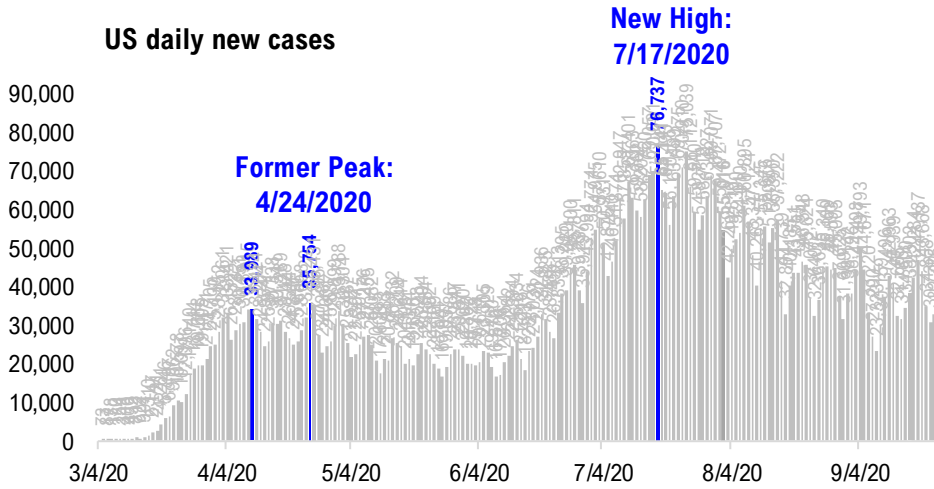


FSInsight Daily COVID-19 Chartbook

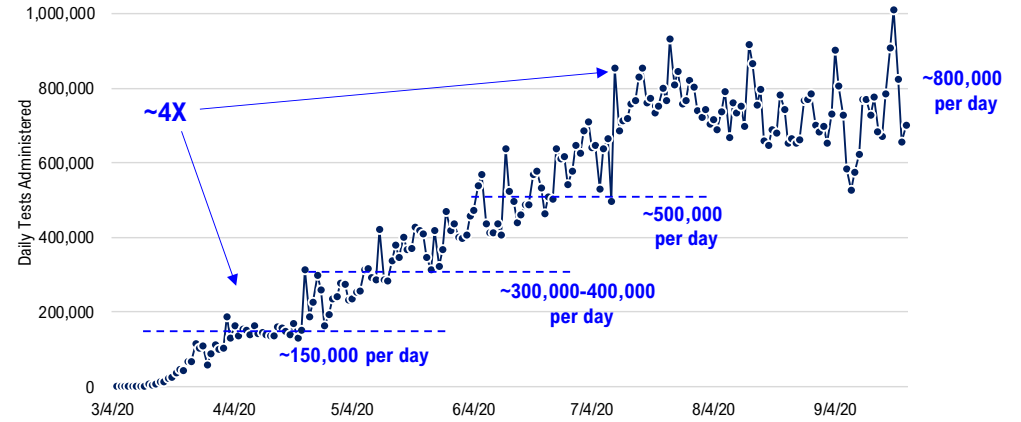


#1: USA COVID-19 Situation at a Glance...

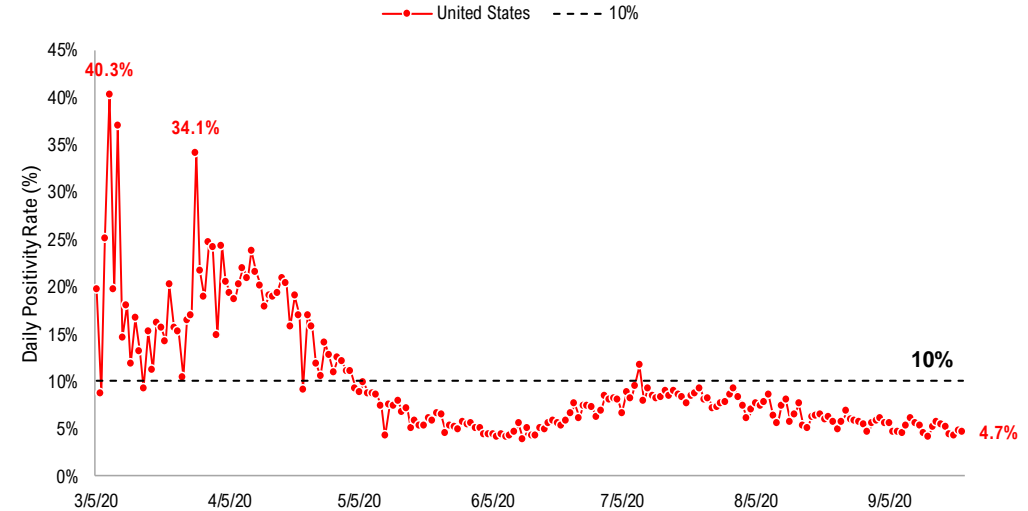
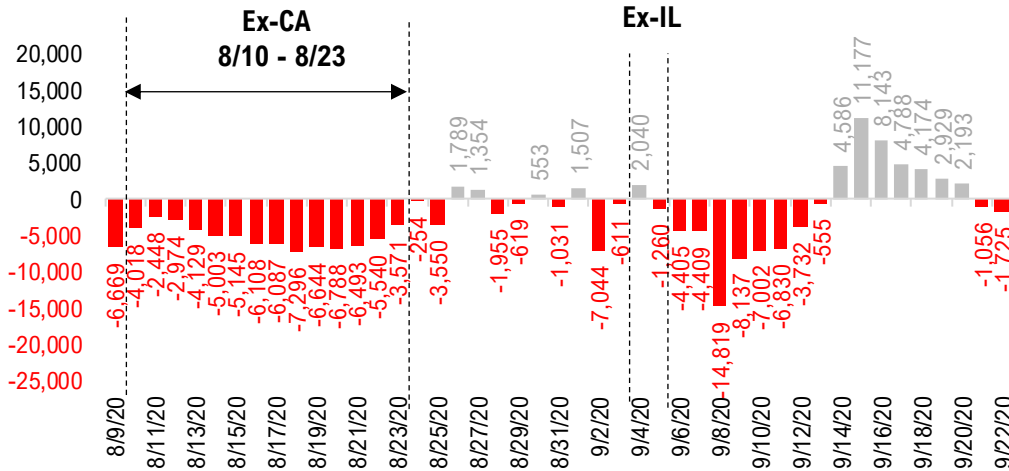
US daily new cases



