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10/29/2020

COVID-19 UPDATE: Residents of Wave 3 states are starting to freak out and wear masks = good

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STRATEGY: The longest wait... losing 1,000 points per day until Election day

Equity markets were utterly crushed Wednesday, falling 3% and adding to the carnage over the past 3 days. There have been factors weighing on markets and if I was to highlight a few:

- Fiscal stimulus "clock ran out"
- Europe entering lockdown after a massive, absolutely massive surge in cases
- Vaccine delays seen as cited by Fauci today
- Biden sweep starting to scare people because of higher taxes and increased regulation
- October tax loss selling season
- Nobody taking risks prior to Election day

So this is an absolutely sickening decline. VIX surged to above 40. We are now reaching levels where the market is pricing in significant expected moves over the next few months. And as the chart below shows, when VIX reaches 40, we are near turning points for both VIX to fall and thus, stocks to find some footing. So, while this has been an absolute bludgeoning, we think this is a buying opportunity and not a time to sell.

 For important disclosures see **Page 15**.

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Source: Bloomberg

Daily cases are still rising, and this is bad news. And with Europe's cases surging so much that both Germany and France are calling for a month-long shelter in place, the level of anxiety is naturally elevated.

The current wave 3 surge in US cases is coming from states that previously did not see an outbreak in wave 1 and wave 2 -- these 8-10 states are primarily in the Mountains region and represent 20% of the US. We have been waiting for policymakers and citizens in these states to finally panic and take mitigation steps.

It looks like it is finally happening. Delphi Research Group has been polling Facebook users on

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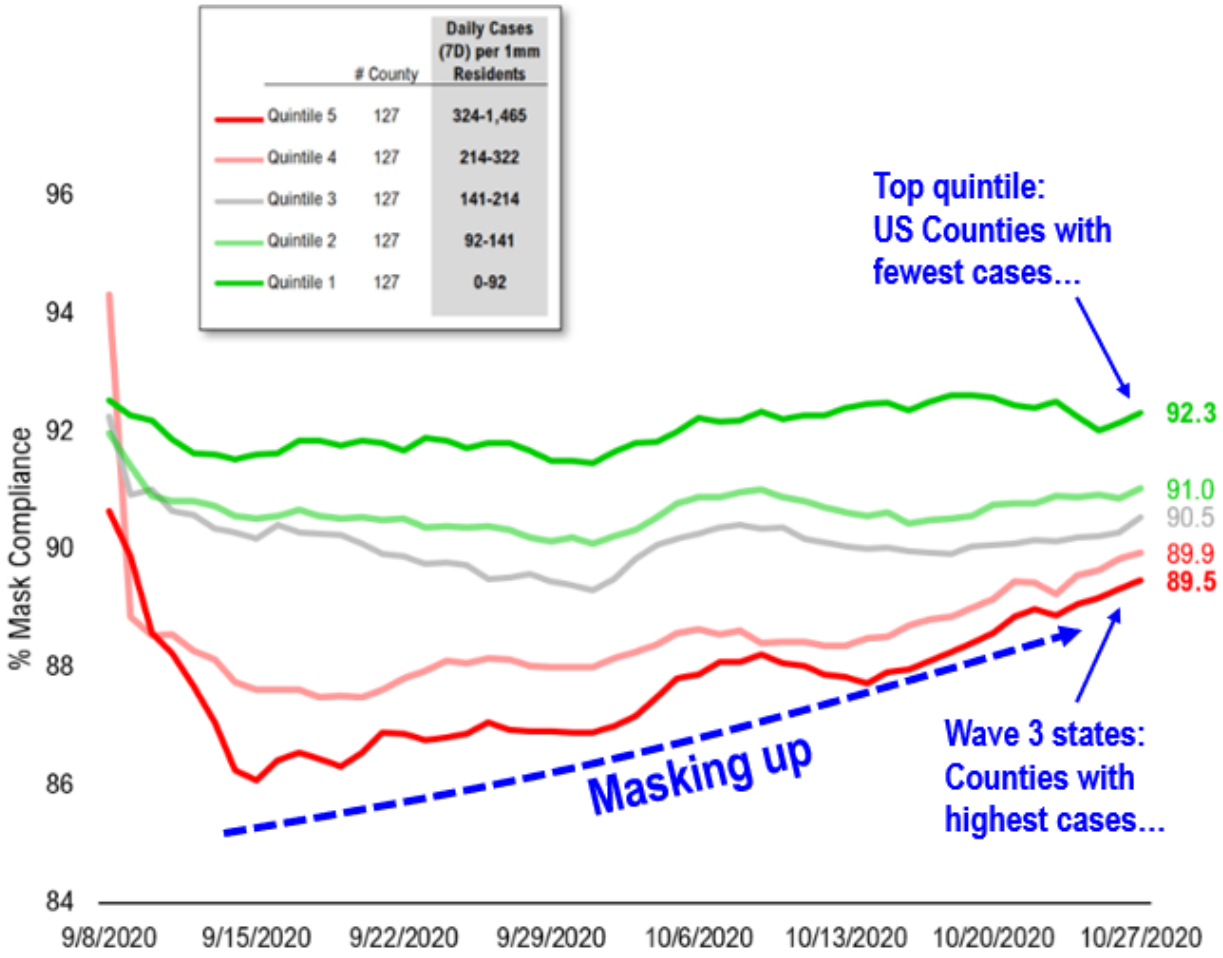
mask usage and our data science team compiled the county-level data. The red line below is the mask usage in wave 3 states (20% of areas with most cases). As you can see, in the past month, residents in these states have started to mask up:

- in other words, we believe we could soon see a peak in cases in these wave 3 states as residents finally panic



