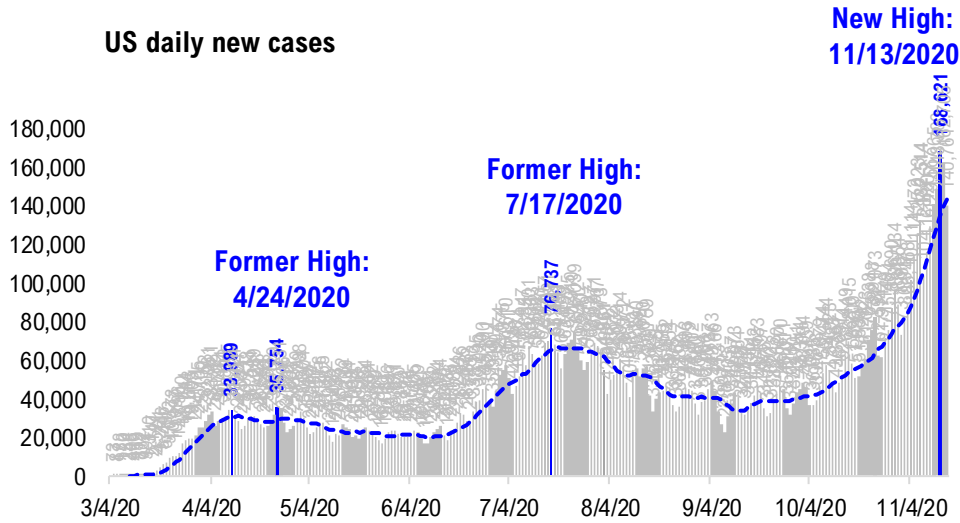


FSInsight Daily COVID-19 Chartbook

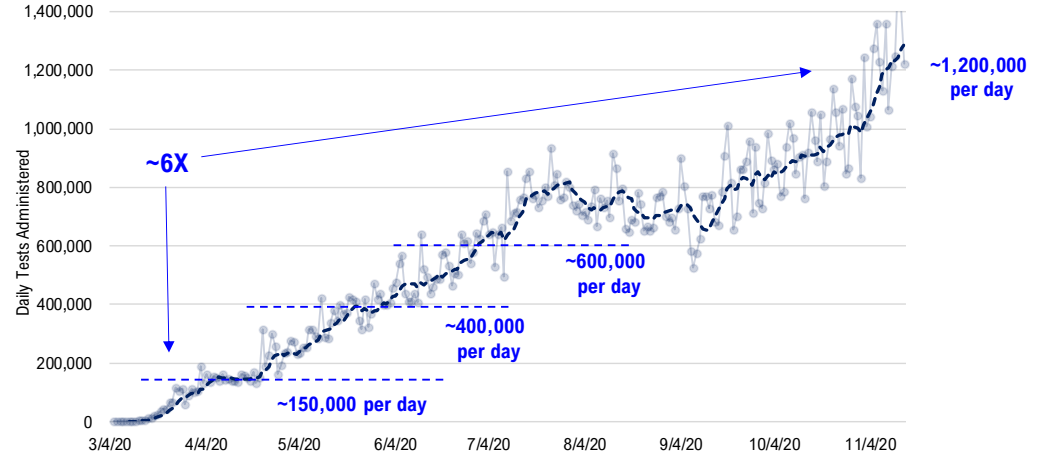


#1: USA COVID-19 Situation at a Glance...

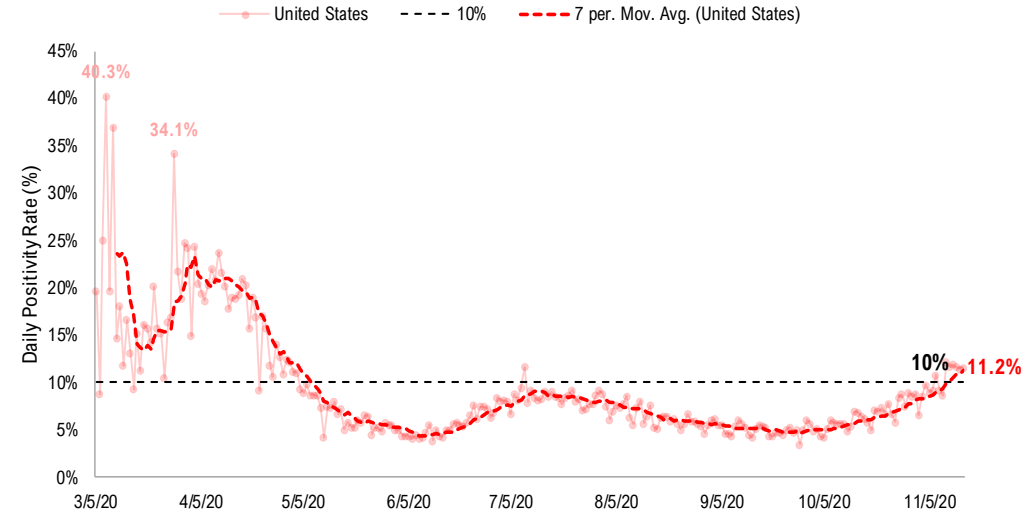
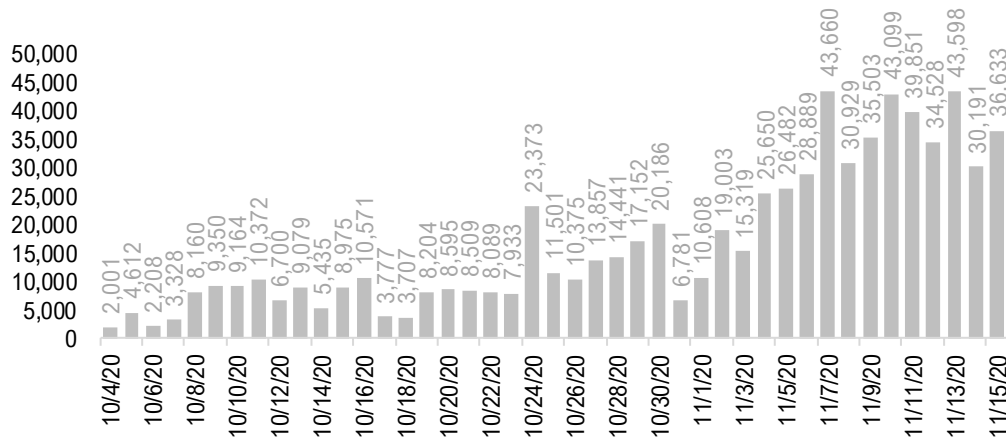
US daily new cases



