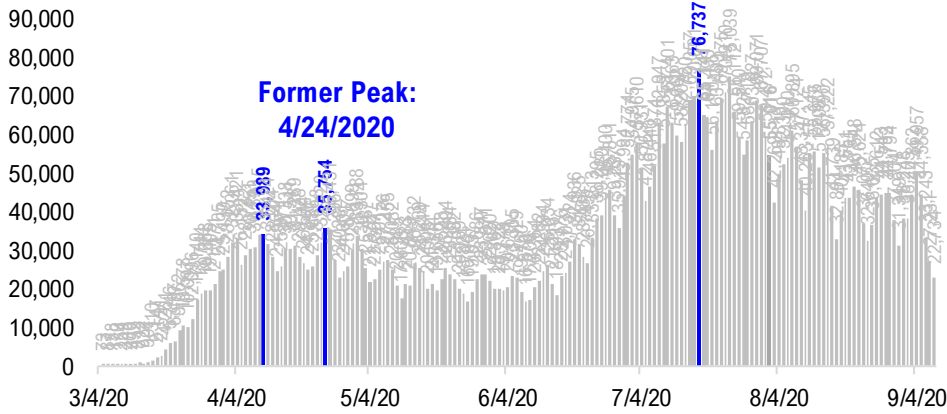


FSInsight Daily COVID-19 Chartbook

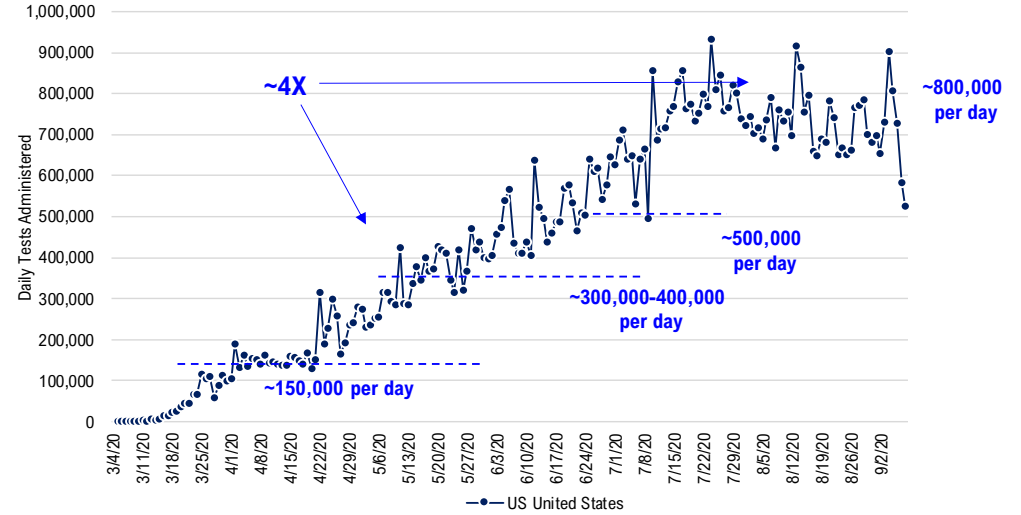


#1: USA COVID-19 Situation at a Glance...

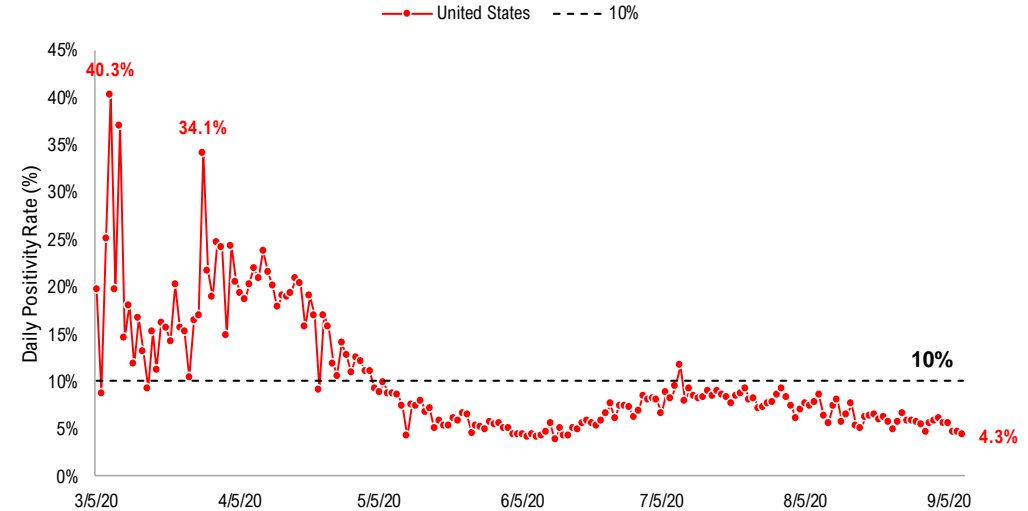
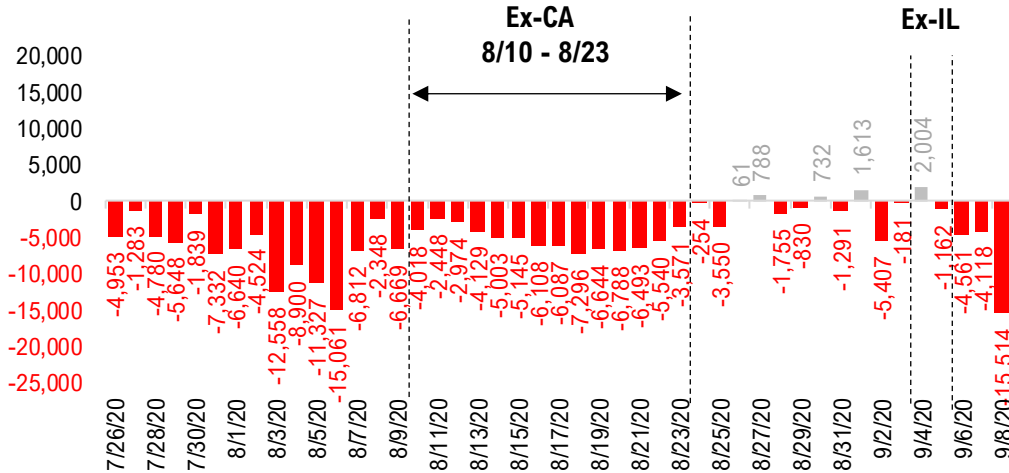
US daily new cases