Source: Delphi and COVID-19 Tracking and Fundstrat

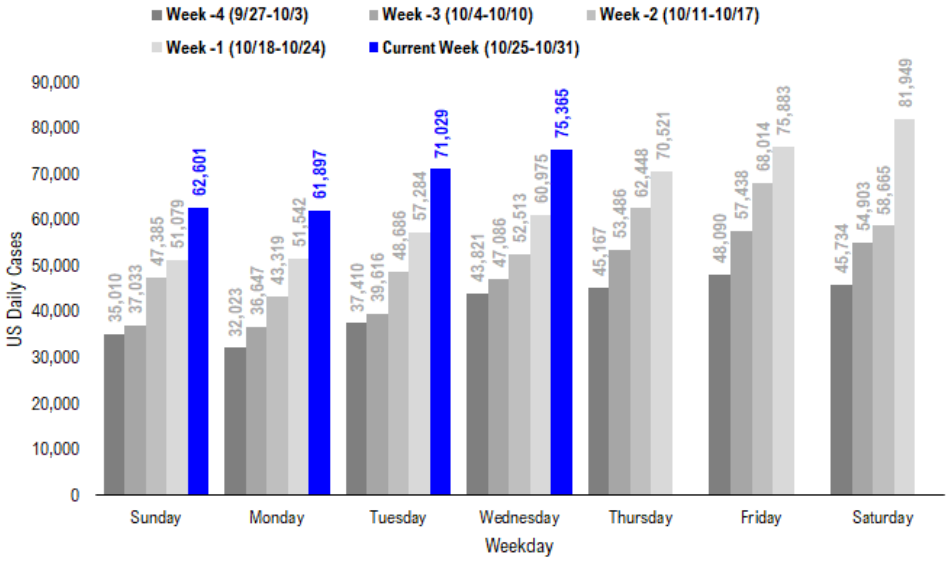
There is a lot more interesting commentary below, including how the mask compliance seems to be positively correlated with more controlled COVID-19 spread.

POINT 1: Daily cases 75,365, +14,390 vs 7D ago -- still more linear than parabolic

The latest COVID-19 daily cases came in at 75,365, up +14,390 vs 7D ago. Daily cases already hit a new all-time high a few days ago of 81,949, so we are seeing a surge in cases. Last week,

we spoke of the likelihood that daily cases would move past 70,000 and we are already past that level.

- Because the spread is primarily in 11 states, we might be nearing peak velocity in those states (daily cases per 1mm >500 trigger policy response)
- states involved in wave 1 and wave 2 are not seeing a surge in cases in this wave 3
- Hospitalizations are more important, in our view, and while hospitalizations are rising, the levels are still quite low

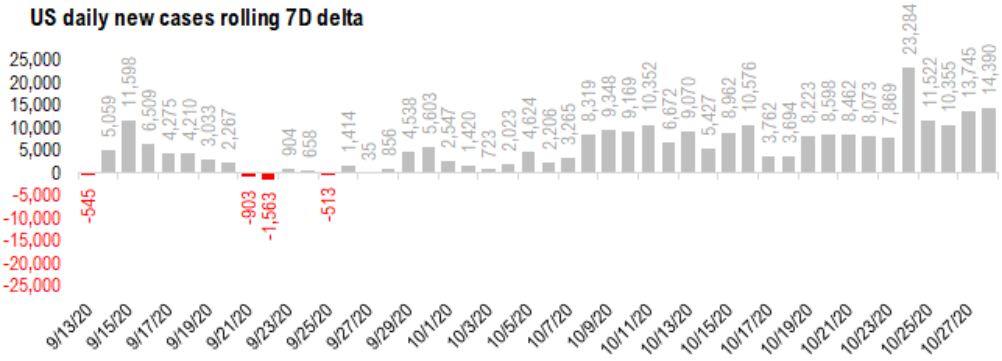


Source: COVID-19 Tracking Project and Fundstrat

US daily cases 7D delta is up but not exponential...

Again, the daily change vs 7D ago, in our view, is the leading indicator as it is what influences the 7D moving average.

- Daily cases are rising vs 7D ago, but the rate of increase is been constant.
- It does not seem to be accelerating (becoming exponential), which is key
- there was 1 day where daily cases surged 23,000 (exponential-like) but it was a 1-day surge



Source: COVID-19 Tracking and Fundstrat

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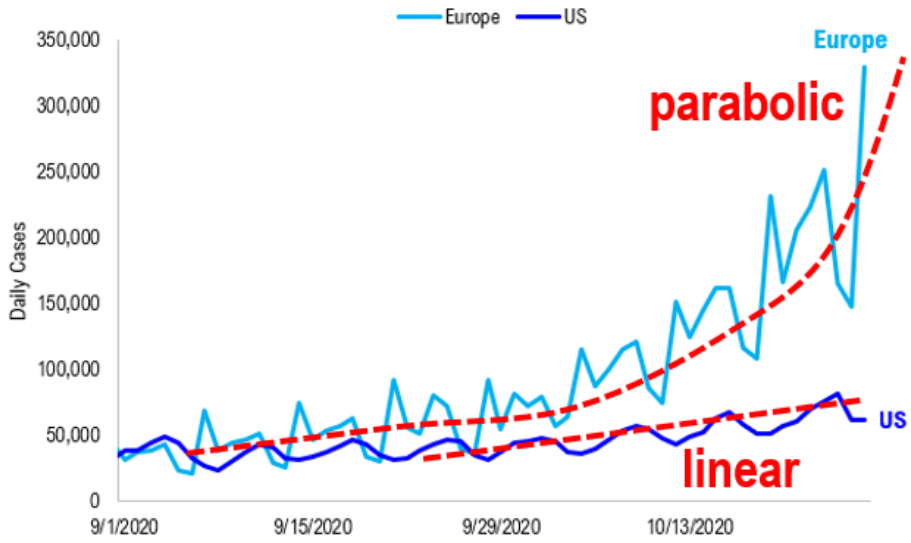

