

"Strategic Guidance in an Era of Unprecedented Change"

Issue #18: April 8

Measure	Desired Change	Yesterday in the U.S.		
No. of Tests	Increase	Up 6.0% (Cumulative)		
Positive Test Rate	Decline	Up 19.1% (from 18.7%)		
No. of Cases	Plateau	Up to 9.1%, rate continues to slow		
% of Deaths Per Case	Decline	Up slightly to 3.2% (v. 3.0%)		
No. of Deaths / 1M Pop.	Plateau	Up to 38.8 (from 32.4)		
Recoveries : Deaths	Increase (>1:1)	Down to 1.69 (from 1.82)		

We are now tracking data for the 17 countries with the most confirmed coronavirus cases. These countries represent 80.1% of all confirmed cases in the world. Additionally, we are tracking all 50 states, the District of Columbia and New York City.

- While total testing in the U.S. is nearly 2.1 million, daily test volume has trending downward since it peak last Friday. Yesterday, 117k tests were performed 22% fewer than on Monday and 45% fewer than last Friday. The 25.7% positive test rate yesterday was the highest it has been in nearly 2 weeks.
- Also, despite 33,000 new confirmed cases in the U.S., total cases have increased less than 10% each of the past 3 days. Cases considered serious or critical declined to 2.5% from 2.7% of active cases.
- Deaths in the U.S. were again the big news yesterday: the 1,970 deaths recorded far exceeded any other day. Deaths should be expected to continue to grow, as the death rate is (tragically) a trailing indicator of the growth and eventual containment of the virus.
- The encouraging news in the U.S. is the continued slowing pace of case growth: in 19 states, cases are growing at less than 10% per day (5-day moving average). The rate for Washington state, the original "hot spot", is down to 5.7%; for New York state, it is down to 8.9% (8.5% for New York city); and, for Louisiana, the newest "hot spot", it is down to 12.2%. At this rate, cases double in Louisiana every 6 days; only 3 days ago, they were doubling at a rate of every 3 days. (Experience from other countries suggests that a growth rate < 10% signals that cases are no longer growing exponentially and, that peak active cases is on the near-horizon.)
- Active cases appear to be reaching a peak in 8 U.S. states Alaska, Arkansas, Arkansas, Hawaii,
  Kentucky, Maine, Minnesota, Montana, North Dakota and Oklahoma. Another 12 states California,
  Georgia, Idaho, Mississippi, Nevada, New York, Oregon, Tennessee, Washington, West Virginia,
  Wisconsin and Wyoming appear that they may have broken the exponential growth rate that typifies
  the contagion phase of any virus.
- Of the 17 countries that have recorded the most confirmed cases, 6 have now progressed beyond a peak in active cases: Austria, China, Germany, Iran, South Korea and Switzerland. Another 7 have ceased the exponential growth rate in cases.

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The graphic illustrates in color when the country first recorded 100 total cases ("contagion" phase); when growth stopped following an exponential pattern ("containment" phase); and, when peak total cases were recorded ("recovery" phase). It uses symbols to indicate when average daily case growth rates fell (and was sustained) below certain benchmarks, as well as when deaths stopped growing exponentially.

A similar chart for selected U.S. states and New York City is provided on the next page.



Information throughout the Dashboard is 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: <a href="worldometers.info">worldometers.info</a>; <a href="covidtracking.com">covidtracking.com</a> Graphics depict data as of April 5, 2020.

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Please note: Due to data limitations, it is more difficult to discern when cases cease to grow exponentially at the State level. Thus, the determination of when to depict the containment phase on the chart below (yellow shading) was made on the basis of the state's timing of posting case growth rates <10% and a visual interpretation of the state's logarithmic chart of total and new cases.



Post-Peak Active Cases

Stabilized < 10%

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		Feb 23-29	March 1-7	March 8-14	March 15-21	March 22 - 28	March 29 - April 4	April 5 - 11
	2/20 2/21 2/22	2/23 2/24 2/25 2/26 2/27 2/28 2/29				1 3/22 3/23 3/24 3/25 3/26 3/27 3/28		
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Phase

