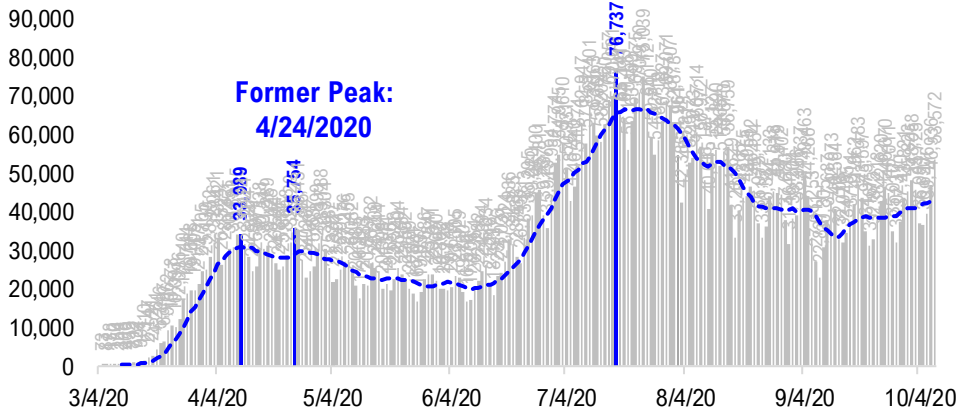


FSInsight Daily COVID-19 Chartbook

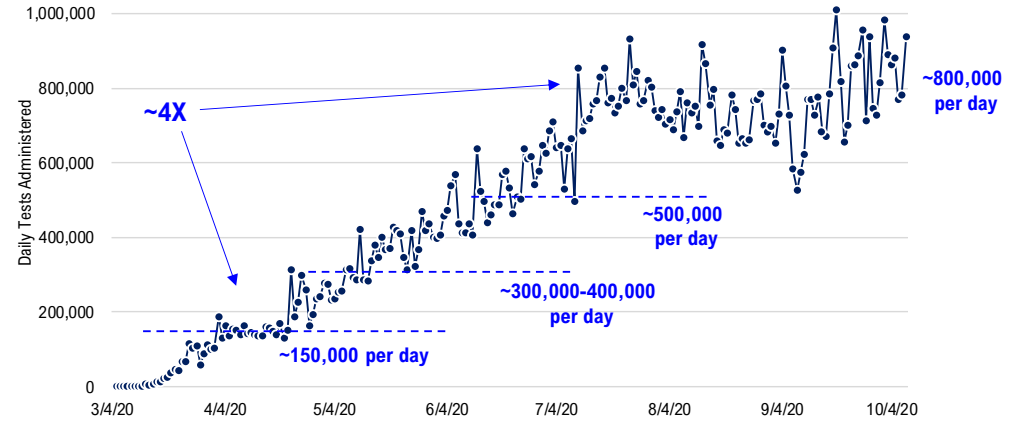


#1: USA COVID-19 Situation at a Glance...

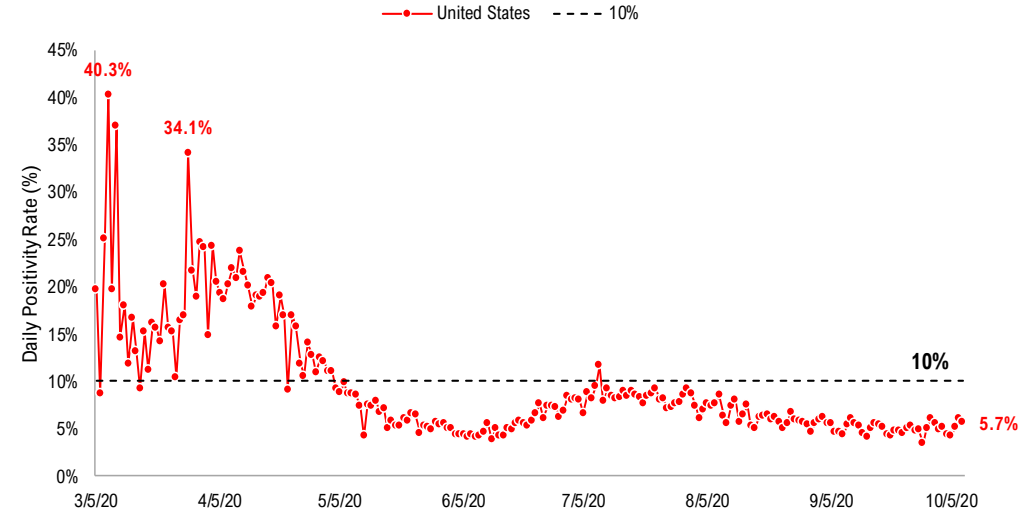
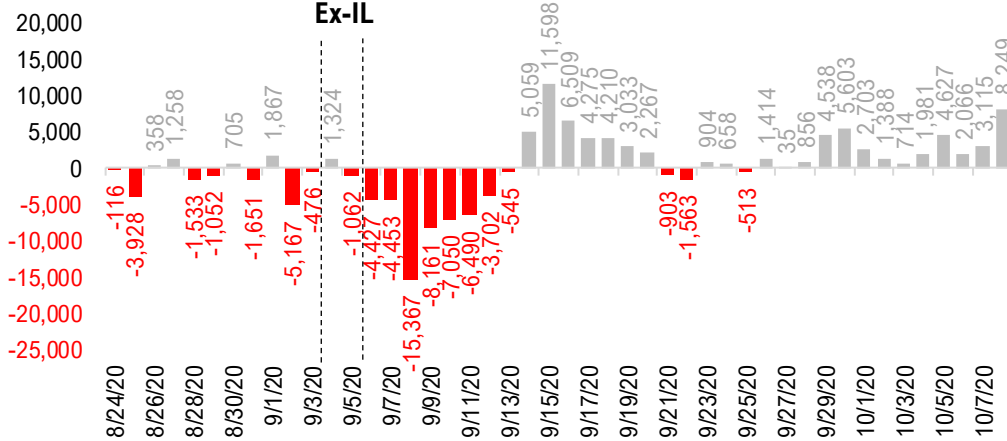
US daily new cases



