

Measure	Desired Change	Yesterday in the U.S.
No. of Tests	Increase	Up 16.5% (Cumulative)
Positive Test Rate	Decline	Up to 19.1% (from 18.8%)
No. of Cases	Plateau	Up 18.5%
% of Deaths Per Case	Decline	Up slightly, to 2.7% (v. 2.6%)
No. of Deaths / 1M Pop.	Plateau	Up to 22.3 (from 18.3)
Recoveries : Deaths	Increase (>1:1)	Down slightly to 1.66 (from 1.71)

- Testing in the U.S. accelerated, with more than 212,000 tests performed on Friday alone – the most of any day, and 80% more than on Thursday. 1.5 million tests have now been performed in the U.S. Despite the increased volume, the positive test rate actually declined day-over-day.
 - Confirmed cases in the U.S. grew significantly - 43,000+ new cases on Friday – likely influenced by the ramp in test volume. Still, case concentration (cases per 1M population) in the U.S. remains lower than in Spain, Italy, Germany, France and the Netherlands. (An important point, when the media focuses on the relatively high confirmed case counts in the U.S., ignoring that the U.S. population far exceeds many other countries.)
 - Case growth in Alaska and Minnesota seems as if is beginning to deviate from the exponential pattern that typifies the contagion phase of the virus. We need to observe this for another several days before making a firm conclusion that containment has begun.
 - Case growth continues to occur a slower pace every day in most countries and states. It now takes more than 10 days for cases to double in Washington; more than 9 days in Arkansas; about 8 days in Minnesota.
 - New York, the epicenter of cases in the U.S. represents an increasing smaller share of all U.S. cases – down to 37.3% as of Friday, from its peak of 48.1%. This is mostly due to the spread of the virus across the country. Still, it is encouraging for New York that its pace of daily case growth continues to decline (it is now growing at a slower pace than all but 11 states).
- Louisiana, on the other hand, is trending in the wrong direction – it has the third highest concentration of cases in the U.S. and is experiencing the second fastest daily growth rate.
- France experienced a spike in confirmed cases and deaths on Friday – more than 23,000 new cases and 1,100 deaths reported on Friday alone. As a result, France’s case concentration now exceeds Germany’s.
 - Daily case growth in Spain, Netherlands, Germany, Iran and Italy remains below 10% - a benchmark that seems to occur close to the date at cases cease to grow exponential (i.e., the “containment” phase underway).
 - The evidence is mounting that Italy has entered into “containment - on or about March 22. Germany, Iran and Spain may be in or approaching the “containment” phase of the pandemic, as they are showing signs their cases may no longer growing exponentially.

Introducing a new graphic, intended to illustrate the progression toward recovery (thanks to John Sherman for suggesting that I present this information).

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 were sustained) below certain benchmarks. ("???" in the right hand side indicate that the start of the containment phase is not yet certain.)

(Note that I have only been able to retrieve most state data back to March 19.)

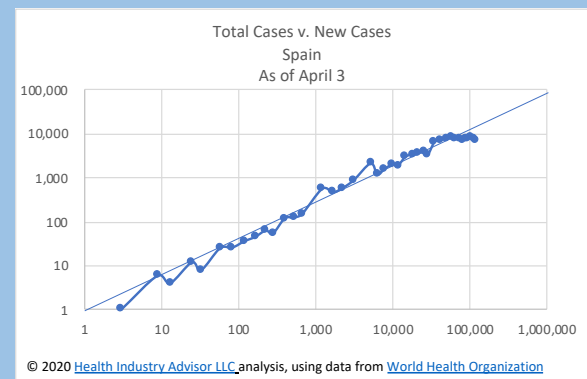
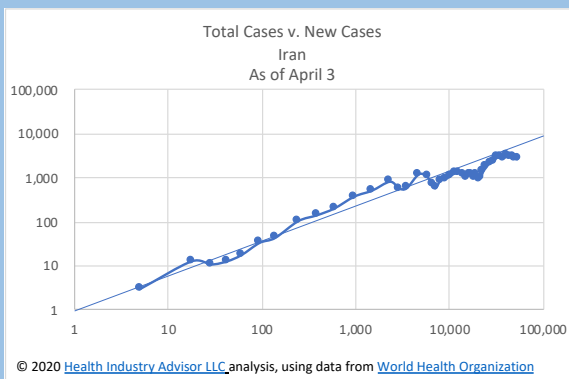
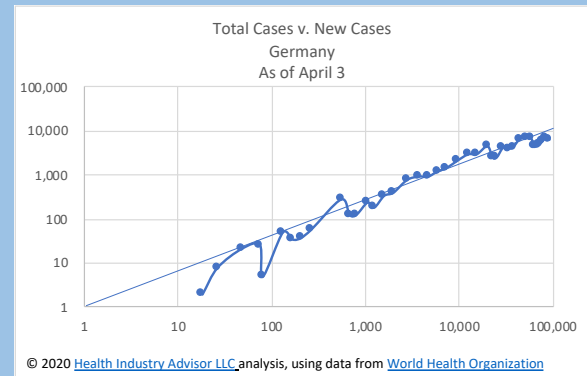
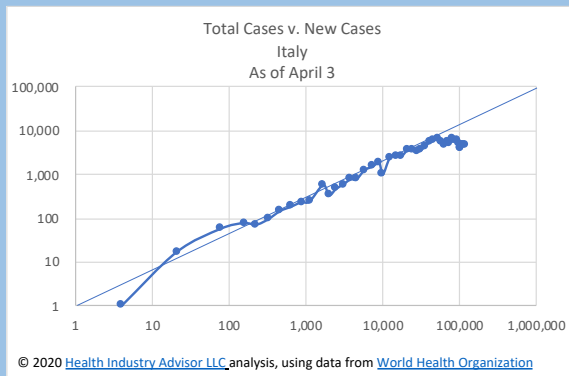
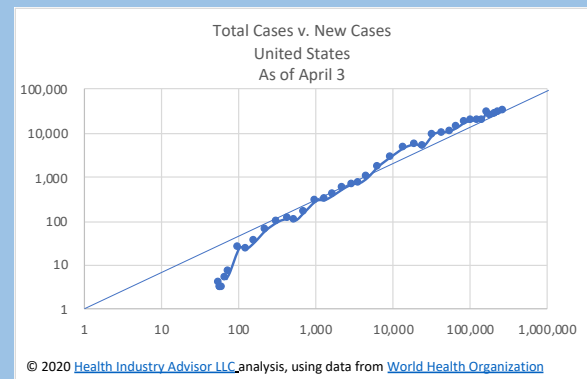
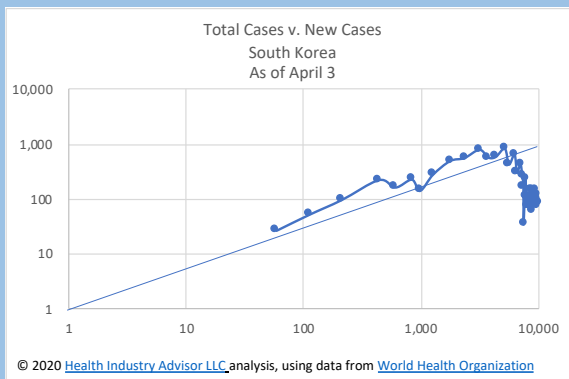