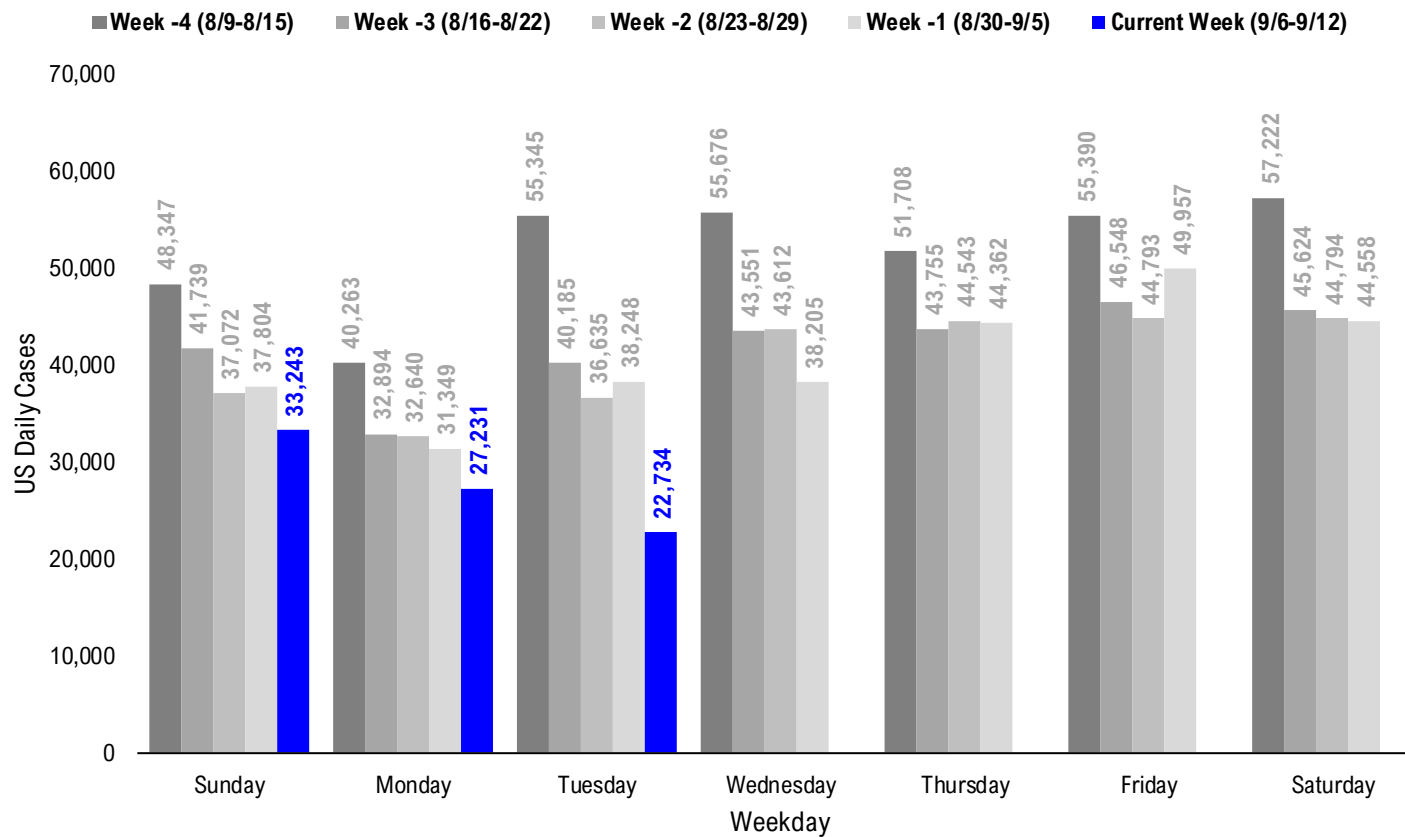
USA total COVID-19 tests administered



US daily new cases rolling 7D delta



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



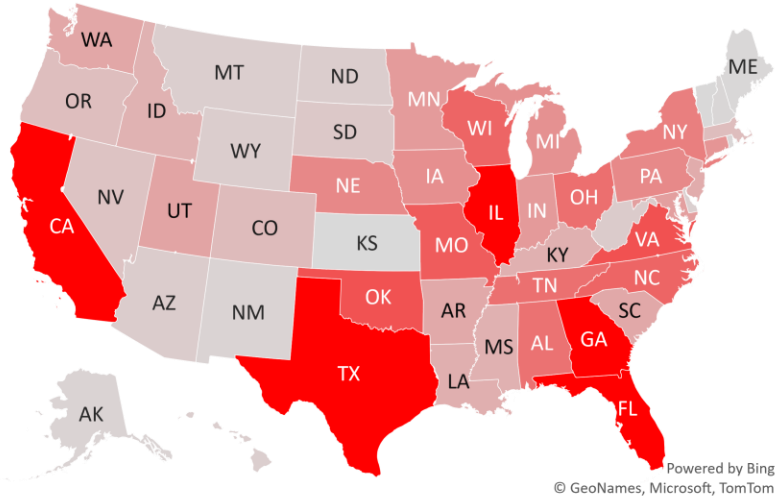
#3: USA State COVID-19 Situation at a Glance...

		Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents		Since Peak		% Decline in Daily Cases	
		% US Pop	9/8/20	7D Delta	9/8/20	7D Delta	# Days	% Decline	
United States		100%	22,734	-15,514	84	-25	53	-61%	
United States (ex-CA)		88%	19,643	-14,478	82	-24	53	-66%	
States:									
1	California	11.9%	2,676	-1,036	90	-28	46	-69%	
2	Florida	6.5%	1,823	-1,777	97	-29	57	-84%	
3	Georgia	3.2%	1,543	-683	119	-36	45	-70%	
4	Texas	8.7%	1,416	-2,700	72	-46	53	-83%	
5	Illinois	3.8%	1,392	-100	110	-26	2	-57%	
6	Virginia	2.6%	836	-185	105	-5	30	-36%	
7	Oklahoma	1.2%	833	+167	157	-15	42	-49%	
8	Missouri	1.8%	773	-285	158	-36	40	-50%	
9	Wisconsin	1.8%	717	-264	125	+22	2	-35%	
10	North Carolina	3.2%	716	-1,395	90	-49	52	-58%	
11	Ohio	3.5%	656	-797	63	-30	39	-53%	
12	Tennessee	2.1%	645	-751	166	-32	42	-59%	
13	Alabama	1.5%	633	-925	123	-131	45	-71%	
14	New York	5.9%	557	-197	31	-5	151	-94%	
15	Nebraska	0.6%	502	+215	116	-26	129	-56%	
16	Pennsylvania	3.9%	496	-274	45	-6	151	-68%	
17	Iowa	1.0%	455	-136	53	-71	11	-59%	
18	Michigan	3.0%	441	-277	53	-4	137	-57%	
19	Connecticut	1.1%	417	+290	39	-9	139	-91%	
20	Indiana	2.0%	386	-309	90	-32	30	-45%	
21	Minnesota	1.7%	383	-108	102	-22	10	-43%	
22	Maryland	1.8%	356	-258	90	+3	110	-57%	
23	Utah	1.0%	326	+30	113	+9	52	-55%	
24	Washington	2.3%	310	-5	53	-5	55	-61%	
25	South Carolina	1.6%	301	-553	105	-63	58	-73%	
26	Arkansas	0.9%	294	+21	147	+23	45	-51%	
27	New Jersey	2.7%	277	-53	35	-2	156	-92%	
28	Louisiana	1.4%	256	-433	141	-49	49	-75%	

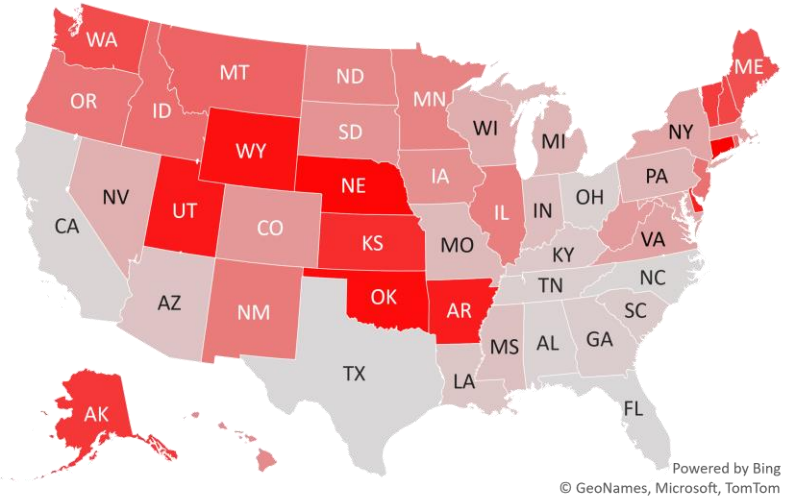
		Sorted Daily Cases		Daily Cases (3D avg) per 1mm residents		Since Peak		% Decline in Daily Cases	
		% US Pop	9/8/20	7D Delta	9/8/20	7D Delta	# Days	% Decline	
United States		100%	22,734	-15,514	84	-25	53	-61%	
United States (ex-CA)		88%	19,643	-14,478	82	-24	53	-66%	
States:									
29	Kentucky	1.3%	255	-534	64	-56	25	-66%	
30	Mississippi	0.9%	249	-385	101	-73	40	-81%	
31	Idaho	0.5%	240	-40	94	-35	53	-75%	
32	Colorado	1.7%	187	-164	40	-3	135	-69%	
33	Massachusetts	2.1%	171	-184	37	-4	136	-93%	
34	Oregon	1.3%	165	-68	39	-12	38	-54%	
35	Nevada	0.9%	137	-268	108	-18	52	-75%	
36	South Dakota	0.3%	103	-137	194	-110	9	-54%	
37	Puerto Rico	1.0%	96	-12	57	-6	21	-58%	
38	West Virginia	0.5%	86	-171	69	-31	3	-43%	
39	Arizona	2.2%	81	-426	24	-24	68	-96%	
40	Wyoming	0.2%	71	+47	56	+9	132	-44%	
41	North Dakota	0.2%	71	-113	235	+10	3	-50%	
42	Hawaii	0.4%	66	-114	78	-43	10	-62%	
43	Montana	0.3%	65	-27	68	-12	4	-58%	
44	Delaware	0.3%	59	+4	142	+57	133	-58%	
45	District of Columbia	0.2%	47	-10	59	+0	128	-82%	
46	Guam	0.0%	42	-10	84	-117	12	-87%	
47	New Mexico	0.6%	37	-71	21	-24	41	-88%	
48	Alaska	0.2%	35	+0	70	+17	37	-62%	
49	Rhode Island	0.3%	20	-33	34	-12	136	-92%	
50	New Hampshire	0.4%	18	-4	17	+5	129	-81%	
51	Maine	0.4%	12	-10	11	-3	109	-78%	
52	Vermont	0.2%	3	-2	4	-12	156	-96%	
53	U.S. Virgin Islands	0.0%	1	-4	75	+9	18	-82%	
54	Northern Mariana Islands	0.0%	1	+0	6	+0	158	-83%	
55	Kansas	0.9%	0	+0	194	+15	13	-45%	
56	American Samoa	0.0%	0	+0	0	+0	-	-	

