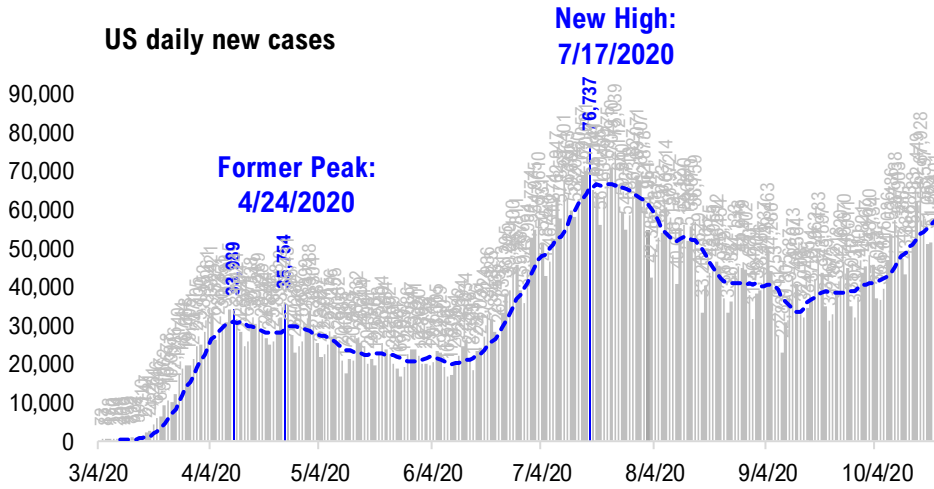


FSInsight Daily COVID-19 Chartbook

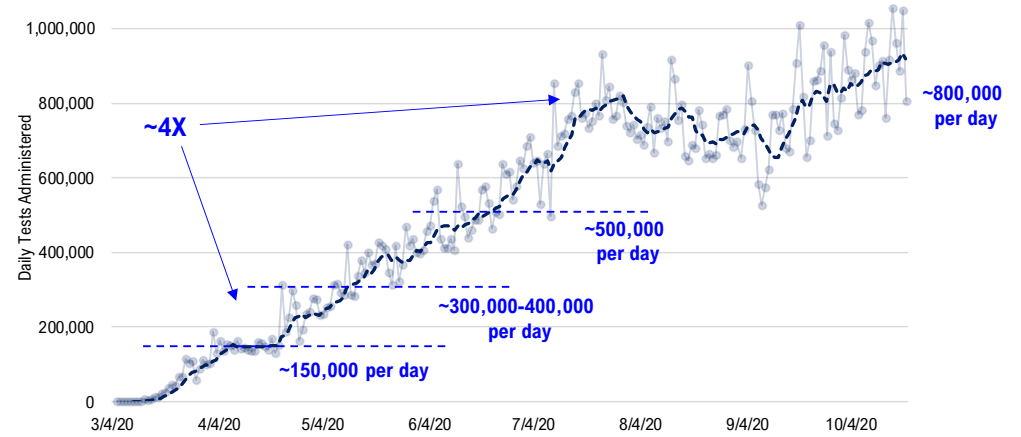


#1: USA COVID-19 Situation at a Glance...

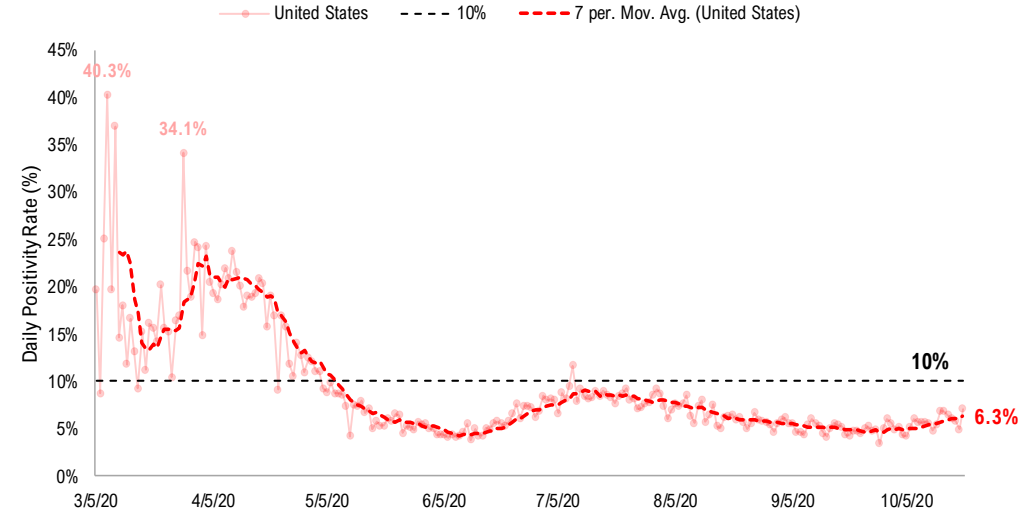
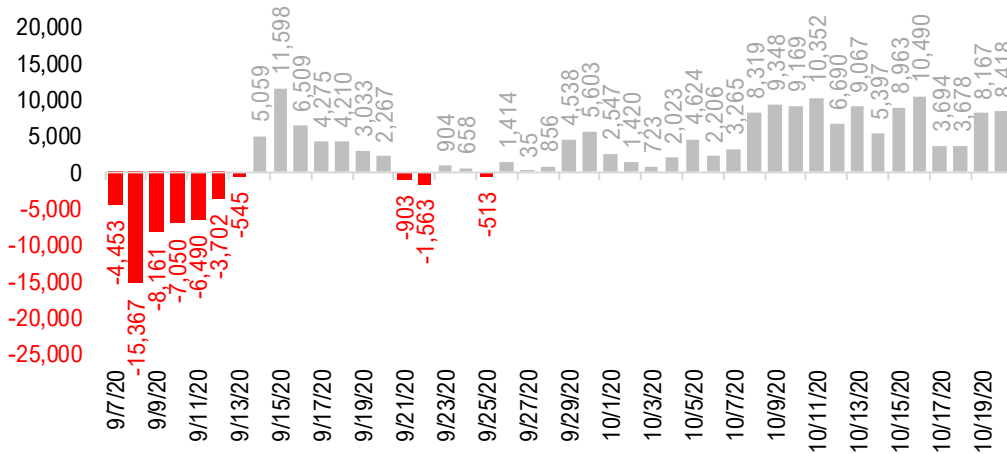
US daily new cases



