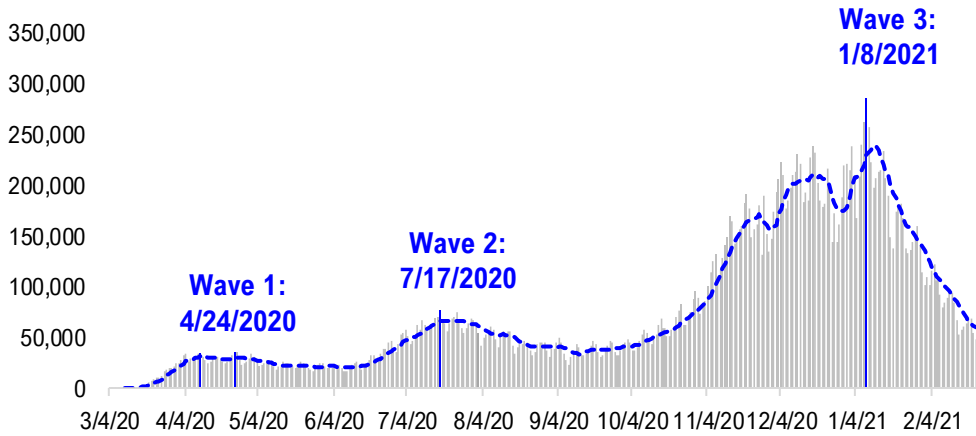


FSInsight Daily COVID-19 Chartbook

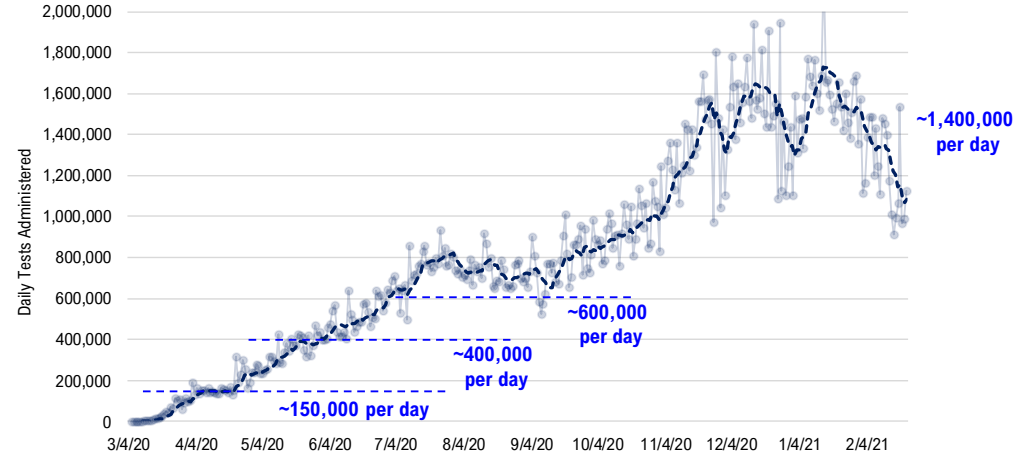


#1: USA COVID-19 Situation at a Glance...

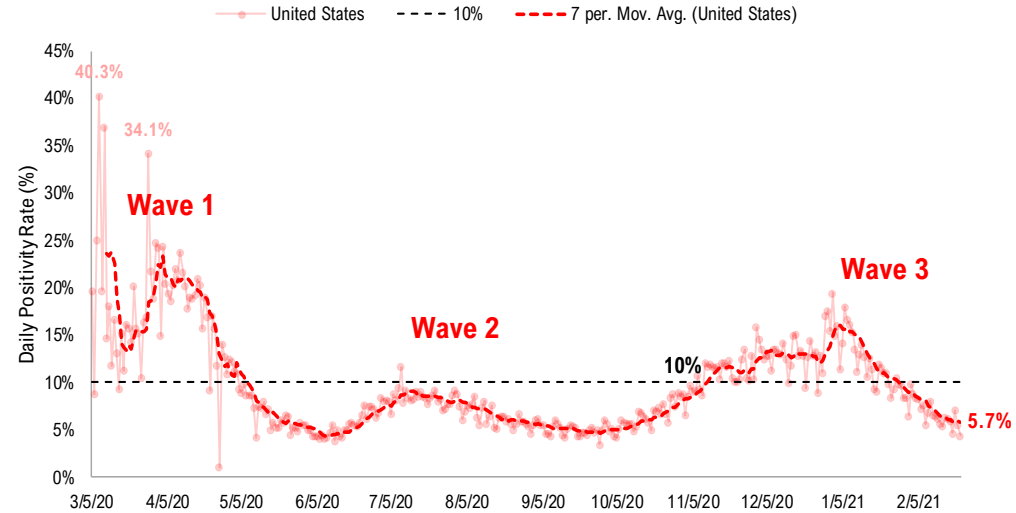
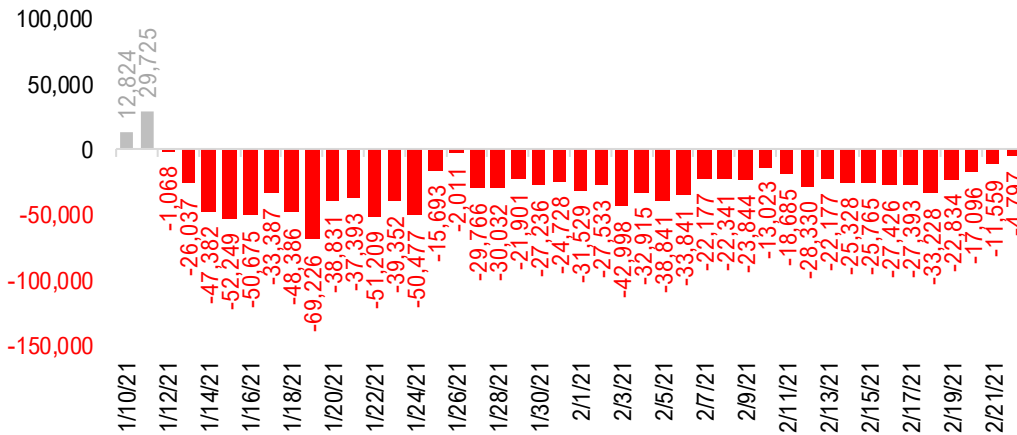
US daily new cases



USA total COVID-19 tests administered

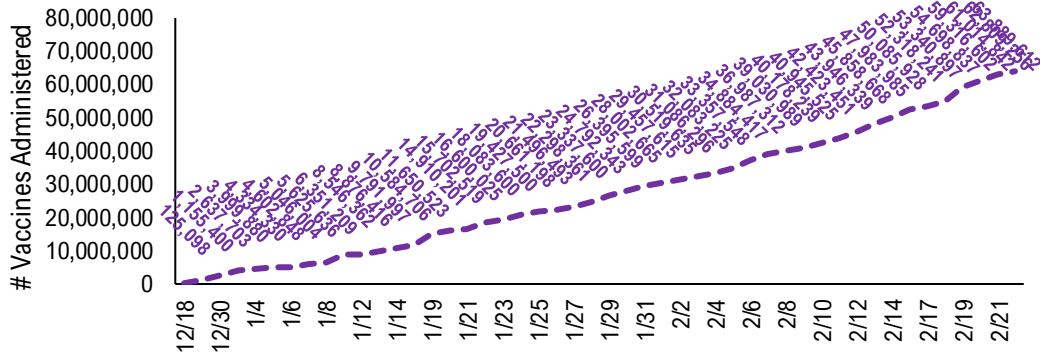


US daily new cases rolling 7D delta

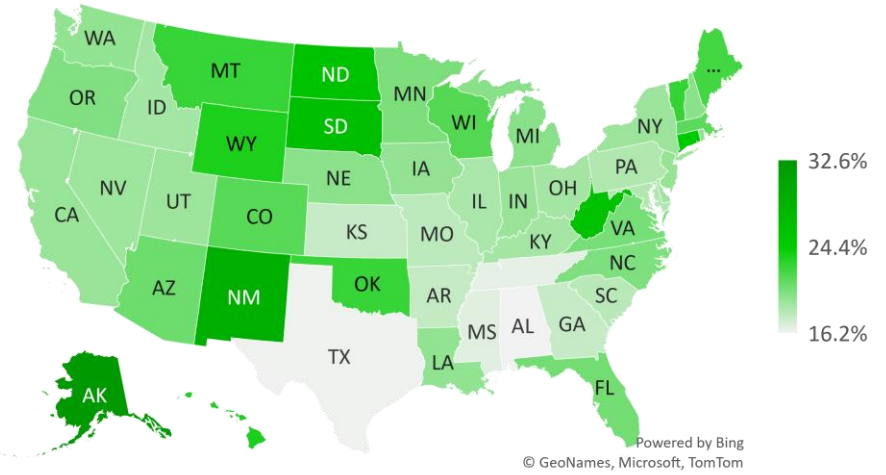


#2: USA COVID-19 Vaccination Progress at a Glance...

