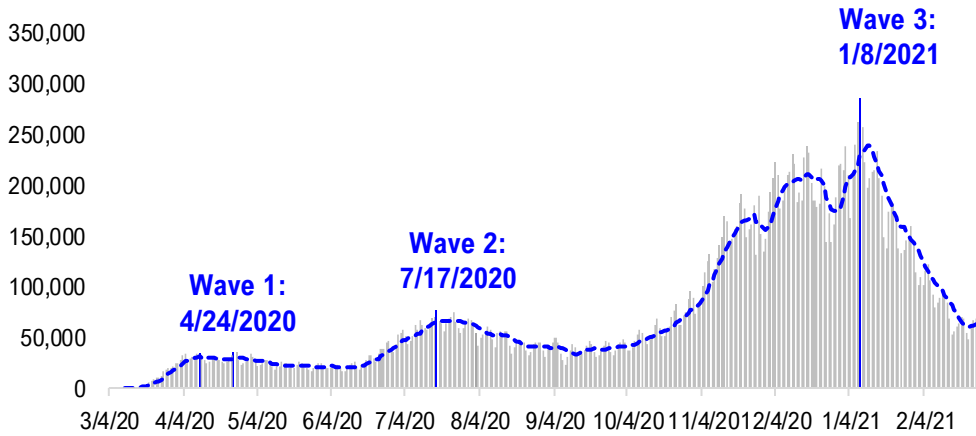


# FSInsight Daily COVID-19 Chartbook

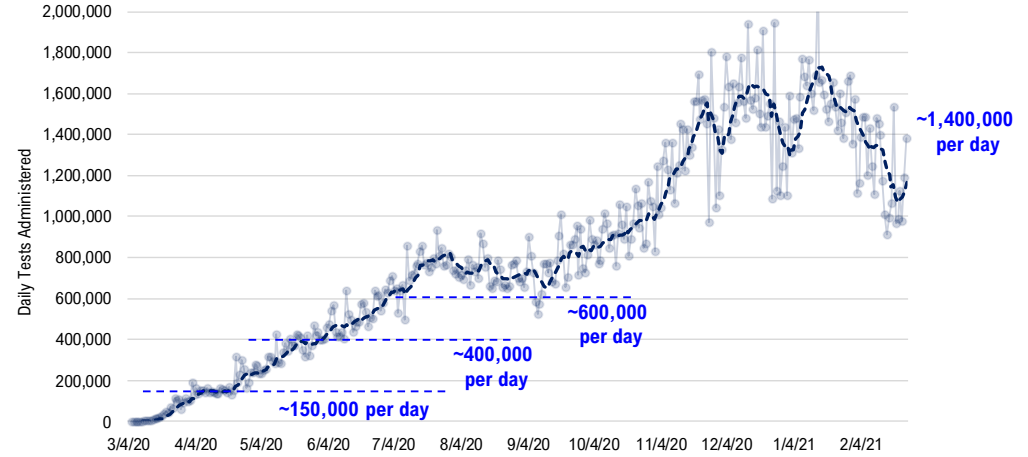


# #1: USA COVID-19 Situation at a Glance...

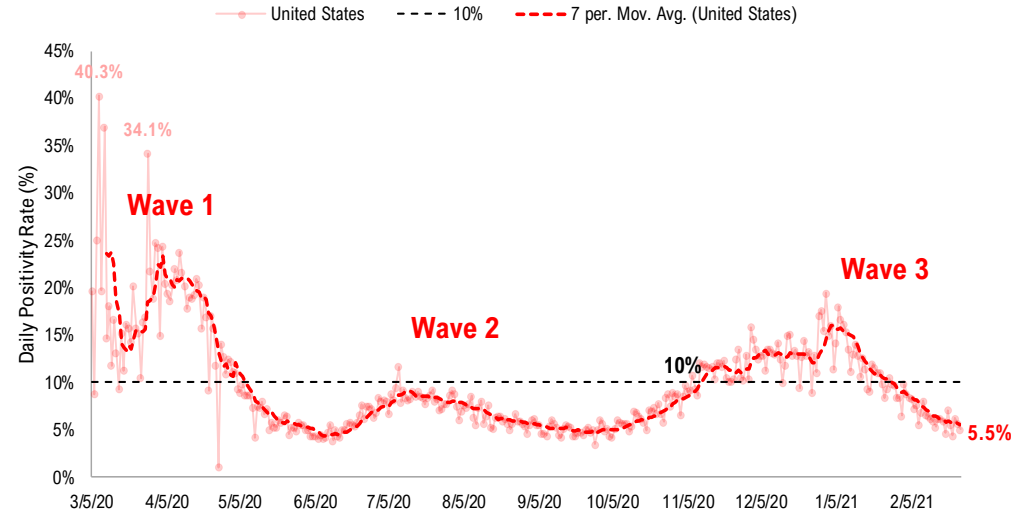
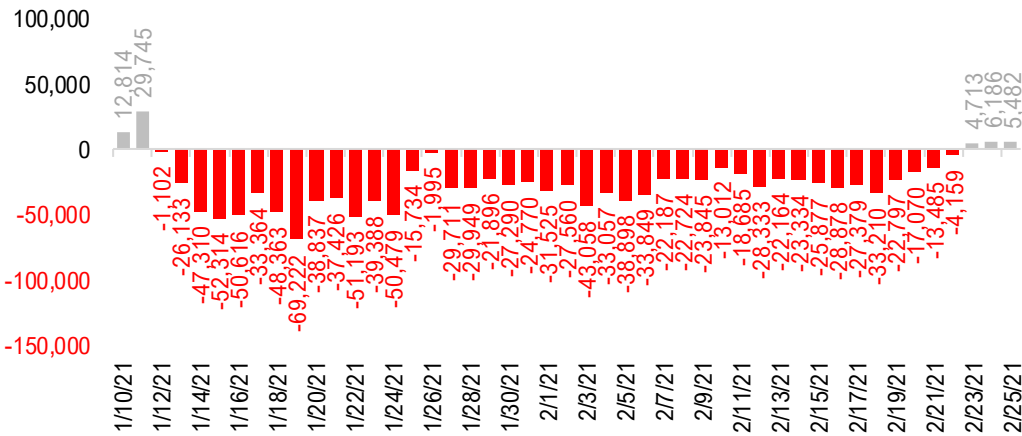
**US daily new cases**



**USA total COVID-19 tests administered**

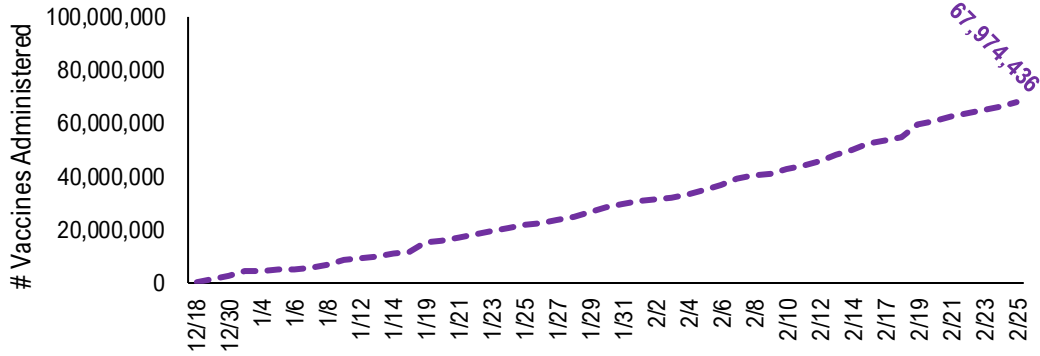


**US daily new cases rolling 7D delta**

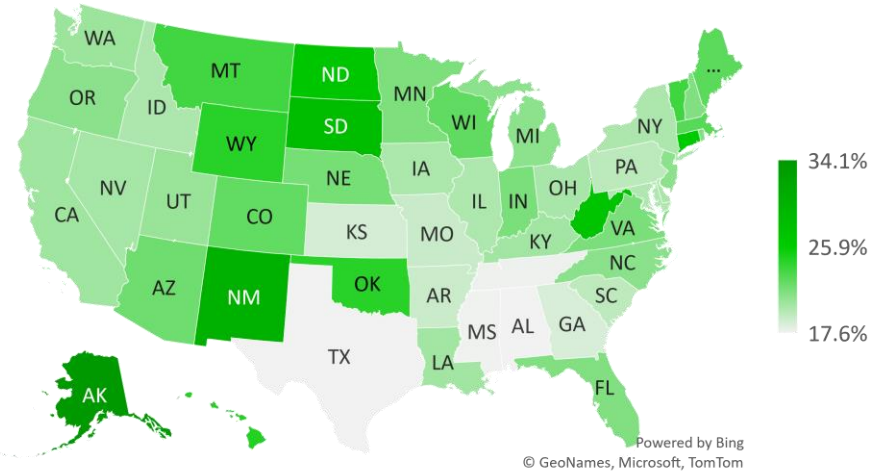


# #2: USA COVID-19 Vaccination Progress at a Glance...

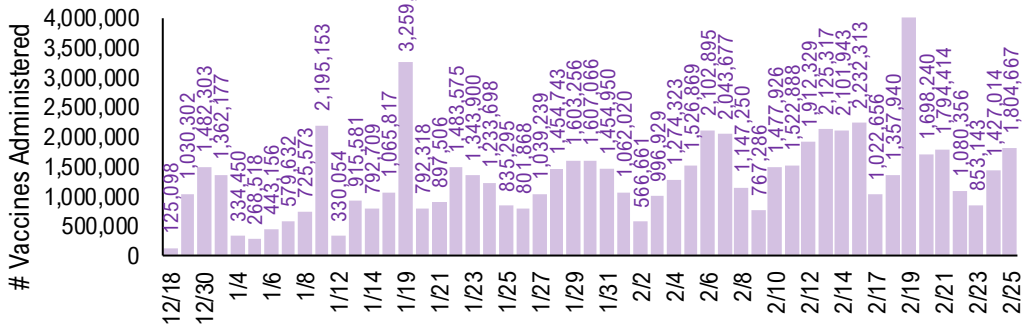
### Cumulative Vaccines Administered



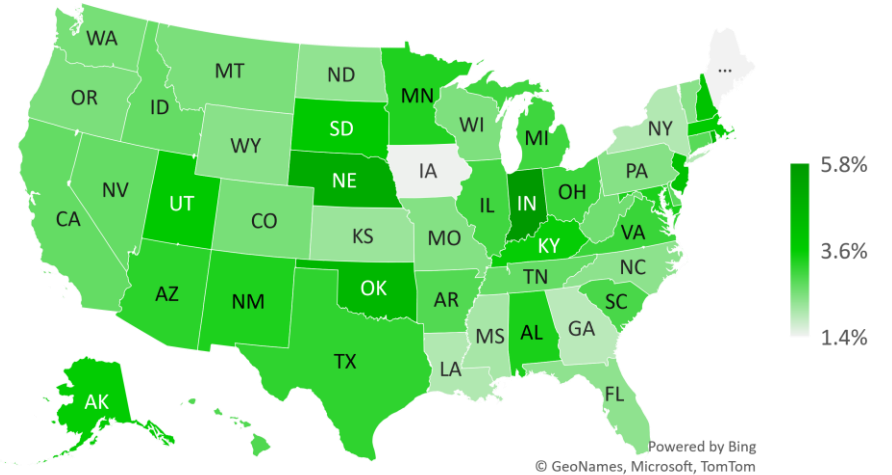
### Cumulative Vaccines Administered as % State Population