Contagion 100th Case to End of Exponential Growth

Containment End of Exponential Growth to Peak Active Cases

Recovery Post-Peak Active Cases

#### Daily Case Increase (5-Day Moving Averge)

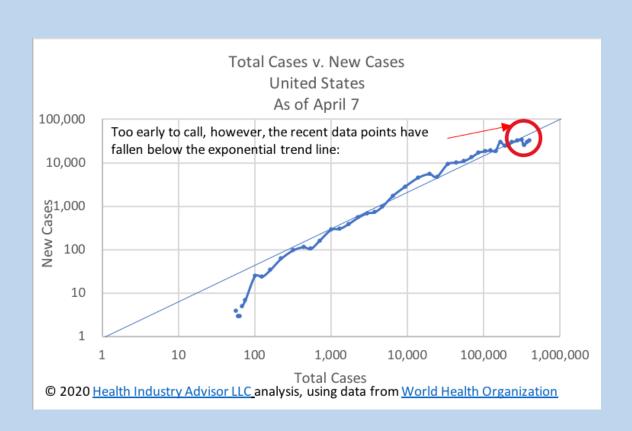
- ▲ Stabilized < 35%
- Stabilized < 20%
- Stabilized < 10%



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Illustration of the logarithmic growth in cases in the U.S., along with similar graphs for selected countries. The selected countries are those which are showing evidence that cases are no longer growing exponentially - in other words, containment.

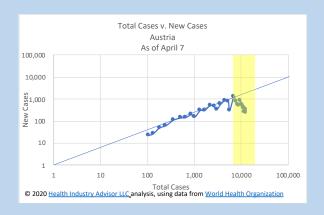


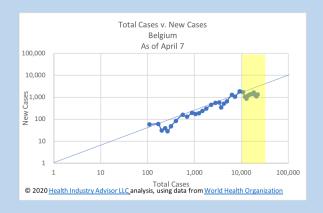


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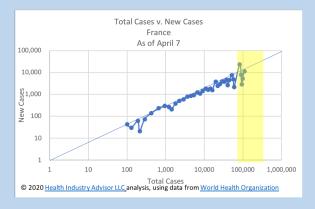
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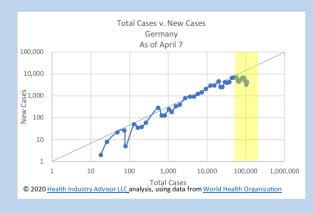
Note: on the country graphs that follow, the yellow-shaded areas are intended to highlight where case growth seems to have ceased growing exponentially (China not shown):

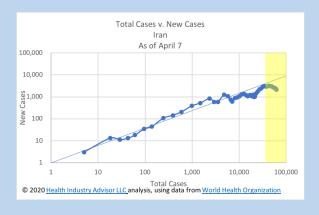












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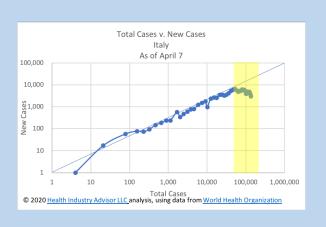
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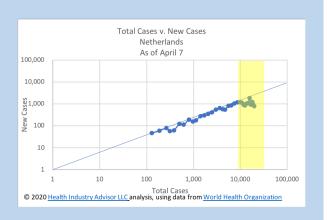
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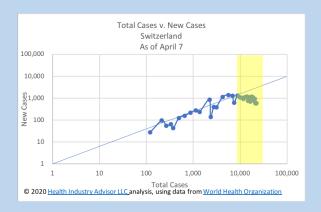