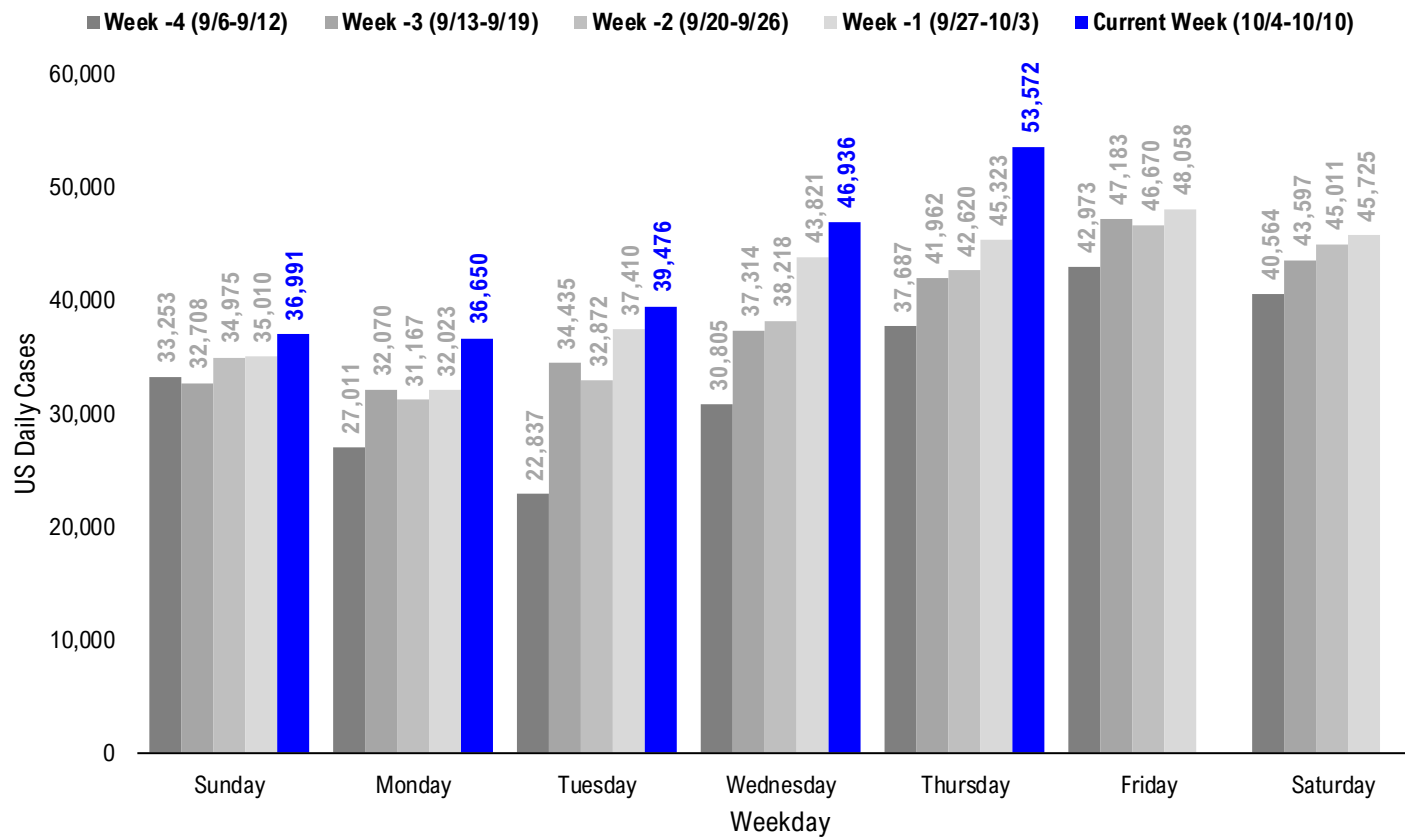
USA total COVID-19 tests administered



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	% US GDP	10/8/20	7D Delta	10/8/20	7D Delta		# Days
United States	100%	100%	53,572	+8,249	142	+14	83	-35%

	Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents		Since Peak		% Decline in Daily Cases	
	% US Pop	% US GDP	10/8/20	7D Delta	10/8/20	7D Delta		# Days
United States	100%	100%	53,572	+8,249	142	+14	83	-35%

States:

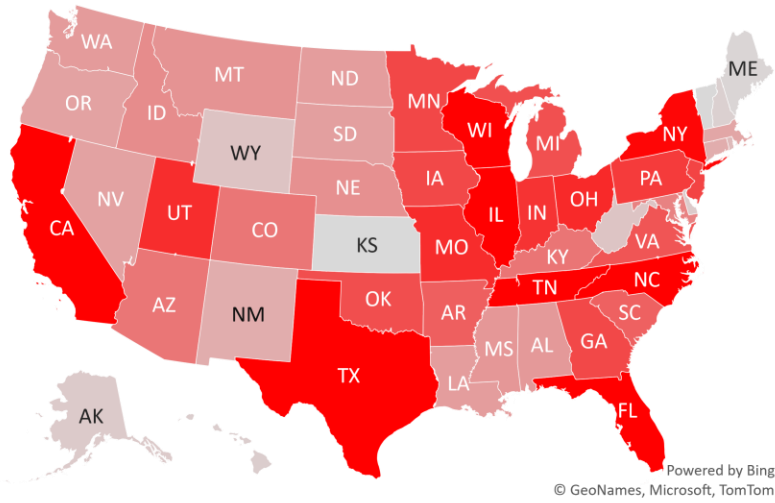
1 Texas	8.7%	8.8%	3,786	+552	131	-11	83	-68%
2 California	11.9%	14.6%	3,575	+513	68	-3	76	-77%
3 Florida	6.5%	5.0%	3,306	+678	126	+5	87	-79%
4 Wisconsin	1.8%	1.6%	3,132	+245	428	-6	5	-12%
5 Illinois	3.8%	4.2%	3,059	+893	192	+40	32	-25%
6 North Carolina	3.2%	2.7%	2,428	+151	179	+31	82	-16%
7 Tennessee	2.1%	1.8%	1,992	+699	281	+100	72	-30%
8 New York	5.9%	8.1%	1,836	+454	79	+17	181	-86%
9 Ohio	3.5%	3.3%	1,539	+212	123	+22	69	-8%
10 Missouri	1.8%	1.5%	1,505	-294	203	-49	70	-35%
11 Utah	1.0%	0.9%	1,501	+493	335	+64	12	-11%
12 Indiana	2.0%	1.8%	1,450	+293	183	+42	5	-8%
13 Pennsylvania	3.9%	3.8%	1,376	+220	97	+11	181	-31%
14 New Jersey	2.7%	3.0%	1,298	+684	91	+25	186	-80%
15 Minnesota	1.7%	1.8%	1,271	+205	185	+33	11	-16%
16 Georgia	3.2%	2.9%	1,265	-43	116	-11	75	-71%
17 Iowa	1.0%	0.9%	1,261	+223	284	+6	41	-27%
18 Oklahoma	1.2%	1.0%	1,212	+42	302	+34	72	-3%
19 Michigan	3.0%	2.6%	1,197	+306	104	+9	167	-15%
20 Virginia	2.6%	2.6%	1,155	+705	116	+33	60	-29%
21 Arkansas	0.9%	0.6%	1,066	+145	252	+30	75	-17%
22 South Carolina	1.6%	1.1%	1,050	+289	165	+16	68	-69%
23 Kentucky	1.3%	1.0%	868	-20	211	+3	5	-11%
24 Colorado	1.7%	1.8%	863	+181	130	+30	0	0%
25 Arizona	2.2%	1.7%	863	+158	107	+29	98	-82%
26 Maryland	1.8%	2.0%	761	-24	90	+0	140	-57%
27 Idaho	0.5%	0.4%	673	+160	374	+68	83	-1%
28 Nebraska	0.6%	0.6%	639	+119	274	+15	5	-18%

States:

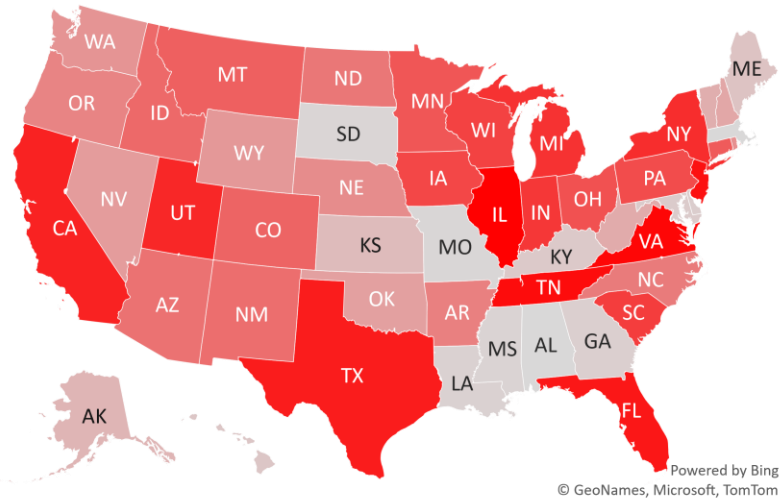
29 Montana	0.3%	0.2%	614	+185	571	+232	0	0%
30 Mississippi	0.9%	0.6%	578	-118	237	+31	70	-54%
31 Alabama	1.5%	1.1%	557	-486	154	-34	75	-64%
32 Washington	2.3%	2.7%	545	+65	58	+4	85	-57%
33 North Dakota	0.2%	0.3%	527	+155	666	+126	0	0%
34 Louisiana	1.4%	1.3%	526	-82	149	+35	79	-74%
35 South Dakota	0.3%	0.3%	505	-242	683	+156	0	0%
36 Oregon	1.3%	1.2%	482	+129	84	+16	68	-3%
37 Nevada	0.9%	0.8%	480	+50	150	+19	82	-65%
38 Massachusetts	2.1%	2.8%	444	-310	71	-16	166	-86%
39 New Mexico	0.6%	0.5%	384	+158	179	+71	0	0%
40 Connecticut	1.1%	1.3%	384	+192	59	+3	169	-86%
41 Puerto Rico	1.0%	0.5%	352	+122	64	-28	12	-64%
42 Rhode Island	0.3%	0.3%	269	+103	197	+43	166	-51%
43 Wyoming	0.2%	0.2%	193	+58	267	+77	0	0%
44 West Virginia	0.5%	0.4%	186	+10	108	+13	26	-18%
45 Delaware	0.3%	0.4%	132	-42	109	-27	163	-68%
46 Alaska	0.2%	0.3%	127	+3	179	+19	3	-27%
47 Hawaii	0.4%	0.5%	101	-6	69	-4	40	-67%
48 New Hampshire	0.4%	0.4%	78	+27	49	+22	159	-47%
49 District of Columbia	0.2%	0.7%	68	+36	103	+59	158	-69%
50 Guam	0.0%	0.0%	66	+4	364	+42	42	-44%
51 Maine	0.4%	0.3%	35	-5	23	-9	139	-55%
52 Vermont	0.2%	0.2%	11	+8	11	+6	186	-88%
53 U.S. Virgin Islands	0.0%	0.0%	1	-4	-16	-34	48	-104%
54 Northern Mariana Isla	0.0%	0.0%	0	+0	0	+0	16	-100%
55 Kansas	0.9%	0.8%	0	+0	142	+14	8	-61%
56 American Samoa	0.0%	0.0%	0	+0	0	+0	0	0%