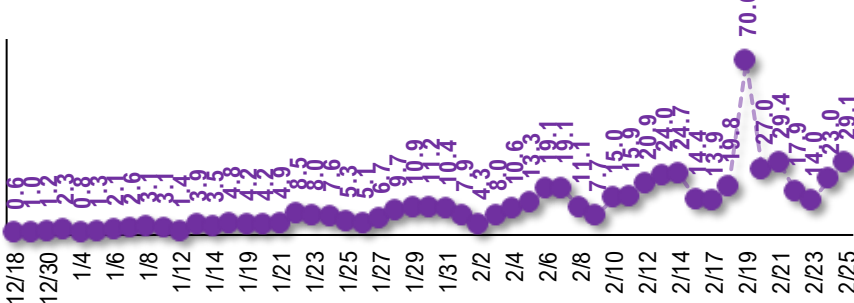
### Daily Vaccines Administered



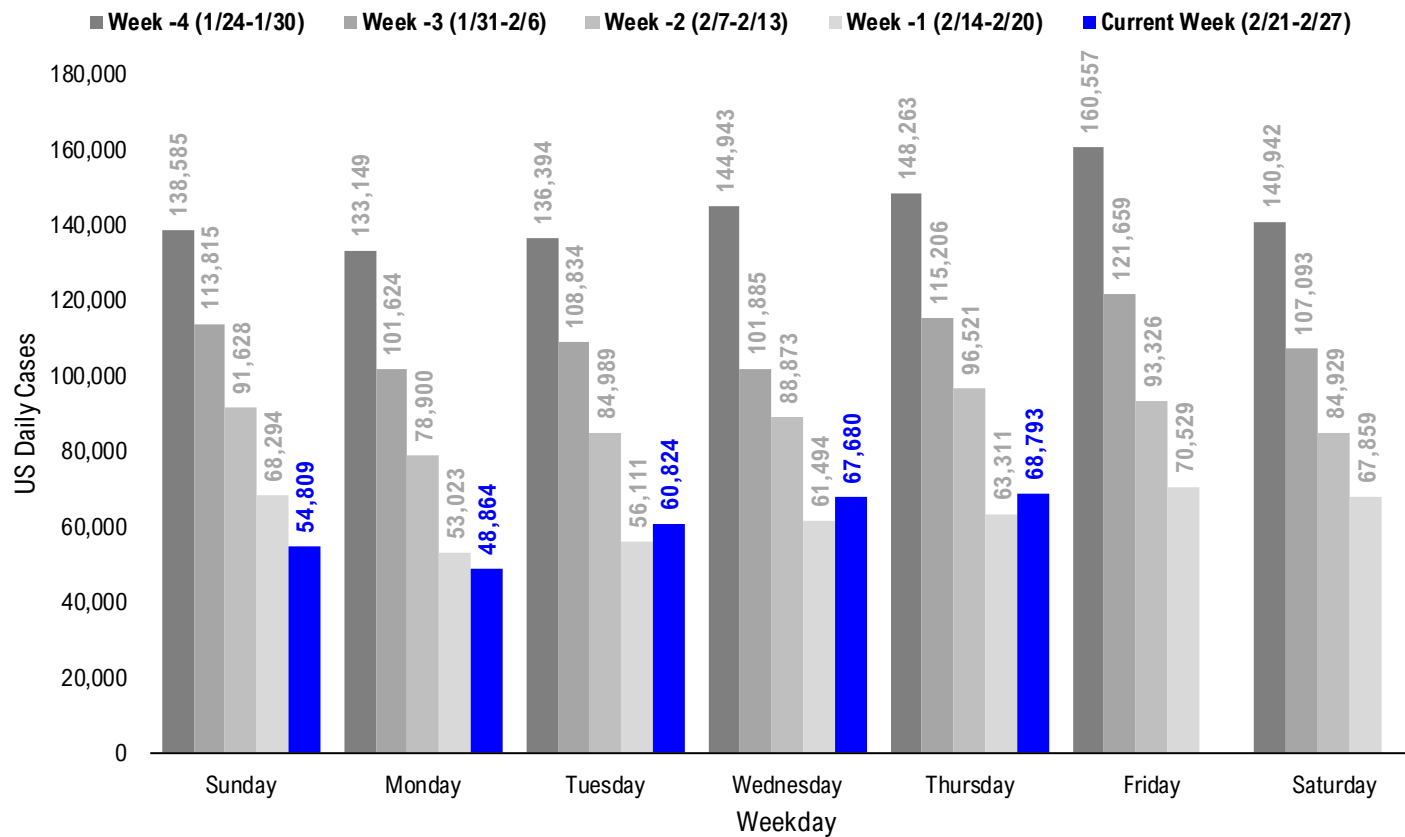
### Implied Weekly Vaccines Administered as % State Population



### Daily Vaccinations / Daily Cases (7D Avg)



# #3: USA COVID-19 Daily Cases Weekday Seasonality (Past 4 Weeks) ...



# #4: USA State COVID-19 Situation at a Glance...

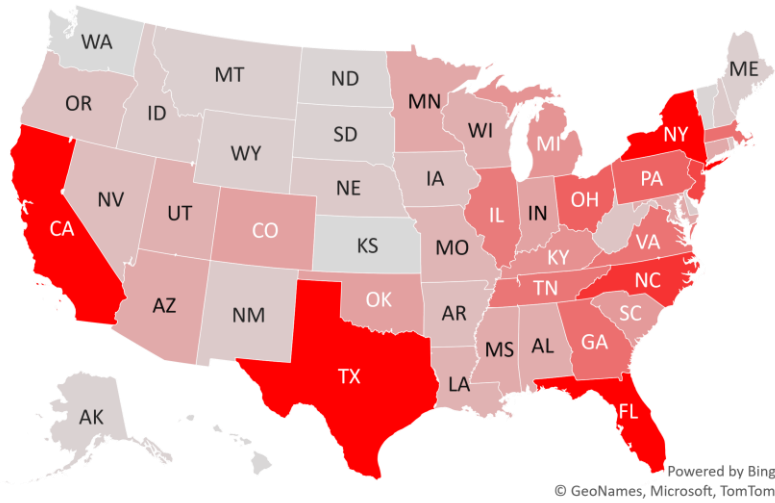
	Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents				Hospitalization			
	% US Pop	% US GDP	7D		Since Peak		% Decline in Daily Cases		7D Net Hospitalization	
			2/25	Delta	2/25	Delta	# Days	%	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
United States	100%	100%	68,793	+5,482	200	+17	47	-76%	-9,631	-2.2%
<b>States:</b>										
1 New York	5.9%	8.1%	8,746	+1,952	370	+33	47	-60%	-731	(1.4%)
2 Florida	6.5%	5.0%	6,640	+1,523	301	+10	48	-66%	-410	(1.0%)
3 California	11.9%	14.6%	4,965	-608	116	-14	46	-91%	-2,046	(5.3%)
4 Texas	8.7%	8.8%	4,912	+2,222	201	+102	49	-73%	-1,150	(3.8%)
5 North Carolina	3.2%	2.7%	3,351	-565	261	-27	47	-74%	-394	(2.0%)
6 New Jersey	2.7%	3.0%	2,987	+382	301	-48	47	-56%	-295	(1.7%)
7 Ohio	3.5%	3.3%	2,409	+127	200	+26	77	-80%	-254	(1.7%)
8 Pennsylvania	3.9%	3.8%	2,356	-989	208	-30	82	-78%	-162	(1.0%)
9 Georgia	3.2%	2.9%	2,139	-99	204	+7	46	-76%	-534	(3.9%)
10 Massachusetts	2.1%	2.8%	2,108	+68	263	+40	47	-76%	-176	(1.5%)
11 Virginia	2.6%	2.6%	2,036	-268	223	-25	38	-76%	-340	(2.6%)
12 Tennessee	2.1%	1.8%	1,994	+996	237	+103	69	-84%	-111	(1.2%)
13 Illinois	3.8%	4.2%	1,884	-82	147	+12	104	-86%	-192	(1.5%)
14 Kentucky	1.3%	1.0%	1,443	+486	315	+76	48	-72%	-92	(1.0%)
15 Michigan	3.0%	2.6%	1,388	+500	132	+45	99	-85%	-56	(0.8%)
16 South Carolina	1.6%	1.1%	1,265	-831	235	-47	46	-82%	-198	(1.8%)
17 Oklahoma	1.2%	1.0%	1,146	+528	194	+8	46	-86%	-214	(3.8%)
18 Colorado	1.7%	1.8%	1,119	-122	196	+20	96	-81%	-50	(0.7%)
19 Indiana	2.0%	1.8%	1,084	+327	137	+10	82	-88%	-77	(1.1%)
20 Minnesota	1.7%	1.8%	986	+73	132	+7	87	-91%	-22	(0.4%)
21 Maryland	1.8%	2.0%	976	-10	138	+13	46	-77%	-96	(1.7%)
22 Connecticut	1.1%	1.3%	975	+428	358	+202	43	-74%	-83	(1.1%)
23 Arizona	2.2%	1.7%	939	-204	157	-7	53	-91%	-438	(4.1%)
24 Mississippi	0.9%	0.6%	920	+786	217	+43	47	-78%	-31	(0.9%)
25 Alabama	1.5%	1.1%	890	-308	244	+56	49	-76%	-281	(4.2%)
26 Wisconsin	1.8%	1.6%	840	+107	123	+8	104	-90%	-36	(0.8%)
27 Utah	1.0%	0.9%	832	-319	245	-29	48	-81%	-43	(0.9%)
28 Louisiana	1.4%	1.3%	779	-53	219	+116	49	-81%	-144	(2.5%)

	Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents				Hospitalization			
	% US Pop	% US GDP	7D		Since Peak		% Decline in Daily Cases		7D Net Hospitalization	
			2/25	Delta	2/25	Delta	# Days	%	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
United States	100%	100%	68,793	+5,482	200	+17	47	-76%	-9,631	-2.2%
<b>States:</b>										
29 Missouri	1.8%	1.5%	727	+9	94	-4	103	-88%	-79	(2.2%)
30 Arkansas	0.9%	0.6%	574	+433	160	+89	46	-80%	-103	(4.5%)
31 Nevada	0.9%	0.8%	571	+83	161	+37	47	-83%	-166	(6.0%)
32 Oregon	1.3%	1.2%	492	+36	112	+14	81	-73%	-29	(1.0%)
33 Iowa	1.0%	0.9%	473	-43	138	+3	104	-89%	-25	(0.9%)
34 Rhode Island	0.3%	0.3%	467	+48	379	+42	82	-76%	-17	(0.7%)
35 West Virginia	0.5%	0.4%	431	+76	178	+16	53	-83%	-19	(0.9%)
36 Nebraska	0.6%	0.6%	324	+28	183	+60	98	-87%	-28	(1.4%)
37 New Hampshire	0.4%	0.4%	310	-124	221	-117	52	-73%	-29	(1.3%)
38 Idaho	0.5%	0.4%	306	+20	189	-27	77	-84%	-21	(1.1%)
39 New Mexico	0.6%	0.5%	299	-108	168	+13	97	-89%	-39	(1.7%)
40 Delaware	0.3%	0.4%	295	+24	243	+34	47	-74%	-33	(1.7%)
41 Maine	0.4%	0.3%	217	-1	130	+27	41	-79%	-22	(2.1%)
42 Wyoming	0.2%	0.2%	214	+133	174	-54	98	-90%	-11	(1.6%)
43 Montana	0.3%	0.2%	203	+3	198	+23	102	-85%	-34	(2.5%)
44 District of Columbia	0.2%	0.7%	179	+58	173	+32	46	-65%	-6	(0.7%)
45 South Dakota	0.3%	0.3%	156	-30	237	+51	103	-89%	8	0.7%
46 Alaska	0.2%	0.3%	150	-60	173	-159	82	-84%	8	0.9%
47 North Dakota	0.2%	0.3%	90	-43	135	-36	103	-94%	-6	(1.0%)
48 Puerto Rico	1.0%	0.5%	85	+27	25	-40	68	-93%	-49	(5.6%)
49 Vermont	0.2%	0.2%	72	-81	124	-29	47	-63%	-12	(1.7%)
50 Hawaii	0.4%	0.5%	38	-27	32	+6	180	-85%	-5	(1.4%)
51 U.S. Virgin Islands	0.0%	0.0%	10	-3	137	+87	188	-68%	0	0.0%
52 Guam	0.0%	0.0%	1	-1	6	-6	107	-99%	2	(3.0%)
53 Washington	2.3%	2.7%	0	-1,022	56	-91	92	-90%	-170	(4.4%)
54 Northern Mariana	0.0%	0.0%	0	+0	0	-6	121	-100%	0	0.0%
55 Kansas	0.9%	0.8%	0	+0	128	-17	92	-92%	-86	(2.1%)
56 American Samoa	0.0%	0.0%	0	+0	0	+0	0	0%	0	

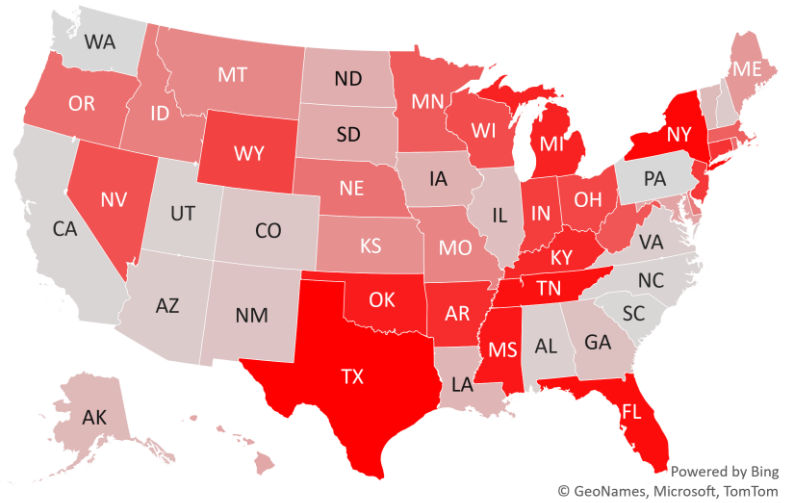


# #5: USA COVID-19 Heat Map...

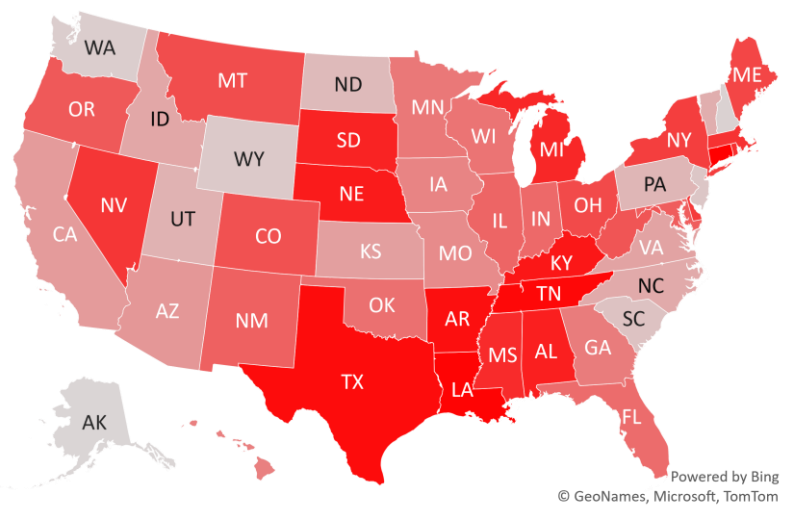
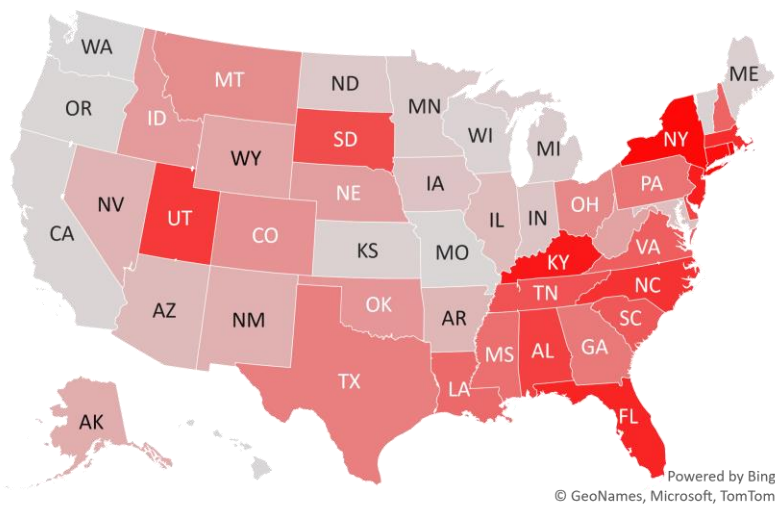
### Daily Case Increases



### 7D Delta in Daily New Cases



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



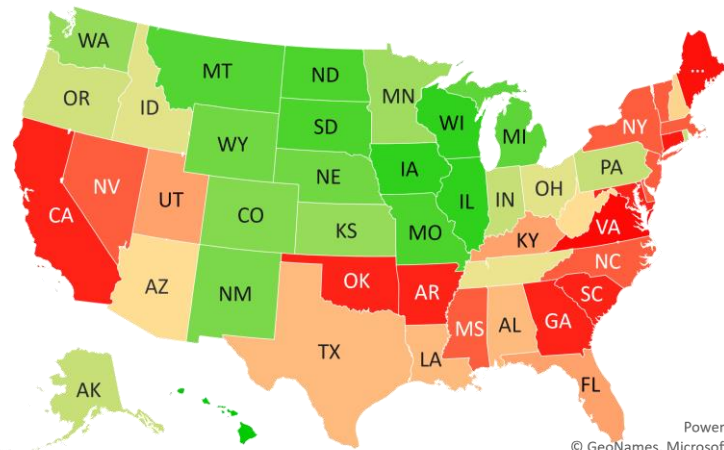
# #6: # of Days since Daily Case Peaked by States...

