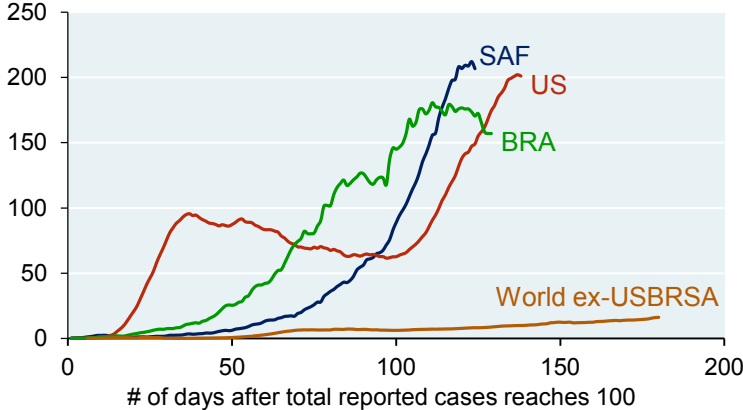


For the full complement of charts and analysis on infections, deaths, reopening trends, macroeconomic policy, vaccine and anti-viral status reports, serology testing and more, please see our coronavirus web portal [here](#).

Sign of the times: Oxford’s coronavirus vaccine will be tested in the US, Brazil and South Africa, since in the absence of human challenge trials (i.e., deliberately infecting people with the virus), vaccine developers need to find places where the virus is spreading widely.

New daily infections per mm people

7 day trailing avg

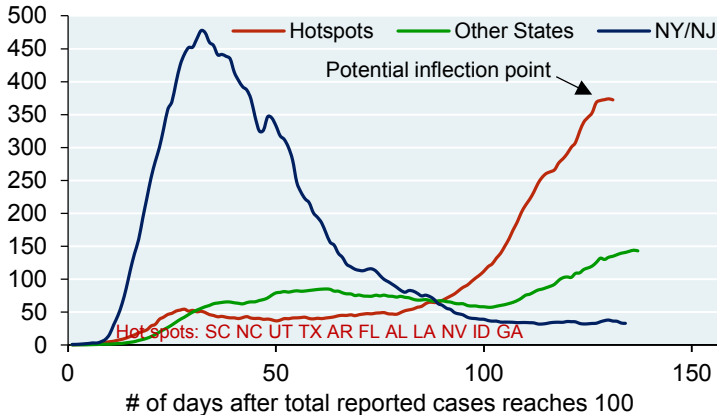


Source: Johns Hopkins University, IMF, JPMAM. July 20, 2020

If you look closely, you can see a mini-slowdown in the rate of new infections in US hotspot states. We don’t know if this is an inflection point, but it’s the first one we have seen in a couple of weeks.

