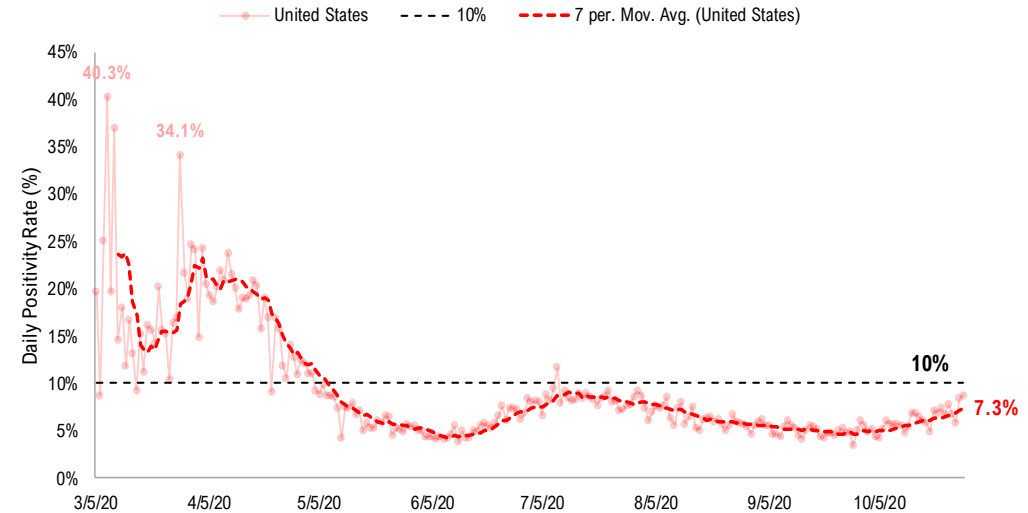
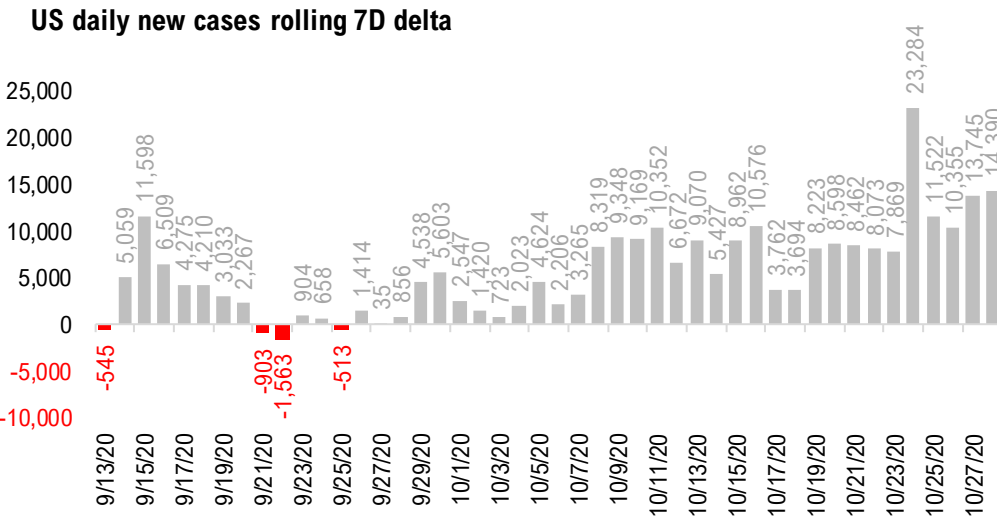
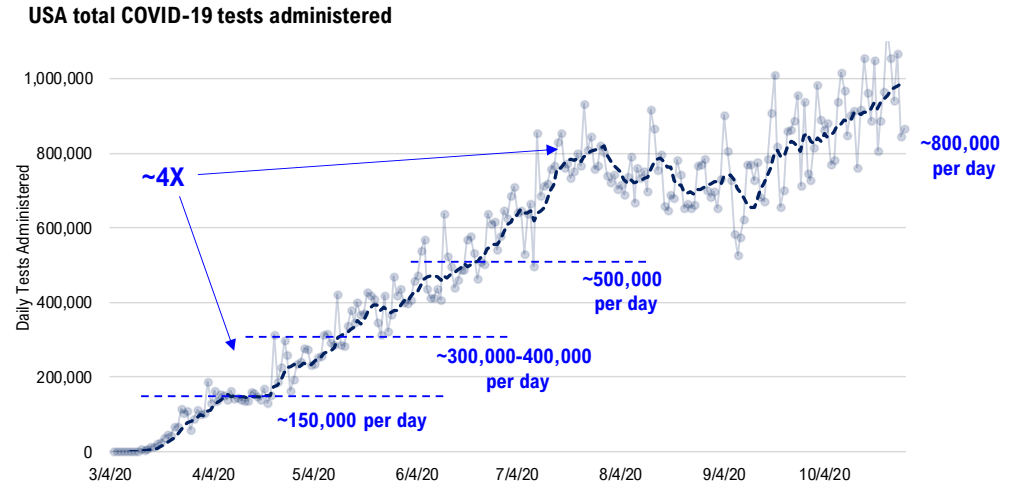
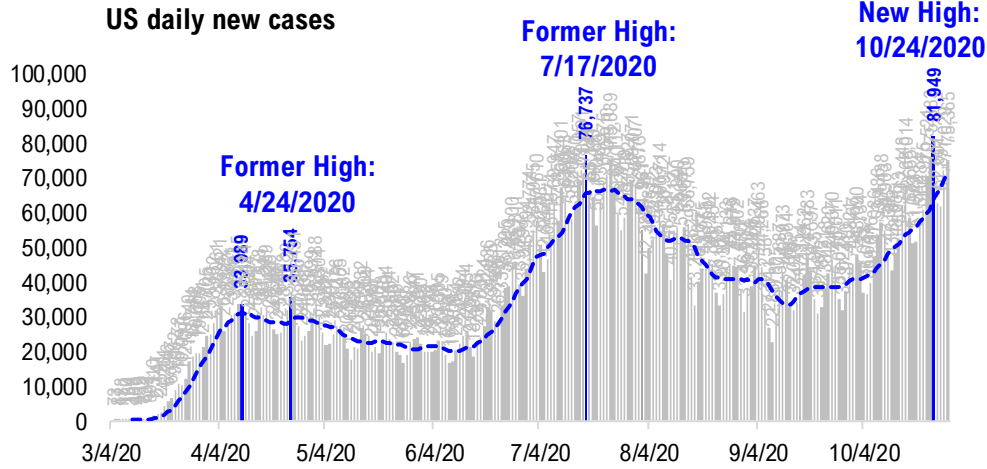