## # Days since Daily Cases (3D Avg) Peak (as of 2/25)

Sorted				
	Peak Date	2/25/21	% off the Peak	% US Pop
United States	1/9/21	47	-76%	100%
<b>States:</b>				
U.S. Virgin Islands	8/21/20	188	-68%	0.0%
Hawaii	8/29/20	180	-85%	0.4%
Northern Mariana Island	10/27/20	121	-100%	0.0%
Guam	11/10/20	107	-99%	0.0%
Wisconsin	11/13/20	104	-90%	1.8%
Illinois	11/13/20	104	-86%	3.8%
Iowa	11/13/20	104	-89%	1.0%
South Dakota	11/14/20	103	-89%	0.3%
North Dakota	11/14/20	103	-94%	0.2%
Missouri	11/14/20	103	-88%	1.8%
Montana	11/15/20	102	-85%	0.3%
Michigan	11/18/20	99	-85%	3.0%
Wyoming	11/19/20	98	-90%	0.2%
Nebraska	11/19/20	98	-87%	0.6%
New Mexico	11/20/20	97	-89%	0.6%
Colorado	11/21/20	96	-81%	1.7%
Washington	11/25/20	92	-90%	2.3%
Kansas	11/25/20	92	-92%	0.9%
Minnesota	11/30/20	87	-91%	1.7%
Rhode Island	12/5/20	82	-76%	0.3%
Pennsylvania	12/5/20	82	-78%	3.9%
Indiana	12/5/20	82	-88%	2.0%
Alaska	12/5/20	82	-84%	0.2%
Oregon	12/6/20	81	-73%	1.3%
Ohio	12/10/20	77	-80%	3.5%
Idaho	12/10/20	77	-84%	0.5%
Tennessee	12/18/20	69	-84%	2.1%
Puerto Rico	12/19/20	68	-93%	1.0%

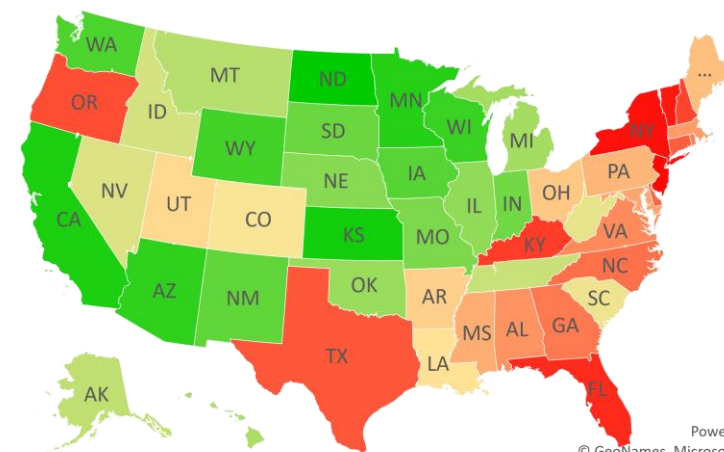
Sorted				
	Peak Date	2/25/21	% off the Peak	% US Pop
United States	1/9/21	47	-76%	100%
<b>States:</b>				
West Virginia	1/3/21	53	-83%	0.5%
Arizona	1/3/21	53	-91%	2.2%
New Hampshire	1/4/21	52	-73%	0.4%
Texas	1/7/21	49	-73%	8.7%
Louisiana	1/7/21	49	-81%	1.4%
Alabama	1/7/21	49	-76%	1.5%
Utah	1/8/21	48	-81%	1.0%
Kentucky	1/8/21	48	-72%	1.3%
Florida	1/8/21	48	-66%	6.5%
Vermont	1/9/21	47	-63%	0.2%
New York	1/9/21	47	-60%	5.9%
Nevada	1/9/21	47	-83%	0.9%
New Jersey	1/9/21	47	-56%	2.7%
North Carolina	1/9/21	47	-74%	3.2%
Mississippi	1/9/21	47	-78%	0.9%
Massachusetts	1/9/21	47	-76%	2.1%
Delaware	1/9/21	47	-74%	0.3%
South Carolina	1/10/21	46	-82%	1.6%
Oklahoma	1/10/21	46	-86%	1.2%
Maryland	1/10/21	46	-77%	1.8%
Georgia	1/10/21	46	-76%	3.2%
District of Columbia	1/10/21	46	-65%	0.2%
California	1/10/21	46	-91%	11.9%
Arkansas	1/10/21	46	-80%	0.9%
Connecticut	1/13/21	43	-74%	1.1%
Maine	1/15/21	41	-79%	0.4%
Virginia	1/18/21	38	-76%	2.6%

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



Powered by Bing  
© GeoNames, Microsoft, TomTom

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



Powered by Bing  
© GeoNames, Microsoft, TomTom

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

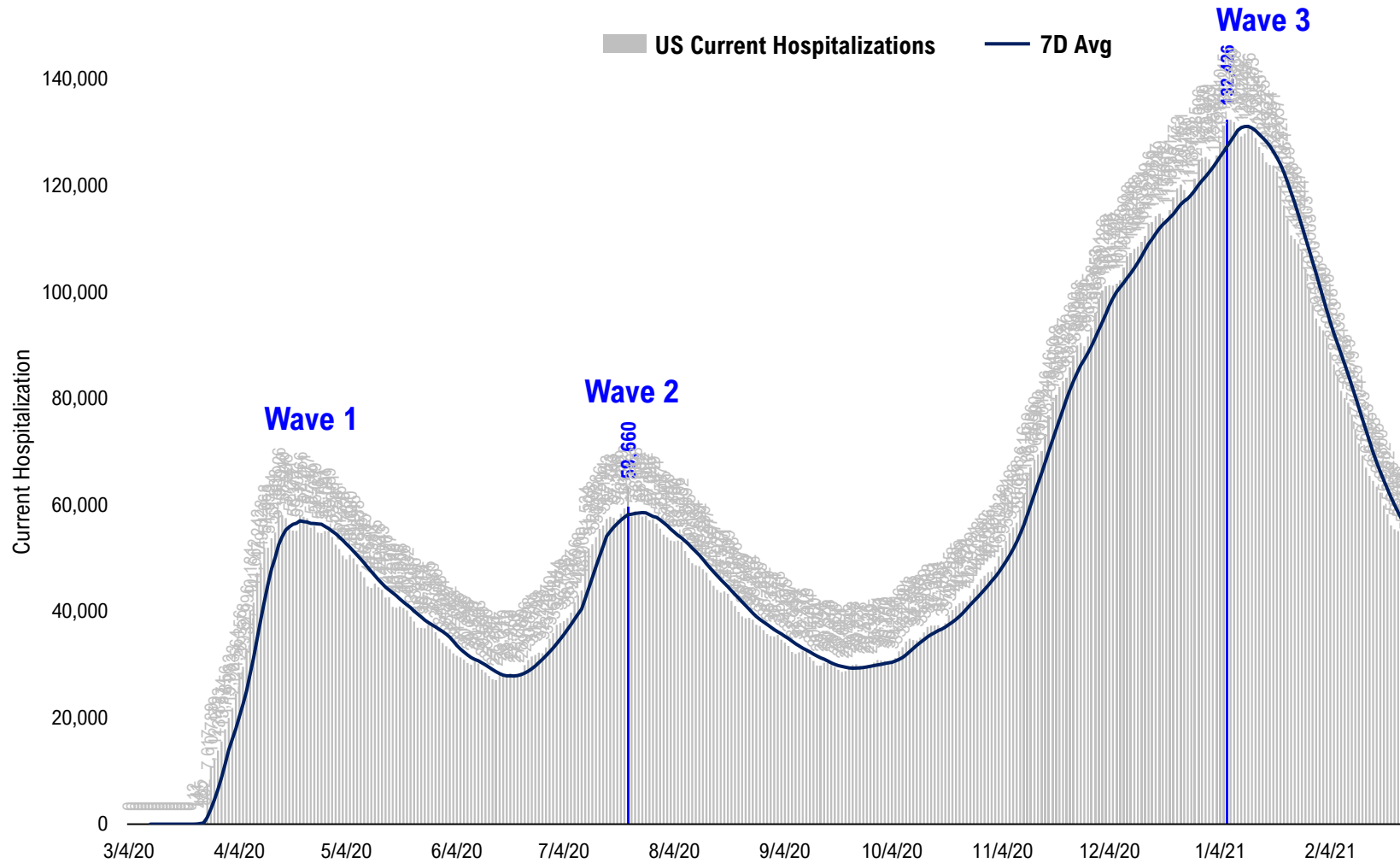
	Sorted				
	7D Ago	Last 3-day Trend			
	2/18/21	2/23/21	2/24/21	2/25/21	vs 7D ago
United States	63,311	60,824	67,680	68,793	+5,482
<b>States:</b>					
New York	6,794	6,654	6,189	8,746	<--higher
Florida	5,117	5,610	7,128	6,640	<--higher
California	5,573	3,447	5,303	4,965	
Texas	2,690	7,556	4,991	4,912	<--higher
North Carolina	3,916	1,514	3,346	3,351	
New Jersey	2,605	2,484	2,558	2,987	
Ohio	2,282	2,775	1,842	2,409	
Pennsylvania	3,345	2,830	2,786	2,356	
Georgia	2,238	2,297	2,057	2,139	
Massachusetts	2,040	1,237	2,102	2,108	
Virginia	2,304	1,769	1,907	2,036	
Tennessee	998	1,226	1,631	1,994	<--higher
Illinois	1,966	1,665	2,022	1,884	
Kentucky	957	1,487	1,294	1,443	<--higher
Michigan	888	1,316	1,245	1,388	<--higher
South Carolina	2,096	986	1,372	1,265	
Oklahoma	618	359	798	1,146	<--higher
Colorado	1,241	1,096	1,168	1,119	
Indiana	757	679	1,006	1,084	<--higher
Minnesota	913	500	754	986	
Maryland	986	662	862	976	
Connecticut	547	1,357	1,493	975	<--higher
Arizona	1,143	1,184	1,310	939	
Mississippi	134	348	669	920	<--higher
Alabama	1,198	1,453	1,247	890	
Wisconsin	733	566	747	840	
Utah	1,151	716	812	832	
Louisiana	832	1,393	879	779	

	Sorted				
	7D Ago	Last 3-day Trend			
	2/18/21	2/23/21	2/24/21	2/25/21	vs 7D ago
United States	63,311	60,824	67,680	68,793	+5,482
<b>States:</b>					
Missouri	718	443	560	727	
Arkansas	141	419	459	574	<--higher
Nevada	488	398	516	571	
Oregon	456	511	417	492	
Iowa	516	241	589	473	
Rhode Island	419	282	456	467	
West Virginia	355	285	243	431	<--higher
Nebraska	296	357	380	324	
New Hampshire	434	258	335	310	
Idaho	286	282	423	306	
New Mexico	407	312	446	299	
Delaware	271	138	278	295	
Maine	218	142	164	217	
Wyoming	81	44	44	214	<--higher
Montana	200	230	202	203	
District of Columbia	121	89	99	179	<--higher
South Dakota	186	212	262	156	
Alaska	210	53	176	150	
North Dakota	133	104	115	90	
Puerto Rico	58	136	18	85	<--higher
Vermont	153	83	77	72	
Hawaii	65	47	50	38	
U.S. Virgin Islands	13	10	24	10	
Guam	2	0	2	1	
Washington	1,022	582	705	0	
Northern Mariana Islands	0	0	0	0	
Kansas	0	0	1,122	0	
American Samoa	0	0	0	0	



