

We had declines in Total Hospitalizations across the weekend as New Hospitalizations were negative both days. New Mortality declined to the lowest level in a month on Sunday to ~1,200. Better news as we start the week as all our lockdown efforts continue to show impact. Current Hospitalization continues to decline in New York with daily declines for more than a week. Hospitalizations have also started to flatten in Massachusetts, Georgia, Florida and have declined several days in Michigan.

Testing remained flat at the new higher volumes of ~250,000 tests per day over the weekend. Most of the ramp from prior levels (~150,000) is in California, although other high case volume states have grown testing as well. We will need to see this rise over the coming days if states are to be on track with limited May openings as currently being discussed.

Study continues to expand on broader and earlier spread of the virus following studies/testing in New York and LA and there is a growing body of clear evidence the virus was in the US earlier and spreading earlier than projected. Estimates from these studies suggest a ~20% infection rate in the high population density areas. As Washington State is the longest measured area, they continue to test a base rate of ~5% positive cases after a decline from higher earlier rates, this may represent a base infection level for lower population density areas and states. All of this suggests a much larger volume of infected and non-tested cases. Many of these have resolved with time, but clearly the active case base is likely larger than measured at this stage. So, as we suspected, this virus is more contagious and spread earlier/faster than testing indicated. This also means, on this much higher "Universe of Cases", hospitalization and mortality rates are much lower than earlier estimated, and overall levels are now measured effectively and are declining daily. This does not make it any easier for those with severe complications.

Clearly Testing, Tracking and Targeted Quarantine of infected/exposed remains the key going forward.

Given this, it seems the most reasonable data to track in total are:

- 1) Daily Testing Volumes
- 2) New Case Volumes
- 3) Hospitalizations
- 4) Mortality

These elements should indicate the overall shape of the outbreak nationally and in each state, although smaller and lower density communities are faring much better after a month of lockdown. ***We will continue to track daily and publish three times weekly going forward on Monday, Wednesday and Friday,*** as we all watch the progression of these elements. Note also that many states are now very effectively reporting at a county level and these sites are simple to find for your state and county.

Let's get to yesterday's #'s:

Headlines:

- Studies continue to indicate a much higher infection rates for the Virus and much earlier spread, with large positive antibody populations across the US,
 - *20% or more of residents of high density population areas have been infected as indicated by a growing body of evidence,*
 - *No indication yet of the impact of Anti-bodies on infection/re-infection rates,*
- New Daily Cases declined over the weekend on variable testing volumes, New Cases yesterday dropped to ~32,400, down from ~37,100 Friday.
- Total Hospitalizations declined by ~1,000 both days over the weekend, as Total US Hospitalizations declined, following a 20 day declining trend,
 - *Hospitalizations continue to decline overall with large declines in New York and other high density areas seeing flat to declining rates.*
- New Mortality dropped yesterday to ~1,100 from ~2,000 prior Friday on
 - Only 2 states had mortality >100 yesterday, New York and Massachusetts
- Testing remained flat over the weekend at ~250,000 yesterday, down from a high of ~370,000 on Friday,
 - *% of tests with positive outcomes declined to ~11% yesterday on flat testing volumes,*
 - ***Total testing to date is now ~5.45 Million across the US***

Note: Hospitalization/Mortality Data have a 3 day moving average filter applied. Spreadsheet format has changes to focus on Testing Volumes, New Case Volumes, Hospitalization/Mortality Levels.