Source: Johns Hopkins and Fundstrat

6 states with largest 7D delta in daily cases

Florida	4,115 vs 2,144 (-7D)	+1,971
Illinois	6,110 vs 4,342	+1,768
Michigan	3,271 vs 1,597	+1,674
Minnesota	1,908 vs 1,060	+848
Indiana	2,548 vs 1,732	+816
California	4,515 vs 3,707	+808
Total		+7,885

6 states with largest 7D delta in daily cases

Oklahoma	743 vs 1,307 (-7D)	-564
Wisconsin	3,815 vs 4,205	-390
Arkansas	690 vs 981	-291
Louisiana	503 vs 744	-241
South Carolina	702 vs 869	-167
New Mexico	657 vs 819	-162
Total		-1,815

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Daily Case Increases (by State) (10/28)

% total new cases (state cases/ total US cases)
% total US pop (state population/ total US population)

Sorted

7D Ago **Last 3-day Trend**

		10/21/20	10/26/20	10/27/20	10/28/20	vs 7D ago
	United States	60,975	61,897	71,029	75,365	+14,390
	States:					
1	Illinois	4,342	4,729	4,000	6,110	<--higher
2	Texas	4,991	4,418	7,055	5,175	
3	California	3,707	2,981	3,188	4,515	<--higher
4	Florida	2,144	3,377	4,298	4,115	<--higher
5	Wisconsin	4,205	2,883	5,262	3,815	
6	Michigan	1,597	3,881	2,367	3,271	<--higher
7	Ohio	2,366	2,116	2,509	2,607	
8	Indiana	1,732	1,974	1,983	2,548	<--higher
9	Tennessee	2,292	2,279	1,908	2,446	
10	North Carolina	1,842	1,643	2,141	2,253	<--higher
11	Pennsylvania	1,425	1,407	2,751	2,228	<--higher
12	New York	2,026	1,191	1,991	2,031	
13	Missouri	1,244	1,527	1,695	1,915	<--higher
14	Minnesota	1,060	1,570	2,164	1,908	<--higher
15	Kansas	1,488	2,146	0	1,869	<--higher
16	Kentucky	1,452	924	1,771	1,857	<--higher
17	Iowa	1,179	747	857	1,781	<--higher
18	New Jersey	1,030	1,216	1,647	1,666	<--higher
19	Georgia	1,312	958	1,491	1,653	<--higher
20	Utah	1,363	1,201	1,145	1,575	
21	Colorado	1,267	2,211	1,433	1,475	
22	Virginia	1,018	904	1,134	1,345	<--higher
23	South Dakota	587	538	989	1,270	<--higher
24	Alabama	1,146	967	1,115	1,269	
25	Massachusetts	702	1,212	1,260	1,181	<--higher
26	Arizona	975	801	1,158	1,043	
27	Mississippi	801	447	854	1,000	<--higher
28	Nebraska	592	582	702	877	<--higher
29	Idaho	987	697	882	862	
30	North Dakota	499	522	889	777	<--higher
31	Oklahoma	1,307	663	1,010	743	
32	Washington	724	587	527	716	
33	South Carolina	869	805	928	702	
34	Arkansas	981	530	651	690	
35	Maryland	492	565	897	684	<--higher
36	New Mexico	819	723	583	657	
37	Montana	619	621	845	620	
38	Nevada	565	475	730	571	
39	Louisiana	744	222	885	503	
40	Rhode Island	474	167	421	499	
41	Connecticut	416	2,047	538	490	
42	Oregon	307	335	372	420	<--higher
43	West Virginia	215	317	483	358	<--higher
44	Alaska	212	348	382	355	<--higher
45	Wyoming	322	436	329	340	
46	Delaware	50	207	81	143	<--higher
47	New Hampshire	89	69	134	110	<--higher
48	Maine	38	53	57	76	<--higher
49	District of Columbia	53	45	94	67	<--higher
50	Puerto Rico	132	461	263	66	
51	Hawaii	77	36	65	62	
52	Guam	82	120	82	48	
53	Vermont	15	10	30	6	
54	U.S. Virgin Islands	2	2	3	2	
55	Northern Mariana Islands	0	4	0	0	
56	American Samoa	0	0	0	0	