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

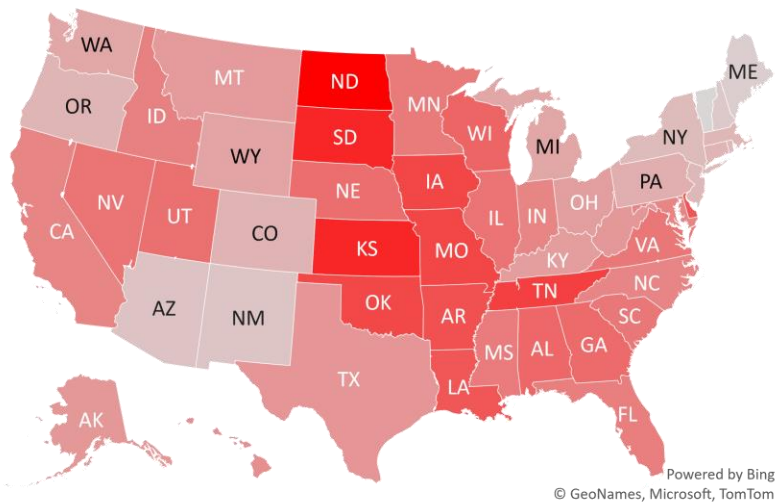
Daily Case Increases



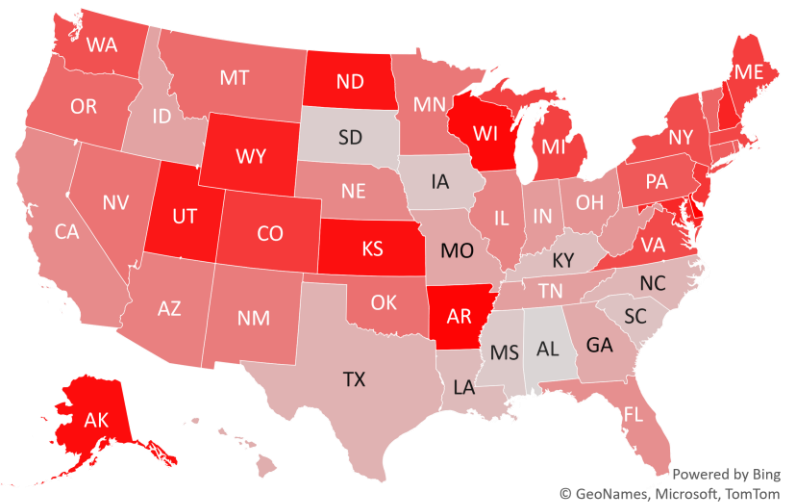
7D Delta in Daily New Cases



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



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



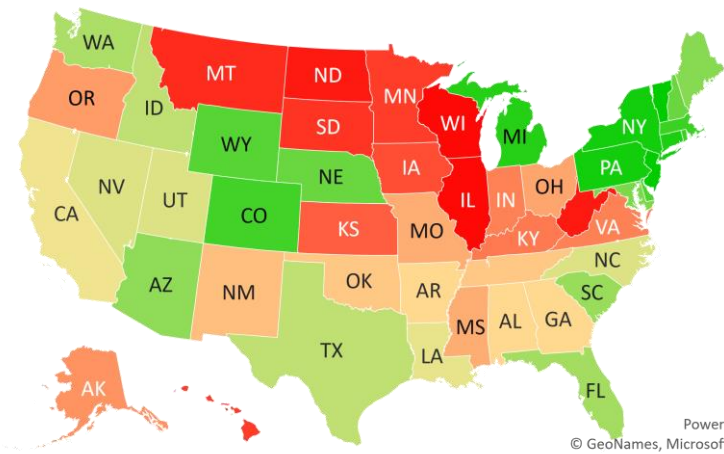
#5: # of Days since Daily Case Peaked by States...

Days since Daily Cases (3D Avg) Peak (as of 9/8)

	Sorted			
	Peak Date	9/8/20	% off the Peak	% US Pop
United States	7/17/20	53	-61%	100%
United States (Ex-CA)	7/17/20	53	-66%	88%
States:				
Northern Mariana Island	4/3/20	158	-83%	0.0%
Vermont	4/5/20	156	-96%	0.2%
New Jersey	4/5/20	156	-92%	2.7%
Pennsylvania	4/10/20	151	-68%	3.9%
New York	4/10/20	151	-94%	5.9%
Connecticut	4/22/20	139	-91%	1.1%
Michigan	4/24/20	137	-57%	3.0%
Rhode Island	4/25/20	136	-92%	0.3%
Massachusetts	4/25/20	136	-93%	2.1%
Colorado	4/26/20	135	-69%	1.7%
Delaware	4/28/20	133	-58%	0.3%
Wyoming	4/29/20	132	-44%	0.2%
New Hampshire	5/2/20	129	-81%	0.4%
Nebraska	5/2/20	129	-56%	0.6%
District of Columbia	5/3/20	128	-82%	0.2%
Maryland	5/21/20	110	-57%	1.8%
Maine	5/22/20	109	-78%	0.4%
Arizona	7/2/20	68	-96%	2.2%
South Carolina	7/12/20	58	-73%	1.6%
Florida	7/13/20	57	-84%	6.5%
Washington	7/15/20	55	-61%	2.3%
Texas	7/17/20	53	-83%	8.7%
Idaho	7/17/20	53	-75%	0.5%
Utah	7/18/20	52	-55%	1.0%
Nevada	7/18/20	52	-75%	0.9%
North Carolina	7/18/20	52	-58%	3.2%
Louisiana	7/21/20	49	-75%	1.4%
California	7/24/20	46	-69%	11.9%

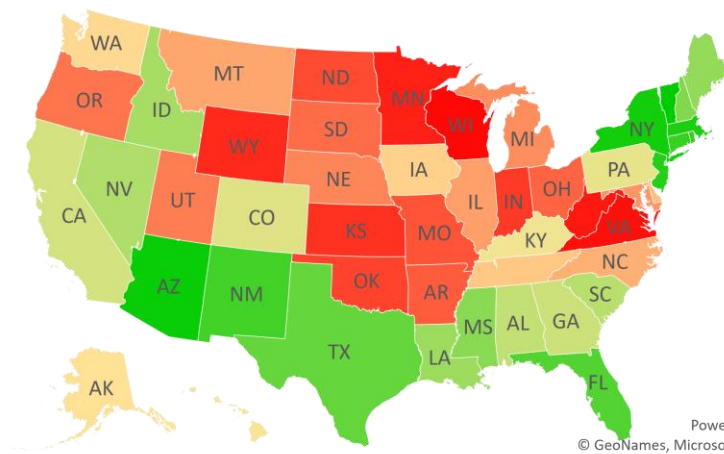
	Sorted			
	Peak Date	9/8/20	% off the Peak	% US Pop
United States	7/17/20	53	-61%	100%
United States (Ex-CA)	7/17/20	53	-66%	88%
States:				
Georgia	7/25/20	45	-70%	3.2%
Arkansas	7/25/20	45	-51%	0.9%
Alabama	7/25/20	45	-71%	1.5%
Tennessee	7/28/20	42	-59%	2.1%
Oklahoma	7/28/20	42	-49%	1.2%
New Mexico	7/29/20	41	-88%	0.6%
Mississippi	7/30/20	40	-81%	0.9%
Missouri	7/30/20	40	-50%	1.8%
Ohio	7/31/20	39	-53%	3.5%
Oregon	8/1/20	38	-54%	1.3%
Alaska	8/2/20	37	-62%	0.2%
Virginia	8/9/20	30	-36%	2.6%
Indiana	8/9/20	30	-45%	2.0%
Kentucky	8/14/20	25	-66%	1.3%
Puerto Rico	8/18/20	21	-58%	1.0%
U.S. Virgin Islands	8/21/20	18	-82%	0.0%
Kansas	8/26/20	13	-45%	0.9%
Guam	8/27/20	12	-87%	0.0%
Iowa	8/28/20	11	-59%	1.0%
Minnesota	8/29/20	10	-43%	1.7%
Hawaii	8/29/20	10	-62%	0.4%
South Dakota	8/30/20	9	-54%	0.3%
Montana	9/4/20	4	-58%	0.3%
West Virginia	9/5/20	3	-43%	0.5%
North Dakota	9/5/20	3	-50%	0.2%
Wisconsin	9/6/20	2	-35%	1.8%
Illinois	9/6/20	2	-57%	3.8%

Days since Daily Case Peak: Greener = More Days



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Daily Cases % off the Peak: Greener = Larger Decline



