



COVID-19 UPDATE: COVID-19 deaths ex-nursing homes and ex-Tri-State area --> ~19,000, or 74% lower

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For anyone who was driving around the US this weekend, one would have noticed a pretty sizable increase in cars on the road. For those in the Northeast US and NY tristate area, local governments are opening some city parks and, coupled with improving weather, is a factor for the increased traffic. But of course, this is going to make a lot of people uneasy and every person has a different degree of comfort with social distance. COVID-19 is still a serious issue for many cities (the chronic states of NY, NJ, CT, MA, IL, etc.), so I understand how this causes concern. And as there is greater movement, and more states relaxing restrictions, the two logical things to monitor is:

- individual compliance with mitigation measures of PPE, hand washing, social distance
- cases reported data since symptoms appear within 1-5 days

But the healthcare tragedy of COVID-19 is concentrated in two epicenters: first, NY/tristate area (~38% cases and 45% deaths) and nursing homes (~17% cases and 42% deaths) (we expanded analysis to 19 states, or 66% US). Thus, ex- NY tri-state and ex-nursing homes:

- total US COVID-19 deaths 19,483 vs 73,569 total. In other words, dramatically lower.

Researches at Mt Sinai posted study that suggests those who had COVID-19 have a degree of immunity (NY Times article,

<https://www.nytimes.com/2020/05/07/health/coronavirus-antibody-prevalence.html>)

Mt Sinai researchers published a study on MedRxiv last week (multiple authors) and the NY Times published an article on May 7. The study looked at convalescent plasma and tested for antibodies. The study has not been peer reviewed, but their conclusion is that they believe patients who were previously COVID19 positive have antibodies "potentially providing immunity to reinfection."

Here we show that the vast majority of confirmed COVID19 patients seroconvert, potentially providing immunity to reinfection. We also report that in a large proportion of individuals, viral genome can be detected via PCR in the upper respiratory tract for weeks post symptom resolution, but it is unclear if this signal represents infectious virus.

Source: <https://www.medrxiv.org/content/10.1101/2020.04.30.20085613v1?referringSource=articleShare>

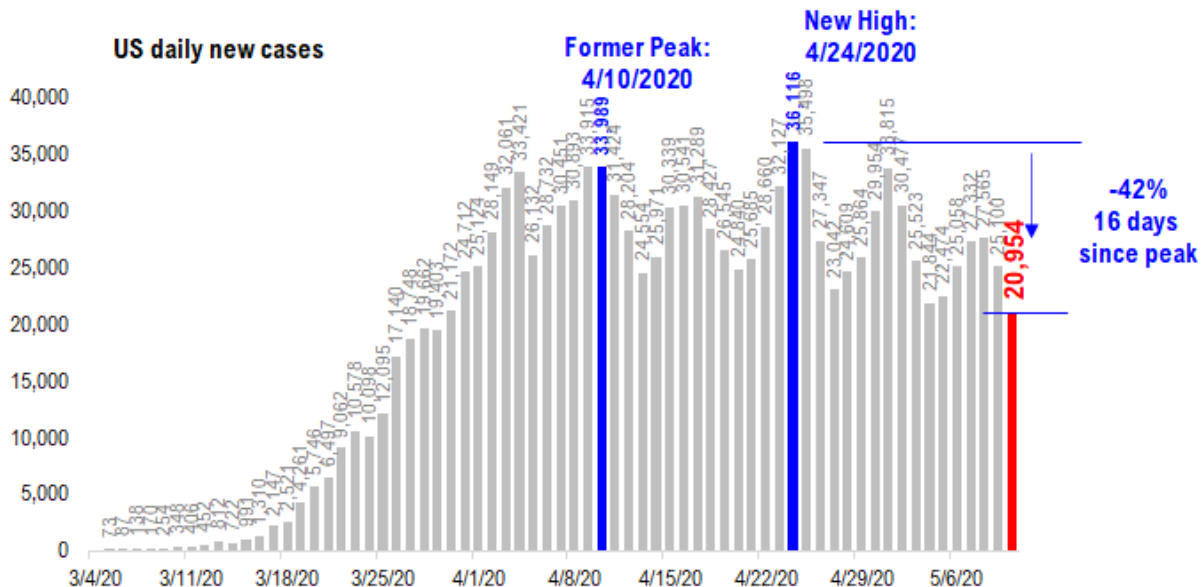
This is one of the first studies to suggest that people with COVID-19 have some sort of immunity and that is a good thing. Foremost, it does suggest there could be eventual herd immunity (absent a vaccine or treatment). And it would reduce the risks of allowing such individuals to return to the workforce.