Source: COVID-19 Tracking and Fundstrat

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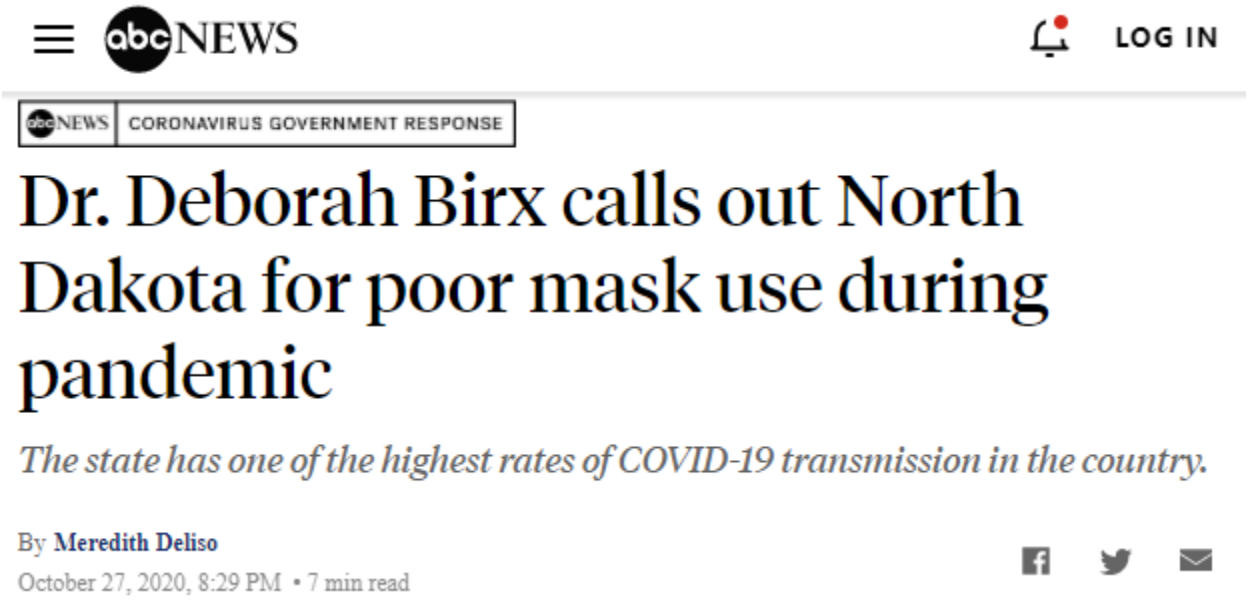
POINT 2: Wave 3: People in "wildfire" areas are starting to wear masks = good

Our data science team, led by tireless Ken, came across some data compiled by Delphi Research Group (Carnegie Mellon) which has been surveying Facebook users about their mask usage. The data is compiled by county, but the dataset is only for the past 4 weeks or so. But tireless Ken put together some interesting analytics.

As many of you know, we are advocates of mitigation, including masks, vitamin D, hand washing and avoiding sick people. And one of the reasons cited for the wildfire spread in the Mountains region of the US has been the relatively less consistent mask usage. For instance, Dr. Birx cited this in her recent visit to North Dakota.



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Dr. Deborah Birx calls out North Dakota for poor mask use during pandemic

The state has one of the highest rates of COVID-19 transmission in the country.

By **Meredith Deliso**
October 27, 2020, 8:29 PM • 7 min read

https://abcnews.go.com/Health/dr-deborah-birx-calls-north-dakota-poor-mask/story?id=73855650

People in "wildfire" states (wave 3) are starting to freak out and put on masks...

Below is a chart looking at the consistency of mask usage. There are 5 lines, each representing a quintile of US based on the level of case spread (green have fewest cases per 1mm).

- the red line is key
- this is wave 3 states, or the 20% of the US with the fastest spread of COVID-19
- mask usage in these state surged in the past few weeks as cases rose

In other words, the spread of COVID-19 in these counties is resulting in citizens starting to mask up. This is a reason we expect US cases to actually potentially peak in the next few weeks. As policymakers and citizens panic, cases begin to slow. And we don't have to shut down the economy.

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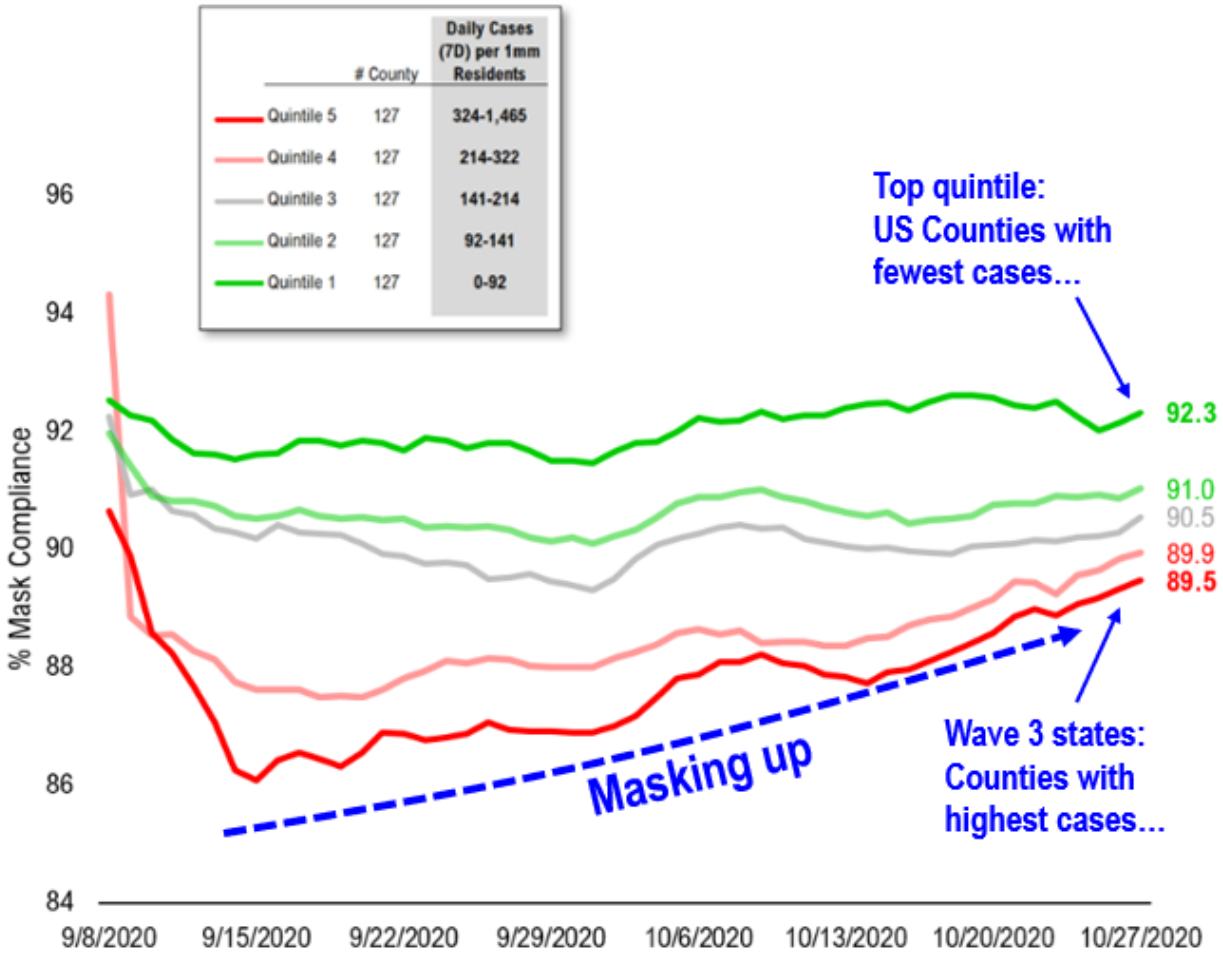