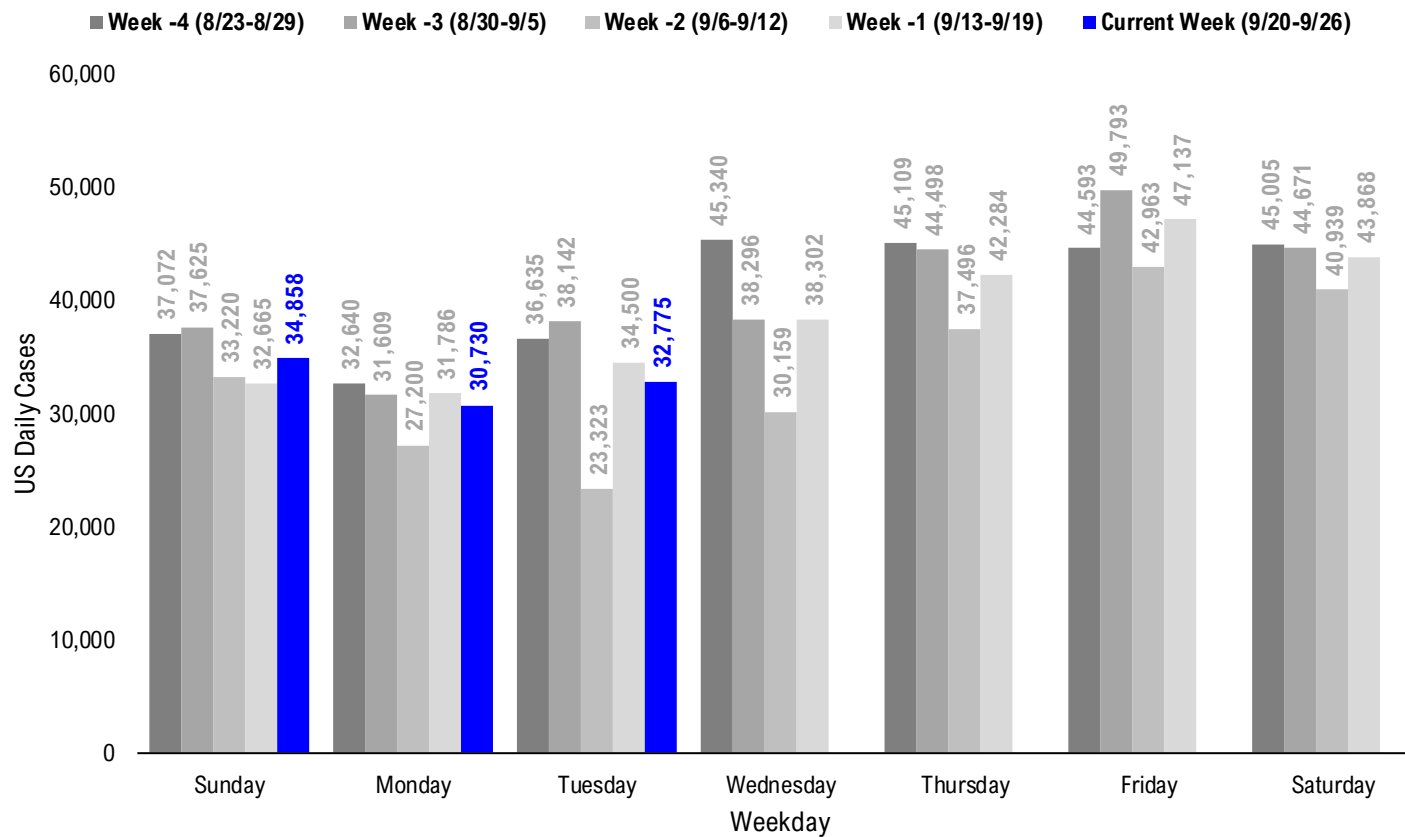
USA total COVID-19 tests administered



US daily new cases rolling 7D delta



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



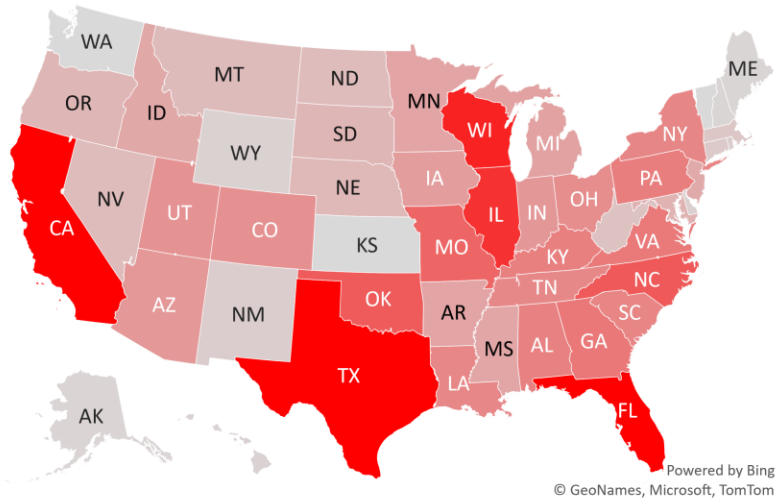
#3: USA State COVID-19 Situation at a Glance...

		Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents		Since Peak		% Decline in Daily Cases	
		9/22/20	7D Delta	9/22/20	7D Delta	# Days			
United States		100%	32,775	-1,725	100	-1	67	-54%	
States:									
1	Texas	8.7%	3,964	-852	91	-15	67	-78%	
2	California	11.9%	2,630	+395	86	+4	60	-71%	
3	Florida	6.5%	2,470	-646	104	-9	71	-83%	
4	Wisconsin	1.8%	1,672	+324	264	+52	3	-33%	
5	Illinois	3.8%	1,531	+65	116	+3	16	-55%	
6	North Carolina	3.2%	1,168	+62	105	+5	66	-51%	
7	Oklahoma	1.2%	1,164	+73	275	+52	56	-12%	
8	Missouri	1.8%	1,059	-258	209	-22	54	-33%	
9	Georgia	3.2%	882	-614	100	-23	59	-75%	
10	Virginia	2.6%	872	-71	92	-9	44	-44%	
11	Pennsylvania	3.9%	834	-317	47	-16	165	-67%	
12	Kentucky	1.3%	814	+96	121	+3	39	-35%	
13	Alabama	1.5%	804	+103	165	-6	59	-62%	
14	South Carolina	1.6%	769	+27	106	-17	72	-73%	
15	New York	5.9%	754	-12	38	+2	165	-93%	
16	Louisiana	1.4%	752	+381	138	-15	63	-76%	
17	Tennessee	2.1%	739	-218	181	-31	56	-55%	
18	Ohio	3.5%	685	-316	66	-18	53	-51%	
19	Colorado	1.7%	654	+254	98	+29	149	-22%	
20	Utah	1.0%	650	+88	228	+46	2	-30%	
21	Indiana	2.0%	599	-90	92	-40	9	-48%	
22	Arizona	2.2%	595	+108	59	+10	82	-90%	
23	Iowa	1.0%	548	+147	193	+27	25	-50%	
24	Michigan	3.0%	504	-67	68	+13	151	-44%	
25	Arkansas	0.9%	486	-190	180	+5	59	-40%	
26	Minnesota	1.7%	480	+78	160	+55	2	-18%	
27	Mississippi	0.9%	465	-40	105	+3	54	-80%	
28	Idaho	0.5%	446	+168	205	+85	67	-46%	

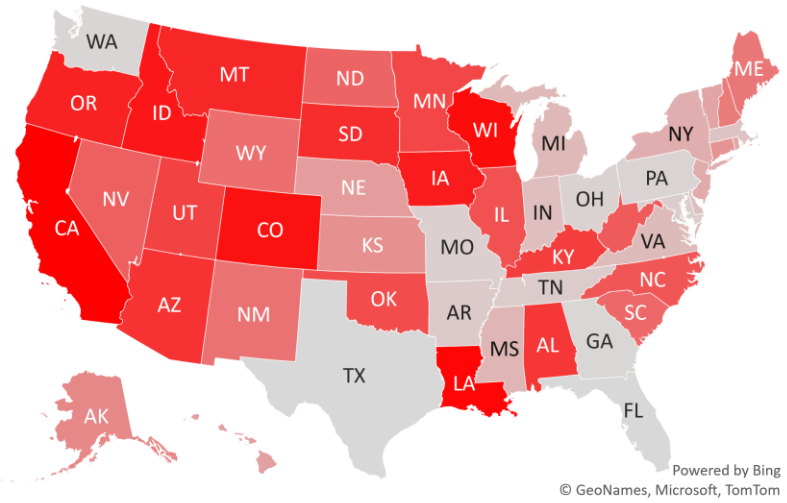
		Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents		Since Peak		% Decline in Daily Cases	
		9/22/20	7D Delta	9/22/20	7D Delta	# Days			
United States		100%	32,775	-1,725	100	-1	67	-54%	
States:									
29	New Jersey	2.7%	426	-10	48	+8	170	-89%	
30	Maryland	1.8%	344	-255	64	-30	124	-69%	
31	South Dakota	0.3%	320	+127	281	+71	3	-35%	
32	Oregon	1.3%	318	+140	56	+16	52	-35%	
33	Nebraska	0.6%	305	-2	172	+80	143	-35%	
34	Montana	0.3%	271	+134	167	+68	3	-27%	
35	North Dakota	0.2%	264	+31	394	-5	3	-29%	
36	Nevada	0.9%	262	+36	95	+6	66	-78%	
37	West Virginia	0.5%	213	+57	95	+10	10	-28%	
38	Massachusetts	2.1%	173	-140	38	-3	150	-92%	
39	Connecticut	1.1%	136	+0	59	-7	153	-86%	
40	Rhode Island	0.3%	112	-8	77	-2	150	-81%	
41	New Mexico	0.6%	107	+26	44	+3	55	-75%	
42	Delaware	0.3%	94	-106	107	-34	147	-69%	
43	Puerto Rico	1.0%	88	-141	62	-2	3	-62%	
44	Wyoming	0.2%	72	+26	136	+55	4	-24%	
45	Hawaii	0.4%	63	-3	46	-15	24	-78%	
46	Alaska	0.2%	44	+2	94	+13	51	-49%	
47	Guam	0.0%	43	+4	147	-4	26	-78%	
48	District of Columbia	0.2%	43	-22	56	-8	142	-83%	
49	Maine	0.4%	40	+25	28	+7	123	-46%	
50	New Hampshire	0.4%	38	+4	17	-6	143	-81%	
51	U.S. Virgin Islands	0.0%	7	+3	106	+62	32	-75%	
52	Vermont	0.2%	2	-4	6	-7	170	-94%	
53	Washington	2.3%	0	-327	15	-28	69	-89%	
54	Northern Mariana Islands	0.0%	0	+0	41	+35	0	0%	
55	Kansas	0.9%	0	+0	192	+18	27	-46%	
56	American Samoa	0.0%	0	+0	0	+0	-	-	