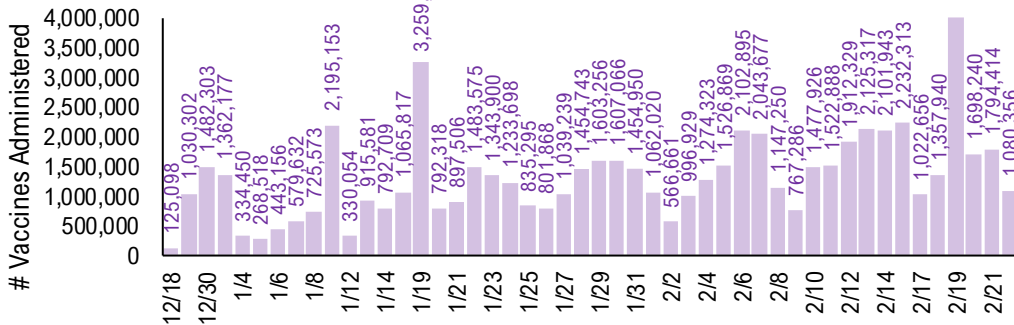
Cumulative Vaccines Administered



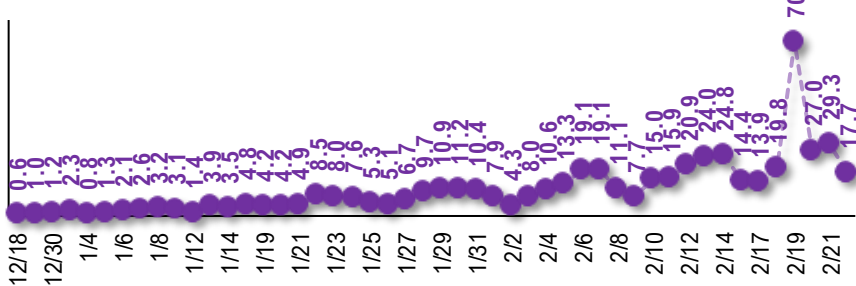
Cumulative Vaccines Administered as % State Population



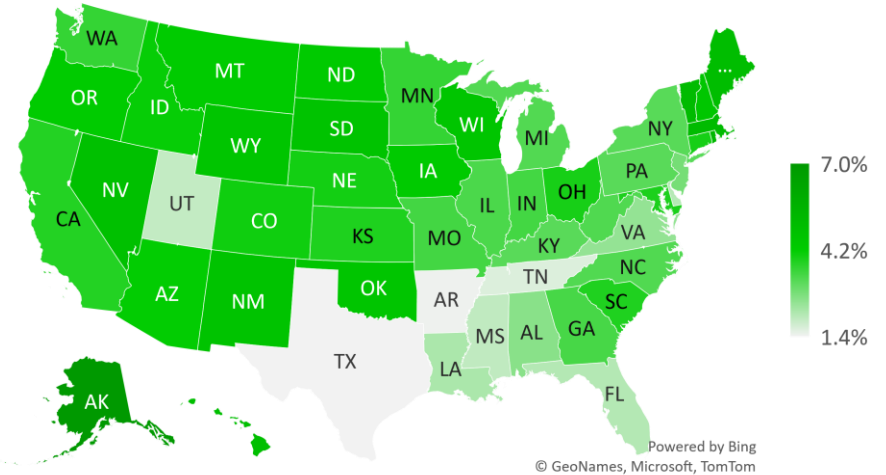
Daily Vaccines Administered



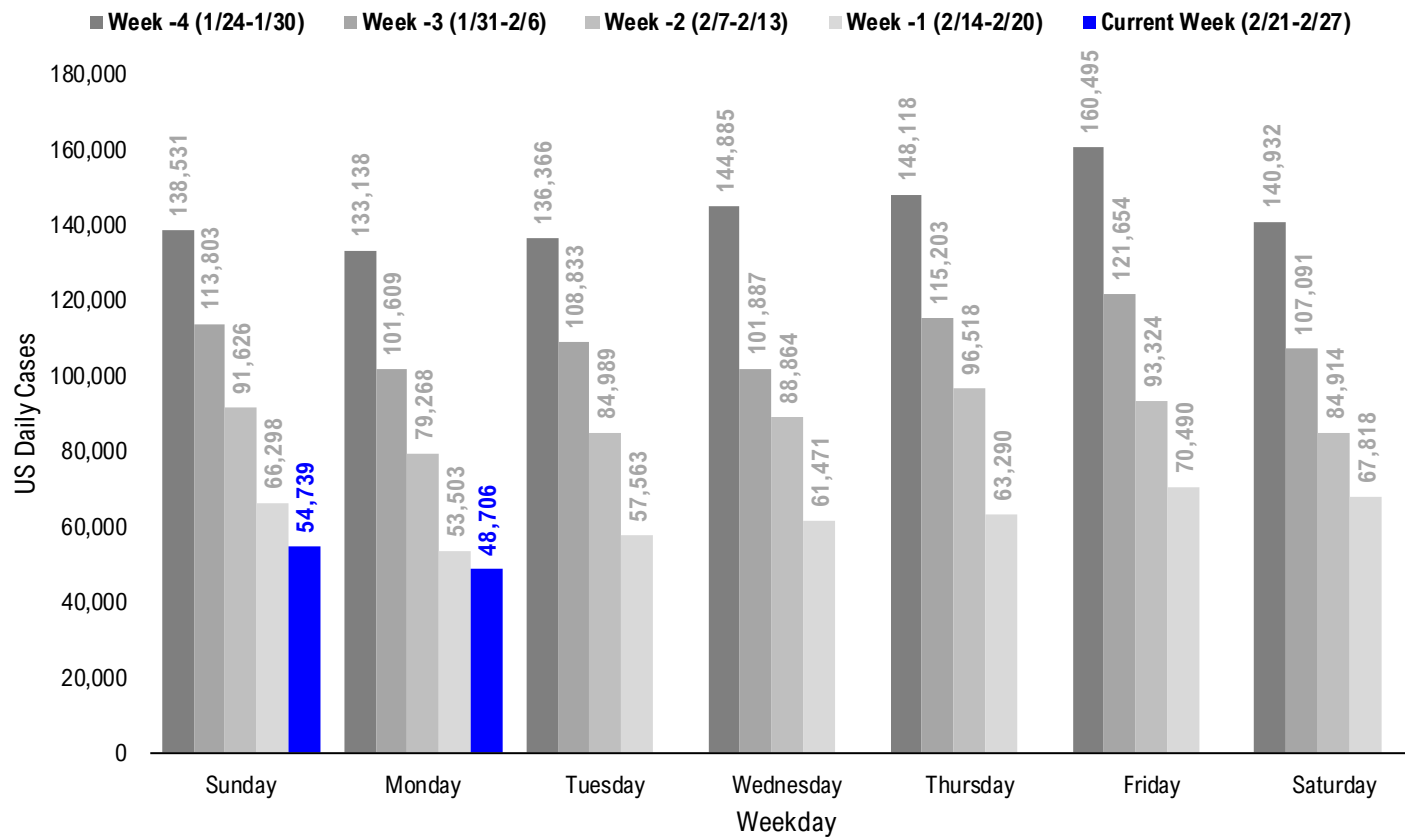
● Daily Vaccinations / Daily Cases (7D Avg)



Implied Weekly Vaccines Administered as % State Population



#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				Since Peak		Hospitalization	
	% US Pop	% US GDP	2/22	7D Delta	2/22	7D Delta	# Days	% Decline in Daily Cases	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
	United States	100%	100%	48,706	-4,797	174	-34	44	-79%	-10,052

	Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents				Since Peak		Hospitalization	
	% US Pop	% US GDP	2/22	7D Delta	2/22	7D Delta	# Days	% Decline in Daily Cases	7D Net Hospitalization	7D Net Hospitalization / 7D New Cases
	United States	100%	100%	48,706	-4,797	174	-34	44	-79%	-10,052

States:

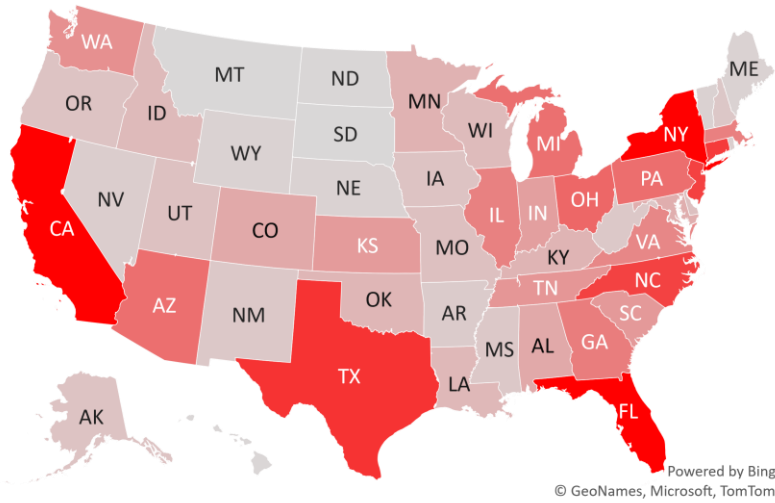
1 New York	5.9%	8.1%	6,146	-219	350	-51	44	-62%	-819	(1.7%)
2 California	11.9%	14.6%	4,665	-1,822	153	-56	43	-88%	-2,134	(5.3%)
3 Florida	6.5%	5.0%	4,151	+536	256	-1	45	-71%	-501	(1.2%)
4 Texas	8.7%	8.8%	2,355	-626	125	-73	46	-83%	-860	(4.0%)
5 Connecticut	1.1%	1.3%	2,233	-672	209	-63	40	-85%	-118	(2.3%)
6 New Jersey	2.7%	3.0%	2,156	+954	248	+10	44	-64%	-385	(2.1%)
7 North Carolina	3.2%	2.7%	2,133	-325	258	-52	44	-75%	-374	(1.8%)
8 Ohio	3.5%	3.3%	1,611	-304	162	-24	74	-84%	-259	(1.8%)
9 Pennsylvania	3.9%	3.8%	1,521	-424	163	-61	79	-83%	-484	(2.7%)
10 Arizona	2.2%	1.7%	1,507	+169	245	+13	50	-85%	-529	(4.9%)
11 Michigan	3.0%	2.6%	1,484	+219	71	+0	96	-92%	-116	(2.0%)
12 Georgia	3.2%	2.9%	1,307	-423	162	-34	43	-81%	-421	(3.1%)
13 Massachusetts	2.1%	2.8%	1,262	-311	230	-38	44	-79%	-219	(2.0%)
14 Illinois	3.8%	4.2%	1,246	-174	125	-10	101	-88%	-285	(2.4%)
15 Virginia	2.6%	2.6%	1,155	-384	209	-78	35	-78%	-293	(2.1%)
16 Washington	2.3%	2.7%	1,037	+1,037	79	+46	89	-86%	-96	(1.6%)
17 Tennessee	2.1%	1.8%	952	-191	167	-42	66	-89%	-93	(1.2%)
18 South Carolina	1.6%	1.1%	903	-1,039	321	-50	43	-76%	-229	(1.8%)
19 Kansas	0.9%	0.8%	883	-465	101	-53	89	-93%	-65	(1.5%)
20 Indiana	2.0%	1.8%	817	+40	154	-6	79	-87%	-188	(2.8%)
21 Colorado	1.7%	1.8%	680	+147	150	+0	93	-86%	-29	(0.4%)
22 Alabama	1.5%	1.1%	677	+3	157	-43	46	-85%	-225	(3.8%)
23 Maryland	1.8%	2.0%	611	-111	110	-41	43	-82%	-121	(2.3%)
24 Minnesota	1.7%	1.8%	555	-47	136	-1	84	-90%	-91	(1.7%)
25 Kentucky	1.3%	1.0%	529	-194	212	-27	45	-81%	-99	(1.2%)
26 Oklahoma	1.2%	1.0%	499	-231	211	-80	43	-84%	-135	(2.4%)
27 Louisiana	1.4%	1.3%	468	-39	170	+40	46	-85%	-109	(2.6%)
28 Idaho	0.5%	0.4%	434	+434	118	+70	74	-90%	-38	(1.8%)

