

# SALISBURY TRUST

## WEALTH ADVISORY SERVICES

A Division of Salisbury Bank and Trust Company

2020

### COVID-19 Model Real Time Situational Update

invested in our customers,  
our employees & our  
communities

*enriching!*



The Hotchkiss School in Lakeville, CT



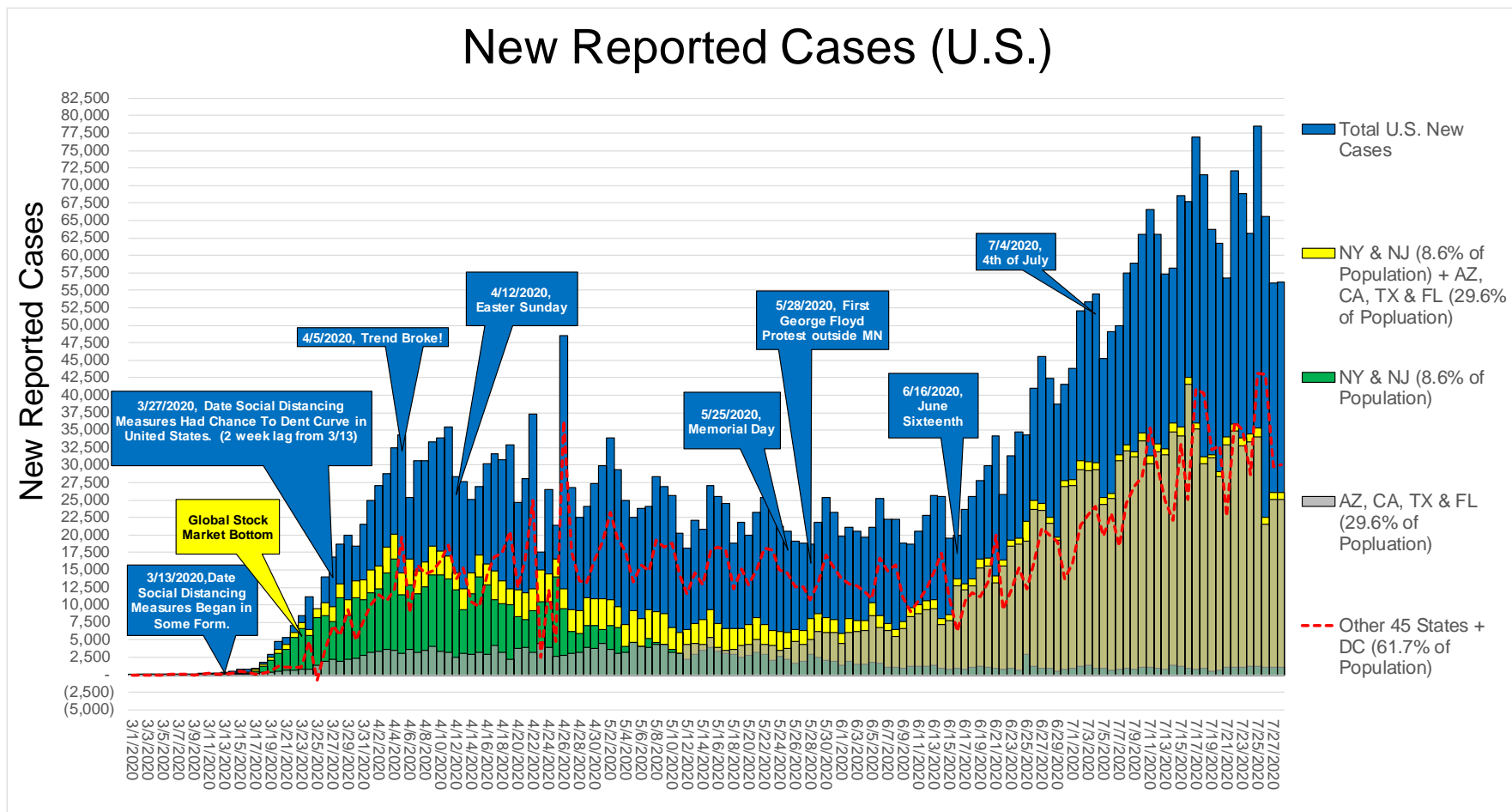
Main Street in Great Barrington, MA



Vanderbilt Mansion National Historic Site in Hyde Park, NY

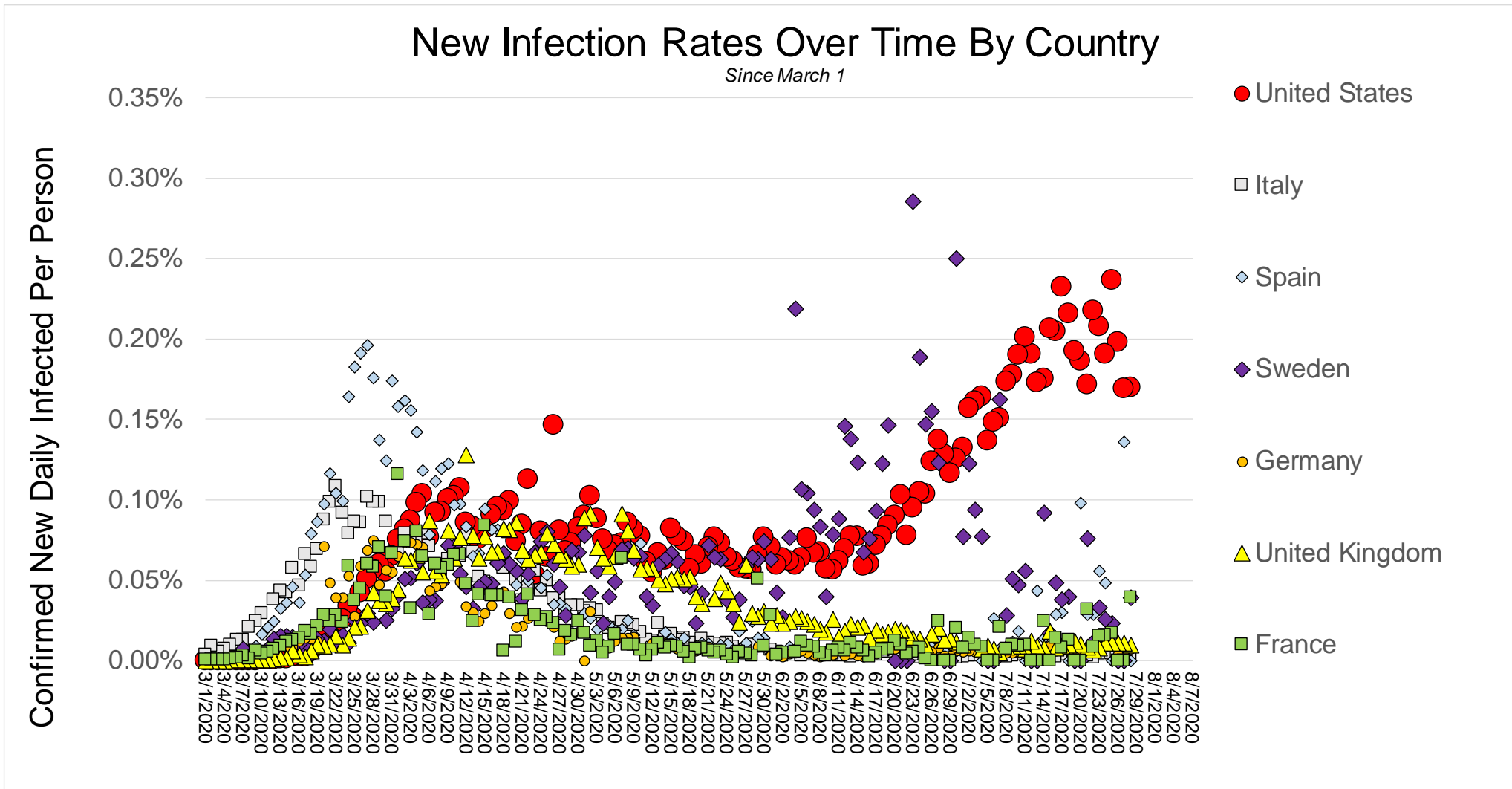
## COVID-19 NEW REPORTED CASES AS OF TODAY