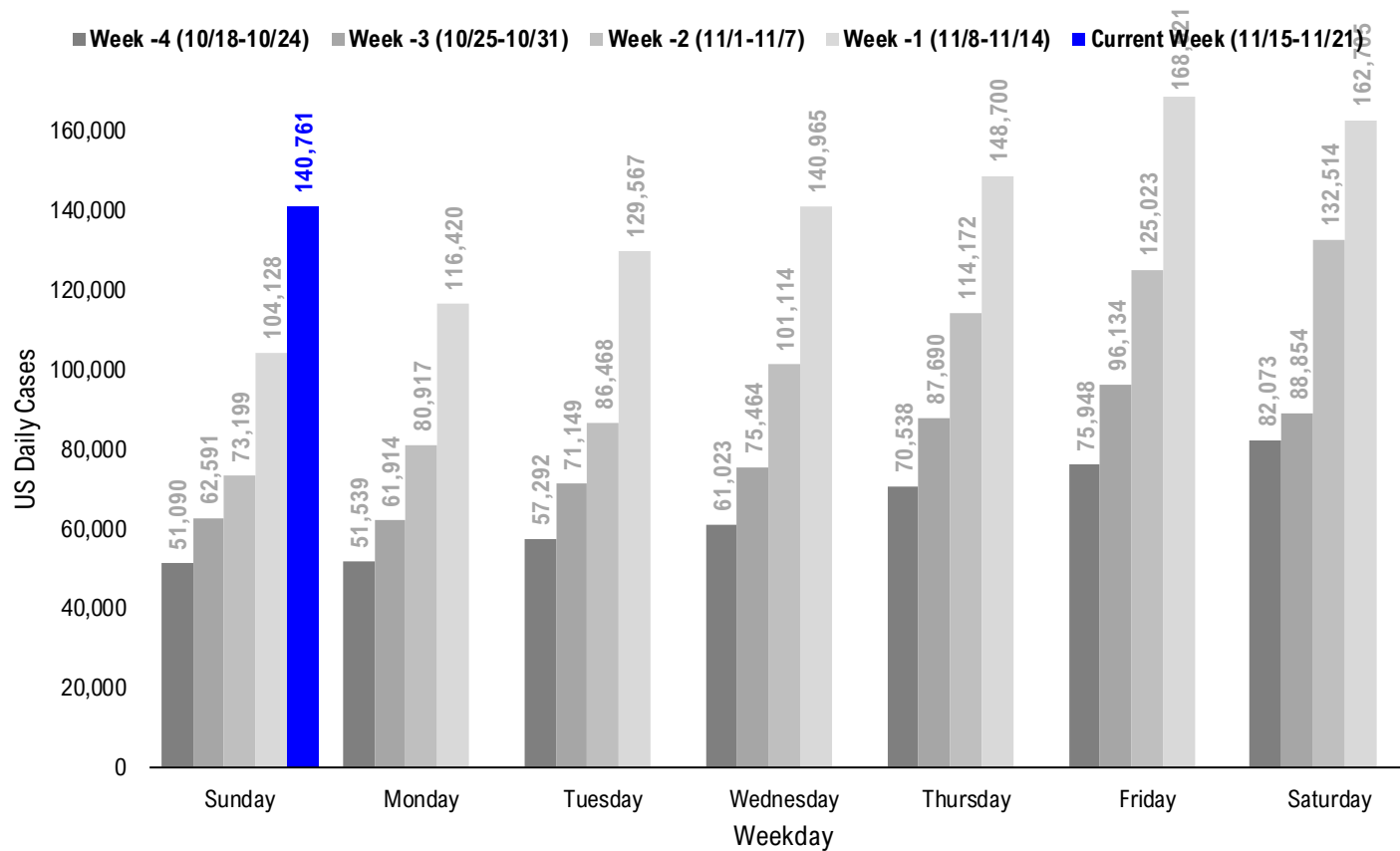
USA total COVID-19 tests administered



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		Hospitalization	
	% US Pop	% US GDP	11/15	7D Delta	11/15	7D Delta	# Days	% Decline in Daily Cases	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
	United States	100%	100%	140.761	+36.633	479	+112	1	-2%	13.271

	Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents				Since Peak		Hospitalization	
	% US Pop	% US GDP	11/15	7D Delta	11/15	7D Delta	# Days	% Decline in Daily Cases	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
	United States	100%	100%	140.761	+36.633	479	+112	1	-2%	13.271

States:

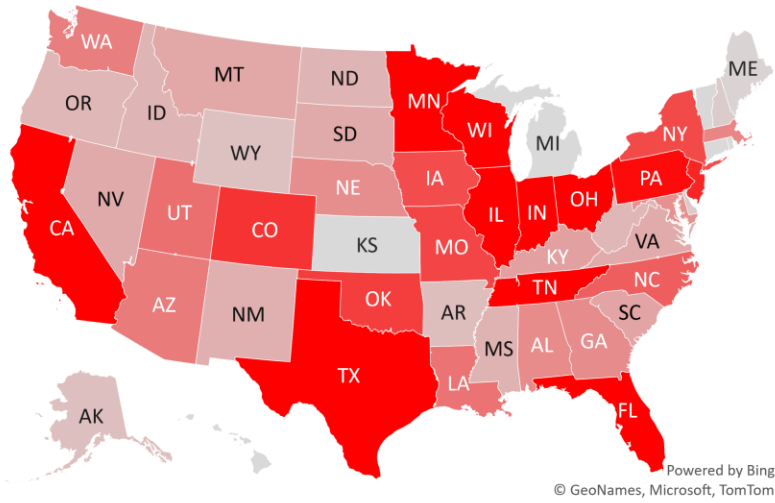
1 California	11.9%	14.6%	10,968	+3,286	234	+65	114	-20%	900	1.6%
2 Illinois	3.8%	4.2%	10,631	+622	975	+75	2	-9%	1,171	1.4%
3 Florida	6.5%	5.0%	10,105	+3,285	335	+79	125	-44%	339	0.8%
4 Ohio	3.5%	3.3%	7,853	+3,312	674	+244	0	0%	889	1.9%
5 Minnesota	1.7%	1.8%	7,553	+1,645	1288	+342	0	0%	386	0.9%
6 Indiana	2.0%	1.8%	6,690	+2,038	1021	+318	0	0%	558	1.4%
7 Texas	8.7%	8.8%	6,390	+986	297	+63	121	-28%	1,194	2.1%
8 Wisconsin	1.8%	1.6%	6,058	+1,778	1087	+86	2	-15%	237	0.5%
9 Tennessee	2.1%	1.8%	5,817	+2,181	694	+202	6	-3%	316	1.1%
10 Pennsylvania	3.9%	3.8%	5,199	+2,290	424	+155	1	-2%	705	2.1%
11 New Jersey	2.7%	3.0%	4,538	+2,525	461	+184	0	0%	565	2.3%
12 Colorado	1.7%	1.8%	4,183	+1,166	916	+338	1	-6%	238	0.7%
13 Oklahoma	1.2%	1.0%	3,923	+3,923	795	+257	0	0%	202	1.1%
14 Missouri	1.8%	1.5%	3,729	-402	765	+79	1	-6%	497	1.6%
15 New York	5.9%	8.1%	3,649	+221	247	+72	219	-54%	449	1.4%
16 Iowa	1.0%	0.9%	3,554	+241	1234	+198	2	-3%	287	1.1%
17 North Carolina	3.2%	2.7%	3,117	+1,023	279	+35	0	0%	248	1.3%
18 Utah	1.0%	0.9%	2,667	+281	1057	+191	1	-11%	65	0.3%
19 Louisiana	1.4%	1.3%	2,565	+1,314	434	+283	117	-24%	131	1.3%
20 Arizona	2.2%	1.7%	2,383	+503	406	+109	136	-31%	321	2.0%
21 Washington	2.3%	2.7%	2,309	+989	293	+83	1	-13%	187	1.5%
22 Massachusetts	2.1%	2.8%	2,133	+310	391	+89	204	-22%	169	1.0%
23 Alabama	1.5%	1.1%	1,979	+774	488	+181	1	-0%	135	1.0%
24 Georgia	3.2%	2.9%	1,952	+699	212	+64	113	-48%	132	1.0%
25 Nebraska	0.6%	0.6%	1,912	+210	1188	+66	1	-4%	129	0.9%
26 Maryland	1.8%	2.0%	1,840	+759	332	+110	0	0%	283	2.4%
27 Kentucky	1.3%	1.0%	1,449	+272	590	+175	1	-10%	225	1.3%
28 South Carolina	1.6%	1.1%	1,349	+482	305	+48	106	-42%	34	0.4%

States:

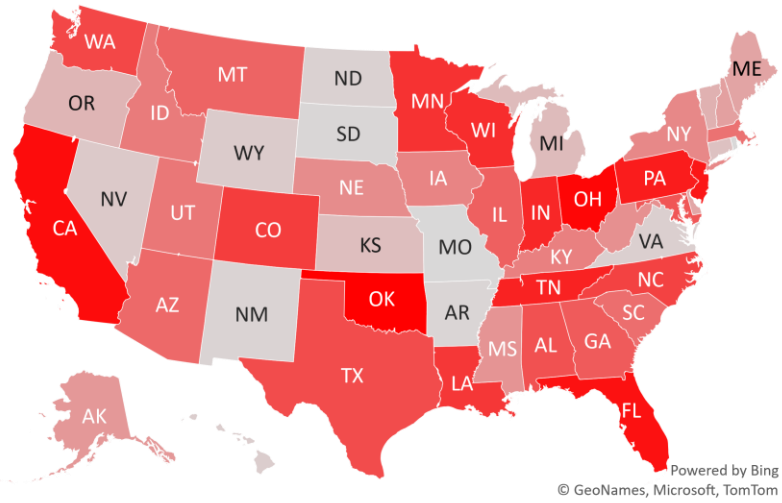
29 Montana	0.3%	0.2%	1,272	+541	1287	+442	0	0%	-23	(0.3%)
30 South Dakota	0.3%	0.3%	1,199	-229	1758	+155	1	-15%	7	0.1%
31 Nevada	0.9%	0.8%	1,177	-99	574	+69	1	-5%	199	2.0%
32 Virginia	2.6%	2.6%	1,161	-141	154	-41	8	-22%	194	2.0%
33 New Mexico	0.6%	0.5%	1,030	-180	544	-55	3	-24%	69	0.7%
34 Mississippi	0.9%	0.6%	969	+165	408	+94	108	-21%	46	0.6%
35 Idaho	0.5%	0.4%	928	+279	740	+109	2	-9%	75	0.8%
36 North Dakota	0.2%	0.3%	924	-177	2022	+68	1	-16%	-8	(0.1%)
37 West Virginia	0.5%	0.4%	867	+205	514	+168	0	0%	77	1.5%
38 Oregon	1.3%	1.2%	862	+1	237	+31	1	-8%	90	1.4%
39 Arkansas	0.9%	0.6%	707	-209	399	-3	1	-14%	197	2.5%
40 Alaska	0.2%	0.3%	648	+130	899	+150	0	0%	22	0.6%
41 Puerto Rico	1.0%	0.5%	624	+115	191	-7	1	-23%	-3	(0.1%)
42 Wyoming	0.2%	0.2%	613	-100	1161	+66	5	-24%	54	1.0%
43 Delaware	0.3%	0.4%	408	+63	430	+139	0	0%	-35	(1.6%)
44 New Hampshire	0.4%	0.4%	360	+113	294	+128	0	0%	14	0.6%
45 District of Columbi	0.2%	0.7%	163	+53	222	+71	196	-32%	27	2.8%
46 Guam	0.0%	0.0%	156	+36	545	+84	5	-50%	2	0.2%
47 Maine	0.4%	0.3%	153	+63	136	+29	1	-7%	19	1.5%
48 Vermont	0.2%	0.2%	45	+2	127	+79	1	-21%	14	2.8%
49 U.S. Virgin Islands	0.0%	0.0%	0	-15	75	+22	86	-82%	0	0.0%
50 Rhode Island	0.3%	0.3%	0	-568	241	-386	3	-72%	63	1.7%
51 Northern Mariana	0.0%	0.0%	0	+0	0	-12	28	-100%	0	0.0%
52 Michigan	3.0%	2.6%	0	+0	520	+187	1	-31%	816	1.9%
53 Kansas	0.9%	0.8%	0	+0	719	+99	2	-47%	118	0.7%
54 Hawaii	0.4%	0.5%	0	-128	51	-37	78	-75%	-12	(2.1%)
55 Connecticut	1.1%	1.3%	0	+0	257	+157	4	-58%	257	2.4%
56 American Samoa	0.0%	0.0%	0	+0	0	+0	0	0%	0	

