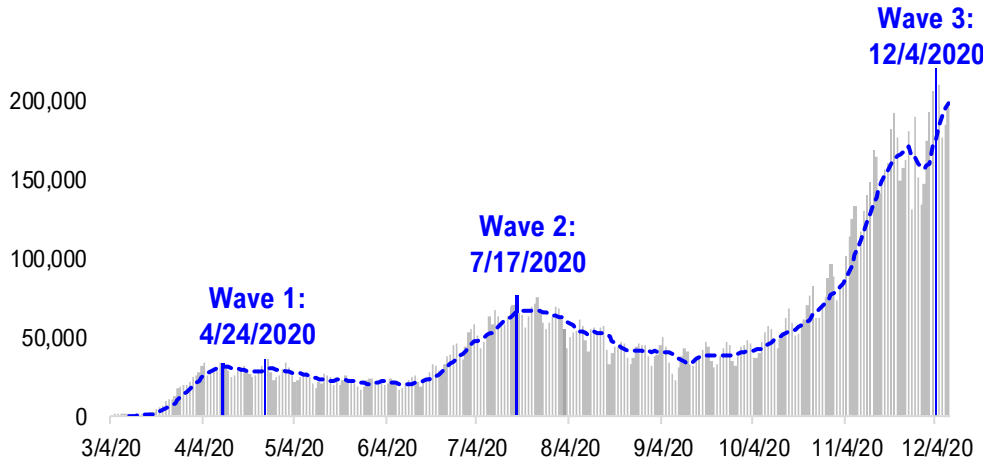


FSInsight Daily COVID-19 Chartbook

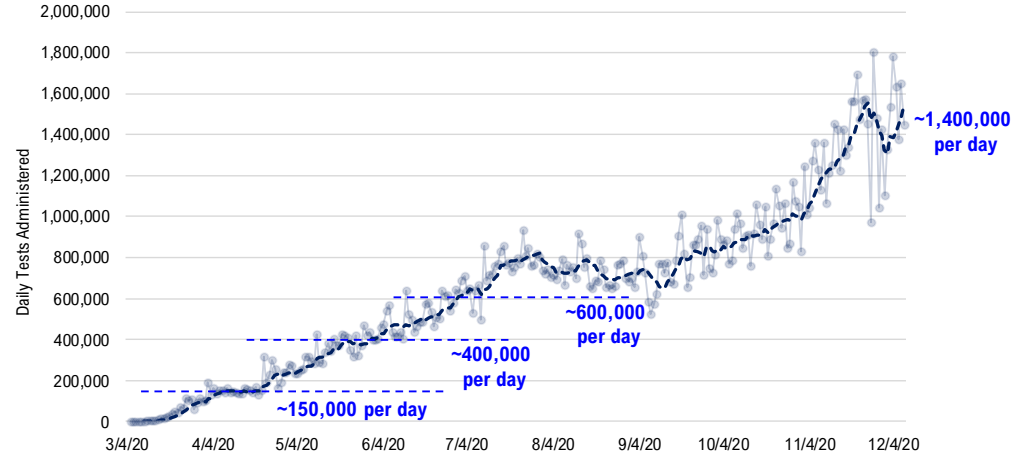


#1: USA COVID-19 Situation at a Glance...

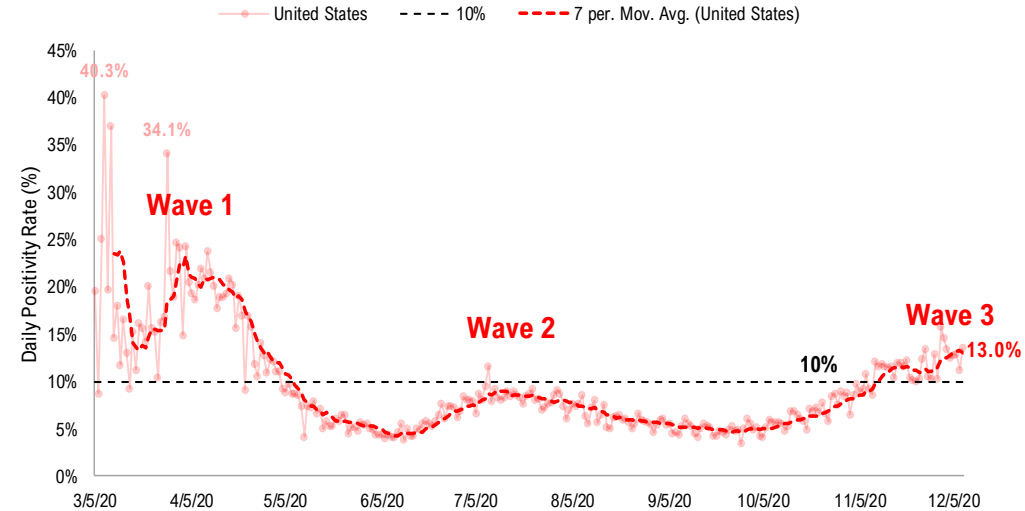
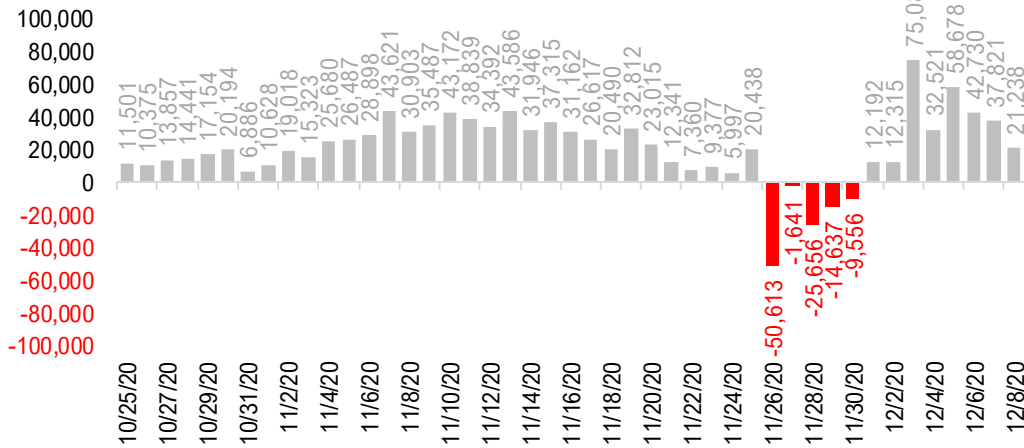
US daily new cases