The future path of the US economy remains uncertain and, therefore, we understand how this leads to bifurcated futures and uncertainty among investors. But the strong equity market gains this past Friday, on the heels of the worst ever reported jobs report in history, highlights how much bad news has already been discounted with equities. We are largely through 1Q2020 EPS. And recall the gauntlet of horrific health and economic news over the past 5 weeks. And yet, equities have managed to sustain gains. We see this as evidence stocks are in the hands of buyers.

POINT #1: US cases fall to NEW LOW 20,954, -42% from peak 16 days prior (4/24/2020)...

US COVID-19 cases fell to 20,954, a pretty sizable drop from 25,100 on 5/9/2020 and 27,565 on 5/8/2020. So the past few days have seen a cumulative drop in daily reported cases - 6,611. Weekend reporting tends to be somewhat inconsistent and thus, given reporting lags, case figures for Sundays and Mondays can seem artificially low, but the trend in cases is still improving. And there does not seem to be a "new outbreak" in any city/state and the high case counts remain with those same states.

- the 20,954 represents a new cycle low for daily reported cases, falling below the previous cycle low of 21,844 reported 5 days earlier on 5/5/2020.



Source: COVID-19 tracking project

IL, NY, MA, OH and NJ comprise the biggest 2-day drop in cases...

Most of the 50 states reported a 2-day drop in cases but the top 5 biggest drops accounted for about 50% of the decline from 27,656 to 20,954.

- IL 1,656 from 2,887 -1,231
- NY 2,273 from 2,938 -665
- MA 1,050 from 1,111 -562
- OH 384 from 885 -501
- NJ 1,447 from 1,819 -372

Total 5 states -3,331 --> 50% total drop

These 5 states are among those with chronically high cases counts, so it is good to see their daily figures fall. But as we noted, there remains inconsistency for reporting on Sunday and Monday (weekend lags) so it is difficult to read too much into the reported data.

Daily Case Increases (by State) (05/10)

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

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

Sorted

Last 3-day trend growth rates

Stats for Kentucky and Idaho were not reported as of Sunday 8 PM...