States:

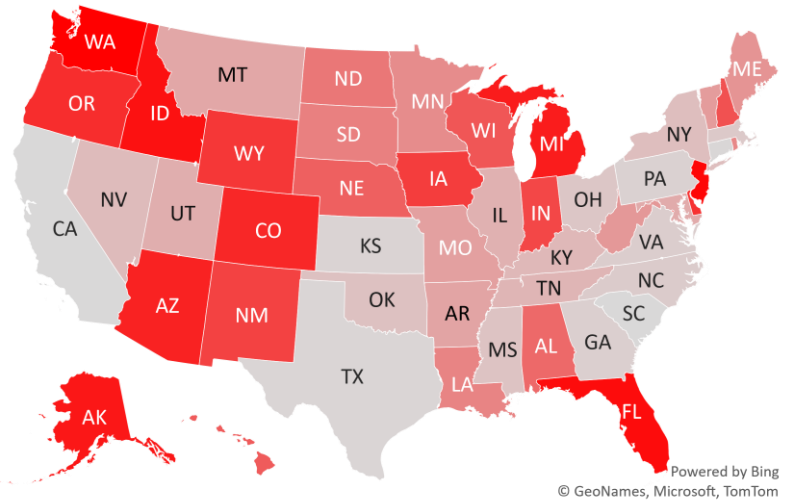
29 Wisconsin	1.8%	1.6%	423	+18	86	-9	101	-93%	-65	(1.5%)
30 Delaware	0.3%	0.4%	358	+122	311	-23	44	-67%	-18	(1.0%)
31 Missouri	1.8%	1.5%	351	-70	72	-12	100	-91%	-196	(5.3%)
32 Utah	1.0%	0.9%	338	-124	189	-31	45	-85%	-33	(0.6%)
33 Oregon	1.3%	1.2%	316	+133	75	+4	78	-82%	-20	(0.7%)
34 Iowa	1.0%	0.9%	312	+98	101	-6	101	-92%	-20	(0.8%)
35 Alaska	0.2%	0.3%	309	+309	141	+141	79	-87%	4	0.3%
36 New Hampshire	0.4%	0.4%	252	+20	220	-12	49	-73%	-16	(0.6%)
37 Mississippi	0.9%	0.6%	242	-302	110	-151	44	-89%	-39	(1.3%)
38 West Virginia	0.5%	0.4%	238	-63	149	-38	50	-86%	-25	(1.3%)
39 New Mexico	0.6%	0.5%	234	+44	155	-10	94	-90%	-39	(1.7%)
40 Arkansas	0.9%	0.6%	195	-76	74	-72	43	-91%	-54	(3.6%)
41 Nevada	0.9%	0.8%	173	-218	91	-94	44	-91%	-175	(7.3%)
42 Rhode Island	0.3%	0.3%	159	-44	263	-41	79	-83%	5	0.2%
43 Puerto Rico	1.0%	0.5%	153	-50	55	-27	65	-84%	24	1.9%
44 Vermont	0.2%	0.2%	115	-70	191	-48	44	-44%	-2	(0.3%)
45 District of Columbia	0.2%	0.7%	107	+24	139	-17	43	-72%	11	1.5%
46 Wyoming	0.2%	0.2%	105	+105	125	+96	95	-93%	-23	(3.0%)
47 Maine	0.4%	0.3%	97	-51	92	-12	38	-85%	-22	(2.4%)
48 Nebraska	0.6%	0.6%	96	+4	104	-214	95	-93%	-34	(2.0%)
49 Hawaii	0.4%	0.5%	49	+16	41	+7	177	-80%	14	4.2%
50 North Dakota	0.2%	0.3%	35	-11	70	-8	100	-97%	-4	(0.6%)
51 Montana	0.3%	0.2%	31	-107	135	-13	99	-90%	-14	(1.1%)
52 South Dakota	0.3%	0.3%	30	-31	119	+3	100	-94%	5	0.5%
53 Guam	0.0%	0.0%	7	+3	24	+4	104	-98%	-1	(3.6%)
54 U.S. Virgin Islands	0.0%	0.0%	4	-14	44	-12	185	-90%	0	0.0%
55 Northern Mariana	0.0%	0.0%	0	+0	47	+47	118	-33%	0	0.0%
56 American Samoa	0.0%	0.0%	0	+0	0	+0	0	0%	0	0.0%

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

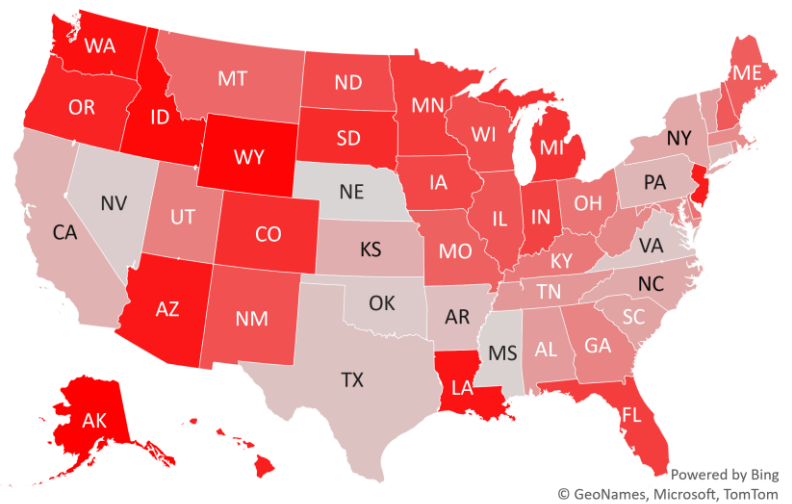
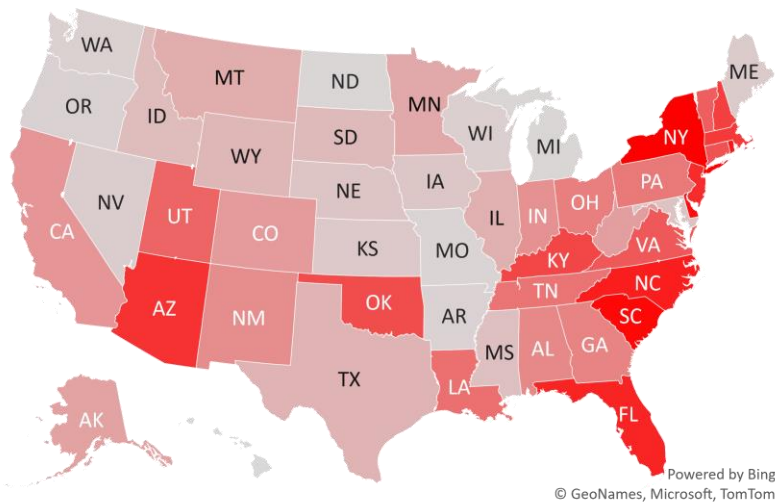
Daily Case Increases



7D Delta in Daily New Cases



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



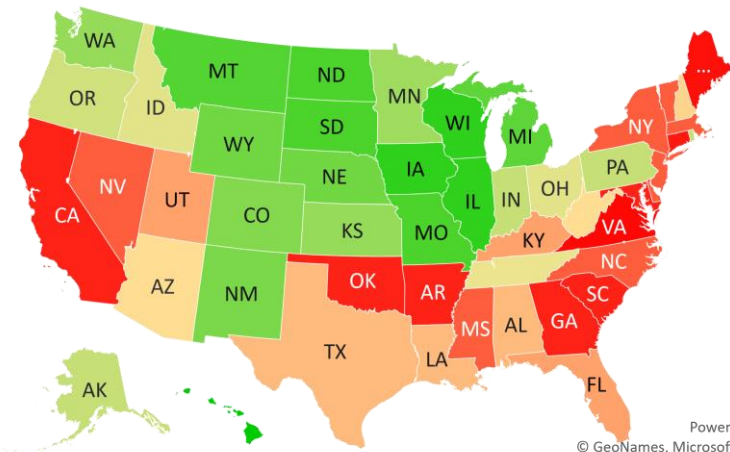
#6: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 2/22)