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

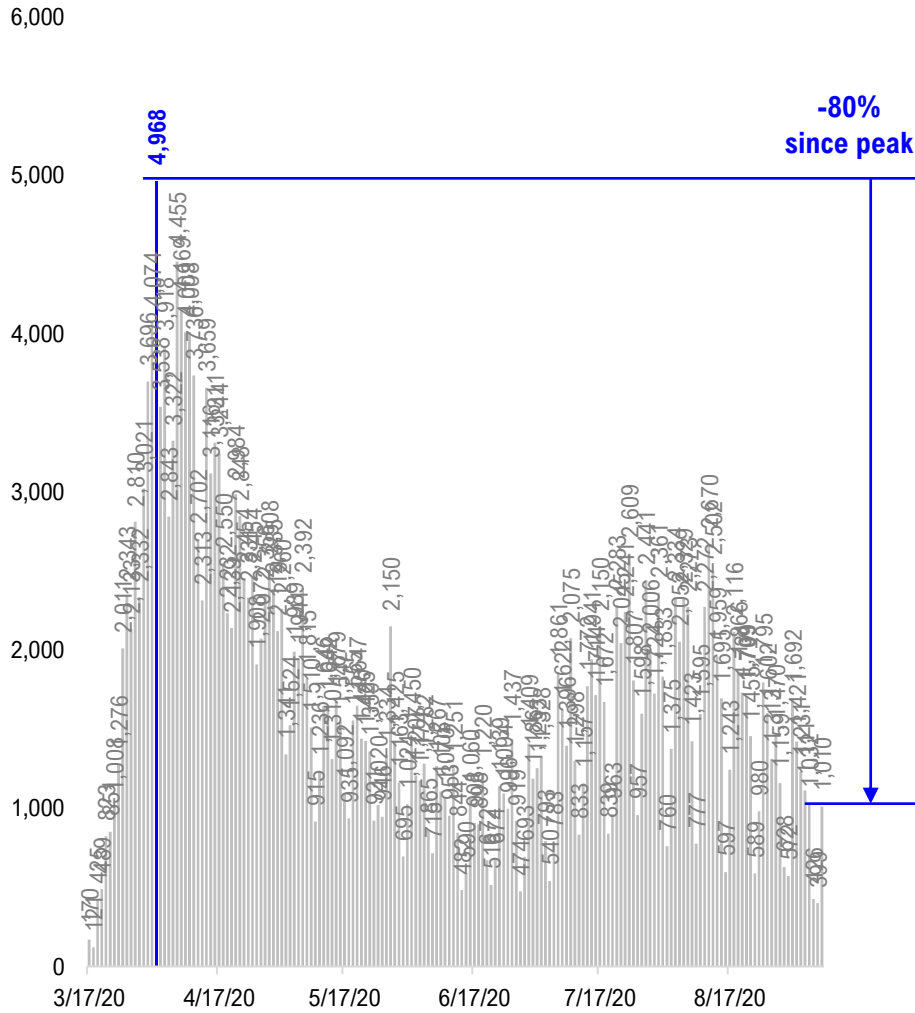
	Sorted				7D Ago	Sorted				7D Ago	
	7D Ago	Last 3-day Trend				7D Ago	Last 3-day Trend				
	9/1/20	9/6/20	9/7/20	9/8/20		9/1/20	9/6/20	9/7/20	9/8/20		
United States	38,248	33,243	27,231	22,734	-4,497	United States	38,248	33,243	27,231	22,734	-4,497
United States (ex-CA)	34,536	28,338	24,140	20,058	-4,082	United States (ex-CA)	34,536	28,338	24,140	20,058	-4,082
States:						States:					
California	3,712	4,905	3,091	2,676		Kentucky	789	310	290	255	
Florida	3,600	2,564	1,838	1,823		Mississippi	634	410	242	249	
Georgia	2,226	1,651	608	1,543		Idaho	280	190	74	240	<--higher
Texas	4,116	2,800	2,057	1,416		Colorado	351	285	213	187	
Illinois	1,492	1,403	1,381	1,392		Massachusetts	355	366	229	171	
Virginia	1,021	1,199	645	836		Oregon	233	188	146	165	
Oklahoma	666	420	613	833	<--higher	Nevada	405	508	357	137	
Missouri	1,058	1,232	906	773		South Dakota	240	220	191	103	
Wisconsin	981	893	567	717		Puerto Rico	108	26	423	96	
North Carolina	2,111	1,086	1,018	716		West Virginia	257	123	163	86	
Ohio	1,453	773	778	656		Arizona	507	250	198	81	
Tennessee	1,396	1,764	983	645		Wyoming	24	26	0	71	<--higher
Alabama	1,558	511	659	633		North Dakota	184	297	170	71	
New York	754	729	520	557		Hawaii	180	161	105	66	
Nebraska	287	81	89	502	<--higher	Montana	92	100	52	65	
Pennsylvania	770	691	547	496		Delaware	55	151	206	59	
Iowa	591	649	393	455		District of Columbia	57	41	36	47	
Michigan	718	0	1,156	441		Guam	52	0	0	42	
Connecticut	127	0	0	417		New Mexico	108	59	37	37	
Indiana	695	843	590	386		Alaska	35	86	33	35	
Minnesota	491	707	638	383		Rhode Island	53	35	53	20	
Maryland	614	512	764	356		New Hampshire	22	23	29	18	
Utah	296	388	373	326		Maine	22	15	19	12	
Washington	315	501	399	310		Vermont	5	1	3	3	
South Carolina	854	663	655	301		U.S. Virgin Islands	5	14	9	1	
Arkansas	273	687	350	294		Northern Mariana Islands	1	0	0	1	
New Jersey	330	311	332	277		Kansas	0	0	1,694	0	
Louisiana	689	1,395	309	256		American Samoa	0	0	0	0	

<--higher – if the state has 20% or more daily cases than prior two days...
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

#7: US Daily Hospitalizations...(aggregated by data type)

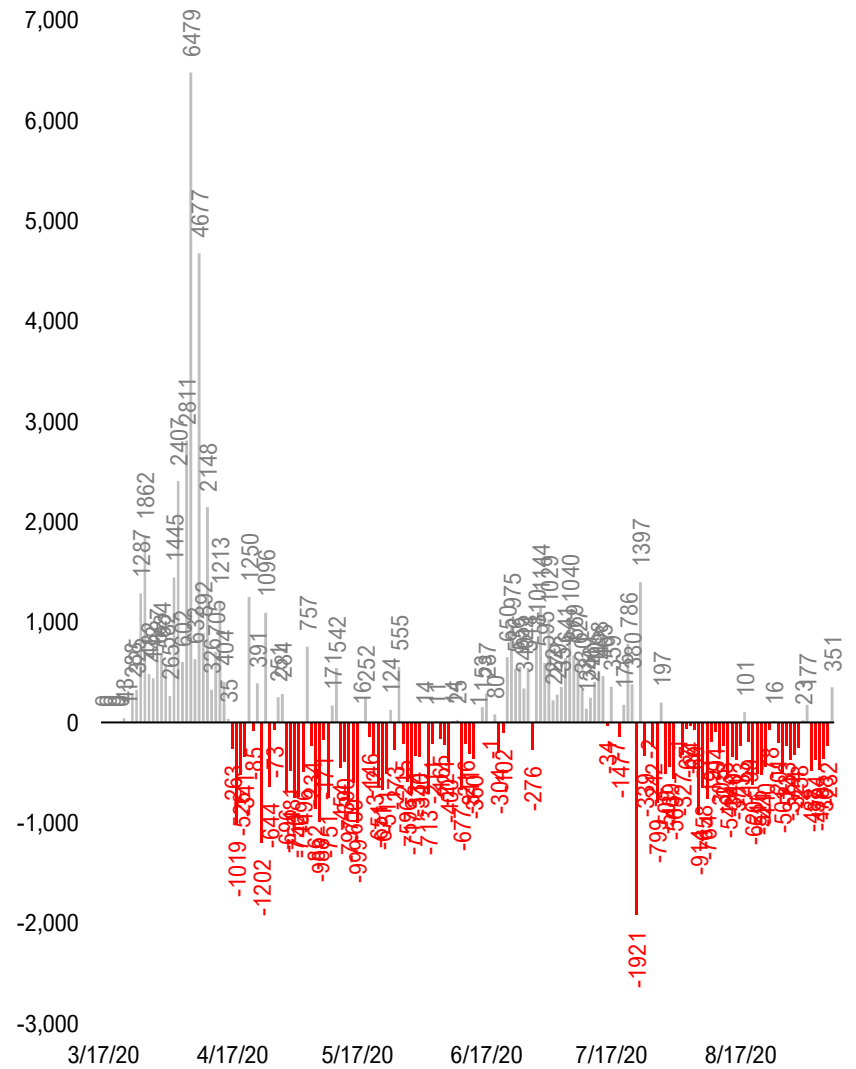
US Gross Hospitalizations

(Composite of 33 states that report "gross hospitalizations")