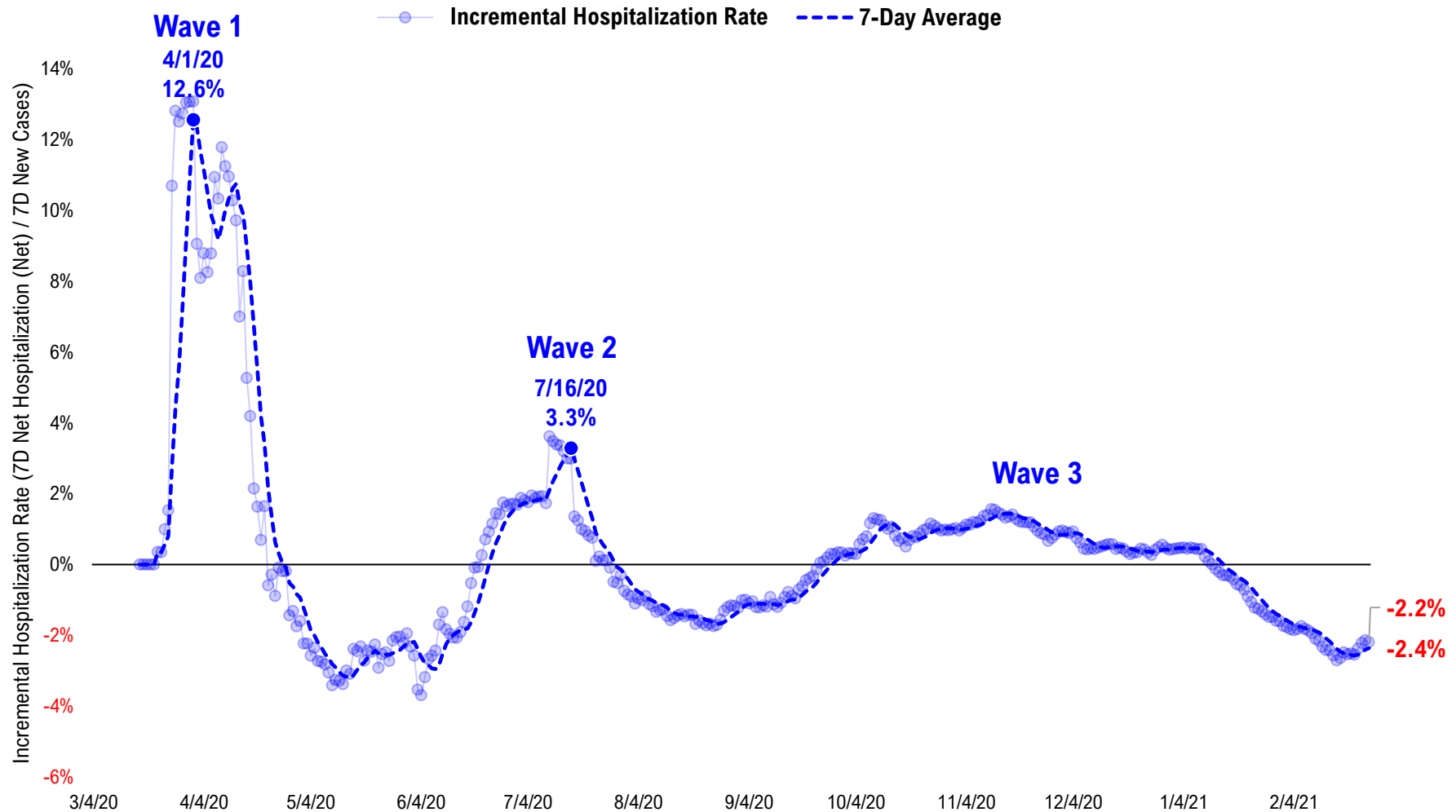
# #8: US Daily Hospitalizations...

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



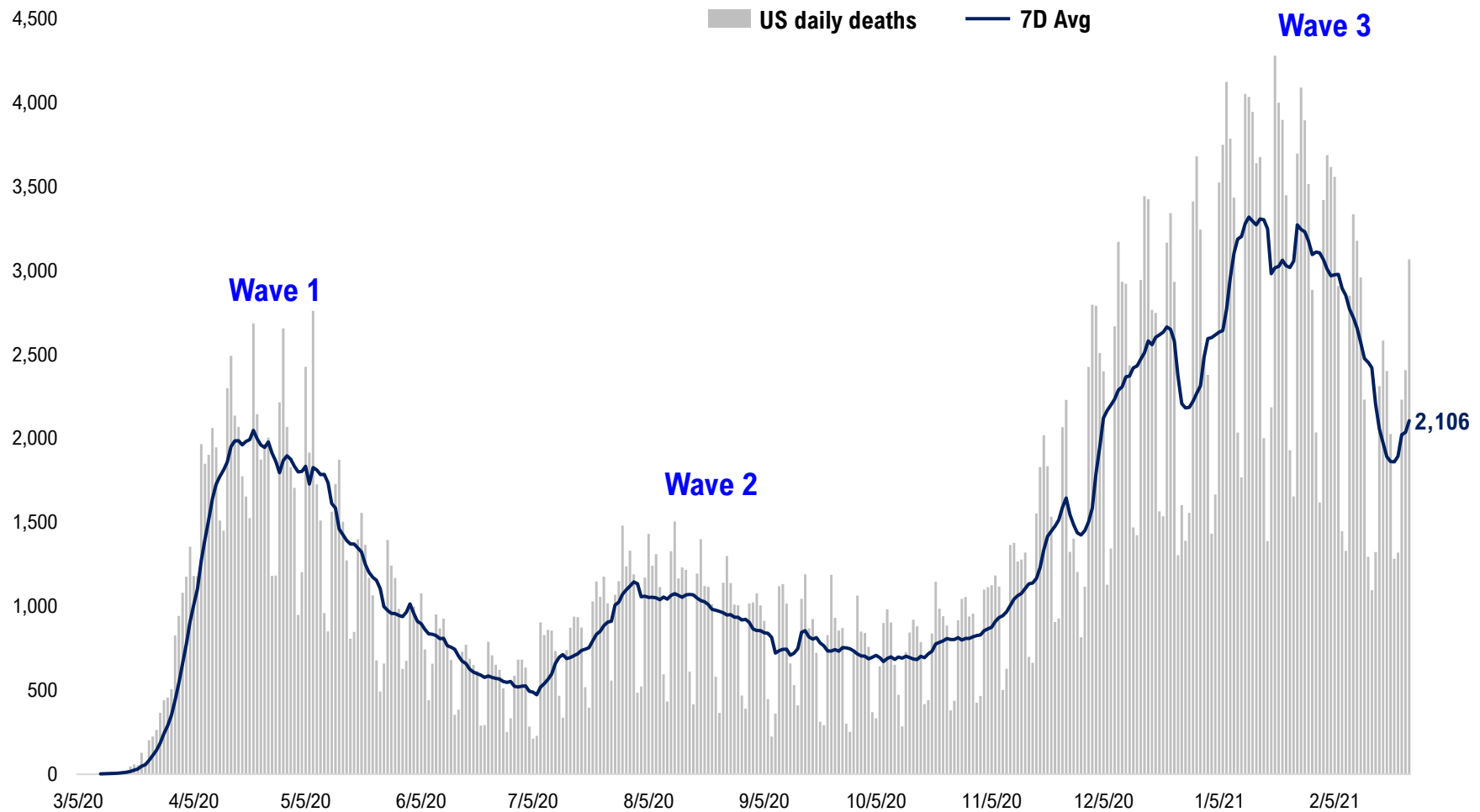
# #9: Incremental Hospitalization Rate...

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



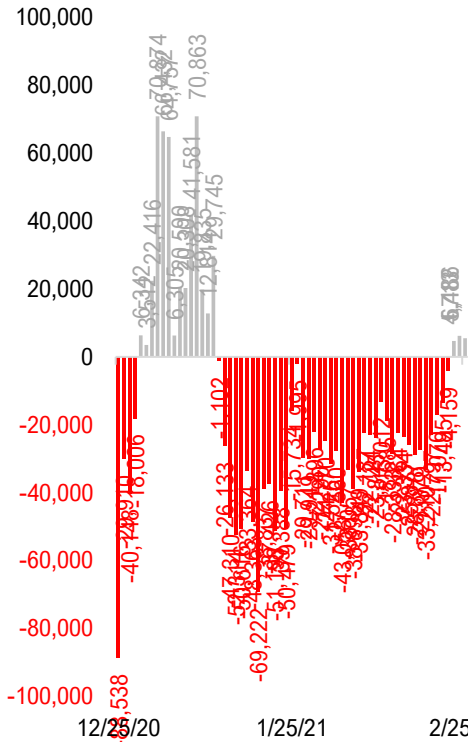
# #10: US Daily New Fatalities...