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

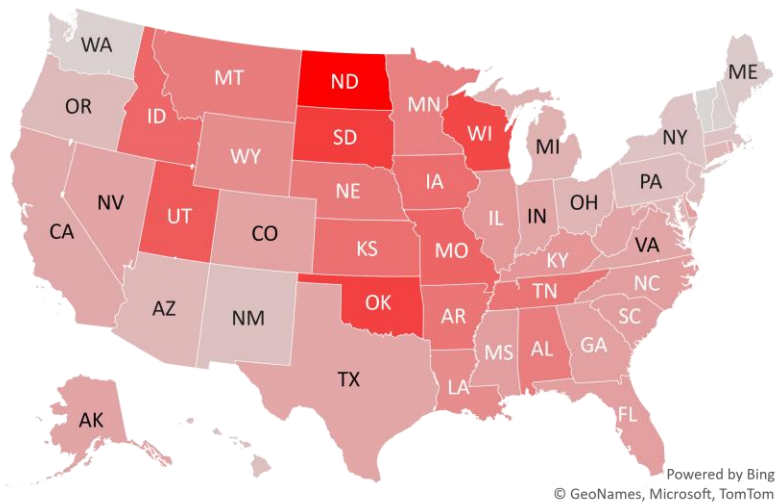
Daily Case Increases



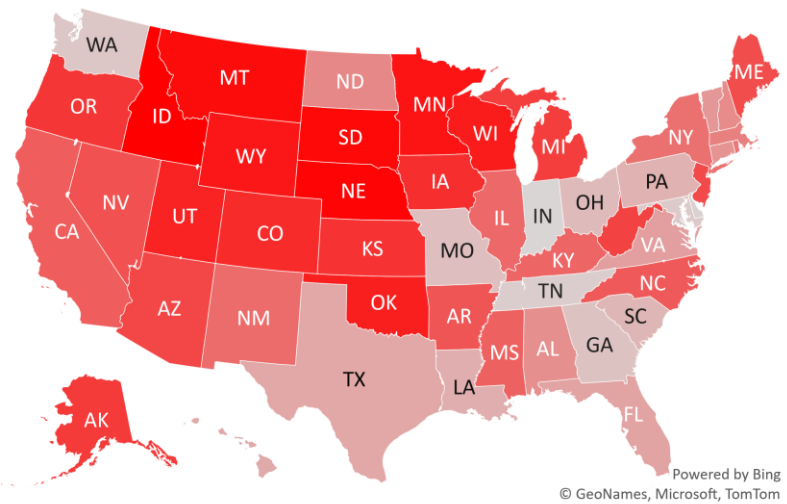
7D Delta in Daily New Cases



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



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



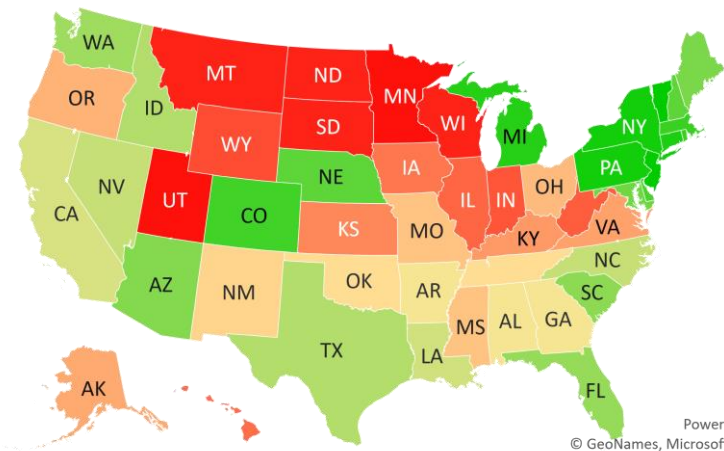
#5: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 9/22)

	Sorted			
	Peak Date	9/22/20	% off the Peak	% US Pop
United States	7/17/20	67	-54%	100%
States:				
Vermont	4/5/20	170	-94%	0.2%
New Jersey	4/5/20	170	-89%	2.7%
Pennsylvania	4/10/20	165	-67%	3.9%
New York	4/10/20	165	-93%	5.9%
Connecticut	4/22/20	153	-86%	1.1%
Michigan	4/24/20	151	-44%	3.0%
Rhode Island	4/25/20	150	-81%	0.3%
Massachusetts	4/25/20	150	-92%	2.1%
Colorado	4/26/20	149	-22%	1.7%
Delaware	4/28/20	147	-69%	0.3%
New Hampshire	5/2/20	143	-81%	0.4%
Nebraska	5/2/20	143	-35%	0.6%
District of Columbia	5/3/20	142	-83%	0.2%
Maryland	5/21/20	124	-69%	1.8%
Maine	5/22/20	123	-46%	0.4%
Arizona	7/2/20	82	-90%	2.2%
South Carolina	7/12/20	72	-73%	1.6%
Florida	7/13/20	71	-83%	6.5%
Washington	7/15/20	69	-89%	2.3%
Texas	7/17/20	67	-78%	8.7%
Idaho	7/17/20	67	-46%	0.5%
Nevada	7/18/20	66	-78%	0.9%
North Carolina	7/18/20	66	-51%	3.2%
Louisiana	7/21/20	63	-76%	1.4%
California	7/24/20	60	-71%	11.9%
Georgia	7/25/20	59	-75%	3.2%
Arkansas	7/25/20	59	-40%	0.9%
Alabama	7/25/20	59	-62%	1.5%

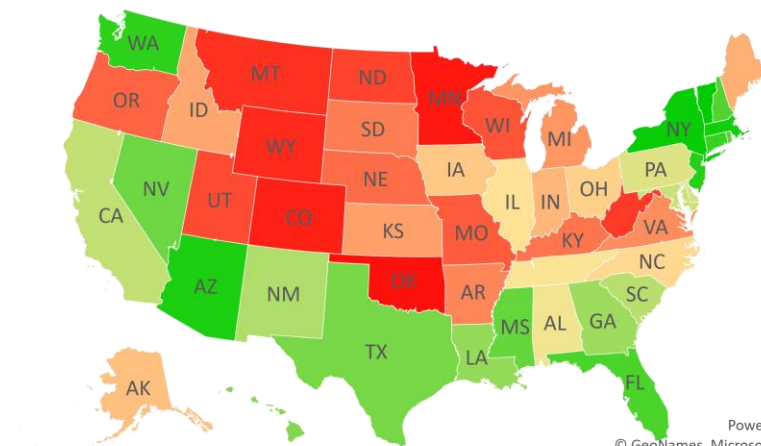
	Sorted			
	Peak Date	9/22/20	% off the Peak	% US Pop
United States	7/17/20	67	-54%	100%
States:				
Tennessee	7/28/20	56	-55%	2.1%
Oklahoma	7/28/20	56	-12%	1.2%
New Mexico	7/29/20	55	-75%	0.6%
Mississippi	7/30/20	54	-80%	0.9%
Missouri	7/30/20	54	-33%	1.8%
Ohio	7/31/20	53	-51%	3.5%
Oregon	8/1/20	52	-35%	1.3%
Alaska	8/2/20	51	-49%	0.2%
Virginia	8/9/20	44	-44%	2.6%
Kentucky	8/14/20	39	-35%	1.3%
U.S. Virgin Islands	8/21/20	32	-75%	0.0%
Kansas	8/26/20	27	-46%	0.9%
Guam	8/27/20	26	-78%	0.0%
Iowa	8/28/20	25	-50%	1.0%
Hawaii	8/29/20	24	-78%	0.4%
Illinois	9/6/20	16	-55%	3.8%
West Virginia	9/12/20	10	-28%	0.5%
Indiana	9/13/20	9	-48%	2.0%
Wyoming	9/18/20	4	-24%	0.2%
Wisconsin	9/19/20	3	-33%	1.8%
South Dakota	9/19/20	3	-35%	0.3%
Puerto Rico	9/19/20	3	-62%	1.0%
North Dakota	9/19/20	3	-29%	0.2%
Montana	9/19/20	3	-27%	0.3%
Utah	9/20/20	2	-30%	1.0%
Minnesota	9/20/20	2	-18%	1.7%
Northern Mariana Island	9/22/20	0	0%	0.0%

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

WA: case data have been rolled back to 9/20 after discovering errors.