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

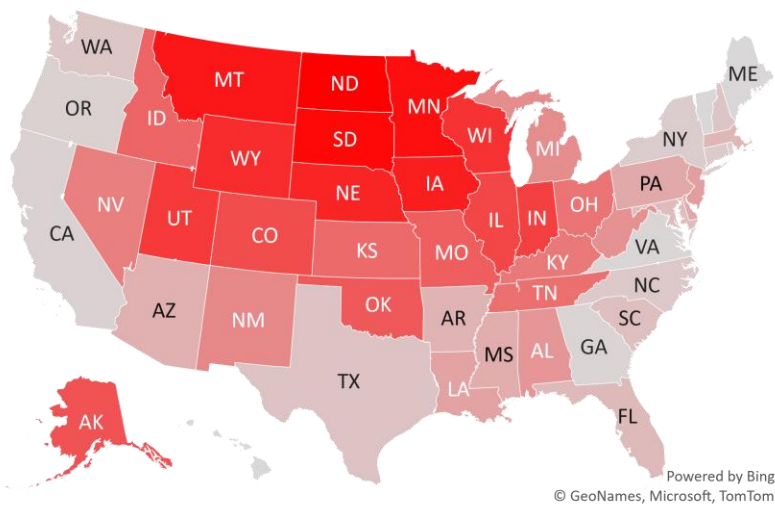
Daily Case Increases



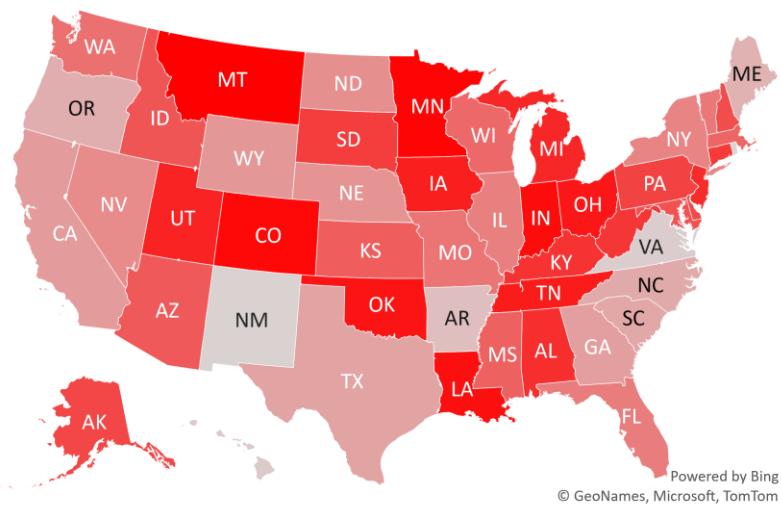
7D Delta in Daily New Cases



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



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



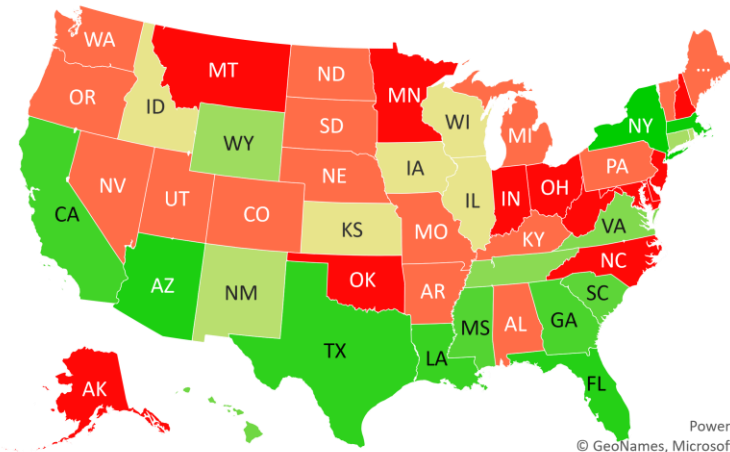
#5: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 11/15)

	Sorted			
	Peak Date	11/15/20	% off the Peak	% US Pop
United States	11/14/20	1	-2%	100%
States:				
New York	4/10/20	219	-54%	5.9%
Massachusetts	4/25/20	204	-22%	2.1%
District of Columbia	5/3/20	196	-32%	0.2%
Arizona	7/2/20	136	-31%	2.2%
Florida	7/13/20	125	-44%	6.5%
Texas	7/17/20	121	-28%	8.7%
Louisiana	7/21/20	117	-24%	1.4%
California	7/24/20	114	-20%	11.9%
Georgia	7/25/20	113	-48%	3.2%
Mississippi	7/30/20	108	-21%	0.9%
South Carolina	8/1/20	106	-42%	1.6%
U.S. Virgin Islands	8/21/20	86	-82%	0.0%
Hawaii	8/29/20	78	-75%	0.4%
Northern Mariana Island	10/18/20	28	-100%	0.0%
Virginia	11/7/20	8	-22%	2.6%
Tennessee	11/9/20	6	-3%	2.1%
Wyoming	11/10/20	5	-24%	0.2%
Guam	11/10/20	5	-50%	0.0%
Connecticut	11/11/20	4	-58%	1.1%
Rhode Island	11/12/20	3	-72%	0.3%
New Mexico	11/12/20	3	-24%	0.6%
Wisconsin	11/13/20	2	-15%	1.8%
Kansas	11/13/20	2	-47%	0.9%
Illinois	11/13/20	2	-9%	3.8%
Idaho	11/13/20	2	-9%	0.5%
Iowa	11/13/20	2	-3%	1.0%
Washington	11/14/20	1	-13%	2.3%
Vermont	11/14/20	1	-21%	0.2%

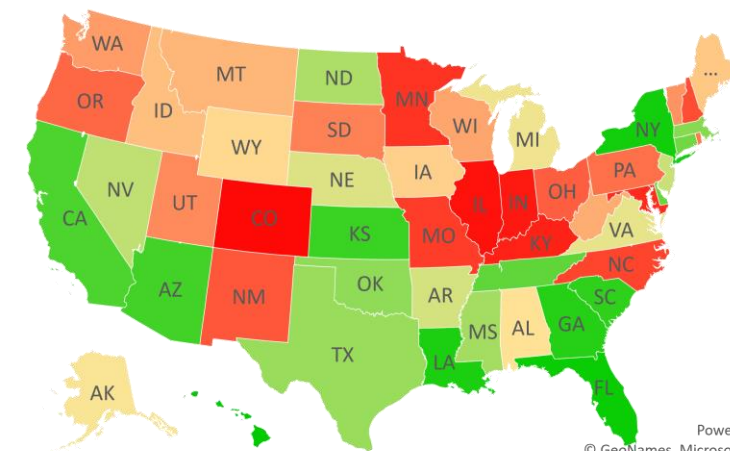
	Sorted			
	Peak Date	11/15/20	% off the Peak	% US Pop
United States	11/14/20	1	-2%	100%
States:				
Utah	11/14/20	1	-11%	1.0%
South Dakota	11/14/20	1	-15%	0.3%
Puerto Rico	11/14/20	1	-23%	1.0%
Pennsylvania	11/14/20	1	-2%	3.9%
Oregon	11/14/20	1	-8%	1.3%
Nevada	11/14/20	1	-5%	0.9%
Nebraska	11/14/20	1	-4%	0.6%
North Dakota	11/14/20	1	-16%	0.2%
Missouri	11/14/20	1	-6%	1.8%
Michigan	11/14/20	1	-31%	3.0%
Maine	11/14/20	1	-7%	0.4%
Kentucky	11/14/20	1	-10%	1.3%
Colorado	11/14/20	1	-6%	1.7%
Arkansas	11/14/20	1	-14%	0.9%
Alabama	11/14/20	1	-0%	1.5%
West Virginia	11/15/20	0	0%	0.5%
Oklahoma	11/15/20	0	0%	1.2%
Ohio	11/15/20	0	0%	3.5%
New Jersey	11/15/20	0	0%	2.7%
New Hampshire	11/15/20	0	0%	0.4%
North Carolina	11/15/20	0	0%	3.2%
Montana	11/15/20	0	0%	0.3%
Minnesota	11/15/20	0	0%	1.7%
Maryland	11/15/20	0	0%	1.8%
Indiana	11/15/20	0	0%	2.0%
Delaware	11/15/20	0	0%	0.3%
Alaska	11/15/20	0	0%	0.2%

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

Hawaii COVID stats were not available as of Sunday 9 PM ET...