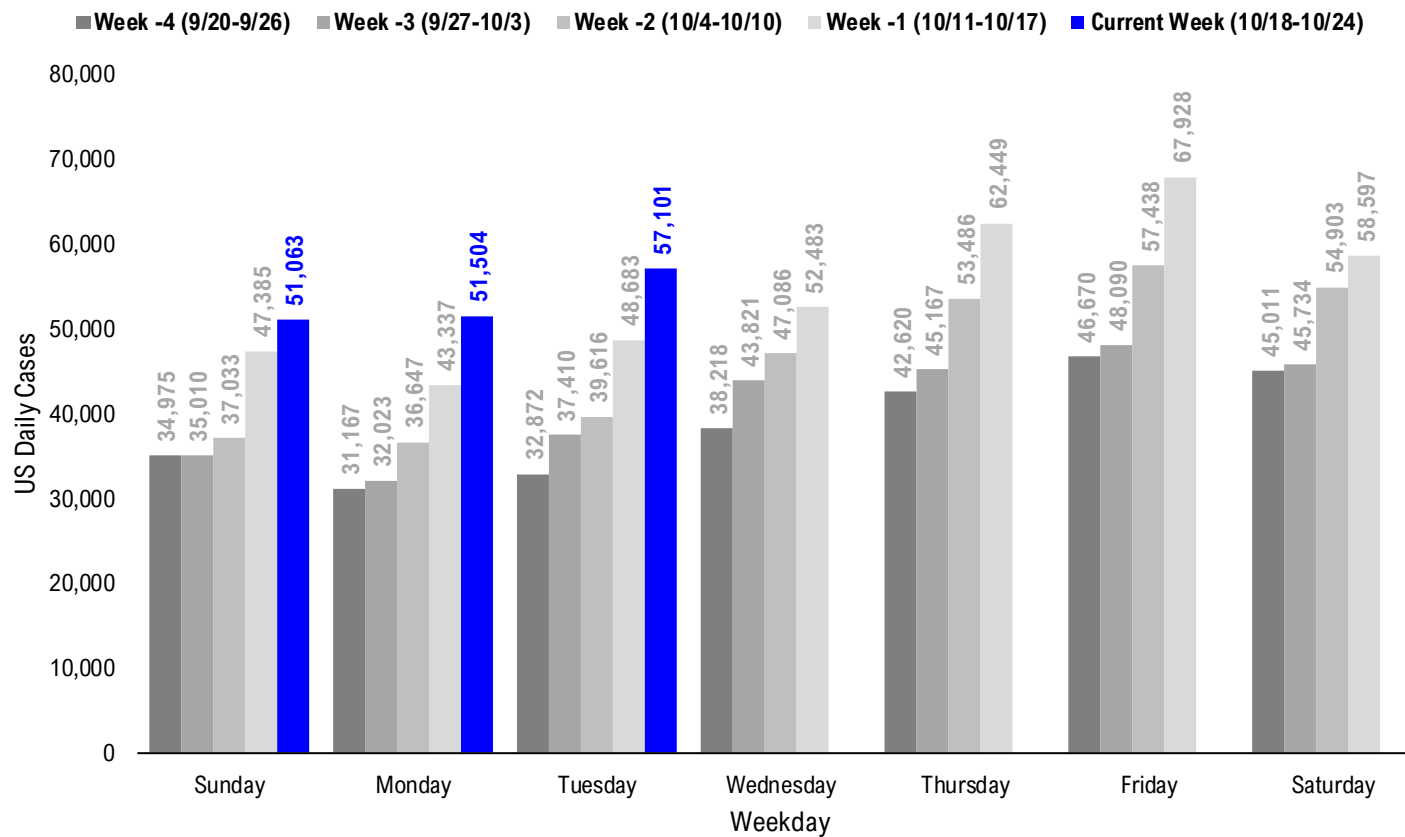
USA total COVID-19 tests administered



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				Hospitalization			
	% US Pop	% US GDP	7D		7D		# Days	% Decline in Daily Cases	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
			10/20	Delta	10/20	Delta				
United States	100%	100%	57.101	+8.418	162	+21	95	-26%	3.216	0.8%

States:

1 Texas	8.7%	8.8%	4,856	-194	117	+6	95	-72%	535	1.8%
2 Wisconsin	1.8%	1.6%	4,591	+1,312	704	+251	0	0%	233	1.0%
3 Illinois	3.8%	4.2%	3,714	+863	291	+72	2	-15%	413	1.5%
4 Florida	6.5%	5.0%	3,662	+937	123	-30	99	-79%	-33	(0.2%)
5 California	11.9%	14.6%	3,286	+908	81	-0	88	-72%	44	0.2%
6 Ohio	3.5%	3.3%	2,015	+568	154	+36	3	-17%	205	1.5%
7 Michigan	3.0%	2.6%	1,586	+349	150	+48	3	-23%	151	1.3%
8 North Carolina	3.2%	2.7%	1,578	-156	160	+9	3	-31%	100	0.7%
9 Pennsylvania	3.9%	3.8%	1,557	+215	102	+9	193	-28%	145	1.4%
10 Missouri	1.8%	1.5%	1,524	+536	255	+59	10	-42%	136	1.1%
11 Tennessee	2.1%	1.8%	1,508	+361	363	+61	1	-13%	179	1.2%
12 Indiana	2.0%	1.8%	1,498	-51	232	-0	3	-30%	137	1.1%
13 Oklahoma	1.2%	1.0%	1,475	+166	257	+15	10	-29%	61	0.8%
14 Kentucky	1.3%	1.0%	1,297	+536	205	+37	4	-28%	72	0.9%
15 Colorado	1.7%	1.8%	1,208	+160	186	+45	3	-11%	95	1.3%
16 New York	5.9%	8.1%	1,201	-192	61	+0	193	-89%	19	0.2%
17 Georgia	3.2%	2.9%	1,128	+135	96	+1	87	-76%	-40	(0.4%)
18 Minnesota	1.7%	1.8%	1,092	-43	262	+41	2	-22%	86	0.8%
19 Utah	1.0%	0.9%	1,081	+94	348	+18	3	-23%	57	0.6%
20 Alabama	1.5%	1.1%	1,043	-74	195	+14	87	-55%	23	0.3%
21 Arizona	2.2%	1.7%	1,040	+356	116	+35	110	-80%	71	1.1%
22 North Dakota	0.2%	0.3%	1,029	+521	1052	+345	0	0%	3	0.1%
23 New Jersey	2.7%	3.0%	988	+0	130	+47	198	-71%	132	1.9%
24 Massachusetts	2.1%	2.8%	976	+227	123	+22	178	-76%	3	0.1%
25 Virginia	2.6%	2.6%	926	-309	98	-15	72	-40%	-62	(0.9%)
26 Idaho	0.5%	0.4%	873	+289	388	+100	3	-23%	0	0.0%
27 Nebraska	0.6%	0.6%	749	+292	362	+70	3	-34%	81	1.4%
28 South Carolina	1.6%	1.1%	732	-38	135	-11	80	-74%	-48	(0.8%)

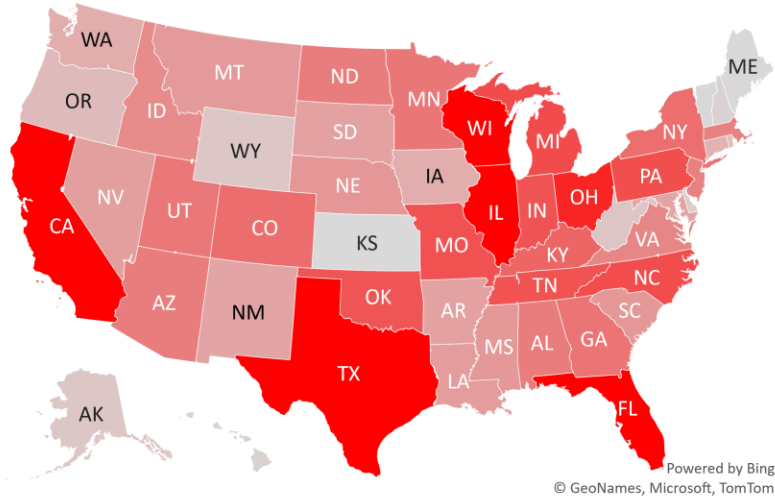
	Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents				Hospitalization			
	% US Pop	% US GDP	7D		7D		# Days	% Decline in Daily Cases	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
			10/20	Delta	10/20	Delta				
United States	100%	100%	57.101	+8.418	162	+21	95	-26%	3.216	0.8%

States:

