	3.2%	1,129	-115	141	+18	46	-34%	
11	Louisiana	1.4%	956	+112	141	-3	43	-75%	
12	Virginia	2.6%	927	+104	109	+12	24	-34%	
13	Indiana	2.0%	859	-79	121	-1	24	-26%	
14	Pennsylvania	3.9%	816	+315	55	+16	145	-61%	
15	Kentucky	1.3%	806	+144	146	+19	19	-22%	
16	Mississippi	0.9%	781	-123	189	-59	34	-63%	
17	Minnesota	1.7%	730	+201	112	+14	4	-37%	
18	Iowa	1.0%	726	-215	203	-4	5	-48%	
19	Oklahoma	1.2%	719	+53	177	+36	36	-43%	
20	New York	5.9%	708	+142	36	+9	145	-93%	
21	South Carolina	1.6%	657	+52	141	+5	52	-63%	
22	Alabama	1.5%	623	-1,389	204	-18	39	-52%	
23	Arkansas	0.9%	615	-34	139	-21	39	-54%	
24	Wisconsin	1.8%	545	-223	103	-0	39	-41%	
25	Michigan	3.0%	524	-237	57	-24	131	-54%	
26	Arizona	2.2%	519	+332	55	-7	62	-91%	
27	Maryland	1.8%	456	+16	84	+8	104	-59%	
28	Nebraska	0.6%	421	+42	164	+19	123	-38%	

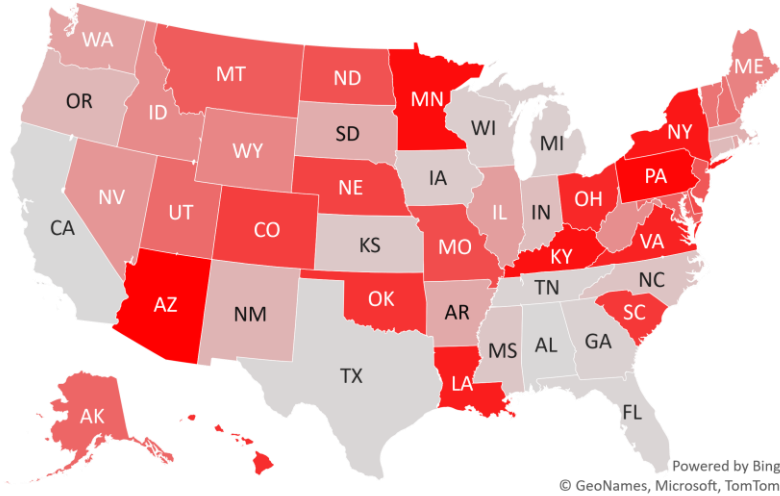
		Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents		Since Peak		% Decline in Daily Cases	
		% US Pop	9/2/20	7D Delta	9/2/20	7D Delta	# Days	% Decline	
United States		100%	38,377	-5,235	110	-5	47	-50%	
United States (ex-CA)		88%	34,665	-3,486	107	-2	47	-46%	
States:									
29	Utah	1.0%	419	+12	101	-9	46	-60%	
30	Puerto Rico	1.0%	358	+340	74	+19	15	-45%	
31	Hawaii	0.4%	339	+62	153	-2	4	-26%	
32	New Jersey	2.7%	305	+20	37	+6	150	-92%	
33	Washington	2.3%	304	-30	46	-2	49	-66%	
34	Idaho	0.5%	296	-9	149	-24	47	-61%	
35	Massachusetts	2.1%	293	-43	46	-21	130	-91%	
36	North Dakota	0.2%	267	+29	247	-11	4	-44%	
37	South Dakota	0.3%	254	-38	257	+40	3	-40%	
38	Colorado	1.7%	244	+51	46	-3	129	-63%	
39	Nevada	0.9%	239	-14	104	-11	46	-76%	
40	Montana	0.3%	183	+20	110	+1	33	-28%	
41	New Mexico	0.6%	152	-45	52	-1	35	-70%	
42	West Virginia	0.5%	135	-10	99	+49	1	-1%	
43	Oregon	1.3%	129	-51	41	-9	32	-52%	
44	Connecticut	1.1%	102	-78	57	-8	133	-86%	
45	Rhode Island	0.3%	76	-33	55	-14	130	-86%	
46	Alaska	0.2%	66	+14	63	-7	31	-66%	
47	Delaware	0.3%	65	+41	71	+39	127	-79%	
48	Guam	0.0%	47	-89	296	-308	6	-55%	
49	Wyoming	0.2%	45	-5	52	-8	126	-48%	
50	District of Columbia	0.2%	28	-10	56	-7	122	-83%	
51	Maine	0.4%	19	-2	14	+0	103	-73%	
52	New Hampshire	0.4%	12	+3	13	+1	123	-85%	
53	U.S. Virgin Islands	0.0%	4	-28	44	-174	12	-90%	
54	Vermont	0.2%	3	+1	11	+2	150	-88%	
55	Northern Mariana Islands	0.0%	0	+0	6	+6	152	-83%	
56	American Samoa	0.0%	0	+0	0	+0	-	-	