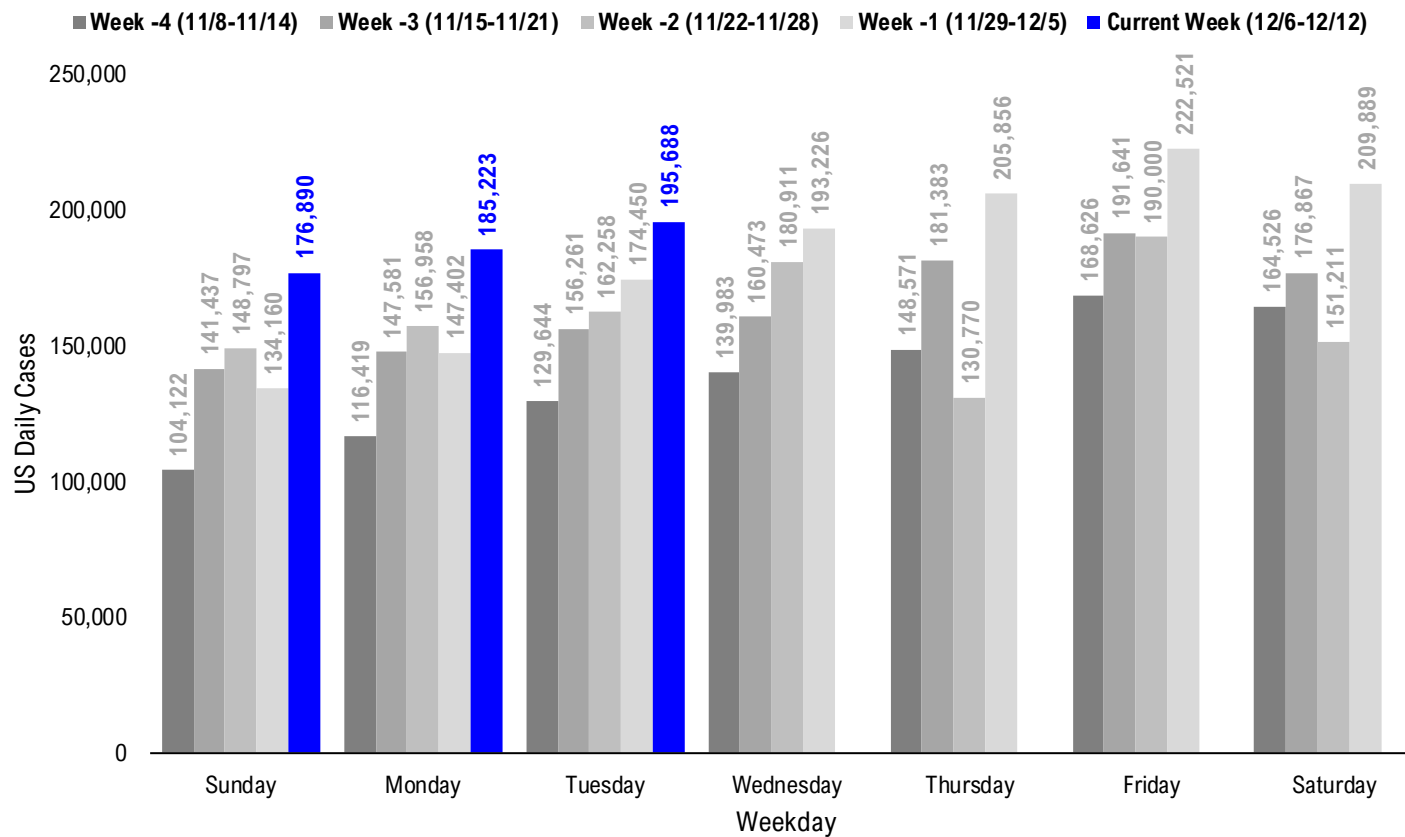
USA total COVID-19 tests administered



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	12/8	7D Delta	12/8	7D Delta	# Days	% Decline in Daily Cases	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
	United States	100%	100%	195,688	+21,238	566	+103	3	-13%	5,909

	Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents				Since Peak		Hospitalization	
	% US Pop	% US GDP	12/8	7D Delta	12/8	7D Delta	# Days	% Decline in Daily Cases	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
	United States	100%	100%	195,688	+21,238	566	+103	3	-13%	5,909

States:

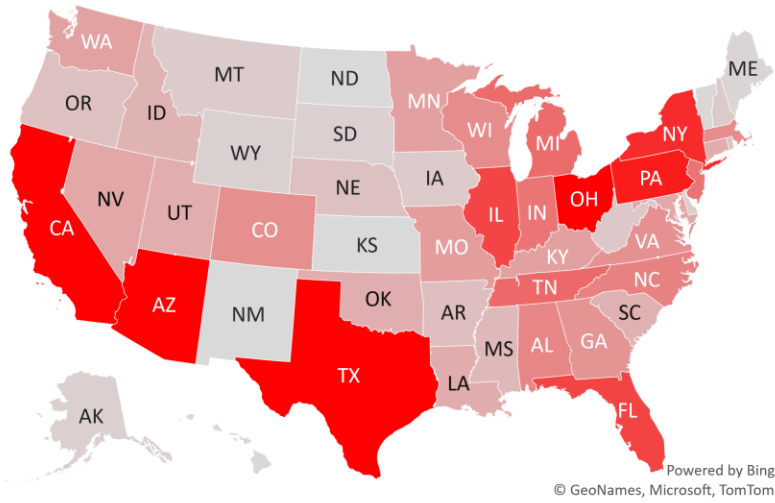
1 California	11.9%	14.6%	23,272	+11,051	659	+306	1	-2%	2,462	1.5%
2 Texas	8.7%	8.8%	15,103	-79	371	+7	5	-26%	-19	(0.0%)
3 Ohio	3.5%	3.3%	12,721	+3,691	844	+177	9	-7%	-45	(0.1%)
4 Arizona	2.2%	1.7%	12,314	+1,992	882	+224	5	-2%	563	1.4%
5 Pennsylvania	3.9%	3.8%	10,170	+4,494	654	+251	3	-30%	817	1.2%
6 New York	5.9%	8.1%	9,335	+2,050	451	+94	3	-17%	1,061	1.6%
7 Florida	6.5%	5.0%	7,985	-862	375	+20	148	-37%	276	0.4%
8 Illinois	3.8%	4.2%	7,910	-4,632	637	-45	25	-41%	-636	(1.0%)
9 Tennessee	2.1%	1.8%	6,019	+326	841	+25	22	-7%	207	0.6%
10 Michigan	3.0%	2.6%	5,909	+116	509	-32	20	-41%	-219	(0.5%)
11 New Jersey	2.7%	3.0%	5,476	+870	566	+129	2	-11%	352	1.0%
12 Indiana	2.0%	1.8%	5,385	-11	874	+113	3	-27%	-210	(0.4%)
13 North Carolina	3.2%	2.7%	4,670	+1,787	492	+192	2	-13%	340	0.9%
14 Alabama	1.5%	1.1%	4,436	+1,060	617	+79	4	-20%	312	1.3%
15 Massachusetts	2.1%	2.8%	4,122	+869	553	+208	3	-33%	361	1.1%
16 Wisconsin	1.8%	1.6%	4,114	+36	519	-79	25	-59%	-271	(1.0%)
17 Colorado	1.7%	1.8%	3,971	-434	651	-45	17	-37%	-222	(0.7%)
18 Virginia	2.6%	2.6%	3,860	+1,632	451	+200	0	0%	161	0.7%
19 Georgia	3.2%	2.9%	3,686	+890	325	+137	4	-23%	379	1.4%
20 Missouri	1.8%	1.5%	3,250	+321	531	-9	24	-35%	29	0.1%
21 Kentucky	1.3%	1.0%	3,076	-1,051	567	-103	5	-34%	-17	(0.1%)
22 Minnesota	1.7%	1.8%	3,051	-498	823	-258	8	-41%	-236	(0.6%)
23 Washington	2.3%	2.7%	2,923	+726	505	+217	13	-9%	177	0.9%
24 Nevada	0.9%	0.8%	2,694	-4	828	+218	3	-11%	195	1.1%
25 Maryland	1.8%	2.0%	2,632	-133	418	+49	2	-21%	70	0.4%
26 Louisiana	1.4%	1.3%	2,429	-2,897	529	+18	5	-37%	236	1.4%
27 Connecticut	1.1%	1.3%	2,414	+955	986	+409	0	0%	71	0.4%
28 Utah	1.0%	0.9%	2,333	-177	741	+104	17	-40%	1	0.0%

States:

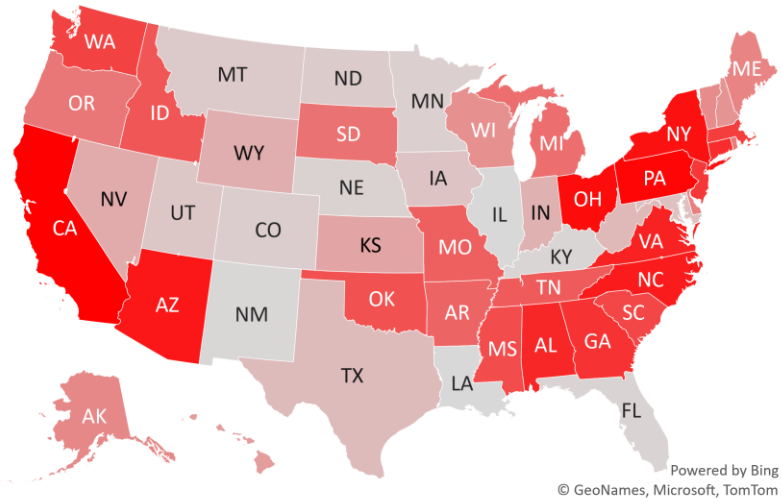
29 Oklahoma	1.2%	1.0%	2,297	+560	627	+150	2	-40%	-20	(0.1%)
30 South Carolina	1.6%	1.1%	2,148	+620	473	+216	2	-13%	199	1.2%
31 Idaho	0.5%	0.4%	2,012	+405	783	+104	4	-17%	-86	(0.8%)
32 Mississippi	0.9%	0.6%	1,732	+591	500	-0	4	-37%	64	0.5%
33 Arkansas	0.9%	0.6%	1,437	+295	431	+85	3	-35%	7	0.1%
34 Oregon	1.3%	1.2%	1,294	+71	303	-24	2	-26%	-17	(0.2%)
35 Nebraska	0.6%	0.6%	1,293	-648	827	+79	19	-43%	-97	(0.8%)
36 Rhode Island	0.3%	0.3%	1,249	+66	983	+74	3	-37%	34	0.4%
37 West Virginia	0.5%	0.4%	932	-44	649	+96	2	-12%	51	0.6%
38 Iowa	1.0%	0.9%	830	-158	318	-75	25	-75%	-272	(2.4%)
39 New Hampshire	0.4%	0.4%	807	+35	609	+177	0	0%	51	1.1%
40 Montana	0.3%	0.2%	755	-252	710	-26	23	-45%	-16	(0.3%)
41 Delaware	0.3%	0.4%	753	+64	811	+238	2	-4%	92	1.8%
42 Puerto Rico	1.0%	0.5%	562	-97	272	+109	1	-10%	-20	(0.4%)
43 Alaska	0.2%	0.3%	562	+51	818	+75	3	-26%	4	0.1%
44 South Dakota	0.3%	0.3%	538	+90	653	-30	24	-68%	-56	(0.9%)
45 Wyoming	0.2%	0.2%	490	-10	883	-198	19	-48%	-36	(1.0%)
46 Maine	0.4%	0.3%	274	+55	229	+58	1	-1%	31	1.5%
47 District of Columbia	0.2%	0.7%	270	+137	339	+161	3	-30%	45	2.4%
48 Vermont	0.2%	0.2%	100	+37	153	+43	4	-45%	0	0.0%
49 Hawaii	0.4%	0.5%	53	+12	56	+13	101	-73%	-10	(1.4%)
50 U.S. Virgin Islands	0.0%	0.0%	31	+25	146	+109	109	-65%	0	0.0%
51 Guam	0.0%	0.0%	7	-30	99	-117	28	-91%	-13	(0.3%)
52 Northern Mariana	0.0%	0.0%	2	+2	#N/A	+18	51	-44%	0	0.0%
53 New Mexico	0.6%	0.5%	0	-2,324	491	-373	18	-68%	26	0.2%
54 North Dakota	0.2%	0.3%	0	-403	367	-386	24	-85%	-16	(0.4%)
55 Kansas	0.9%	0.8%	0	+0	656	+149	13	-57%	-231	(1.4%)
56 American Samoa	0.0%	0.0%	0	+0		+0	0	0%	0	