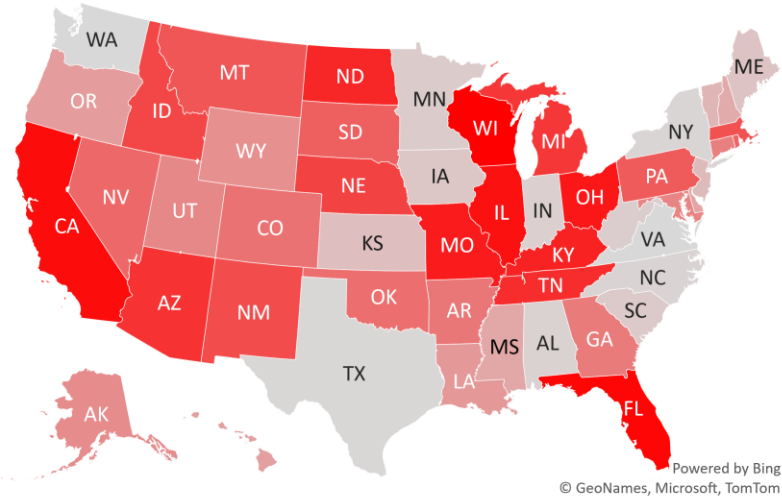
29 Mississippi	0.9%	0.6%	730	+17	147	+1	82	-72%	64	1.2%
30 Montana	0.3%	0.2%	703	+217	580	+114	10	-9%	66	1.5%
31 Louisiana	1.4%	1.3%	685	+32	144	+9	91	-75%	13	0.3%
32 Nevada	0.9%	0.8%	656	+169	200	+44	94	-54%	1	0.0%
33 Arkansas	0.9%	0.6%	628	+147	176	-1	10	-44%	26	0.5%
34 South Dakota	0.3%	0.3%	621	+207	696	+171	4	-25%	26	0.5%
35 New Mexico	0.6%	0.5%	594	+243	247	+89	4	-25%	80	1.9%
36 Maryland	1.8%	2.0%	590	+108	89	+4	152	-57%	62	1.4%
37 Iowa	1.0%	0.9%	494	-35	202	-17	3	-49%	38	0.6%
38 Washington	2.3%	2.7%	489	-1,251	65	-32	5	-53%	13	0.3%
39 Puerto Rico	1.0%	0.5%	447	+312	135	+74	24	-25%	75	3.1%
40 Connecticut	1.1%	1.3%	434	+114	152	+22	181	-64%	45	1.6%
41 Oregon	1.3%	1.2%	342	+29	65	-3	10	-36%	-27	(1.1%)
42 Rhode Island	0.3%	0.3%	302	+173	211	+92	178	-48%	9	0.5%
43 West Virginia	0.5%	0.4%	226	-48	134	+14	4	-30%	10	0.5%
44 Wyoming	0.2%	0.2%	215	+53	409	+116	0	0%	20	1.3%
45 Alaska	0.2%	0.3%	211	+60	288	+16	8	-9%	-21	(1.5%)
46 Guam	0.0%	0.0%	130	+34	541	+119	54	-17%	8	1.3%
47 Delaware	0.3%	0.4%	129	+24	131	-4	175	-62%	-5	(0.5%)
48 Hawaii	0.4%	0.5%	91	+29	49	+0	52	-76%	-7	(1.2%)
49 New Hampshire	0.4%	0.4%	82	+11	50	+4	171	-46%	-1	(0.2%)
50 District of Columbi	0.2%	0.7%	50	+4	52	-18	170	-84%	-3	(0.8%)
51 Maine	0.4%	0.3%	27	-1	19	-2	151	-63%	1	0.5%
52 Vermont	0.2%	0.2%	10	+0	16	+1	198	-83%	-5	(0.8%)
53 Northern Mariana	0.0%	0.0%	2	+2	12	+12	2	-78%	0	0.0%
54 U.S. Virgin Islands	0.0%	0.0%	0	+0	19	+16	60	-96%	0	0.0%
55 Kansas	0.9%	0.8%	0	+0	242	+7	6	-37%	-70	(1.4%)
56 American Samoa	0.0%	0.0%	0	+0		+0	0	0%	0	

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

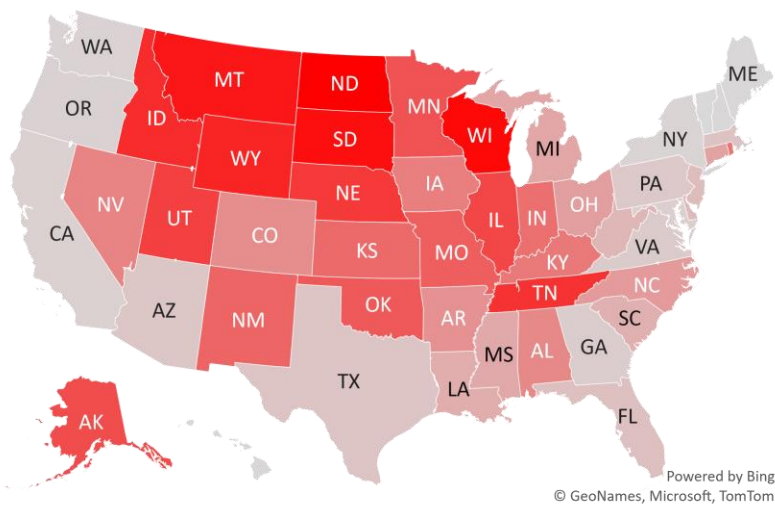
Daily Case Increases



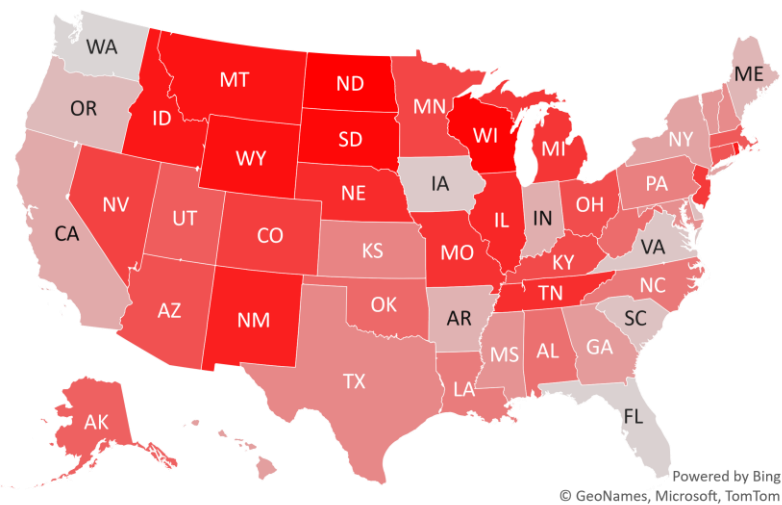
7D Delta in Daily New Cases



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



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

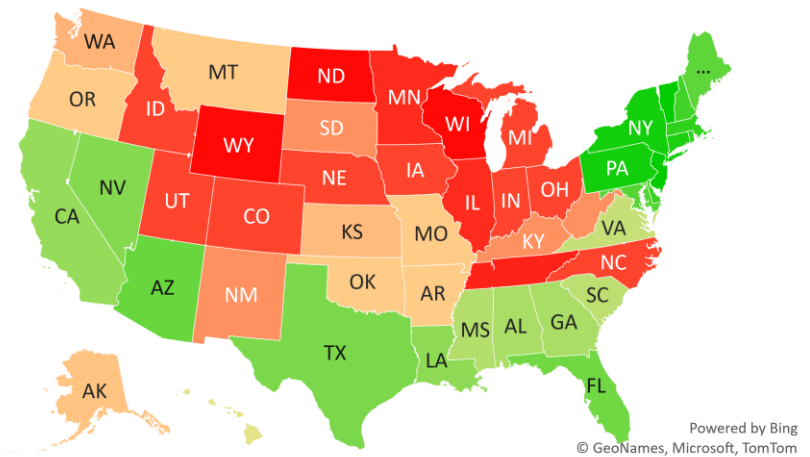


#5: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 10/20)

