

Measure	Desired Change	Yesterday in the U.S.
No. of Tests	Increase	Up 16% (Cumulative)
Positive Test Rate	Decline	15.9% (from 15.2%)
No. of Cases	Plateau	Up 21.9%, But Rate is Slowing
% of Deaths Per Case	Decline	Up Slightly @ 1.6% (v. 1.5%)
No. of Deaths / 1M Pop.	Plateau	Up to 5.12
Recoveries : Deaths	Increase (>1:1)	1.49 (up from 1.43)

Yesterday's Highlights:

Note: with continued analysis of the experiences in other countries, I have concluded that a 5-day (v. a 3-day) moving average of daily case volume changes appears more informative of where a country or state is on the virus progression lifecycle: Above 35% is suggestive of still being in the early stages of virus-progression; between 10-35% suggests that, while cases in total are rising, the rate of virus spread has begun to slow; under 10% suggests the peak active cases should soon occur.

Friday was again somewhat of a mixed day in the U.S. First, with the challenging news:

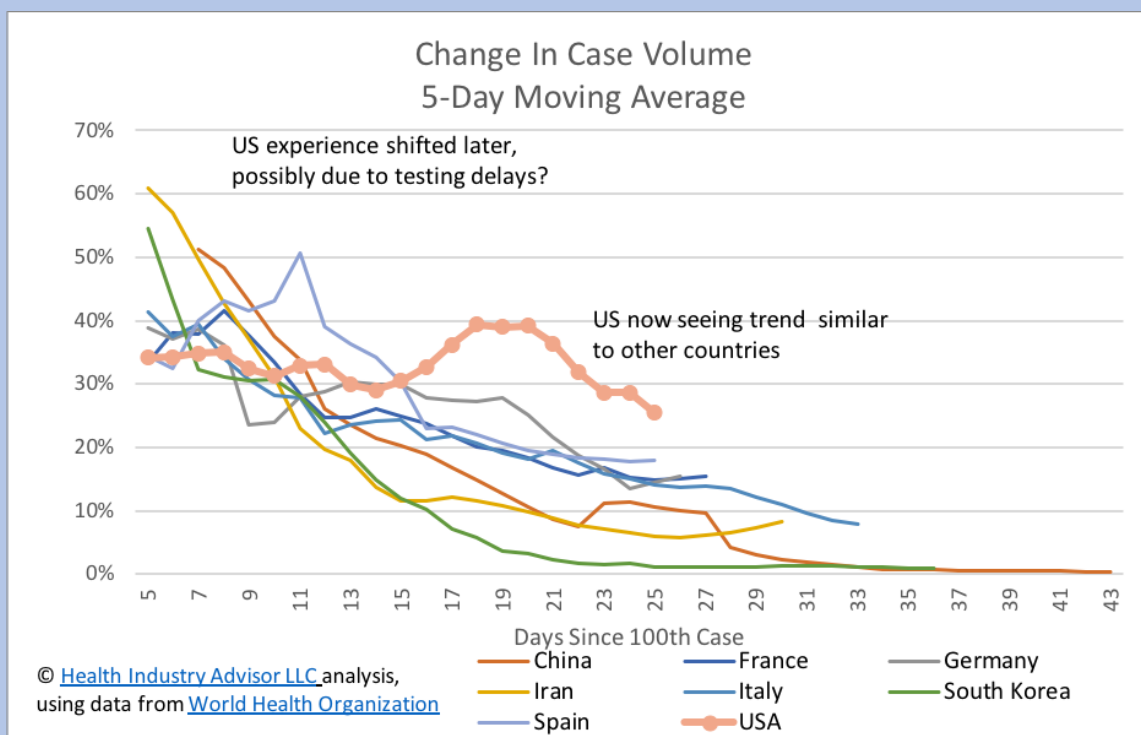
- The positive test rate inched up again to 15.9%; with increased testing, an increasing positive rate suggests either the virus continues to spread, the US is still playing catch-up in testing, or both
- New York continues to be a "Hot Spot" with 46k cases, representing 44% of all U.S. cases; New Jersey is next, with 8,825 cases, 8.5% of the total
- Ten states – CA, GSA, KS, MA, ND, OK, OR, WV & WY – are exhibiting statistically significant upward trends in daily cases volume (3 consecutive days in which the 5-day moving average change in cases increases). Note: in WV and WY, these are based on low case volumes (<100 cases)
- Nine states continue to experience daily case volume increases >35% (5-day moving average) – CT, ID, IN, MA, MO, NJ, OK, PA & WV. As stated above, this is suggestive of still being in the early stages of virus-progression lifecycle
- The death rate in the U.S. inched up again to 1.6% from 1.5%. It remains very low, however, by international standards