Sorted				
	Peak Date	2/22/21	% off the Peak	% US Pop
United States	1/9/21	44	-79%	100%
States:				
U.S. Virgin Islands	8/21/20	185	-90%	0.0%
Hawaii	8/29/20	177	-80%	0.4%
Northern Mariana Island	10/27/20	118	-33%	0.0%
Guam	11/10/20	104	-98%	0.0%
Wisconsin	11/13/20	101	-93%	1.8%
Illinois	11/13/20	101	-88%	3.8%
Iowa	11/13/20	101	-92%	1.0%
South Dakota	11/14/20	100	-94%	0.3%
North Dakota	11/14/20	100	-97%	0.2%
Missouri	11/14/20	100	-91%	1.8%
Montana	11/15/20	99	-90%	0.3%
Michigan	11/18/20	96	-92%	3.0%
Wyoming	11/19/20	95	-93%	0.2%
Nebraska	11/19/20	95	-93%	0.6%
New Mexico	11/20/20	94	-90%	0.6%
Colorado	11/21/20	93	-86%	1.7%
Washington	11/25/20	89	-86%	2.3%
Kansas	11/25/20	89	-93%	0.9%
Minnesota	11/30/20	84	-90%	1.7%
Rhode Island	12/5/20	79	-83%	0.3%
Pennsylvania	12/5/20	79	-83%	3.9%
Indiana	12/5/20	79	-87%	2.0%
Alaska	12/5/20	79	-87%	0.2%
Oregon	12/6/20	78	-82%	1.3%
Ohio	12/10/20	74	-84%	3.5%
Idaho	12/10/20	74	-90%	0.5%
Tennessee	12/18/20	66	-89%	2.1%
Puerto Rico	12/19/20	65	-84%	1.0%

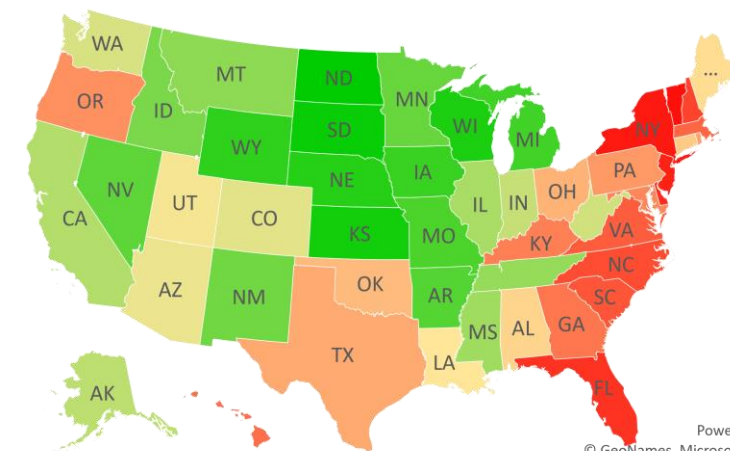
Sorted				
	Peak Date	2/22/21	% off the Peak	% US Pop
United States	1/9/21	44	-79%	100%
States:				
West Virginia	1/3/21	50	-86%	0.5%
Arizona	1/3/21	50	-85%	2.2%
New Hampshire	1/4/21	49	-73%	0.4%
Texas	1/7/21	46	-83%	8.7%
Louisiana	1/7/21	46	-85%	1.4%
Alabama	1/7/21	46	-85%	1.5%
Utah	1/8/21	45	-85%	1.0%
Kentucky	1/8/21	45	-81%	1.3%
Florida	1/8/21	45	-71%	6.5%
Vermont	1/9/21	44	-44%	0.2%
New York	1/9/21	44	-62%	5.9%
Nevada	1/9/21	44	-91%	0.9%
New Jersey	1/9/21	44	-64%	2.7%
North Carolina	1/9/21	44	-75%	3.2%
Mississippi	1/9/21	44	-89%	0.9%
Massachusetts	1/9/21	44	-79%	2.1%
Delaware	1/9/21	44	-67%	0.3%
South Carolina	1/10/21	43	-76%	1.6%
Oklahoma	1/10/21	43	-84%	1.2%
Maryland	1/10/21	43	-82%	1.8%
Georgia	1/10/21	43	-81%	3.2%
District of Columbia	1/10/21	43	-72%	0.2%
California	1/10/21	43	-88%	11.9%
Arkansas	1/10/21	43	-91%	0.9%
Connecticut	1/13/21	40	-85%	1.1%
Maine	1/15/21	38	-85%	0.4%
Virginia	1/18/21	35	-78%	2.6%

Days since Daily Case Peak: Longer = Good



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Daily Cases % off the Peak: Larger Decline = Good



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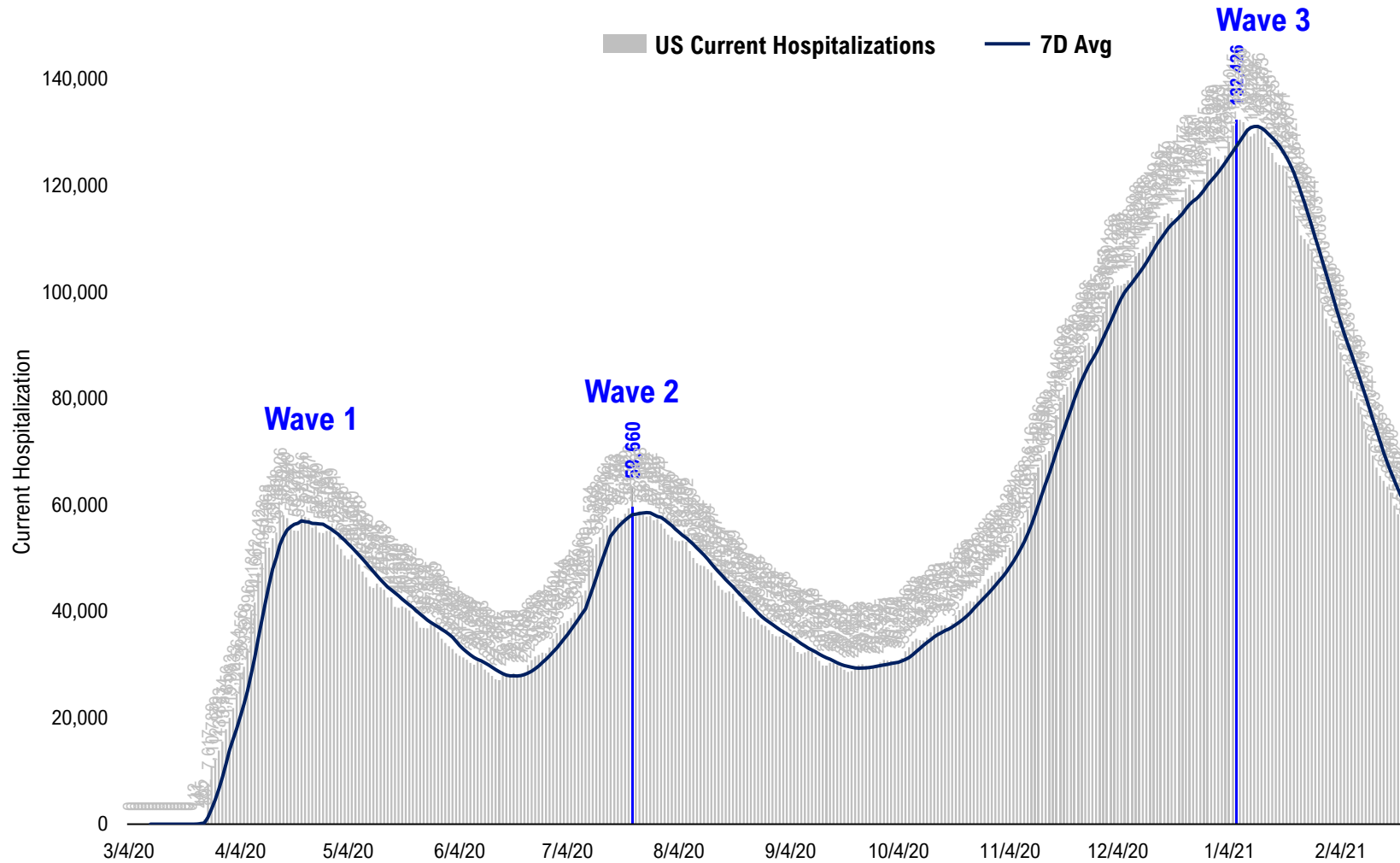
#7: US New Cases by States... (sorted by today's new cases)