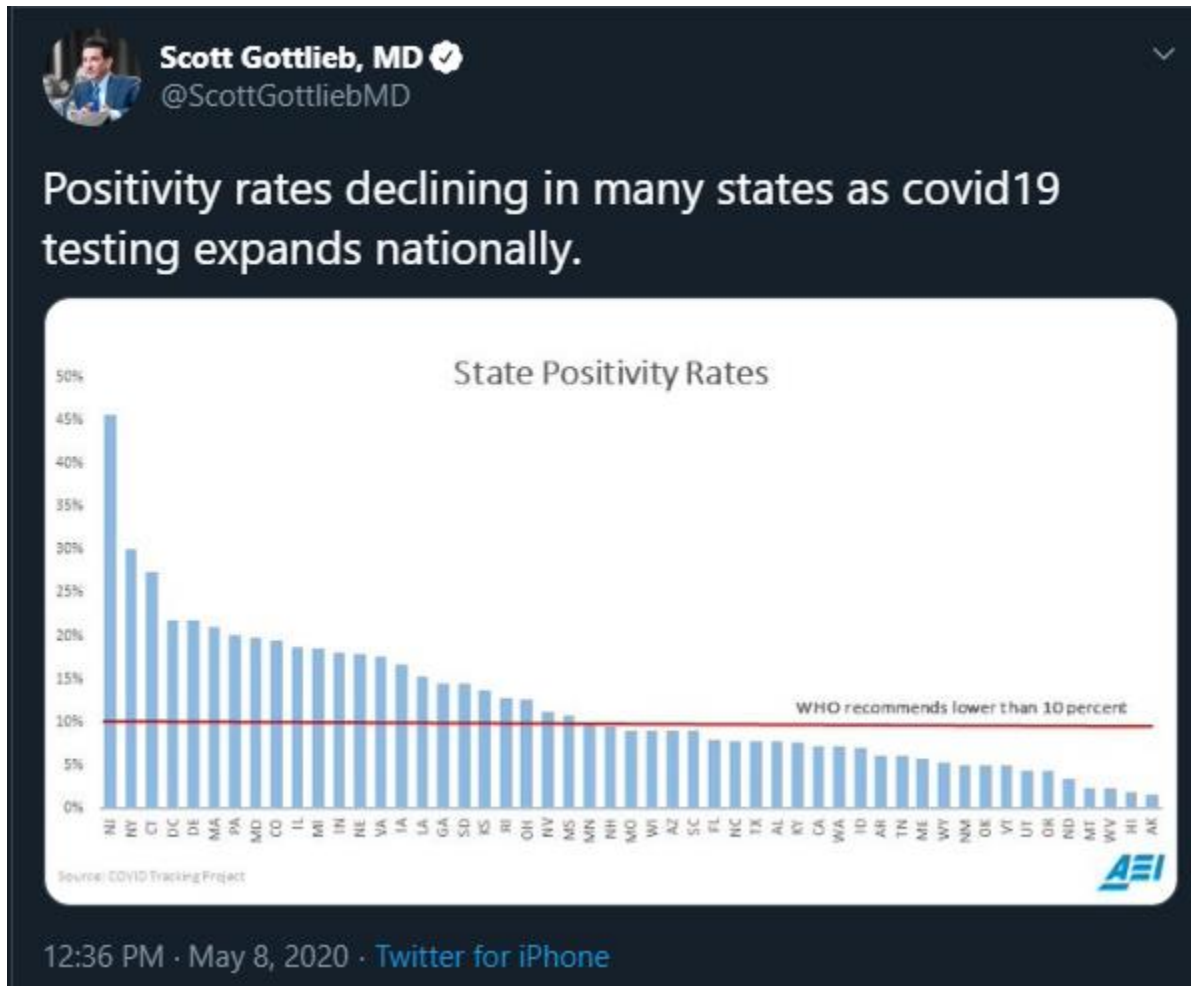
	5/8/20	5/9/20	5/10/20	
United States	27,565	25,100	20,954	
States:				
1 New York	2,938	2,715	2,273	
2 California	1,898	2,049	2,119	
3 Illinois	2,887	2,325	1,656	
4 New Jersey	1,819	1,631	1,447	
5 Pennsylvania	1,323	1,078	1,295	
6 Maryland	1,111	1,049	1,053	
7 Massachusetts	1,612	1,410	1,050	
8 Texas	1,219	1,251	1,009	
9 Virginia	772	854	885	
10 Georgia	598	390	873	←-higher
11 Florida	371	802	595	
12 Connecticut	627	573	570	
13 Minnesota	723	702	481	
14 North Carolina	471	492	404	
15 Indiana	643	586	394	
16 Ohio	885	681	384	
17 Michigan	680	430	382	
18 Colorado	456	548	328	
19 Iowa	398	214	288	
20 Washington	326	157	286	
21 Rhode Island	249	210	285	
22 Wisconsin	375	349	280	
23 Tennessee	345	327	217	
24 Alabama	329	192	210	
25 Kansas	357	250	197	
26 Louisiana	203	562	183	
27 Missouri	148	177	178	
28 Delaware	172	166	170	
29 District of Columbia	245	203	170	
30 Arizona	581	434	159	
31 Utah	195	184	148	
32 South Dakota	239	249	124	
33 Mississippi	404	288	123	
34 South Carolina	225	164	122	
35 Oklahoma	94	66	99	
36 New Mexico	180	105	85	
37 Nebraska	641	403	81	

Source: COVID-19 tracking project

More talk about "% positive" tests and the 10% threshold recommended by the WHO

We are hearing more talk about the "% tests positive" benchmark. The WHO sees a figure <10% as a sign of progress and thus, recommends that as a hurdle before easing restrictions. Scott Gottlieb, former FDA commissioner (and all around level-headed voice in this crisis) tweeted about this over the weekend.

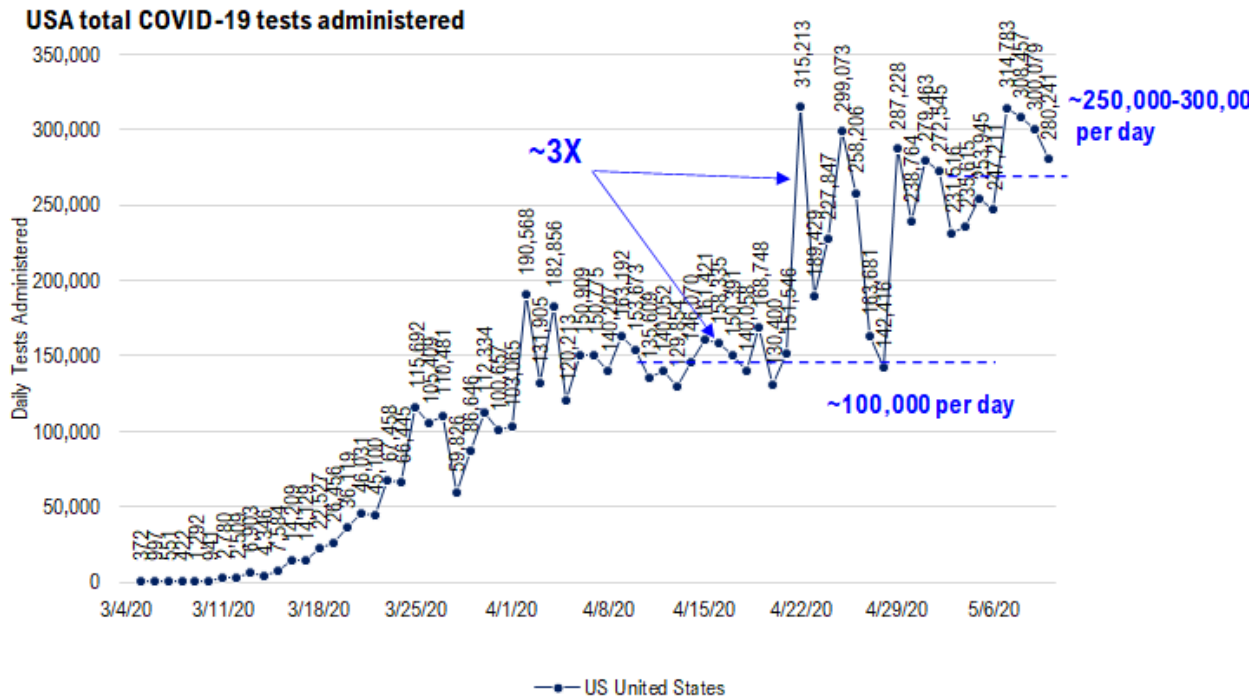
- he notes many states are seeing % positives fall below 10%. As one can see from this chart, even states like FL, TX and most of those which have opened are below 10%. GA is not, but their ~15% is not too far off.