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

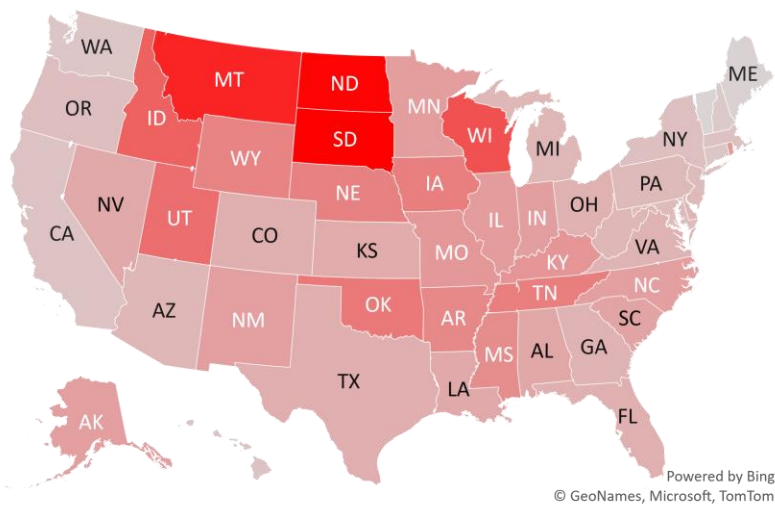
Daily Case Increases



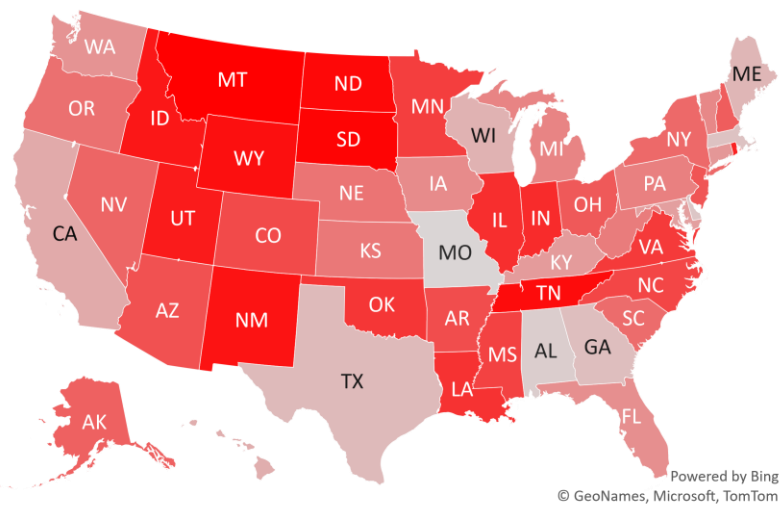
7D Delta in Daily New Cases



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



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



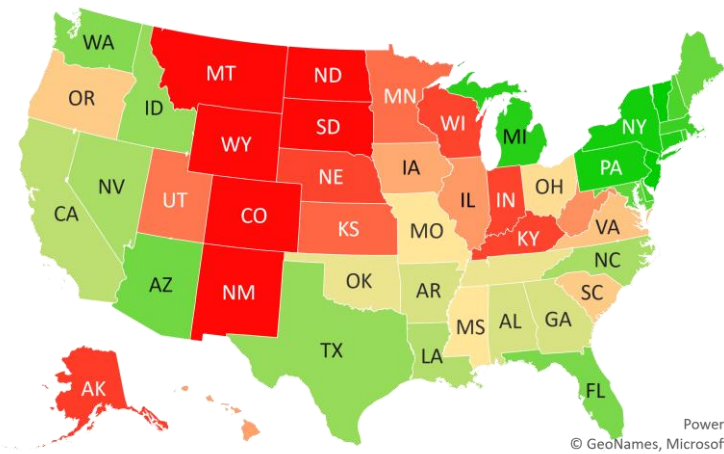
#5: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 10/8)

	Sorted			
	Peak Date	10/8/20	% off the Peak	% US Pop
United States	7/17/20	83	-35%	100%
States:				
Vermont	4/5/20	186	-88%	0.2%
New Jersey	4/5/20	186	-80%	2.7%
Pennsylvania	4/10/20	181	-31%	3.9%
New York	4/10/20	181	-86%	5.9%
Connecticut	4/22/20	169	-86%	1.1%
Michigan	4/24/20	167	-15%	3.0%
Rhode Island	4/25/20	166	-51%	0.3%
Massachusetts	4/25/20	166	-86%	2.1%
Delaware	4/28/20	163	-68%	0.3%
New Hampshire	5/2/20	159	-47%	0.4%
District of Columbia	5/3/20	158	-69%	0.2%
Maryland	5/21/20	140	-57%	1.8%
Maine	5/22/20	139	-55%	0.4%
Arizona	7/2/20	98	-82%	2.2%
Florida	7/13/20	87	-79%	6.5%
Washington	7/15/20	85	-57%	2.3%
Texas	7/17/20	83	-68%	8.7%
Idaho	7/17/20	83	-1%	0.5%
Nevada	7/18/20	82	-65%	0.9%
North Carolina	7/18/20	82	-16%	3.2%
Louisiana	7/21/20	79	-74%	1.4%
California	7/24/20	76	-77%	11.9%
Georgia	7/25/20	75	-71%	3.2%
Arkansas	7/25/20	75	-17%	0.9%
Alabama	7/25/20	75	-64%	1.5%
Tennessee	7/28/20	72	-30%	2.1%
Oklahoma	7/28/20	72	-3%	1.2%
Mississippi	7/30/20	70	-54%	0.9%

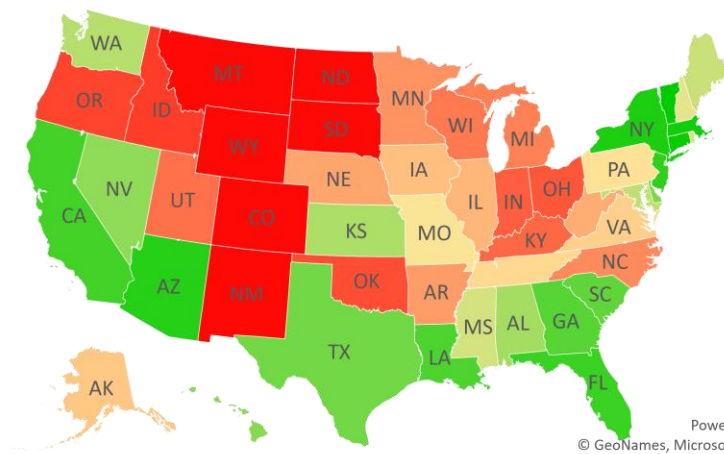
	Sorted			
	Peak Date	10/8/20	% off the Peak	% US Pop
United States	7/17/20	83	-35%	100%
States:				
Missouri	7/30/20	70	-35%	1.8%
Ohio	7/31/20	69	-8%	3.5%
South Carolina	8/1/20	68	-69%	1.6%
Oregon	8/1/20	68	-3%	1.3%
Virginia	8/9/20	60	-29%	2.6%
U.S. Virgin Islands	8/21/20	48	-104%	0.0%
Guam	8/27/20	42	-44%	0.0%
Iowa	8/28/20	41	-27%	1.0%
Hawaii	8/29/20	40	-67%	0.4%
Illinois	9/6/20	32	-25%	3.8%
West Virginia	9/12/20	26	-18%	0.5%
Northern Mariana Island	9/22/20	16	-100%	0.0%
Utah	9/26/20	12	-11%	1.0%
Puerto Rico	9/26/20	12	-64%	1.0%
Minnesota	9/27/20	11	-16%	1.7%
Kansas	9/30/20	8	-61%	0.9%
Wisconsin	10/3/20	5	-12%	1.8%
Nebraska	10/3/20	5	-18%	0.6%
Kentucky	10/3/20	5	-11%	1.3%
Indiana	10/3/20	5	-8%	2.0%
Alaska	10/5/20	3	-27%	0.2%
Wyoming	10/8/20	0	0%	0.2%
South Dakota	10/8/20	0	0%	0.3%
New Mexico	10/8/20	0	0%	0.6%
North Dakota	10/8/20	0	0%	0.2%
Montana	10/8/20	0	0%	0.3%
Colorado	10/8/20	0	0%	1.7%