	Sorted				
	7D Ago	Last 3-day Trend			
	2/15/21	2/20/21	2/21/21	2/22/21	vs 7D ago
United States	53,503	67,818	54,739	48,706	-4,797
States:					
New York	6,365	7,692	6,610	6,146	
California	6,487	6,668	6,760	4,665	
Florida	3,615	7,280	5,065	4,151	
Texas	2,981	4,902	3,617	2,355	
Connecticut	2,905	0	0	2,233	
New Jersey	1,202	2,631	1,809	2,156	<--higher
North Carolina	2,458	3,446	2,541	2,133	
Ohio	1,915	2,611	1,461	1,611	
Pennsylvania	1,945	2,818	1,906	1,521	
Arizona	1,338	2,047	1,804	1,507	
Michigan	1,265	635	0	1,484	
Georgia	1,730	2,390	1,463	1,307	
Massachusetts	1,573	1,970	1,520	1,262	
Illinois	1,420	1,922	1,585	1,246	
Virginia	1,539	1,882	2,303	1,155	
Washington	0	767	0	1,037	
Tennessee	1,143	1,335	1,129	952	
South Carolina	1,942	2,195	1,862	903	
Kansas	1,348	0	0	883	
Indiana	777	1,415	881	817	
Colorado	533	1,117	802	680	<--higher
Alabama	674	774	857	677	
Maryland	722	763	618	611	
Minnesota	602	870	879	555	
Kentucky	723	1,331	979	529	
Oklahoma	730	973	1,036	499	
Louisiana	507	0	1,909	468	
Idaho	0	197	0	434	

	Sorted				
	7D Ago	Last 3-day Trend			
	2/15/21	2/20/21	2/21/21	2/22/21	vs 7D ago
United States	53,503	67,818	54,739	48,706	-4,797
States:					
Wisconsin	405	676	403	423	
Delaware	236	350	201	358	<--higher
Missouri	421	566	410	351	
Utah	462	778	701	338	
Oregon	183	521	107	316	<--higher
Iowa	214	345	302	312	<--higher
Alaska	0	0	0	309	
New Hampshire	232	394	252	252	
Mississippi	544	350	390	242	
West Virginia	301	309	252	238	
New Mexico	190	425	314	234	<--higher
Arkansas	271	316	160	195	
Nevada	391	371	301	173	
Rhode Island	203	403	273	159	
Puerto Rico	203	175	203	153	
Vermont	185	108	134	115	
District of Columbia	83	92	95	107	<--higher
Wyoming	0	0	112	105	
Maine	148	143	130	97	
Nebraska	92	309	198	96	
Hawaii	33	59	67	49	<--higher
North Dakota	46	75	49	35	
Montana	138	264	138	31	
South Dakota	61	147	139	30	
Guam	4	1	4	7	<--higher
U.S. Virgin Islands	18	10	0	4	
Northern Mariana Islands	0	0	8	0	
American Samoa	0	0	0	0	

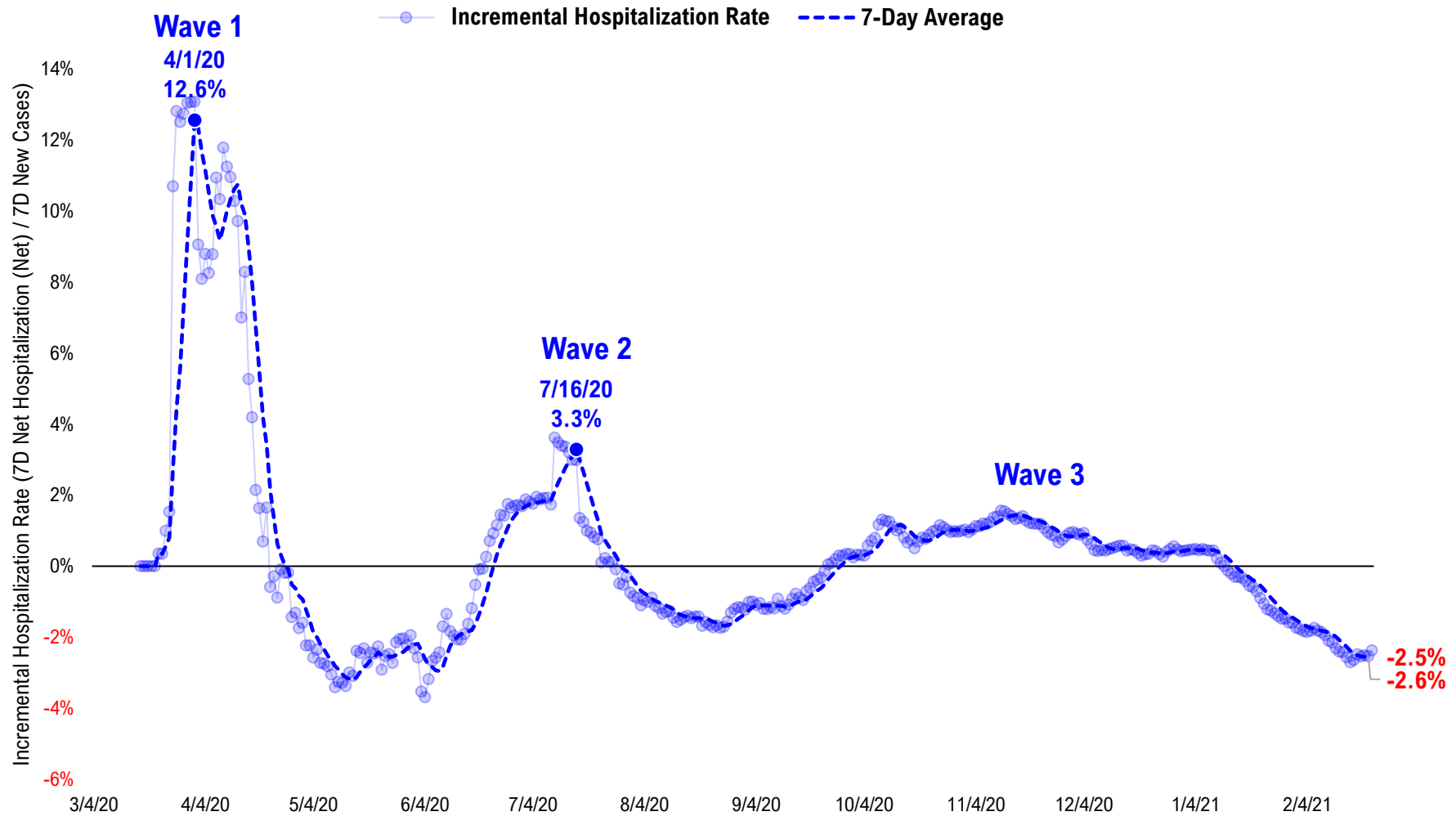
#8: US Daily Hospitalizations...

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



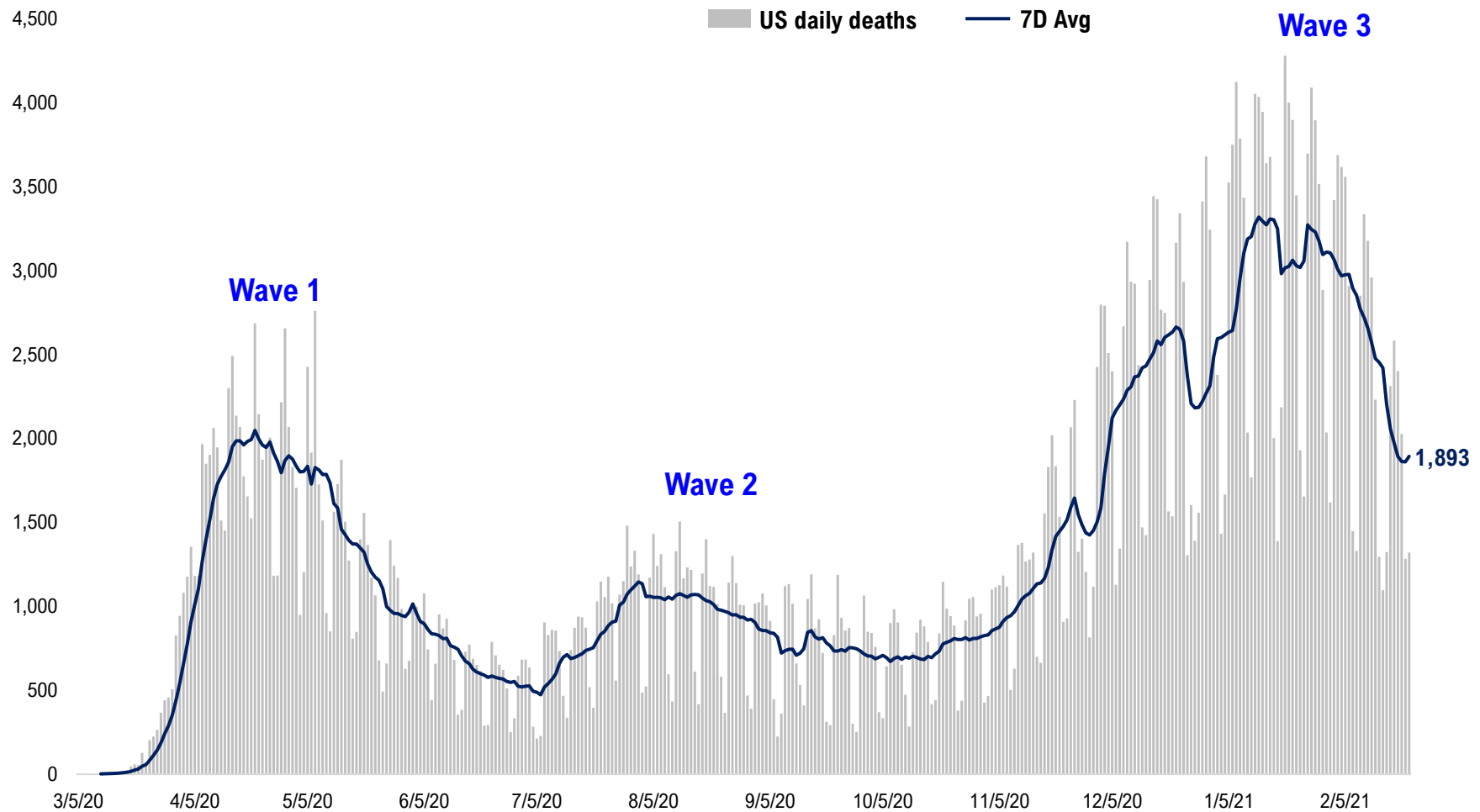
#9: Incremental Hospitalization Rate...