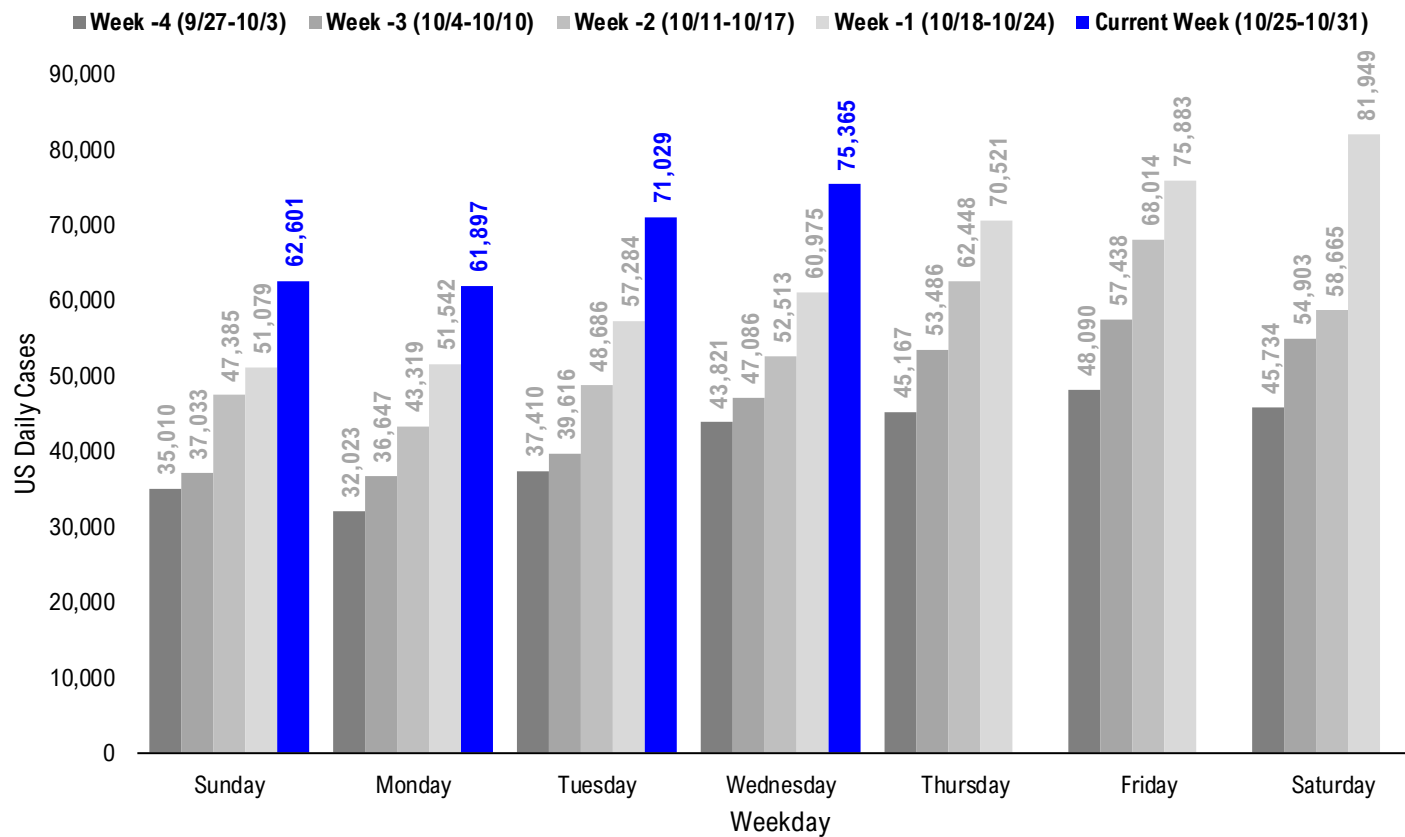
FSInsight Daily COVID-19 Chartbook



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



#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		Since Peak		7D Net Hospitalization	7D Net Hospitalization / 7D New Cases		
			10/28	Delta	# Days	% Decline in Daily Cases		Hospitalization	Hospitalization / 7D New Cases	
United States	100%	100%	75.365	+14,390	212	+39	4	-9%	4,795	1.0%

	Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents				Hospitalization			
	% US Pop	% US GDP	7D		Since Peak		7D Net Hospitalization	7D Net Hospitalization / 7D New Cases		
			10/28	Delta	# Days	% Decline in Daily Cases		Hospitalization	Hospitalization / 7D New Cases	
United States	100%	100%	75.365	+14,390	212	+39	4	-9%	4,795	1.0%

States:

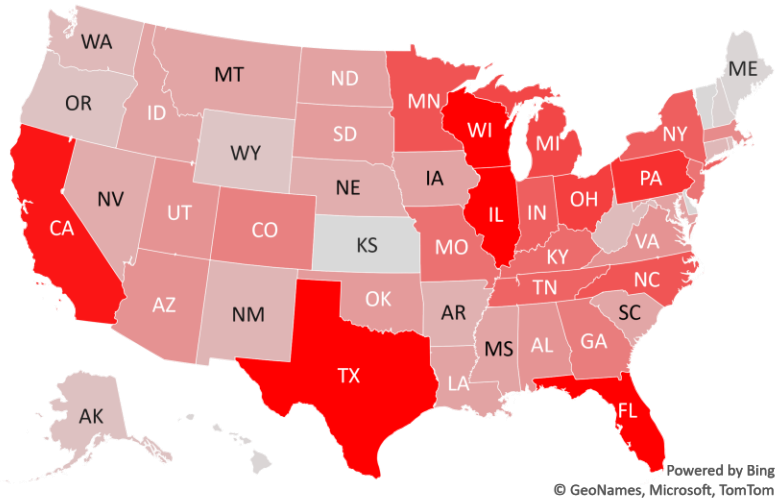
1 Illinois	3.8%	4.2%	6,110	+1,768	390	+97	4	-8%	523	1.5%
2 Texas	8.7%	8.8%	5,175	+184	191	+52	103	-54%	868	2.3%
3 California	11.9%	14.6%	4,515	+808	90	+2	96	-69%	-79	(0.3%)
4 Florida	6.5%	5.0%	4,115	+1,971	183	+66	107	-69%	246	0.9%
5 Wisconsin	1.8%	1.6%	3,815	-390	685	-35	7	-5%	249	0.9%
6 Michigan	3.0%	2.6%	3,271	+1,674	318	+114	0	0%	282	1.7%
7 Ohio	3.5%	3.3%	2,607	+241	206	+29	4	-7%	284	1.6%
8 Indiana	2.0%	1.8%	2,548	+816	322	+84	4	-19%	195	1.2%
9 Tennessee	2.1%	1.8%	2,446	+154	324	-24	3	-31%	-40	(0.2%)
10 North Carolina	3.2%	2.7%	2,253	+411	192	+47	4	-22%	-26	(0.2%)
11 Pennsylvania	3.9%	3.8%	2,228	+803	166	+60	0	0%	221	1.5%
12 New York	5.9%	8.1%	2,031	+5	89	+17	201	-84%	135	1.1%
13 Missouri	1.8%	1.5%	1,915	+671	279	+52	18	-36%	31	0.2%
14 Minnesota	1.7%	1.8%	1,908	+848	333	+110	10	-1%	92	0.7%
15 Kansas	0.9%	0.8%	1,869	+381	459	+47	0	0%	103	1.8%
16 Kentucky	1.3%	1.0%	1,857	+405	340	+87	0	0%	133	1.4%
17 Iowa	1.0%	0.9%	1,781	+602	358	+122	4	-22%	62	0.7%
18 New Jersey	2.7%	3.0%	1,666	+636	170	+49	206	-62%	166	1.7%
19 Georgia	3.2%	2.9%	1,653	+341	129	+29	95	-68%	43	0.4%
20 Utah	1.0%	0.9%	1,575	+212	408	+32	3	-26%	-22	(0.2%)
21 Colorado	1.7%	1.8%	1,475	+208	296	+91	2	-11%	132	1.2%
22 Virginia	2.6%	2.6%	1,345	+327	132	+29	80	-20%	58	0.7%
23 South Dakota	0.3%	0.3%	1,270	+683	1054	+385	3	-12%	80	1.2%
24 Alabama	1.5%	1.1%	1,269	+123	228	+21	95	-47%	150	1.6%
25 Massachusetts	2.1%	2.8%	1,181	+479	177	+55	186	-65%	63	0.8%
26 Arizona	2.2%	1.7%	1,043	+68	137	+11	118	-77%	39	0.5%
27 Mississippi	0.9%	0.6%	1,000	+199	258	+47	90	-50%	-45	(0.8%)
28 Nebraska	0.6%	0.6%	877	+285	372	+15	11	-32%	56	0.9%

States:

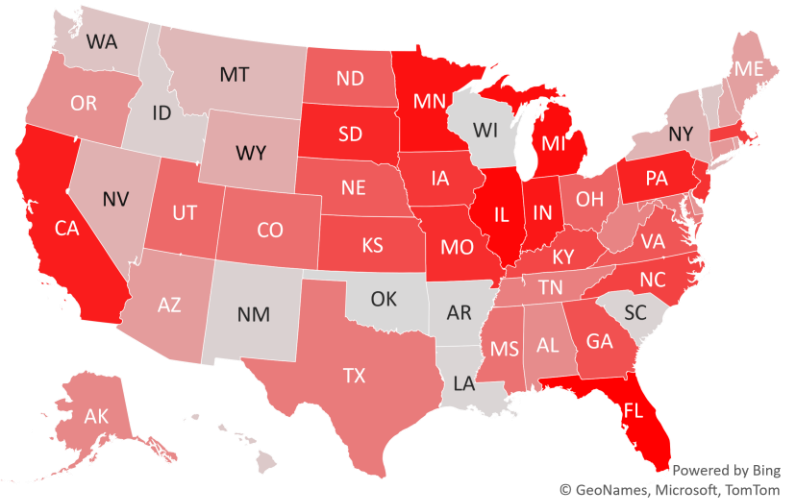
29 Idaho	0.5%	0.4%	862	-125	455	-22	4	-20%	85	1.4%
30 North Dakota	0.2%	0.3%	777	+278	957	+0	4	-19%	65	1.1%
31 Oklahoma	1.2%	1.0%	743	-564	204	-96	4	-50%	15	0.2%
32 Washington	2.3%	2.7%	716	-8	80	+7	13	-42%	16	0.3%
33 South Carolina	1.6%	1.1%	702	-167	158	+2	88	-70%	67	1.0%
34 Arkansas	0.9%	0.6%	690	-291	207	-19	5	-36%	18	0.3%
35 Maryland	1.8%	2.0%	684	+192	118	+31	160	-43%	38	0.7%
36 New Mexico	0.6%	0.5%	657	-162	312	+6	3	-21%	111	2.2%
37 Montana	0.3%	0.2%	620	+1	651	+61	4	-14%	29	0.6%
38 Nevada	0.9%	0.8%	571	+6	192	-3	102	-56%	30	0.6%
39 Louisiana	1.4%	1.3%	503	-241	115	-2	99	-80%	5	0.1%
40 Rhode Island	0.3%	0.3%	499	+25	342	+71	5	-26%	6	0.2%
41 Connecticut	1.1%	1.3%	490	+74	287	+97	189	-32%	96	2.3%
42 Oregon	1.3%	1.2%	420	+113	89	+17	4	-13%	23	0.8%
43 West Virginia	0.5%	0.4%	358	+143	215	+94	0	0%	38	1.6%
44 Alaska	0.2%	0.3%	355	+143	494	+210	1	-13%	39	1.6%
45 Wyoming	0.2%	0.2%	340	+18	636	+162	0	0%	38	1.7%
46 Delaware	0.3%	0.4%	143	+93	148	+51	183	-57%	-7	(0.7%)
47 New Hampshire	0.4%	0.4%	110	+21	77	+22	179	-17%	15	2.1%
48 Maine	0.4%	0.3%	76	+38	46	+24	159	-10%	9	2.5%
49 District of Columbi	0.2%	0.7%	67	+14	97	+37	178	-70%	5	1.1%
50 Puerto Rico	1.0%	0.5%	66	-66	82	-23	3	-59%	56	2.0%
51 Hawaii	0.4%	0.5%	62	-15	38	-10	60	-81%	-20	(0.3%)
52 Guam	0.0%	0.0%	48	-34	503	-86	62	-23%	15	3.0%
53 Vermont	0.2%	0.2%	6	-9	25	+6	206	-74%	4	2.7%
54 U.S. Virgin Islands	0.0%	0.0%	2	+0	22	+16	68	-95%	0	0.0%
55 Northern Mariana	0.0%	0.0%	0	+0	23	+12	10	-56%	0	0.0%
56 American Samoa	0.0%	0.0%	0	+0	0	+0	0	0%	0	

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

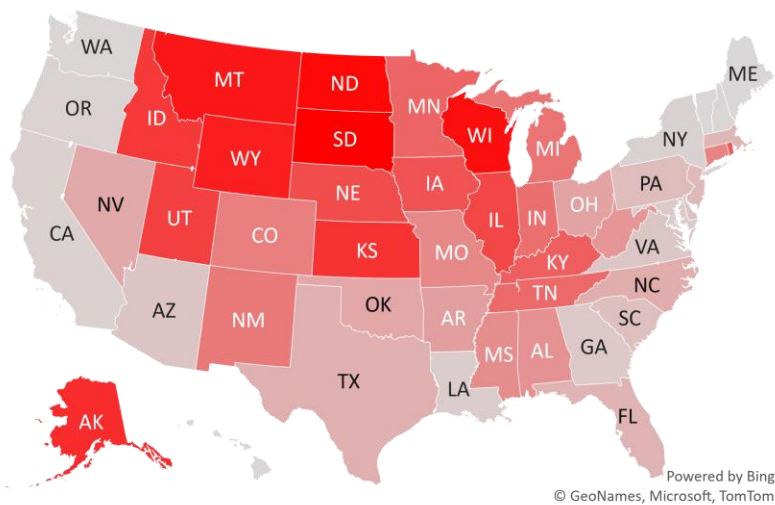
Daily Case Increases



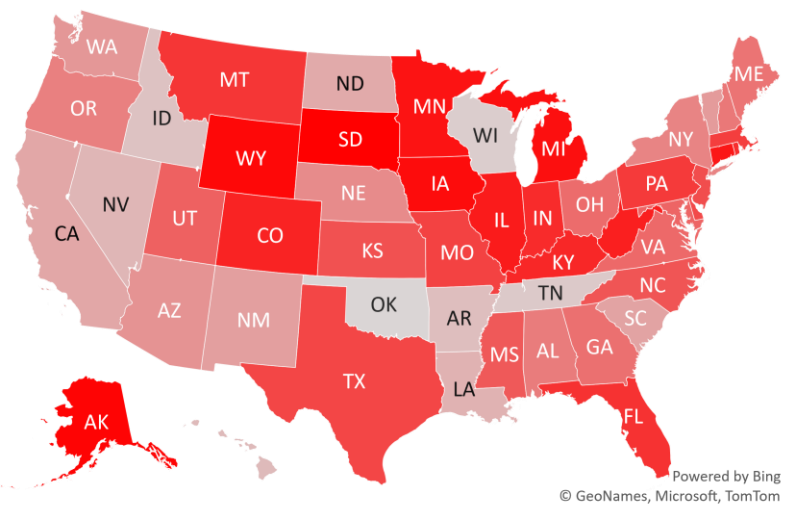
7D Delta in Daily New Cases



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



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



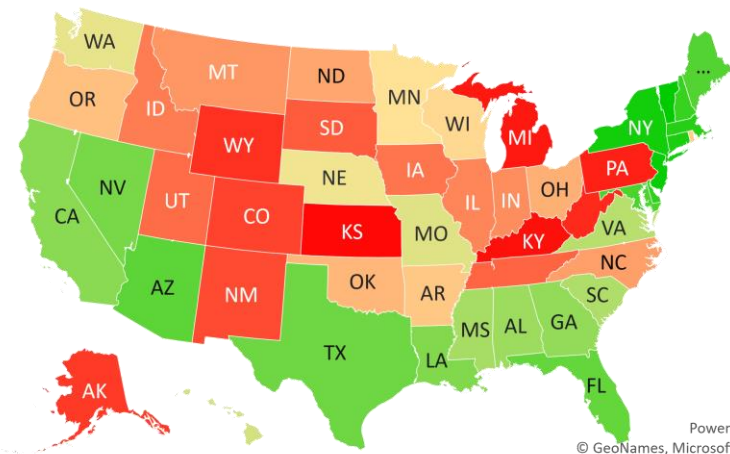
#5: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 10/28)

	Sorted			
	Peak Date	10/28/20	% off the Peak	% US Pop
United States	10/24/20	4	-9%	100%
States:				
Vermont	4/5/20	206	-74%	0.2%
New Jersey	4/5/20	206	-62%	2.7%
New York	4/10/20	201	-84%	5.9%
Connecticut	4/22/20	189	-32%	1.1%
Massachusetts	4/25/20	186	-65%	2.1%
Delaware	4/28/20	183	-57%	0.3%
New Hampshire	5/2/20	179	-17%	0.4%
District of Columbia	5/3/20	178	-70%	0.2%
Maryland	5/21/20	160	-43%	1.8%
Maine	5/22/20	159	-10%	0.4%
Arizona	7/2/20	118	-77%	2.2%
Florida	7/13/20	107	-69%	6.5%
Texas	7/17/20	103	-54%	8.7%
Nevada	7/18/20	102	-56%	0.9%
Louisiana	7/21/20	99	-80%	1.4%
California	7/24/20	96	-69%	11.9%
Georgia	7/25/20	95	-68%	3.2%
Alabama	7/25/20	95	-47%	1.5%
Mississippi	7/30/20	90	-50%	0.9%
South Carolina	8/1/20	88	-70%	1.6%
Virginia	8/9/20	80	-20%	2.6%
U.S. Virgin Islands	8/21/20	68	-95%	0.0%
Guam	8/27/20	62	-23%	0.0%
Hawaii	8/29/20	60	-81%	0.4%
Missouri	10/10/20	18	-36%	1.8%
Washington	10/15/20	13	-42%	2.3%
Nebraska	10/17/20	11	-32%	0.6%
Northern Mariana Island	10/18/20	10	-56%	0.0%