- On April 5, the uptrend broke to down. In mid June, the downtrend reversed.
- ~1.5 MM tests had been performed through April 5. We hit ~48 MM tests today.
- NY & NJ were ~71% of new cases in the 7-days ending March 25. They're only ~1.7% of new cases now.
- AZ, FL, TX & CA were ~ 11% of new cases on March 25. They're about 45% of new cases now.
- AZ, FL, TX & CA peaked at 57% of new cases on July 7, and has trended down since.



## INFECTION RATES TODAY

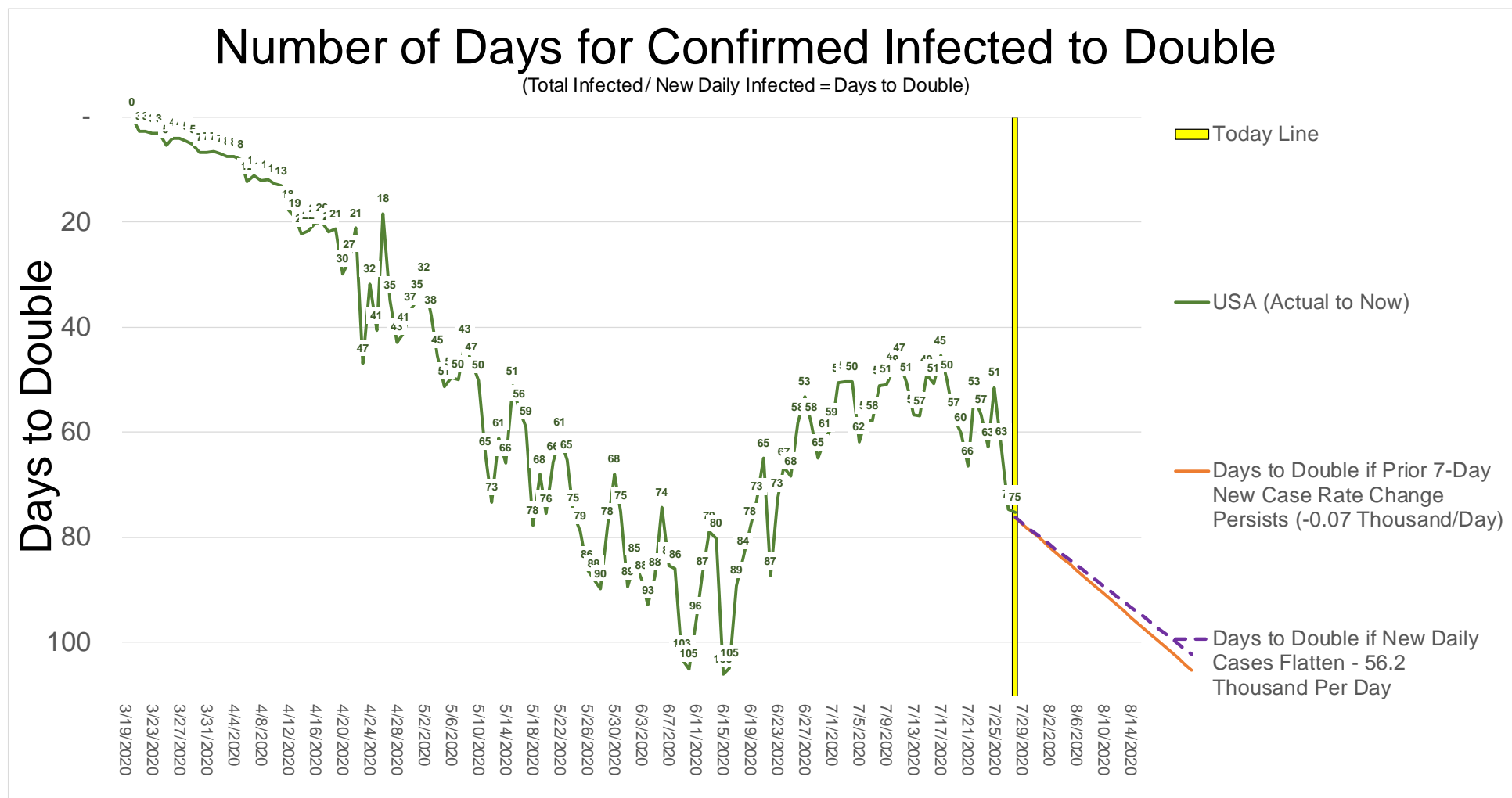
- Comparisons to other nations as reasonable benchmarks adjusted for dates where the one case per million residents threshold was crossed (at day zero)
- Sweden seemed to get hit with a big second wave. (Sweden never completely locked down.)



Sources: Data from prior day's end is the "European CDC – Latest Situation Update Worldwide." Data for U.S. State and intraday measures is <https://www.worldometers.info/coronavirus>.