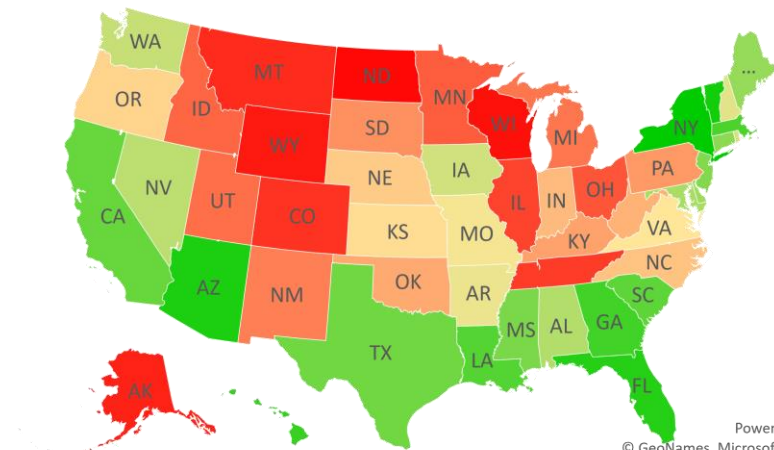
Sorted					Sorted				
	Peak Date	10/20/20	% off the Peak	% US Pop		Peak Date	10/20/20	% off the Peak	% US Pop
United States	7/17/20	95	-26%	100%	United States	7/17/20	95	-26%	100%
States:					States:				
Vermont	4/5/20	198	-83%	0.2%	Oklahoma	10/10/20	10	-29%	1.2%
New Jersey	4/5/20	198	-71%	2.7%	Montana	10/10/20	10	-9%	0.3%
Pennsylvania	4/10/20	193	-28%	3.9%	Missouri	10/10/20	10	-42%	1.8%
New York	4/10/20	193	-89%	5.9%	Arkansas	10/10/20	10	-44%	0.9%
Connecticut	4/22/20	181	-64%	1.1%	Alaska	10/12/20	8	-9%	0.2%
Rhode Island	4/25/20	178	-48%	0.3%	Kansas	10/14/20	6	-37%	0.9%
Massachusetts	4/25/20	178	-76%	2.1%	Washington	10/15/20	5	-53%	2.3%
Delaware	4/28/20	175	-62%	0.3%	West Virginia	10/16/20	4	-30%	0.5%
New Hampshire	5/2/20	171	-46%	0.4%	South Dakota	10/16/20	4	-25%	0.3%
District of Columbia	5/3/20	170	-84%	0.2%	New Mexico	10/16/20	4	-25%	0.6%
Maryland	5/21/20	152	-57%	1.8%	Kentucky	10/16/20	4	-28%	1.3%
Maine	5/22/20	151	-63%	0.4%	Utah	10/17/20	3	-23%	1.0%
Arizona	7/2/20	110	-80%	2.2%	Ohio	10/17/20	3	-17%	3.5%
Florida	7/13/20	99	-79%	6.5%	Nebraska	10/17/20	3	-34%	0.6%
Texas	7/17/20	95	-72%	8.7%	North Carolina	10/17/20	3	-31%	3.2%
Nevada	7/18/20	94	-54%	0.9%	Michigan	10/17/20	3	-23%	3.0%
Louisiana	7/21/20	91	-75%	1.4%	Indiana	10/17/20	3	-30%	2.0%
California	7/24/20	88	-72%	11.9%	Idaho	10/17/20	3	-23%	0.5%
Georgia	7/25/20	87	-76%	3.2%	Iowa	10/17/20	3	-49%	1.0%
Alabama	7/25/20	87	-55%	1.5%	Colorado	10/17/20	3	-11%	1.7%
Mississippi	7/30/20	82	-72%	0.9%	Minnesota	10/18/20	2	-22%	1.7%
South Carolina	8/1/20	80	-74%	1.6%	Illinois	10/18/20	2	-15%	3.8%
Virginia	8/9/20	72	-40%	2.6%	Tennessee	10/19/20	1	-13%	2.1%
U.S. Virgin Islands	8/21/20	60	-96%	0.0%	Wyoming	10/20/20	0	0%	0.2%
Guam	8/27/20	54	-17%	0.0%	Wisconsin	10/20/20	0	0%	1.8%
Hawaii	8/29/20	52	-76%	0.4%	North Dakota	10/20/20	0	0%	0.2%
Puerto Rico	9/26/20	24	-25%	1.0%					
Oregon	10/10/20	10	-36%	1.3%					

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



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



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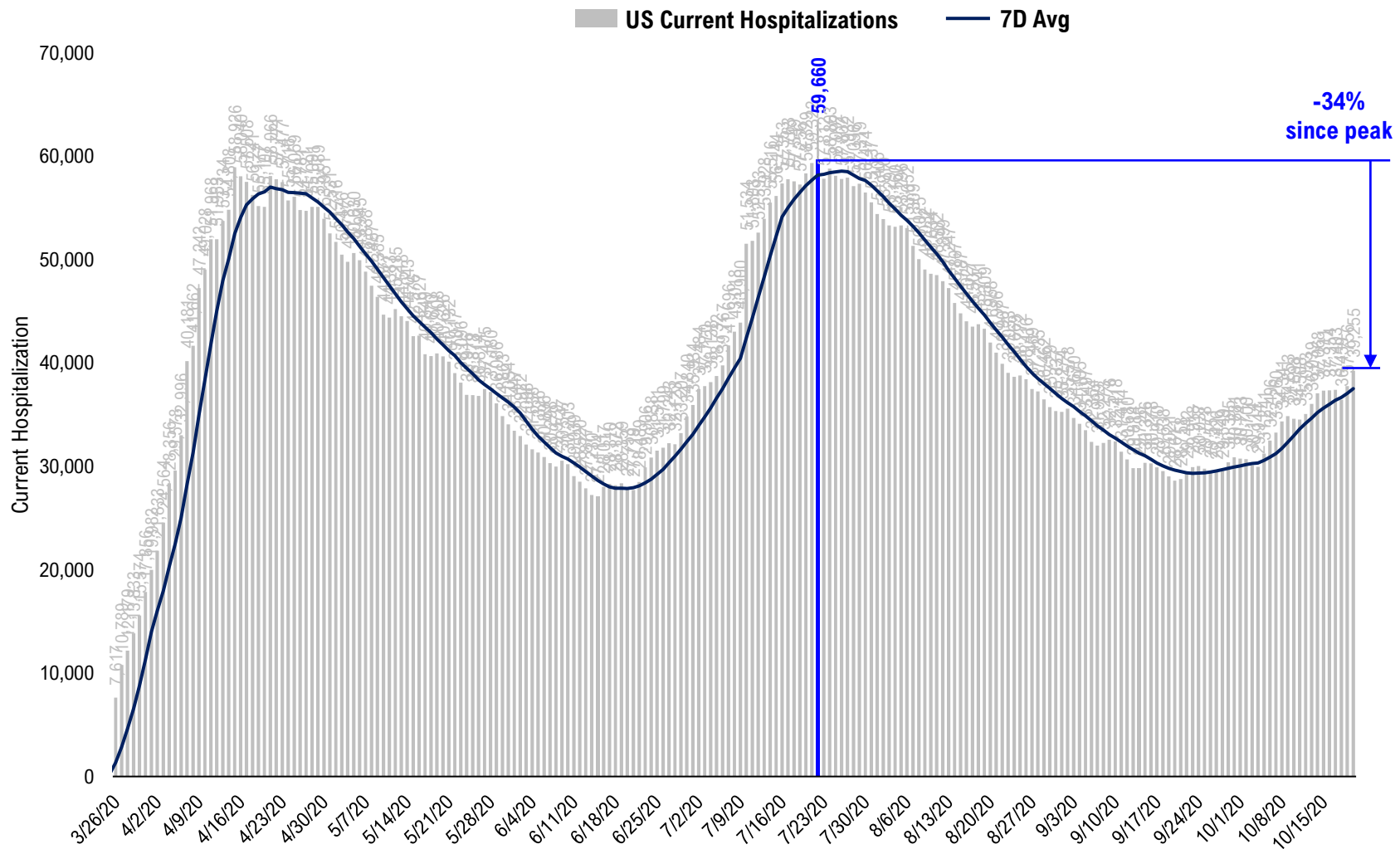
#6: US New Cases by States... (sorted by today's new cases)

	Sorted				
	7D Ago	Last 3-day Trend			
	10/13/20	10/18/20	10/19/20	10/20/20	vs 7D ago
United States	48,683	51,063	51,504	57,101	+8,418
States:					
Texas	5,050	3,048	2,273	4,856	
Wisconsin	3,279	3,928	3,777	4,591	<--higher
Illinois	2,851	4,245	3,113	3,714	<--higher
Florida	2,725	2,539	1,707	3,662	<--higher
California	2,378	2,862	3,474	3,286	<--higher
Ohio	1,447	1,562	1,837	2,015	<--higher
Michigan	1,237	0	2,909	1,586	<--higher
North Carolina	1,734	2,303	1,144	1,578	
Pennsylvania	1,342	1,269	1,103	1,557	
Missouri	988	1,768	1,405	1,524	<--higher
Tennessee	1,147	2,605	3,317	1,508	<--higher
Indiana	1,549	1,605	1,584	1,498	
Oklahoma	1,309	796	774	1,475	
Kentucky	761	810	640	1,297	<--higher
Colorado	1,048	933	1,072	1,208	
New York	1,393	1,390	998	1,201	
Georgia	993	1,174	752	1,128	
Minnesota	1,135	1,722	1,627	1,092	
Utah	987	1,097	1,168	1,081	
Alabama	1,117	964	859	1,043	
Arizona	684	742	748	1,040	<--higher
North Dakota	508	717	659	1,029	<--higher
New Jersey	988	1,275	1,192	988	
Massachusetts	749	730	828	976	<--higher
Virginia	1,235	900	690	926	
Idaho	584	510	698	873	<--higher
Nebraska	457	620	734	749	<--higher
South Carolina	770	780	580	732	

	Sorted				
	7D Ago	Last 3-day Trend			
	10/13/20	10/18/20	10/19/20	10/20/20	vs 7D ago
United States	48,683	51,063	51,504	57,101	+8,418
States:					
Mississippi	713	233	353	730	
Montana	486	588	569	703	<--higher
Louisiana	653	1,125	202	685	
Nevada	487	609	582	656	<--higher
Arkansas	481	529	434	628	<--higher
South Dakota	414	658	567	621	<--higher
New Mexico	351	445	514	594	<--higher
Maryland	482	530	497	590	<--higher
Iowa	529	857	557	494	
Washington	1,740	530	460	489	
Puerto Rico	135	418	427	447	<--higher
Connecticut	320	0	1,191	434	<--higher
Oregon	313	216	262	342	
Rhode Island	129	284	85	302	<--higher
West Virginia	274	280	212	226	
Wyoming	162	209	286	215	<--higher
Alaska	151	220	202	211	<--higher
Guam	96	58	81	130	<--higher
Delaware	105	151	103	129	<--higher
Hawaii	62	81	36	91	<--higher
New Hampshire	71	69	52	82	
District of Columbia	46	36	25	50	
Maine	28	26	23	27	
Vermont	10	11	9	10	
Northern Mariana Islands	0	0	0	2	
U.S. Virgin Islands	0	6	0	0	
Kansas	0	0	2,113	0	
American Samoa	0	0	0	0	

#7: US Daily Hospitalizations...