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

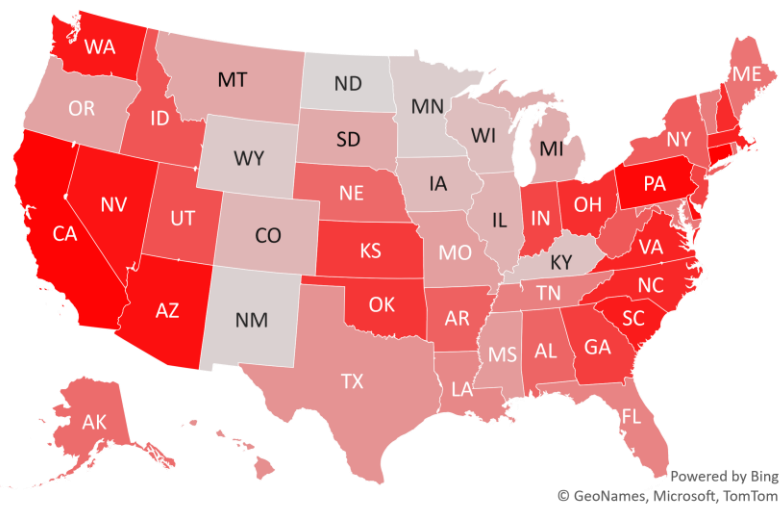
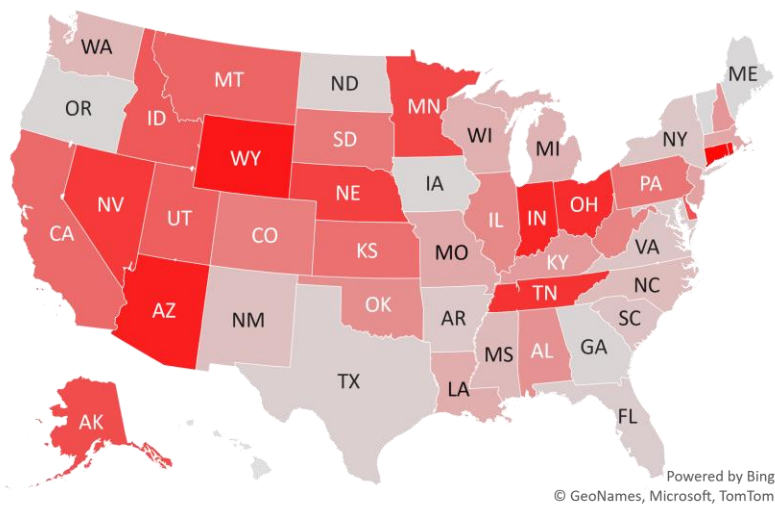
Daily Case Increases



7D Delta in Daily New Cases



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



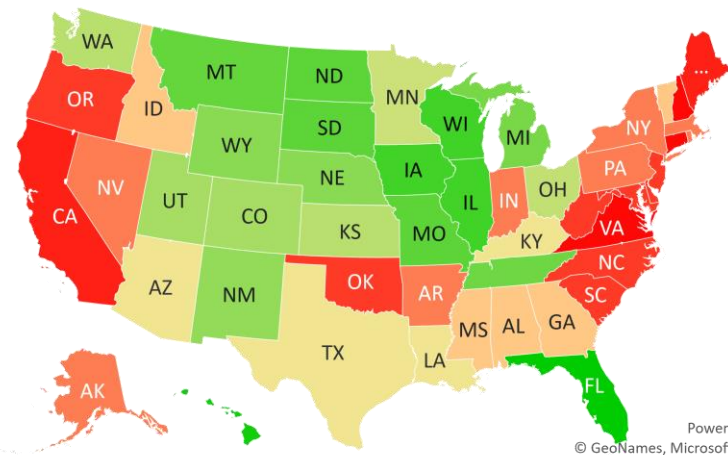
#5: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 12/8)

	Sorted			
	Peak Date	12/8/20	% off the Peak	% US Pop
United States	12/5/20	3	-13%	100%
States:				
Florida	7/13/20	148	-37%	6.5%
U.S. Virgin Islands	8/21/20	109	-65%	0.0%
Hawaii	8/29/20	101	-73%	0.4%
Northern Mariana Island	10/18/20	51	-44%	0.0%
Guam	11/10/20	28	-91%	0.0%
Wisconsin	11/13/20	25	-59%	1.8%
Illinois	11/13/20	25	-41%	3.8%
Iowa	11/13/20	25	-75%	1.0%
South Dakota	11/14/20	24	-68%	0.3%
North Dakota	11/14/20	24	-85%	0.2%
Missouri	11/14/20	24	-35%	1.8%
Montana	11/15/20	23	-45%	0.3%
Tennessee	11/16/20	22	-7%	2.1%
Michigan	11/18/20	20	-41%	3.0%
Wyoming	11/19/20	19	-48%	0.2%
Nebraska	11/19/20	19	-43%	0.6%
New Mexico	11/20/20	18	-68%	0.6%
Utah	11/21/20	17	-40%	1.0%
Colorado	11/21/20	17	-37%	1.7%
Washington	11/25/20	13	-9%	2.3%
Kansas	11/25/20	13	-57%	0.9%
Ohio	11/29/20	9	-7%	3.5%
Minnesota	11/30/20	8	-41%	1.7%
Texas	12/3/20	5	-26%	8.7%
Louisiana	12/3/20	5	-37%	1.4%
Kentucky	12/3/20	5	-34%	1.3%
Arizona	12/3/20	5	-2%	2.2%
Vermont	12/4/20	4	-45%	0.2%

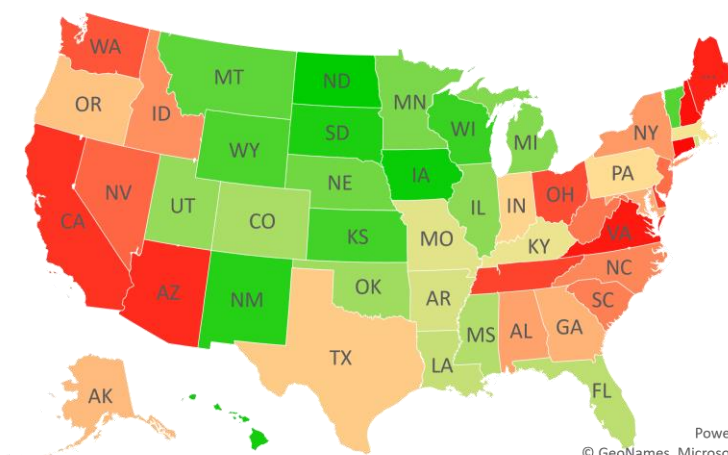
	Sorted			
	Peak Date	12/8/20	% off the Peak	% US Pop
United States	12/5/20	3	-13%	100%
States:				
Mississippi	12/4/20	4	-37%	0.9%
Idaho	12/4/20	4	-17%	0.5%
Georgia	12/4/20	4	-23%	3.2%
Alabama	12/4/20	4	-40%	1.5%
Rhode Island	12/5/20	3	-37%	0.3%
Pennsylvania	12/5/20	3	-30%	3.9%
New York	12/5/20	3	-17%	5.9%
Nevada	12/5/20	3	-11%	0.9%
Massachusetts	12/5/20	3	-33%	2.1%
Indiana	12/5/20	3	-27%	2.0%
District of Columbia	12/5/20	3	-30%	0.2%
Arkansas	12/5/20	3	-35%	0.9%
Alaska	12/5/20	3	-26%	0.2%
West Virginia	12/6/20	2	-12%	0.5%
South Carolina	12/6/20	2	-13%	1.6%
Oregon	12/6/20	2	-26%	1.3%
Oklahoma	12/6/20	2	-40%	1.2%
New Jersey	12/6/20	2	-11%	2.7%
North Carolina	12/6/20	2	-13%	3.2%
Maryland	12/6/20	2	-21%	1.8%
Delaware	12/6/20	2	-4%	0.3%
Puerto Rico	12/7/20	1	-10%	1.0%
Maine	12/7/20	1	-1%	0.4%
California	12/7/20	1	-2%	11.9%
Virginia	12/8/20	0	0%	2.6%
New Hampshire	12/8/20	0	0%	0.4%
Connecticut	12/8/20	0	0%	1.1%

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

COVID stats for ND and NM were not available as of 8 PM ET...