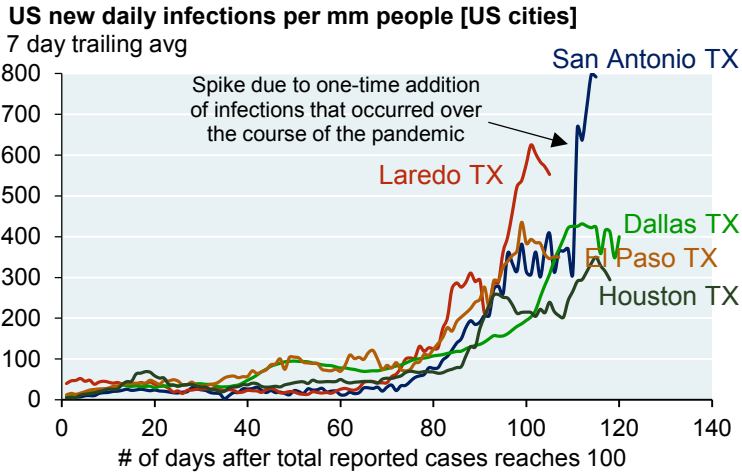
US new daily infections per mm people

7 day trailing avg



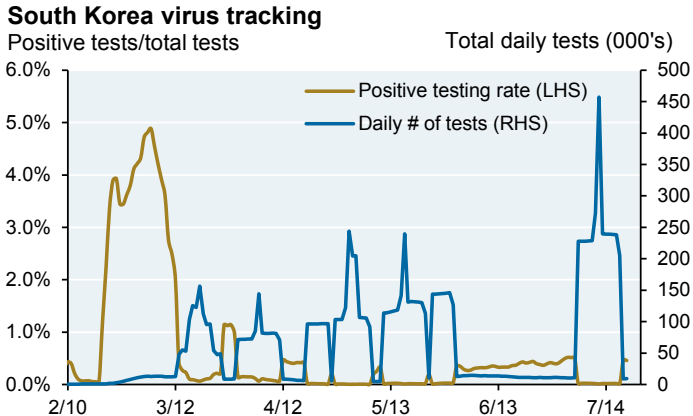
Source: Johns Hopkins University, IMF, JPMAM. July 20, 2020

What could be behind a possible inflection point: a plateau in the rate of new infections in Texas. Note that the San Antonio surge on July 16th was the result of a one-time addition of cases occurring over the course of the pandemic.



Source: Johns Hopkins University, IMF, JPMAM. July 20, 2020

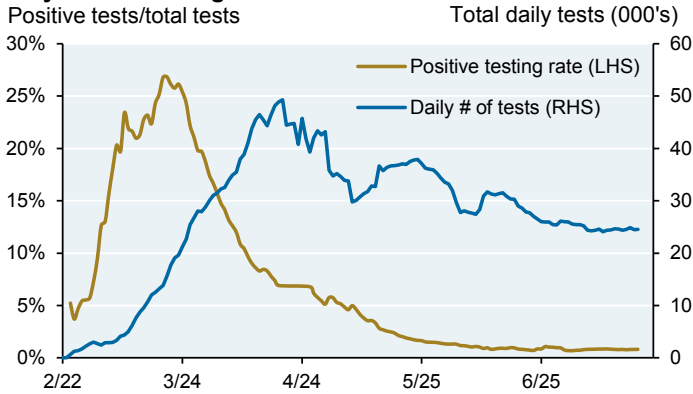
South Korea set the standard for how to reduce infections and get people back to work: keep testing even after infections fall.



Source: Our World in Data, JPMAM. 07/20/2020. 7 day avgs.

Italy adopted this approach as well...

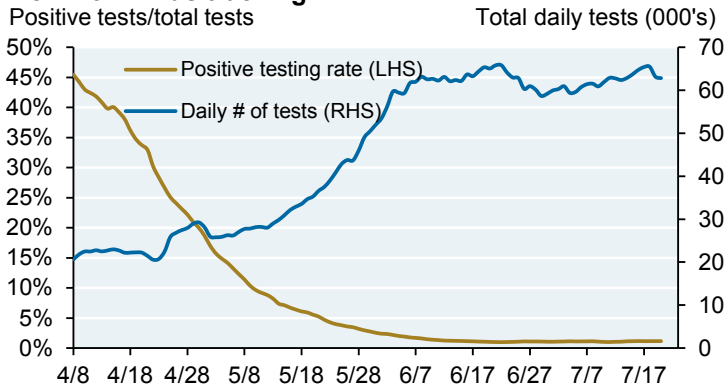
Italy virus tracking



Source: Our World in Data, JPMAM. 07/20/2020. 7 day avgs.

...and so did New York. We expect the rest of the states to follow.

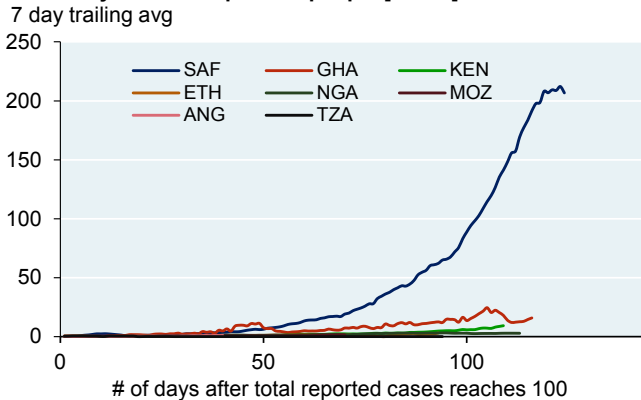
New York virus tracking



Source: COVID Tracking Project, JPMAM. 07/20/2020. 7 day avgs.