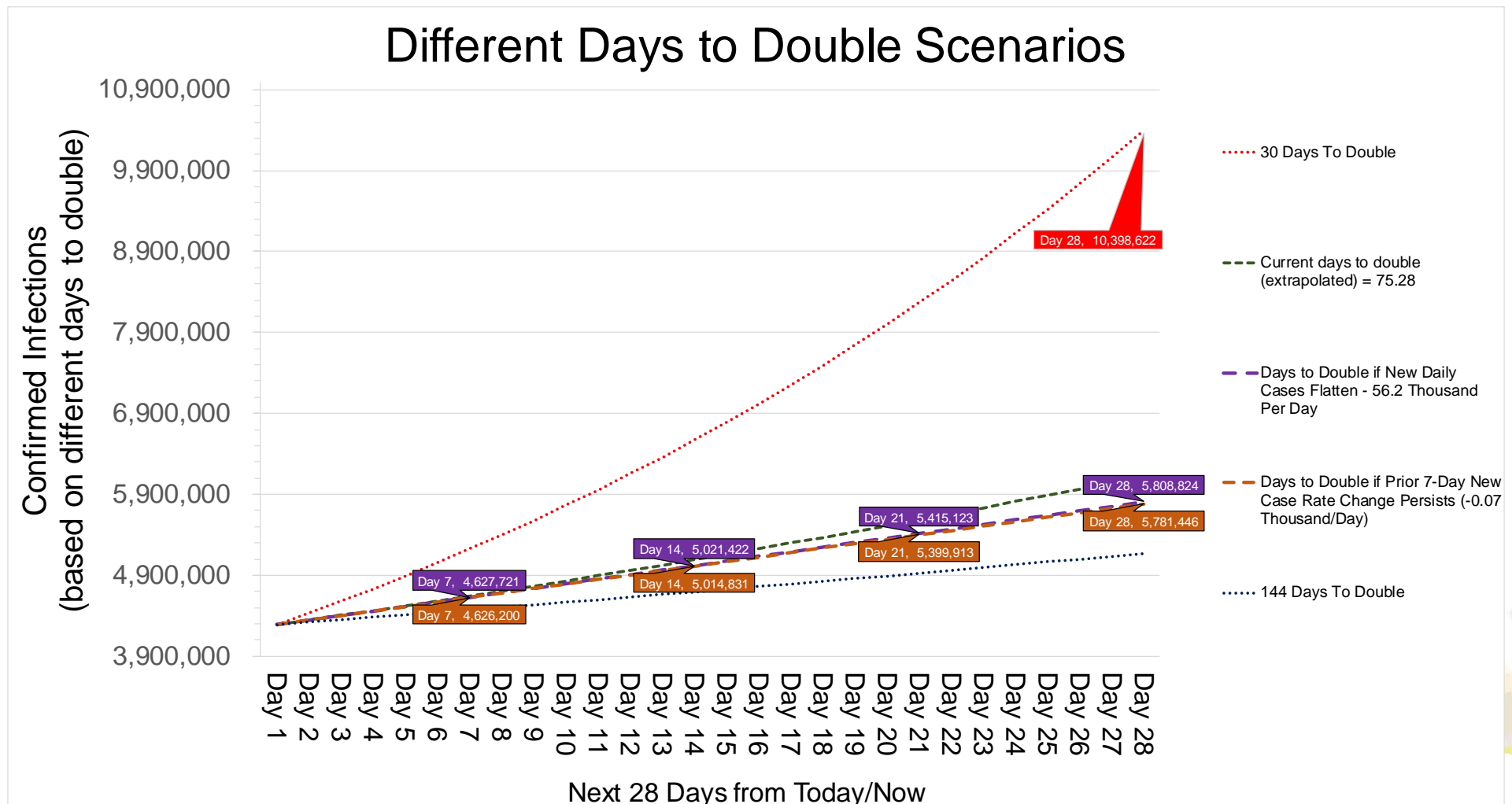
## DAYS FOR CASES TO DOUBLE AS OF TODAY - ACCELERATE DOWNWARD SLOPES

- We are on pace for ~76 days to double. Peaked at over 100 a few weeks ago.