	9/15/20	9/20/20	9/21/20	9/22/20	vs 7D ago
United States	34,500	34,858	30,730	32,775	-1,725
States:					
Texas	4,816	2,241	1,742	3,964	
California	2,235	4,265	3,294	2,630	
Florida	3,116	2,521	1,685	2,470	
Wisconsin	1,348	1,665	1,271	1,672	<--higher
Illinois	1,466	1,402	1,477	1,531	
North Carolina	1,106	1,333	800	1,168	
Oklahoma	1,091	1,003	1,101	1,164	
Missouri	1,317	1,328	1,463	1,059	
Georgia	1,496	1,134	1,184	882	
Virginia	943	856	627	872	
Pennsylvania	1,151	733	234	834	
Kentucky	718	436	375	814	
Alabama	701	798	818	804	
South Carolina	742	447	417	769	
New York	766	862	573	754	
Louisiana	371	936	243	752	<--higher
Tennessee	957	2,075	895	739	
Ohio	1,001	762	856	685	
Colorado	400	501	542	654	<--higher
Utah	562	920	622	650	
Indiana	689	746	522	599	
Arizona	487	467	233	595	<--higher
Iowa	401	621	660	548	<--higher
Michigan	571	0	1,536	504	
Arkansas	676	549	596	486	
Minnesota	402	1,296	925	480	
Mississippi	505	277	192	465	
Idaho	278	244	410	446	<--higher

Sorted

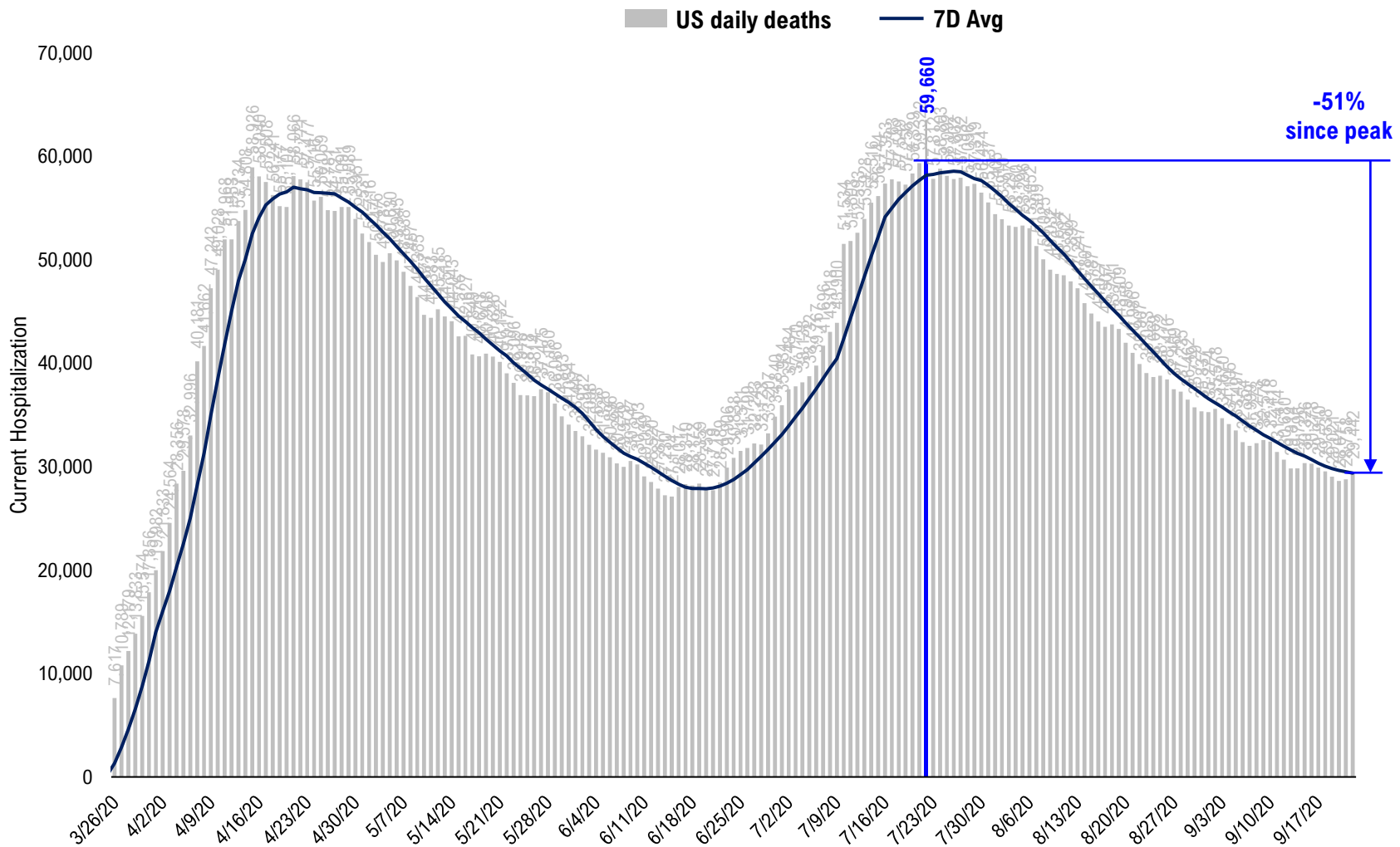
7D Ago Last 3-day Trend

WA: case data have been rolled back to 9/20 after discovering errors.

	9/15/20	9/20/20	9/21/20	9/22/20	vs 7D ago
United States	34,500	34,858	30,730	32,775	-1,725
States:					
New Jersey	436	453	392	426	
Maryland	599	412	412	344	
South Dakota	193	252	173	320	<--higher
Oregon	178	202	194	318	<--higher
Nebraska	307	410	286	305	
Montana	137	136	130	271	<--higher
North Dakota	233	351	286	264	
Nevada	226	385	232	262	
West Virginia	156	180	117	213	<--higher
Massachusetts	313	359	256	173	
Connecticut	136	0	497	136	
Rhode Island	120	82	52	112	
New Mexico	81	67	104	107	<--higher
Delaware	200	117	101	94	
Puerto Rico	229	262	242	88	
Wyoming	46	91	73	72	<--higher
Hawaii	66	77	56	63	
Alaska	42	93	70	44	
Guam	39	0	30	43	
District of Columbia	65	53	23	43	
Maine	15	44	27	40	<--higher
New Hampshire	34	27	5	38	
U.S. Virgin Islands	4	27	0	7	<--t
Vermont	6	5	4	2	
Washington	327	349	0	0	
Northern Mariana Islands	0	6	1	0	
Kansas	0	0	1,674	0	
American Samoa	0	0	0	0	

#7: US Daily Hospitalizations...