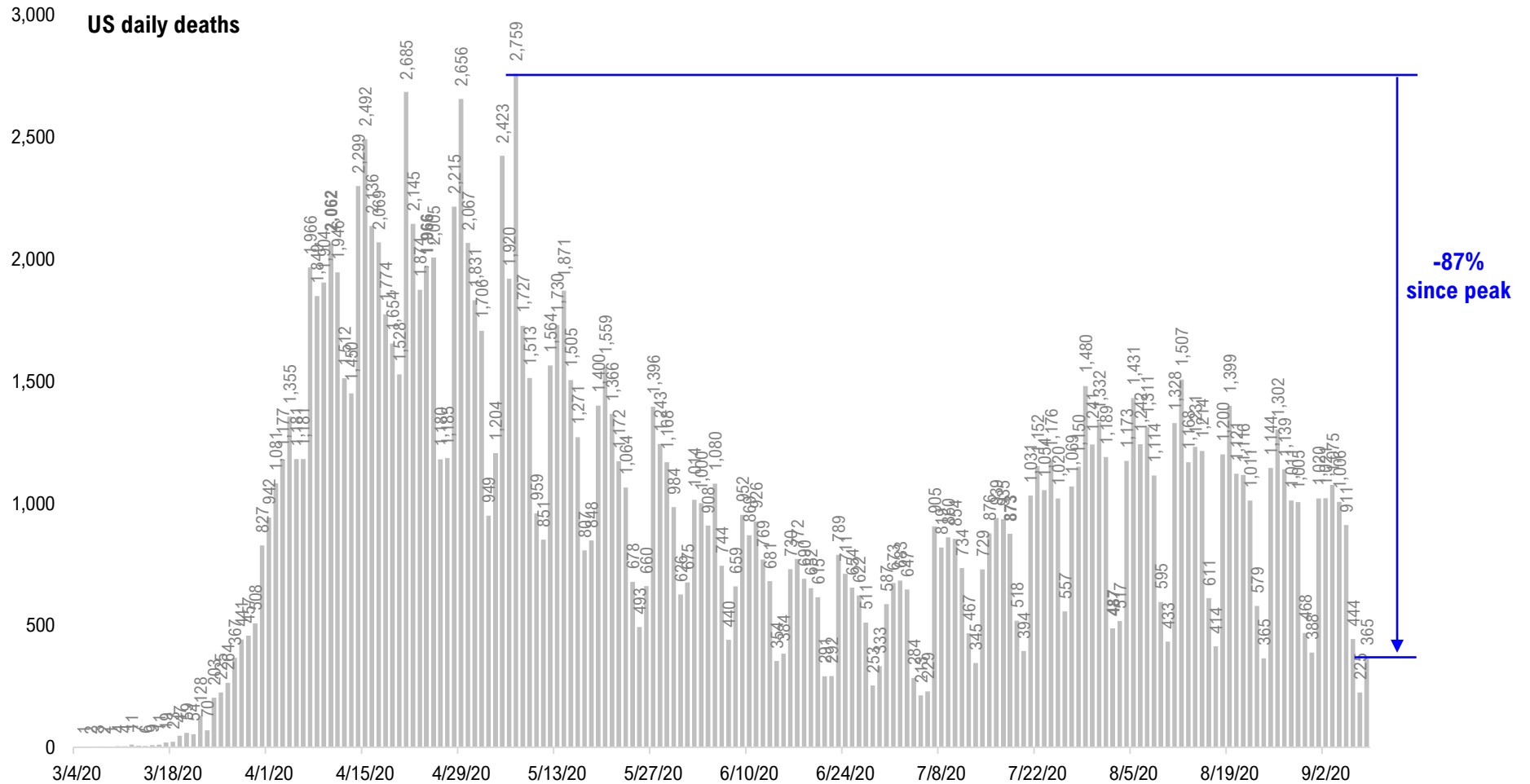
US Net Hospitalizations

(Composite of 18 states that report "net/current hospitalizations")



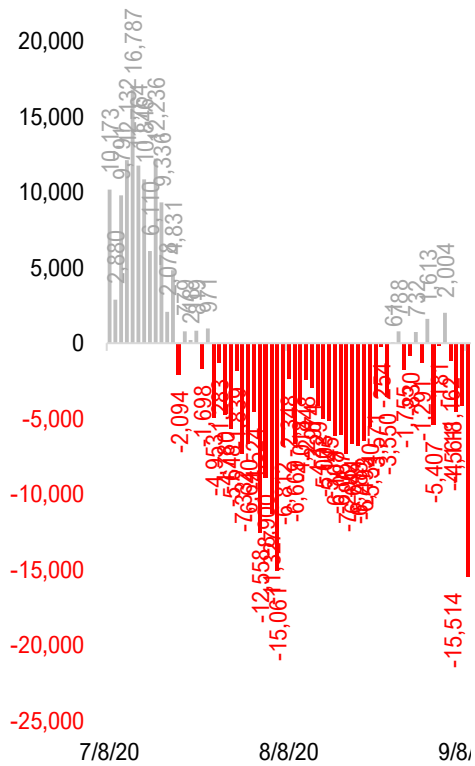
#8: US Daily New Fatalities...

US daily COVID-19 Fatalities

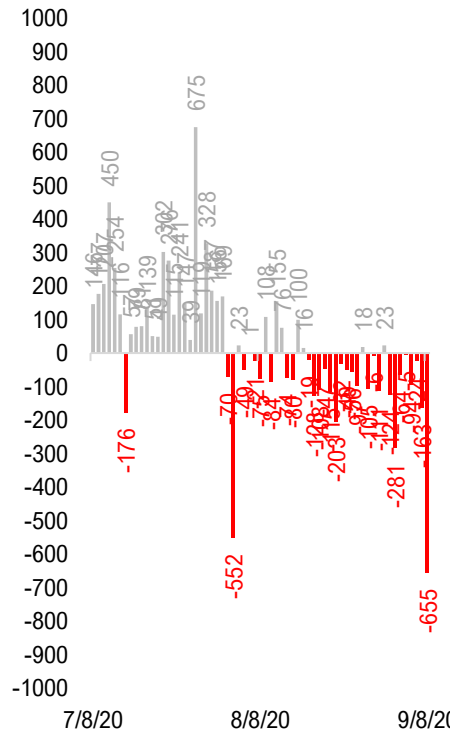


#9: Rolling 7-Day Change in the Key Metrics... (Past 8 Weeks)

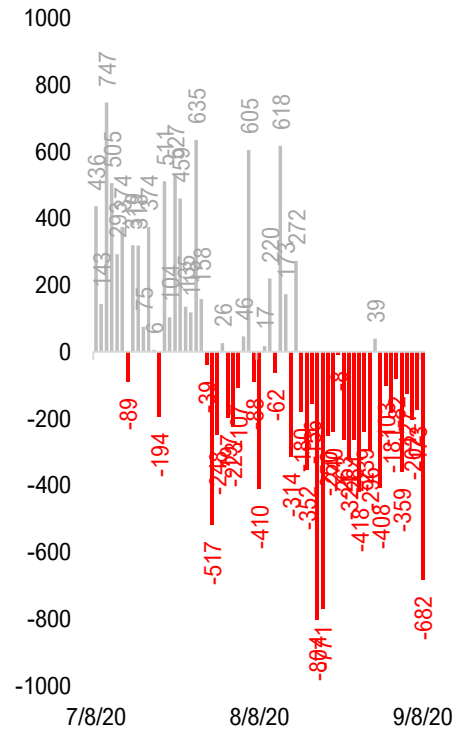
Daily New Cases
(8/10-8/23 ex-CA; 9/4-9/5 ex-IL)



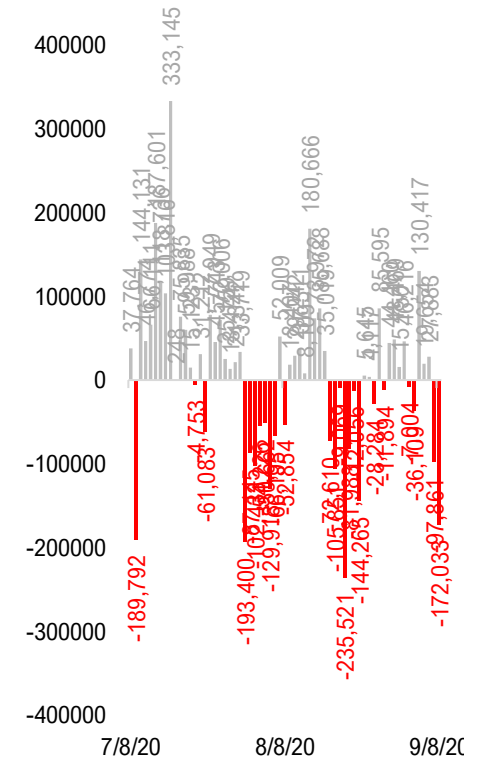
Daily Deaths



Daily New Gross hospitalization
(aggregate of 33 states)