## US daily COVID-19 Fatalities

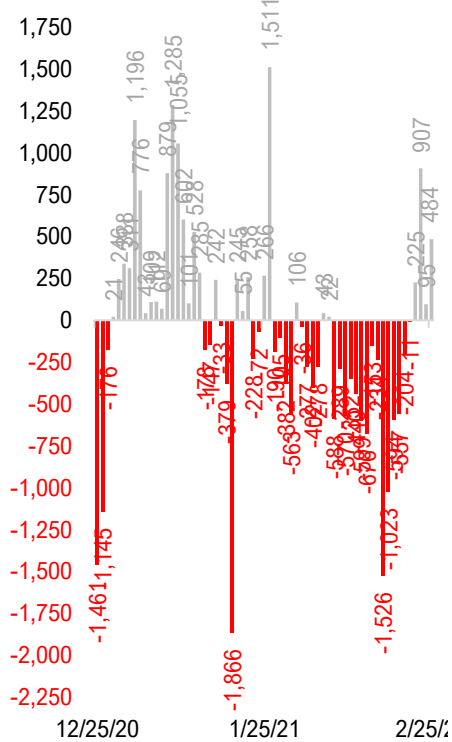


# #11: Rolling 7-Day Change in the Key Metrics... (Past 8 Weeks)

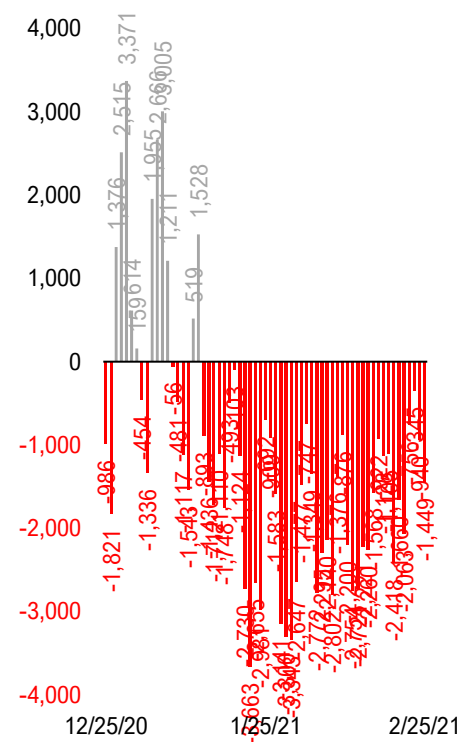
**Daily New Cases**  
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



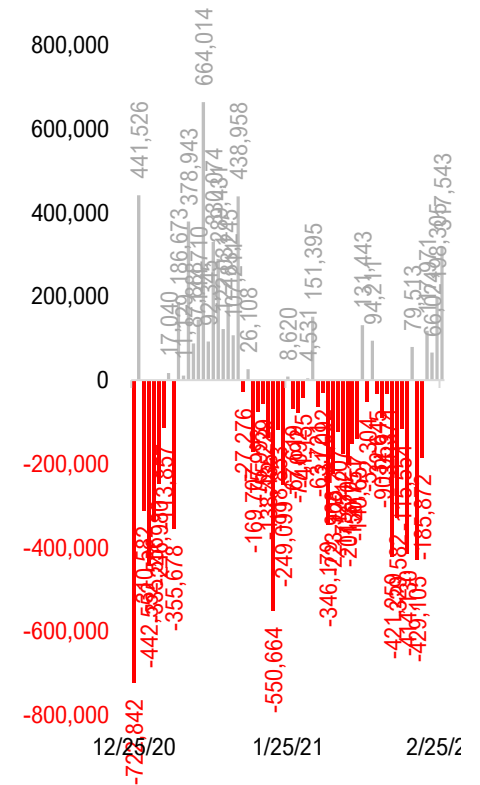
**Daily Deaths**



**Daily Net Hospitalization**  
(Red = more discharge than admission)

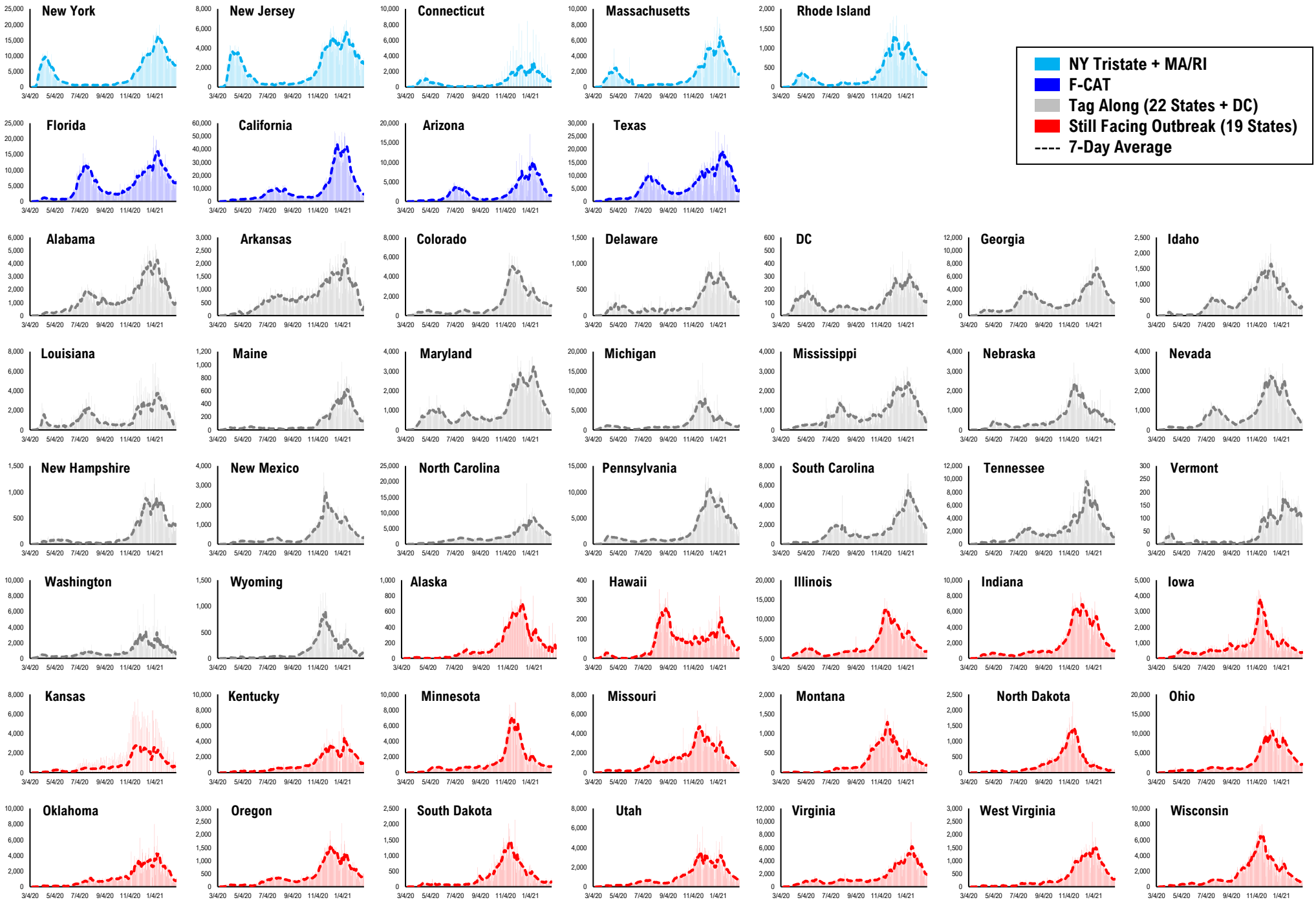


**Daily Tests**



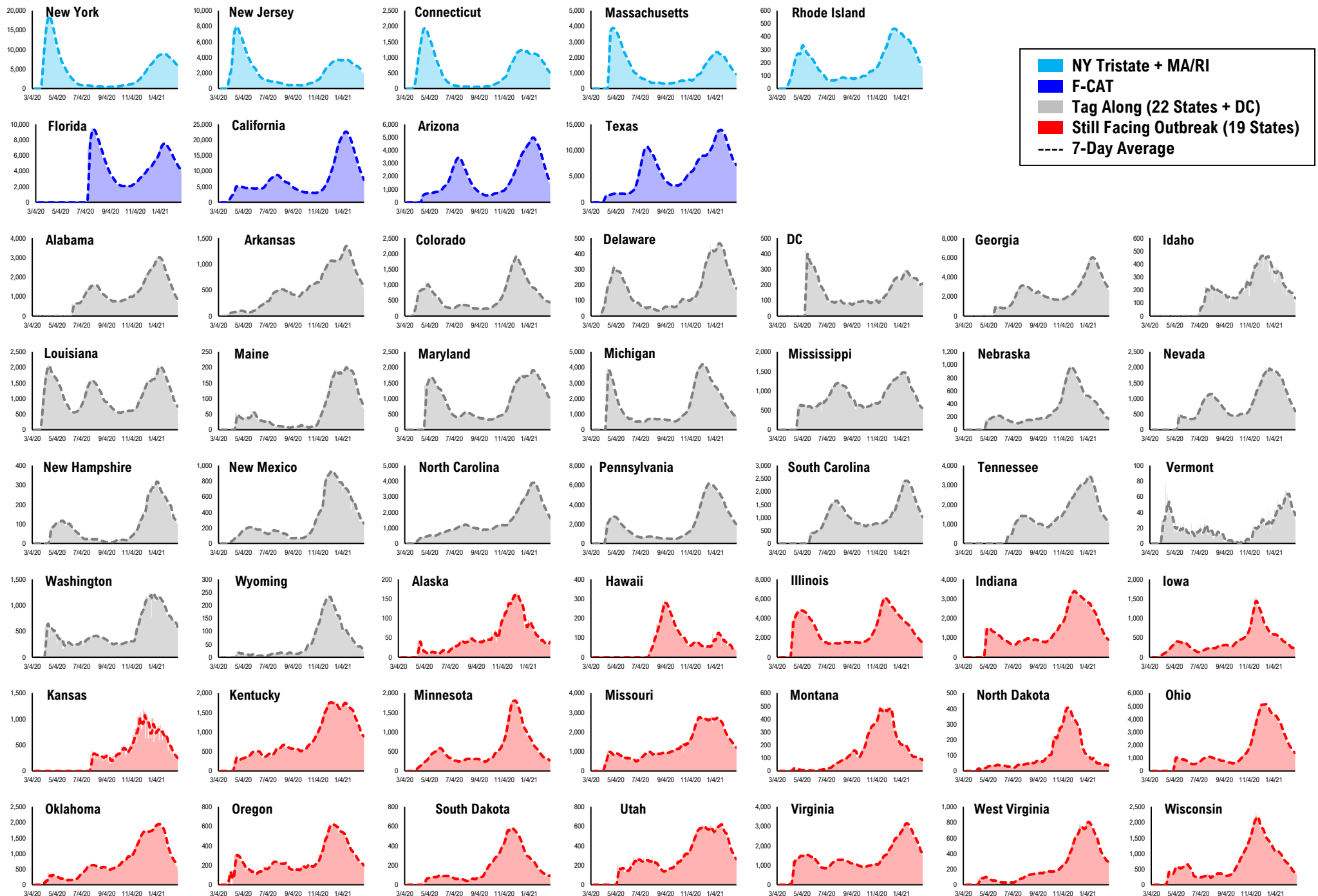
\* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog  
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