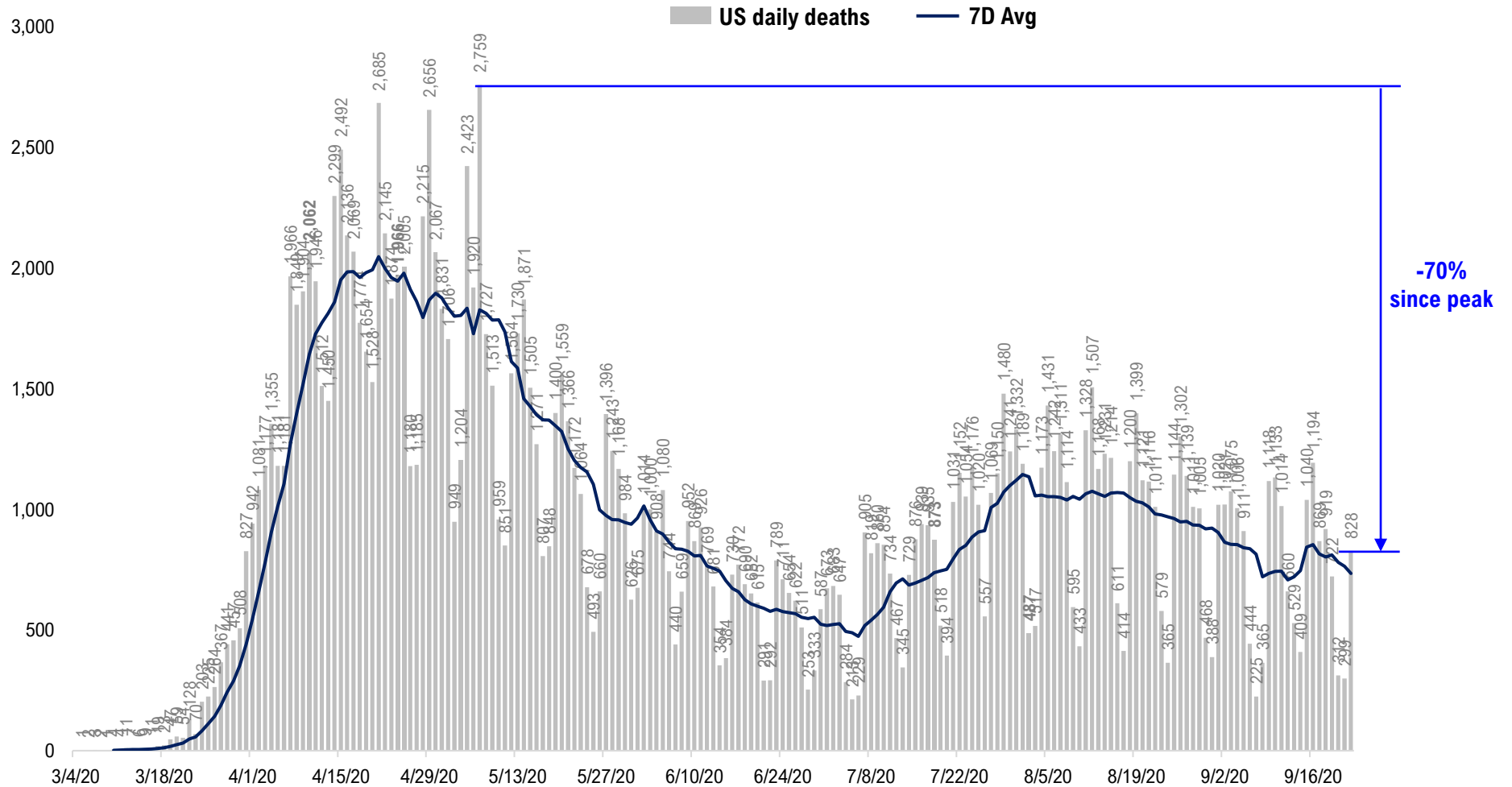
US Net Hospitalizations (aggregate of 50 states + Washington, D.C.)



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

#8: US Daily New Fatalities...

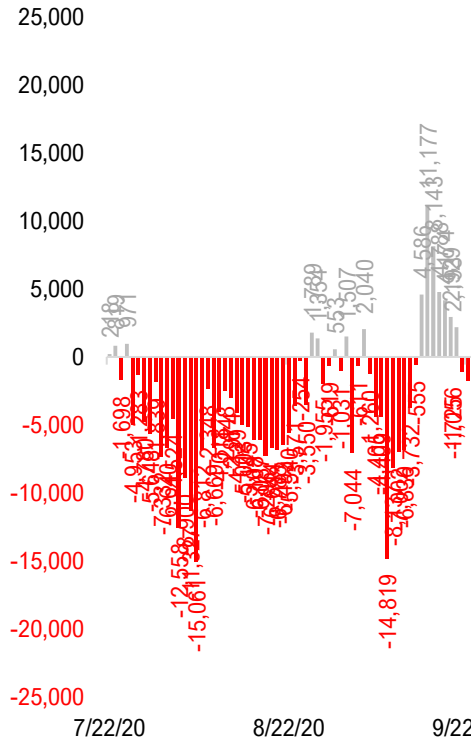
US daily COVID-19 Fatalities



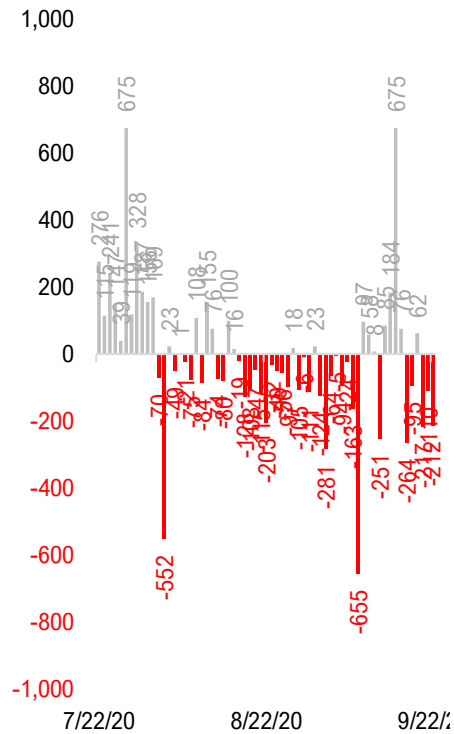
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

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

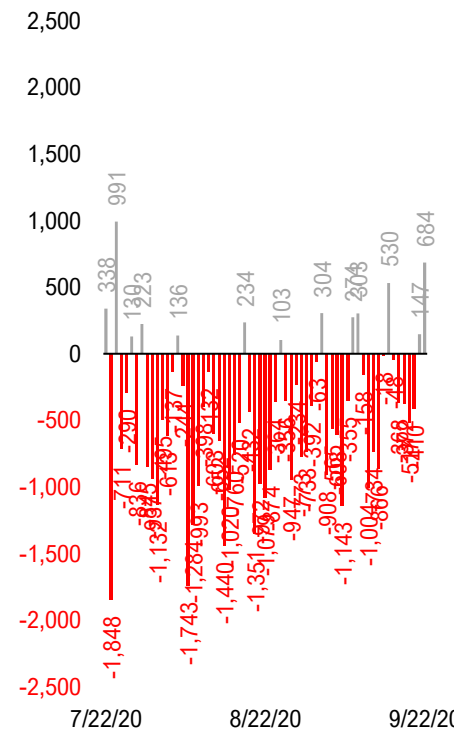
Daily New Cases
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



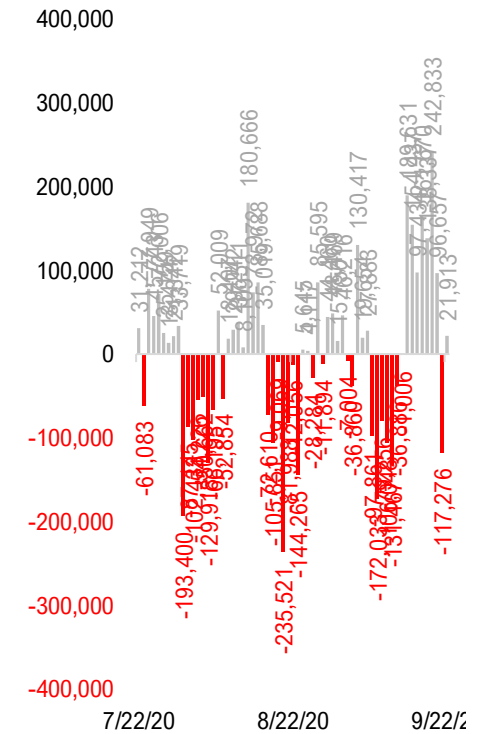
Daily Deaths



Daily Net Hospitalization
(Red = more discharge than admission)