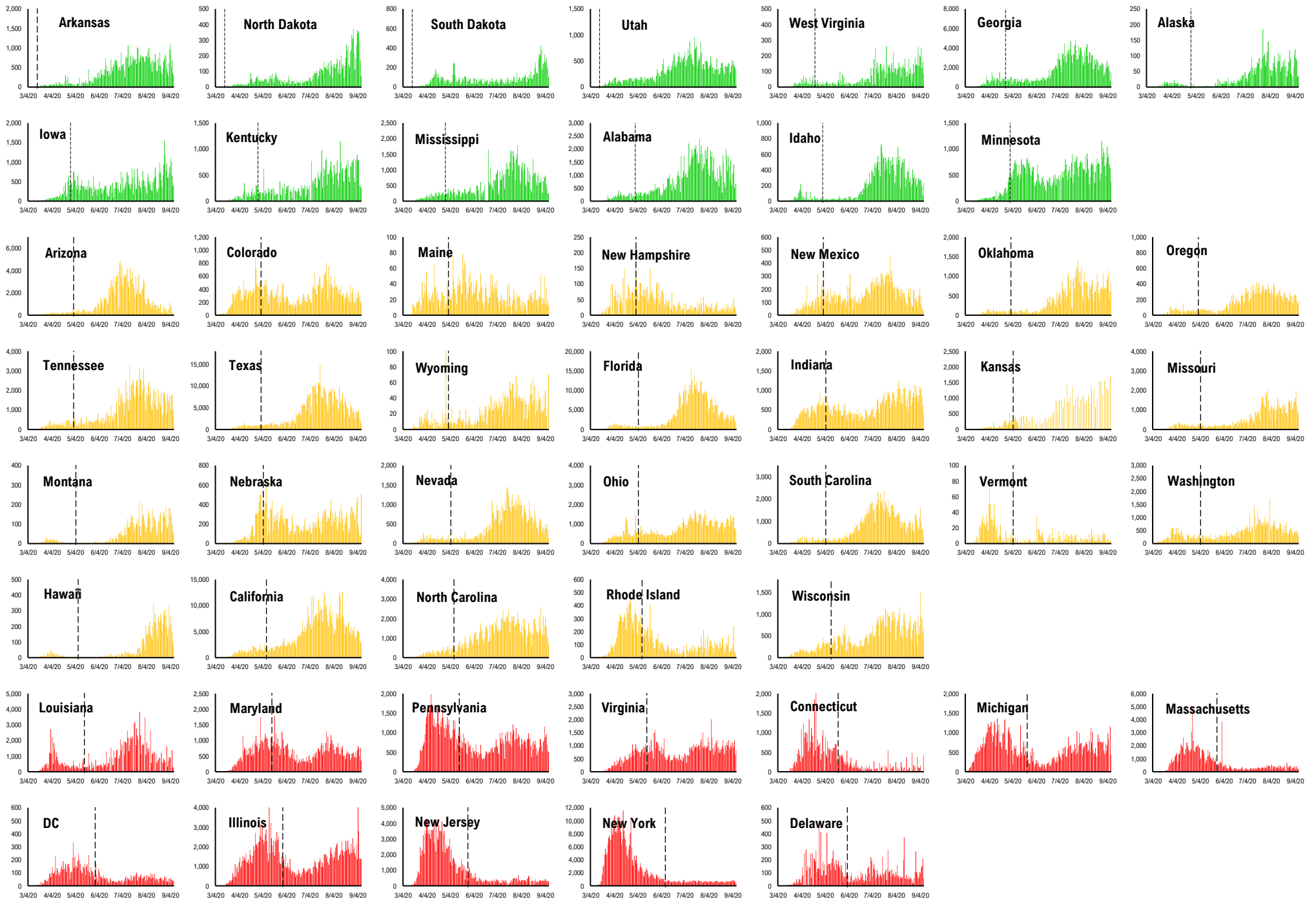


Daily Tests

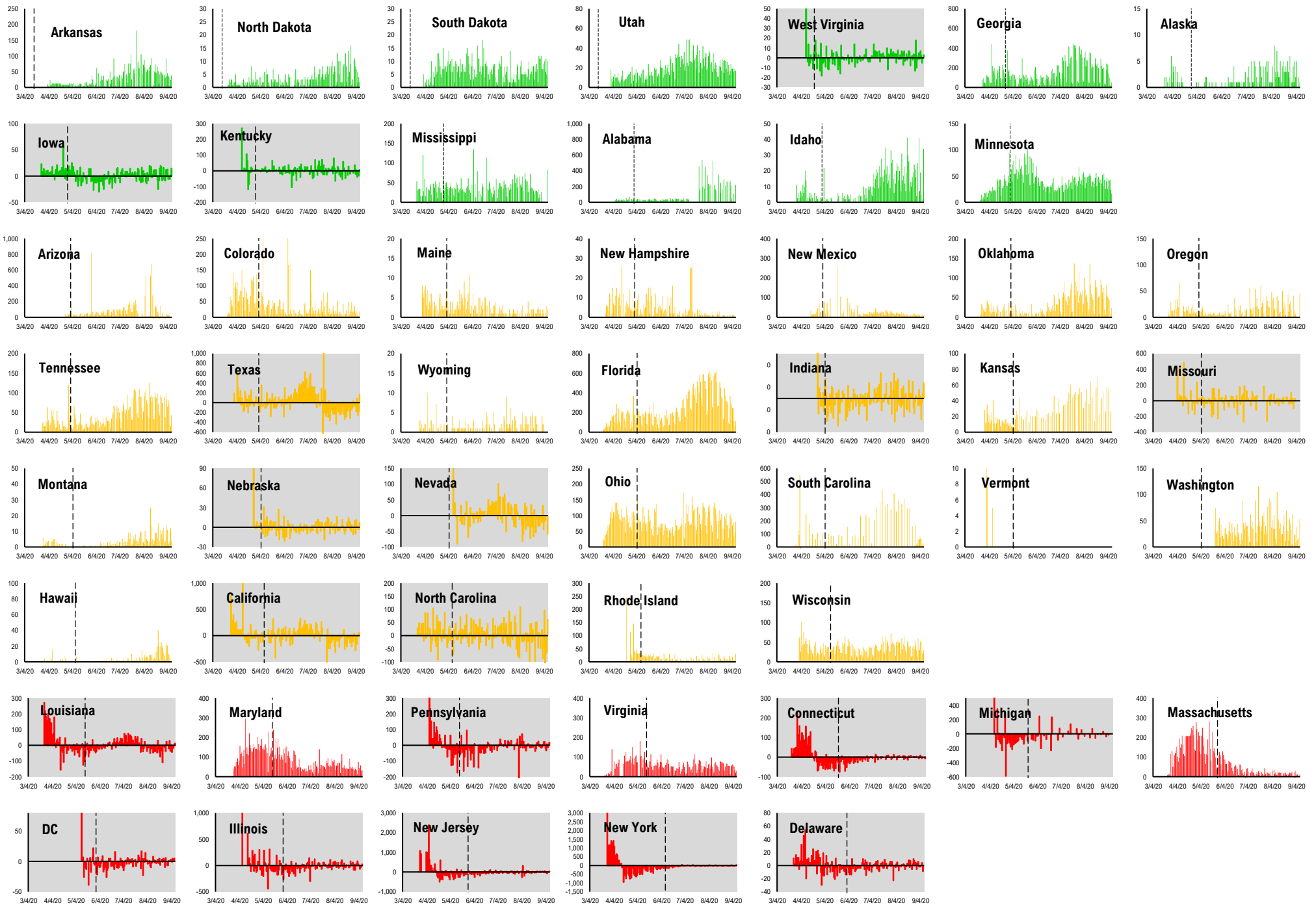


* Ignored California between 8/10 and 8/23, due to its data glitch caused 300,000-case backlog
Source: Fundstrat, COVID-19 Tracking Project, State Department of Health