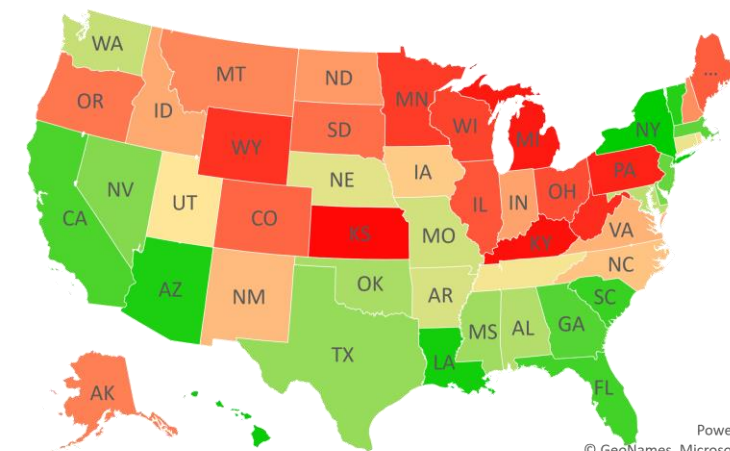
	Sorted			
	Peak Date	10/28/20	% off the Peak	% US Pop
United States	10/24/20	4	-9%	100%
States:				
Minnesota	10/18/20	10	-1%	1.7%
Wisconsin	10/21/20	7	-5%	1.8%
Rhode Island	10/23/20	5	-26%	0.3%
Arkansas	10/23/20	5	-36%	0.9%
Oregon	10/24/20	4	-13%	1.3%
Oklahoma	10/24/20	4	-50%	1.2%
Ohio	10/24/20	4	-7%	3.5%
North Dakota	10/24/20	4	-19%	0.2%
North Carolina	10/24/20	4	-22%	3.2%
Montana	10/24/20	4	-14%	0.3%
Indiana	10/24/20	4	-19%	2.0%
Illinois	10/24/20	4	-8%	3.8%
Idaho	10/24/20	4	-20%	0.5%
Iowa	10/24/20	4	-22%	1.0%
Utah	10/25/20	3	-26%	1.0%
Tennessee	10/25/20	3	-31%	2.1%
South Dakota	10/25/20	3	-12%	0.3%
Puerto Rico	10/25/20	3	-59%	1.0%
New Mexico	10/25/20	3	-21%	0.6%
Colorado	10/26/20	2	-11%	1.7%
Alaska	10/27/20	1	-13%	0.2%
Wyoming	10/28/20	0	0%	0.2%
West Virginia	10/28/20	0	0%	0.5%
Pennsylvania	10/28/20	0	0%	3.9%
Michigan	10/28/20	0	0%	3.0%
Kentucky	10/28/20	0	0%	1.3%
Kansas	10/28/20	0	0%	0.9%

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



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



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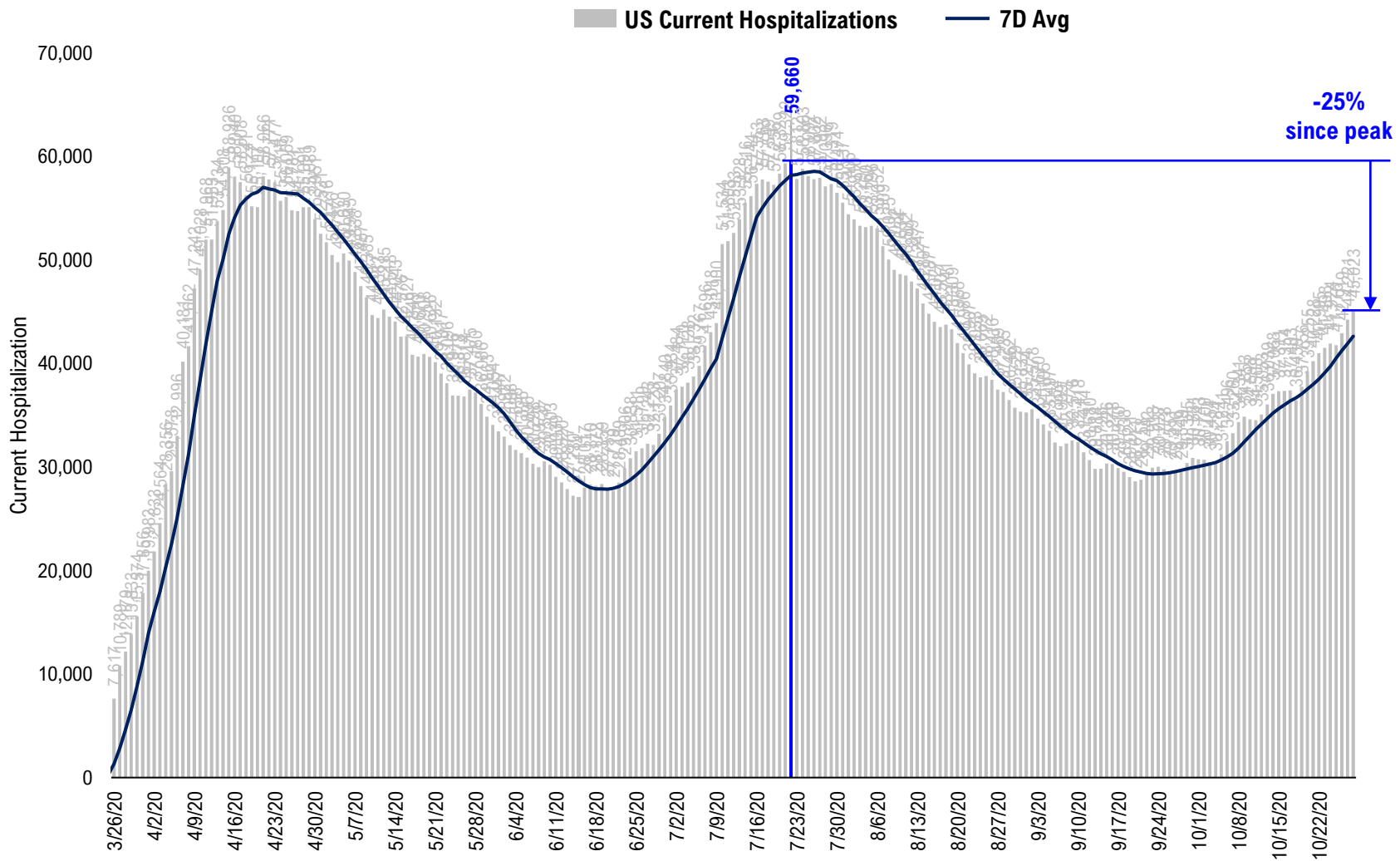
#6: US New Cases by States... (sorted by today's new cases)

	Sorted				
	7D Ago	Last 3-day Trend			
	10/21/20	10/26/20	10/27/20	10/28/20	vs 7D ago
United States	60,975	61,897	71,029	75,365	+14,390
States:					
Illinois	4,342	4,729	4,000	6,110	<--higher
Texas	4,991	4,418	7,055	5,175	
California	3,707	2,981	3,188	4,515	<--higher
Florida	2,144	3,377	4,298	4,115	<--higher
Wisconsin	4,205	2,883	5,262	3,815	
Michigan	1,597	3,881	2,367	3,271	<--higher
Ohio	2,366	2,116	2,509	2,607	
Indiana	1,732	1,974	1,983	2,548	<--higher
Tennessee	2,292	2,279	1,908	2,446	
North Carolina	1,842	1,643	2,141	2,253	<--higher
Pennsylvania	1,425	1,407	2,751	2,228	<--higher
New York	2,026	1,191	1,991	2,031	
Missouri	1,244	1,527	1,695	1,915	<--higher
Minnesota	1,060	1,570	2,164	1,908	<--higher
Kansas	1,488	2,146	0	1,869	<--higher
Kentucky	1,452	924	1,771	1,857	<--higher
Iowa	1,179	747	857	1,781	<--higher
New Jersey	1,030	1,216	1,647	1,666	<--higher
Georgia	1,312	958	1,491	1,653	<--higher
Utah	1,363	1,201	1,145	1,575	
Colorado	1,267	2,211	1,433	1,475	
Virginia	1,018	904	1,134	1,345	<--higher
South Dakota	587	538	989	1,270	<--higher
Alabama	1,146	967	1,115	1,269	
Massachusetts	702	1,212	1,260	1,181	<--higher
Arizona	975	801	1,158	1,043	
Mississippi	801	447	854	1,000	<--higher
Nebraska	592	582	702	877	<--higher