# #12: Daily New Cases by States...

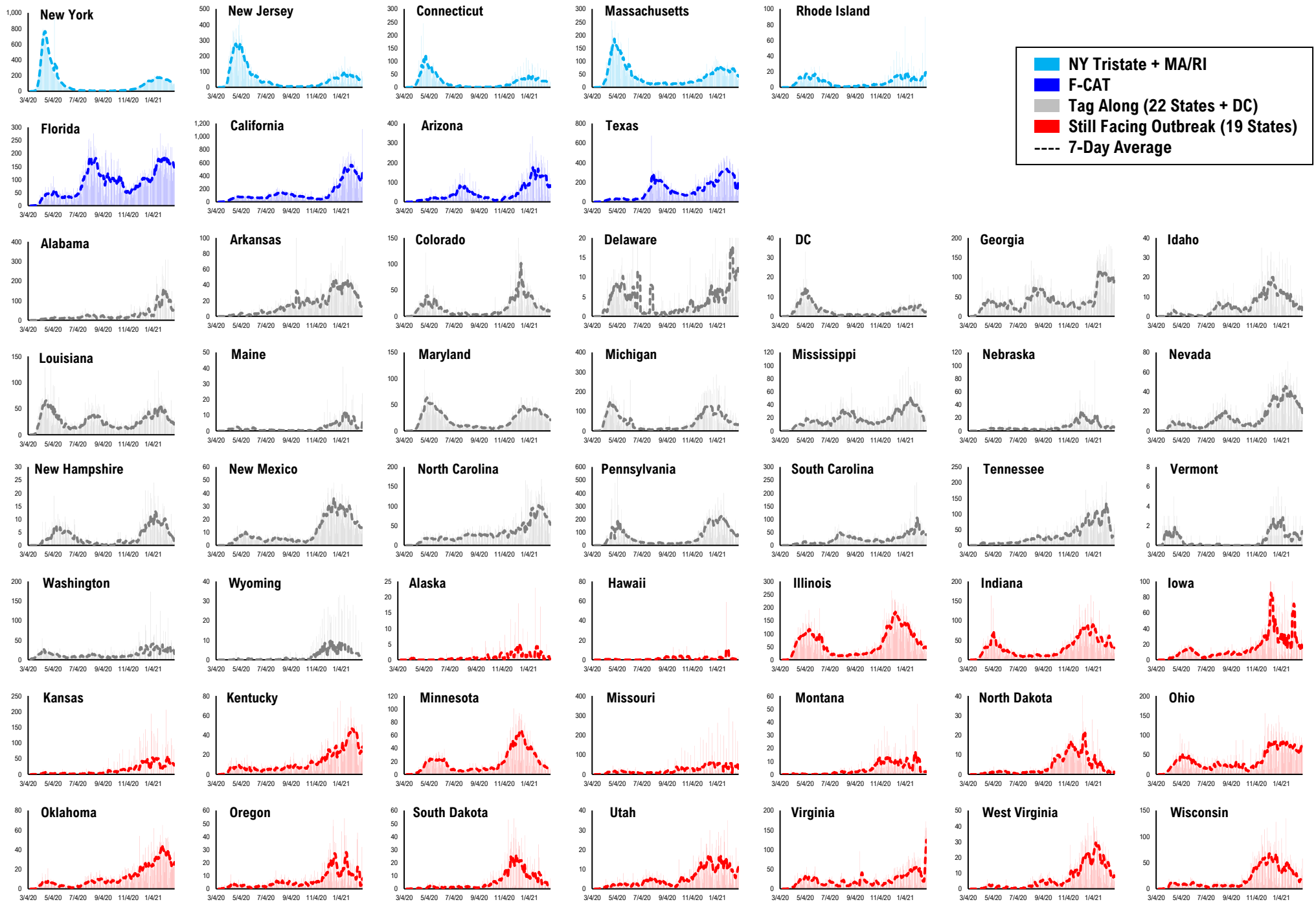




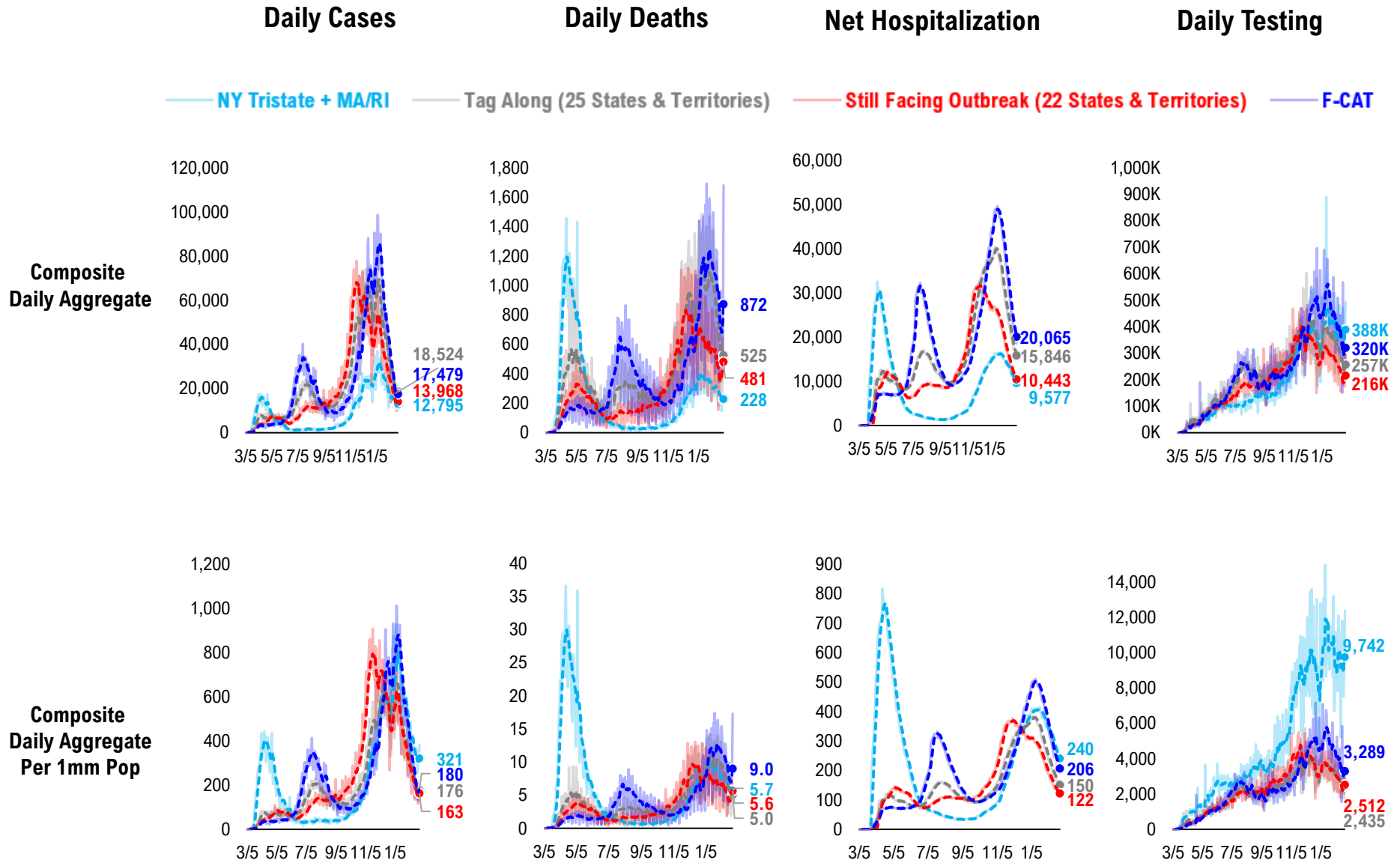
# #13: Current Hospitalizations by States...