	12/1/20	12/6/20	12/7/20	12/8/20	vs 7D ago
United States	174,450	176,890	185,223	195,688	+21,238
States:					
California	12,221	30,075	24,735	23,272	<--higher
Texas	15,182	8,436	8,712	15,103	
Ohio	9,030	7,592	9,273	12,721	<--higher
Arizona	10,322	5,376	1,567	12,314	
Pennsylvania	5,676	8,630	6,330	10,170	<--higher
New York	7,285	9,702	7,302	9,335	<--higher
Florida	8,847	8,436	7,711	7,985	
Illinois	12,542	7,598	8,691	7,910	
Tennessee	5,693	3,072	8,136	6,019	
Michigan	5,793	0	9,350	5,909	
New Jersey	4,606	6,030	3,563	5,476	
Indiana	5,396	6,598	5,661	5,385	
North Carolina	2,883	6,438	4,372	4,670	<--higher
Alabama	3,376	2,288	2,352	4,436	<--higher
Massachusetts	3,253	4,827	2,481	4,122	<--higher
Wisconsin	4,078	2,791	2,155	4,114	
Colorado	4,405	3,234	4,037	3,971	
Virginia	2,228	3,880	3,817	3,860	<--higher
Georgia	2,796	1,805	4,861	3,686	<--higher
Missouri	2,929	3,876	2,658	3,250	
Kentucky	4,127	2,567	1,960	3,076	
Minnesota	3,549	5,581	5,290	3,051	
Washington	2,197	1,654	6,957	2,923	<--higher
Nevada	2,698	2,511	2,448	2,694	
Maryland	2,765	2,643	2,302	2,632	
Louisiana	5,326	3,939	1,016	2,429	
Connecticut	1,459	0	8,129	2,414	<--higher
Utah	2,510	2,563	2,231	2,333	

Sorted

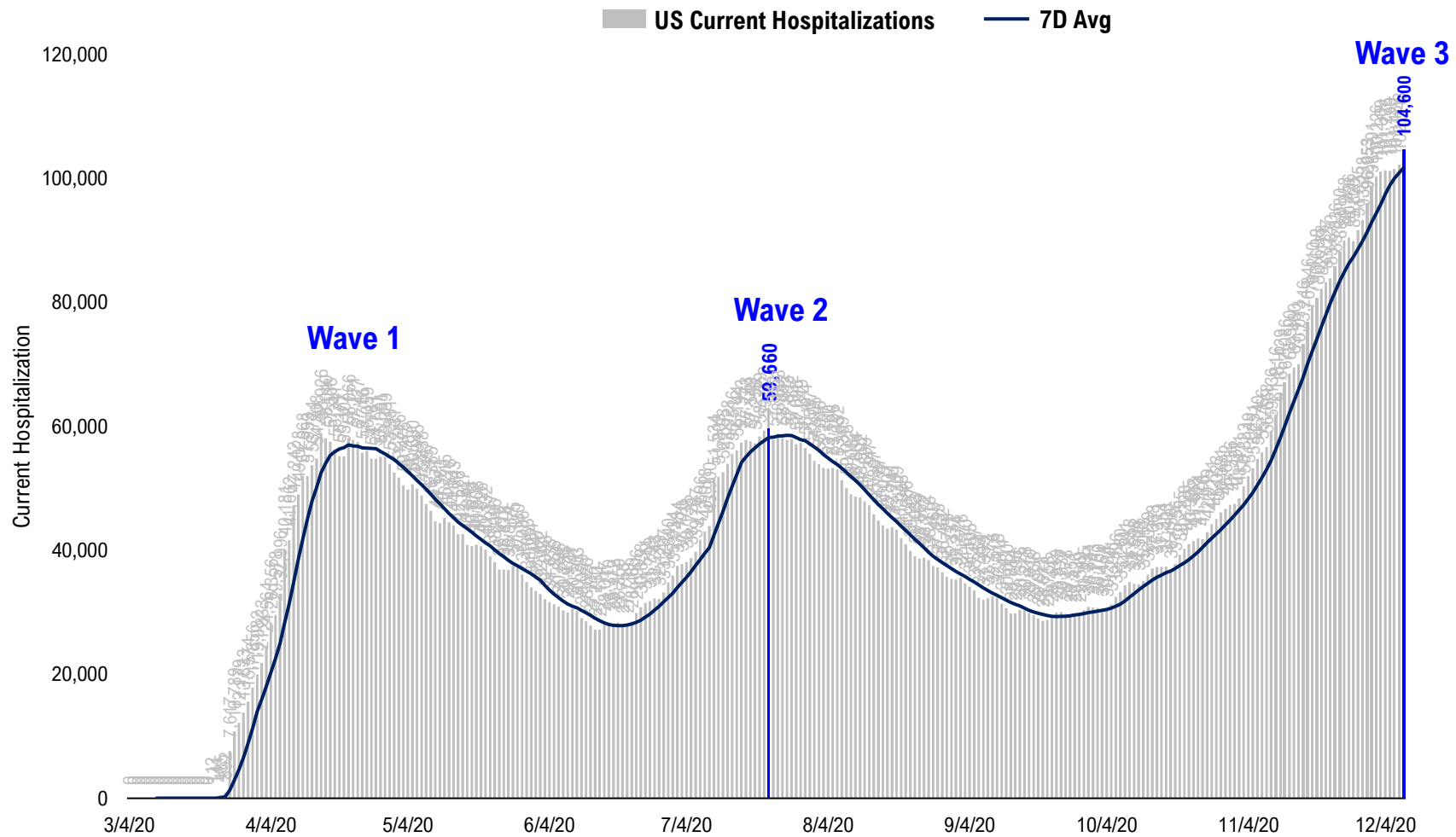
7D Ago Last 3-day Trend

COVID stats for ND and NM were not available as of 8 PM ET...

	12/1/20	12/6/20	12/7/20	12/8/20	vs 7D ago
United States	174,450	176,890	185,223	195,688	+21,238
States:					
Oklahoma	1,737	3,241	1,903	2,297	<--higher
South Carolina	1,528	2,685	2,476	2,148	<--higher
Idaho	1,607	805	1,383	2,012	<--higher
Mississippi	1,141	1,473	1,263	1,732	<--higher
Arkansas	1,142	1,460	1,004	1,437	<--higher
Oregon	1,223	1,253	1,292	1,294	
Nebraska	1,941	2,243	1,266	1,293	
Rhode Island	1,183	1,030	844	1,249	
West Virginia	976	1,425	1,131	932	
Iowa	988	1,499	677	830	
New Hampshire	772	633	1,045	807	
Montana	1,007	806	716	755	
Delaware	689	816	799	753	
Puerto Rico	659	1,113	934	562	
Alaska	511	757	476	562	
South Dakota	448	687	509	538	<--higher
Wyoming	500	376	668	490	
Maine	219	221	427	274	<--higher
District of Columbia	133	264	183	270	<--higher
Vermont	63	121	65	100	<--higher
Hawaii	41	104	81	53	<--higher
U.S. Virgin Islands	6	0	16	31	<--higher
Guam	37	27	15	7	
Northern Mariana Islands	0	0	3	2	
New Mexico	2,324	1,232	1,859	0	
North Dakota	403	477	361	0	
Kansas	0	0	5,730	0	
American Samoa	0	0	0	0	