Source: Delphi and COVID-19 Tracking and Fundstrat

Tireless Ken aggregated the data and compared "mask consistency" (x-axis) versus daily cases per 1mm residents (y-axis). The chart is shown below. At first glance, there does seem to be a

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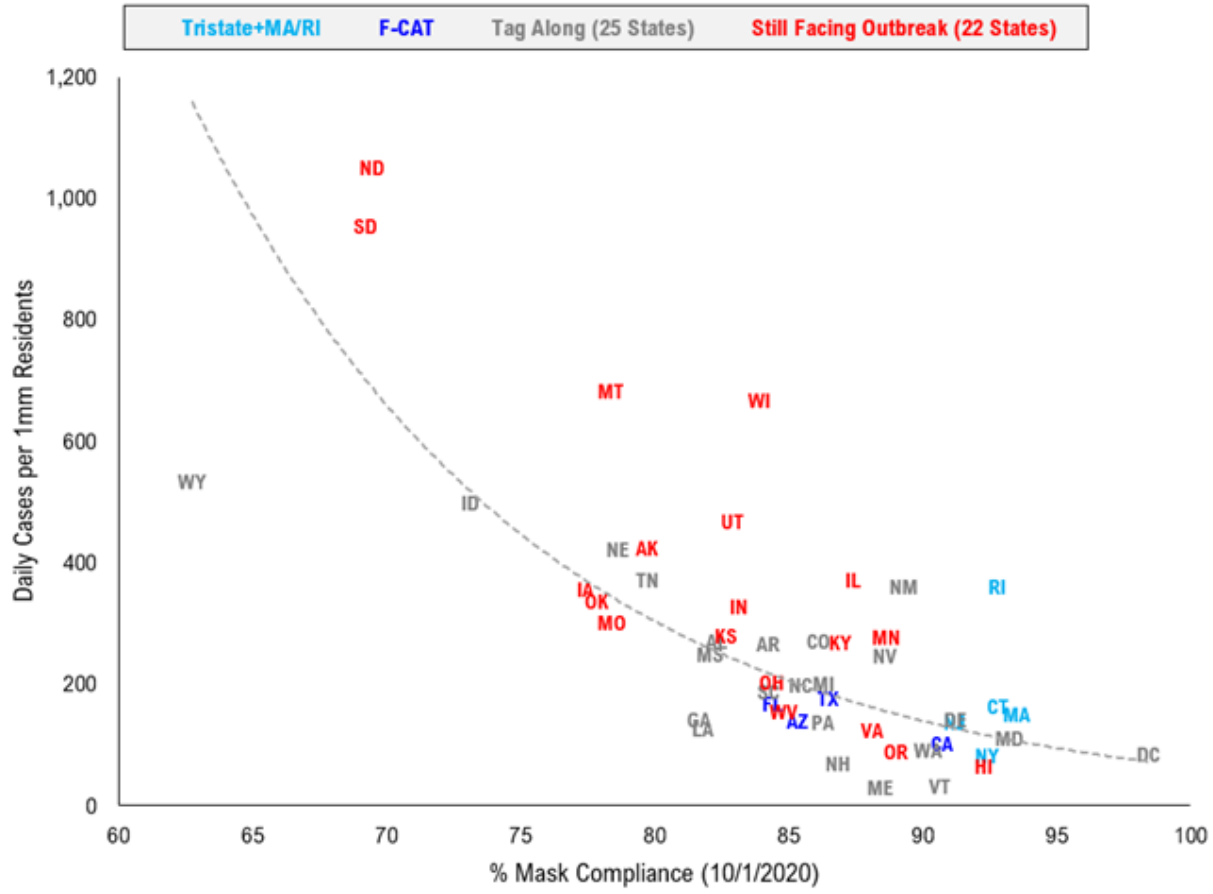
pretty strong relationship.

- states with the lowest mask compliance are seeing the worst outbreaks --> ND, SD and WY
- states with the highest mask compliance are generally seeing the fewest cases



Source: Delphi and COVID-19 Tracking and Fundstrat

In fact, it also looks like states with the lowest mask compliance are seeing the biggest surge in cases as well. This is evident looking at the stratification of the data below. Tireless Ken sliced