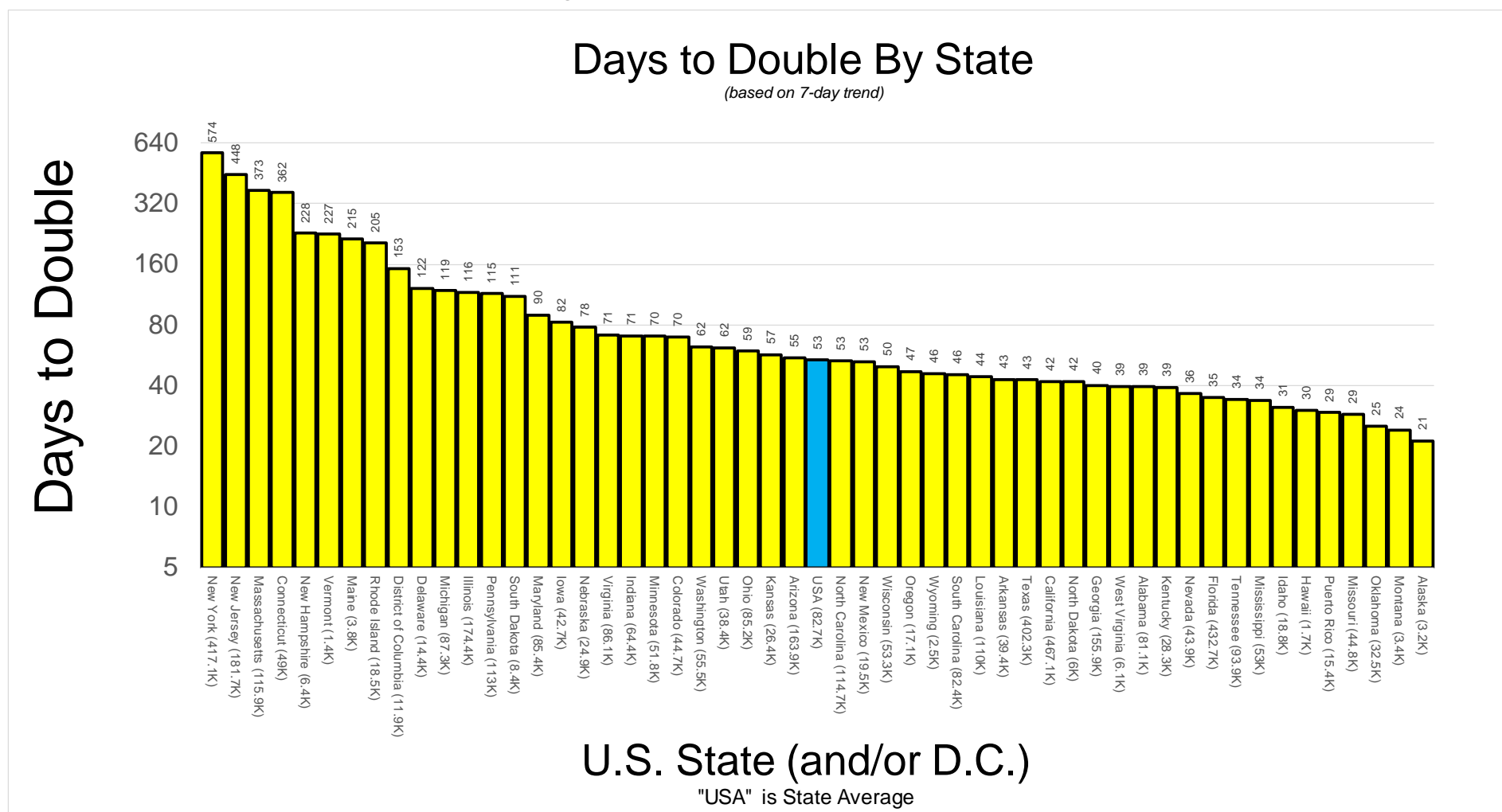
## 28 DAY FORECASTS AS OF TODAY - WHY CUTTING DAYS TO DOUBLE IS SO CRITICAL

- Reasonable forecasts based on today's trends
- Added a 30 days to double scenario to show why reversing recent trend is so critical.



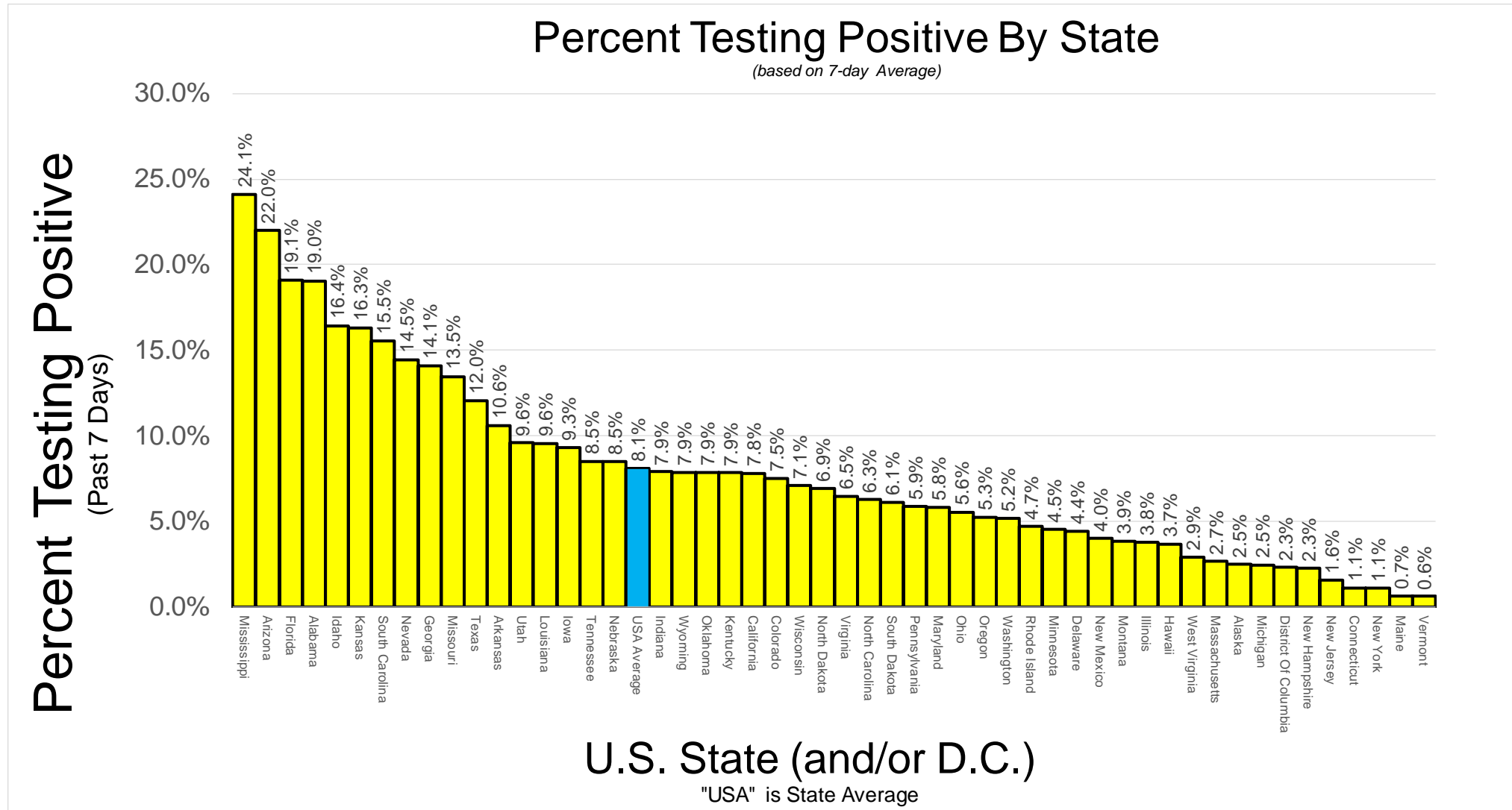
## COVID-19 STATE TOTAL CASES & DAYS TO DOUBLE

- Every State has its own “days-to-double” trend
- States to the right may have a harder time easing restrictions or may require a second lockdown
- States to the left may have more options to ease more restrictions sooner
- States hit hardest the earliest are generally those in better shape today (and vice-versa).