	11/8/20	11/13/20	11/14/20	11/15/20	vs 7D ago
United States	104,128	168,621	162,705	140,761	+36,633
States:					
California	7,682	6,893	9,875	10,968	<--higher
Illinois	10,009	15,415	11,028	10,631	
Florida	6,820	6,933	4,544	10,105	<--higher
Ohio	4,541	8,071	7,715	7,853	<--higher
Minnesota	5,908	5,544	8,689	7,553	<--higher
Indiana	4,652	5,600	8,322	6,690	<--higher
Texas	5,404	10,434	8,989	6,390	
Wisconsin	4,280	7,777	5,146	6,058	<--higher
Tennessee	3,636	3,733	4,662	5,817	<--higher
Pennsylvania	2,909	5,531	5,551	5,199	<--higher
New Jersey	2,013	3,397	4,353	4,538	<--higher
Colorado	3,017	6,439	5,196	4,183	<--higher
Oklahoma	0	2,667	2,847	3,923	
Missouri	4,131	4,005	6,346	3,729	
New York	3,428	5,401	5,388	3,649	
Iowa	3,313	4,032	4,093	3,554	
North Carolina	2,094	1,779	3,885	3,117	<--higher
Utah	2,386	2,150	5,352	2,667	
Louisiana	1,251	3,492	0	2,565	<--higher
Arizona	1,880	3,015	3,476	2,383	<--higher
Washington	1,320	2,142	2,233	2,309	<--higher
Massachusetts	1,823	2,906	3,047	2,133	
Alabama	1,205	2,980	2,226	1,979	<--higher
Georgia	1,253	2,315	2,492	1,952	<--higher
Nebraska	1,702	2,611	2,369	1,912	
Maryland	1,081	1,869	2,321	1,840	<--higher
Kentucky	1,177	3,164	3,293	1,449	<--higher
South Carolina	867	1,596	1,772	1,349	<--higher

Sorted

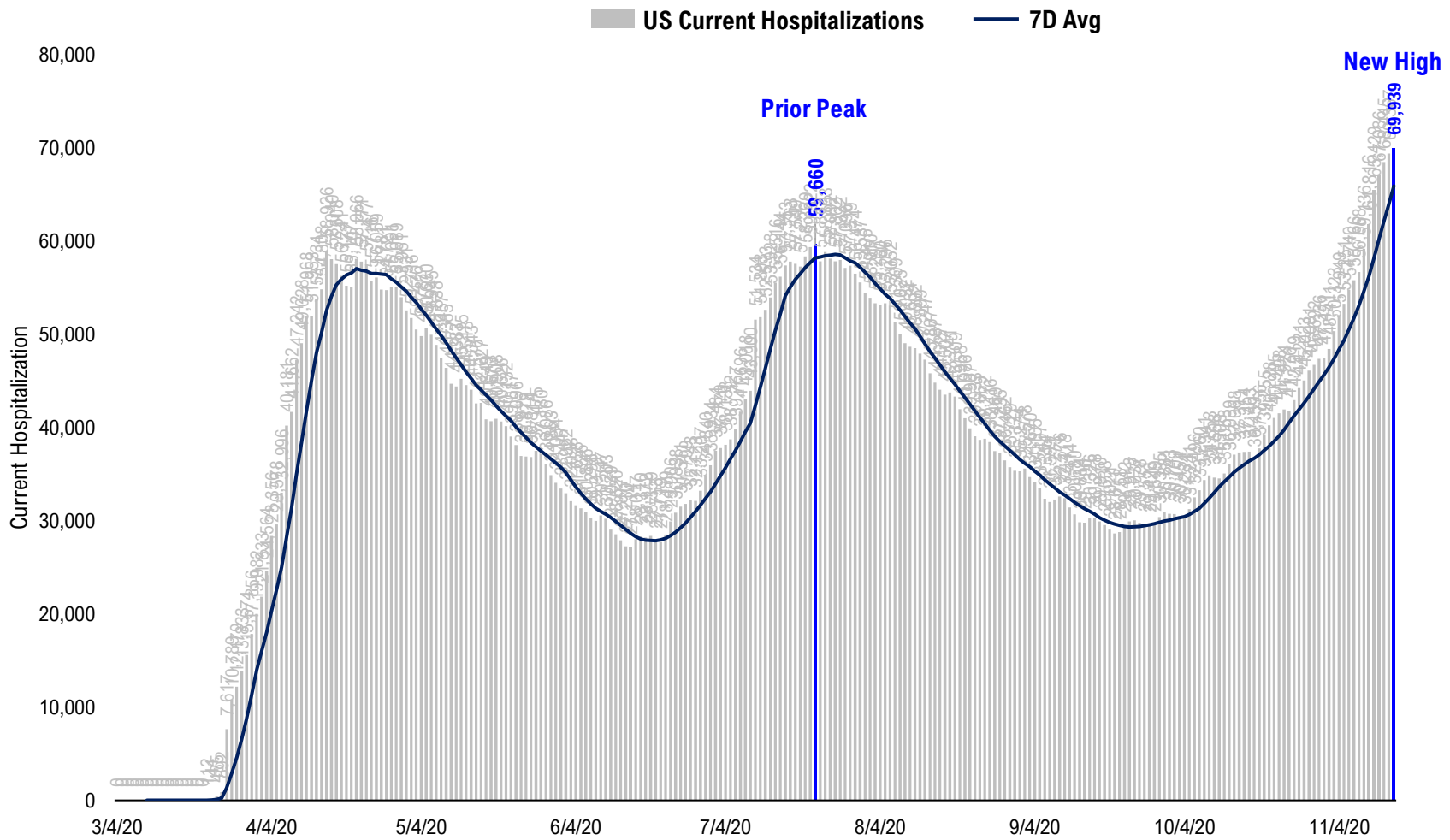
7D Ago Last 3-day Trend

Hawaii COVID stats were not available as of Sunday 9 PM ET...

	11/8/20	11/13/20	11/14/20	11/15/20	vs 7D ago
United States	104,128	168,621	162,705	140,761	+36,633
States:					
Montana	731	1,213	1,642	1,272	<--higher
South Dakota	1,428	1,611	1,855	1,199	
Nevada	1,276	1,857	2,269	1,177	
Virginia	1,302	1,235	1,537	1,161	
New Mexico	1,210	1,230	1,165	1,030	
Mississippi	804	1,305	1,370	969	<--higher
Idaho	649	1,519	1,519	928	<--higher
North Dakota	1,101	1,429	2,270	924	
West Virginia	662	742	1,153	867	<--higher
Oregon	861	1,058	1,081	862	
Arkansas	916	1,559	1,349	707	
Alaska	518	587	739	648	<--higher
Puerto Rico	509	606	600	624	<--higher
Wyoming	713	862	540	613	
Delaware	345	470	379	408	
New Hampshire	247	459	382	360	<--higher
District of Columbia	110	159	148	163	<--higher
Guam	120	74	41	156	<--higher
Maine	90	244	152	153	<--higher
Vermont	43	92	101	45	
U.S. Virgin Islands	15	0	24	0	
Rhode Island	568	765	0	0	
Northern Mariana Islands	0	0	0	0	
Michigan	0	8,516	7,072	0	
Kansas	0	6,282	0	0	
Hawaii	128	110	107	0	
Connecticut	0	2,746	0	0	
American Samoa	0	0	0	0	