	Sorted				
	7D Ago	Last 3-day Trend			
	10/21/20	10/26/20	10/27/20	10/28/20	vs 7D ago
United States	60,975	61,897	71,029	75,365	+14,390
States:					
Idaho	987	697	882	862	
North Dakota	499	522	889	777	<--higher
Oklahoma	1,307	663	1,010	743	
Washington	724	587	527	716	
South Carolina	869	805	928	702	
Arkansas	981	530	651	690	
Maryland	492	565	897	684	<--higher
New Mexico	819	723	583	657	
Montana	619	621	845	620	
Nevada	565	475	730	571	
Louisiana	744	222	885	503	
Rhode Island	474	167	421	499	
Connecticut	416	2,047	538	490	
Oregon	307	335	372	420	<--higher
West Virginia	215	317	483	358	<--higher
Alaska	212	348	382	355	<--higher
Wyoming	322	436	329	340	
Delaware	50	207	81	143	<--higher
New Hampshire	89	69	134	110	<--higher
Maine	38	53	57	76	<--higher
District of Columbia	53	45	94	67	<--higher
Puerto Rico	132	461	263	66	
Hawaii	77	36	65	62	
Guam	82	120	82	48	
Vermont	15	10	30	6	
U.S. Virgin Islands	2	2	3	2	
Northern Mariana Islands	0	4	0	0	
American Samoa	0	0	0	0	

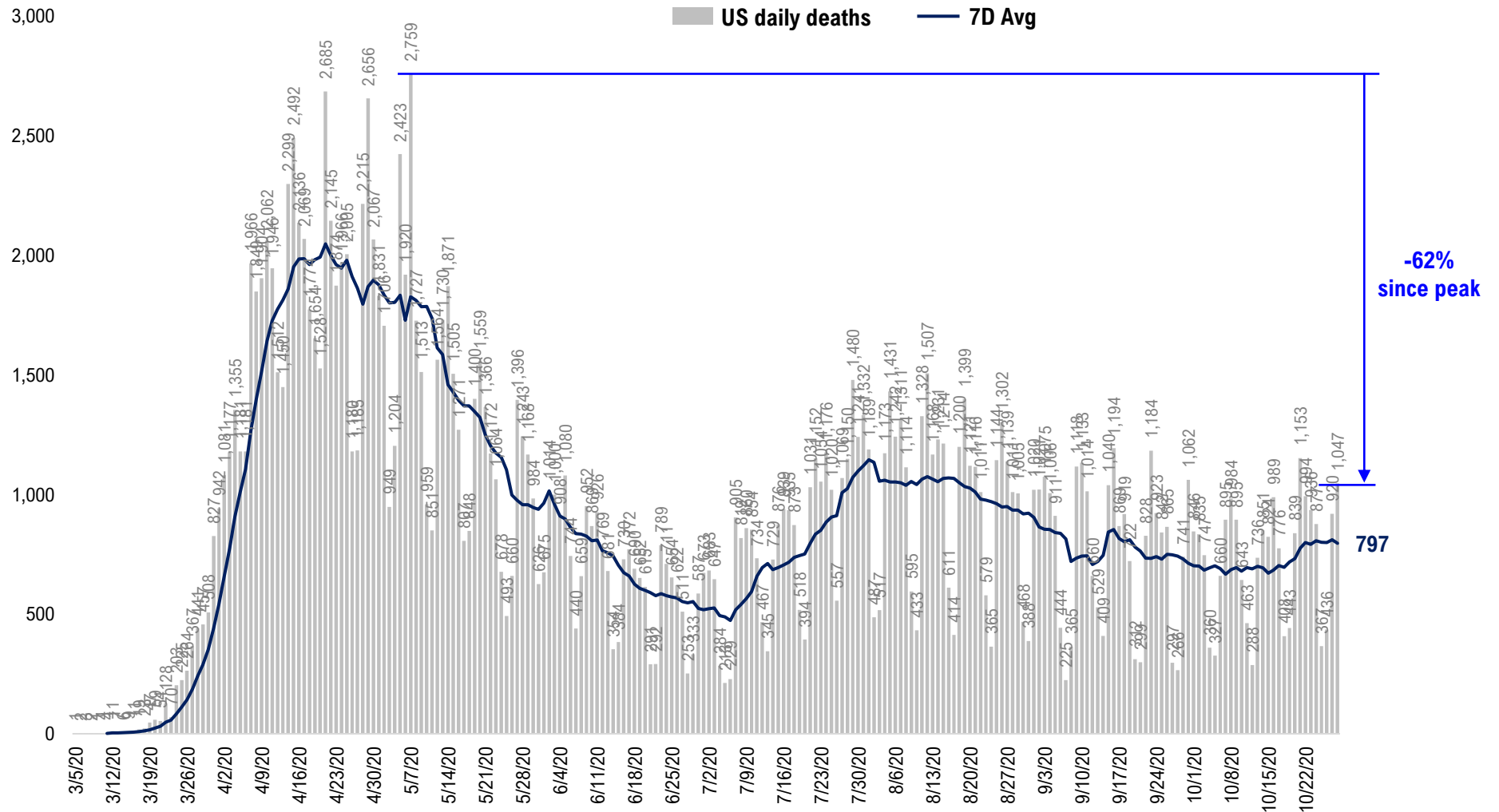
#7: US Daily Hospitalizations...

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



#8: US Daily New Fatalities...

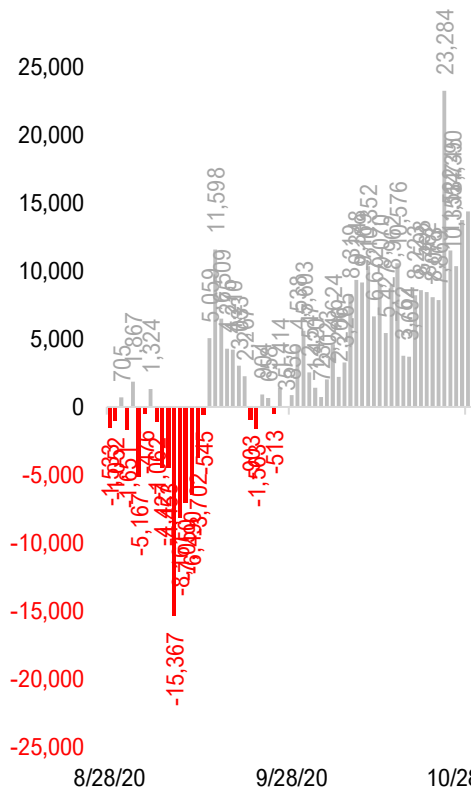
US daily COVID-19 Fatalities



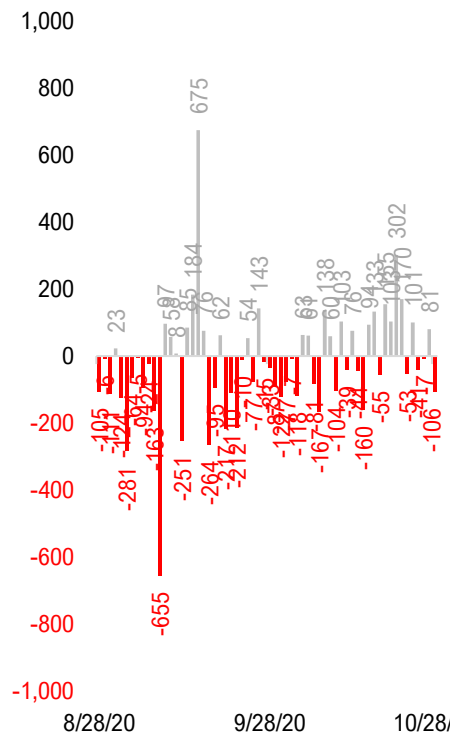
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

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

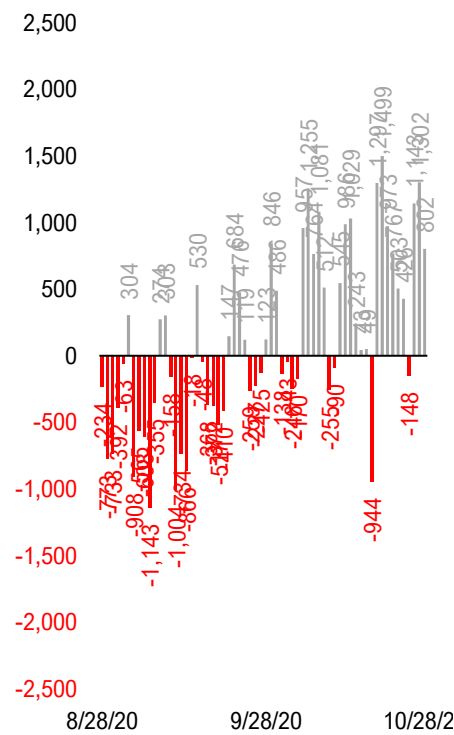
Daily New Cases
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