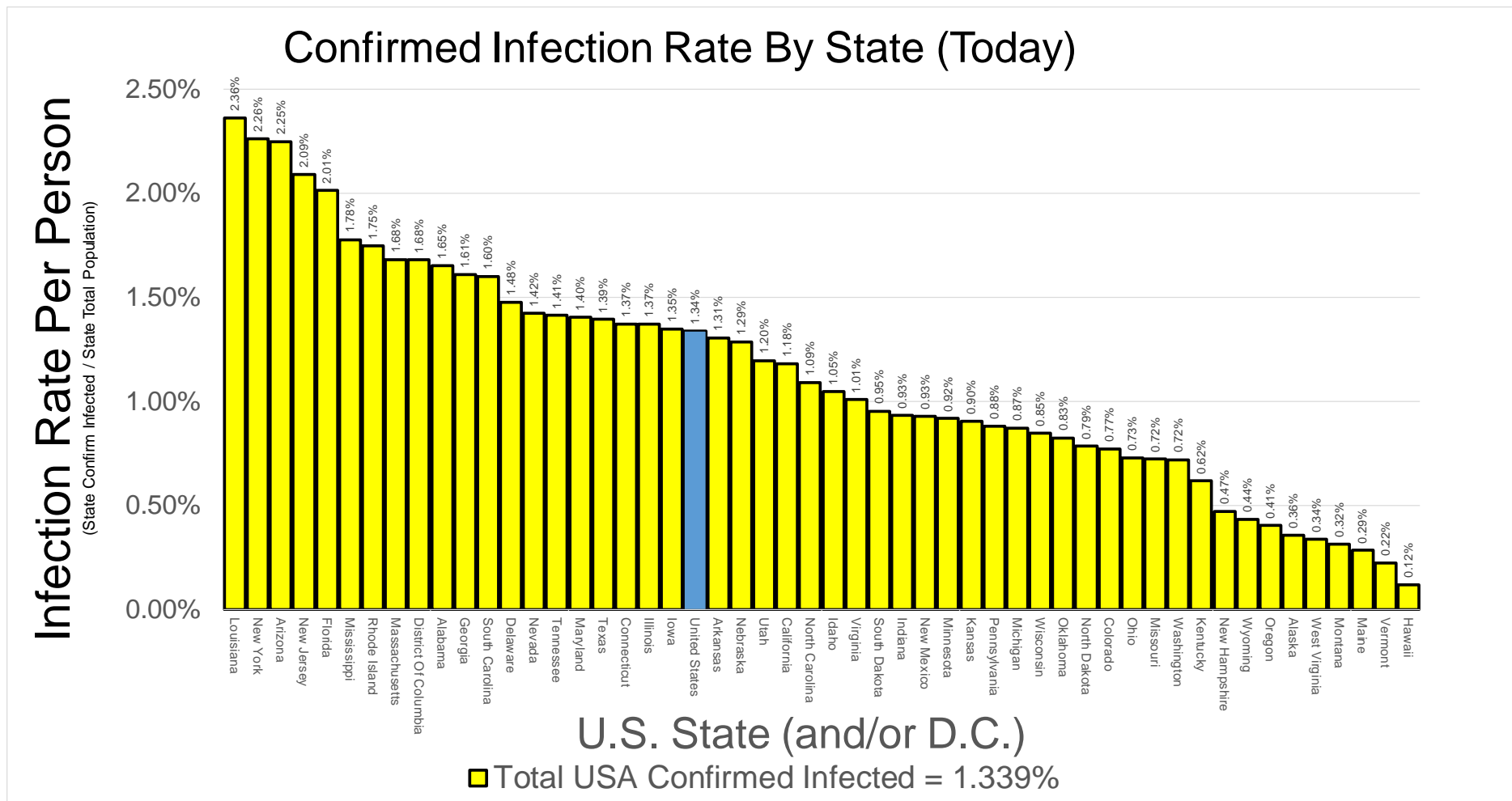
## PERCENT TESTING POSITIVE BY STATE

- 24% of those tested in Mississippi the past week tested positive to COVID-19.
- Arizona and Florida are still in trouble, but showing improvement.



## CONFIRMED INFECTIONS / POPULATION BY STATE

- NY & NJ peaked at 62% of total U.S. cases on March 25, but trended down to 15% of total reported cases today.
- **According to Dr. Robert Redfield, director of the U.S. CDC, 10 times more people have antibodies in the jurisdictions tested than had documented infections. Source: <https://time.com/5859790/cdc-coronavirus-estimates/>**
- This implies the true U.S. infection rate may be 10.34% rather than 1.34% (or 44 MM rather than 4.4 MM Americans)
- Arizona, Louisiana and Florida have been rapidly ascending on this list





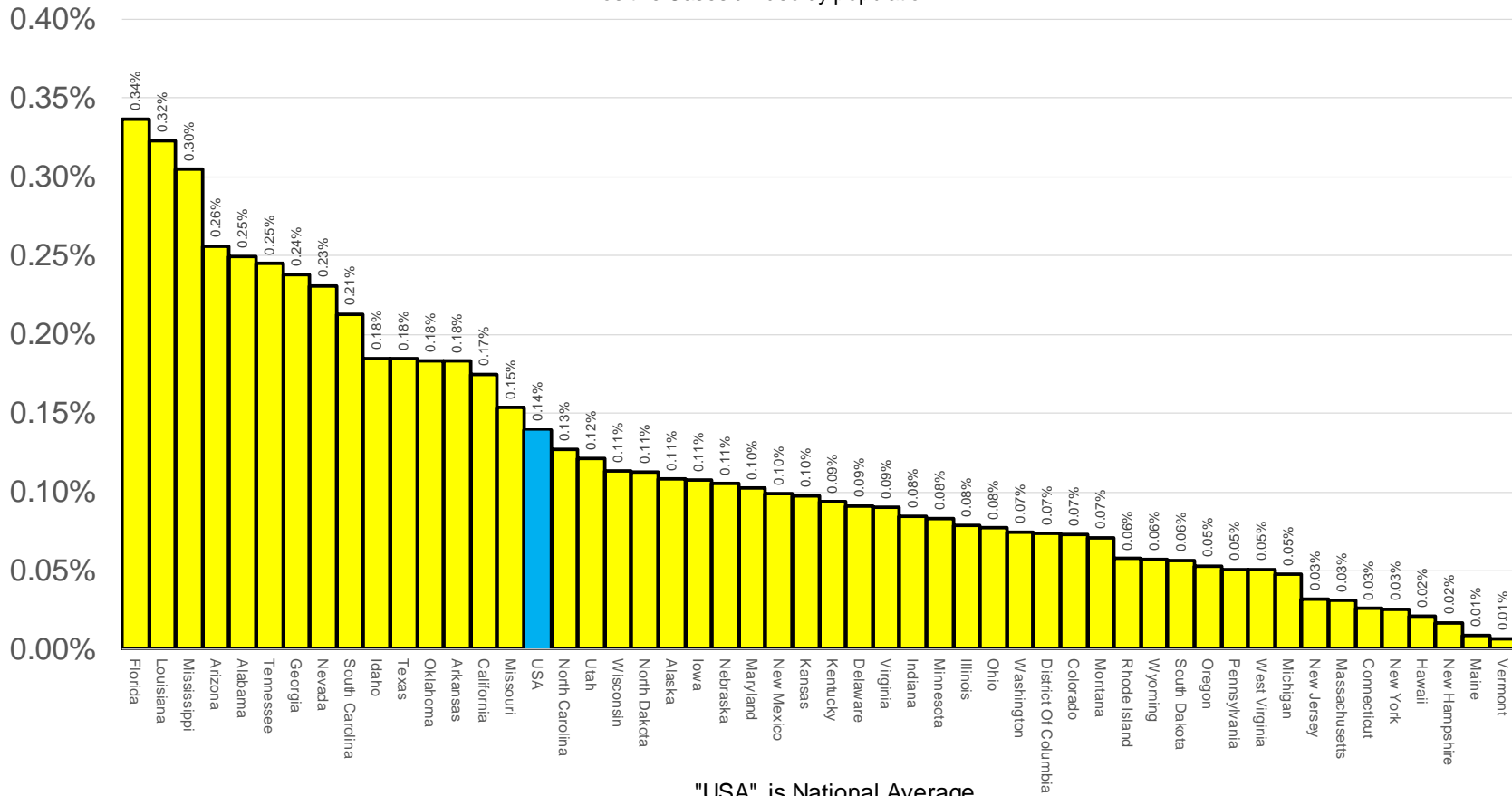
## PERCENT OF POPULATION TESTING POSITIVE