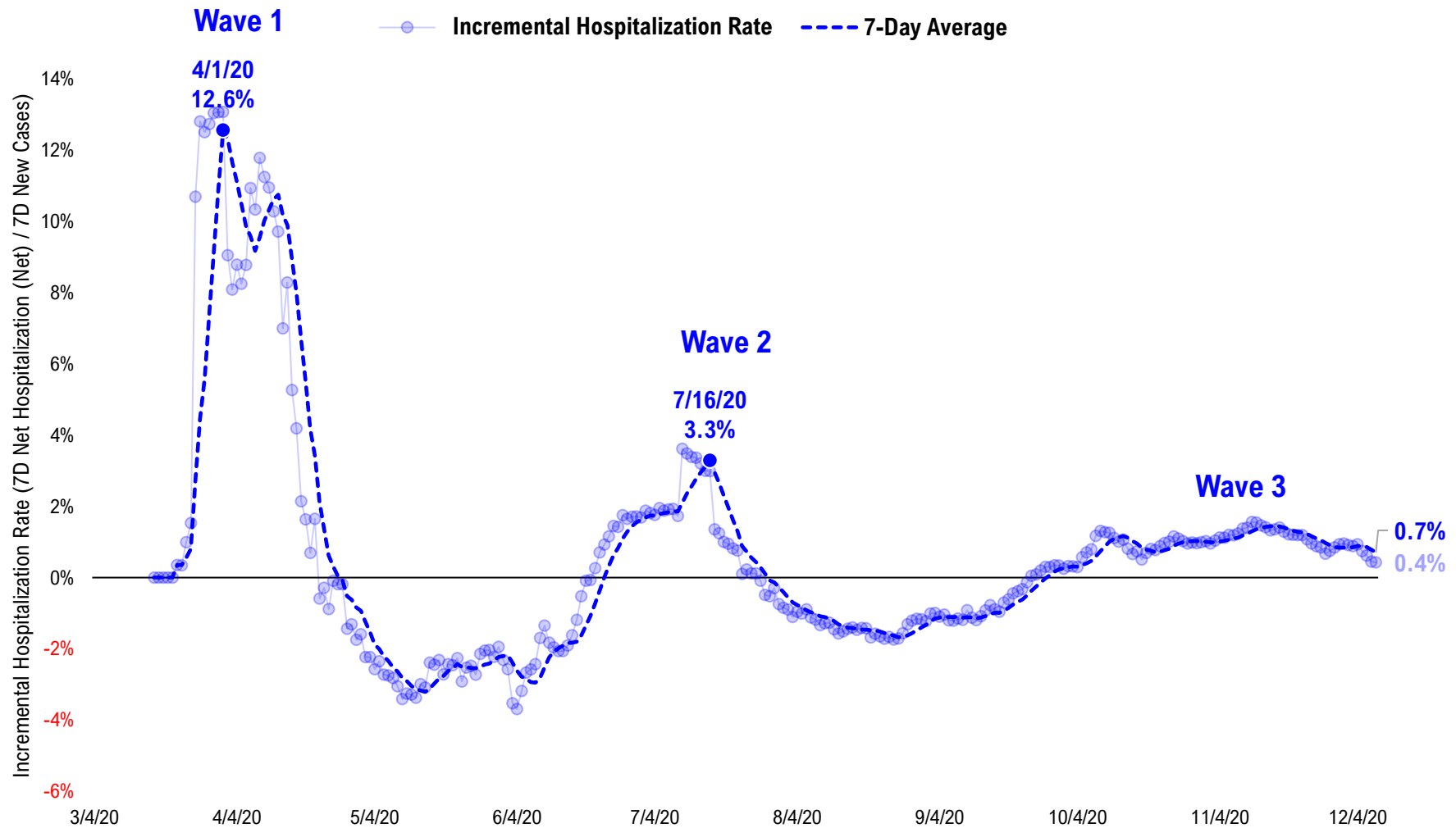
#7: US Daily Hospitalizations...

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



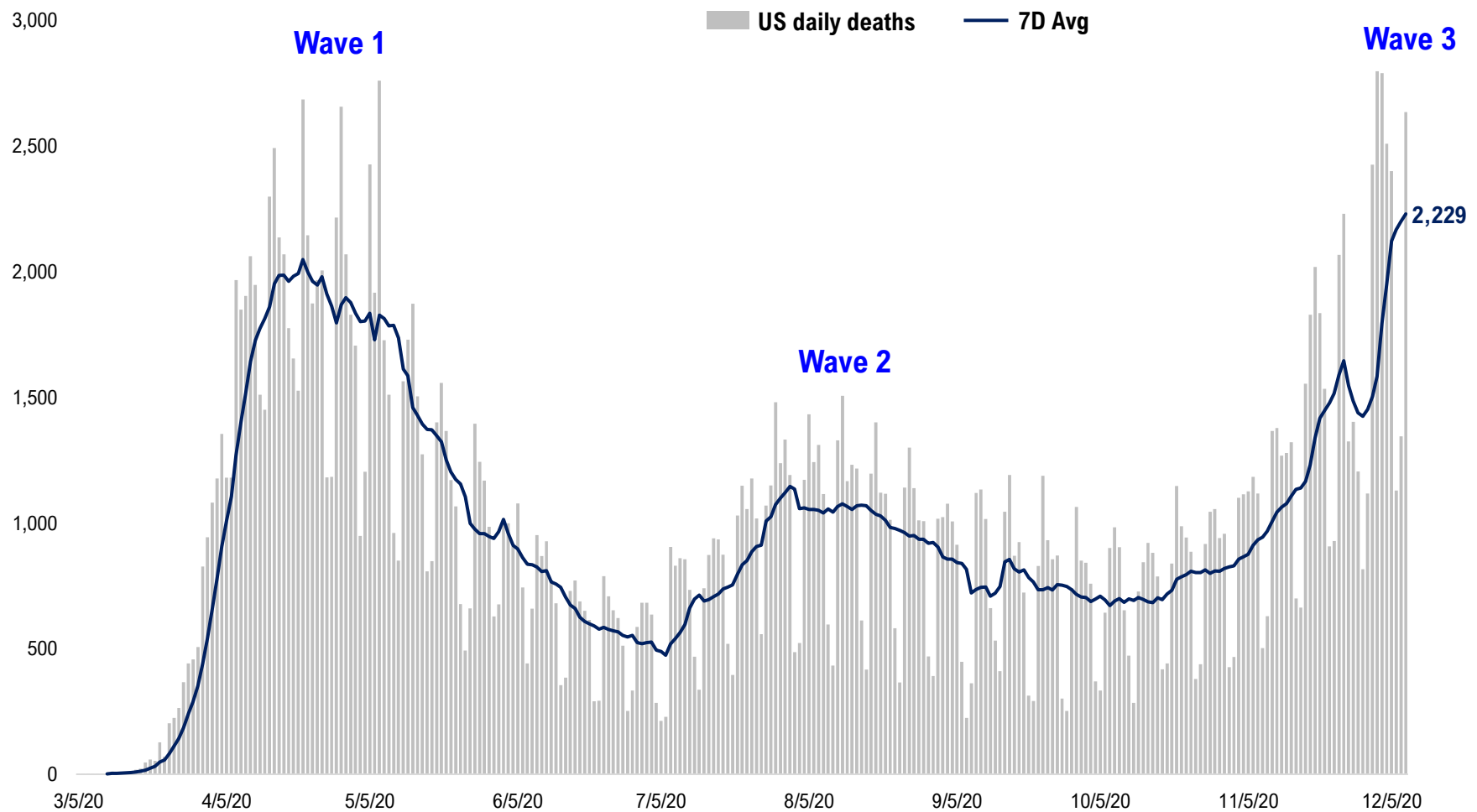
#8: Incremental Hospitalization Rate...

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



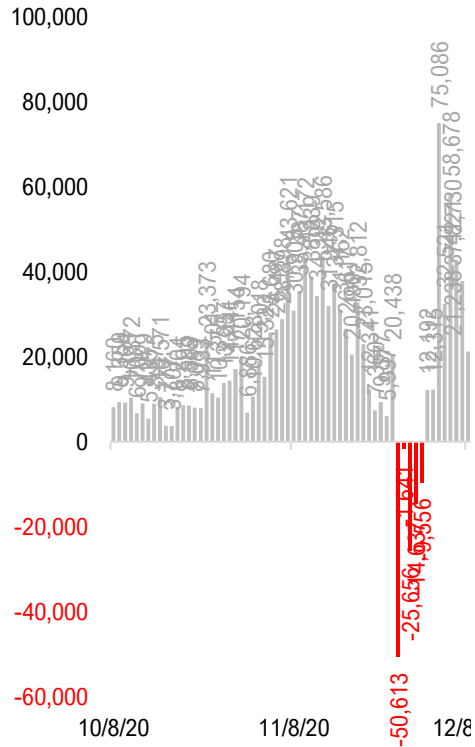
#9: US Daily New Fatalities...