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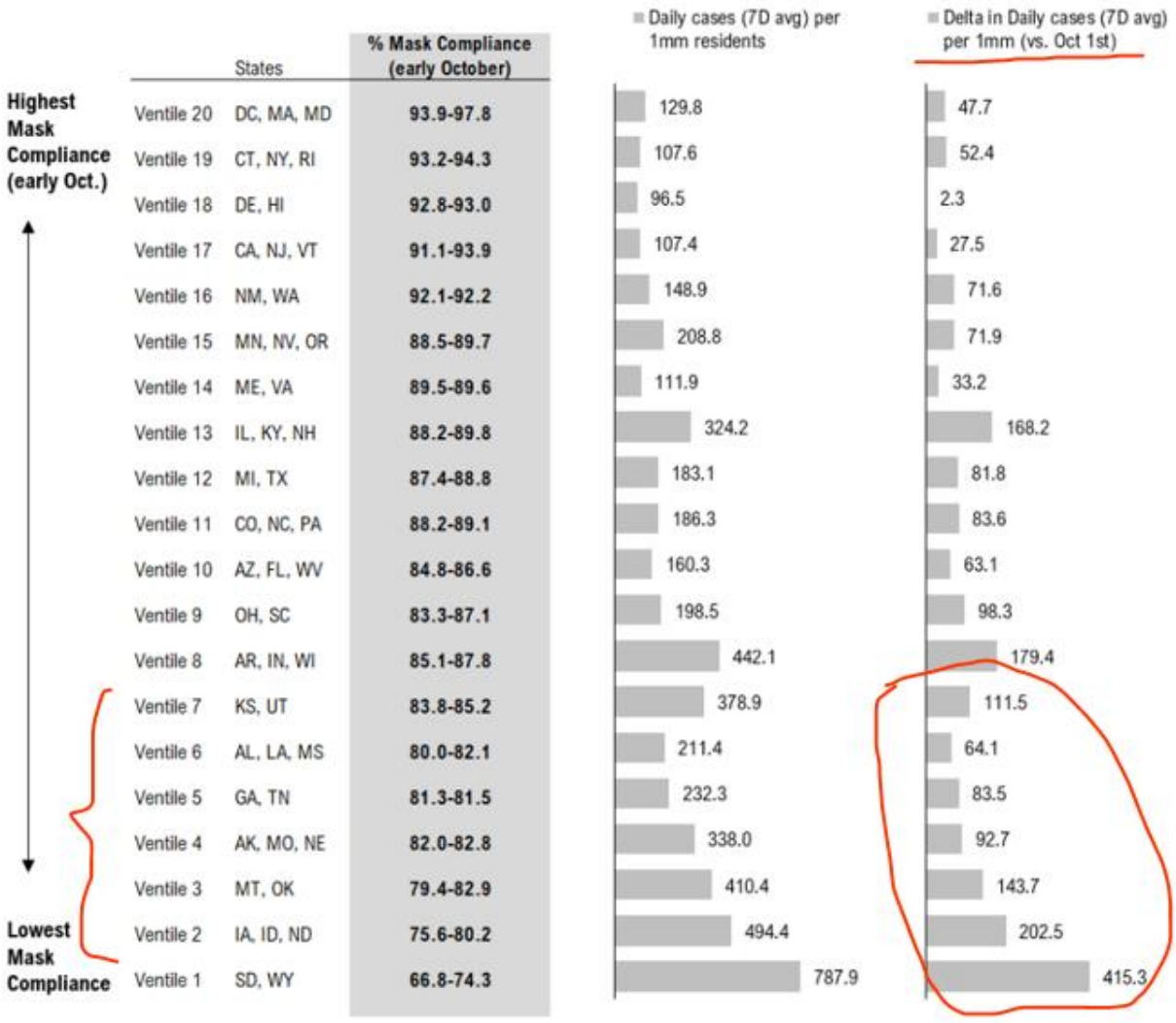
the data into 20 tiers.



		States	% Mask Compliance (early October)	Daily cases (7D avg) per 1mm residents	Delta in Daily cases (7D avg) per 1mm (vs. Oct 1st)
Highest Mask Compliance (early Oct.)	Ventile 20	DC, MA, MD	93.9-97.8	129.8	47.7
	Ventile 19	CT, NY, RI	93.2-94.3	107.6	52.4
	Ventile 18	DE, HI	92.8-93.0	96.5	2.3
	Ventile 17	CA, NJ, VT	91.1-93.9	107.4	27.5
	Ventile 16	NM, WA	92.1-92.2	148.9	71.6
	Ventile 15	MN, NV, OR	88.5-89.7	208.8	71.9
	Ventile 14	ME, VA	89.5-89.6	111.9	33.2
	Ventile 13	IL, KY, NH	88.2-89.8	324.2	168.2
	Ventile 12	MI, TX	87.4-88.8	183.1	81.8
	Ventile 11	CO, NC, PA	88.2-89.1	186.3	83.6
	Ventile 10	AZ, FL, WV	84.8-86.6	160.3	63.1
	Ventile 9	OH, SC	83.3-87.1	198.5	98.3
	Ventile 8	AR, IN, WI	85.1-87.8	442.1	179.4
	Ventile 7	KS, UT	83.8-85.2	378.9	111.5
	Ventile 6	AL, LA, MS	80.0-82.1	211.4	64.1
	Ventile 5	GA, TN	81.3-81.5	232.3	83.5
	Ventile 4	AK, MO, NE	82.0-82.8	338.0	92.7
	Ventile 3	MT, OK	79.4-82.9	410.4	143.7
Lowest Mask Compliance	Ventile 2	IA, ID, ND	75.6-80.2	494.4	202.5
	Ventile 1	SD, WY	66.8-74.3	787.9	415.3

Source: Delphi and COVID-19 Tracking and Fundstrat

In my opinion, if someone is consistently wearing a mask, they are also likely practicing other stringent mitigation measures. That is, someone masking up is also likely to be cleaning hands, social distancing, etc. Thus, this mask consistency is a proxy for general COVID-19 prevention measures.

In fact, masks alone are probably not enough to prevent a massive spread across the US. Take a look at the YouGov poll below. As you can see, mask wearing is incredibly high in Europe. Yet, this did not prevent a massive, absolutely massive second wave.