- 0.34% of the entire Florida population tested positive in the past 7 days
- 0.32% of the entire Louisiana population tested positive in the past 7 days
- Mississippi & Arizona not far behind.

### Percent of Population Testing Positive the Past 7 Days

Positive Cases divided by population

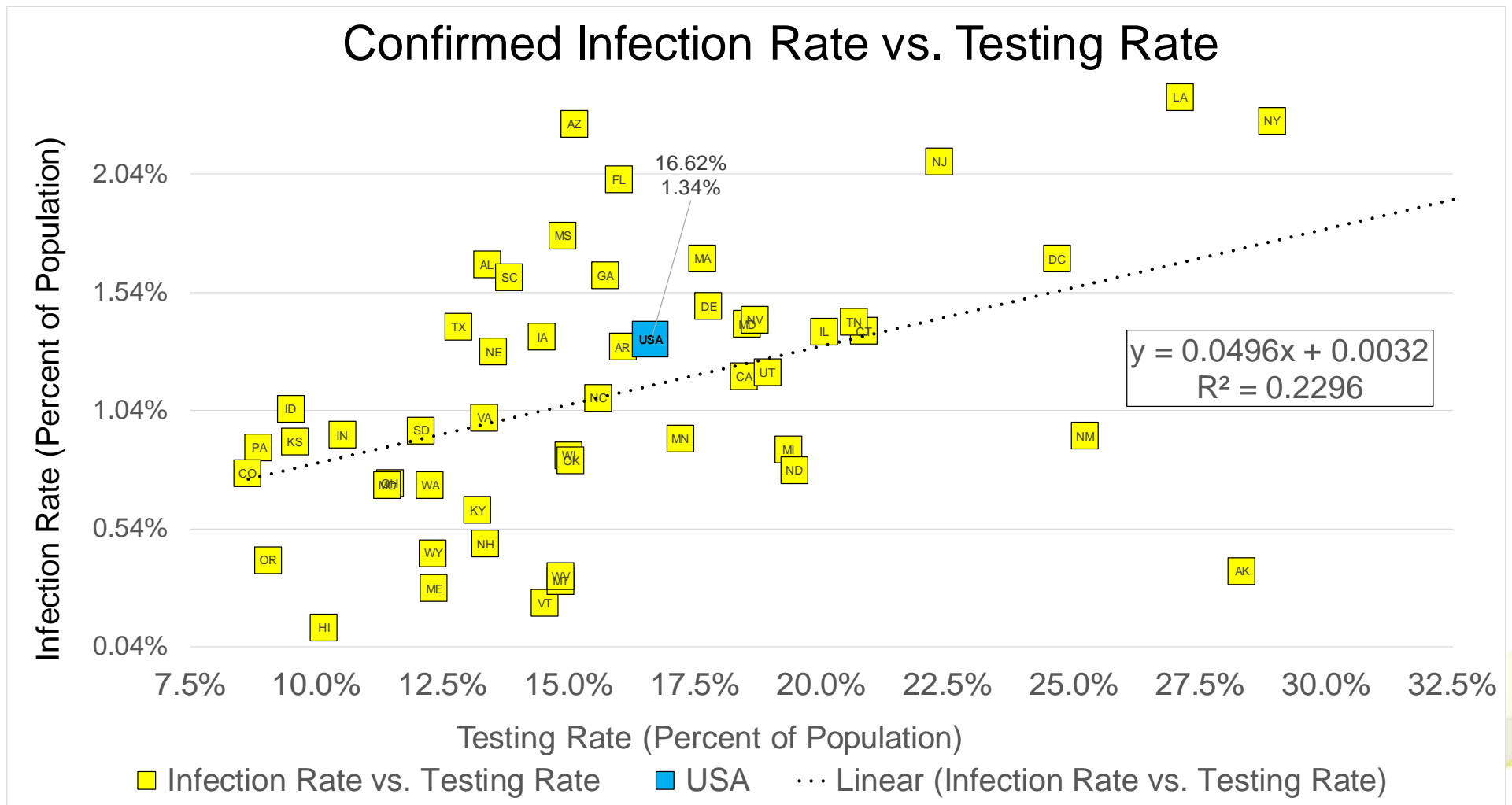
Percent of Population



"USA" is National Average

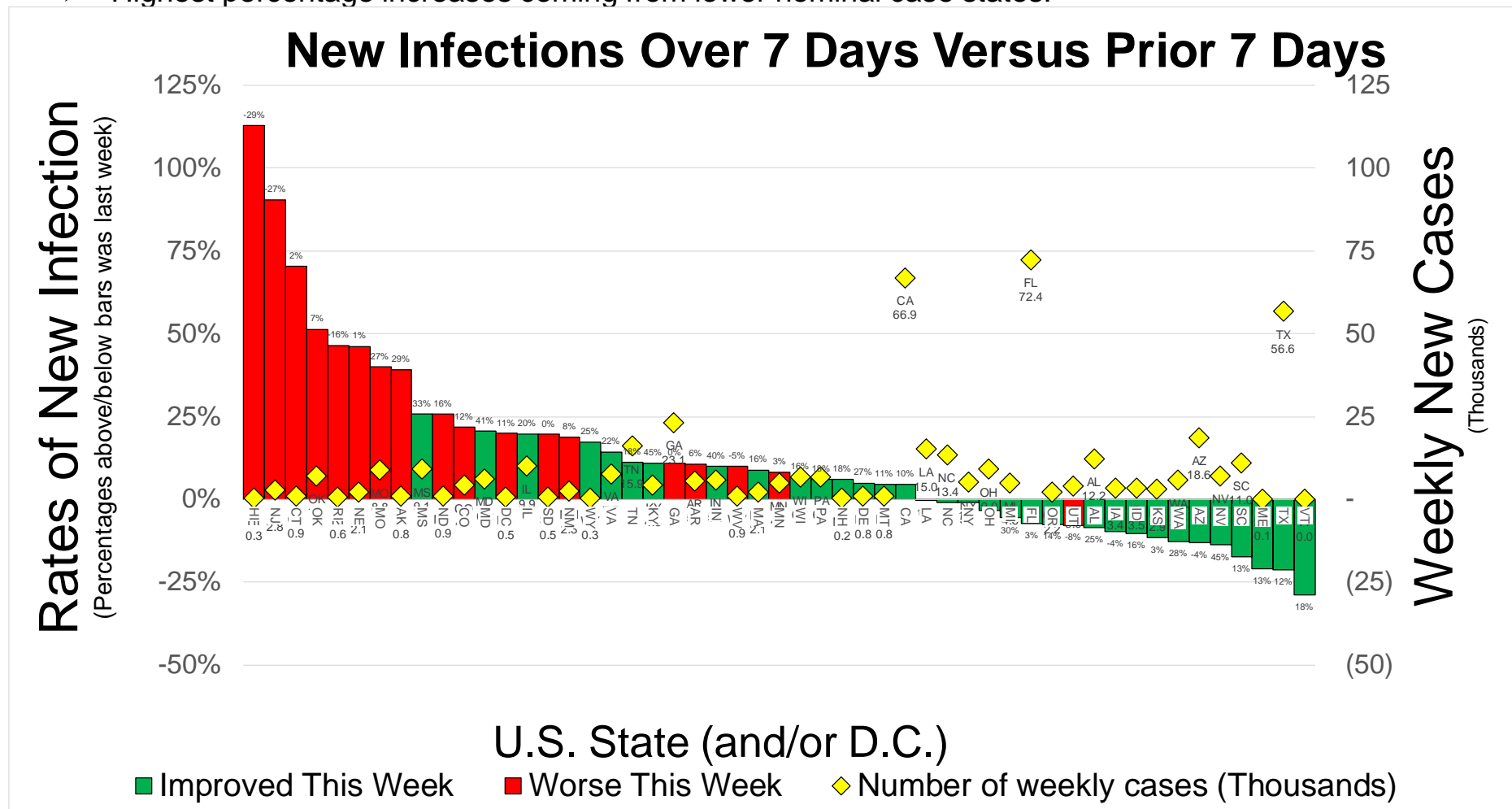
## INFECTIONS RATES VS TESTING RATES BY STATE

- You cannot measure what you cannot see. National testing rate continues to rise.