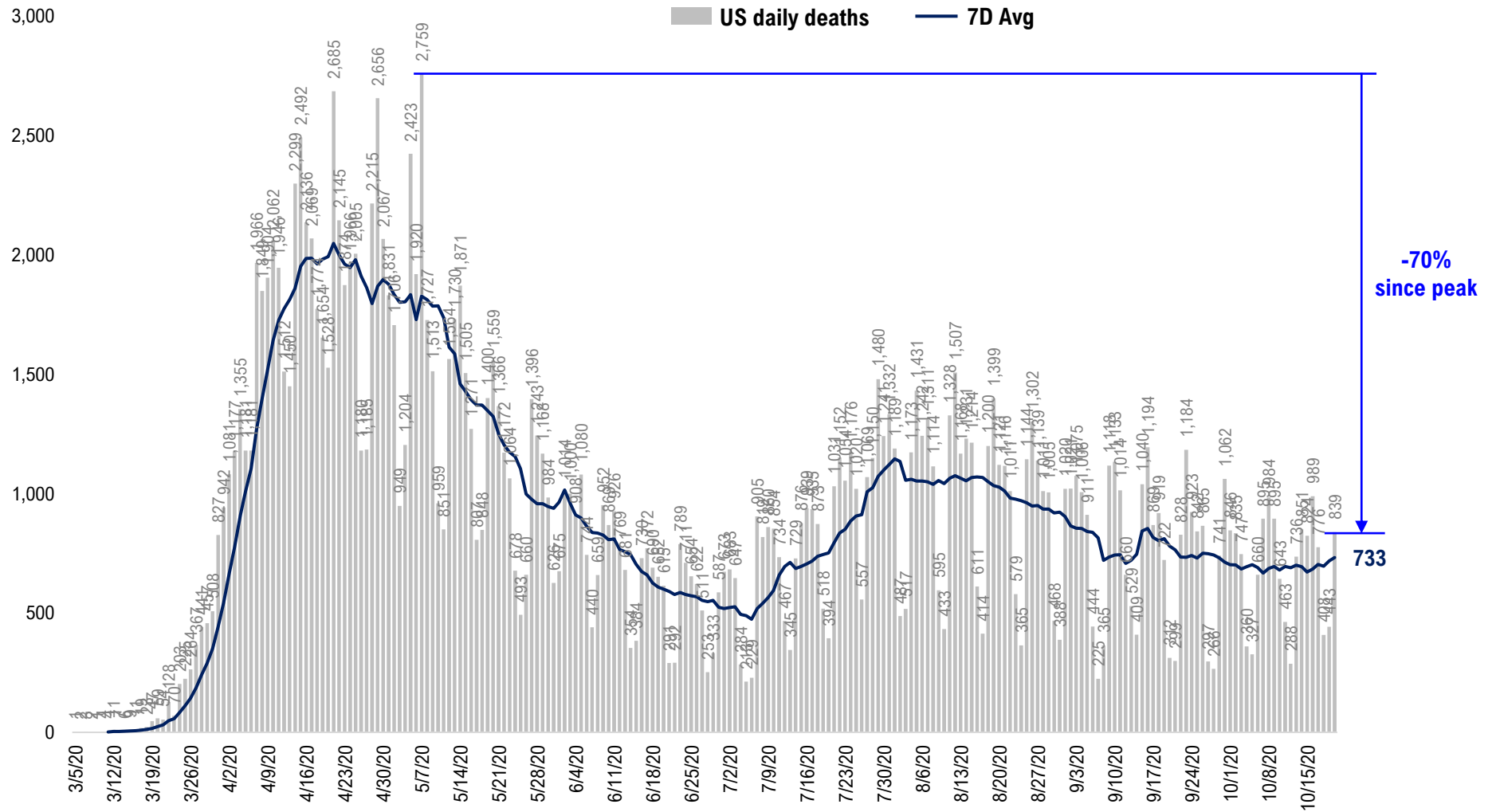
US Net Hospitalizations (aggregate of 50 states + Washington, D.C.)



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

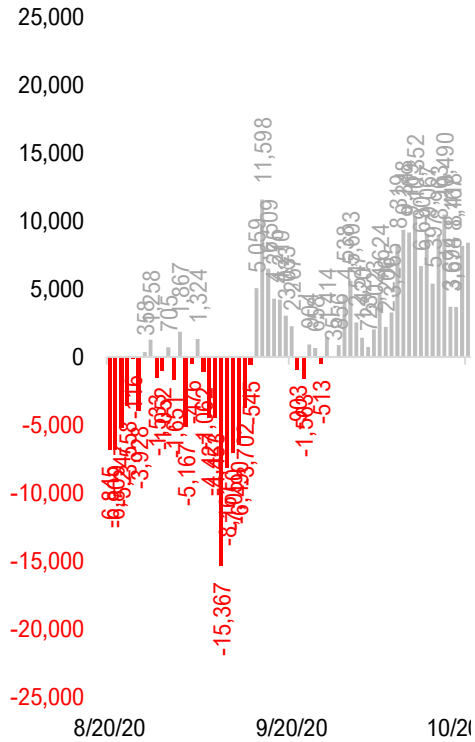
#8: US Daily New Fatalities...

US daily COVID-19 Fatalities

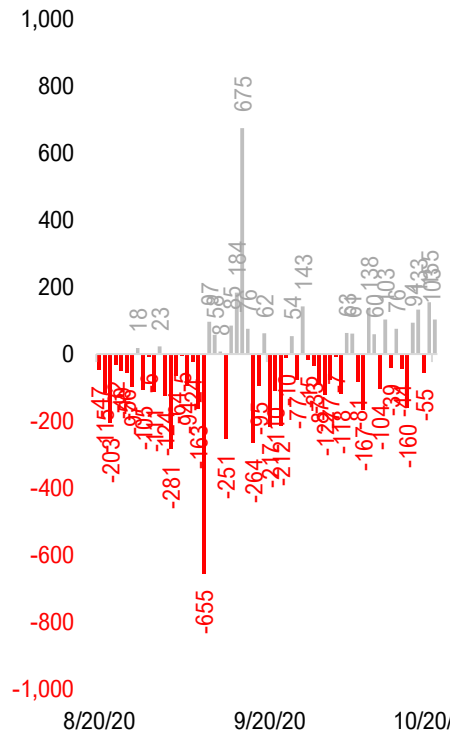


#9: Rolling 7-Day Change in the Key Metrics... (Past 8 Weeks)

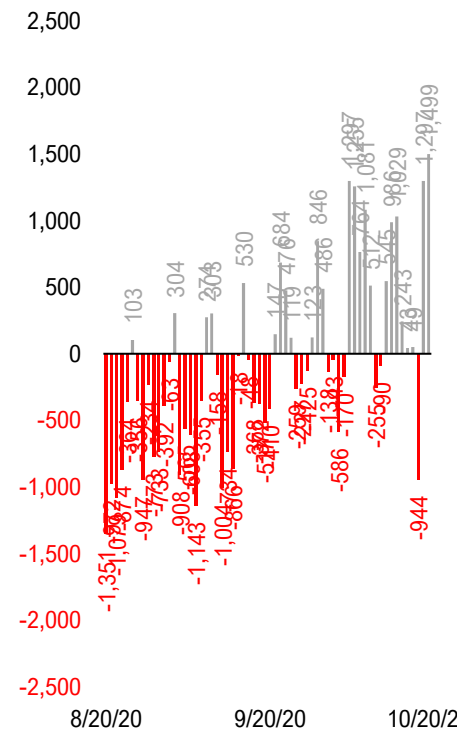
Daily New Cases
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