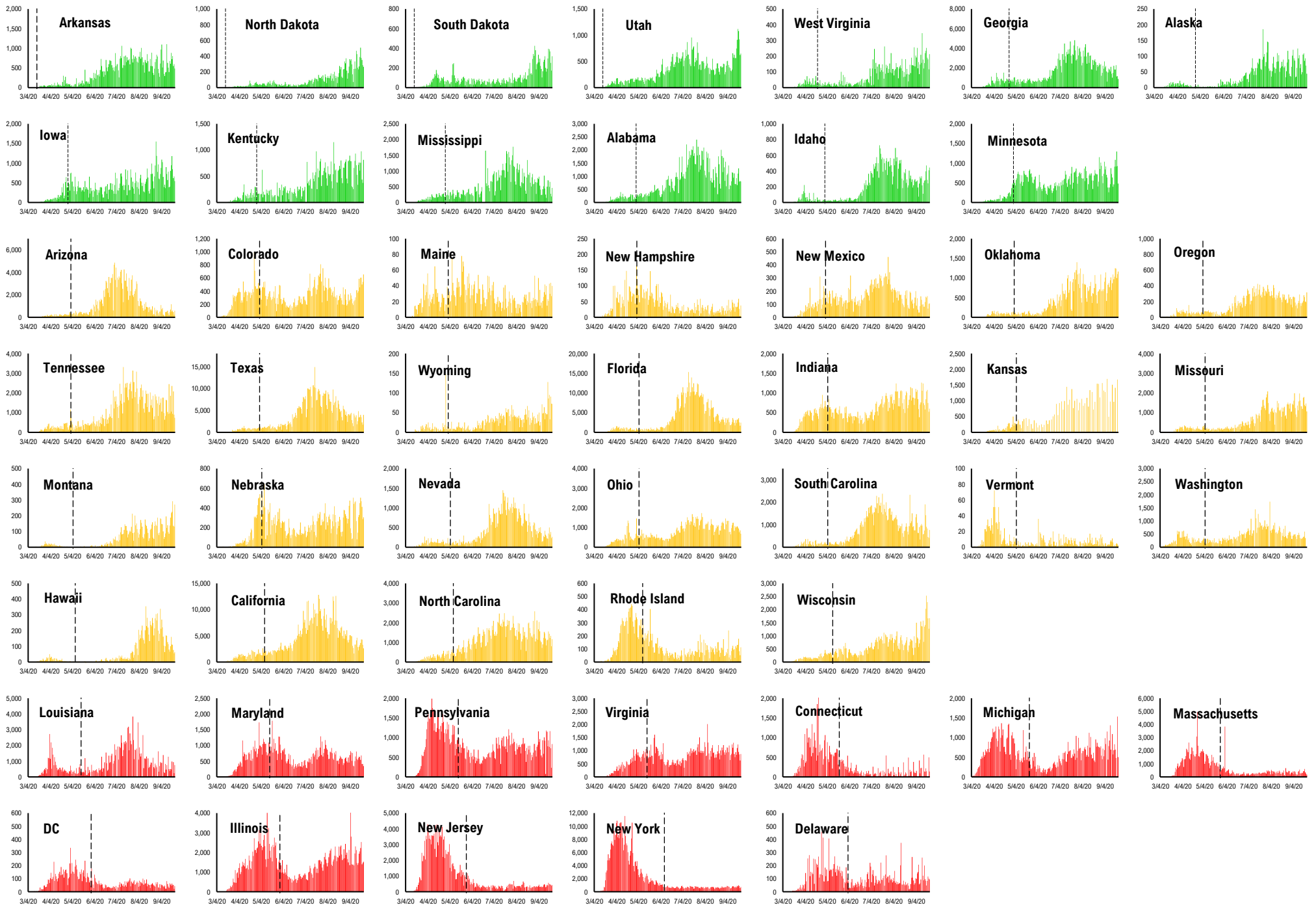


Daily Tests

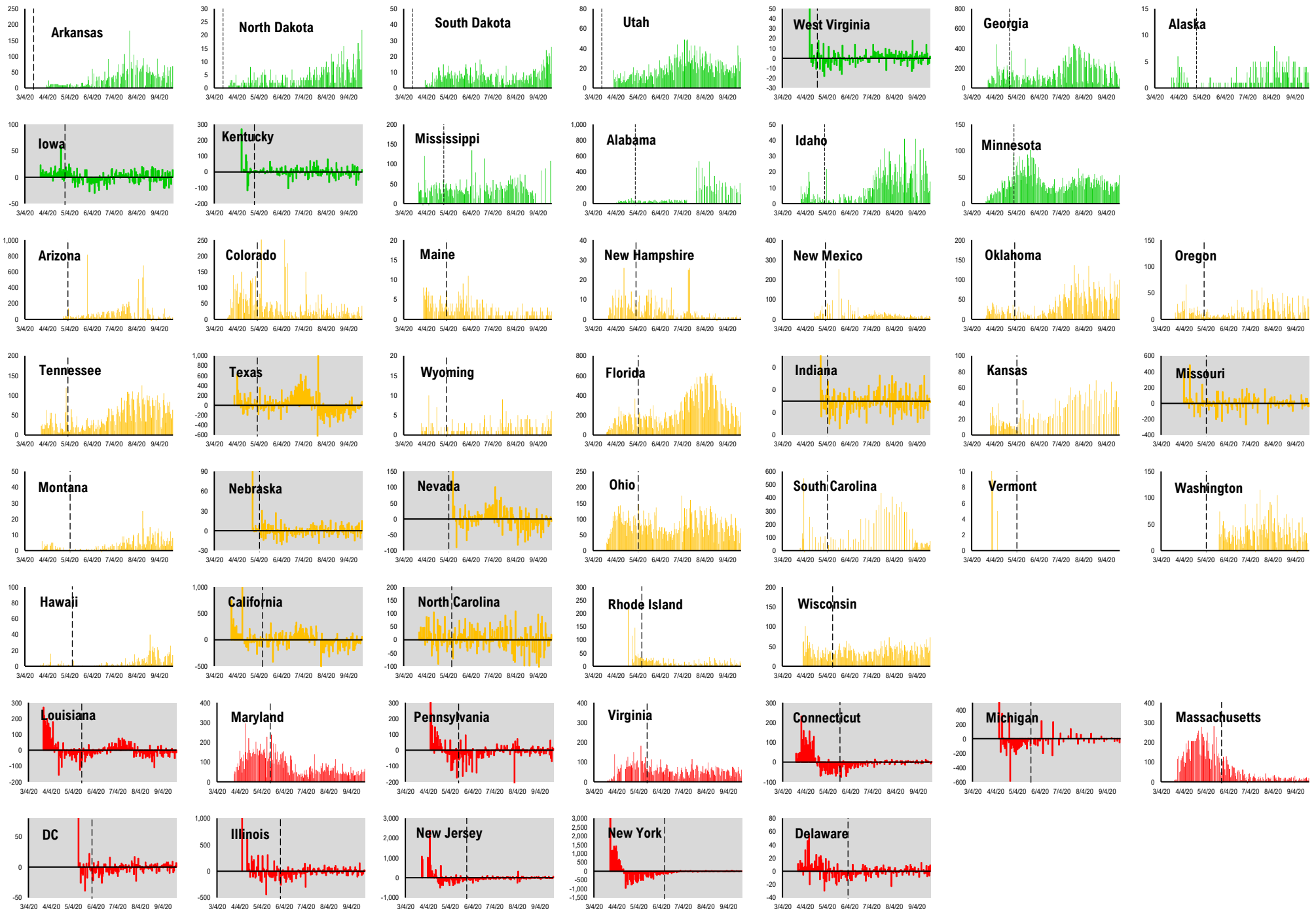


* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

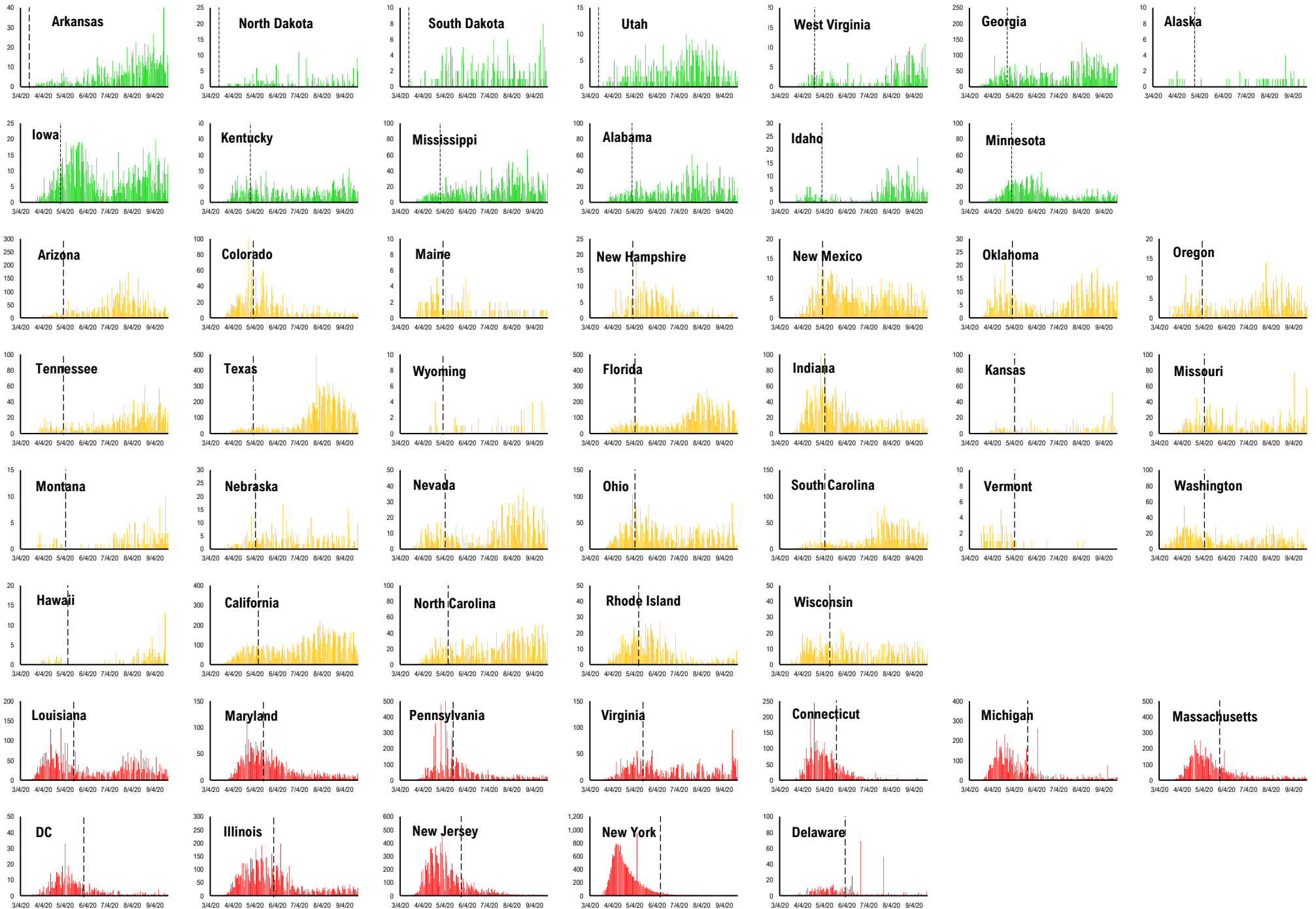
#10: Daily New Cases by States... (sorted by "open" date)



#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

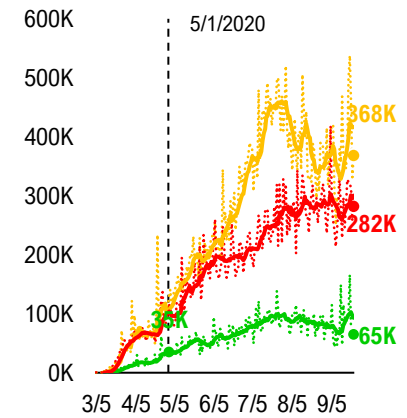