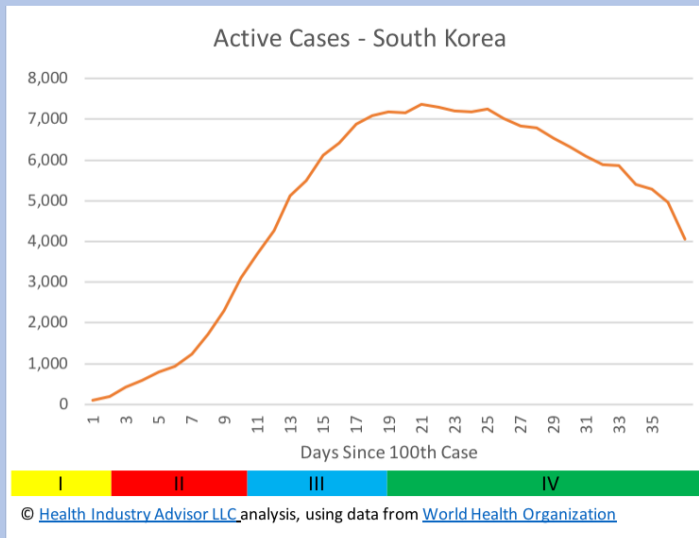
On the brighter side:

- While other countries exhibited a relatively consistent downward trend in case volume changes, the U.S. pattern seemed to begin later (see first graph), perhaps due to testing delays. The U.S.'s trend is now following the downward trend consistent with other countries
- The U.S. continues to make progress on recoveries. To date, the U.S. has experienced 2,494 recoveries versus 1,696 deaths; the % of active cases considered serious or critical also declined Friday, to 2.5% from 2.6%
- The District of Columbia reported a decline in active cases – the first decline in the U.S. thus far
- Iran and Italy have joined China and South Korea in exhibiting 5-day moving average changes in case volume under 10%. As such, Active Cases in these countries may be anticipated to peak soon
- 6 states still have reported fewer than 100 cases – AS, NE, ND, SD, WV & WY; 11 states are experiencing case volume increases (5-day moving average) under 20% - AK, HI, ME, MN, NE, ND, NH, TN, RI, WA & WI

Information provided as a courtesy, based on data from the above-named sources. HIA has no responsibility for the accuracy and updating of any data. Sources: worldometers.info; covidtracking.com, [Financial Times](http://FinancialTimes)

Graphics depict data as of March 25, 2020





Using the experiences of China and South Korea, we have hypothesized a virus lifecycle progression model. Other countries appear to be matching the characteristics of the model

Stage	I	II	III	III
	Introduction	Spread	Peak	Recovery
Characteristic	Low # of Cases Rapid Daily Increase (>35%)	# of Cases accelerating Rate of Growth declining (<35%)	Active Cases Peak Rate of Growth < 10%	Decline in Active Cases
Duration * - Based on experiences of South Korea and China	Varies, due to testing intensity & demographics	10 – 14 days *	2 3 days*	Long Tail
Countries in Stage	Canada	United States, France, Germany, Netherlands, Spain, UK	Iran (?), Italy (?)	China, South Korea