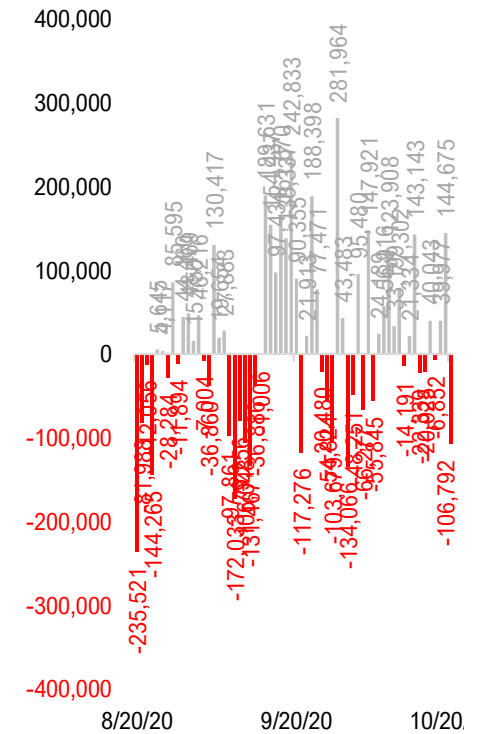
Daily Deaths



Daily Net Hospitalization
(Red = more discharge than admission)



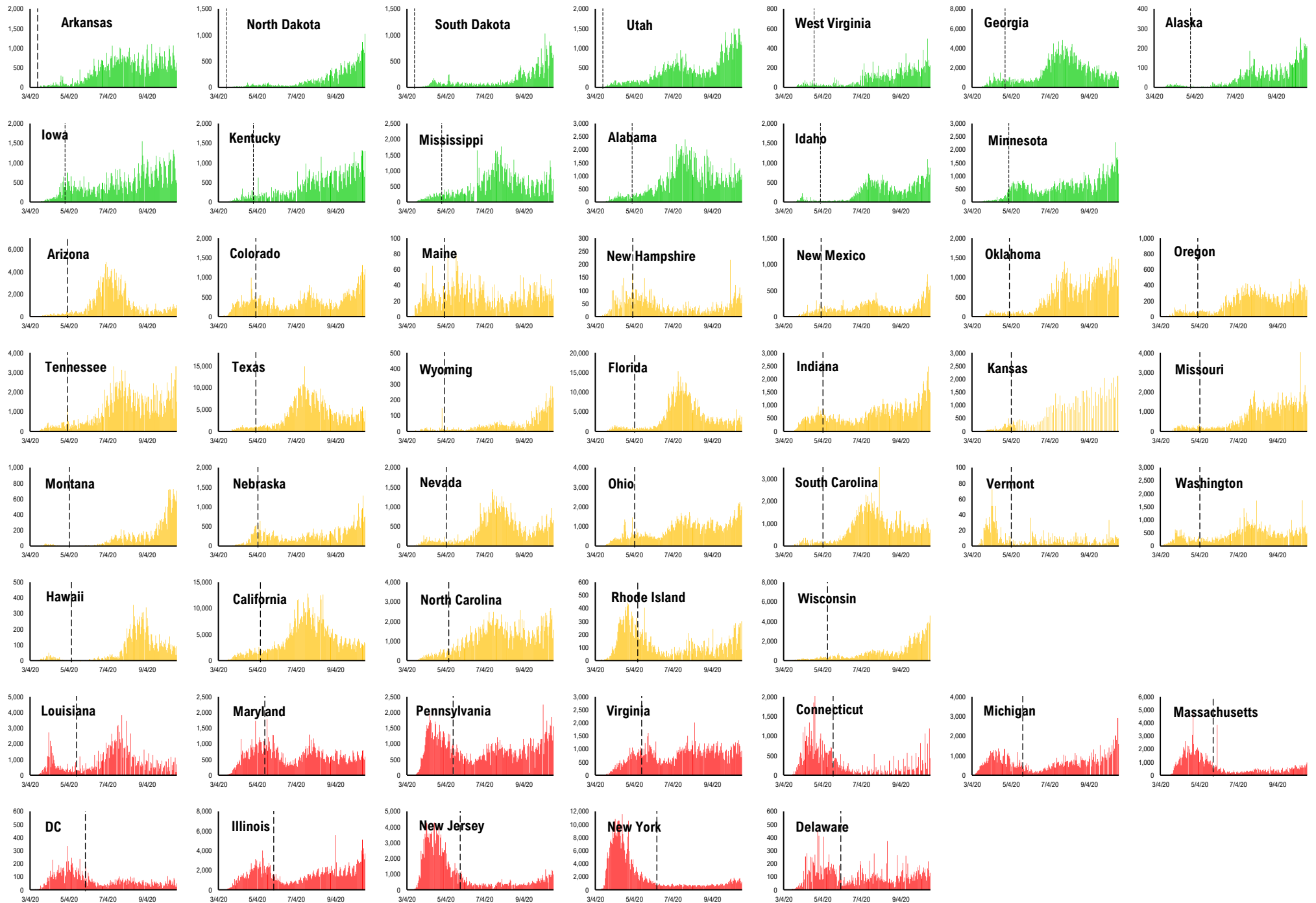
Daily Tests



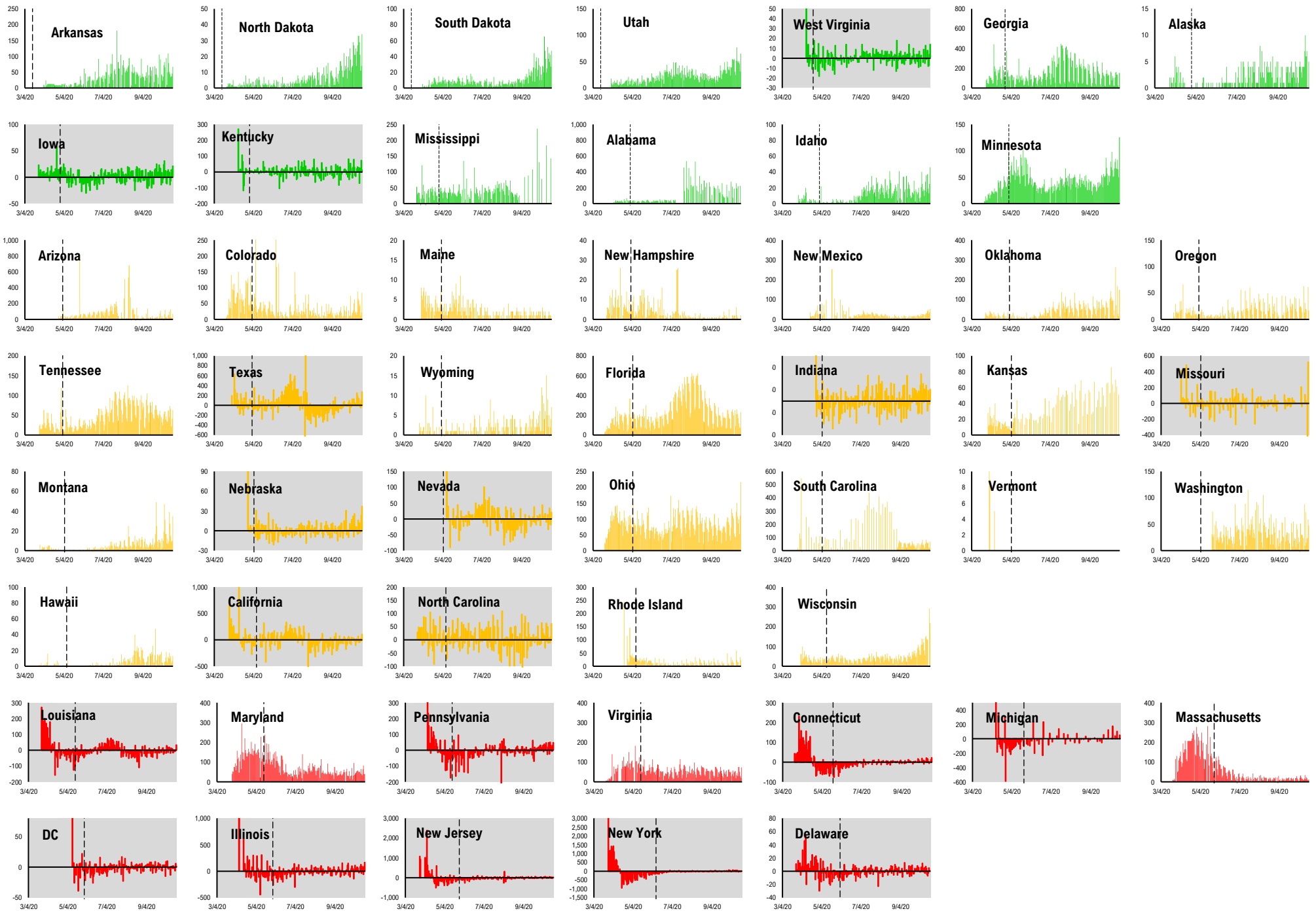
* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog

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

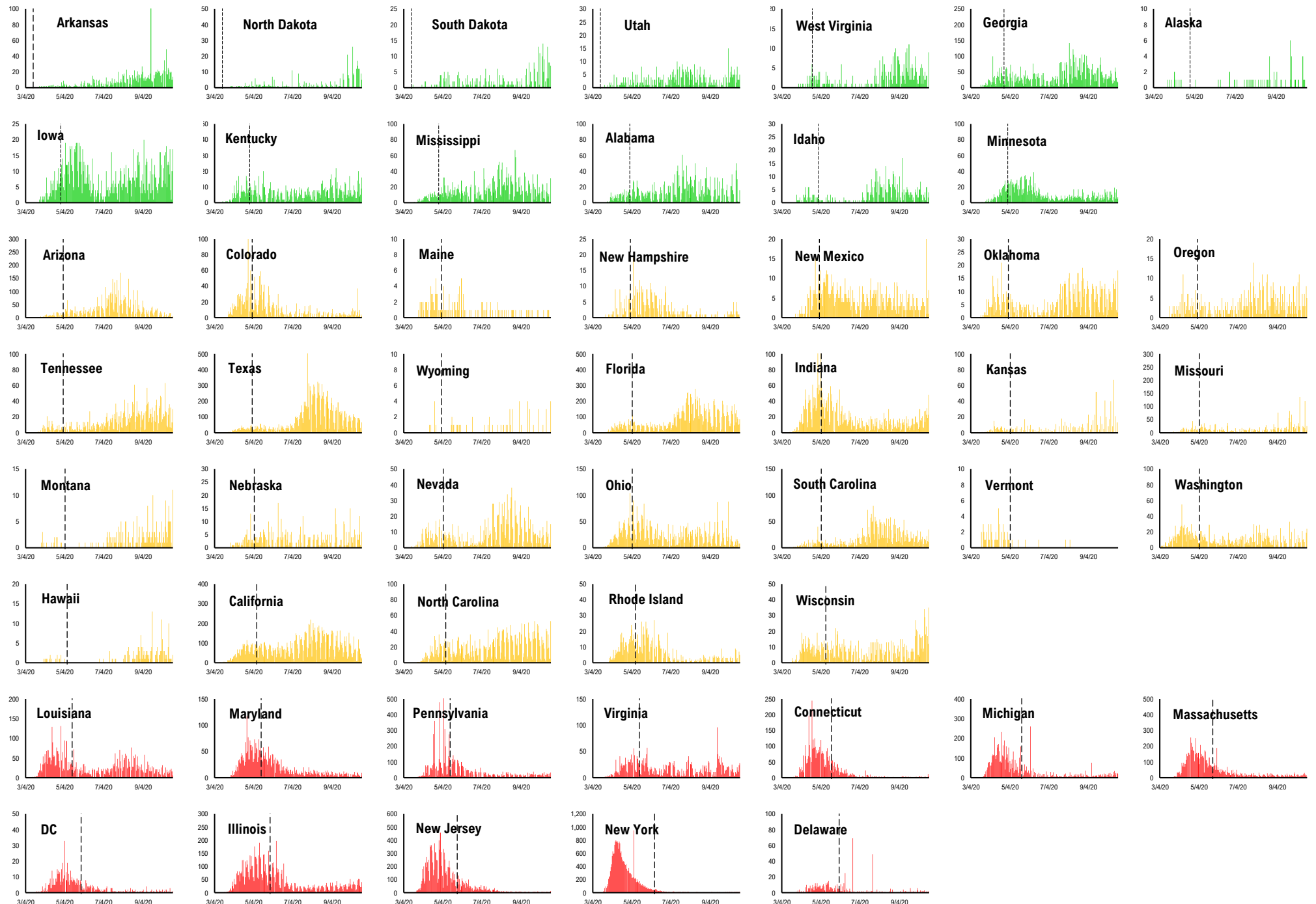
#10: Daily New Cases by States... (sorted by "open" date)



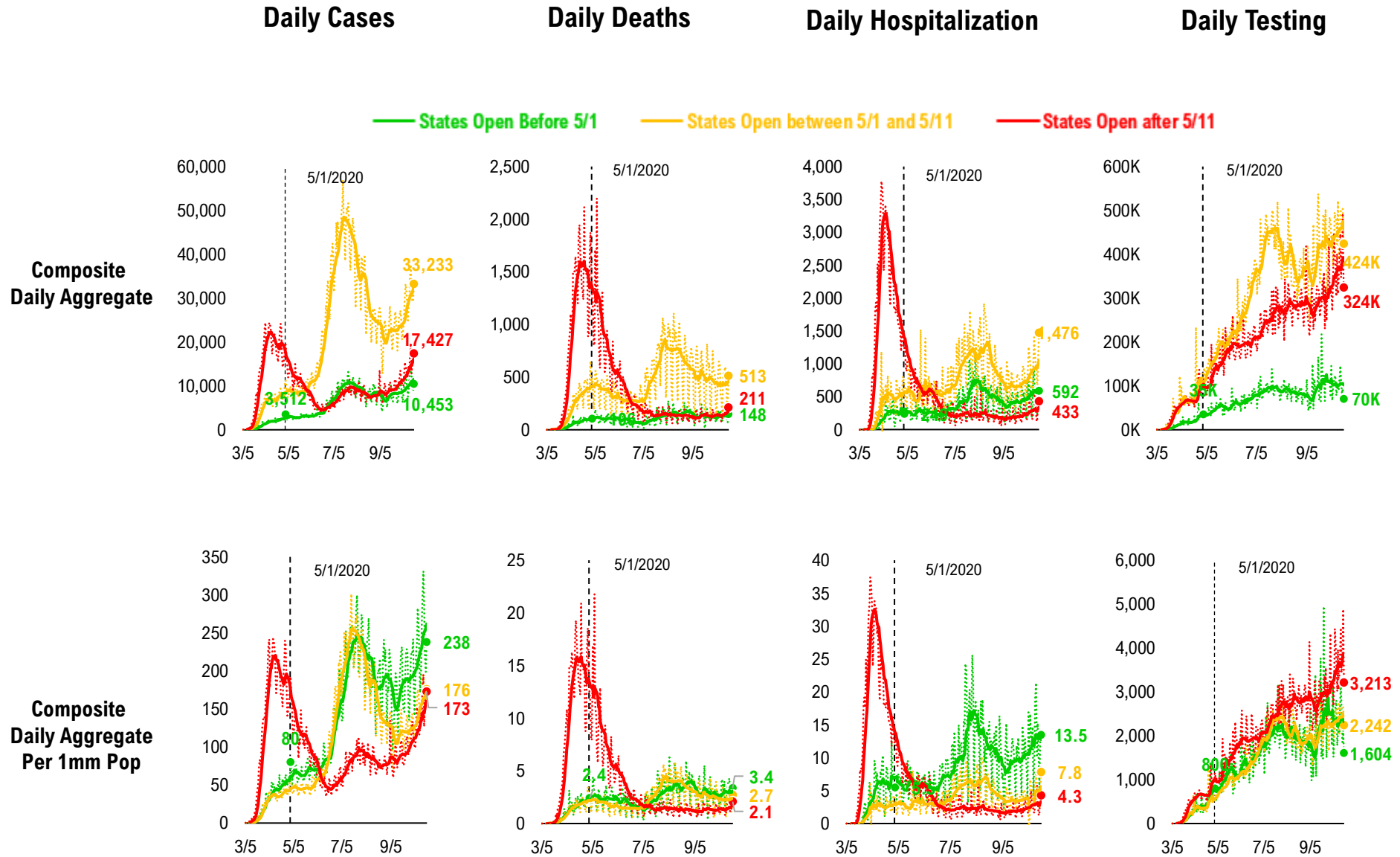
#11: Daily Hospitalizations by States... (sorted by "open" date)