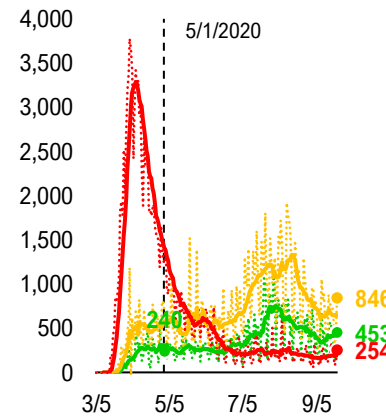
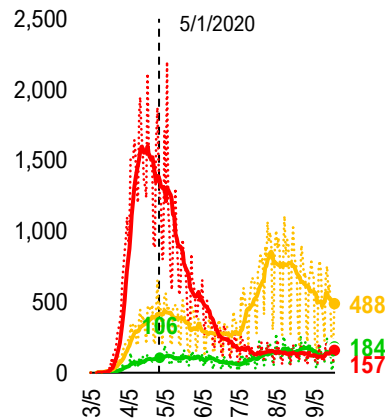
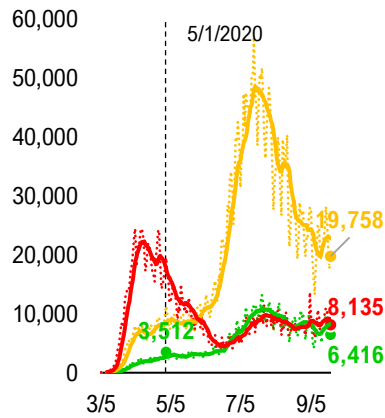
Daily Deaths

Daily Hospitalization

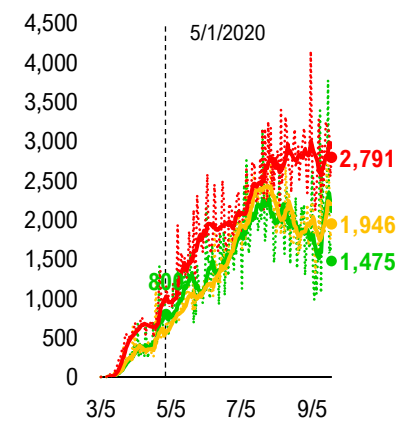
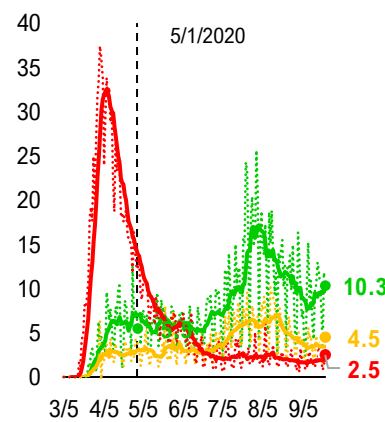
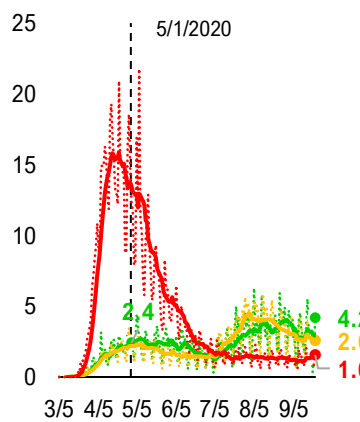
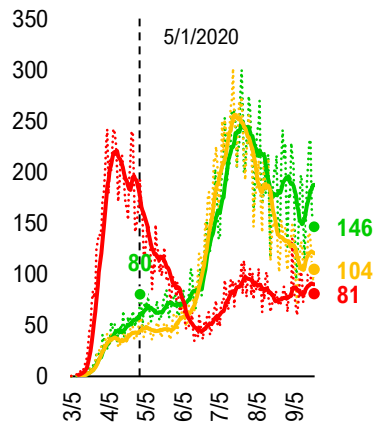
Daily Testing