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

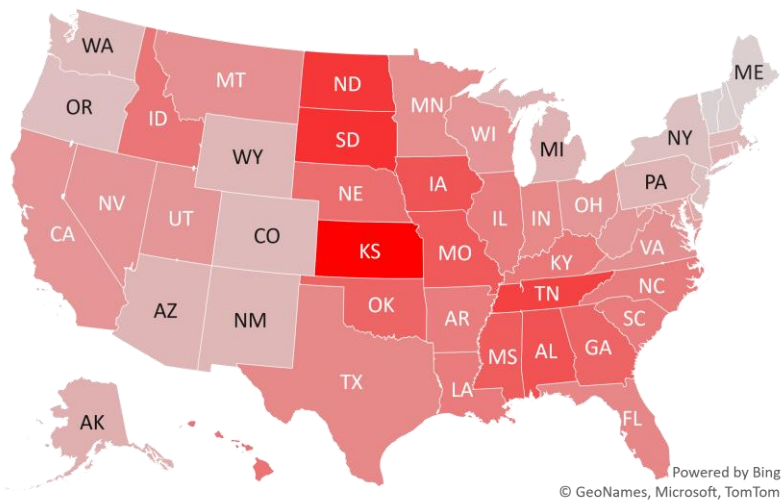
Daily Case Increases



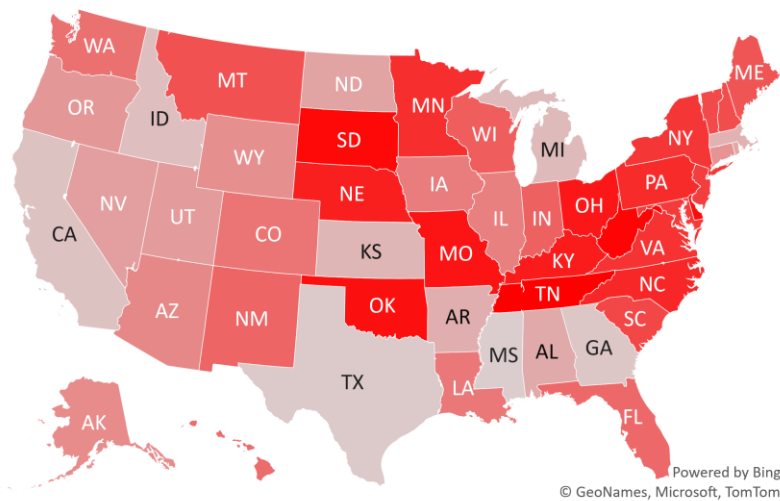
7D Delta in Daily New Cases



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



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



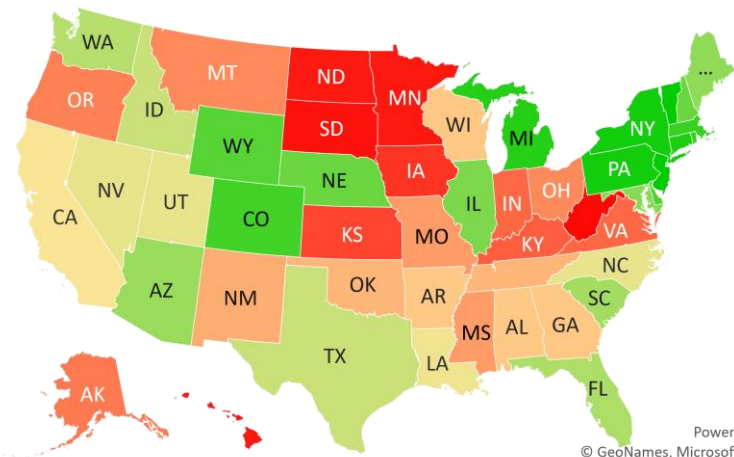
#5: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 9/2)

	Sorted			
	Peak Date	9/2/20	% off the Peak	% US Pop
United States	7/17/20	47	-50%	100%
United States (Ex-CA)	7/17/20	47	-46%	88%
States:				
Northern Mariana Island	4/3/20	152	-83%	0.0%
Vermont	4/5/20	150	-88%	0.2%
New Jersey	4/5/20	150	-92%	2.7%
Pennsylvania	4/10/20	145	-61%	3.9%
New York	4/10/20	145	-93%	5.9%
Connecticut	4/22/20	133	-86%	1.1%
Michigan	4/24/20	131	-54%	3.0%
Rhode Island	4/25/20	130	-86%	0.3%
Massachusetts	4/25/20	130	-91%	2.1%
Colorado	4/26/20	129	-63%	1.7%
Delaware	4/28/20	127	-79%	0.3%
Wyoming	4/29/20	126	-48%	0.2%
New Hampshire	5/2/20	123	-85%	0.4%
Nebraska	5/2/20	123	-38%	0.6%
District of Columbia	5/3/20	122	-83%	0.2%
Illinois	5/14/20	111	-41%	3.8%
Maryland	5/21/20	104	-59%	1.8%
Maine	5/22/20	103	-73%	0.4%
Arizona	7/2/20	62	-91%	2.2%
South Carolina	7/12/20	52	-63%	1.6%
Florida	7/13/20	51	-79%	6.5%
Washington	7/15/20	49	-66%	2.3%
Texas	7/17/20	47	-70%	8.7%
Idaho	7/17/20	47	-61%	0.5%
Utah	7/18/20	46	-60%	1.0%
Nevada	7/18/20	46	-76%	0.9%
North Carolina	7/18/20	46	-34%	3.2%
Louisiana	7/21/20	43	-75%	1.4%

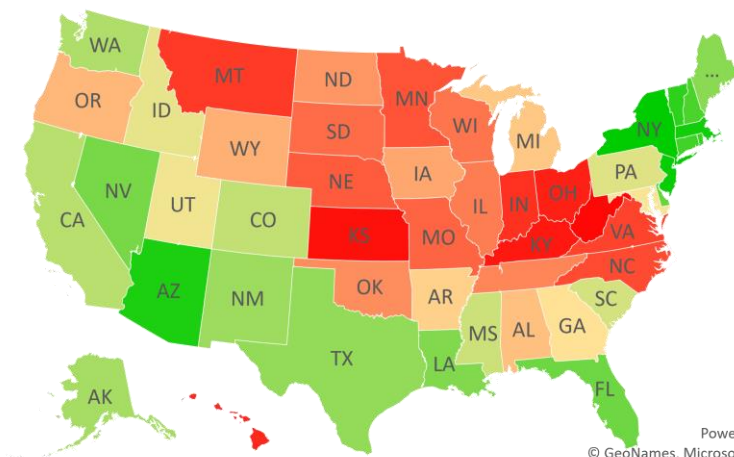
	Sorted			
	Peak Date	9/2/20	% off the Peak	% US Pop
United States	7/17/20	47	-50%	100%
United States (Ex-CA)	7/17/20	47	-46%	88%
States:				
California	7/24/20	40	-65%	11.9%
Wisconsin	7/25/20	39	-41%	1.8%
Georgia	7/25/20	39	-56%	3.2%
Arkansas	7/25/20	39	-54%	0.9%
Alabama	7/25/20	39	-52%	1.5%
Tennessee	7/28/20	36	-43%	2.1%
Oklahoma	7/28/20	36	-43%	1.2%
New Mexico	7/29/20	35	-70%	0.6%
Mississippi	7/30/20	34	-63%	0.9%
Missouri	7/30/20	34	-38%	1.8%
Ohio	7/31/20	33	-25%	3.5%
Montana	7/31/20	33	-28%	0.3%
Oregon	8/1/20	32	-52%	1.3%
Alaska	8/2/20	31	-66%	0.2%
Virginia	8/9/20	24	-34%	2.6%
Indiana	8/9/20	24	-26%	2.0%
Kentucky	8/14/20	19	-22%	1.3%
Puerto Rico	8/18/20	15	-45%	1.0%
U.S. Virgin Islands	8/21/20	12	-90%	0.0%
Kansas	8/26/20	7	-6%	0.9%
Guam	8/27/20	6	-55%	0.0%
Iowa	8/28/20	5	-48%	1.0%
North Dakota	8/29/20	4	-44%	0.2%
Minnesota	8/29/20	4	-37%	1.7%
Hawaii	8/29/20	4	-26%	0.4%
South Dakota	8/30/20	3	-40%	0.3%
West Virginia	9/1/20	1	-1%	0.5%

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)