# #14: Daily New Deaths by States...

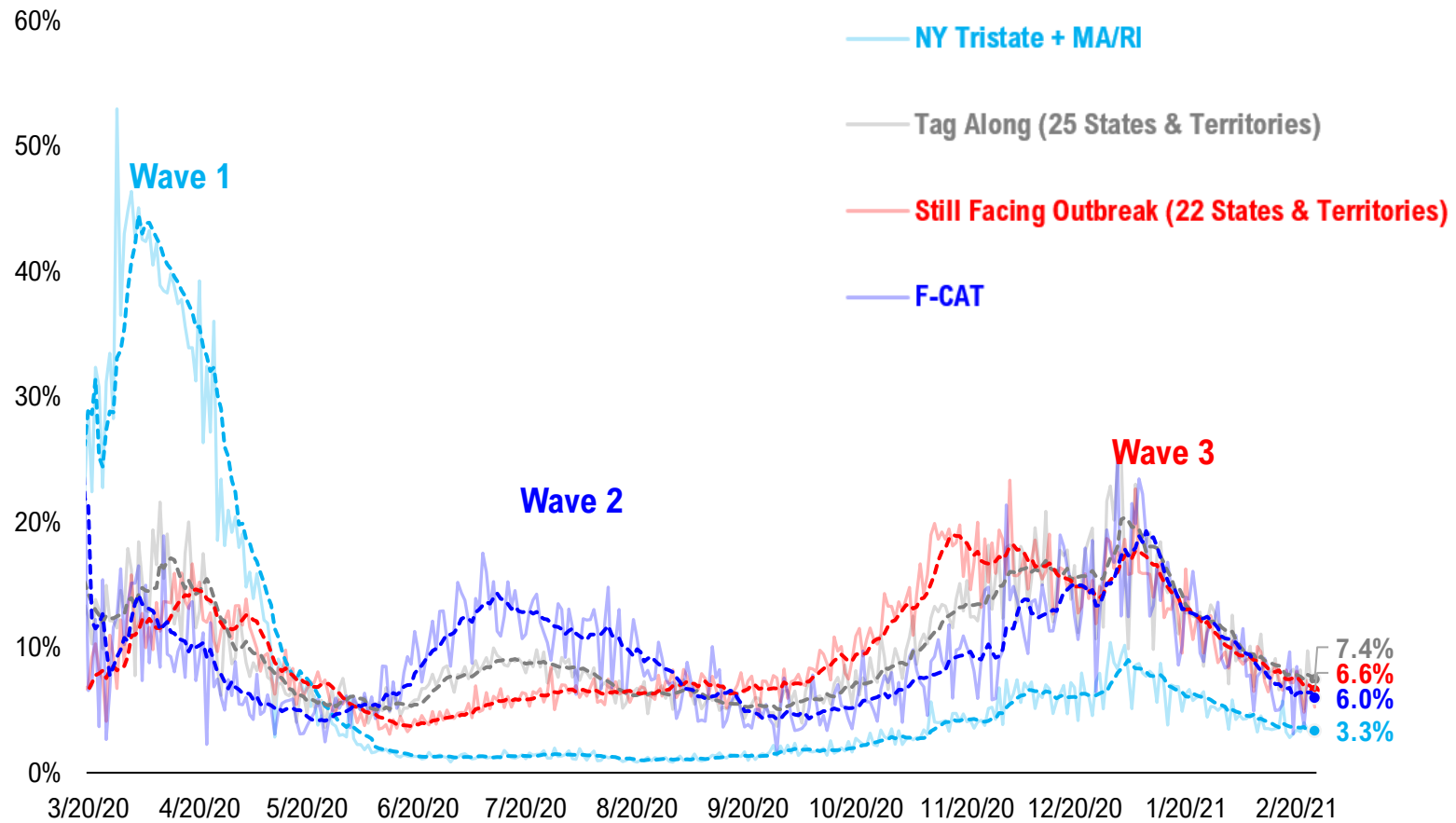


# #15: State COVID-19 situation by Tier...

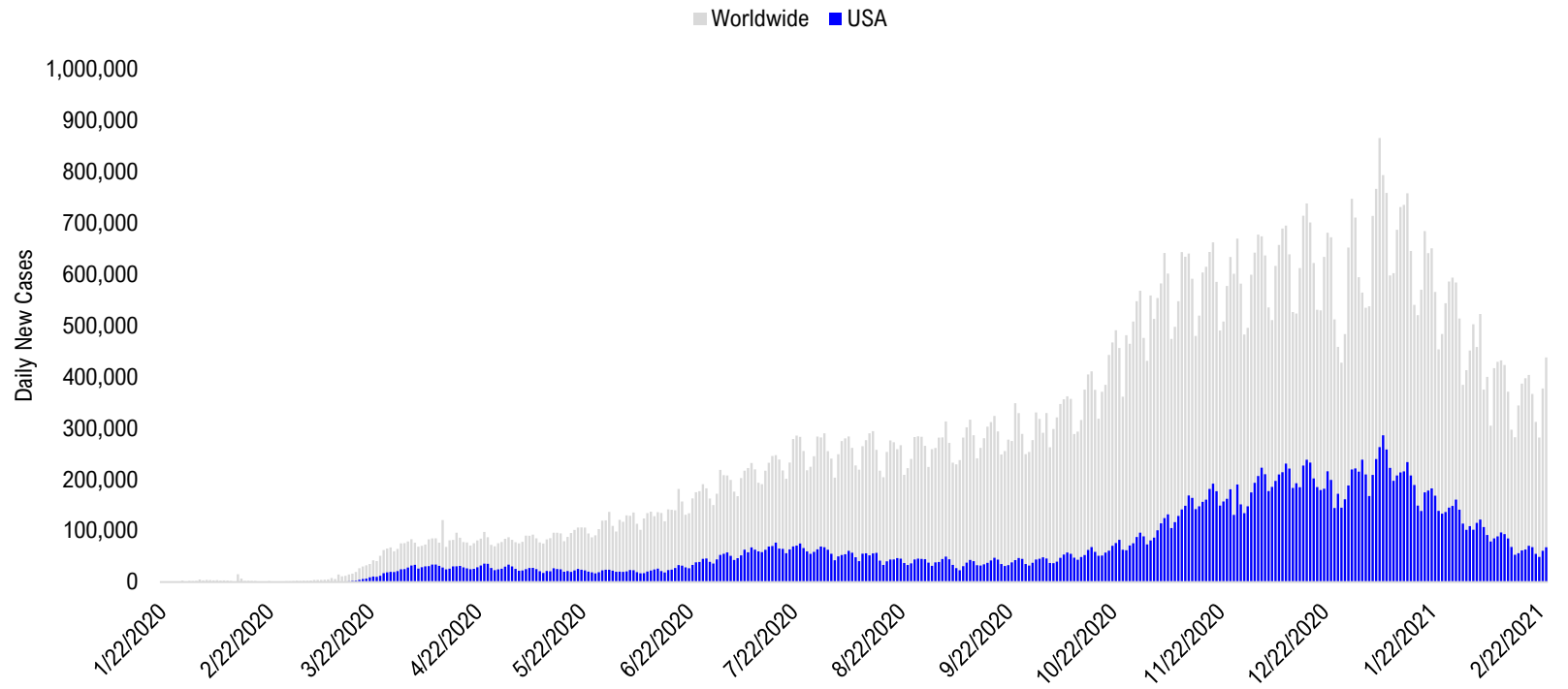


# #16: State COVID-19 Daily Positivity Rate by Tier...

## Composite Daily Positivity Rate



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



Oct 9	Oct 23	Nov 6	Nov 20	Dec 4	Dec 18	Jan 1	Jan 15	Jan 29	Feb 12	Feb 24
Europe 112,288	Europe 223,800	Europe 312,557	Europe 279,289	Europe 258,867	Europe 282,868	Europe 275,313	Europe 266,474	Europe 218,592	Europe 162,010	Europe 146,341
Pakistan + India + Bangladesh 76,149	US + Canada 71,893	US + Canada 116,878	US + Canada 182,604	US + Canada 213,933	US + Canada 239,406	US + Canada 224,124	US + Canada 228,080	US + Canada 155,905	Latin America 98,399	Latin America 84,878
Latin America 69,828	Latin America 69,395	Latin America 59,340	Latin America 68,233	Latin America 88,682	Latin America 108,004	Latin America 96,926	Latin America 139,455	Latin America 122,769	US + Canada 95,948	US + Canada 62,326
US + Canada 54,955	Pakistan + India + Bangladesh 56,907	Pakistan + India + Bangladesh 52,404	Pakistan + India + Bangladesh 50,856	Pakistan + India + Bangladesh 41,815	Pakistan + India + Bangladesh 28,277	Africa 29,285	Africa 33,021	Asia ex- India+Pakistan 28,260	Asia ex- India+Pakistan 18,796	Asia ex- India+Pakistan 16,770
Asia ex- India+Pakistan 13,934	Asia ex- India+Pakistan 15,237	Africa 13,699	Asia ex- India+Pakistan 15,309	Asia ex- India+Pakistan 17,499	Africa 20,279	Asia ex- India+Pakistan 19,749	Asia ex- India+Pakistan 27,255	Africa 20,015	Pakistan + India + Bangladesh 13,206	Pakistan + India + Bangladesh 15,288
Africa 9,962	Africa 10,618	Asia ex- India+Pakistan 13,638	Africa 14,984	Africa 16,694	Asia ex- India+Pakistan 17,898	Pakistan + India + Bangladesh 17,406	Pakistan + India + Bangladesh 19,368	Pakistan + India + Bangladesh 16,944	Africa 12,888	Africa 9,081



# Disclosures

This research is for the clients of FS Insight only. For important disclosures and rating histories regarding sectors or companies that are the subject of this report, please contact your sales representative or FS Insight at 150 East 52nd Street, New York, NY, 10022 USA.

## **Analyst Certification (Reg AC)**

Thomas J. Lee, the research analyst denoted by an “AC” on the cover of this report, hereby certifies that all of the views expressed in this report accurately reflect his personal views, which have not been influenced by considerations of the firm’s business or client relationships.

Neither I, nor a member of my household is an officer, director, or advisory board member of the issuer(s) or has another significant affiliation with the issuer(s) that is/are the subject of this research report. There is a possibility that we will from time to time have long or short positions in, and buy or sell, the securities or derivatives, if any, referred to in this research

## **Conflicts of Interest**

This research contains the views, opinions and recommendations of FS Insight . As of the time of writing and publication of this presentation, FS Insight does not know of, or have reason to know of any material conflicts of interest at the time of the publication of this presentation. The Company has no contractual relationship, nor have we received any compensation from any of the companies listed in this research report.

## **Analyst Industry/Sector Views**

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.

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.

## **General Disclosures**

FS Insight is an independent research company and is not a registered investment advisor and is not acting as a broker dealer under any federal or state securities laws. FS Insight is a member of IRC Securities’ Research Prime Services Platform. IRC Securities is a FINRA registered broker-dealer that is focused on supporting the independent research industry. Certain personnel of FS Insight (i.e. Research Analysts) are registered representatives of IRC Securities, a FINRA member firm registered as a broker-dealer with the Securities and Exchange Commission and certain state securities regulators. As registered representatives and independent contractors of IRC Securities, such personnel may receive commissions paid to or shared with IRC Securities for transactions placed by FS Insight clients directly with IRC Securities or with securities firms that may share commissions with IRC Securities in accordance with applicable SEC and FINRA requirements. IRC Securities does not distribute the research of FS Insight , which is available to select institutional clients that have engaged FS Insight .

As registered representatives of IRC Securities our analysts must follow IRC Securities’ Written Supervisory Procedures. Notable compliance policies include (1) prohibition of insider trading or the facilitation thereof, (2) maintaining client confidentiality, (3) archival of electronic communications, and (4) appropriate use of electronic communications, amongst other compliance related policies.

FS Insight does not have the same conflicts that traditional sell-side research organizations have because FS Insight (1) does not conduct any investment banking activities, (2) does not manage any investment funds, and (3) our clients are only institutional investors.

This research is for the clients of FS Insight only. Additional information is available upon request. Information has been obtained from sources believed to be reliable but FS Insight does not warrant its completeness or accuracy except with respect to any disclosures relative to FS Insight and the analyst’s involvement (if any) with any of the subject companies of the research. All pricing is as of the market close for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, risk tolerance, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies. The recipient of this report must make its own independent decision regarding any securities or financial instruments mentioned herein. Except in circumstances where FS Insight expressly agrees otherwise in writing, FS Insight is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice, including within the meaning of Section 15B of the Securities Exchange Act of 1934. All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client website, FS Insight .com. Not all research content is redistributed to our clients or made available to third-party aggregators or the media. Please contact your sales representative if you would like to receive any of our research publications.

**Copyright 2021 FS Insight LLC. All rights reserved. No part of this material may be reprinted, sold or redistributed without the prior written consent of FS Insight LLC.**