I don't really know what to make of this next chart. I doubt that the true rates of infection in South Africa differs this much from other sub-Saharan African countries.

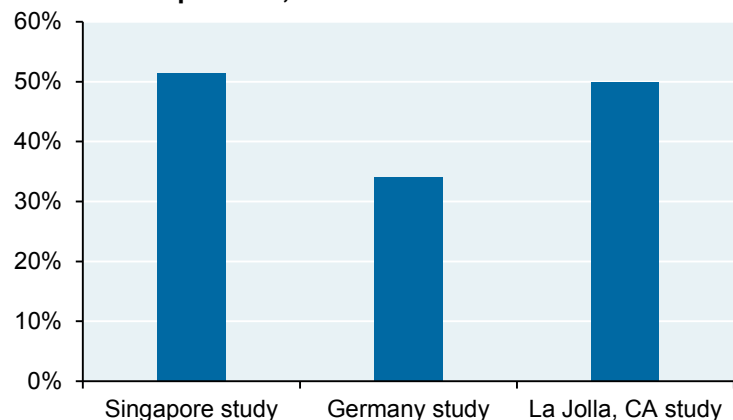
New daily infections per mm people [Africa]



Source: Johns Hopkins University, IMF, JPMAM. July 20, 2020

Why do some exposed people not get infected with COVID or only develop mild symptoms? A high percentage of random blood donors have T-cells which react to SARS-CoV-2 and begin fighting the invading pathogen immediately. These pre-existing T-cells apparently result from past exposure to more widely circulating “common cold” coronaviruses, and not from prior exposure to SARS-CoV-1, SARS-CoV-2 or MERS. See Section 5 on our web portal for more details.

Healthy people with T-cells which reacted to SARS-CoV-2 proteins, % of donors

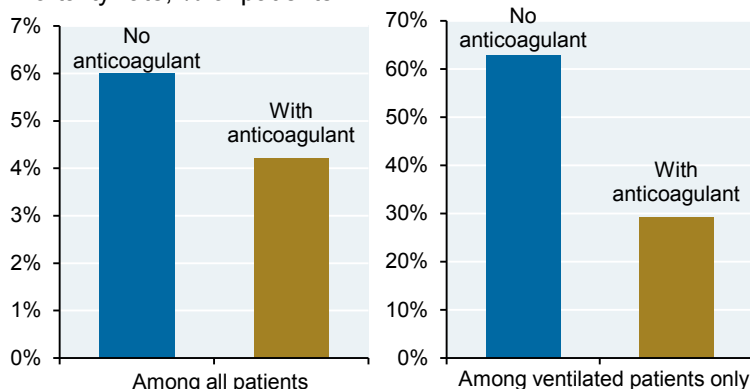


Source: Singapore study: Bertoletti et al, Nature magazine, July 7, 2020; Germany study: Braun et al. Berlin University, April 16, 2020; La Jolla, CA study: Grifoni et al, La Jolla Institute for Immunology, May 14, 2020.

If I contracted COVID, the first thing I would ask for are anticoagulants (a type of blood thinner) given the track record they have in reducing mortality rates. See Section 4 on our web portal for more details.

Anticoagulant impact on COVID mortality rates

Mortality rate, % of patients



Source: New England Journal of Medicine, American College of Cardiology. '20.

COVID news of the week

- Keep Phase I COVID vaccine results in perspective: safety has been established by Moderna, Oxford/AstraZeneca, CanSino, Pfizer, etc. Many Phase I results also show evidence of immune system responses that include both neutralizing antibodies (which render the virus incapable of being infective) and T-cell responses (another weapon in the body's fight against invading pathogens). Now on to Phases II and III which will establish dosage, efficacy and long term immunity
- Last week, I discussed how the Trump Administration had made COVID analysis more difficult by preventing hospitals from reporting data to the CDC. We have found a workaround through state sources for every state except Hawaii and Kansas, but I am under no illusion here; there are forces at work that may seek to suppress negative information about the pandemic for political reasons

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