Days since Daily Case Peak: **Longer = Good**



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Daily Cases % off the Peak: **Larger Decline = Good**



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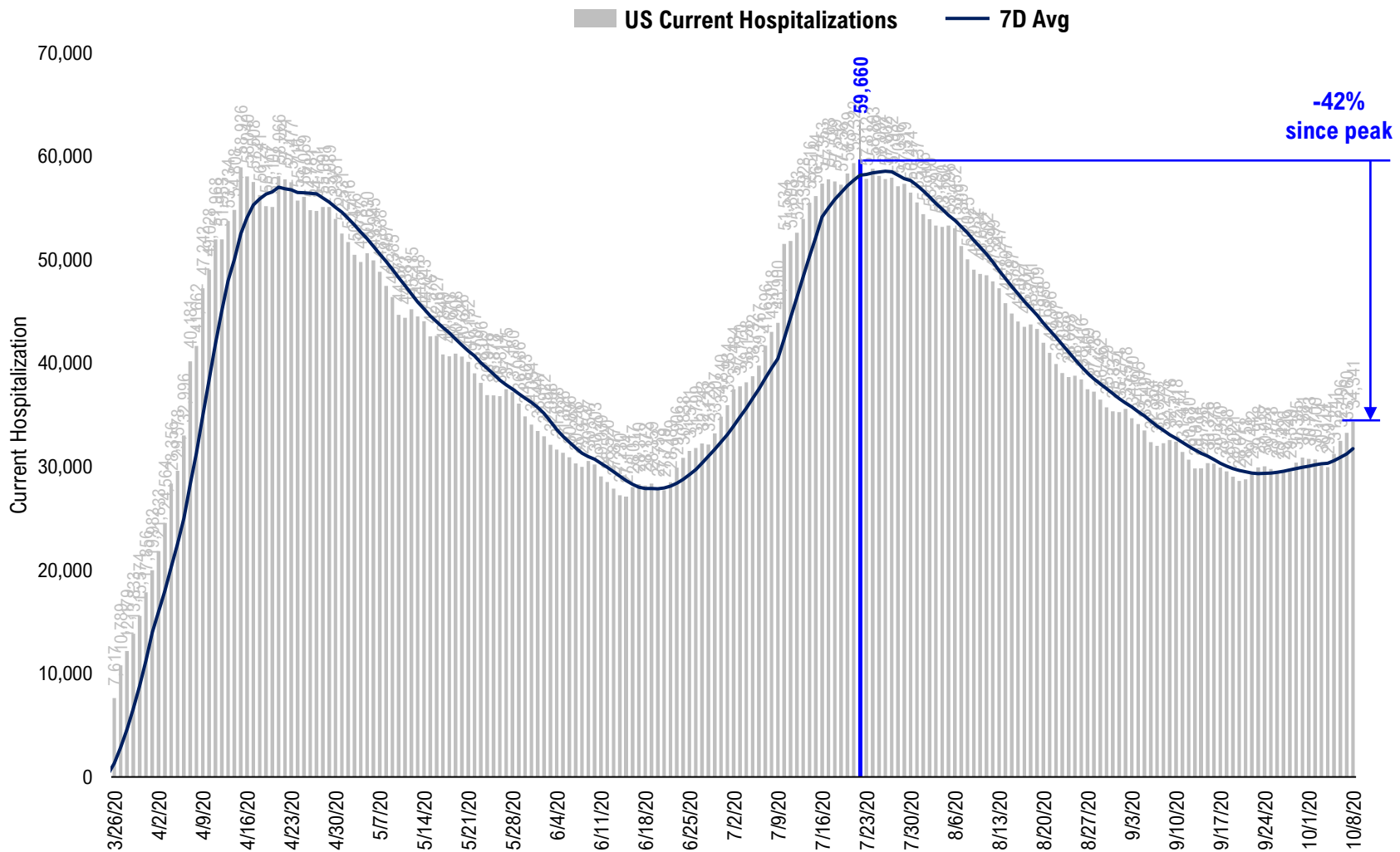
#6: US New Cases by States... (sorted by today's new cases)

	Sorted				
	7D Ago	Last 3-day Trend			
	10/1/20	10/6/20	10/7/20	10/8/20	vs 7D ago
United States	45,323	39,476	46,936	53,572	+8,249
States:					
Texas	3,234	3,872	3,776	3,786	
California	3,062	1,677	2,764	3,575	
Florida	2,628	2,251	2,582	3,306	<--higher
Wisconsin	2,887	2,020	2,319	3,132	
Illinois	2,166	1,617	2,630	3,059	<--higher
North Carolina	2,277	1,504	1,711	2,428	
Tennessee	1,293	1,676	2,080	1,992	<--higher
New York	1,382	1,393	1,360	1,836	<--higher
Ohio	1,327	1,335	1,424	1,539	
Missouri	1,799	1,165	1,068	1,505	
Utah	1,008	716	1,007	1,501	<--higher
Indiana	1,157	970	1,281	1,450	<--higher
Pennsylvania	1,156	1,036	1,309	1,376	
New Jersey	614	629	508	1,298	<--higher
Minnesota	1,066	941	911	1,271	
Georgia	1,308	936	1,492	1,265	
Iowa	1,038	474	950	1,261	<--higher
Oklahoma	1,170	1,364	1,006	1,212	
Michigan	891	903	1,016	1,197	<--higher
Virginia	450	625	1,198	1,155	<--higher
Arkansas	921	532	684	1,066	
South Carolina	761	824	674	1,050	<--higher
Kentucky	888	1,036	921	868	
Colorado	682	654	731	863	<--higher
Arizona	705	864	604	863	<--higher
Maryland	785	413	460	761	
Idaho	513	660	671	673	<--higher
Nebraska	520	452	498	639	<--higher

	Sorted				
	7D Ago	Last 3-day Trend			
	10/1/20	10/6/20	10/7/20	10/8/20	vs 7D ago
United States	45,323	39,476	46,936	53,572	+8,249
States:					
Montana	429	500	716	614	<--higher
Mississippi	696	975	563	578	
Alabama	1,043	764	941	557	
Washington	480	402	387	545	
North Dakota	372	502	493	527	<--higher
Louisiana	608	506	1,052	526	
South Dakota	747	278	1,030	505	
Oregon	353	291	294	482	<--higher
Nevada	430	479	431	480	
Massachusetts	754	495	535	444	
New Mexico	226	315	425	384	<--higher
Connecticut	192	121	123	384	<--higher
Puerto Rico	230	238	23	352	<--higher
Rhode Island	166	177	180	269	<--higher
Wyoming	135	141	129	193	<--higher
West Virginia	176	194	203	186	
Delaware	174	103	84	132	
Alaska	124	139	126	127	
Hawaii	107	81	110	101	
New Hampshire	51	51	69	78	<--higher
District of Columbia	32	105	45	68	<--higher
Guam	62	61	54	66	
Maine	40	20	39	35	
Vermont	3	4	6	11	<--higher
U.S. Virgin Islands	5	-5	-1	1	
Northern Mariana Islands	0	0	0	0	
Kansas	0	0	1,244	0	
American Samoa	0	0	0	0	

#7: US Daily Hospitalizations...