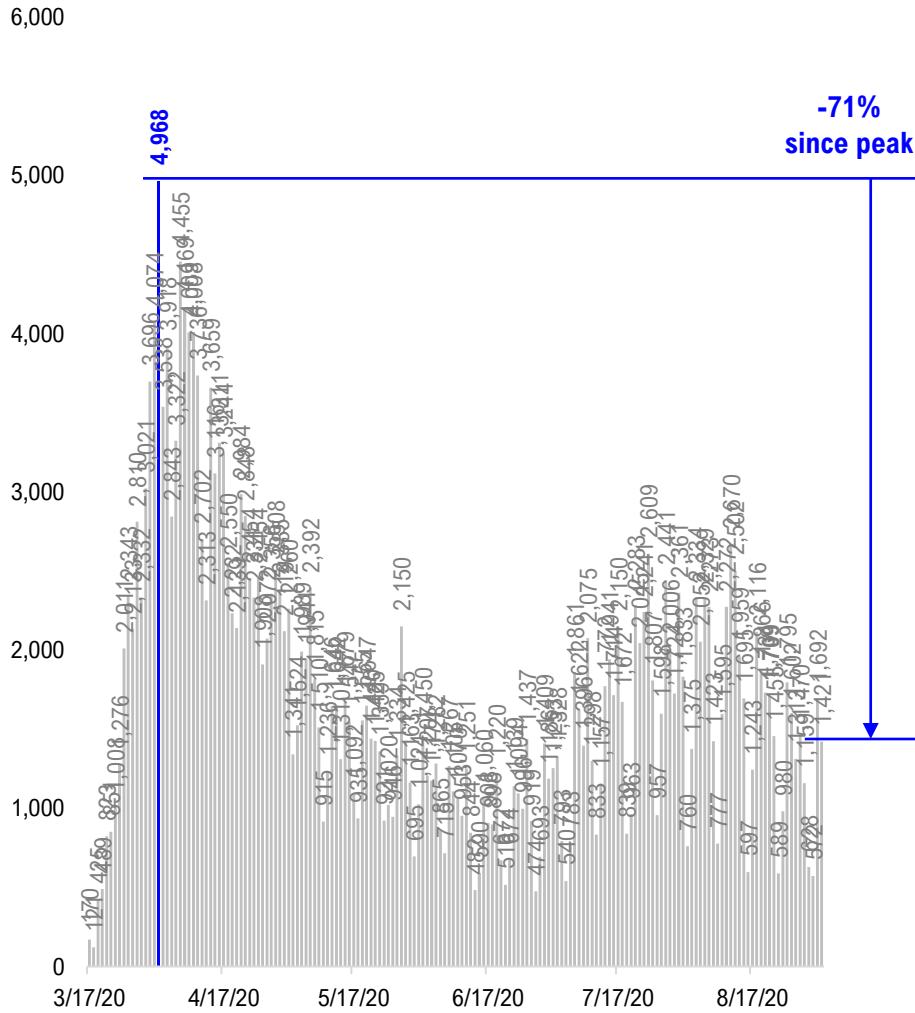
	Sorted					Sorted					
	7D Ago	Last 3-day Trend				7D Ago	Last 3-day Trend				
	8/26/20	8/31/20	9/1/20	9/2/20		8/26/20	8/31/20	9/1/20	9/2/20		
United States	43,612	31,349	38,248	38,377	+129	United States	43,612	31,349	38,248	38,377	+129
United States (ex-CA)	37,608	27,173	34,536	34,122	-414	United States (ex-CA)	37,608	27,173	34,536	34,122	-414
States:						States:					
California	6,004	4,176	3,712	4,255		Utah	407	253	296	419	<--higher
Texas	5,313	2,374	4,116	4,157		Puerto Rico	18	247	108	358	<--higher
Florida	3,220	1,885	3,600	2,575		Hawaii	277	133	180	339	<--higher
Illinois	2,157	1,668	1,492	2,128	<--higher	New Jersey	285	349	330	305	
Georgia	2,236	1,498	2,226	1,916		Washington	334	441	315	304	
Tennessee	1,936	1,818	1,396	1,502		Idaho	305	221	280	296	
Missouri	1,426	1,042	1,058	1,458	<--higher	Massachusetts	336	304	355	293	
Kansas	1,536	1,564	0	1,328		North Dakota	238	114	184	267	<--higher
Ohio	1,089	895	1,453	1,157		South Dakota	292	187	240	254	
North Carolina	1,244	1,186	2,111	1,129		Colorado	193	201	351	244	
Louisiana	844	326	689	956	<--higher	Nevada	253	320	405	239	
Virginia	823	847	1,021	927		Montana	163	77	92	183	<--higher
Indiana	938	883	695	859		New Mexico	197	69	108	152	<--higher
Pennsylvania	501	521	770	816		West Virginia	145	140	257	135	
Kentucky	662	364	789	806		Oregon	180	162	233	129	
Mississippi	904	274	634	781	<--higher	Connecticut	180	384	127	102	
Minnesota	529	675	491	730		Rhode Island	109	46	53	76	<--higher
Iowa	941	608	591	726		Alaska	52	37	35	66	<--higher
Oklahoma	666	713	666	719		Delaware	24	86	55	65	
New York	566	656	754	708		Guam	136	48	52	47	
South Carolina	605	668	854	657		Wyoming	50	22	24	45	<--higher
Alabama	2,012	823	1,558	623		District of Columbia	38	33	57	28	
Arkansas	649	368	273	615	<--higher	Maine	21	14	22	19	
Wisconsin	768	266	981	545		New Hampshire	9	21	22	12	
Michigan	761	451	718	524		U.S. Virgin Islands	32	5	5	4	
Arizona	187	174	507	519		Vermont	2	13	5	3	
Maryland	440	458	614	456		Northern Mariana Islands	0	0	1	0	
Nebraska	379	241	287	421	<--higher	American Samoa	0	0	0	0	

<--higher – if the state has 20% or more daily cases than prior two days...
 Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