source: twitter

Total testing >300,000 for 3 of the past 4 days, and despite that the US reported daily cases are declining = good thing...

Total testing in the US continues to track higher and have been >300,000 in 3 of the last 4 days. The fact that reported cases are generally declining despite high levels of testing is encouraging.



Source: COVID-19 tracking project

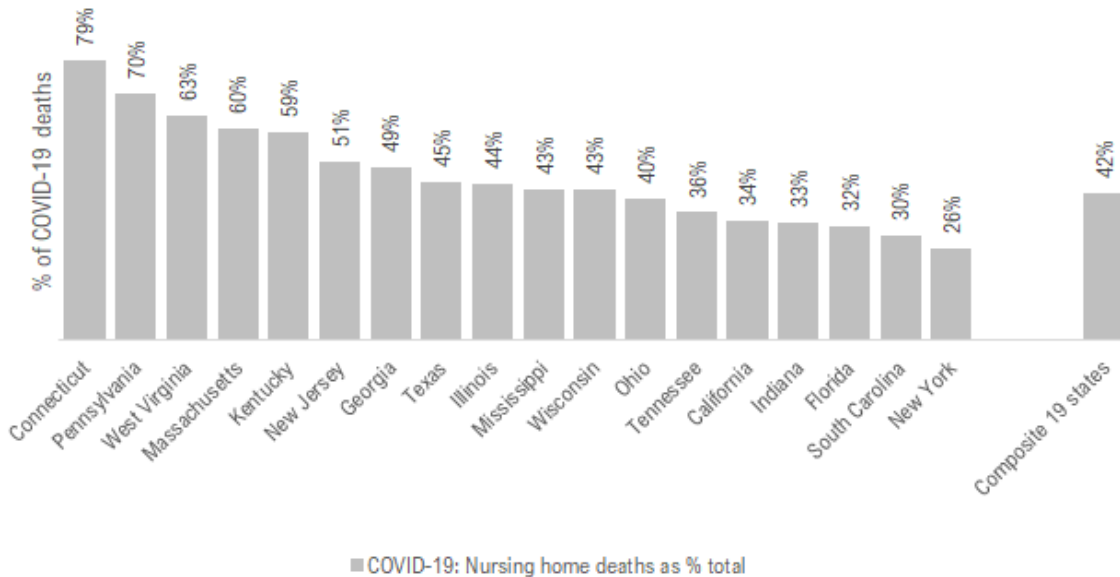
POINT #2: Expanding nursing home data to 19 states (~67% US pops) --> still 42% of overall COVID-19 deaths. NY Gov Cuomo increasing scrutiny of nursing homes.

42% of US COVID-19 deaths are from nursing homes -- looks like NY state data is under-reported...

Last week, we discussed the tragic disproportionate contribution of nursing homes to COVID-19 deaths. We have compiled data from 10 states (~50% of US). Our data scientist team, led by tireless Ken, expanded this to 19 states (~66% of US). And the data remains consistent -- nursing homes are 42% of COVID-19 deaths.

- the largest is CT with 79% of deaths from nursing homes, followed closely by PA (70%)
- the lowest figures are from NY (26%), South Carolina (30%) and Florida (32%)

The NY figures for "nursing home" deaths are potentially under-reported and the state, it appears, does not list nursing home residents who were transferred to a hospital and subsequently died from COVID-19.