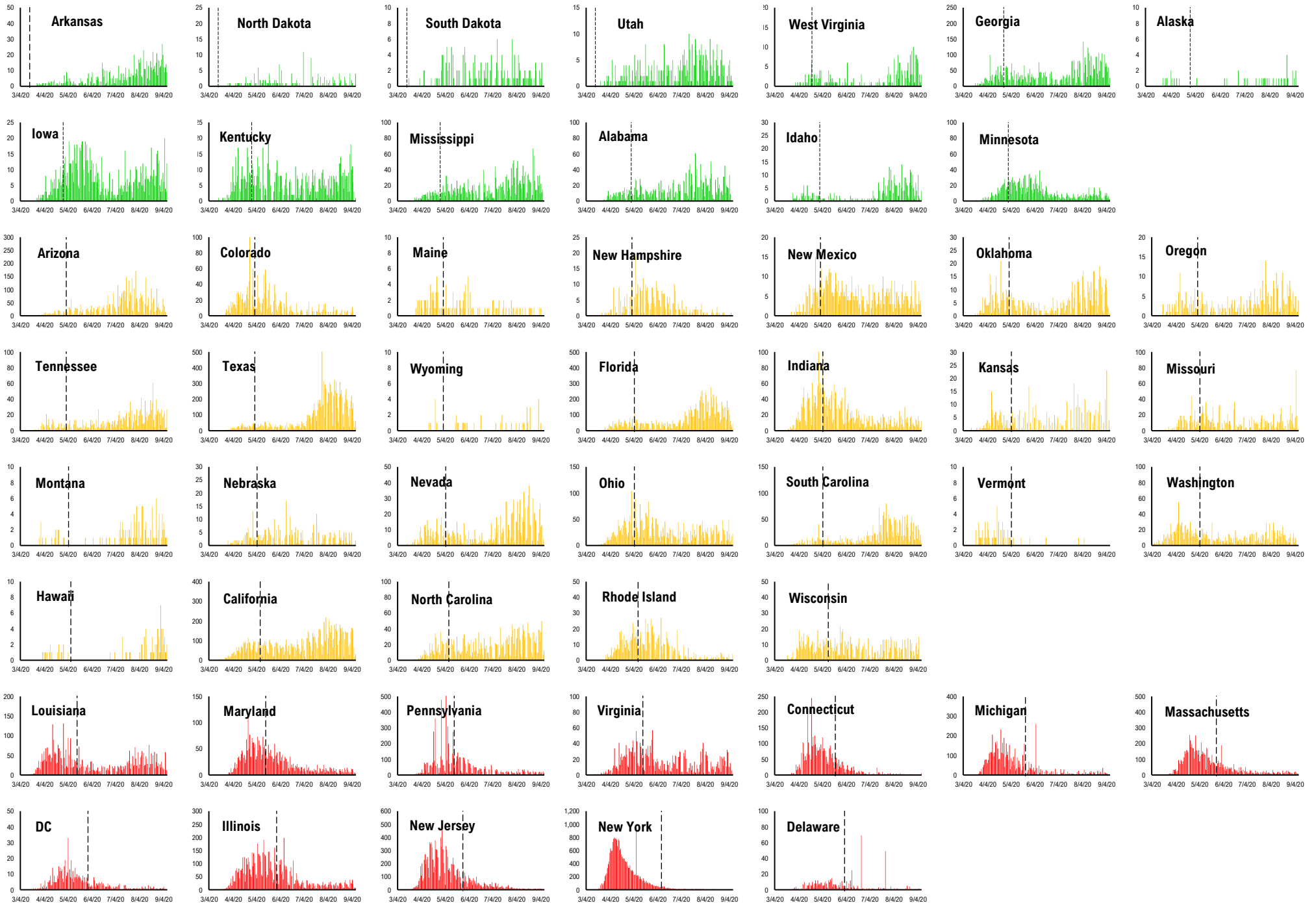
#10: Daily New Cases by States... (sorted by "open" date)



#11: Daily Hospitalizations by States... (sorted by "open" date)



#12: Daily New Deaths by States... (sorted by "open" date)



#13: State COVID-19 situation by Reopen Date...

Daily Cases

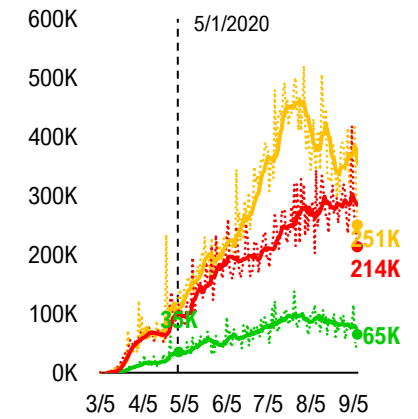
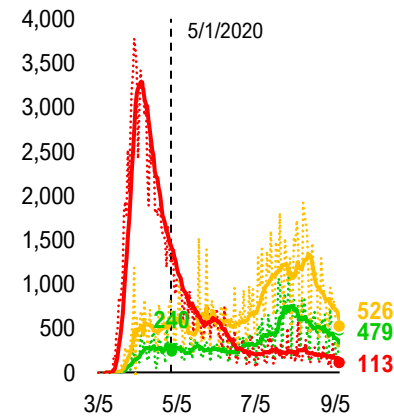
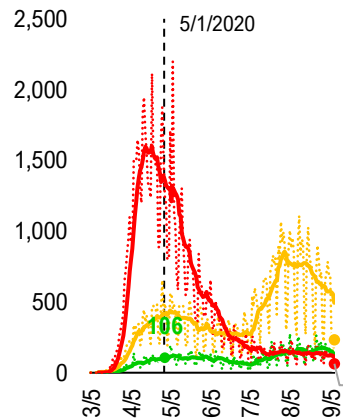
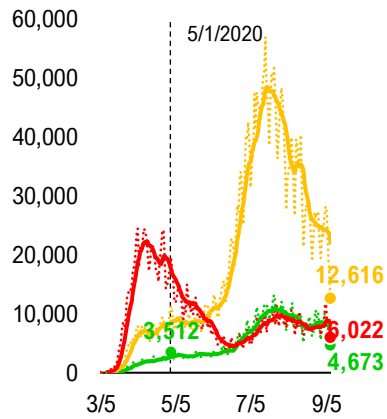
Daily Deaths

Daily Hospitalization

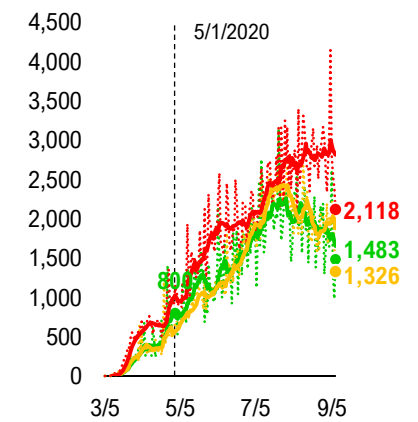
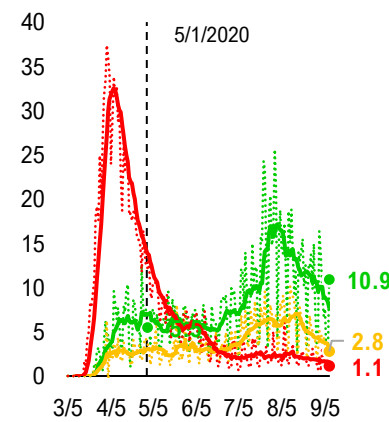
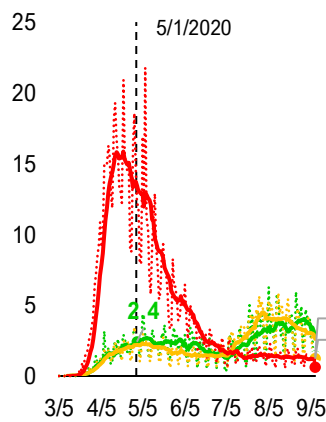
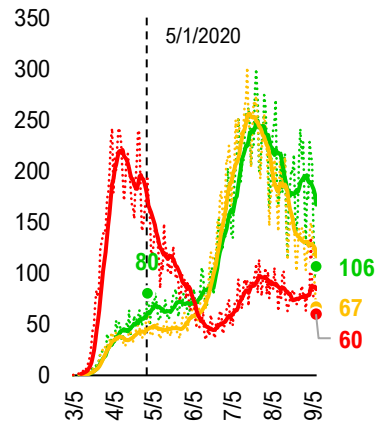
Daily Testing

— States Open Before 5/1 — States Open between 5/1 and 5/11 — States Open after 5/11