- Obviously, states that have tested more have found more cases.



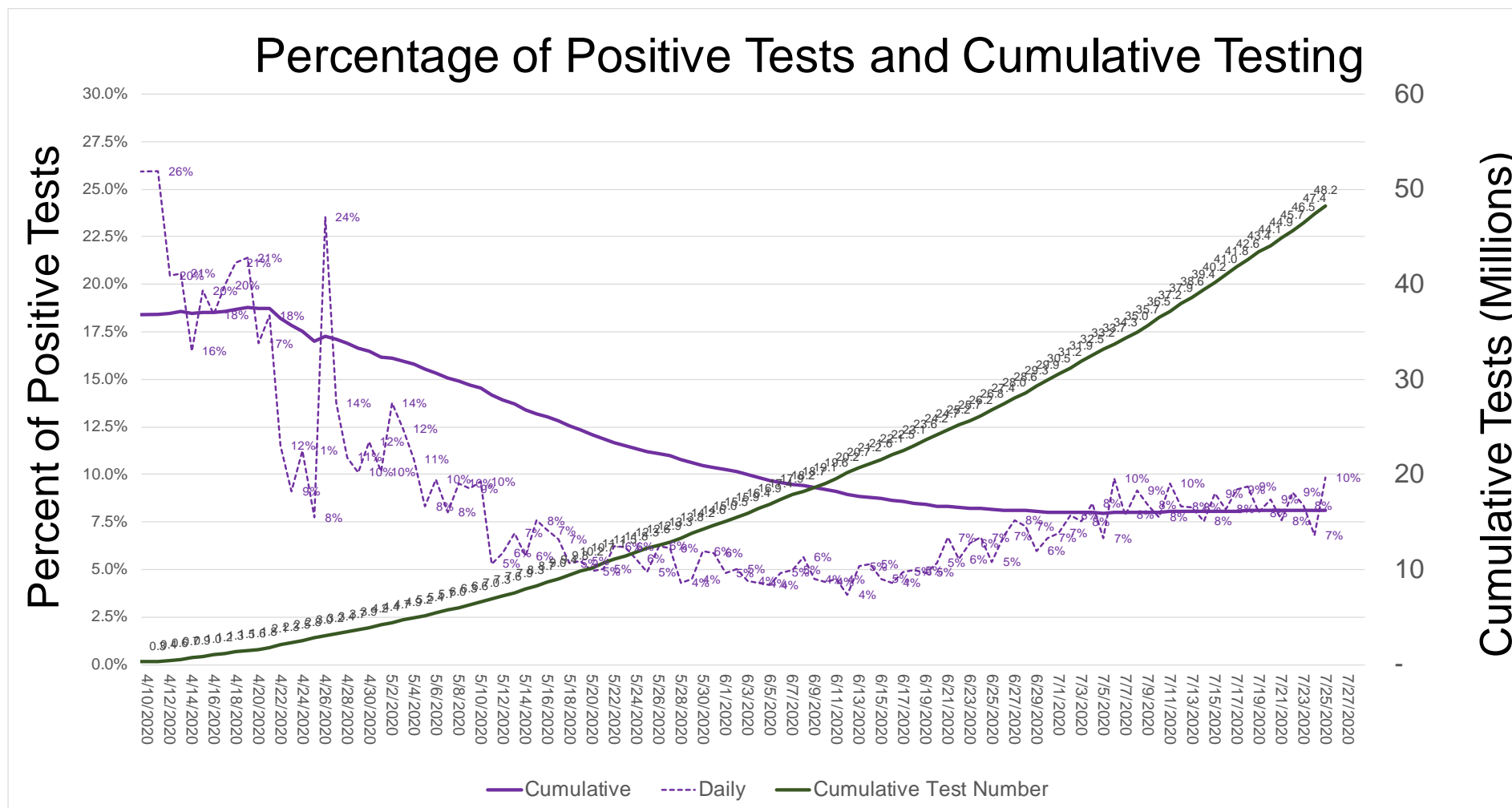
## WEEKLY TREND BY STATE

- 32 states/DC saw increased cases over last week. 19 showed declines.
- A week ago, it was a 42/9 +/- ratio.
- 33 states/DC improved since last week. 18 digressed since last week.
- CA, FL and TX are driving the nation and all three showed week-over-week improvement.
- Highest percentage increases coming from lower nominal case states.