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

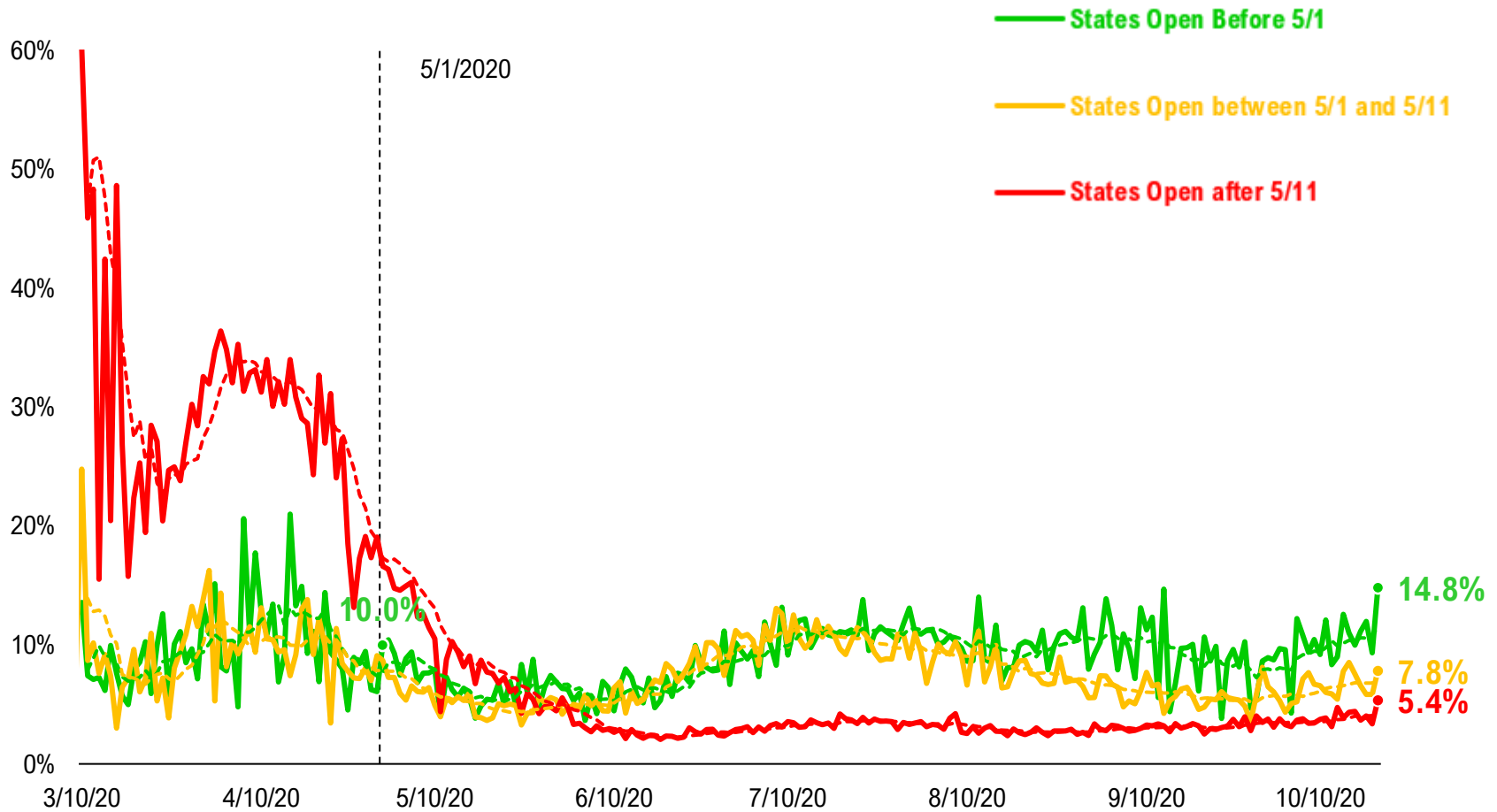


#13: State COVID-19 situation by Reopen Date...

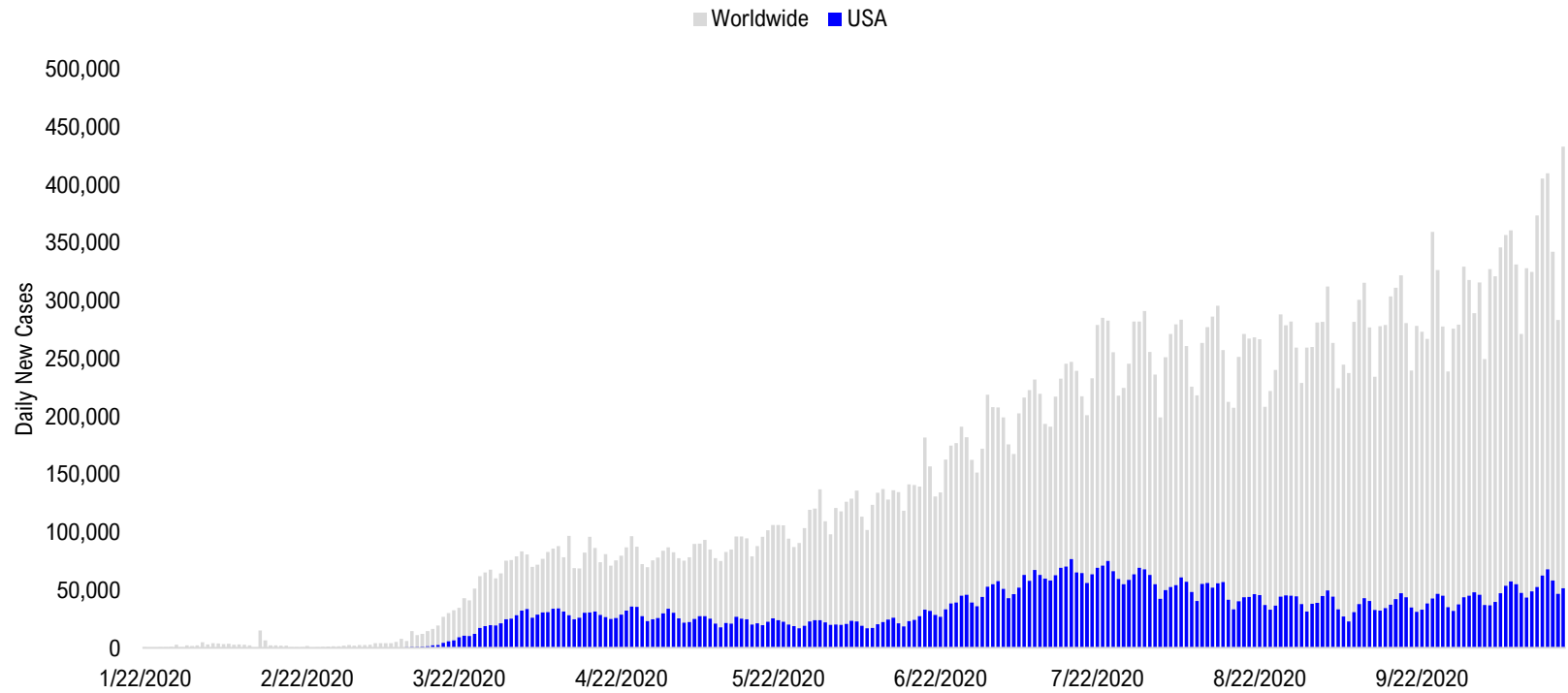


#14: State COVID-19 Daily Positivity Rate by Reopen Date...

Composite Daily Positivity Rate



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



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	10/9/2020	10/19/2020
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 112,014	Europe 152,049
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 80,841	Latin America 76,712	Pakistan + India + Bangladesh 76,149	Pakistan + India + Bangladesh 56,695
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	Latin America 69,822	US + Canada 54,498
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 54,962	Latin America 50,396
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 13,687	Asia ex- India+Pakistan 13,438
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 9,966	Africa 10,717

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Positive (+): The analyst expects the performance of his industry/sector coverage universe over the next 6-18 months to be attractive vs. the relevant broad market benchmark, being the S&P 500 for North America.

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