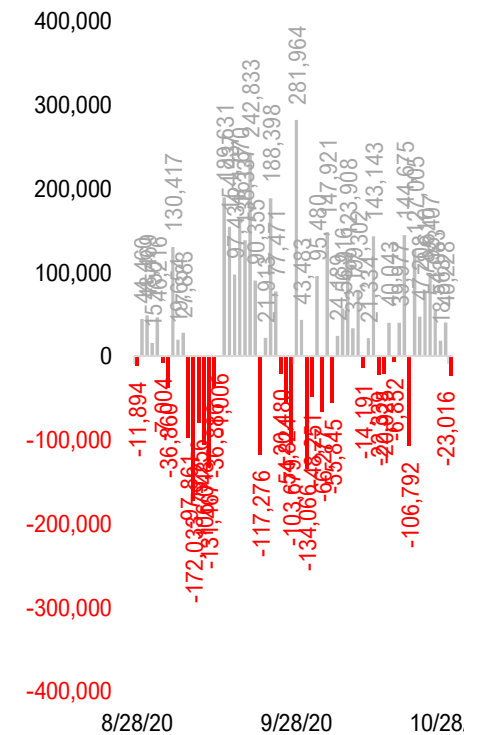
Daily Deaths



Daily Net Hospitalization
(Red = more discharge than admission)



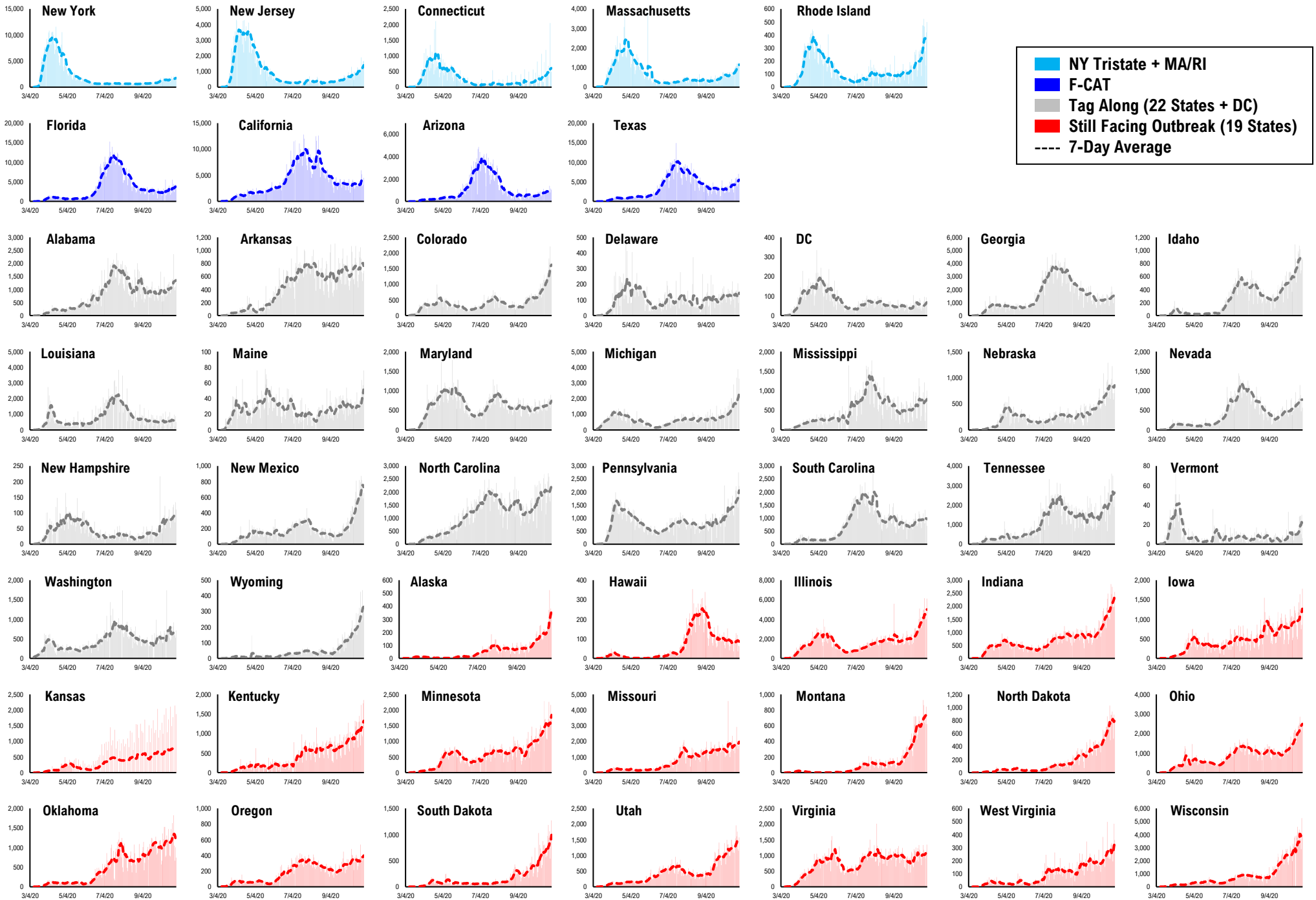
Daily Tests



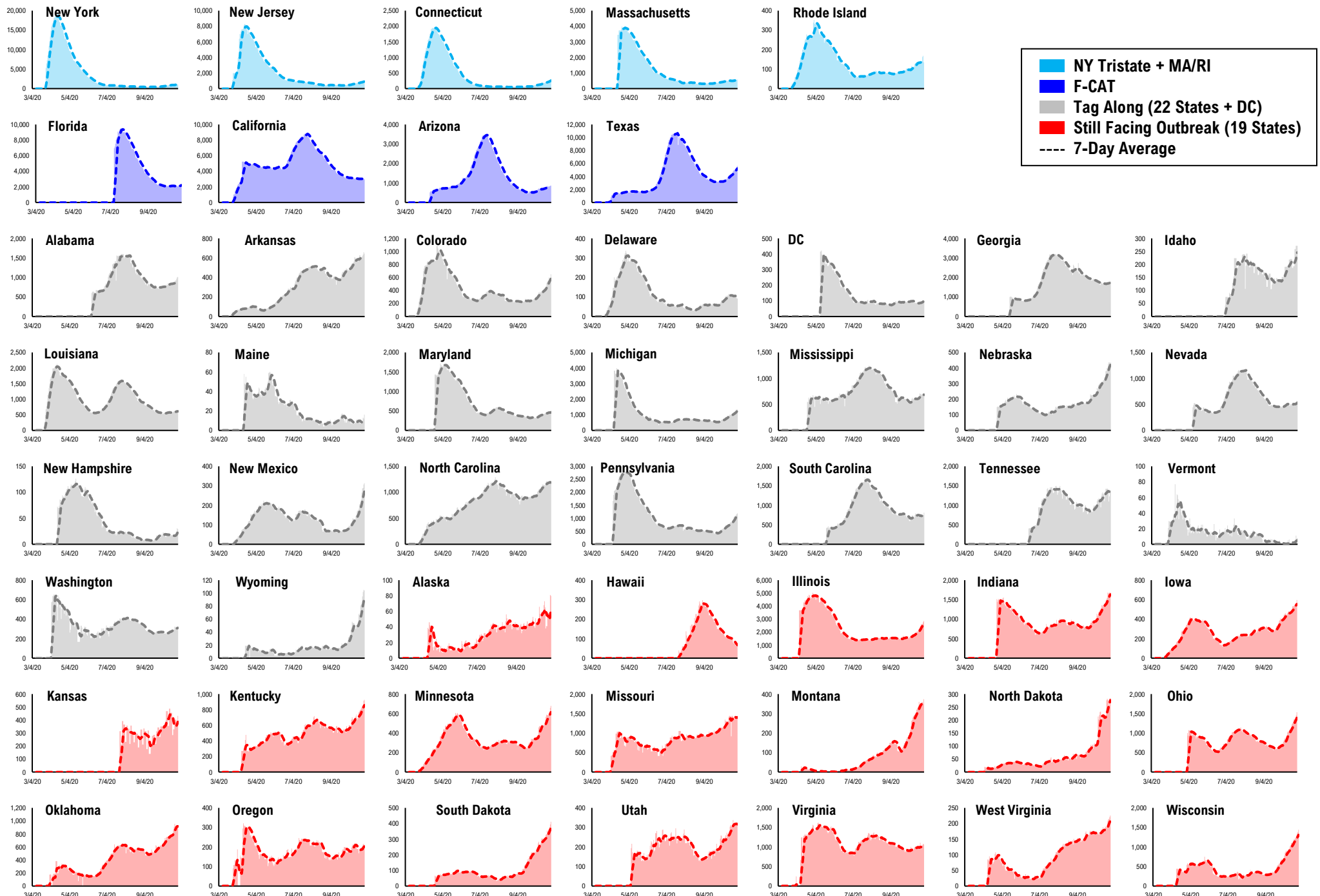
* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog

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

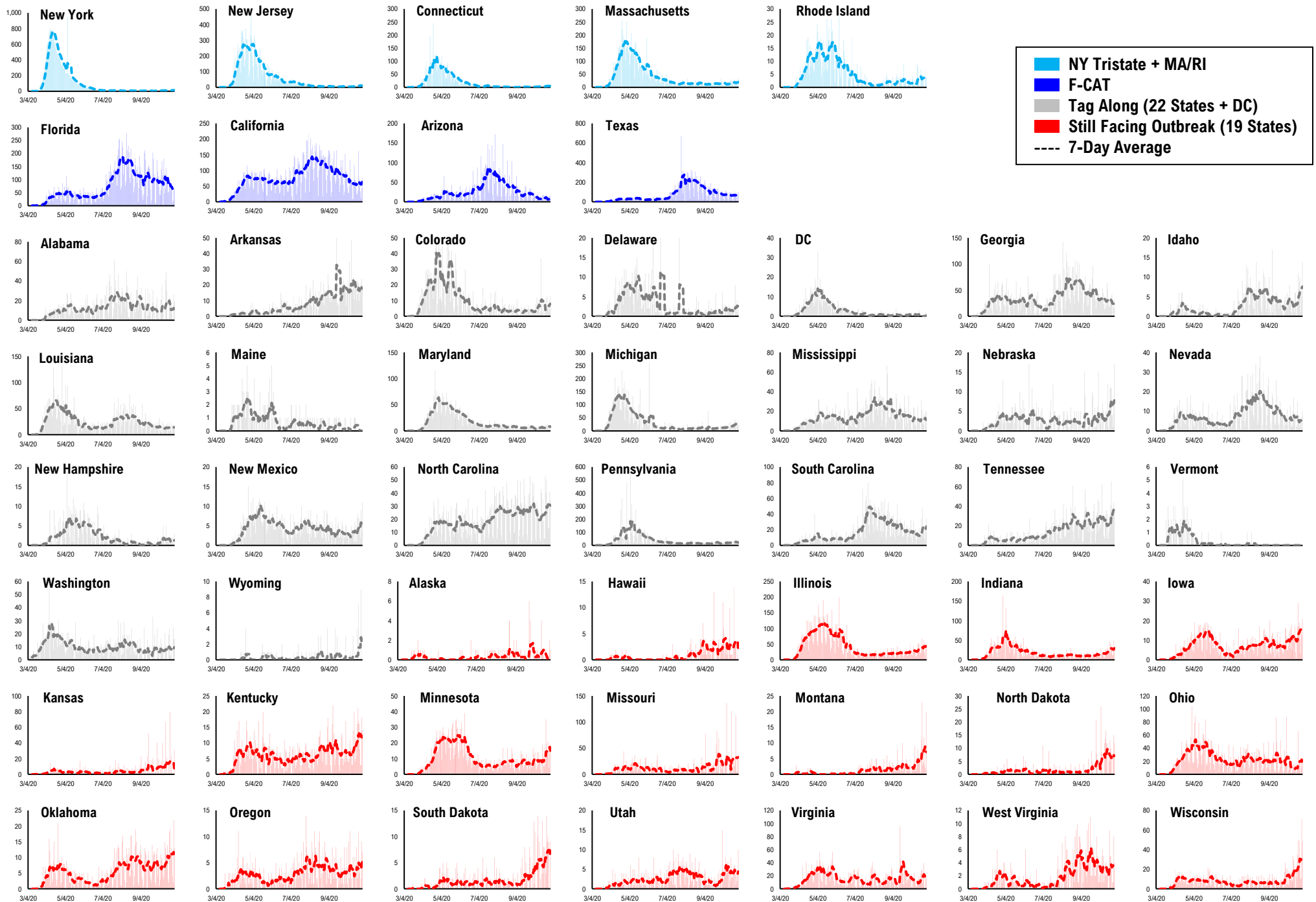
#10: Daily New Cases by States...



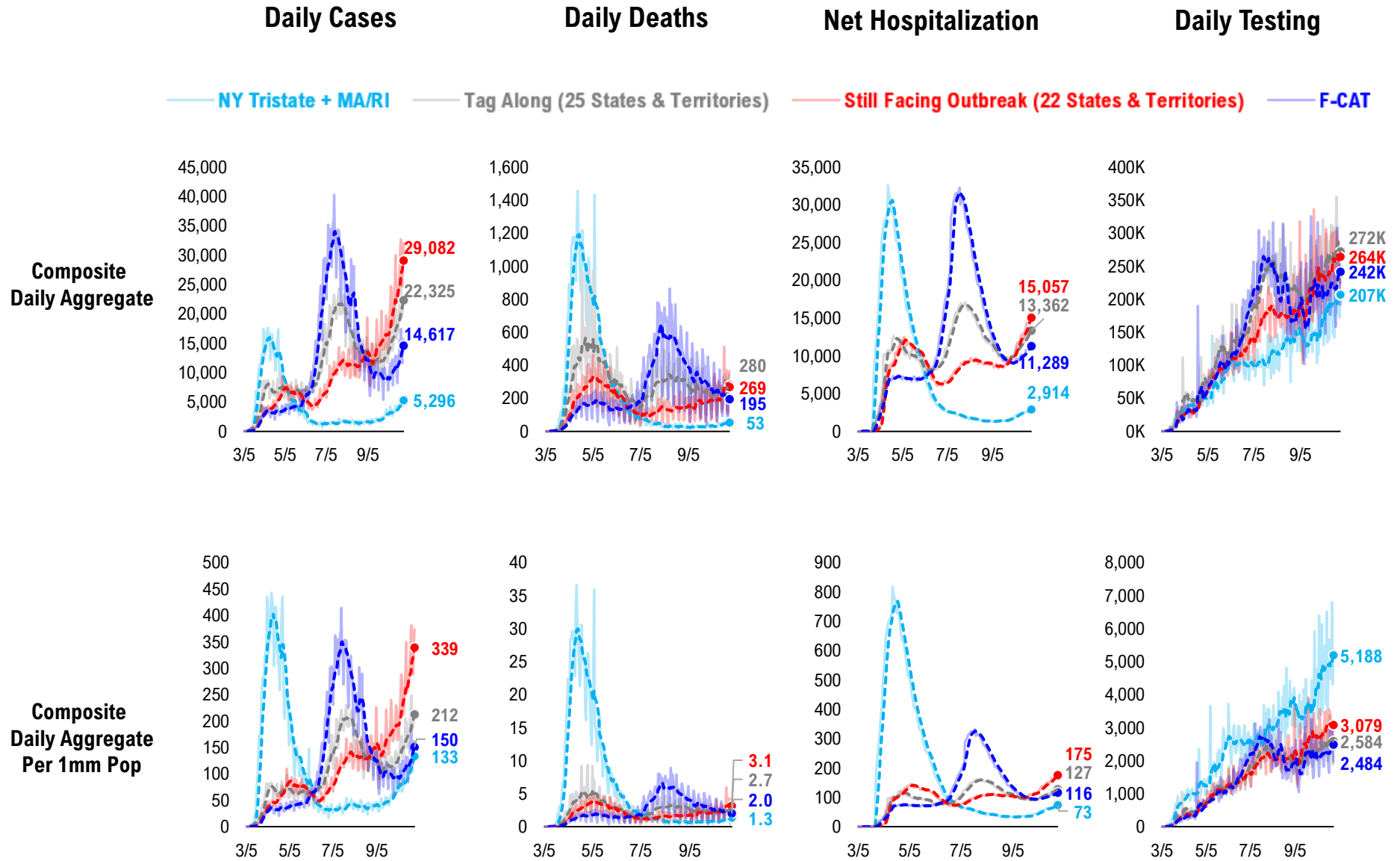
#11: Current Hospitalizations by States...



#12: Daily New Deaths by States...