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Source: YouGov

POINT 3: Wave 2 >25% of with "wildfire" growth in cases vs <19% in Wave 3, so far

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For much of the past 9 months, we have focused both on the headline COVID-19 as well as focused on the diffusion (% of USA) of cases. Looking at diffusion is important, since the pandemic is essentially local. That is, should anyone in Manhattan really feel threatened if there is a surge in cases in Boise? But the headline numbers are what are generally reported and unfortunately, this does have an impact on national sentiment and behavior.

But the issue we want to focus on is whether this wave 3 is encompassing a larger number of cities.

For background, we have written multiple times highlighting this wave 3 involves essentially a new set of states that did not suffer the horrific surges seen in wave 1 (NY tristate +MA +RI) and wave 2 (FL, CA, AZ, TX, or F-CAT).

- thus, wave 3 is essentially the Mountains region of the US --> WY, WI, UT, ND, SD, and other states.
- these states were not engulfed by COVID-19 in prior waves and thus, residents were less "fearful" of COVID-19 and thus, less prepared.

19% of US is seeing "wildfire" growth (>300 daily cases per 1mm) compared to >25% in wave 2

Total US cases are surging. And the good news, if one could deem it, is that cases are rising in a linear fashion and have not gone parabolic. We also want to know what % of the US is seeing "wildfire" growth in daily cases, which we previously defined as daily cases >300 per 1mm residents. We believe this is the level of cases that cause policymakers and residents to panic.

- wave 1 <10% of US had "wildfire" growth --> hence, this was East Coast problem
- wave 2 >25% of US --> US-Mexico border states --> F-CAT
- wave 3 ~19% of US --> mostly mountain states

In other words, the current surge in the US is seeing massive increases in cases concentrated in ~20% of the US. Think of it this way. If you live in NYC, or Northeast, daily cases have not surged to the point that reminds one of April 2020. Cases are up, yes. But this is hardly the chaos of April/May.

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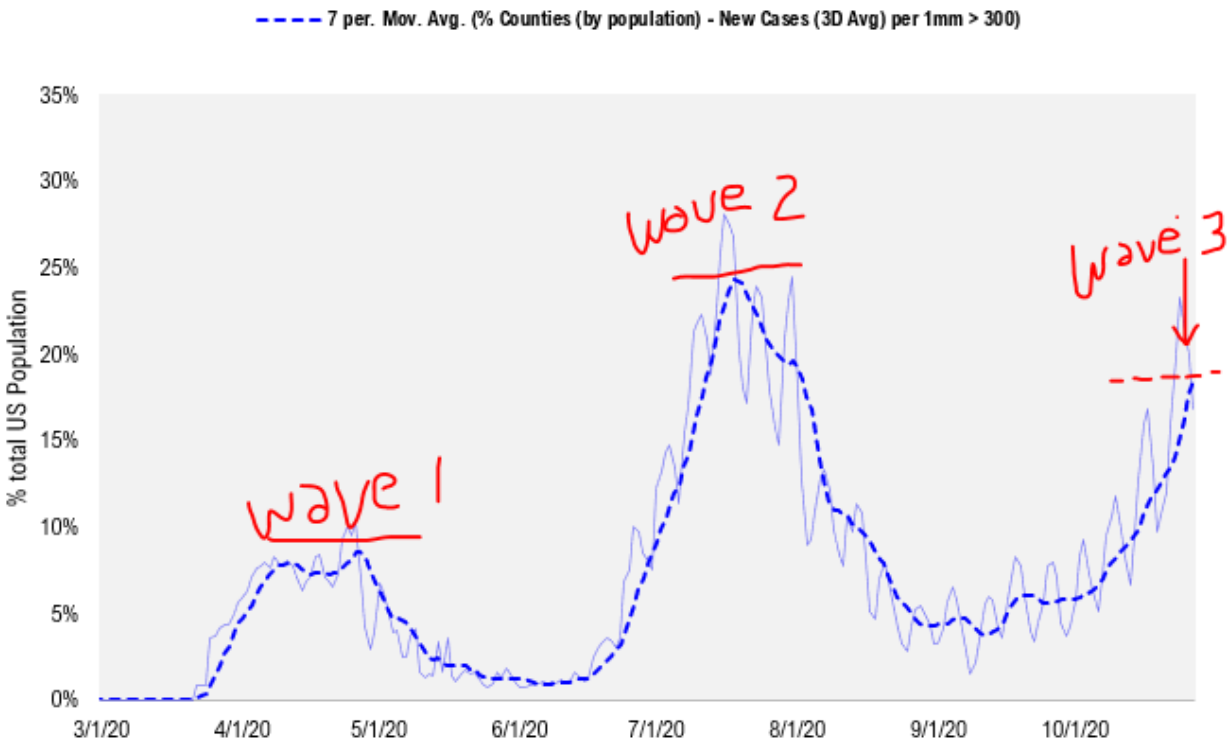

Source: Johns Hopkins and Fundstrat

Tracking the breakout in wave 3 involves much smaller cities as well...
Wave 1 and wave 2 of US COVID-19 involved a handful of cities, but wave 3 encompasses a broader swathe of small cities. We highlight this below:

- wave 1 --> NYC, Boston, Philly, etc. --> East Coast
- wave 2 --> Los Angeles, Big 3 in TX (Houston, Austin, Dallas), Phoenix and Miami
- wave 3 --> dozens of smaller cities <1.0 million Pops

Below are the 50 counties with the highest daily cases (per 1mm residents) in the US. The 50th county has 437 daily cases (per 1mm) and the highest is El Paso with 1,501 (border state). We made some annotations.