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

Composite Daily Aggregate

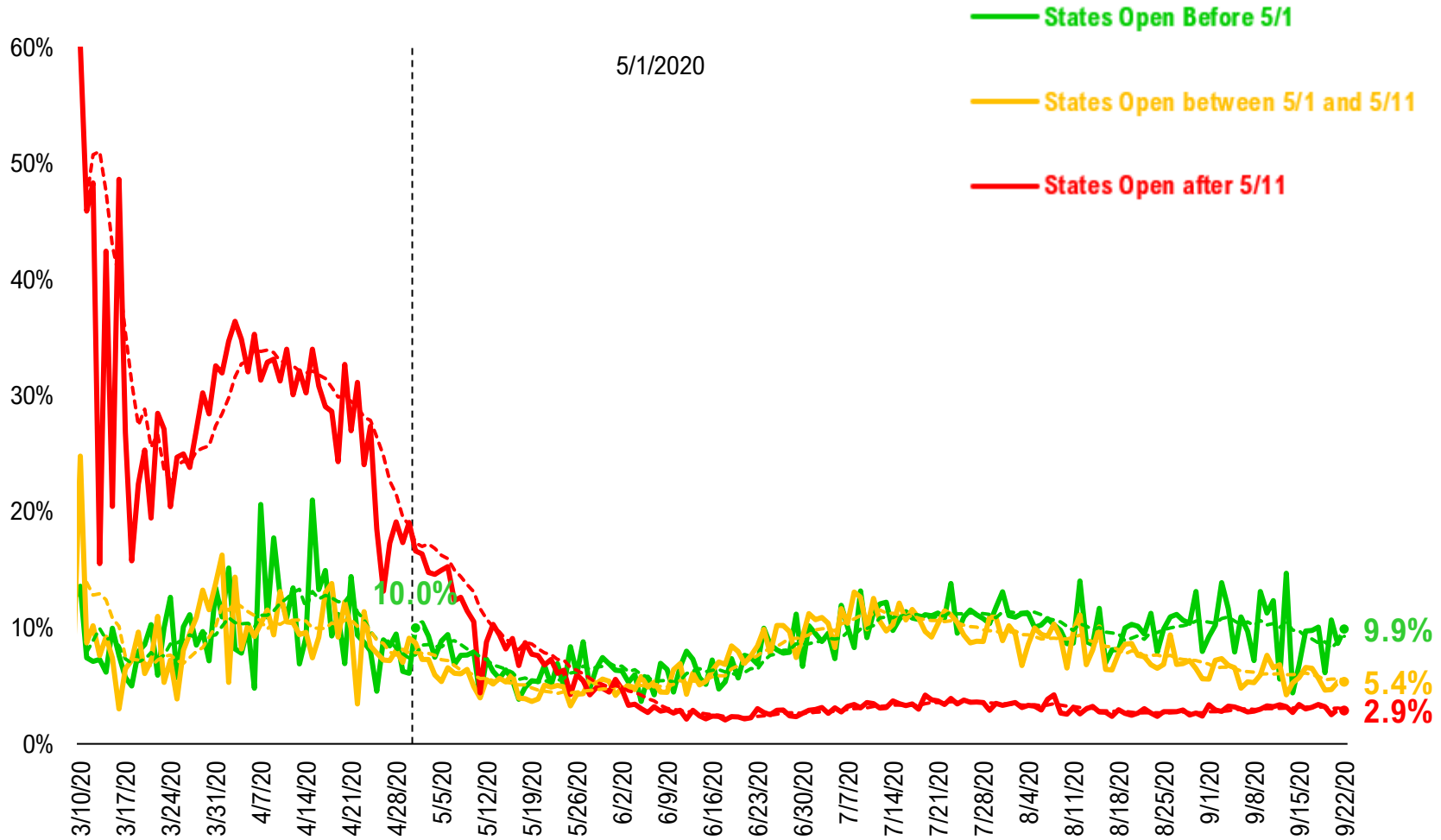


Composite Daily Aggregate Per 1mm Pop

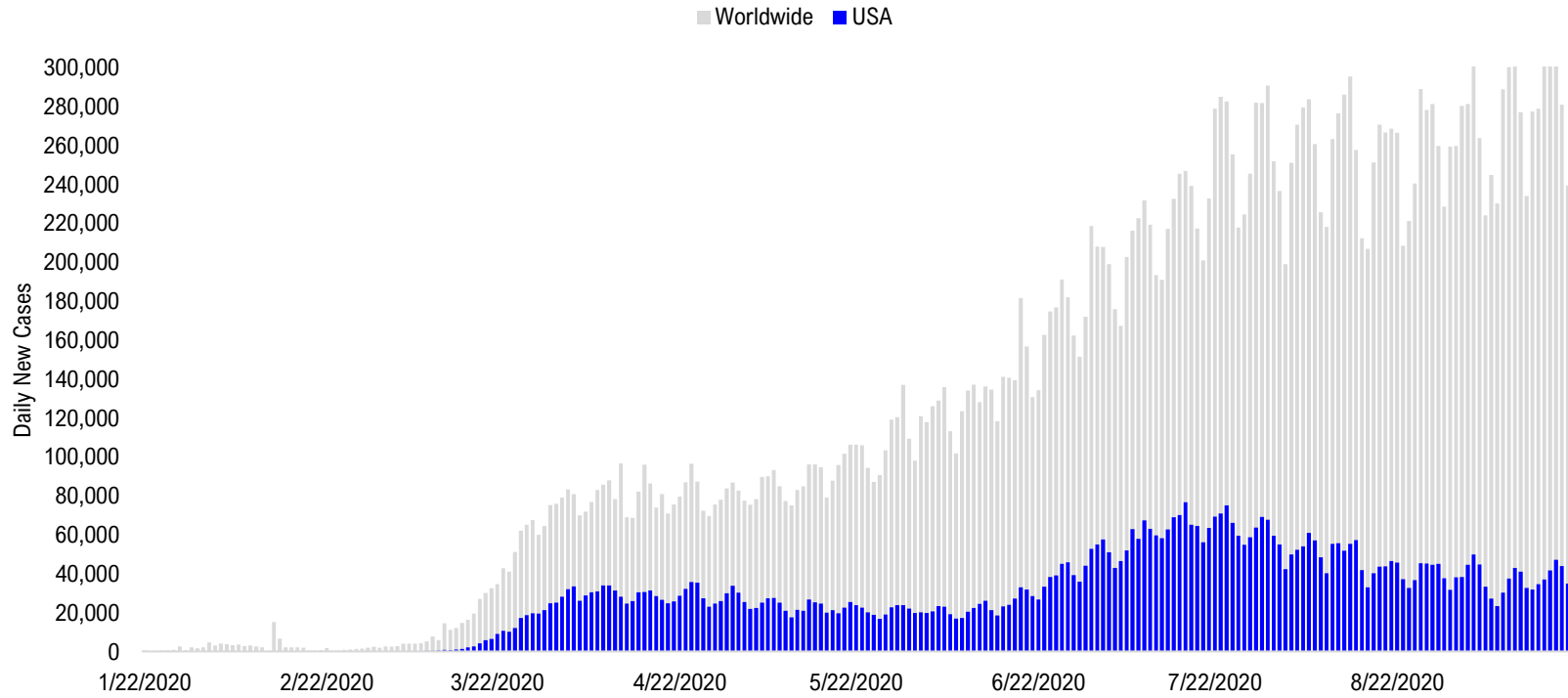


#14: State COVID-19 Daily Positivity Rate by Reopen Date...

Composite Daily Positivity Rate



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



5/8/2020	5/22/2020	6/5/2020	6/19/2020	7/3/2020	7/17/2020	7/31/2020	8/14/2020	8/28/2020	9/11/2020	9/21/2020
US + Canada 28,068	Latin America 33,875	Latin America 47,182	Latin America 58,570	Latin America 72,231	Latin America 72,602	Latin America 97,308	Latin America 100,636	Latin America 88,255	Pakistan + India + Bangladesh 98,888	Pakistan + India + Bangladesh 87,107
Europe 27,484	US + Canada 25,073	US + Canada 21,894	US + Canada 28,473	US + Canada 55,408	US + Canada 72,365	US + Canada 67,272	Pakistan + India + Bangladesh 68,924	Pakistan + India + Bangladesh 82,644	Latin America 83,501	Latin America 54,821
Latin America 18,868	Europe 19,494	Europe 17,839	Pakistan + India + Bangladesh 22,981	Pakistan + India + Bangladesh 27,389	Pakistan + India + Bangladesh 39,450	Pakistan + India + Bangladesh 58,625	US + Canada 54,663	US + Canada 45,494	Europe 47,368	Europe 51,739
Pakistan + India + Bangladesh 5,721	Pakistan + India + Bangladesh 9,981	Pakistan + India + Bangladesh 16,820	Europe 18,534	Europe 15,950	Africa 19,290	Europe 20,854	Europe 28,282	Europe 35,826	US + Canada 37,512	US + Canada 37,798
Africa 2,945	Africa 4,166	Africa 6,467	Africa 8,930	Africa 14,218	Europe 17,320	Africa 17,999	Africa 10,680	Asia ex- India+Pakistan 9,999	Asia ex- India+Pakistan 10,612	Asia ex- India+Pakistan 10,973
Asia ex- India+Pakistan 1,906	Asia ex- India+Pakistan 2,225	Asia ex- India+Pakistan 2,565	Asia ex- India+Pakistan 3,314	Asia ex- India+Pakistan 12,006	Asia ex- India+Pakistan 7,321	Asia ex- India+Pakistan 10,630	Asia ex- India+Pakistan 10,512	Africa 8,468	Africa 8,309	Africa 7,753

Disclosures

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