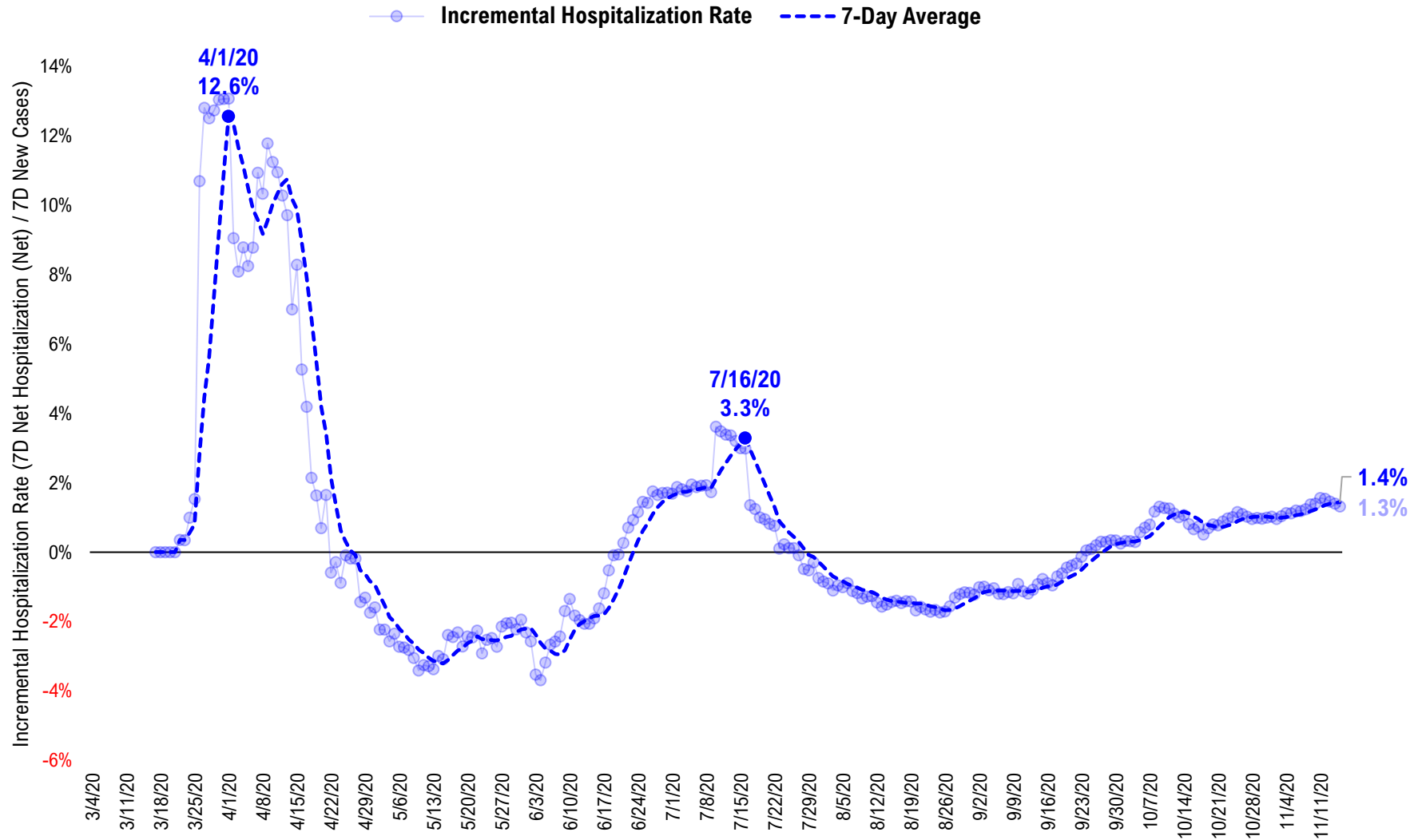
#7: US Daily Hospitalizations...

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



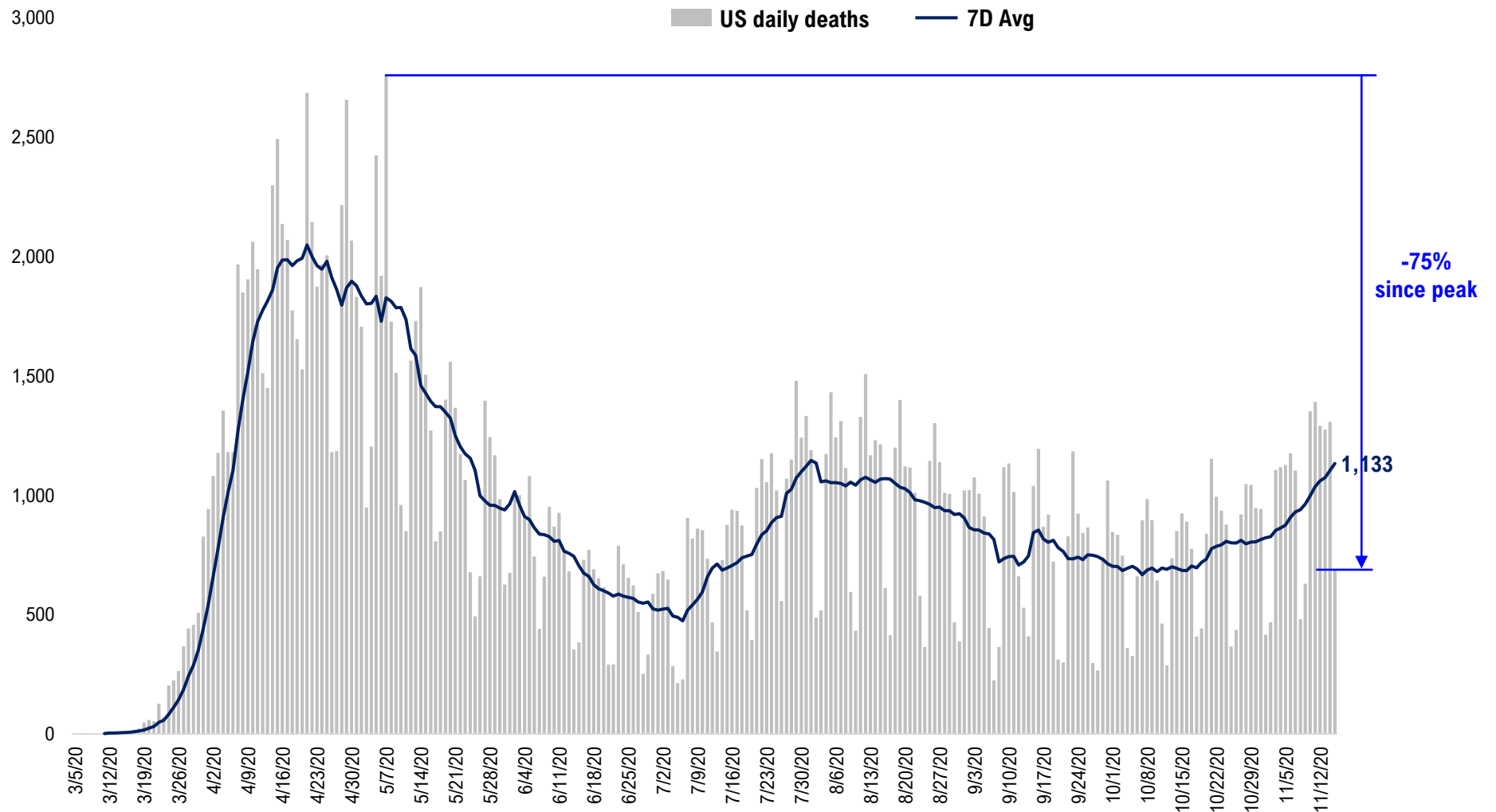
#8: Incremental Hospitalization Rate...

**Incremental Hospitalization Rate: 7D Net Hospitalizations / 7D Total New Cases
(aggregate of 50 states + Washington, D.C.)**



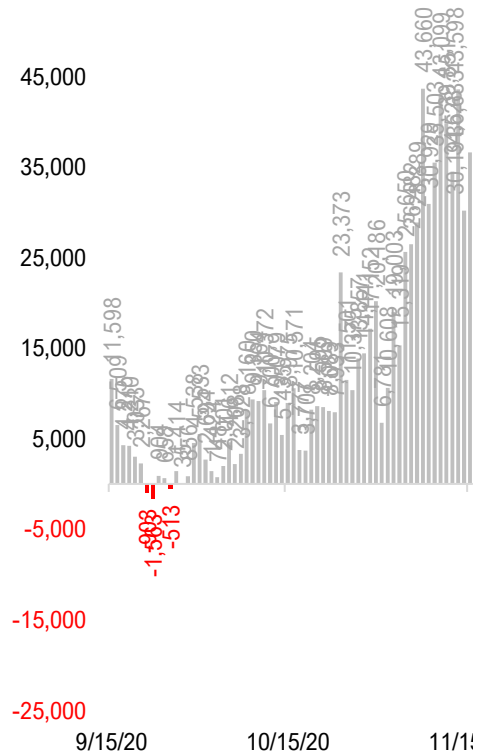
#9: US Daily New Fatalities...