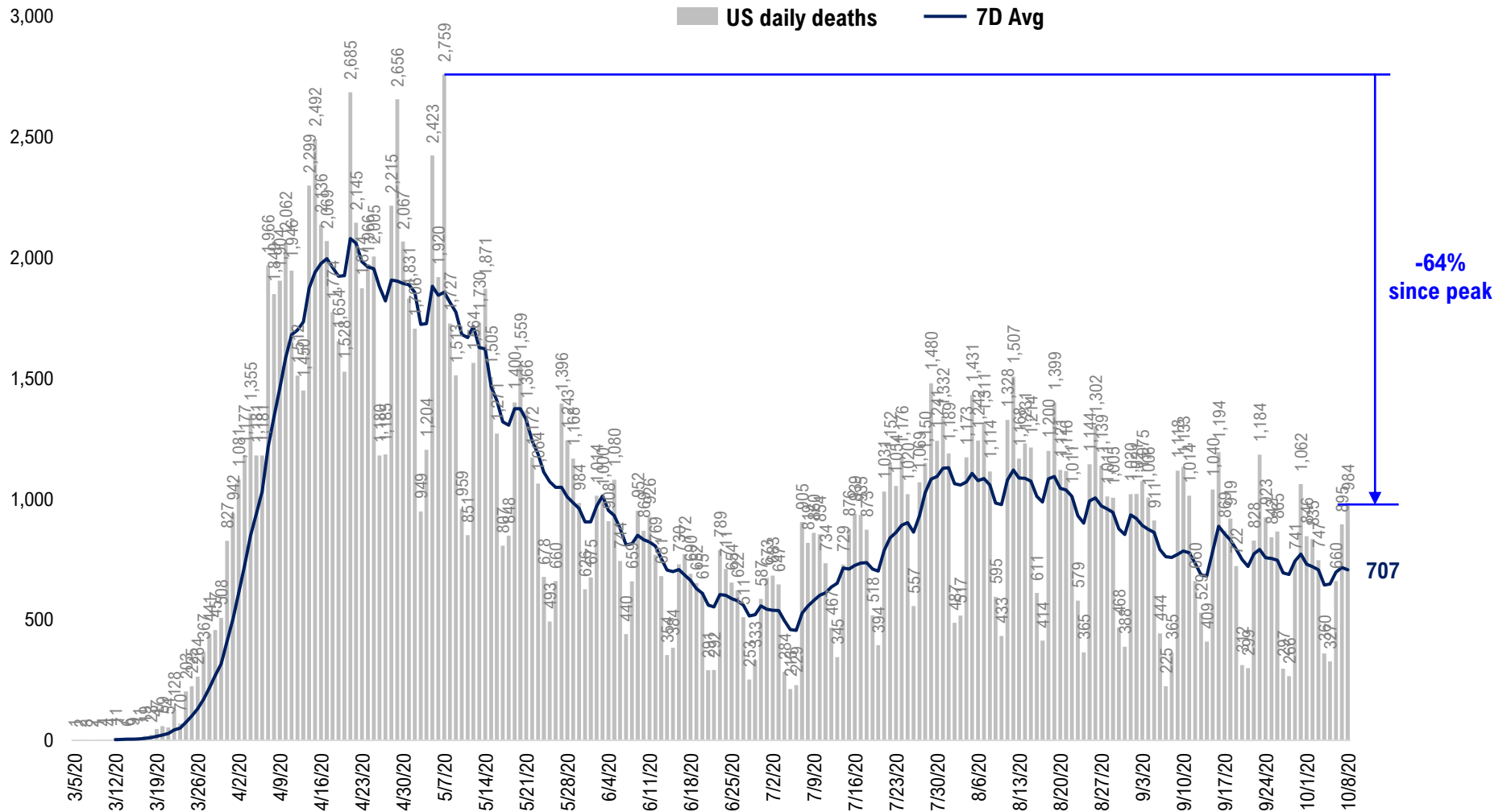
US Net Hospitalizations (aggregate of 50 states + Washington, D.C.)



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

#8: US Daily New Fatalities...

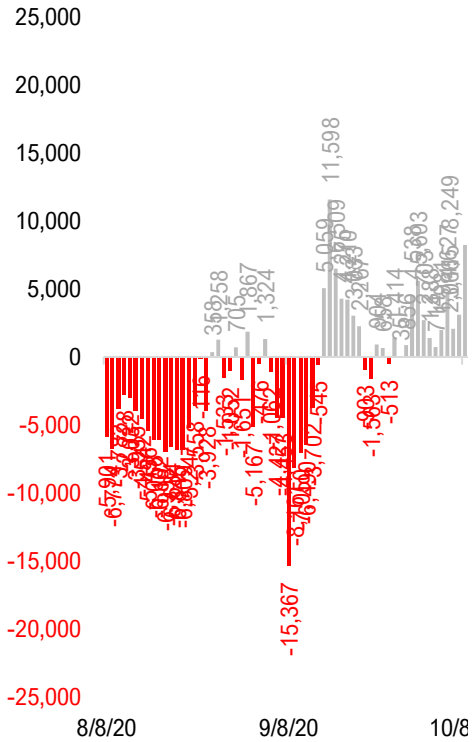
US daily COVID-19 Fatalities



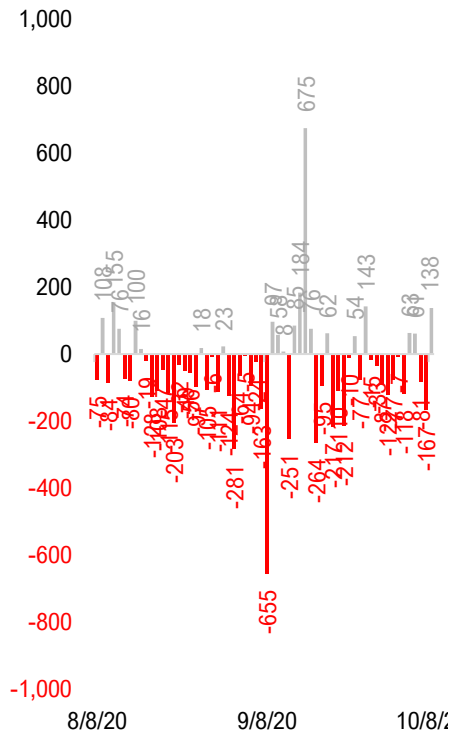
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

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

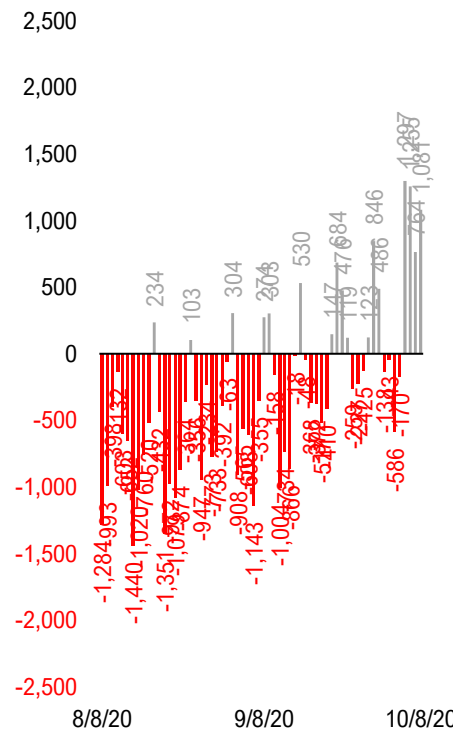
Daily New Cases
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



