

24 March 2020

BRIEF-19

A daily review of covid-19 research and policy.

RESEARCH BRIEFING

Latest research from Lombardy, Italy. In a [preprint](#) (not peer reviewed) publication, researchers looked for trends among the first 5,830 laboratory-confirmed cases of SARS-nCov-2. Patients infected were older (average age of 69 years), and almost 50 percent of patients with covid-19 infection were hospitalized. Of those admitted to the hospital, 18 percent required intensive care and many died. In other words, the people who became infected with SARS-nCov-2 in Italy became very sick. Interestingly, the authors found no significant difference in the number of SARS-nCov-2 viral particles in the noses of patients with and without symptoms. This suggests that the amount of the virus is not directly related to severity of the symptoms. These preliminary findings may suggest that patients without symptoms are driving the pandemic.

Gilead Sciences' (GILD) Remdesivir Granted FDA Orphan Drug Status for Treatment of COVID-19. Remdesivir is a medication that stops some viruses from reproducing. It has emerged as one of the 'hopeful' drugs for treating covid-19 infection. Currently, there are no high quality or reliable data to support its use in treating covid-19 infection, though numerous human trials are underway to determine whether it has any clinical effect. The Food and Drug Administration recent [granted](#) remdesivir "orphan" drug status. Orphan drugs are experimental medications for diseases that are considered to help treat, prevent, or diagnose life-threatening or rare disease. Companies that gain orphan status approval for a medicine gain economic [advantages](#) including market exclusivity, fee reductions, and other assistance. The orphan classification was created to encourage companies to create medications for rare diseases that would otherwise have difficulty becoming profitable. To be clear, the FDA's granting of orphan drug status does not imply that the medication works.

Why do more people die from SARS-nCov-2 infection in Italy compared to China? A perspective piece published in [JAMA](#) compares the fatality rate from SARS-nCov-2 infection in Italy and China. The authors report that the overall case-fatality rate in Italy (7.2%) is substantially higher than in China (2.3%). The fatality rate from SARS-nCov-2 was similar among persons aged 0 to 69 years old in both nations. However, almost one in four citizens in Italy is over the age of 65. Further, patients 70 years or older represented 37.6 percent of the cases in Italy, compared with only 11.9 percent in China. This age imbalance among infected persons offers one possible explanation for the discrepancy in fatality rates across the two countries. However, differing measurement strategies may also be playing a role, albeit an artificial one. The distinction boils down to "total deaths" (which are all deaths during a time period) and "excess deaths" (which are deaths thought to be attributable to an exterior cause, such as covid-19. In Italy, a "death from covid-19" was defined as any patient who tested positive for SARS-nCov-2 and later died, without taking into consideration the cause of the death. Many chronic diseases (heart failure, stroke, dementia, *etc.*) are risks for dying during any hospitalization. Therefore, we can say that some fraction of patients died *with* covid-19 infection but not necessarily *from* the virus (it is unclear how many patients acquired SARS-nCoV-2 in the hospital or prior to hospitalization). Finally, on February 25th, Italy changed who they are testing for infection. People offered testing were those with suspected covid-19 and severe clinical symptoms. Those with mild symptoms were tested less frequently. Only testing very sick patients thought to have covid-19 infection increases the reported fatality rate because infected patients with mild or no clinical symptoms are not included in the calculations. The evidence reported underscores this: the

“case-fatality rate changed from 3.1% on February 24 to 7.2% on March 17” after testing criteria were changed on February 25th. Regardless, people in Italy are sick and dying. The point here of presenting this paper is that the numbers reported early in a pandemic may not be reliable; they depend upon the choices made by statisticians.

--Joshua Niforatos MD.

POLICY BRIEFING

Peace on Earth? At a virtual news conference, United Nations Secretary-General Antonio Guterres [called](#) for a ceasefire across the globe so that more efforts can be turned to combatting the coronavirus. He noted that “[t]he virus does not care about nationality or ethnicity, faction or faith. It attacks all, relentlessly.” Guterres also noted that the healthcare systems in war-torn nations are already fractured as a result of conflict and that those who suffer most from the violence of war are also most likely to be stricken with covid-19, further complicating humanitarian aid efforts. New York Times.

Another one bites the dust In a 49-46 vote, mostly along party lines, the United States Senate again [failed](#) to move forward with the Phase 3 bill to combat the economic consequences of the coronavirus. Earlier in the day, Democrats acknowledged that there had been some movement on their key concerns in the package, but not enough to garner the 60 votes needed to pass the procedural hurdle. In a rare open floor debate before the vote, the Senate, typically known for its strong sense of decorum, devolved into finger-pointing and heated exchanges as Democrats and Republicans hurled blame for the delay back and forth. Following the vote, Senate Majority Leader Mitch McConnell spoke on the Senate floor, stating that Phase 3 may not be finished until Friday or Saturday. House Democrats later revealed their own vision of a third stimulus package but a voting schedule for the bill is not yet apparent. Any bill must be passed by both the chambers before going to the President for approval. Politico.

Sugar, We’re Going Down Swinging Economic prospects remain bleak as stocks on Wall Street continued their decline despite the Federal Reserve Bank of the United States on Monday [stating](#) that it would spend whatever it takes to keep the economy afloat. The Fed is responsible for setting monetary policy, the strategic actions that influence the supply of money and credit. Expanding on policies announced last week, several new programs aimed at assisting both small and large businesses as well as cities and households were announced. Coming off of the worst week of trading since the Great Recession, stocks responded to this news with a positive uptick before again falling after the Phase 3 bill stalled in the Senate. Warnings also emerged that unemployment could surge to nearly 30 percent during the second quarter of the year after reaching lows earlier this year not seen in several decades. Washington Post.

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