US daily COVID-19 Fatalities

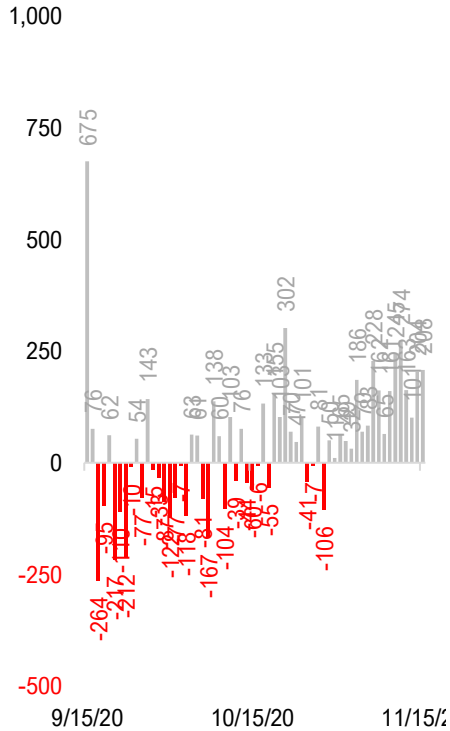


#10: Rolling 7-Day Change in the Key Metrics... (Past 8 Weeks)

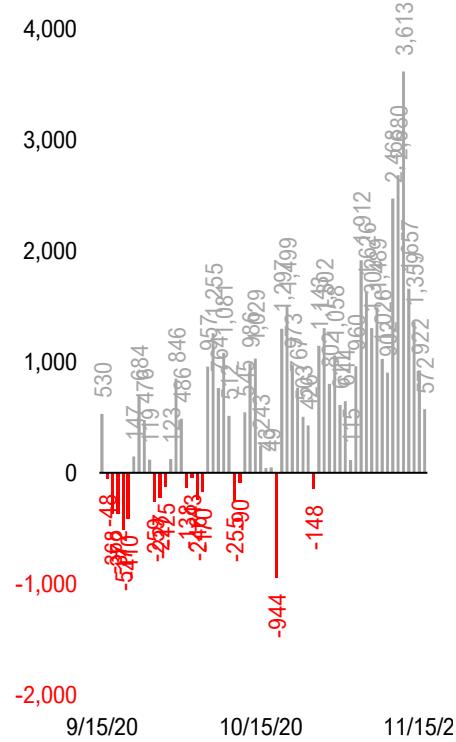
Daily New Cases
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



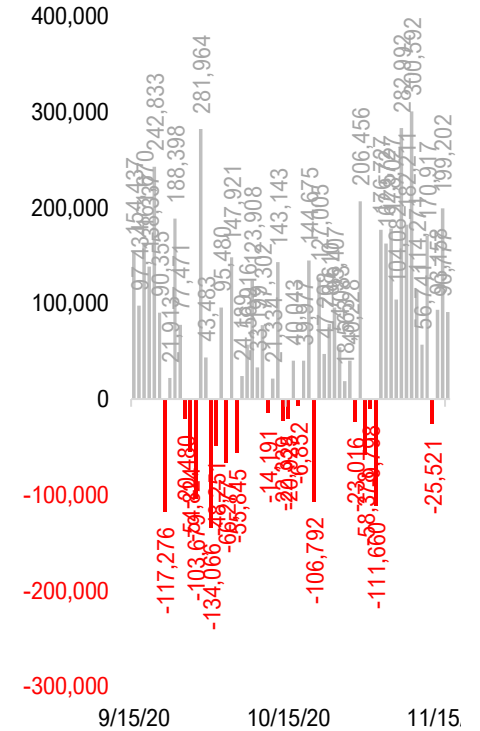
Daily Deaths



Daily Net Hospitalization
(Red = more discharge than admission)