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

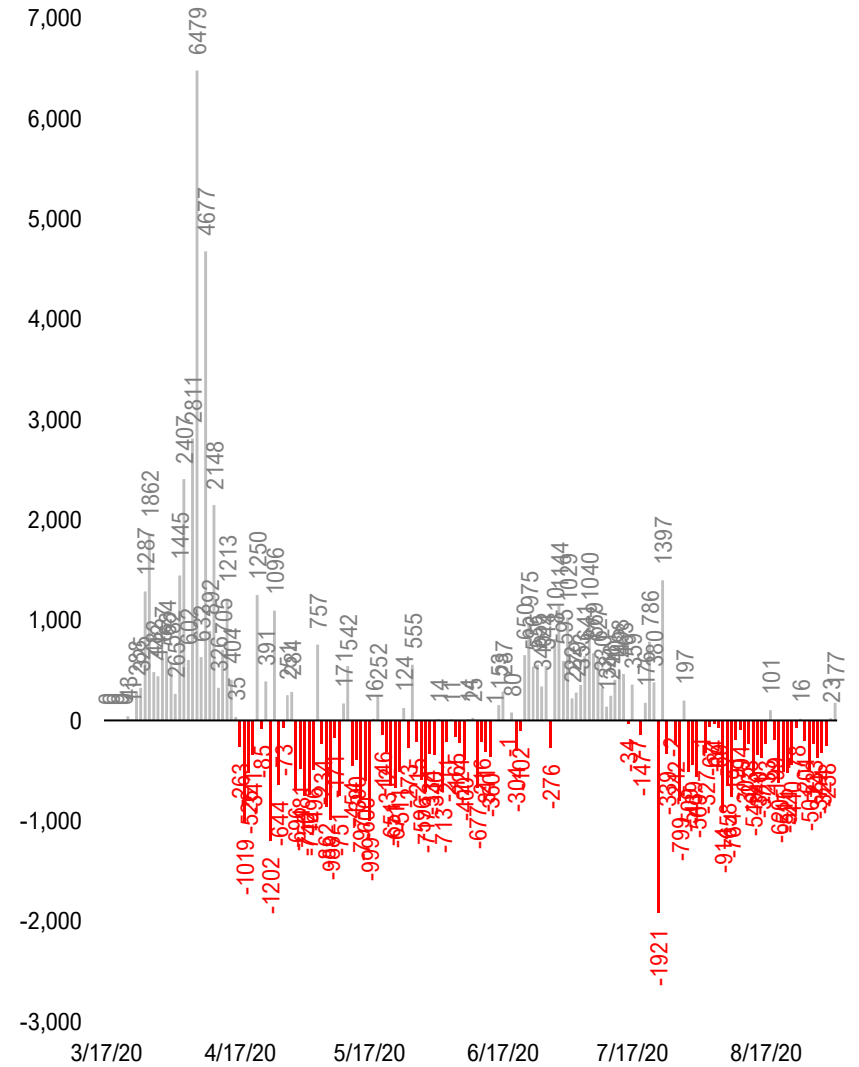
US Gross Hospitalizations

(Composite of 33 states that report "gross hospitalizations")



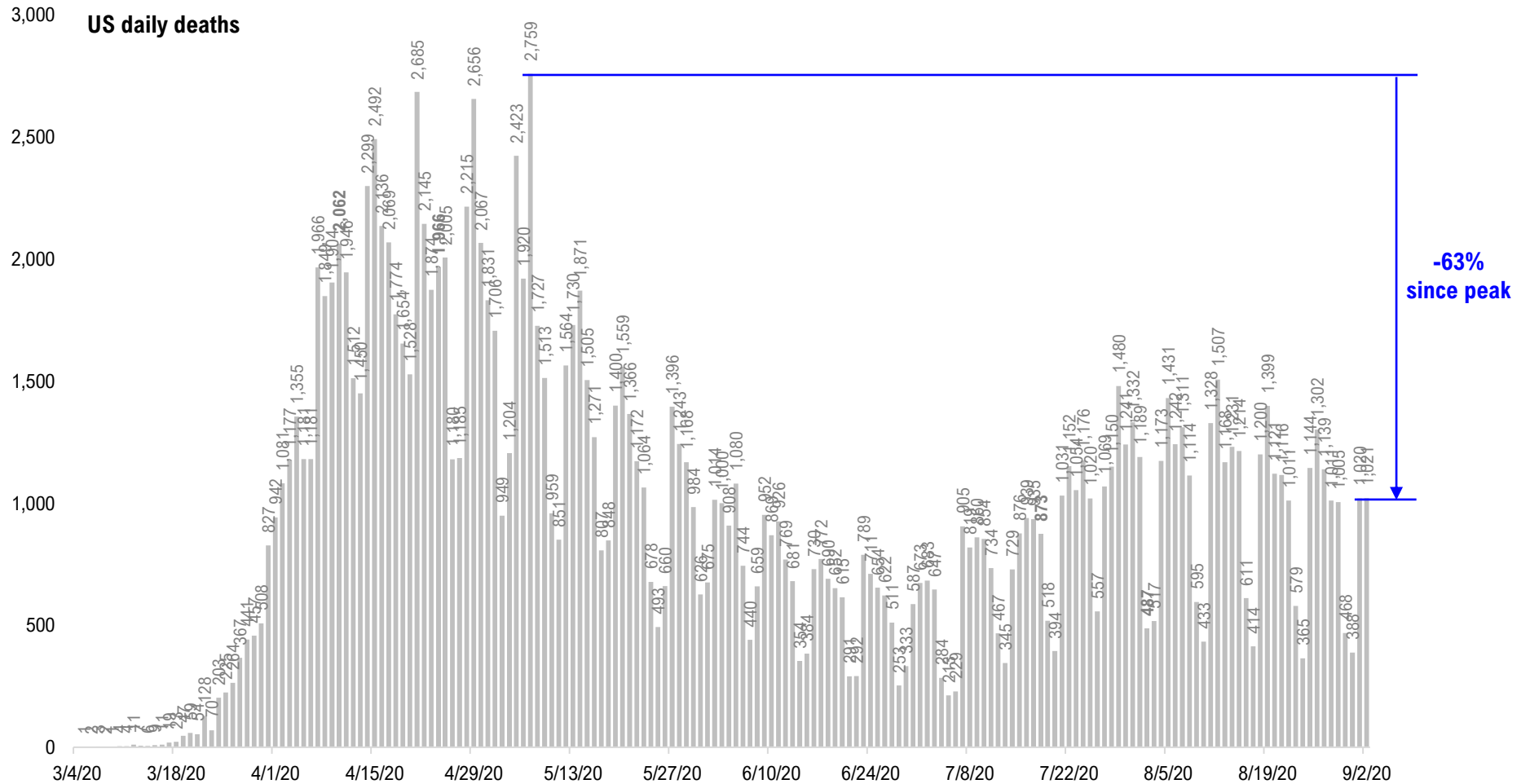
US Net Hospitalizations

(Composite of 18 states that report "net/current hospitalizations")



#8: US Daily New Fatalities...