Source: Various state dept of health

NY state nursing home deaths could be "under-reported" as those transferred to a hospital and subsequently dying are not counted...

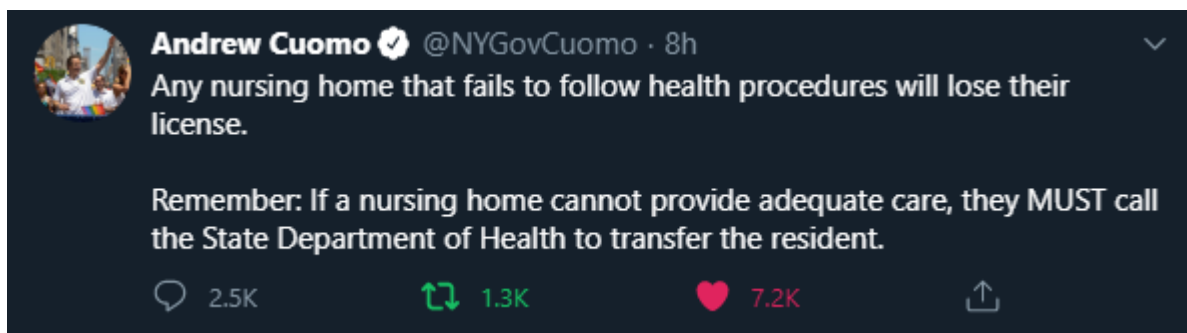
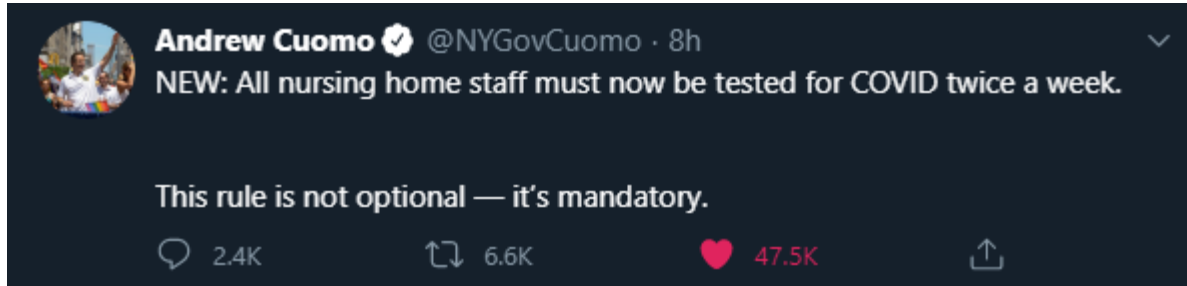
This is an abstract from a FOX5 story regarding nursing homes. The link to that article is here: <https://www.fox5ny.com/news/more-than-1700-new-unreported-deaths-at-nursing-homes-in-ny>



Exactly how many nursing home residents have died remains uncertain despite the state’s latest disclosure, as the list doesn’t nursing home residents who were transferred to hospitals before dying.

source: Fox5NY

The tragedy around nursing homes is not lost on the states. In fact, NY Gov Cuomo today instituted new rules for nursing homes and their employees. Specifically, he is requiring all staff to be tested 2X per week. He is making this mandatory and will revoke the license of any nursing home that fails to comply.



Source: Twitter

Based on 19 states. Nursing homes residents 0.4% of the population, 17% of cases and 42% of deaths... incredible

The aggregated data for the 19 states is shown below. And the results remain shocking. Of the 220 million residents in the 19 states:

- Nursing home residents are 940,361 or 0.4% of the total
- Nursing home cases are 17% of the total (MI and TX do not breakout the case numbers)
- Nursing home deaths are 20,581 of the total 53,302 deaths reported in those 19 states (42% of total)

These are consistent with the 10 we highlighted last week. The bottom line is COVID-19 exploded through nursing homes in every state -- leading to tragic surges in deaths and hospitalizations.