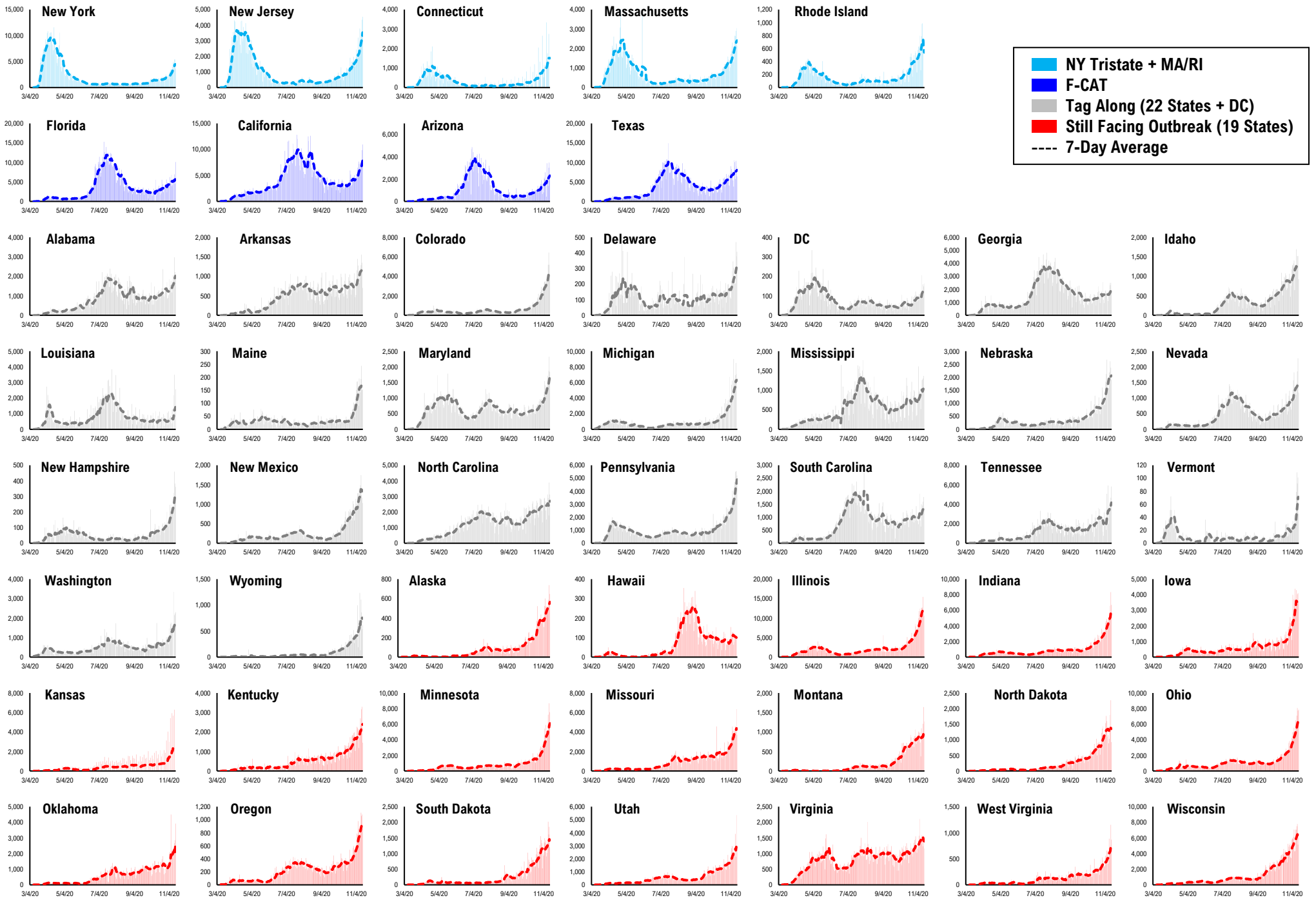


Daily Tests

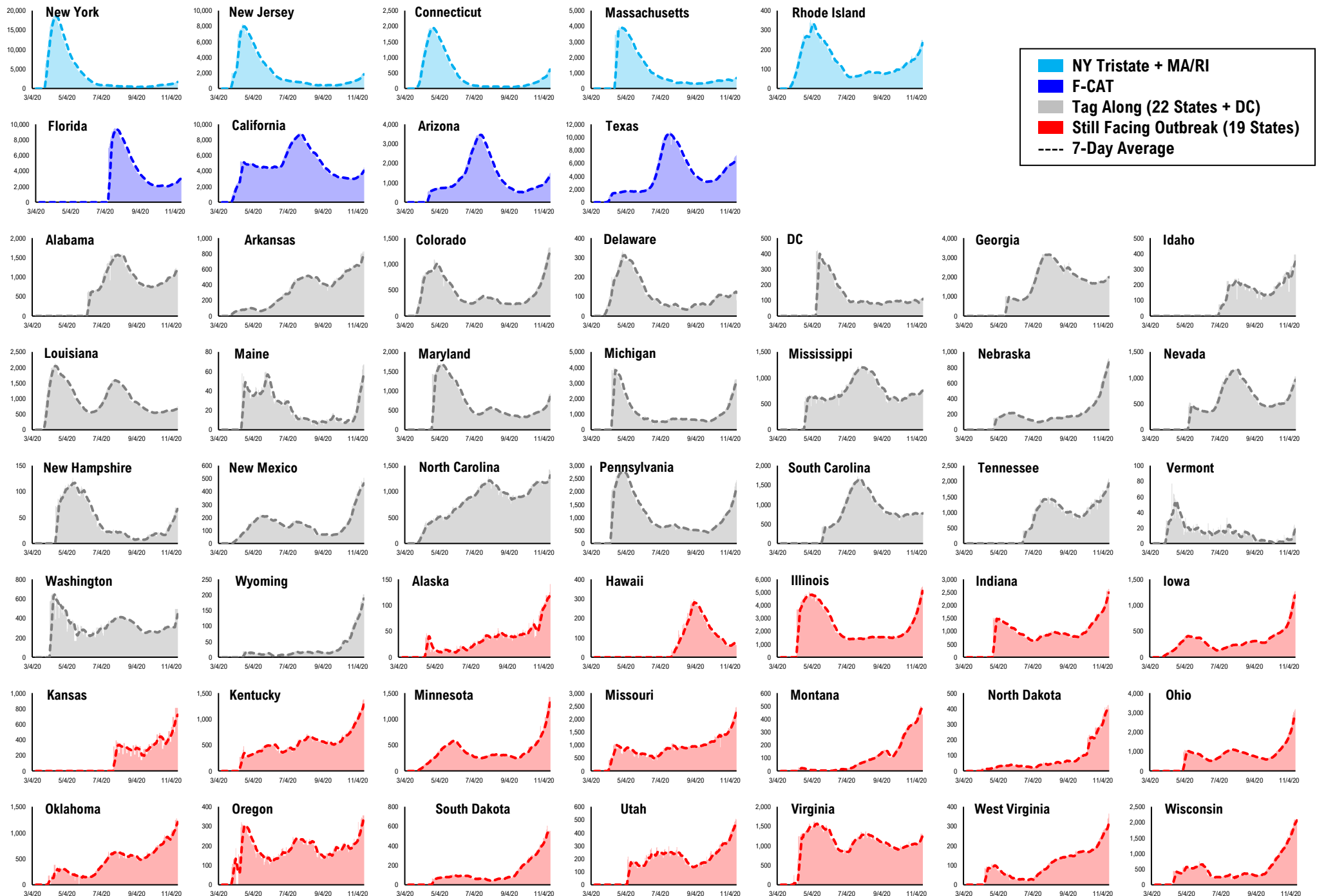


* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

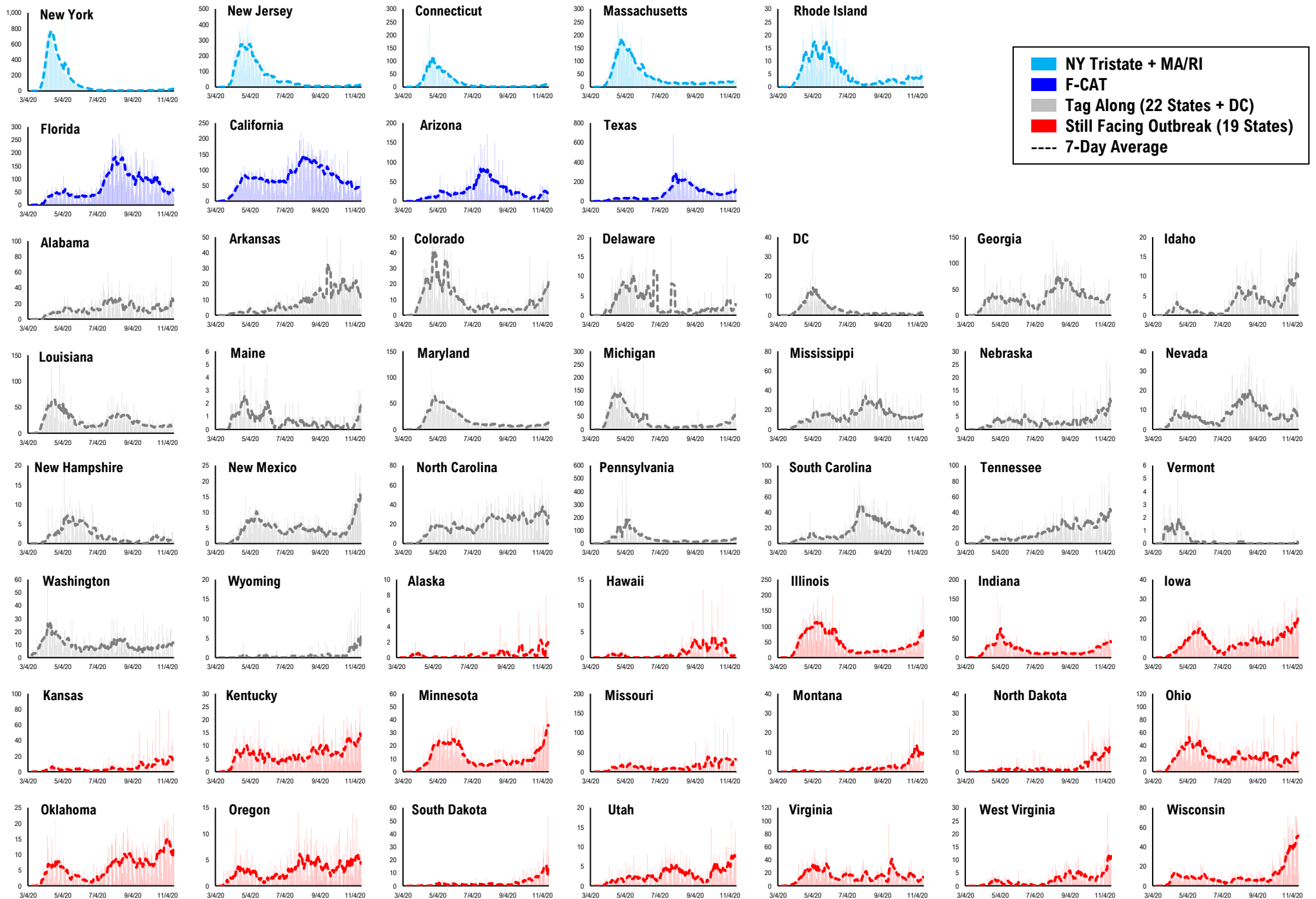
#11: Daily New Cases by States...



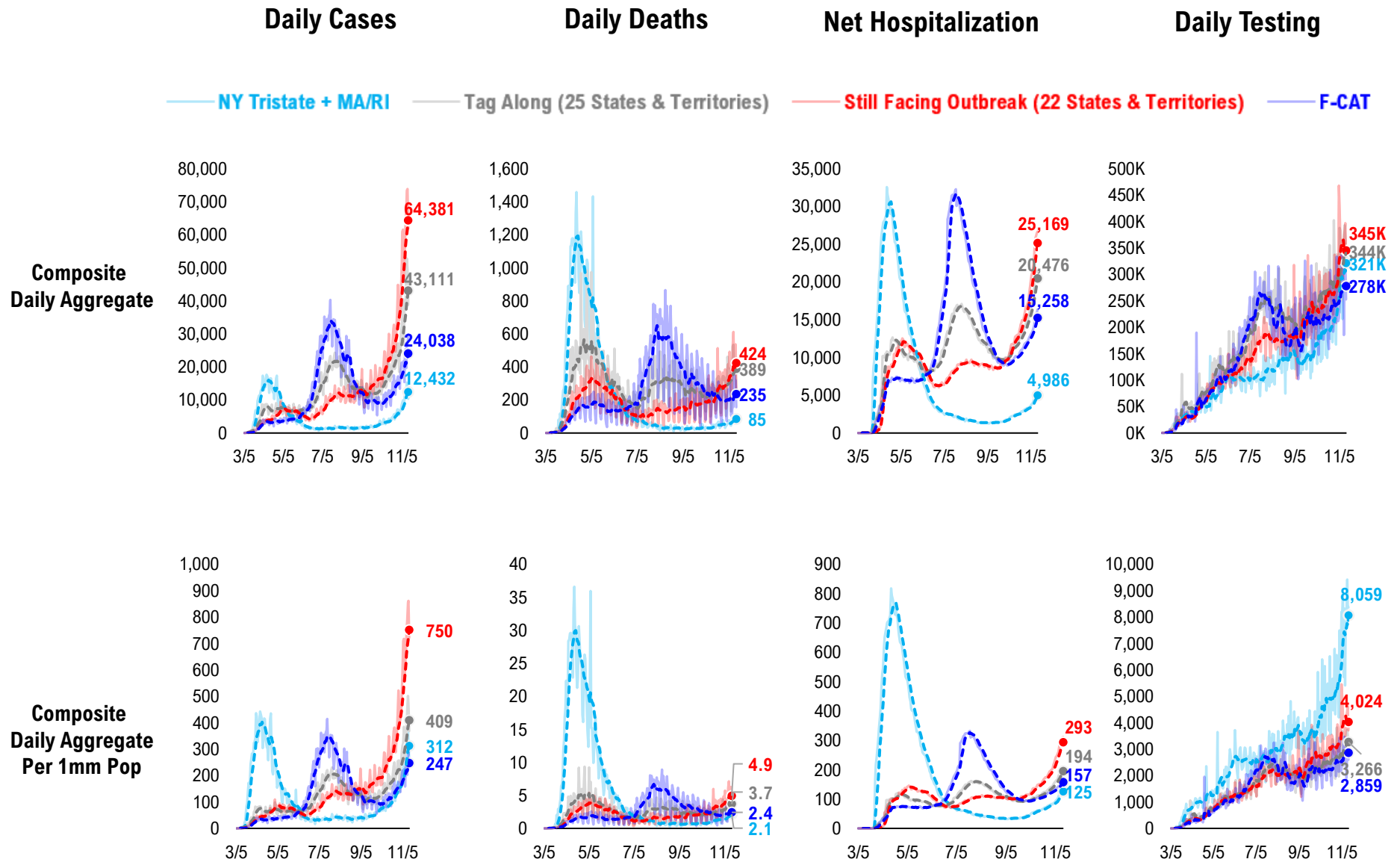
#12: Current Hospitalizations by States...