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



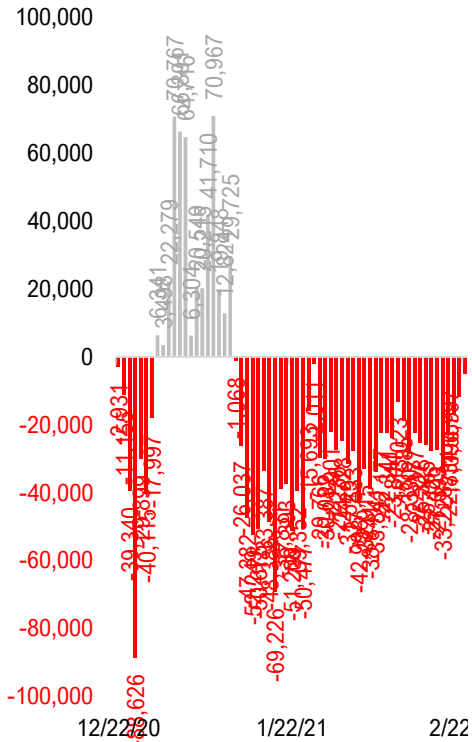
#10: US Daily New Fatalities...

US daily COVID-19 Fatalities

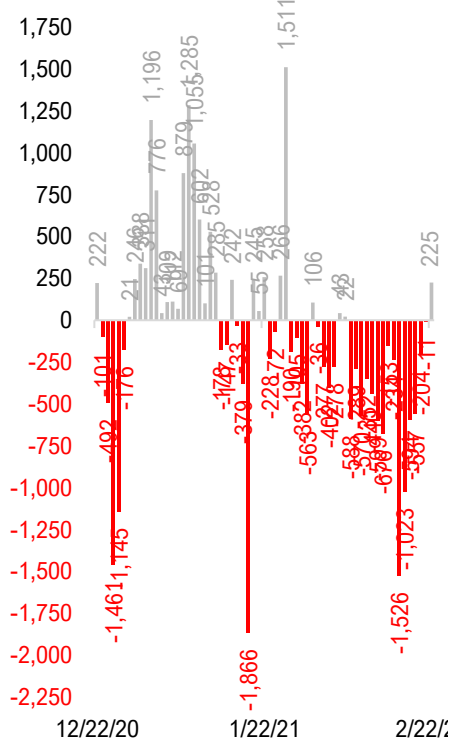


#11: Rolling 7-Day Change in the Key Metrics... (Past 8 Weeks)

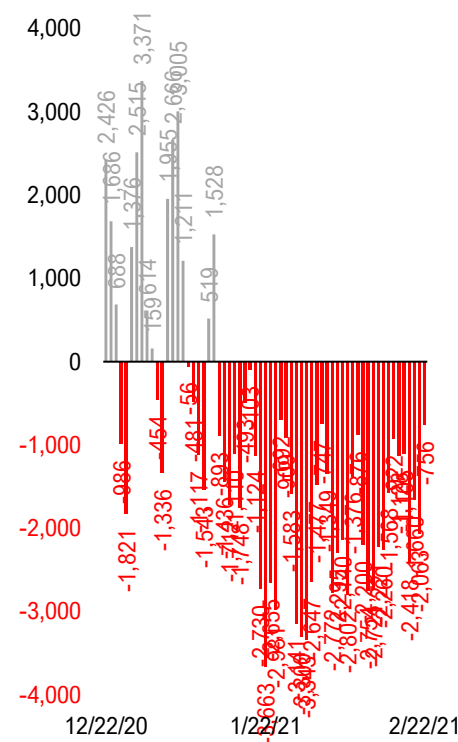
Daily New Cases
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



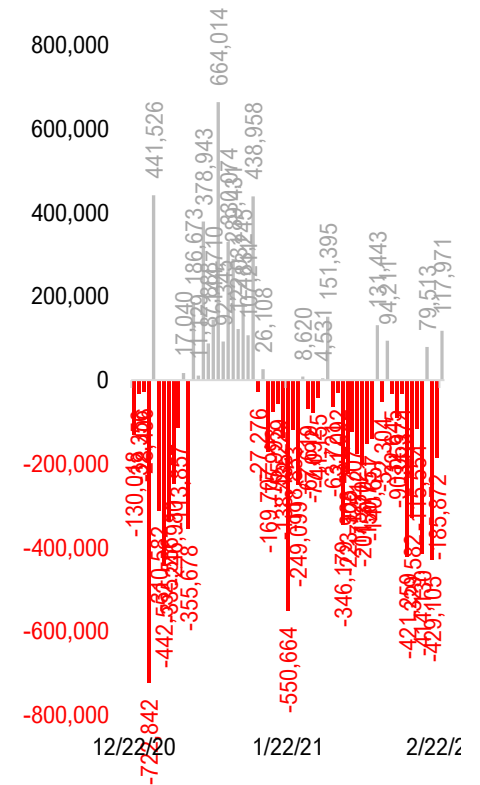
Daily Deaths



Daily Net Hospitalization
(Red = more discharge than admission)