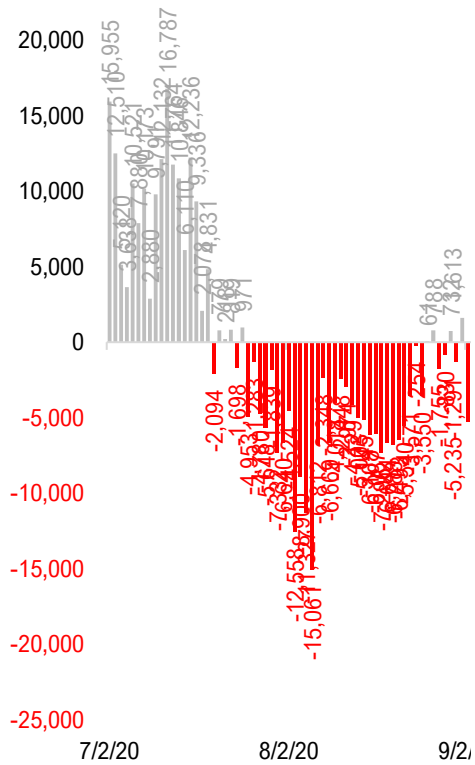
US daily COVID-19 Fatalities



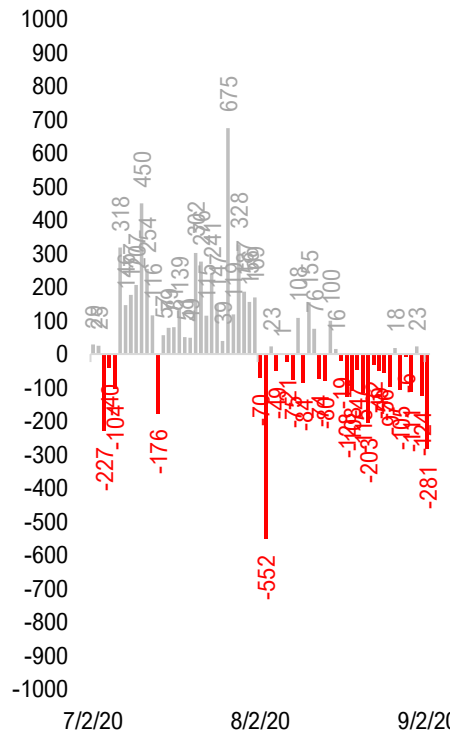
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

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

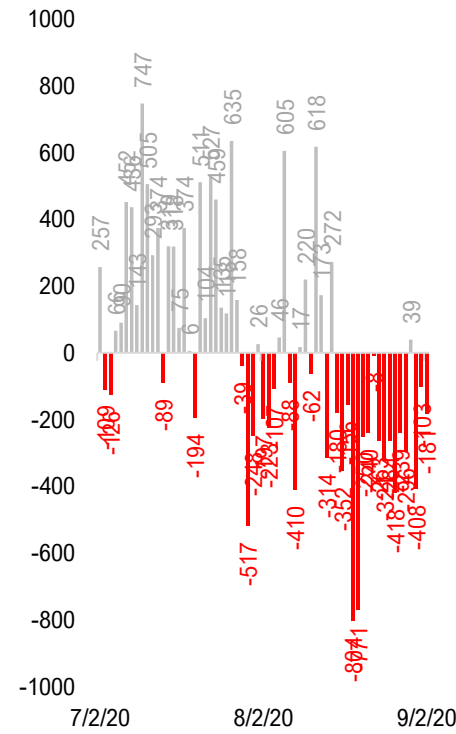
Daily New Cases (8/10-8/23 ex-CA)



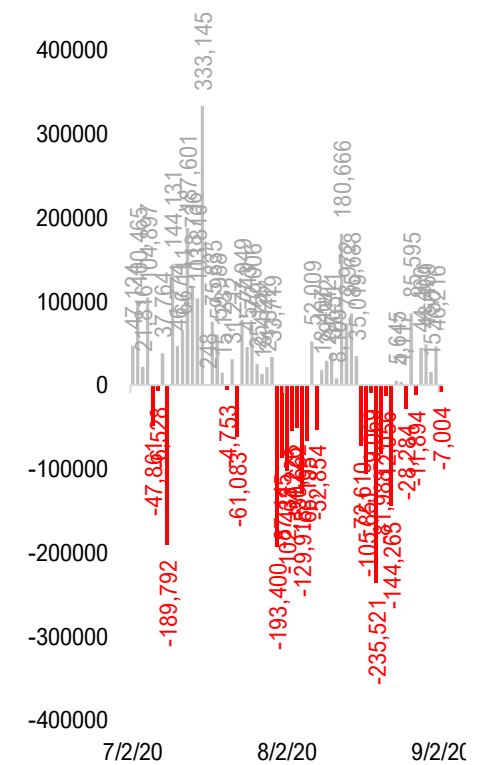
Daily Deaths



Daily New Gross hospitalization (aggregate of 33 states)