Report Date	State	State Population...			% COVID-19 cases...		COVID-19 deaths...			% COVID-19 deaths...		Case Fatality Rate		
		# Total Residents	# in Nursing (LTC)	% LTC	Non-LTC	LTC	State Total	Non-LTC	LTC	Non-LTC	LTC	State Total	Non-LTC	LTC
5/4/2020	Connecticut	3,565,287	23,457	0.7%	67%	33%	2,556	526	2,030	21%	79%	8.5%	2.6%	20.3%
5/5/2020	Pennsylvania	12,801,989	78,823	0.6%	78%	22%	3,012	904	2,108	30%	70%	5.9%	2.3%	18.5%
5/8/2020	West Virginia	1,792,147	9,541	0.5%	75%	25%	52	19	33	37%	63%	3.9%	1.9%	10.1%
5/5/2020	Massachusetts	6,892,503	40,466	0.6%	80%	20%	4,212	1,692	2,520	40%	60%	6.0%	3.0%	17.5%
5/8/2020	Kentucky	4,467,673	23,677	0.5%	81%	19%	298	122	176	41%	59%	4.7%	2.4%	14.4%
5/4/2020	New Jersey	8,882,190	45,045	0.5%	83%	17%	7,910	3,900	4,010	49%	51%	6.2%	3.7%	18.2%
5/7/2020	Georgia	10,617,423	33,658	0.3%	81%	19%	1,348	689	659	51%	49%	4.3%	2.7%	11.0%
5/4/2020	Texas	28,995,881	93,666	0.3%	—	—	884	489	395	55%	45%	2.7%	—	—
5/1/2020	Illinois	12,671,821	68,871	0.5%	87%	13%	2,457	1,375	1,082	56%	44%	4.4%	2.8%	14.3%
5/8/2020	Mississippi	2,976,149	16,261	0.5%	88%	12%	409	234	175	57%	43%	4.5%	2.9%	16.0%
5/7/2020	Wisconsin	5,822,434	26,024	0.4%	93%	7%	374	215	159	57%	43%	4.1%	2.5%	25.9%
5/6/2020	Ohio	11,689,100	75,593	0.6%	80%	20%	1,225	736	489	60%	40%	5.7%	4.3%	11.2%
5/8/2020	Tennessee	6,829,174	27,761	0.4%	94%	6%	241	154	87	64%	36%	1.7%	1.1%	10.7%
5/4/2020	California	39,512,223	102,763	0.3%	85%	15%	2,254	1,491	763	66%	34%	4.1%	3.2%	9.5%
5/4/2020	Indiana	6,732,219	39,273	0.6%	89%	11%	1,264	844	420	67%	33%	6.2%	4.6%	18.1%
5/1/2020	Florida	21,477,737	73,916	0.3%	91%	9%	1,314	891	423	68%	32%	3.8%	2.8%	13.5%
5/4/2020	South Carolina	5,148,714	17,102	0.3%	87%	13%	283	199	84	70%	30%	4.2%	3.4%	9.9%
5/3/2020	New York	19,453,561	105,230	0.5%	—	—	19,189	14,221	4,968	74%	26%	6.1%	—	—
5/2/2020	Michigan	9,986,857	39,236	0.4%	93%	7%	4,020	n/a	n/a	—	—	9.3%	—	—
Composite 19 states		220,315,082	940,361	0.4%	83%	17%	53,302	28,701	20,581	58%	42%	5.7%	3.1%	16.2%

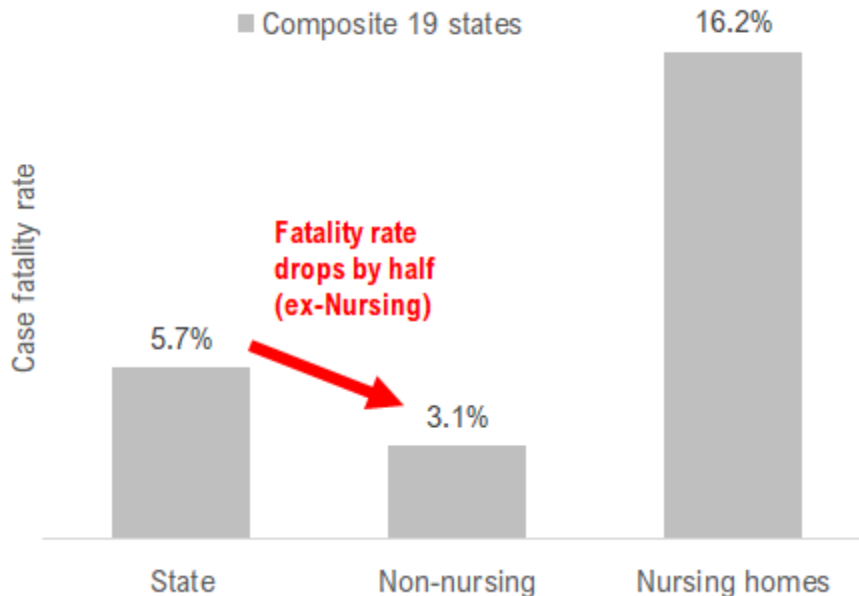
Source: Various state dept of health

Ex-Nursing homes and ex-NY state, COVID-19 Case Fatality rate is 3.1% vs 5.7% US overall...

The calculated case fatality rate (CFR) is based on COVID-19 deaths divided by "official" confirmed COVID-19 cases. And we show the CFR for those 19 states based upon both total and ex-nursing homes.