## POSITIVE TESTS AND CUMULATIVE TESTING

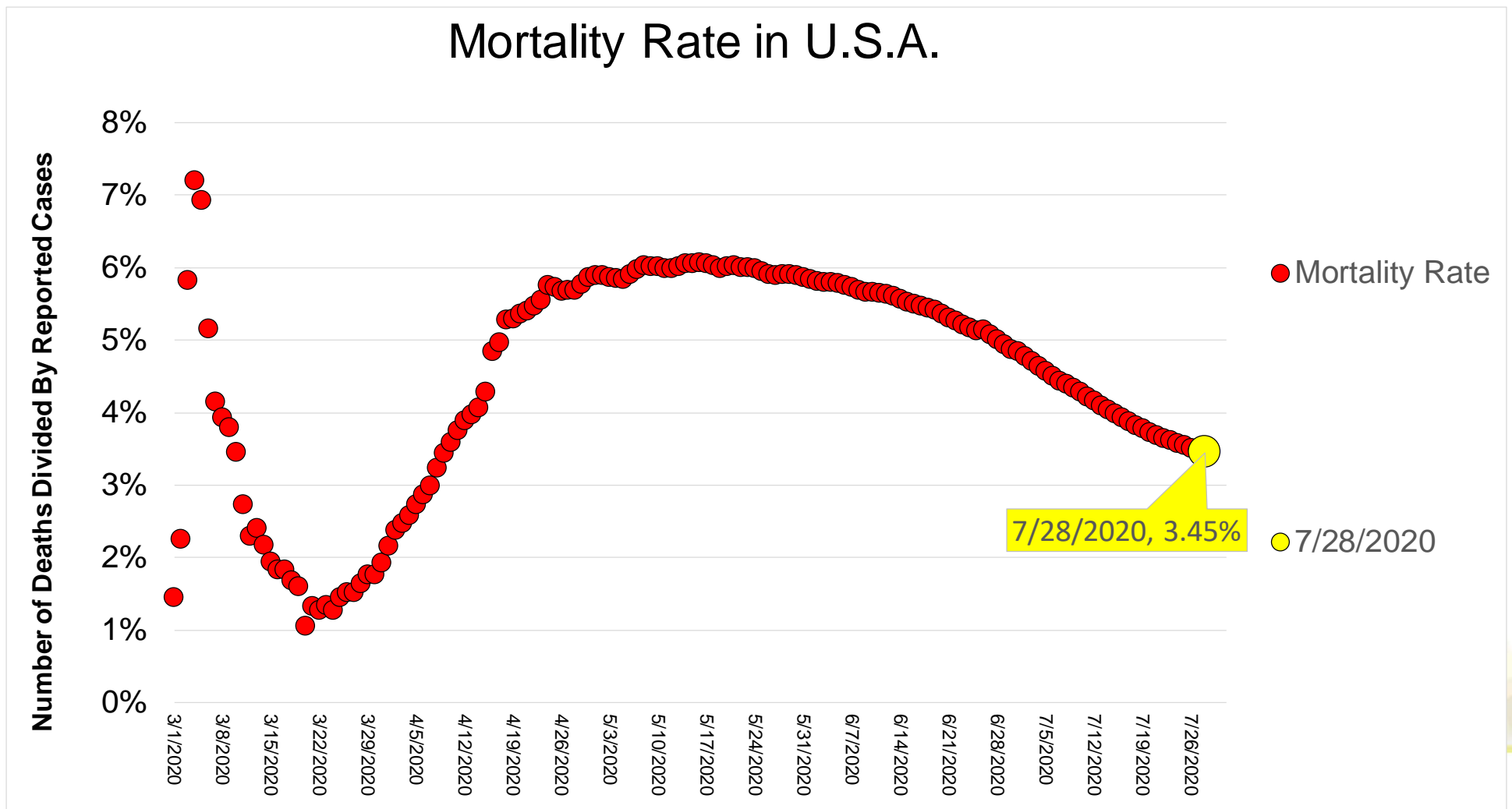
- Testing is ramping up. This may be the only log scale graph we want when it comes to COVID-19.
- ~10% of those tested have test positive today.
- Uptrend of those testing positive over the last few weeks is a likely sign that increasing case counts are not merely just a function of more testing.



Sources: Data from prior day's end is the "European CDC – Latest Situation Update Worldwide." Data for U.S. State and intraday measures is <https://www.worldometers.info/coronavirus>.

## COVID-19 MORTALITY AS OF TODAY

- We know the true infection rate is much higher than confirmed case count based on antibody testing, testing capacity constraints, high amounts of asymptomatic infections, so actual mortality rate is likely meaningfully overstated (perhaps by 10X according to CDC estimates).



## DISCLOSURES

*While health datasets and economic and financial market data have become uniquely coupled (more than typical) by this immediate COVID-19 pandemic crisis, nothing in this presentation is meant to represent a trading recommendation of any kind for any individual asset class or security.*

*The presentation seeks to find a best estimate of the COVID-19 outbreak as it stands today and build reasonable forecasts for the next day, next week or next 28 days. They are speculative, but simply represent our best speculation.*

*Salisbury Trust Wealth Advisory Services does not have any unique expertise on viruses or pandemics. Our modeling of the virus assumes a predictable mathematical path (across borders) based statistical analysis. However, while we believe the information to be sound, it may be subject to significant errors.*

*To the extent this presentation includes any information on past returns, past returns are not indicative of future returns.*

### *Sources:*

- The source for any S&P 500 Index (Daily) Data, will be Yahoo Finance (^GSPC). It will be shown assuming historical dividends are reinvested and in U.S. Dollar terms.*
- Data from prior day's end is the "European CDC – Latest Situation Update Worldwide."*
- Data for intraday (nationwide) snapshots and the prior day's individual U.S. States is <https://www.worldometers.info/coronavirus>*
- Data for state geographic size is: <https://statesymbolsusa.org/symbol-official-item/national-us/uncategorized/states-size>*
- Data for average daily state temperature is: <https://www.currentresults.com/Weather/US/average-annual-state-temperatures.php> (Virginia temperatures used for Washington DC.)*
- Data for state population: Census.gov. [Population, Population Change, and Estimated Components of Population Change: April 1, 2010 to July 1, 2019 (NST-EST2019-alldata)].*
- Data for U.S. States is New York Times - <https://github.com/nytimes/covid-19-data>*