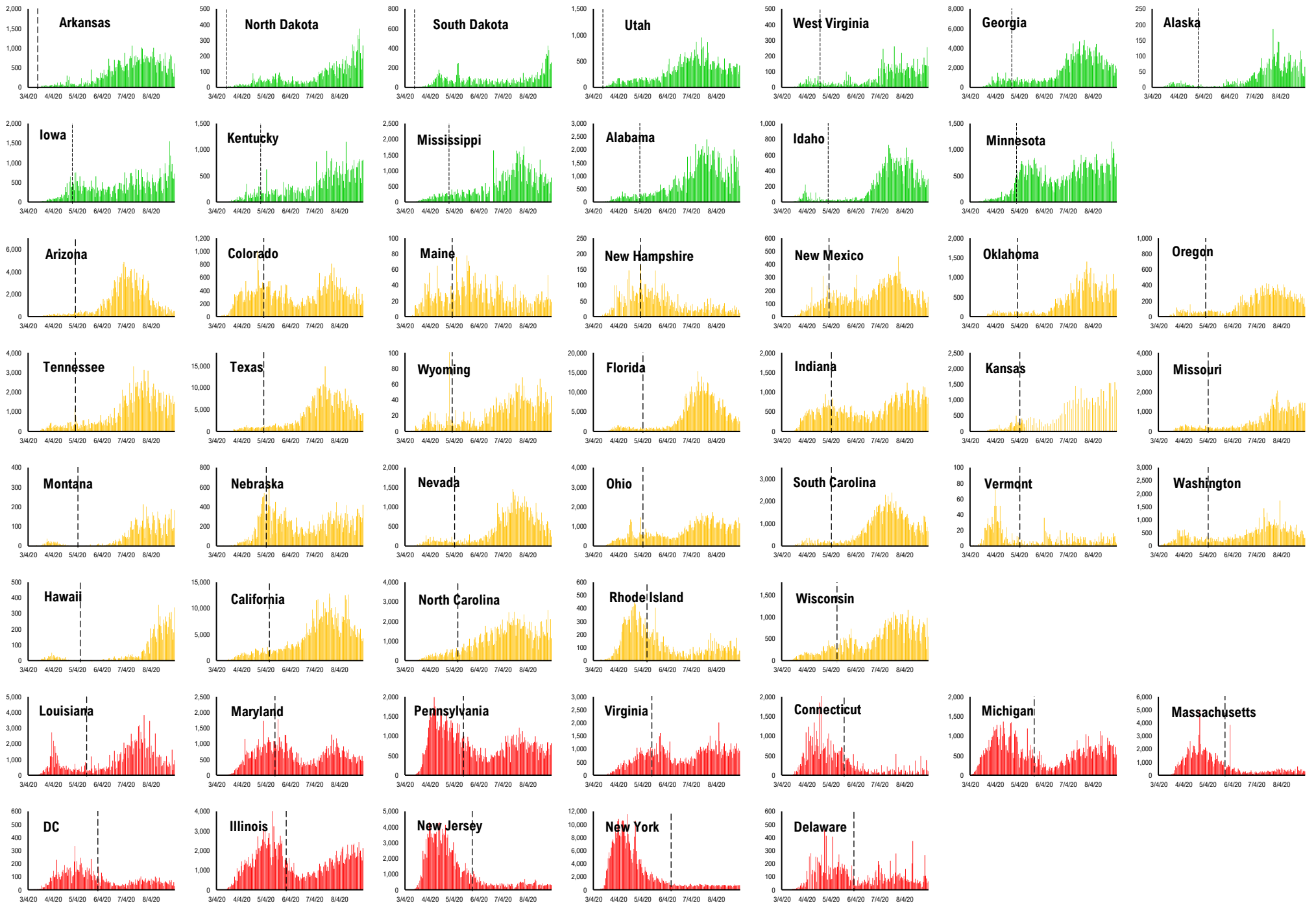


Daily Tests

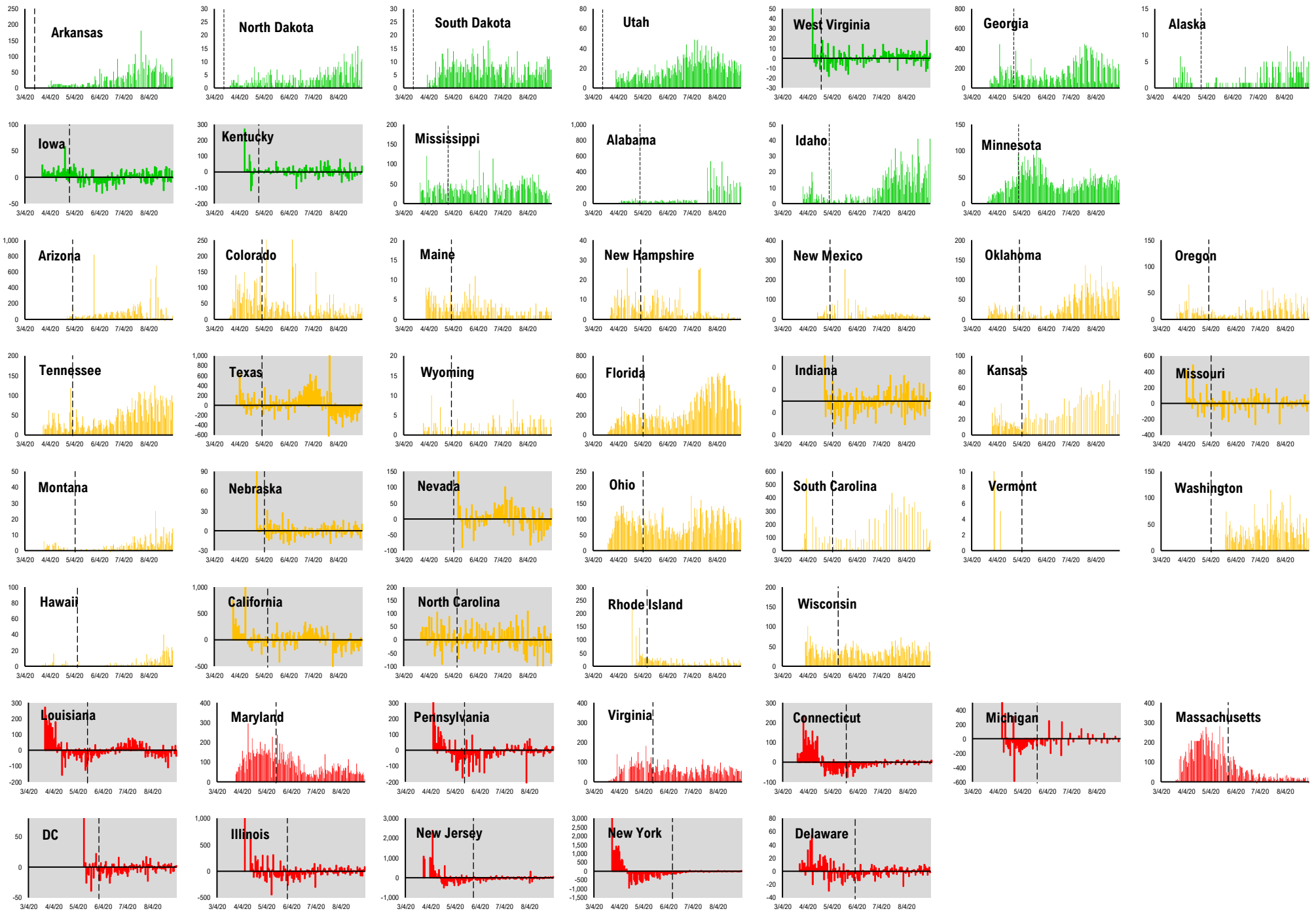


* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

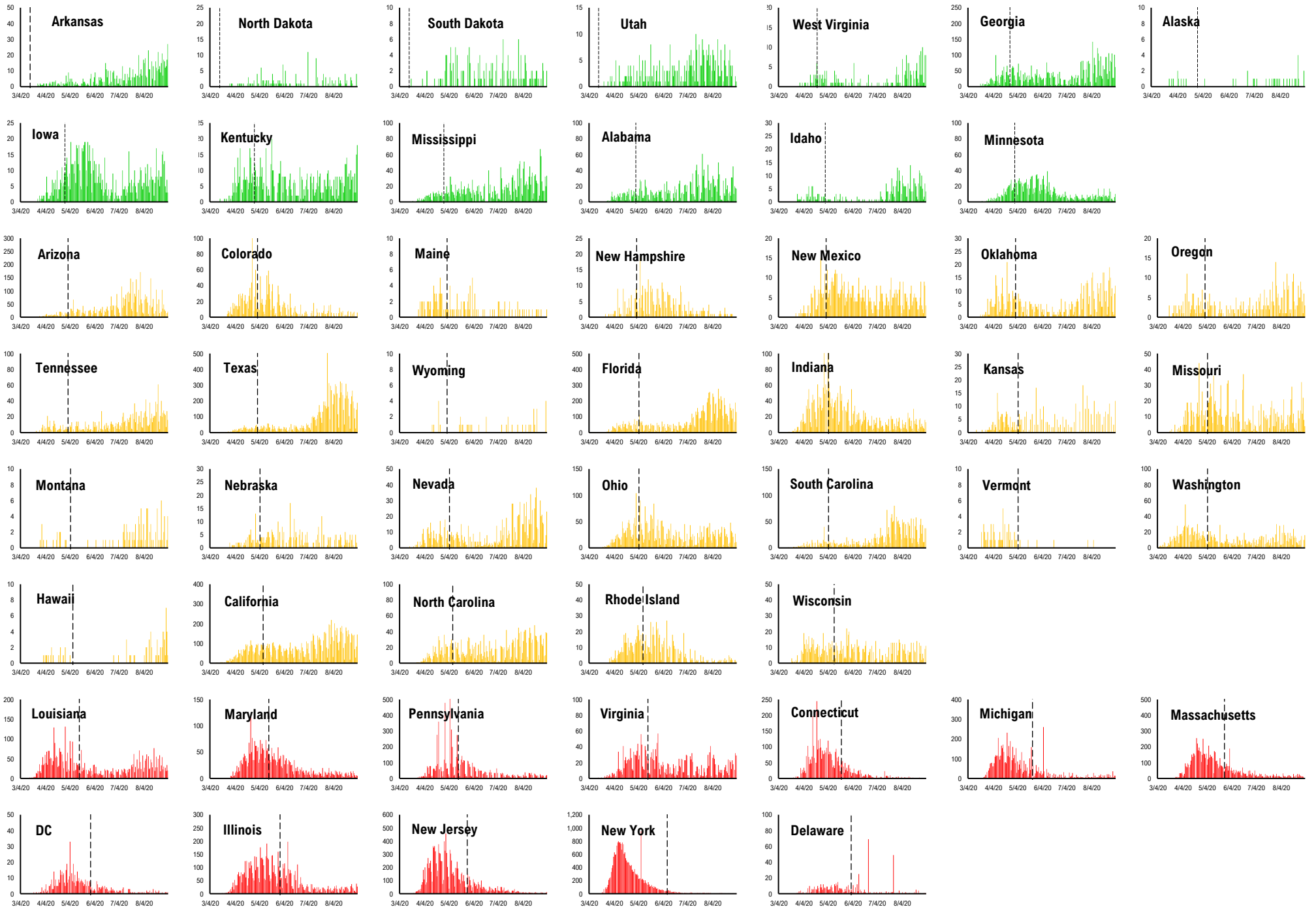
#10: Daily New Cases by States... (sorted by "open" date)