- ex-nursing homes, the CFR drops from 5.7% to half to 3.1%
- nursing home CFR is 16.2%

These are based on "official" case counts (confirmed positive for COVID-19 using a test). But serology studies suggest that the actual official case figures in the US are 10X to 50X to 87X higher. If we take the lower end of that figure, the CFR for the US is likely around 0.3% ex-nursing homes.



Source: Various state dept of health and Fundstrat

Total US COVID-19 deaths drop to 25,350 ex-nursing homes and ex-NY tri-state...

There are many implications of the fact that nursing homes are the second epi-center of COVID-

19. The first by far is NY state and the tri-state area (+NJ and +CT). But nursing home residents are retired and generally not large consumers of the US service economy (they are big consumers of healthcare). And as such, if the disproportionate deaths and hospitalizations from COVID-19 are from nursing homes, this does change what should be the economic framework for opening states.

Perhaps the easiest way to see this is to look at the compositions of US COVID-19 deaths:

- of the 73,569 reported COVID-19 deaths;
- NY tristate comprises 32,979 or 45% of the total;
- Nursing homes (ex-NY) are 27,462 or 37%;
- ex-Nursing and ex-NY, total deaths are 19,483

Think of it this way, COVID-19 deaths of 19k is pretty low compared to what are other causes of death in the USA and compared to other flu seasons.

	<i>COVID-19 deaths</i>		<i>COVID-19 cases</i>		<i>Case Fatality Rate</i>
	Deaths	%	Cases	%	%
Total US Deaths	73,569	100%	1,323,817	100%	5.6%
NY	20,757	28%	335,395	25%	6.2%
NJ	9,255	13%	138,532	10%	6.7%
CT	2,967	4%	33,554	3%	8.8%
NY tri-state state deaths	32,979	45%	507,481	38%	6.5%
Nursing home deaths	21,107	29%	138,777	10%	15.2%
Total deaths ex-NY and ex-nursing homes	19,483	26%	677,559	51%	2.9%

Source: Various state dept of health and Fundstrat

POINT #3: Tesla struggle to re-open in CA is one of many battles fought throughout the US... per McKinsey, Companies in COVID-19 world NEED to adapt and change strategy in massively shorter timeframes

Tesla filed a lawsuit against Alameda county in federal district court, seeking an injunction allowing the company to re-open its Fremont factory site. CA Gov Gavin Newsom has relaxed some restrictions, but counties are applying these changes selectively. And for Tesla, the county has denied the request to open the factory.



CA Politicians have been quick to criticize Tesla and Lorena Gonzalez, Assembly person in San Diego even weighed in with a tweet storm shown below. But Elon Musk and Tesla do not seem to be winning the sympathy of CA policy makers.



So not surprisingly, Tesla is threatening to move out of CA. Whether Tesla ultimately moves, and such timing, is not known.

The screenshot shows a MarketWatch news article. At the top, the MarketWatch logo is visible along with navigation links for Latest, Watchlist, Markets, Investing, Barron's, Personal Finance, Economy, Retirement, and Coronavirus. Below the navigation is a breadcrumb trail: Home > Industries > Automobiles. The main headline reads "Elon Musk threatens to move Tesla out of California, then files lawsuit". The article is dated "Published: May 10, 2020 at 5:42 a.m. ET" and is written by "Claudia Assis". A blue comment bubble on the right indicates 339 comments. Below the headline is a sub-headline: "'Final straw' as Fremont, Calif., remains closed". A large aerial photograph of the Tesla assembly plant in Fremont, California, is shown. The word "TESLA" is visible on the side of the main building. Below the photo is a caption: "The Tesla Inc. assembly plant in Fremont, Calif. Bloomberg News/Landov". Social media sharing icons for Email, Facebook, Twitter, LinkedIn, and YouTube are present. Below the icons is a "Referenced Symbols" section showing "TSLA +5.04%" and "SPX +1.68%". A "Sponsored By" section for Ameritrade is also visible. The main body of the article text begins with: "Tesla Inc. Chief Executive Elon Musk tweeted Saturday he will move the Silicon Valley car maker's headquarters and operations out of California as the company's main car-making factory remains closed."

Source: Marketwatch.com

Unfortunately, Tesla is one of many manufacturing businesses that cannot work "remotely"...