Information provided as a courtesy, based on data from the above-named sources. HIA has no responsibility for the accuracy and updating of any data. Sources: worldometers.info; covidtracking.com Graphics depict data as of April 3, 2020.

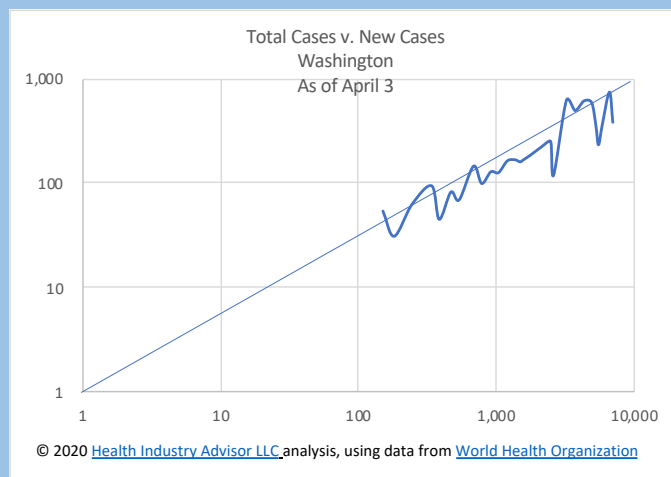
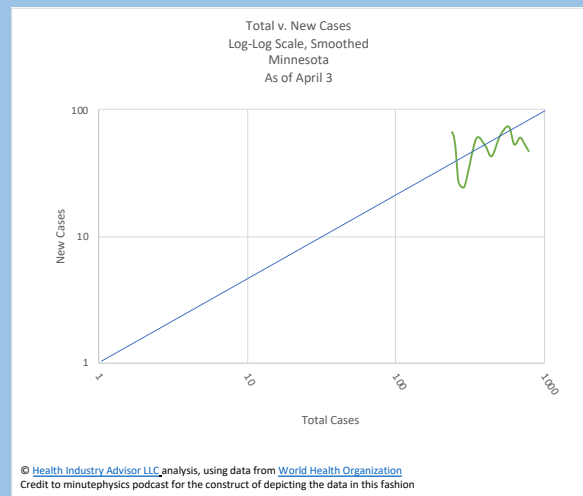
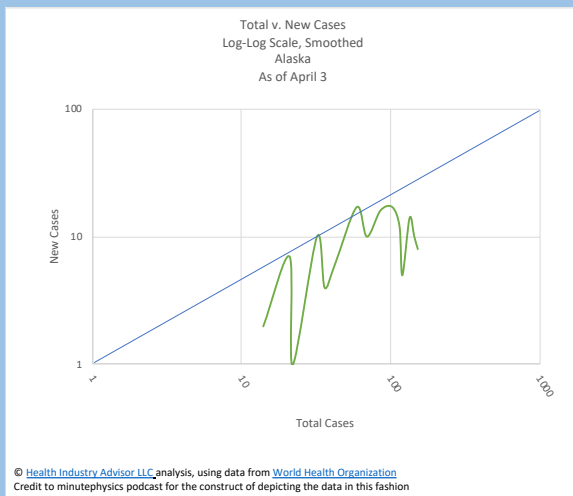
Mark A. Van Sumeren
P. O. Box 1810
Ann Arbor, MI 48106

Phone: 804/402-1365
Email: Mark.VanSumeren@HealthIndustryAdvisor.com
Website: www.HealthIndustryAdvisor.com
Twitter: @HealthIndAdv

Tracking various countries, to observe when cases no longer grows exponentially . .



Here are a few states that we are monitoring, to see if they break the trend of exponential case growth:



Growth is slowing across the U.S.:

As expected with an exponentially-growing virus, average daily growth rates diminish over time. Washington's cases are now taking more than 10 days to double; Arkansas, more than 9; Minnesota, about 8; Montana, Nevada, Oregon, Vermont and Wisconsin, about 7; and New York and 4 others, more than 6 days.