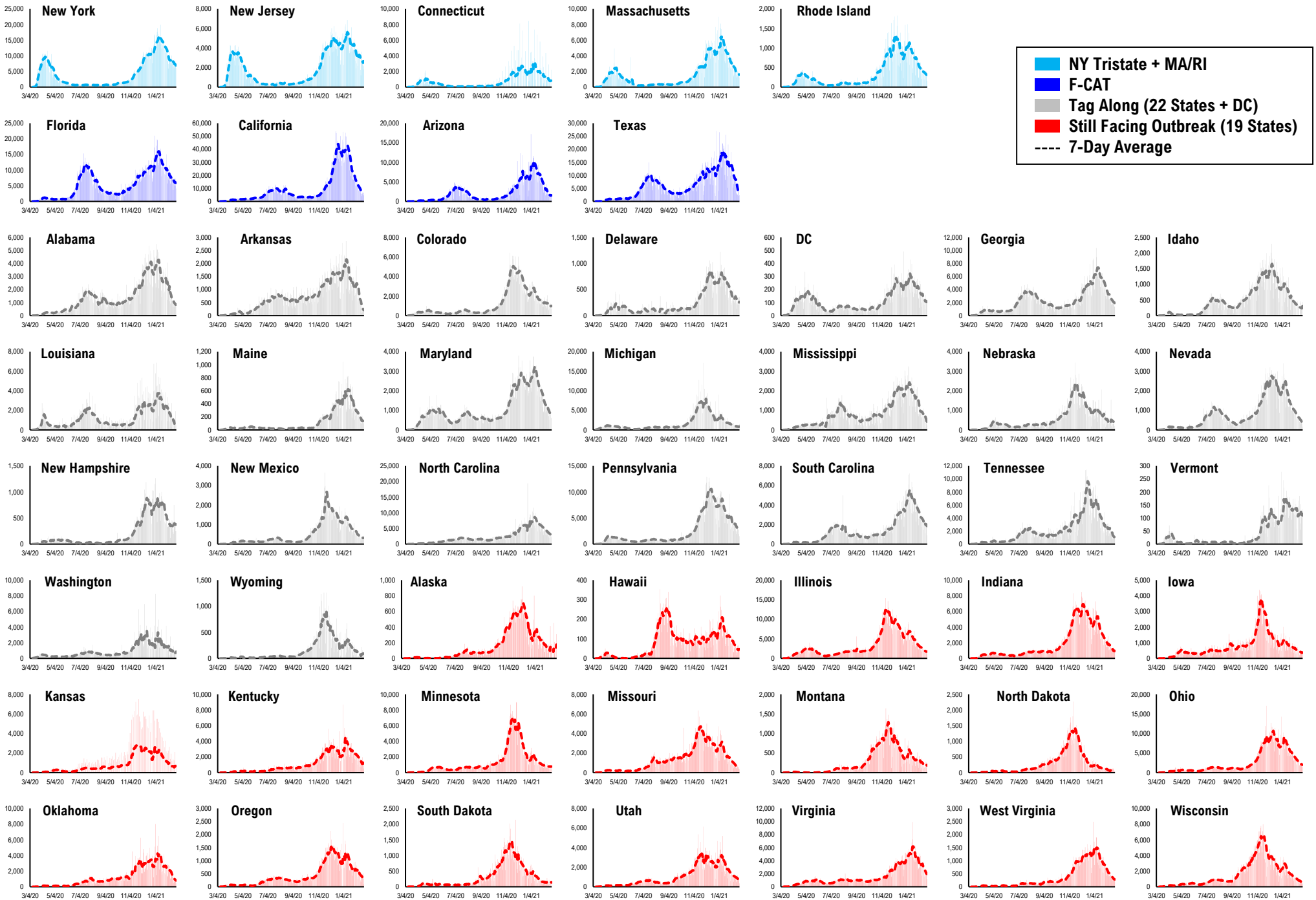


Daily Tests

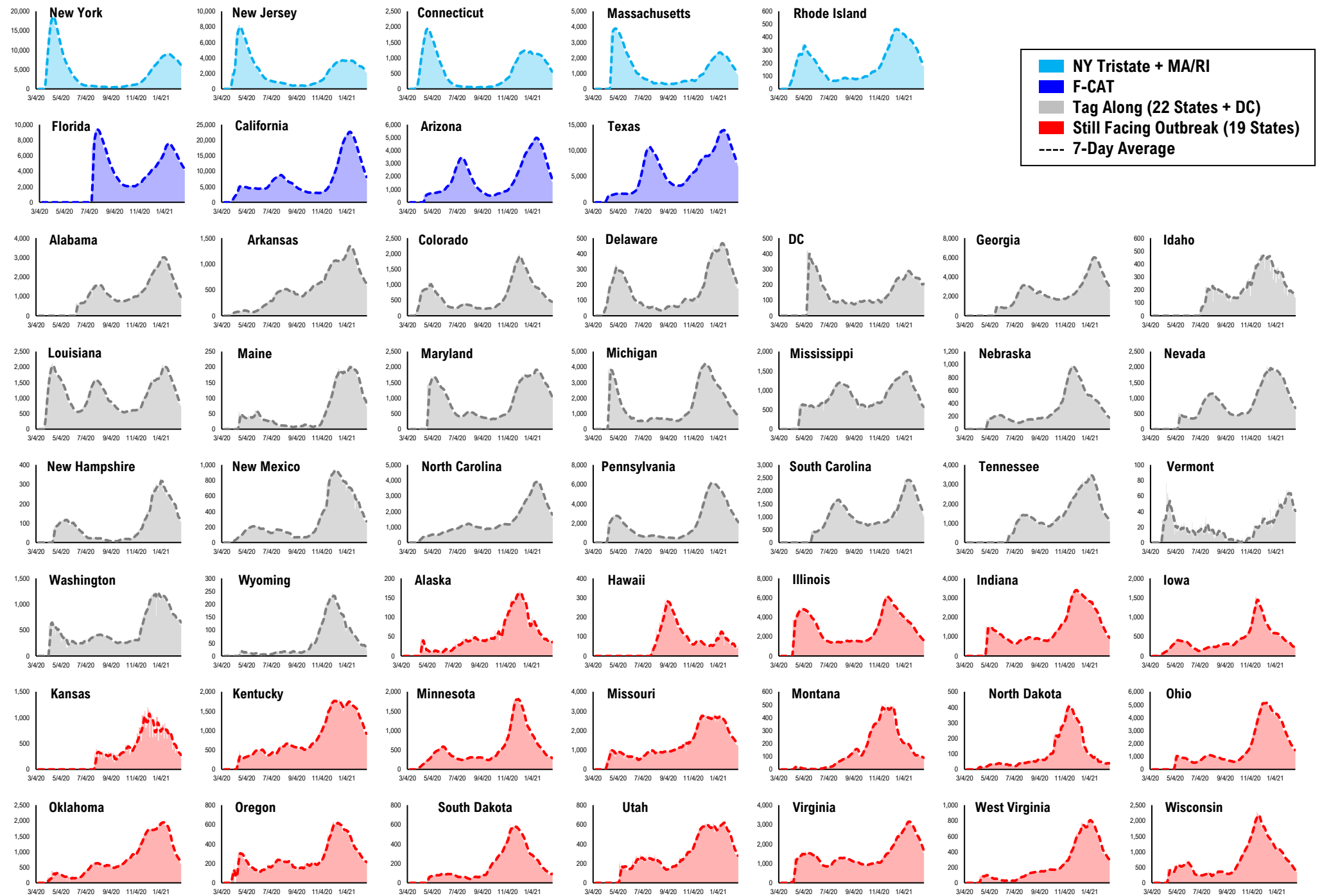


* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

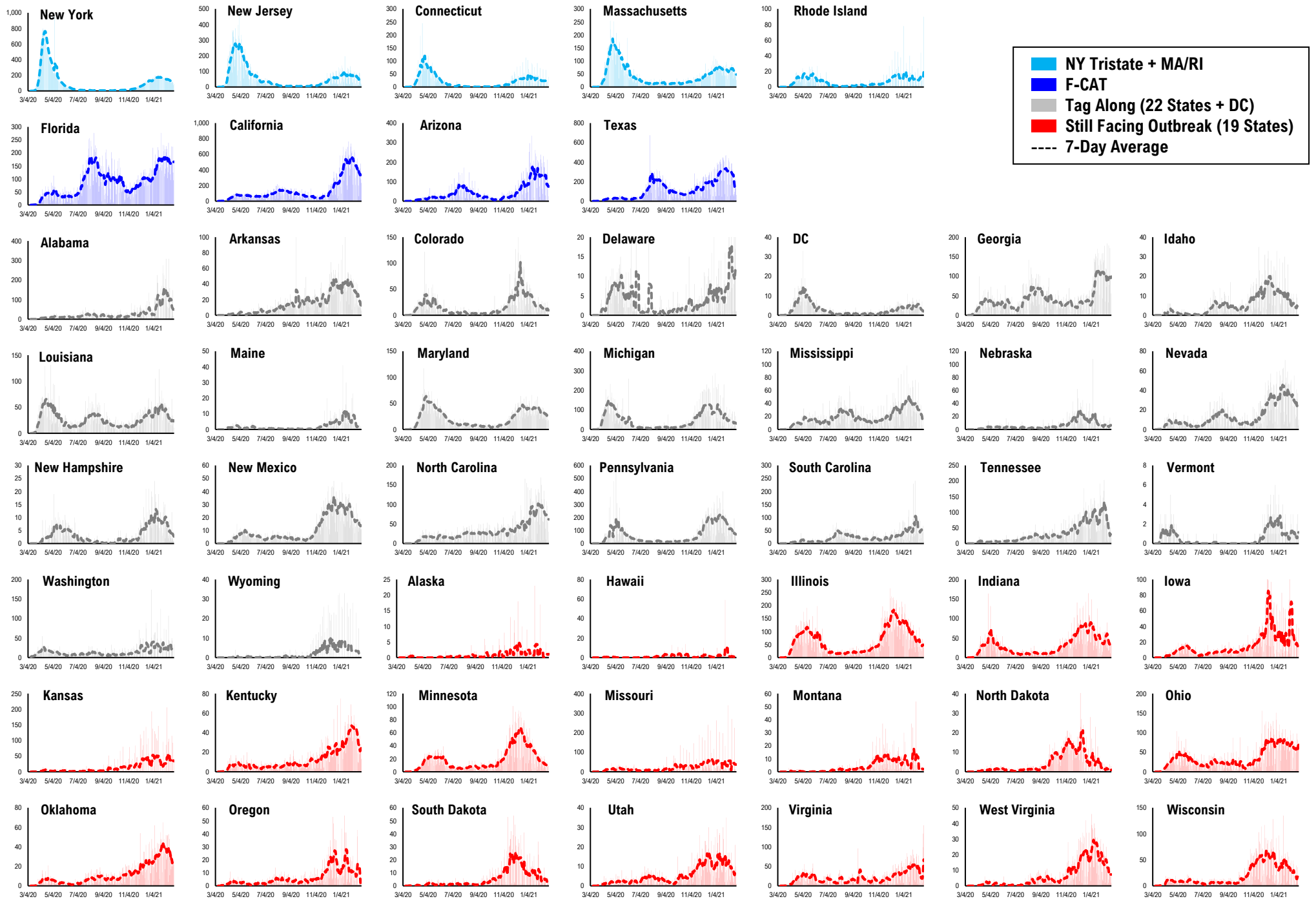
#12: Daily New Cases by States...



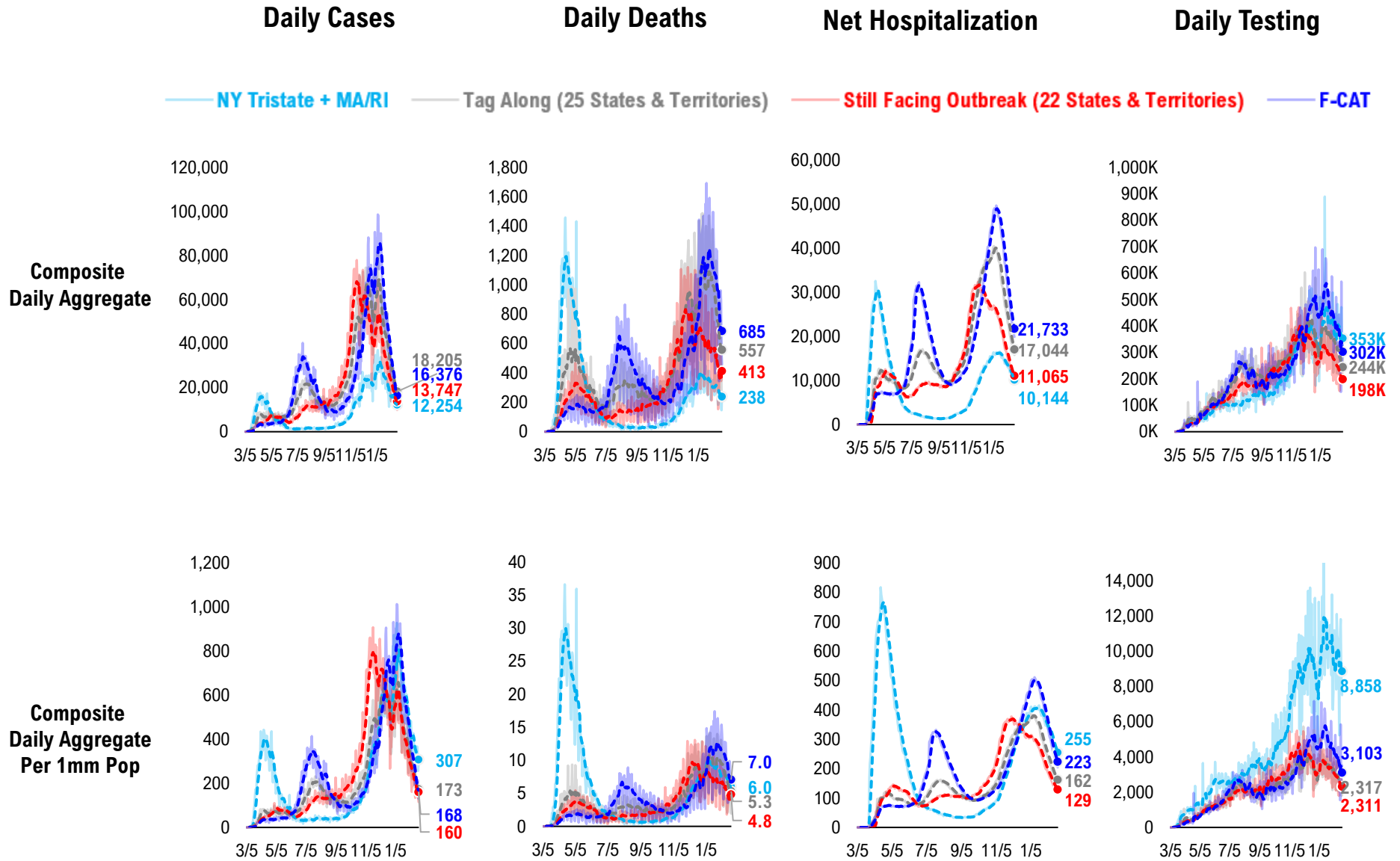
#13: Current Hospitalizations by States...