- these are basically all cities with 100,000-200,000 residents
- Wisconsin dominates this list
- this sort of proves that population density is not necessarily the reason for "wildfire" spread

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	County	State	Population	Pop per Sq-Miles	% US Population	# Cases	#Cases per 1mm Pop	1 Case per x residents	Daily Cases (3D Avg)	**Daily Cases per 1mm (3D Avg)**
1	El Paso	*Texas*	839,238	828	0.3%	42,332	50,441	20	1,259	**1,501**
2	Minnehaha	*South Dakota*	193,134	239	0.1%	10,997	56,940	18	264	**1,369**
3	Eau Claire	*Wisconsin*	104,646	164	0.0%	3,442	32,892	30	128	**1,226**
4	Marathon	*Wisconsin*	135,692	88	0.0%	4,620	34,048	29	154	**1,137**
5	Fond du Lac	*Wisconsin*	103,403	143	0.0%	4,461	43,142	23	113	**1,090**
6	Rock	*Wisconsin*	163,354	227	0.0%	5,077	31,080	32	157	**959**
7	Sheboygan	*Wisconsin*	115,340	225	0.0%	4,697	40,723	25	107	**931**
8	Potter	*Texas*	117,415	129	0.0%	8,007	68,194	15	108	**923**
9	Winnebago	*Wisconsin*	171,907	392	0.1%	8,726	50,760	20	148	**863**
10	Doña Ana	*New Mexico*	218,195	57	0.1%	5,980	27,407	36	186	**854**
11	Lubbock	*Texas*	310,569	345	0.1%	17,703	57,002	18	264	**850**
12	Macon	*Illinois*	104,009	179	0.0%	3,234	31,093	32	88	**849**
13	Yellowstone	*Montana*	161,300	61	0.0%	6,215	38,531	26	137	**847**
14	Brown	*Wisconsin*	264,542	500	0.1%	15,103	57,091	18	223	**844**
15	Cass	*North Dakota*	181,923	103	0.1%	8,925	49,059	20	148	**815**
16	Outagamie	*Wisconsin*	187,885	293	0.1%	9,176	48,838	20	151	**804**
17	Flathead	*Montana*	103,806	20	0.0%	3,176	30,596	33	75	**719**
18	Milwaukee	*Wisconsin*	945,726	3,914	0.3%	40,143	42,447	24	678	**717**
19	Gallatin	*Montana*	114,434	46	0.0%	2,959	25,858	39	78	**679**
20	Elkhart	*Indiana*	206,341	445	0.1%	9,402	45,565	22	125	**607**
21	Racine	*Wisconsin*	196,311	589	0.1%	7,299	37,181	27	117	**596**
22	Midland	*Texas*	176,832	196	0.1%	5,294	29,938	33	105	**594**
23	Bonneville	*Idaho*	119,062	64	0.0%	4,459	37,451	27	70	**588**
24	Washington	*Tennessee*	129,375	397	0.0%	3,615	27,942	36	76	**585**
25	Pennington	*South Dakota*	113,775	41	0.0%	4,239	37,258	27	66	**577**
26	Adams	*Colorado*	517,421	434	0.2%	13,945	26,951	37	293	**567**
27	Missoula	*Montana*	119,600	46	0.0%	2,155	18,018	55	66	**552**
28	Black Hawk	*Iowa*	131,228	231	0.0%	5,727	43,642	23	72	**551**
29	Utah	*Utah*	636,235	318	0.2%	28,353	44,564	22	342	**538**
30	Rutherford	*Tennessee*	332,285	537	0.1%	12,143	36,544	27	177	**534**
31	Woodbury	*Iowa*	103,107	118	0.0%	7,285	70,655	14	54	**527**
32	Craighead	*Arkansas*	110,332	155	0.0%	4,544	41,185	24	57	**520**
33	Stearns	*Minnesota*	161,075	120	0.0%	5,991	37,194	27	83	**513**
34	Pueblo	*Colorado*	168,424	71	0.1%	2,047	12,154	82	86	**509**
35	Pickens	*South Carolina*	126,884	255	0.0%	4,406	34,725	29	64	**504**
36	Sumner	*Tennessee*	191,283	361	0.1%	6,230	32,570	31	94	**491**
37	Imperial	*California*	181,215	43	0.1%	12,967	71,556	14	89	**491**
38	Franklin	*Missouri*	103,967	113	0.0%	2,694	25,912	39	51	**487**
39	Winnebago	*Illinois*	282,572	550	0.1%	10,463	37,028	27	137	**485**
40	Salt Lake	*Utah*	1,160,437	1,574	0.4%	45,969	39,614	25	555	**478**
41	Waukesha	*Wisconsin*	404,198	727	0.1%	12,186	30,149	33	190	**471**
42	Kenosha	*Wisconsin*	169,561	622	0.1%	4,958	29,240	34	79	**468**
43	Jefferson	*Kentucky*	766,757	1,991	0.2%	22,204	28,958	35	359	**468**
44	Davidson	*Tennessee*	694,144	1,382	0.2%	32,175	46,352	22	323	**465**
45	La Crosse	*Wisconsin*	118,016	261	0.0%	4,187	35,478	28	54	**458**
46	Anoka	*Minnesota*	356,921	842	0.1%	9,039	25,325	39	162	**455**
47	Porter	*Indiana*	170,389	407	0.1%	3,554	20,858	48	77	**452**
48	Dane	*Wisconsin*	546,695	455	0.2%	14,560	26,633	38	243	**444**
49	Ector	*Texas*	166,223	184	0.1%	6,246	37,576	27	74	**443**
50	Sangamon	*Illinois*	194,672	224	0.1%	4,151	21,323	47	85	**437**

Source: Johns Hopkins and Fundstrat

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