Composite Daily Aggregate

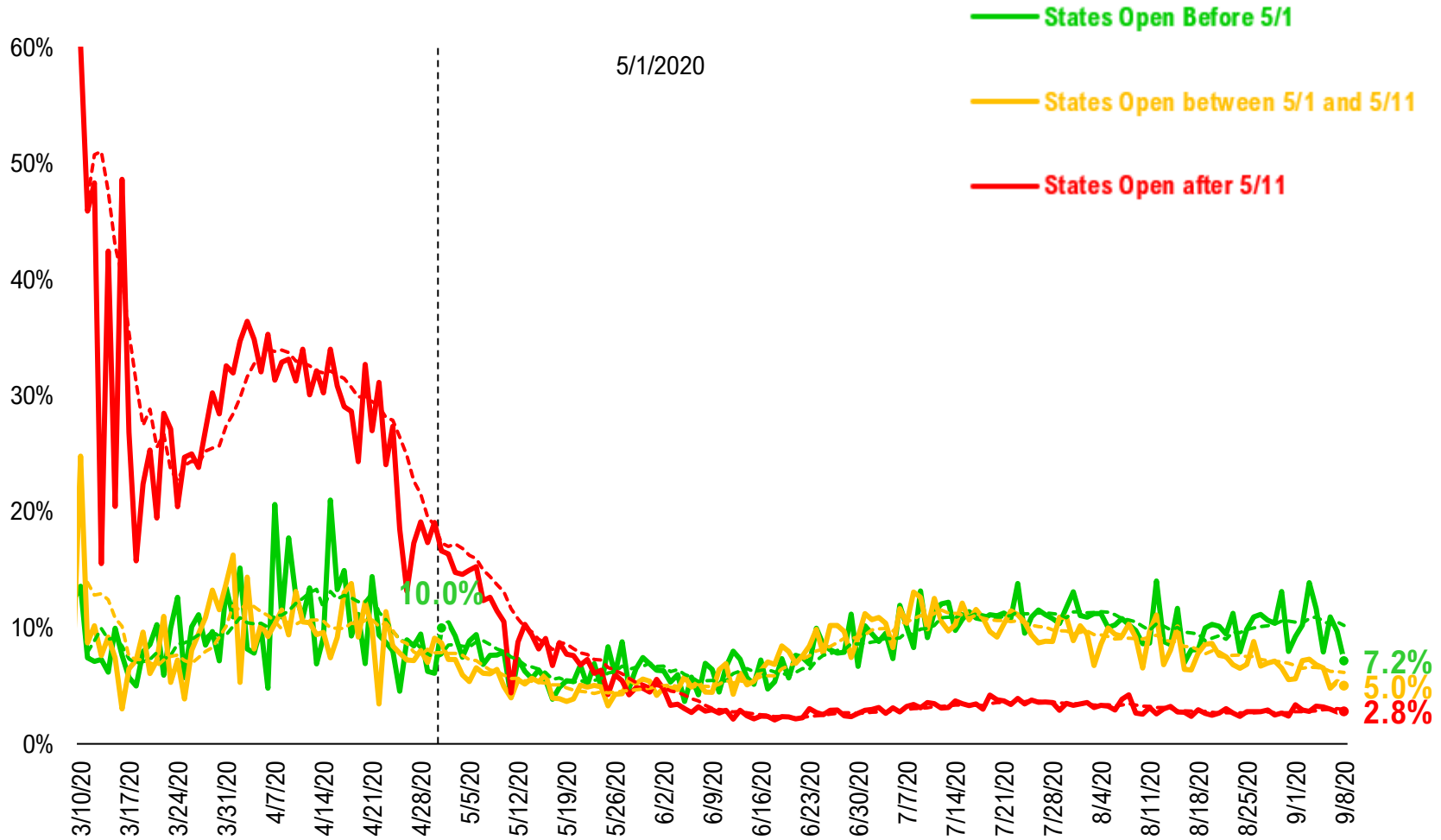


Composite Daily Aggregate Per 1mm Pop

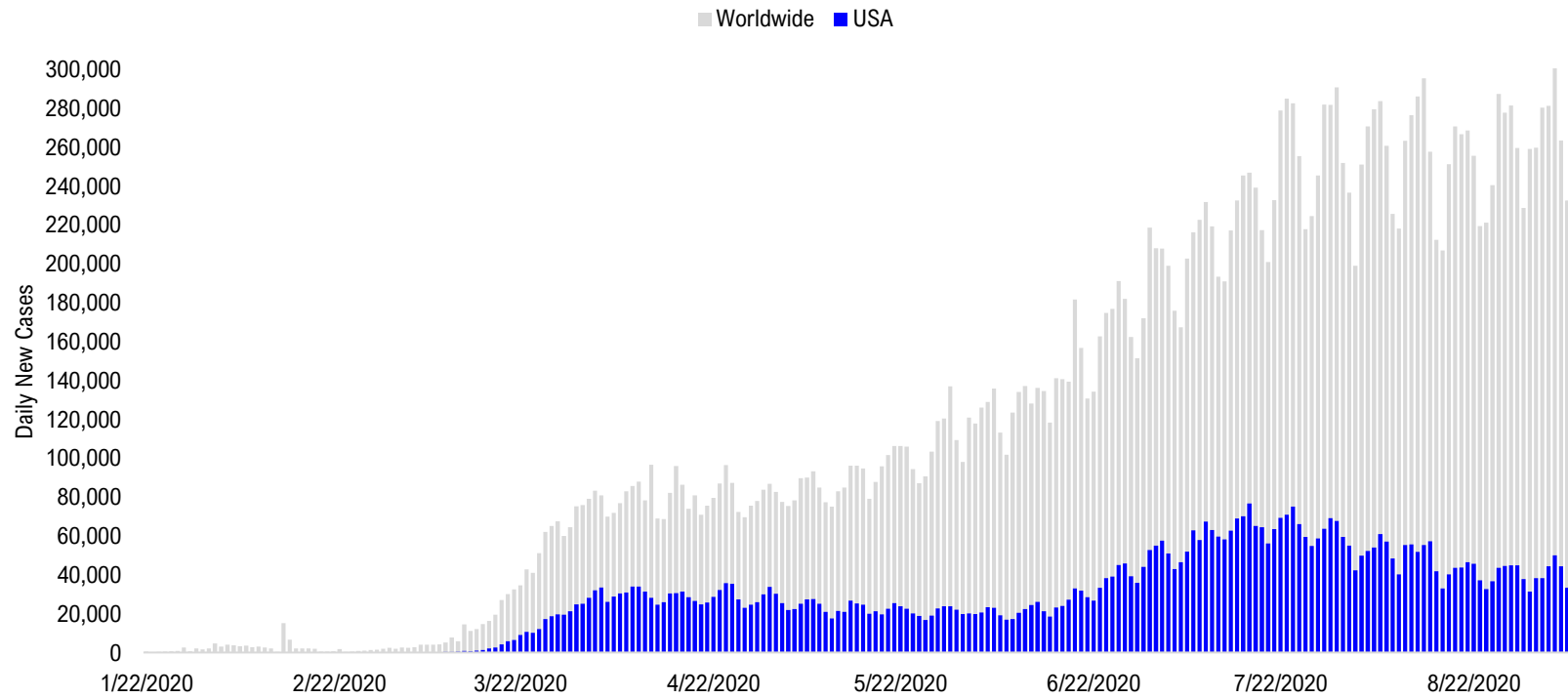


#14: State COVID-19 Daily Positivity Rate by Reopen Date...

Composite Daily Positivity Rate



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



4/24/2020	5/8/2020	5/22/2020	6/5/2020	6/19/2020	7/3/2020	7/17/2020	7/31/2020	8/14/2020	8/28/2020	9/7/2020
US + Canada 34,019	US + Canada 28,068	Latin America 33,875	Latin America 47,182	Latin America 58,570	Latin America 72,231	Latin America 72,602	Latin America 97,308	Latin America 100,636	Latin America 88,255	Pakistan + India + Bangladesh 88,065
Europe 30,673	Europe 27,484	US + Canada 25,073	US + Canada 21,894	US + Canada 28,473	US + Canada 55,408	US + Canada 72,365	US + Canada 67,272	Pakistan + India + Bangladesh 68,924	Pakistan + India + Bangladesh 82,644	Latin America 55,926
Latin America 11,820	Latin America 18,868	Europe 19,494	Europe 17,839	Pakistan + India + Bangladesh 22,981	Pakistan + India + Bangladesh 27,389	Pakistan + India + Bangladesh 39,450	Pakistan + India + Bangladesh 58,625	US + Canada 54,663	US + Canada 44,796	Europe 37,540
Pakistan + India + Bangladesh 2,801	Pakistan + India + Bangladesh 5,721	Pakistan + India + Bangladesh 9,981	Pakistan + India + Bangladesh 16,820	Europe 18,534	Europe 15,950	Africa 19,290	Europe 20,854	Europe 28,282	Europe 35,826	US + Canada 35,286
Asia ex- India+Pakistan 2,369	Africa 2,945	Africa 4,166	Africa 6,467	Africa 8,930	Africa 14,218	Europe 17,320	Africa 17,999	Africa 10,680	Asia ex- India+Pakistan 9,999	Asia ex- India+Pakistan 7,731
Africa 1,520	Asia ex- India+Pakistan 1,906	Asia ex- India+Pakistan 2,225	Asia ex- India+Pakistan 2,565	Asia ex- India+Pakistan 3,314	Asia ex- India+Pakistan 12,006	Asia ex- India+Pakistan 7,321	Asia ex- India+Pakistan 10,630	Asia ex- India+Pakistan 10,512	Africa 8,468	Africa 7,362

Disclosures

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