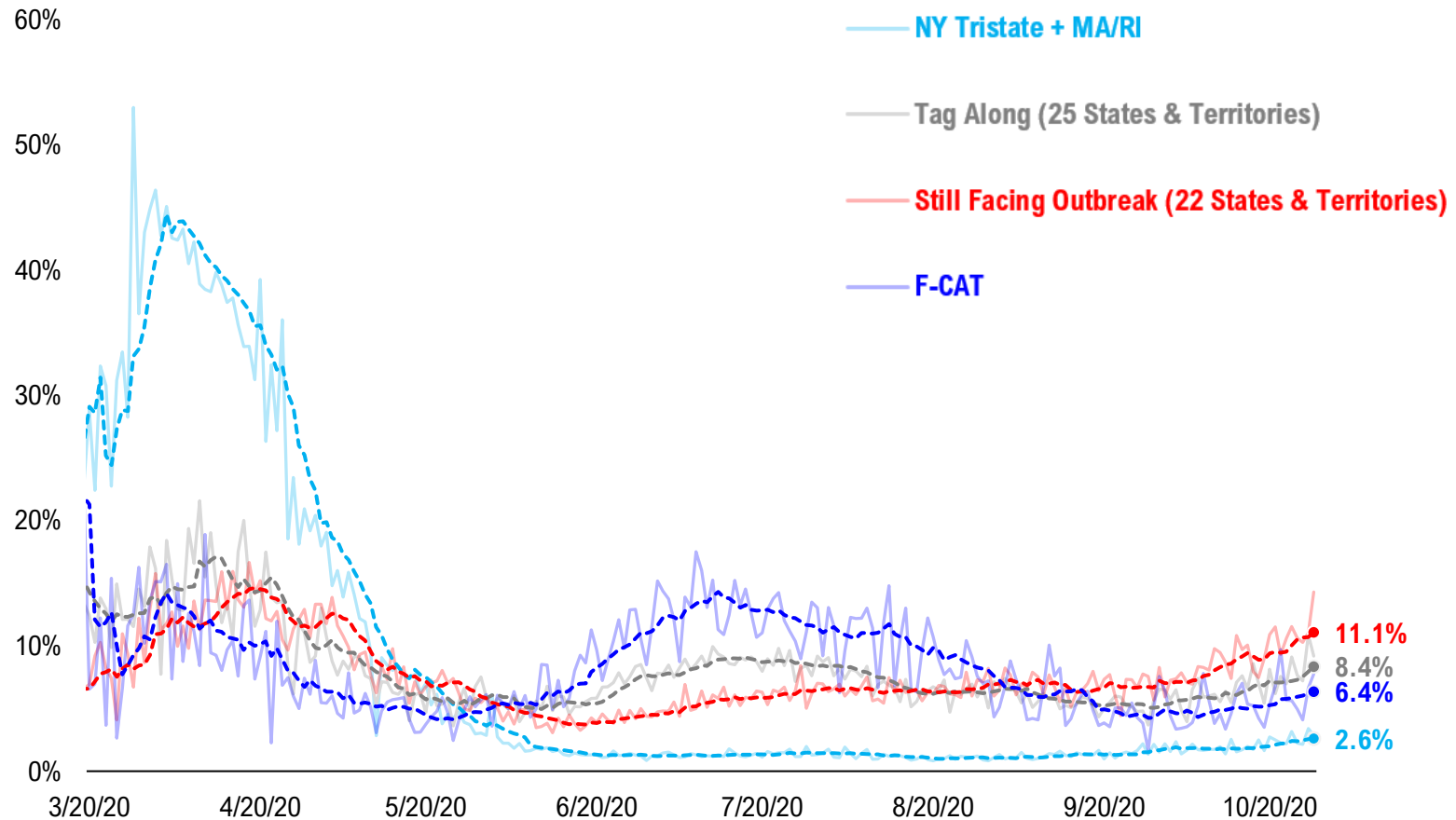


#13: State COVID-19 situation by Tier...

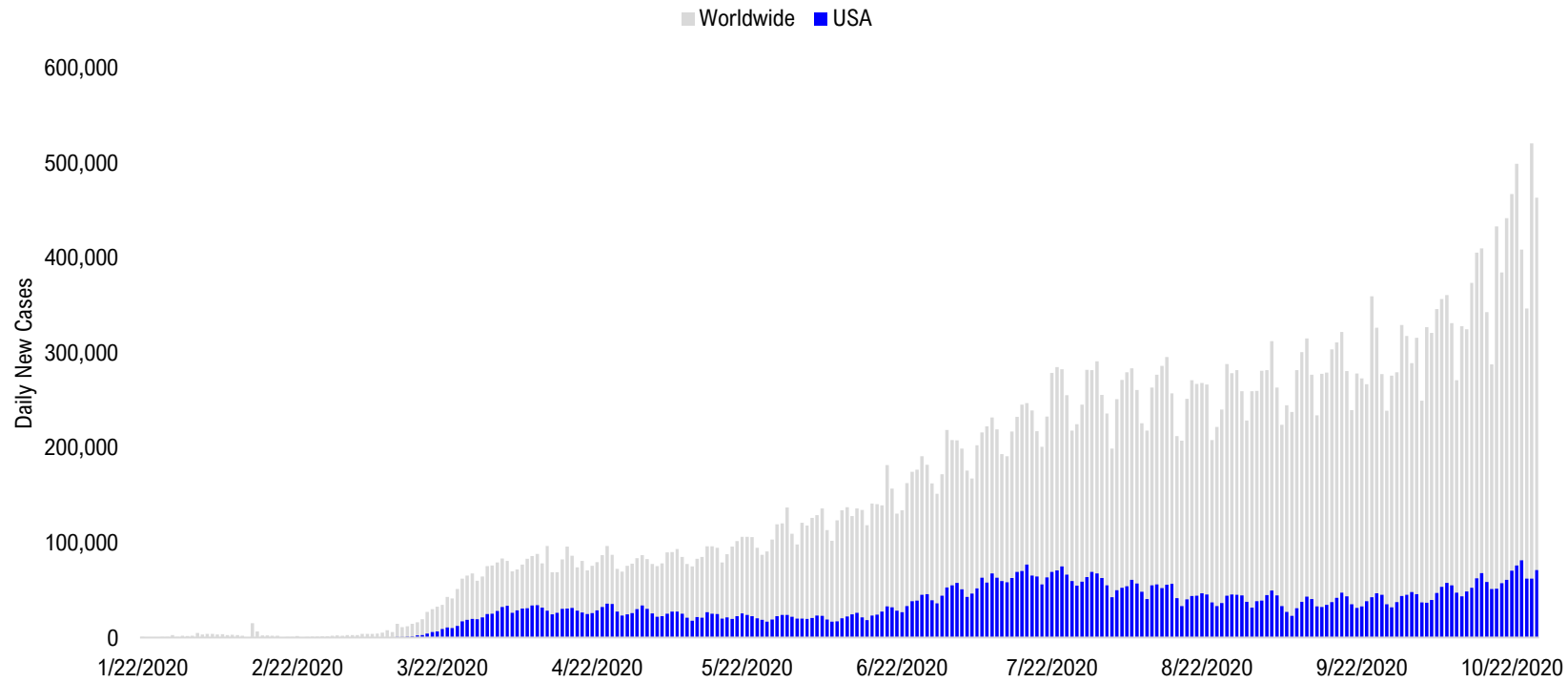


#14: State COVID-19 Daily Positivity Rate by Tier...

Composite Daily Positivity Rate



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



6/12/2020	6/26/2020	7/10/2020	7/24/2020	8/7/2020	8/21/2020	9/4/2020	9/18/2020	10/2/2020	10/16/2020	10/27/2020
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	Pakistan + India + Bangladesh 98,115	Pakistan + India + Bangladesh 84,614	Europe 156,633	Europe 237,438
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	Latin America 76,730	Europe 77,734	Latin America 67,985	US + Canada 68,277
Pakistan + India + Bangladesh 18,309	Pakistan + India + Bangladesh 24,668	Pakistan + India + Bangladesh 32,386	Pakistan + India + Bangladesh 52,184	US + Canada 56,201	US + Canada 45,159	US + Canada 44,962	Europe 57,930	Latin America 61,017	Pakistan + India + Bangladesh 66,697	Latin America 53,892
Europe 18,149	Europe 17,889	Africa 17,127	Africa 20,063	Europe 23,878	Europe 32,466	Europe 40,116	US + Canada 43,204	US + Canada 47,714	US + Canada 63,432	Pakistan + India + Bangladesh 43,965
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 10,763	Asia ex- India+Pakistan 11,417	Asia ex- India+Pakistan 13,578	Asia ex- India+Pakistan 11,417
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 7,997	Africa 8,146	Africa 10,428	Africa 9,482

Disclosures

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