#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

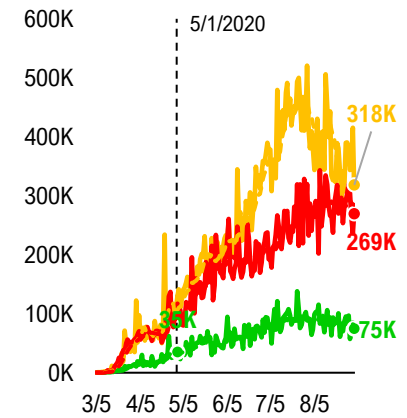
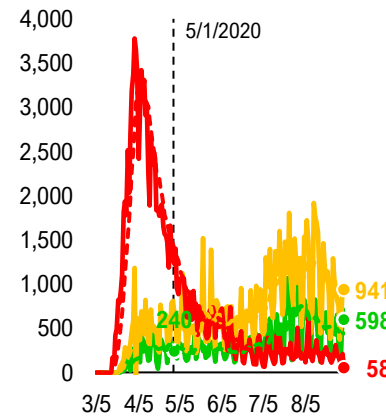
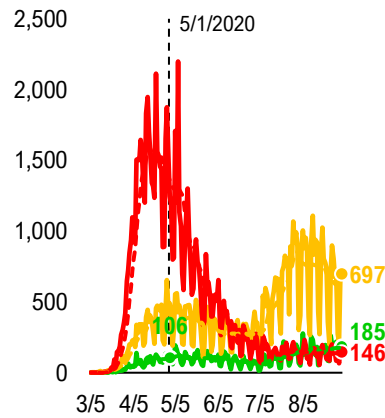
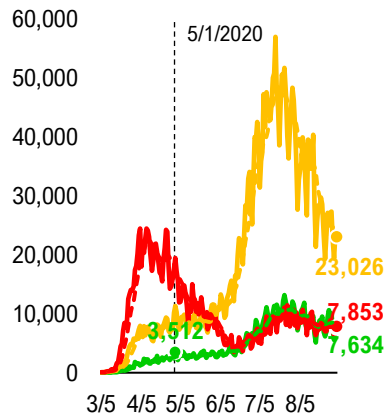
Daily Deaths

Daily Hospitalization

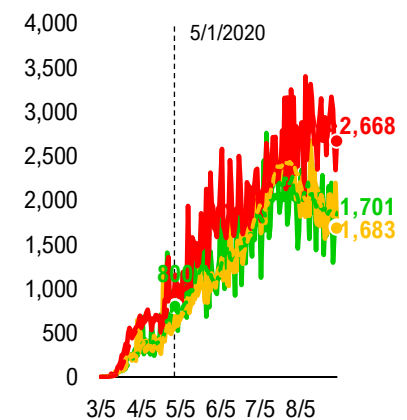
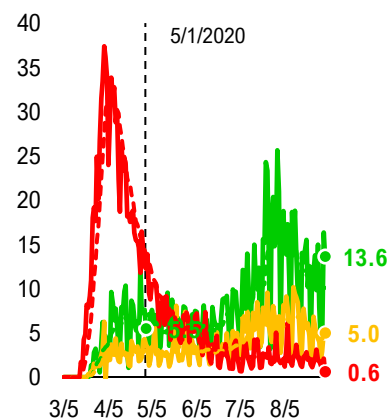
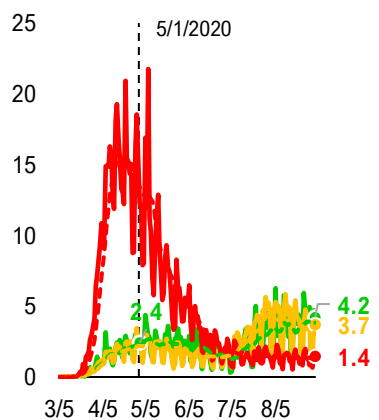
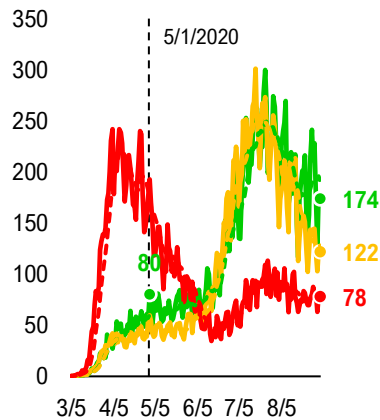
Daily Testing