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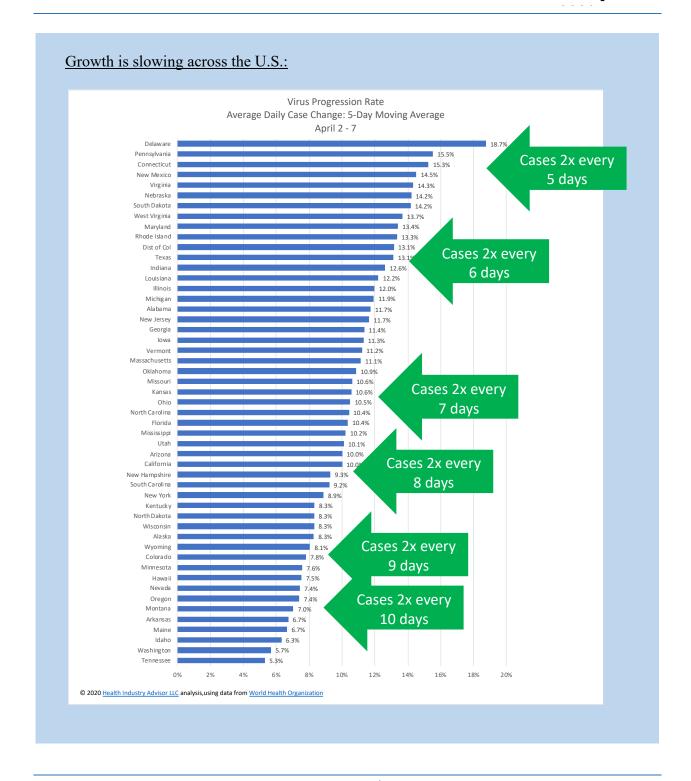
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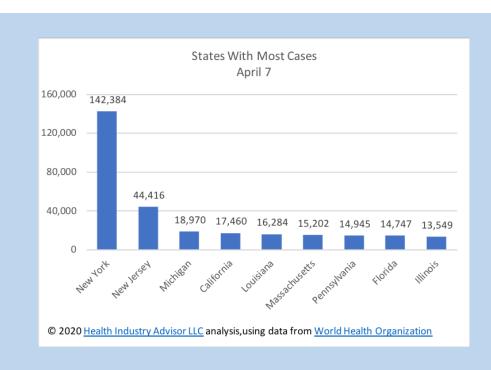
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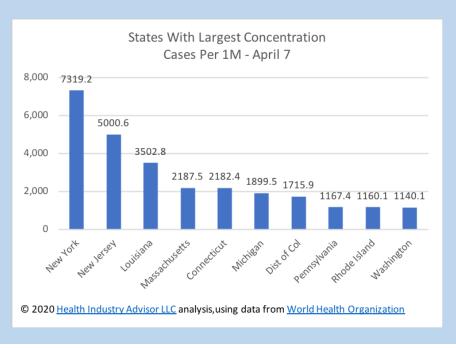
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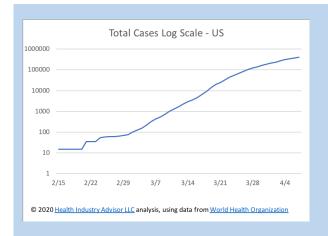
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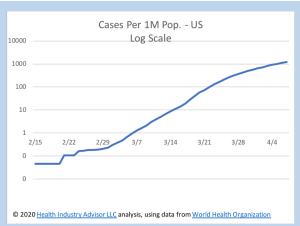
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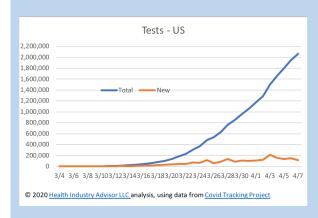


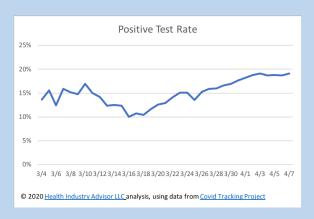
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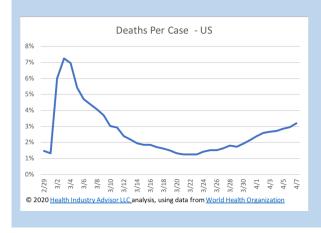
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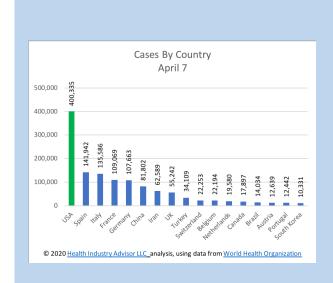
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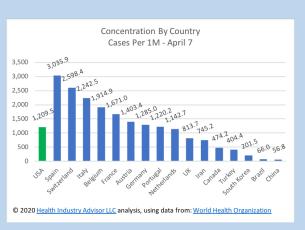
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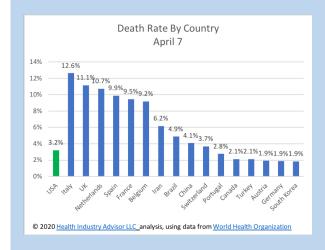


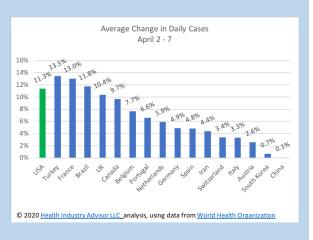
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