US daily COVID-19 Fatalities

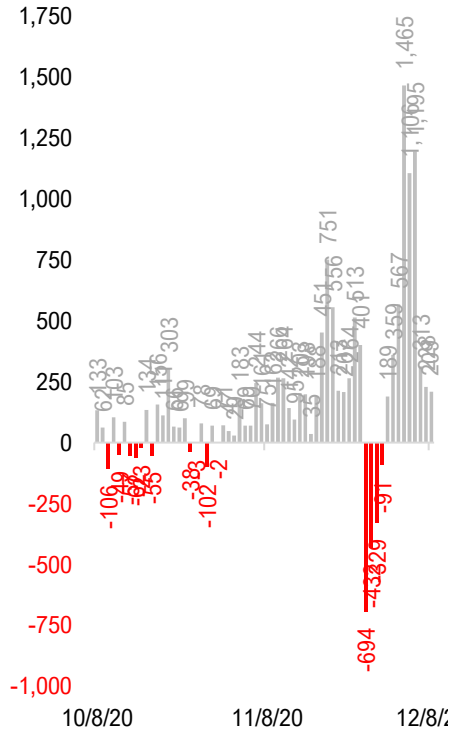


#10: Rolling 7-Day Change in the Key Metrics... (Past 8 Weeks)

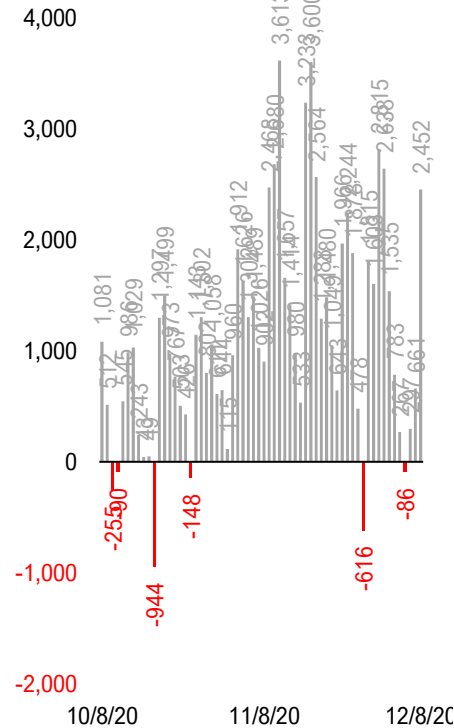
Daily New Cases
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



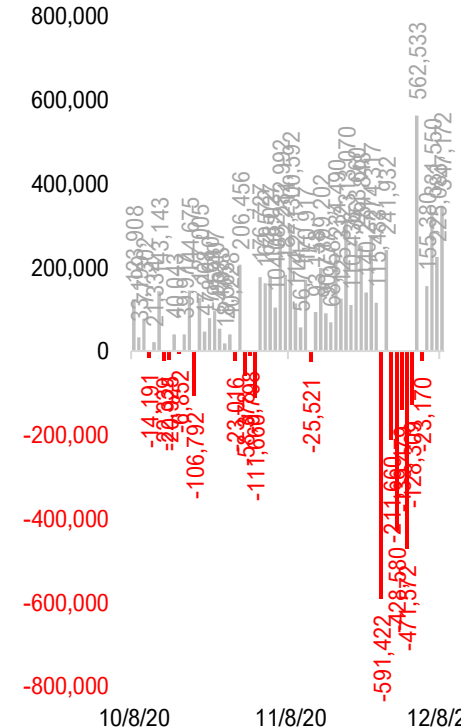
Daily Deaths



Daily Net Hospitalization
(Red = more discharge than admission)