#13: Daily New Deaths by States...

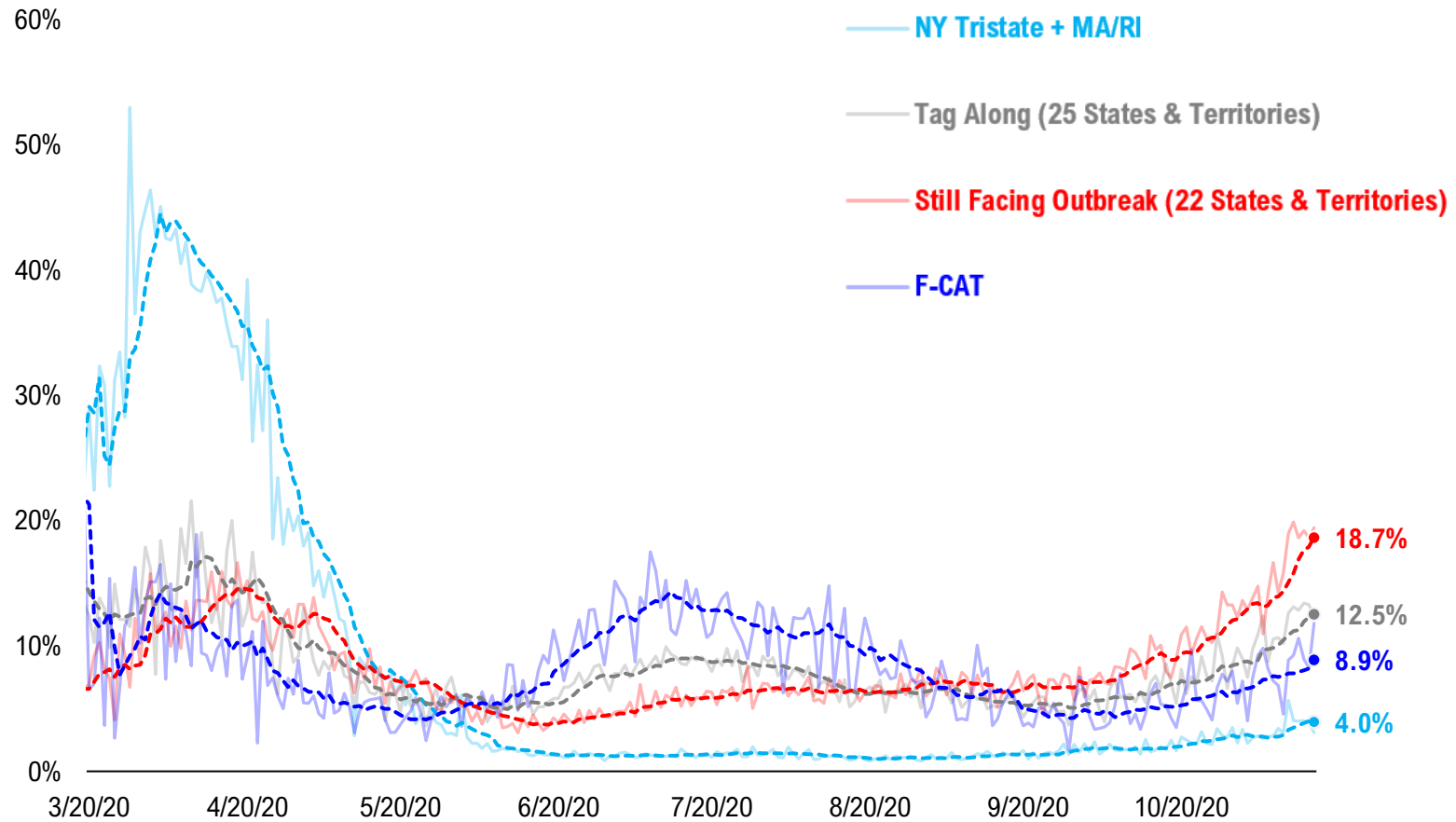


#14: State COVID-19 situation by Tier...

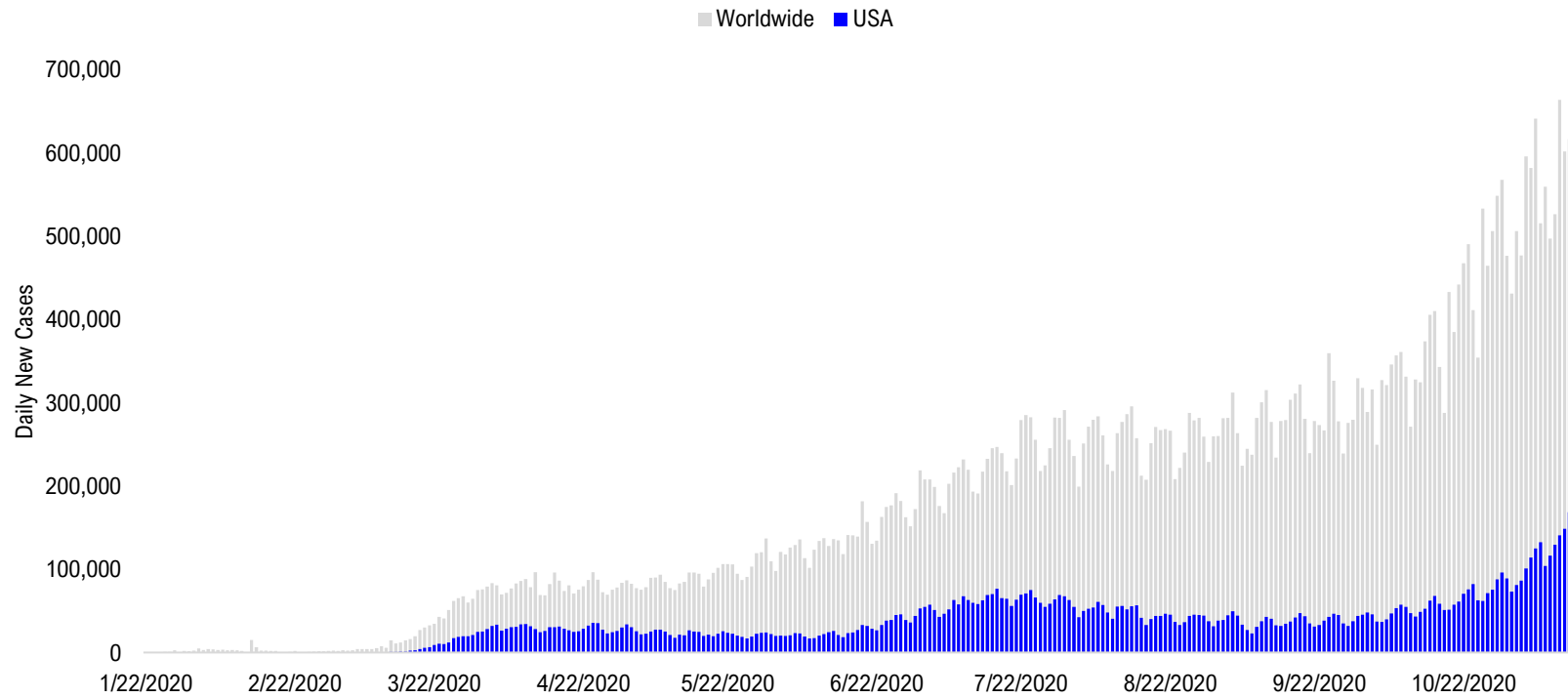


#15: State COVID-19 Daily Positivity Rate by Tier...

Composite Daily Positivity Rate



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



Jun 26	Jul 10	Jul 24	Aug 7	Aug 21	Sep 4	Sep 18	Oct 2	Oct 16	Oct 30	Nov 14
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 288,054	Europe 254,926
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 89,508	US + Canada 164,903
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 65,611	Latin America 69,645
Europe 17,889	Africa 17,127	Africa 20,063	Europe 23,878	Europe 32,466	Europe 40,116	US + Canada 43,204	US + Canada 47,741	US + Canada 63,472	Pakistan + India + Bangladesh 51,456	Pakistan + India + Bangladesh 47,573
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 12,736	Africa 14,760
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 12,181	Asia ex- India+Pakistan 14,696

Disclosures

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