McKinsey & Company has published a series of papers discussing business strategy around COVID-19. And one of the more interesting takeaways is looking at businesses that can be effective while their employees are "working remotely" ([Link](#))

The chart is below (with our annotations marked) and the industries with the least ability to work

remotely are the obvious ones:

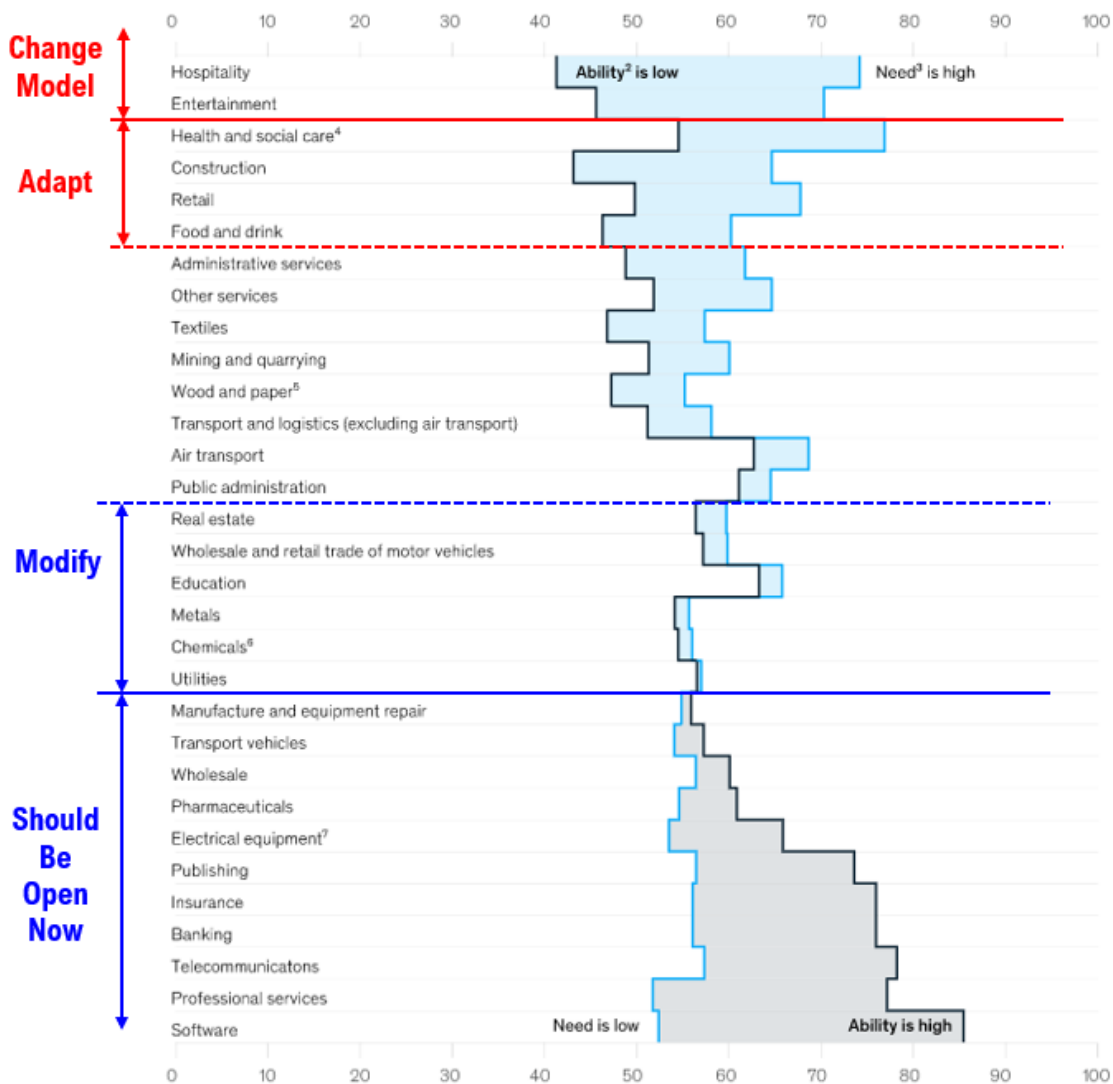
- hospitality, entertainment, healthcare and construction, retail and food

- manufacturing falls into the lower categories, according to McKinsey, which we do not fully understand.

Manufacturing requires people to work in a centralized location. But the issue for Tesla is whether employees can maintain safe distances with adequate PPE and ventilation. If this can be achieved, then many of the concerns of policy makers are overstated.

In cases where remote working is necessary, some occupations and businesses can adapt readily; in others, the work location is fixed and cannot adapt easily.

Difference between ability to work remotely and need to work remotely,¹ index (0 = no need or ability)



¹Agriculture is not included. ²Based on each occupation's level of interaction with computers. ³Based on each occupation's level of physical proximity to other people. ⁴Health and social care are special cases: work is likely to continue despite high proximity to other people. ⁵Includes other manufacturing. ⁶Includes oil refining. ⁷Includes high-tech manufacturing.

Source: McKinsey & Co.

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