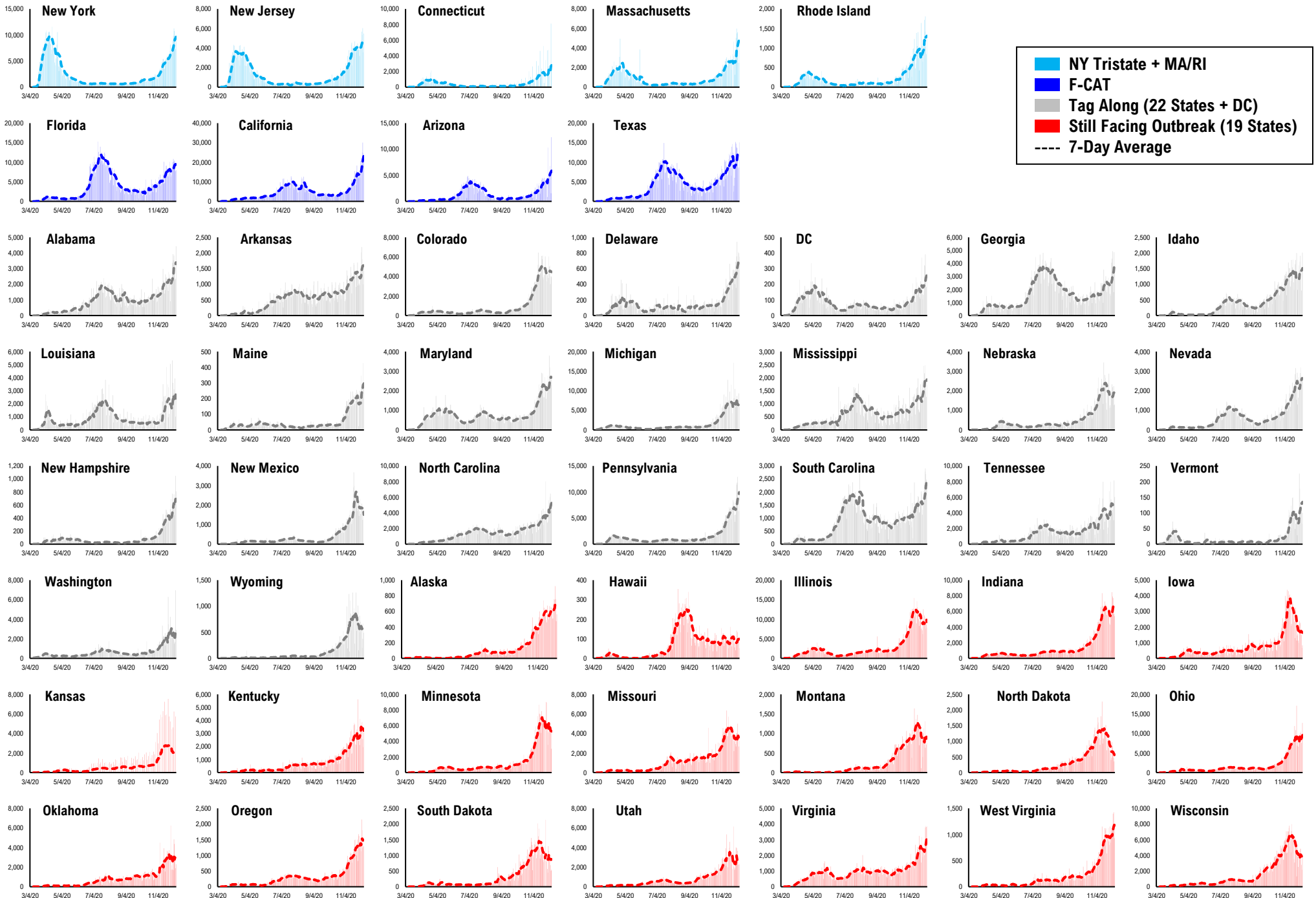


Daily Tests

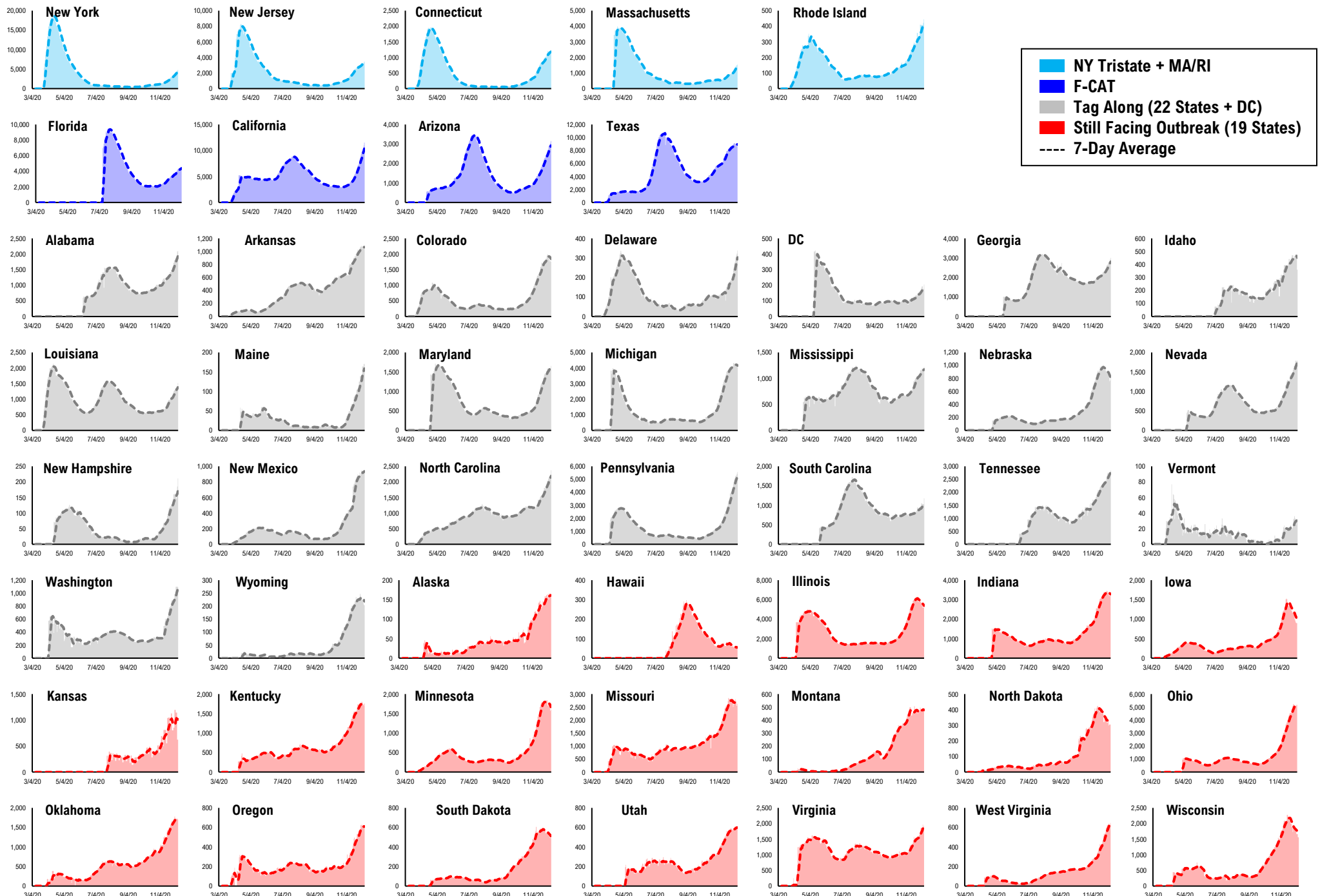


* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

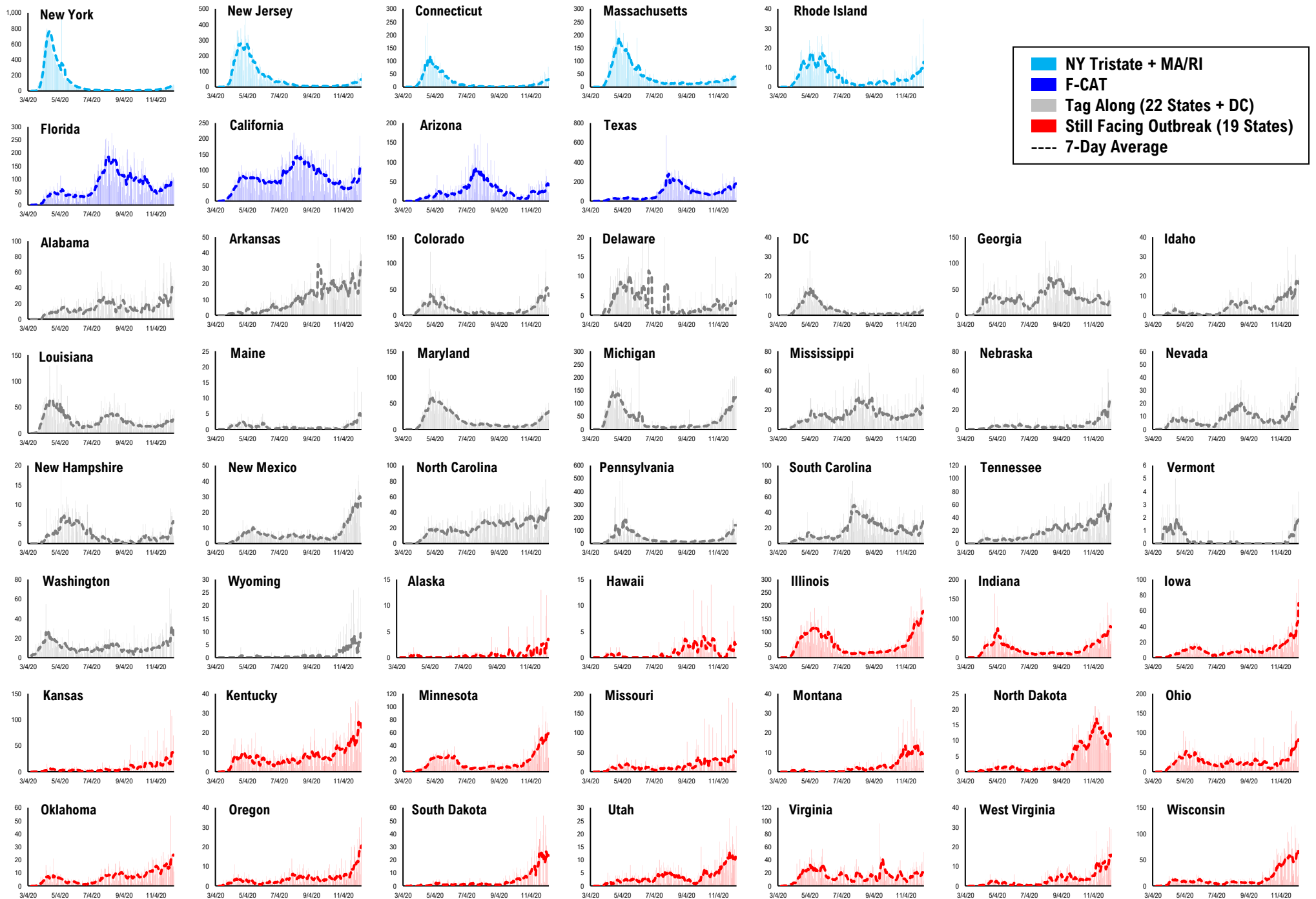
#11: Daily New Cases by States...



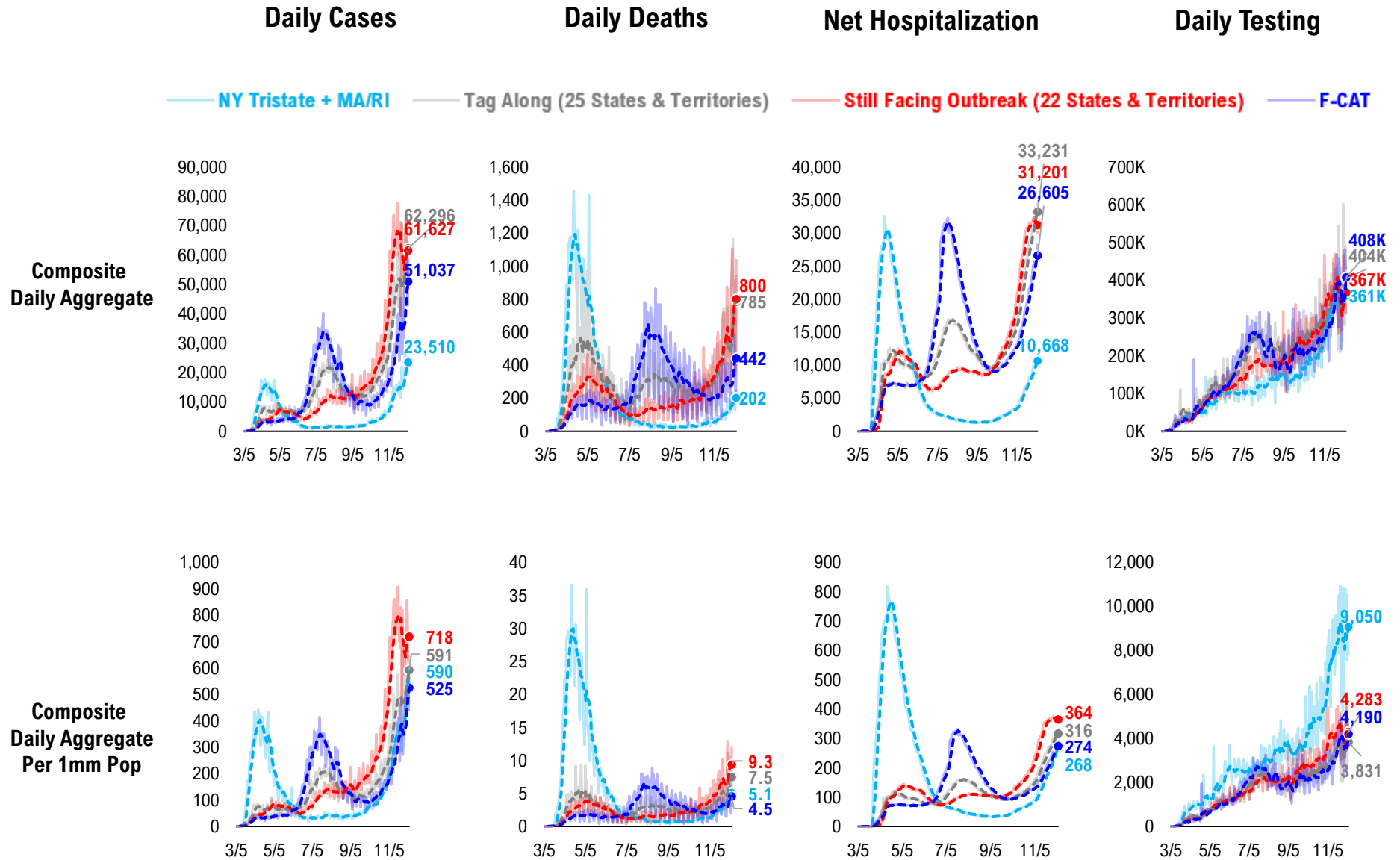
#12: Current Hospitalizations by States...