#14: Daily New Deaths by States...

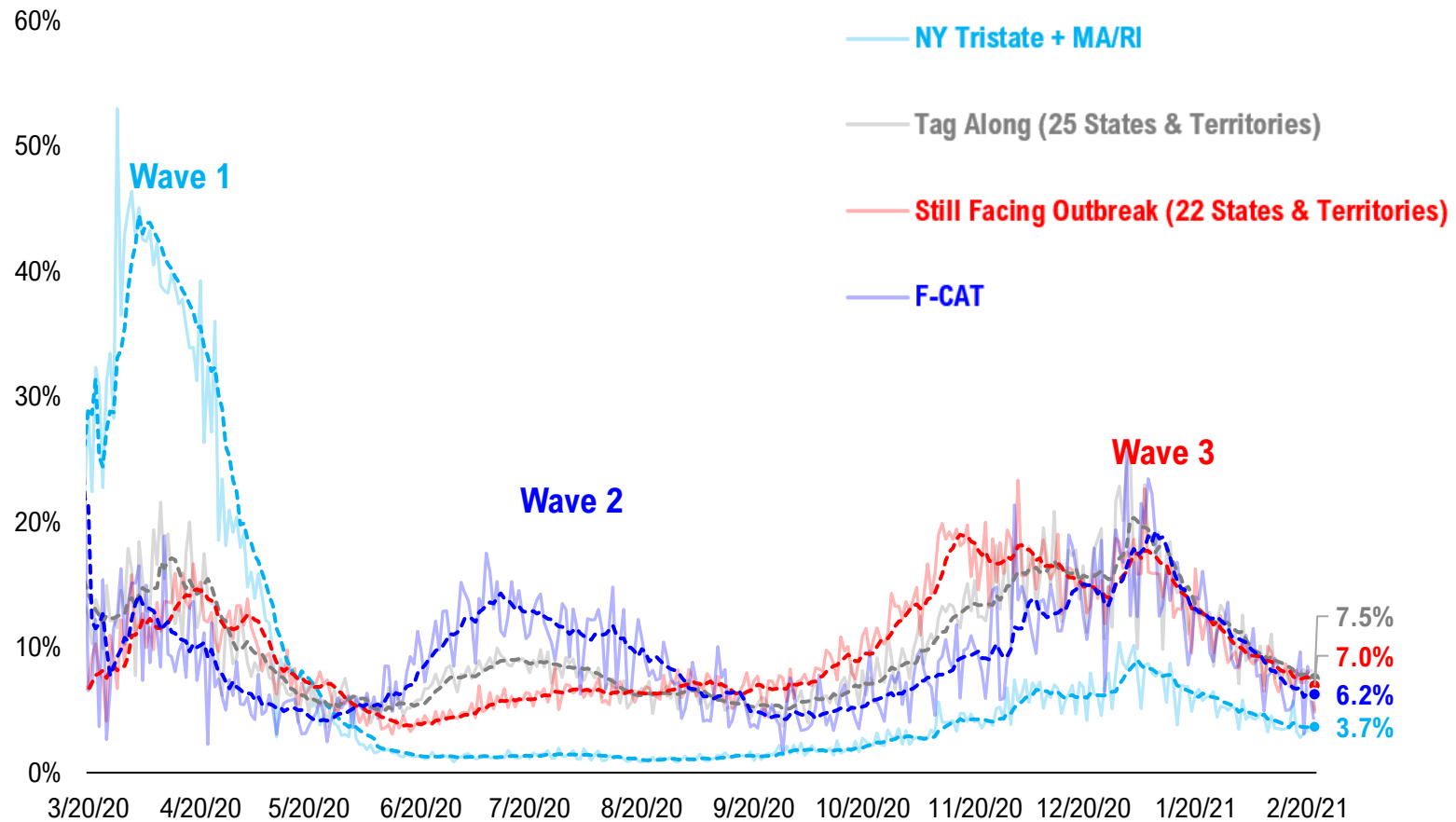


#15: State COVID-19 situation by Tier...

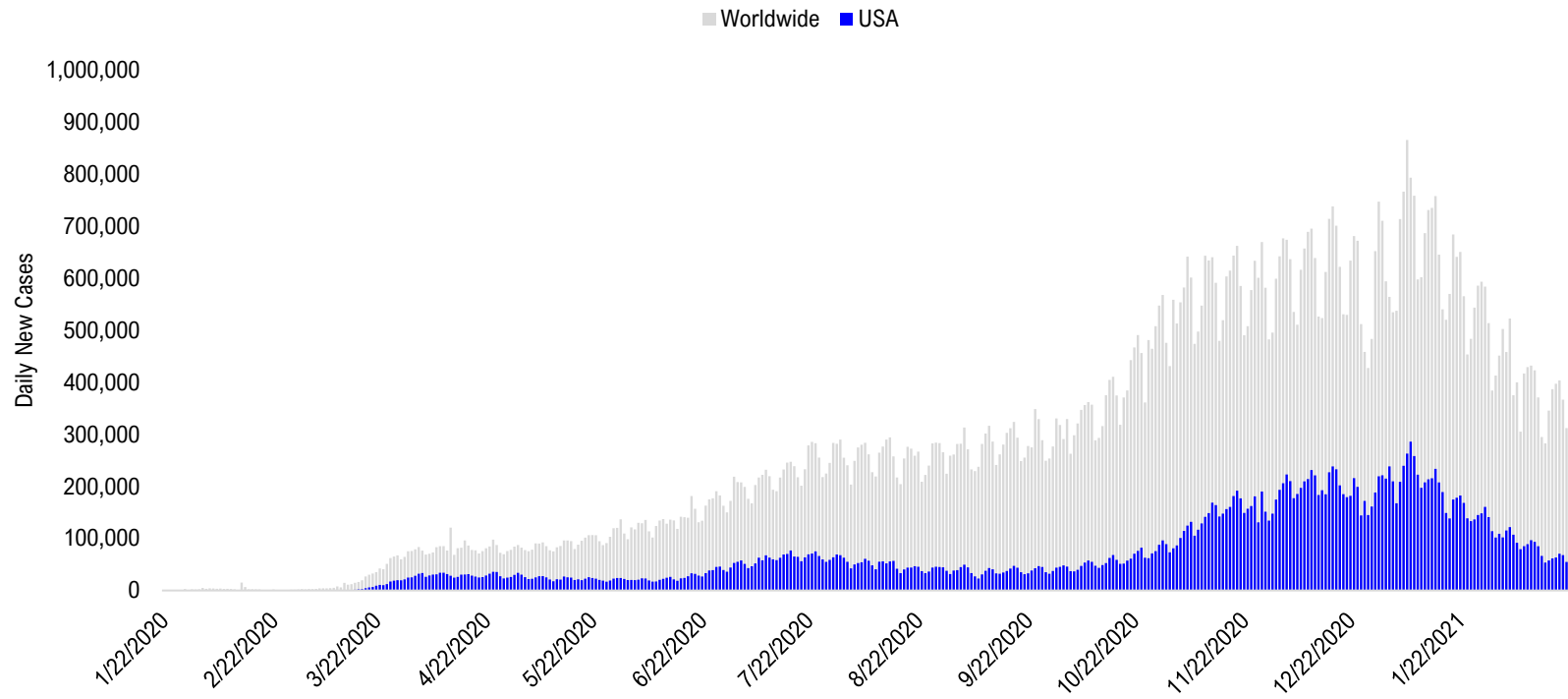


#16: State COVID-19 Daily Positivity Rate by Tier...

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 21
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 139,947
Pakistan + India + Bangladesh 76,149	US + Canada 71,893	US + Canada 116,878	US + Canada 182,604	US + Canada 213,729	US + Canada 239,400	US + Canada 224,000	US + Canada 228,032	US + Canada 155,817	Latin America 98,399	Latin America 85,799
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 95,943	US + Canada 67,065
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 17,098
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 15,789
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 10,016

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