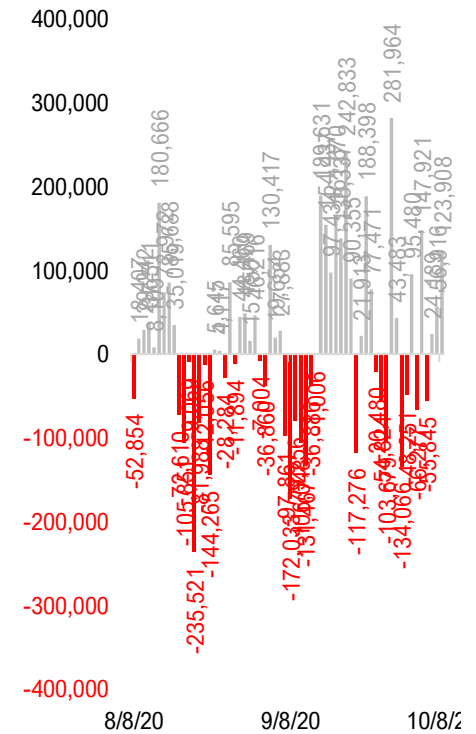
Daily Deaths



Daily Net Hospitalization
(Red = more discharge than admission)

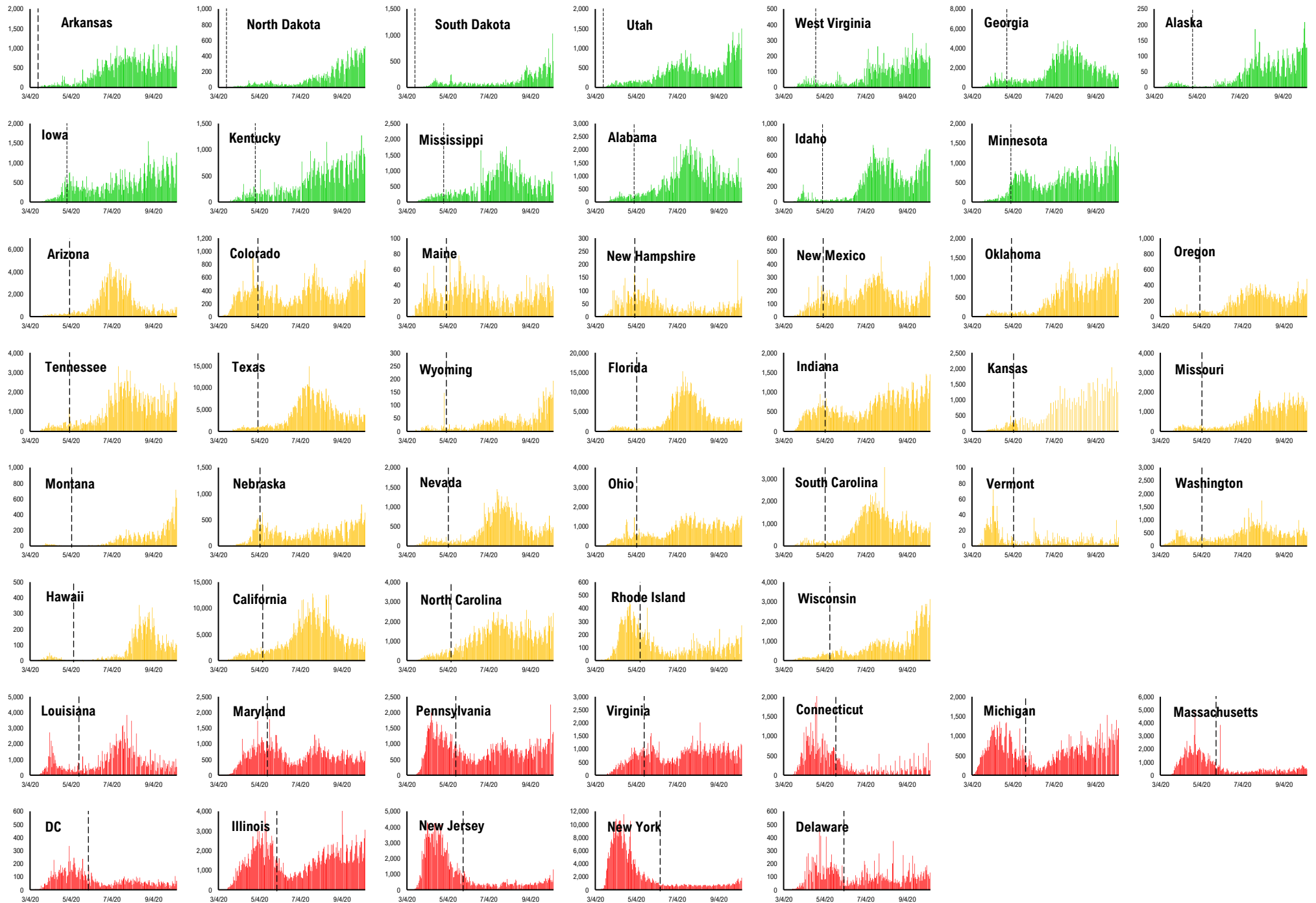


Daily Tests

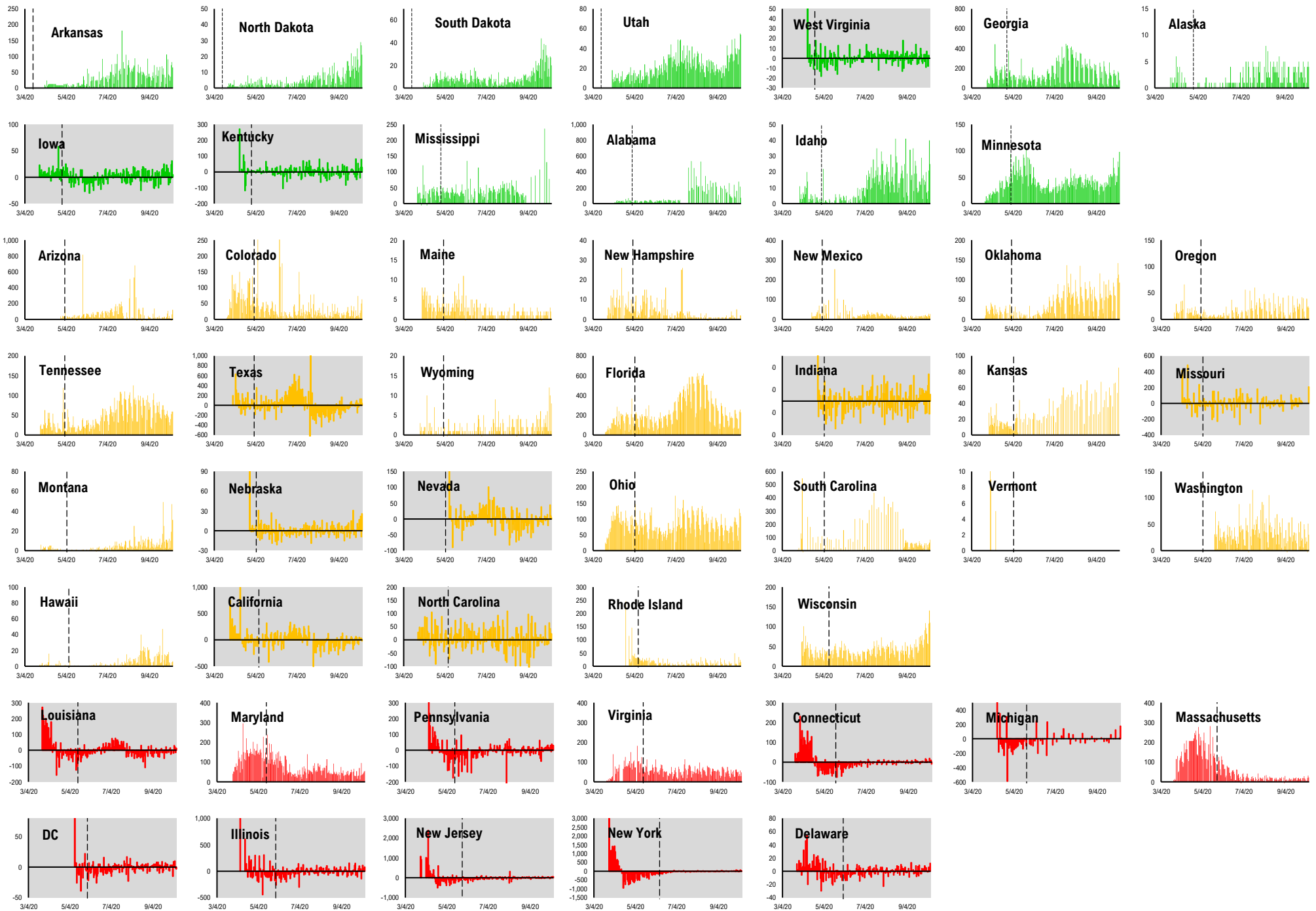


* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

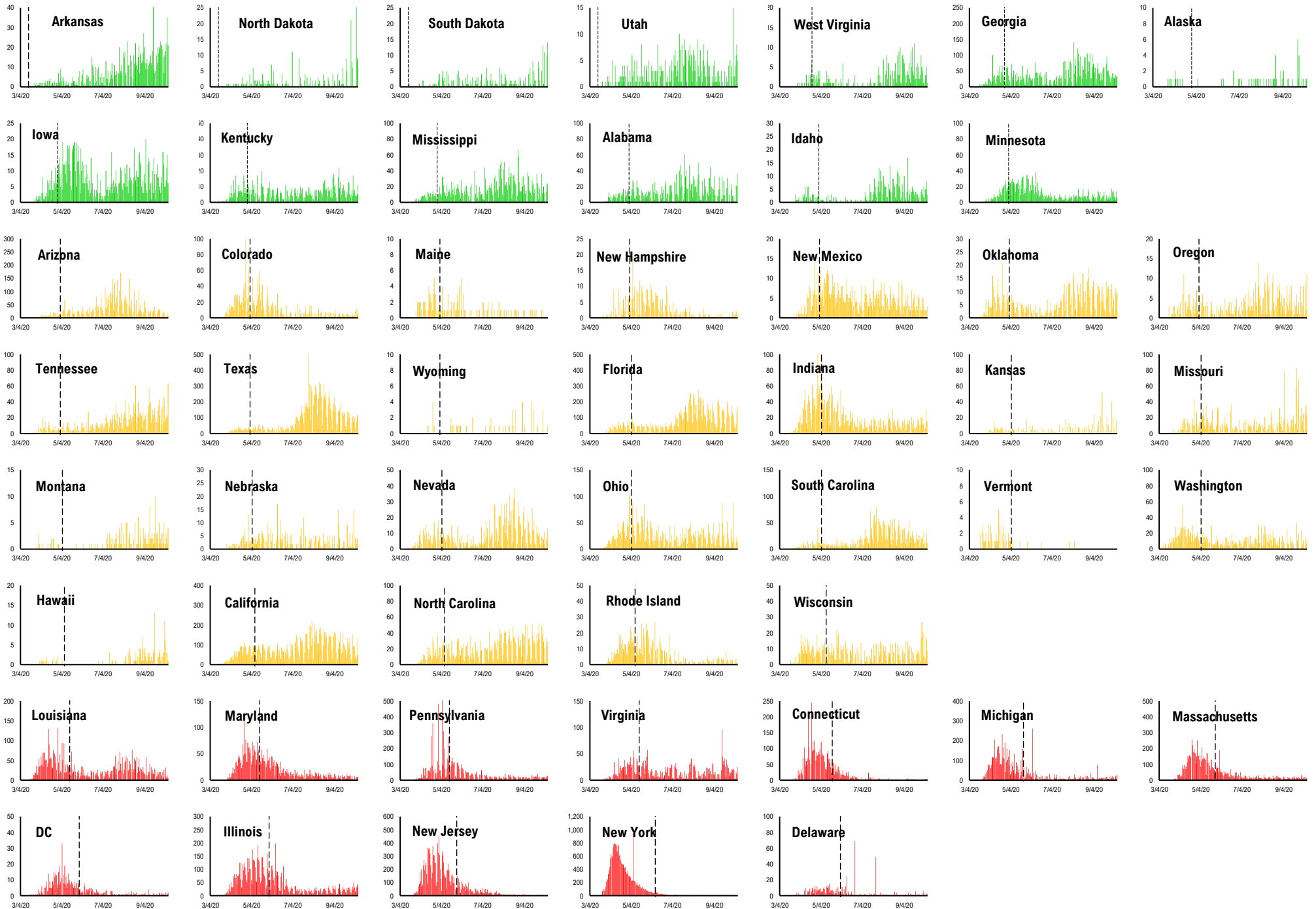
#10: Daily New Cases by States... (sorted by "open" date)



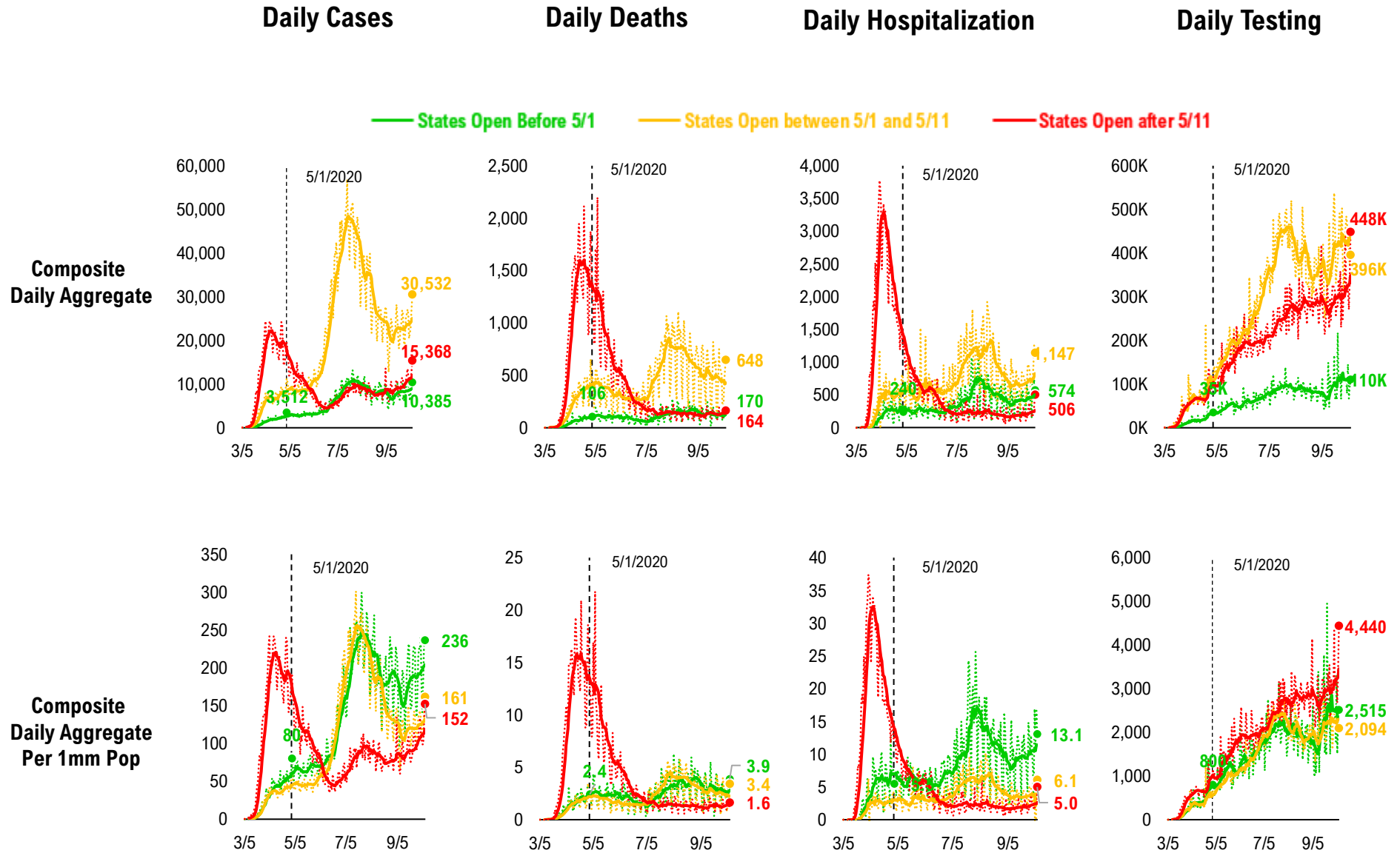
#11: Daily Hospitalizations by States... (sorted by "open" date)