#13: Daily New Deaths by States...

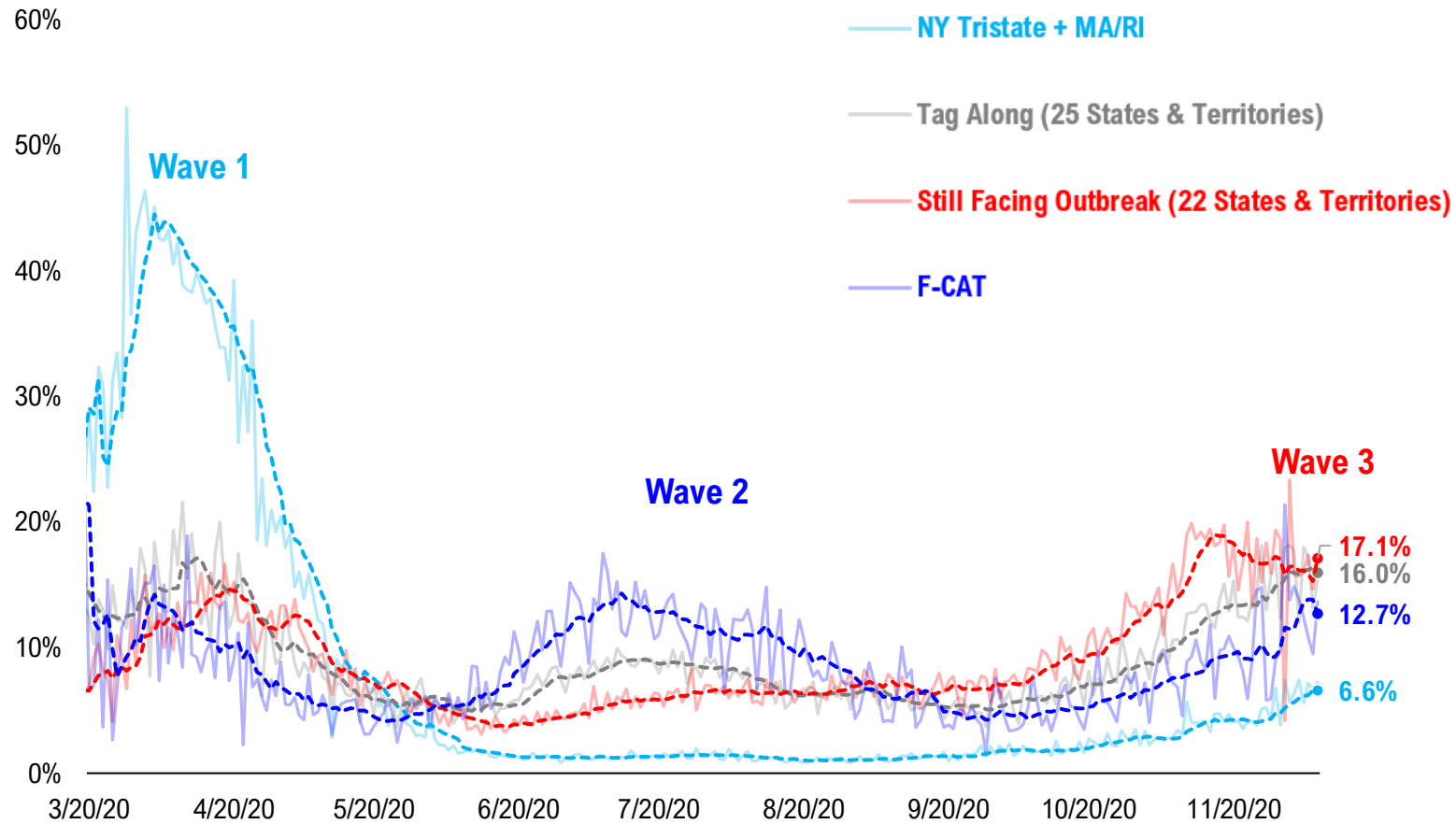


#14: State COVID-19 situation by Tier...

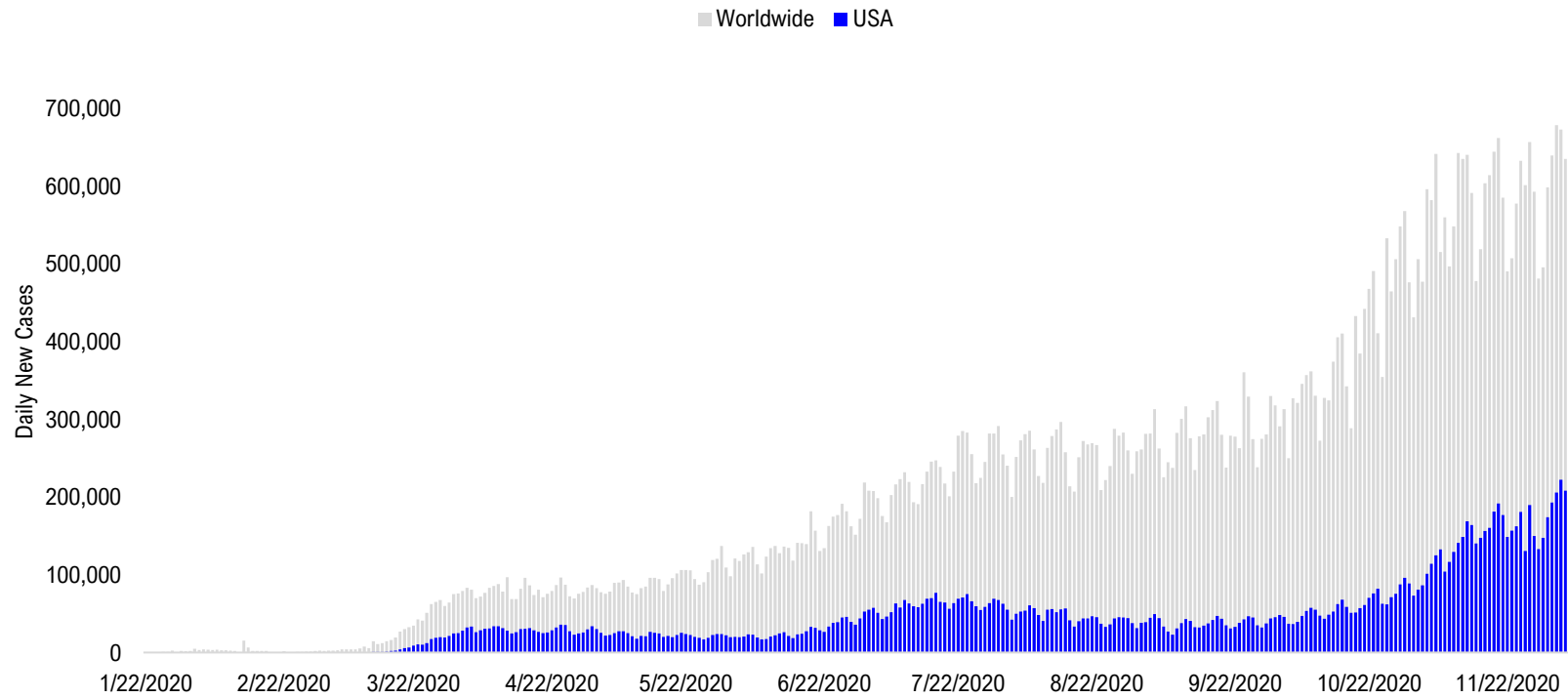


#15: State COVID-19 Daily Positivity Rate by Tier...

Composite Daily Positivity Rate



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



Jul 24	Aug 7	Aug 21	Sep 4	Sep 18	Oct 2	Oct 16	Oct 30	Nov 13	Nov 27	Dec 7
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 302,160	Europe 274,422	Europe 211,883
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 89,511	US + Canada 157,634	US + Canada 172,661	US + Canada 194,351
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 74,234	Latin America 75,171	Latin America 61,473
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 49,697	Pakistan + India + Bangladesh 48,359	Pakistan + India + Bangladesh 37,100
Europe 18,765	Africa 14,390	Asia ex- India+Pakistan 10,921	Asia ex- India+Pakistan 9,069	Asia ex- India+Pakistan 11,067	Asia ex- India+Pakistan 11,658	Asia ex- India+Pakistan 13,788	Asia ex- India+Pakistan 12,846	Africa 14,829	Asia ex- India+Pakistan 16,287	Asia ex- India+Pakistan 16,167
Asia ex- India+Pakistan 8,636	Asia ex- India+Pakistan 12,060	Africa 10,566	Africa 8,318	Africa 7,997	Africa 8,146	Africa 10,428	Africa 12,181	Asia ex- India+Pakistan 14,319	Africa 14,762	Africa 12,995

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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.

Negative (-): The analyst expects his or her industry coverage universe over the next 6-18 months to underperform vs. the relevant broad market benchmark, being the S&P 500 for North America.

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