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

Composite Daily Aggregate

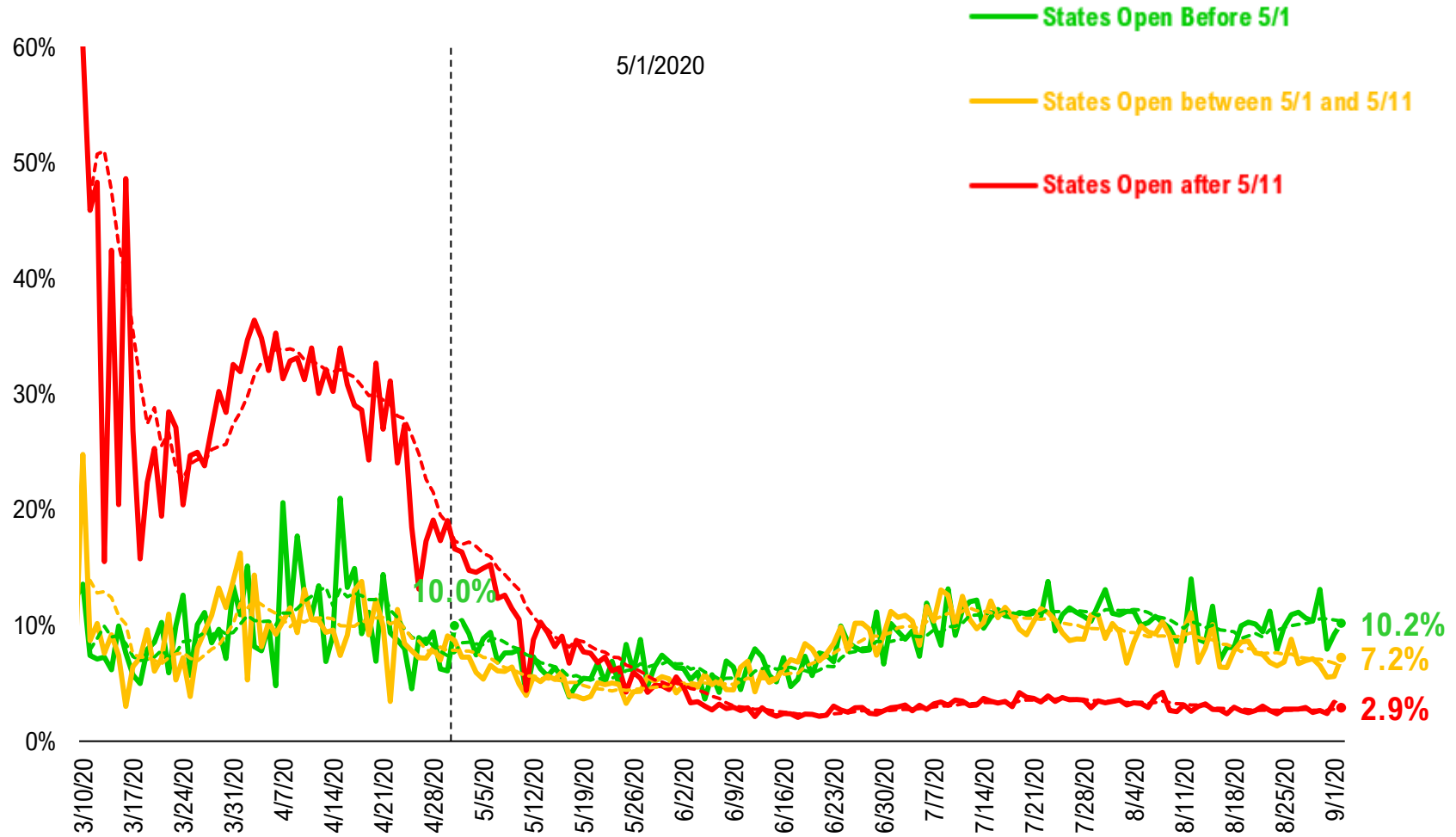


Composite Daily Aggregate Per 1mm Pop

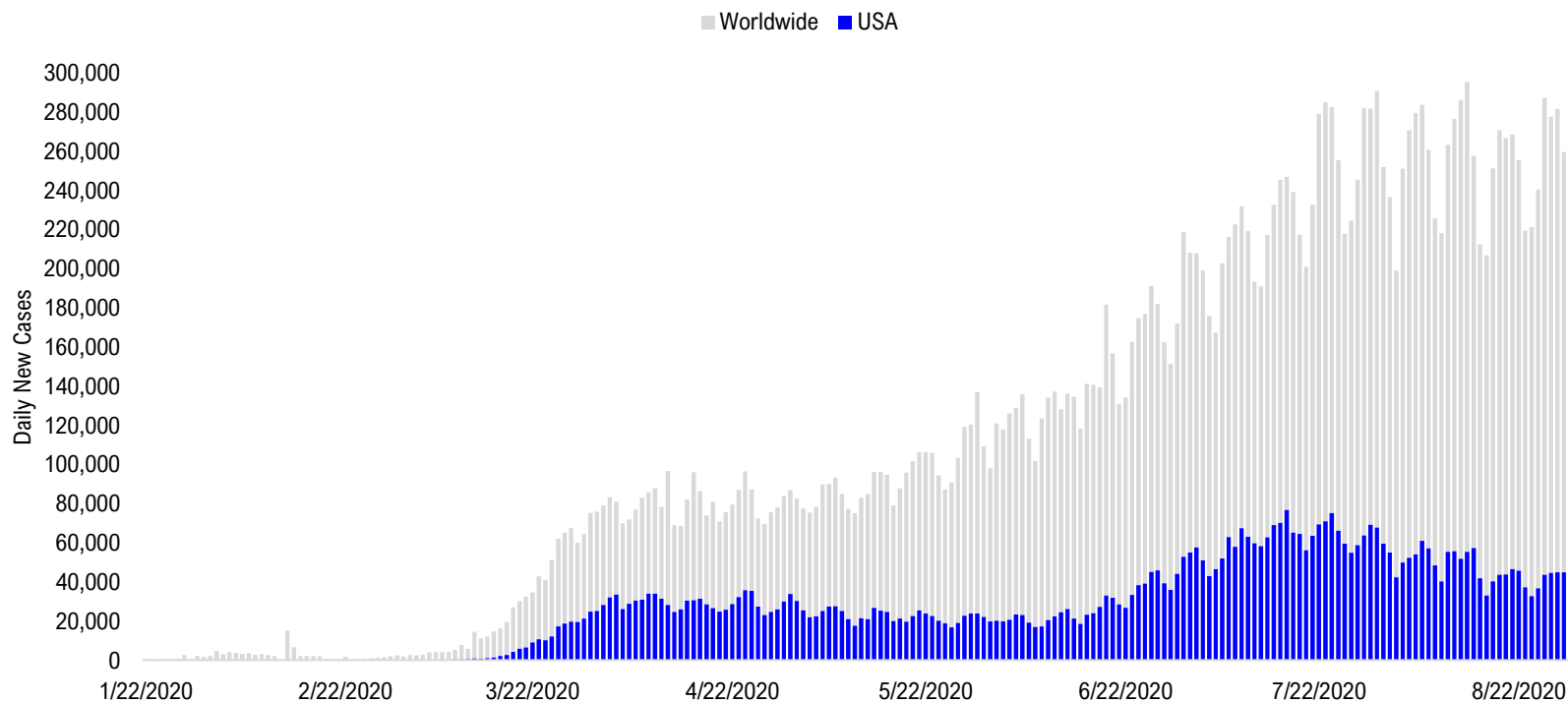


#14: State COVID-19 Daily Positivity Rate by Reopen Date...

Composite Daily Positivity Rate



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



4/17/2020	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	9/1/2020
Europe 40,652	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	Pakistan + India + Bangladesh 77,863
US + Canada 32,649	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	Latin America 72,160
Latin America 6,026	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 36,470
Asia ex- India+Pakistan 2,264	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 35,029
Pakistan + India + Bangladesh 1,649	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 9,237
Africa 1,176	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 7,460

Disclosures

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