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

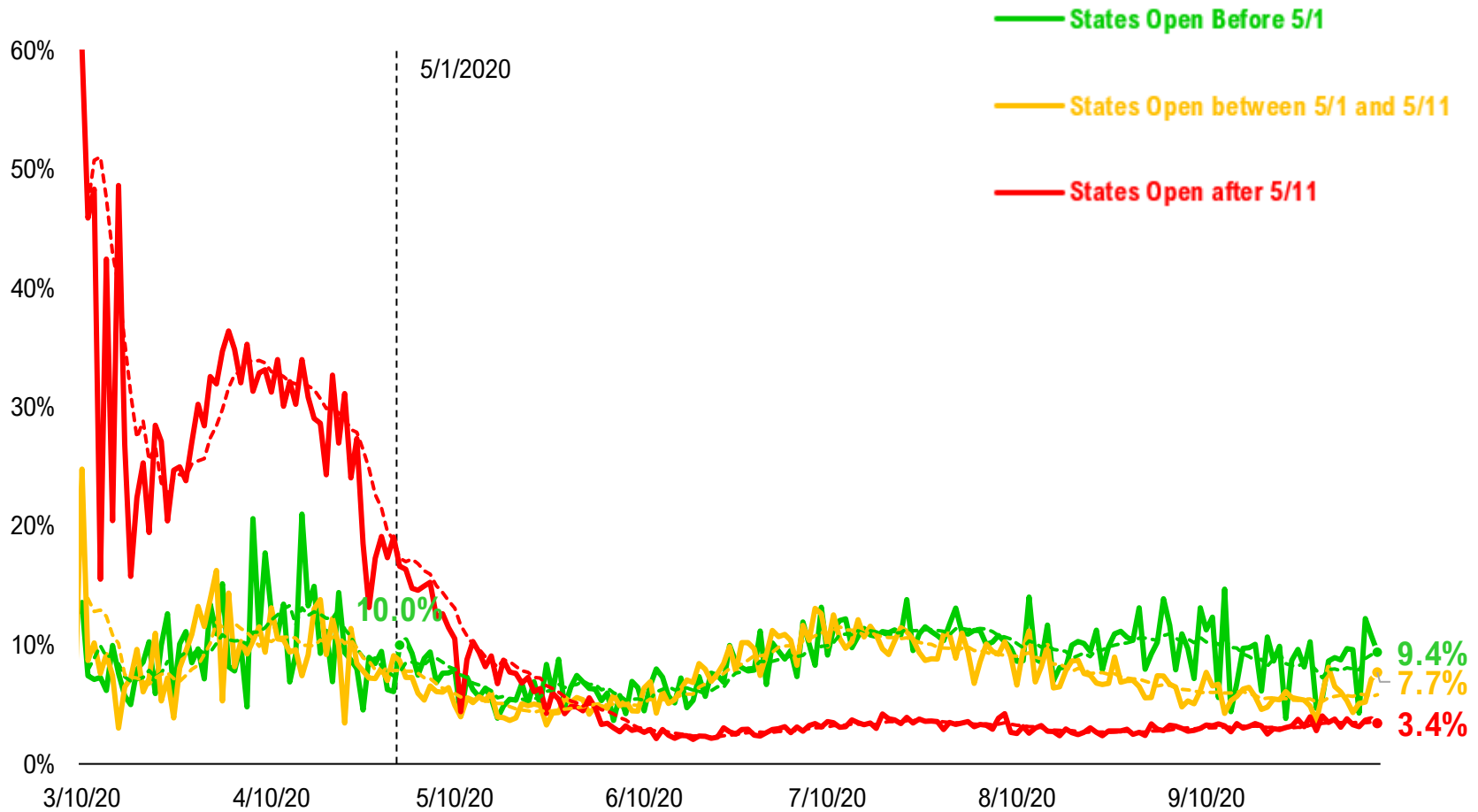


#13: State COVID-19 situation by Reopen Date...

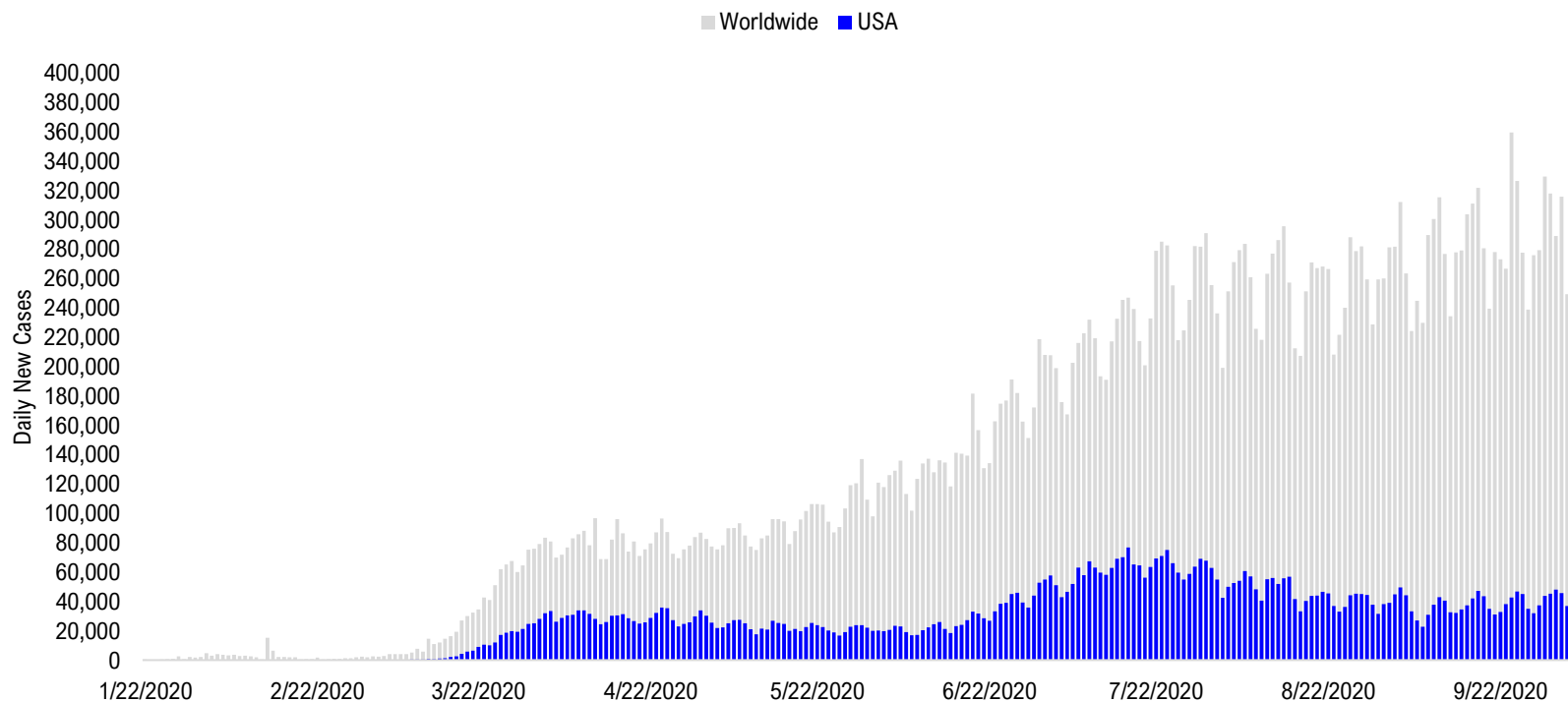


#14: State COVID-19 Daily Positivity Rate by Reopen Date...

Composite Daily Positivity Rate



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



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	9/25/2020	10/7/2020
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 88,225	Europe 101,143
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 76,712	Latin America 74,664
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 54,914	US + Canada 45,255	Europe 47,433	Europe 67,915	Pakistan + India + Bangladesh 72,873
Pakistan + India + Bangladesh 9,981	Pakistan + India + Bangladesh 16,820	Europe 18,534	Europe 15,950	Africa 19,290	Europe 20,929	Europe 28,225	Europe 35,965	US + Canada 37,795	US + Canada 43,790	US + Canada 43,084
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 10,726	Asia ex- India+Pakistan 12,264
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 8,247	Africa 7,258

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Neutral (N): The analyst expects the performance of his or her industry/sector coverage universe over the next 6-18 months to be in line with the relevant broad market benchmark, being the S&P 500 for North America.

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