

We were not Prepared for Covid-19-But we Should Have Been

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Opinion



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The COVID-19 pandemic could have played out very differently if we were more prepared. Will we take this opportunity to learn from our mistakes and better prepare for future pandemics? We are all too familiar with the COVID-19 pandemic which seemingly ground the world to a halt. Caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), this pandemic is unprecedented for many of us. Hundreds of thousands have died, and economies will likely cripple as a result of the severe restrictions. Disappointingly, we should not be in this position. Scientists have predicted for decades that viral pandemics of this nature will arise, yet these cries of warning have largely fell on deaf ears. We could have had a vaccine for the original SARS-CoV years ago, but not enough money provided to allow for its development. Inaction has potentially contributed to one of the largest pandemics in living memory. Infectious diseases kill millions of people yearly, but COVID-19 is different. We do not properly understand this virus yet. There is no way to accurately predict when the pandemic will end and whether it will return. What we do know for certain is our immune systems have never dealt with it before. Many cases occur with mild or no symptoms, and it can spread from person to person for prolonged periods, which has resulted in its rapid growth across the world. All most of us can do is hope that natural herd immunity will be effective and for vaccines and anti-viral drugs to be created soon.

Viruses and viral pandemics

SARS-CoV-2 is a zoonotic virus made up of ribonucleic acid (RNA) surrounded by four structural proteins that protect the virus and allow it to bind to and invade our cells. Its RNA encodes the genetic information needed to hijack our cells, which are then used to copy itself and spread. RNA is also very prone to mutations, resulting in the virus being able to rapidly change and adapt to new conditions. Bats are likely the natural reservoir of SARS-CoV-2, though there may be an unknown intermediary host that transmitted the virus to humans. The rapid mutability combined with the densely packed South Chinese wet markets likely provided the ideal environment for this coronavirus to jump between animal hosts and develop. There have been many different infectious viral outbreaks over the last few decades, yet it seems we have learnt nothing from these previous events. Despite knowing of the inevitability of such an infectious disease arising for years, we were caught by this pandemic almost completely unaware. We were aware of the potential dangers, yet minimal effort was taken to decrease the risks. Even during the midst of this pandemic, many governments failed to address the situation adequately, leading to its rapid spread which crippled health care systems and led to the death of countless lives. Worryingly, SARS-CoV-2 is relatively mild, with a low death rate. This likely aids in the virus's spread, since a virus cannot adequately spread if it kills every person it infects. However, there have been worse pandemics in the past. The Spanish Flu killed an estimated 50 million between 1918-1919, the two flu pandemics of 1957 and 1968 both killed over one million people each, while the ongoing HIV/AIDS pandemic has killed over 30 million so far. Looking to the future, the likelihood of such deadly viruses arising is set to increase. Plus, this is not even considering potential disease outbreaks that will occur due to antibiotic resistant bacteria.

What we should have done

As concerning as all this sounds, there are measures we can take – and should have already taken to decrease the impact and risk of viral pandemics. First and foremost, giving scientists adequate funding to research and understand these diseases will put us in a drastically better situation to fight new diseases. The original SARS-CoV appeared during 2002 in China, which was much deadlier but less infectious than SAR-CoV-2, where only around 8000 people were infected. There are no approved vaccines or anti-viral drugs to fight SARS, as scientists were not given the funding to develop them. These two SARS viruses are roughly 80% similar, so previously made vaccines or anti-virals may have been effective against the SARS-CoV-2. Even if these hypothetical vaccines and drugs were not effective for the new virus, they would have likely made it easier and quicker to develop ones that were. The events and consequences of COVID-19 could have played out vastly different manner if this was the case. Another potential method to lessen the impact of a pandemic is to be properly prepared for one. South Korea's response to COVID-19 is a great example. They initially had the largest outbreak outside of mainland China and disaster seemed imminent, but as the rest of the world's COVID-19 cases continued to shoot up, South Korea almost levelled out as they managed to contain the virus. To be frank, South Korea were only so prepared due to another coronavirus outbreak, the 2015 Middle East Respiratory Syndrome (MERS), where they were the worst effected country outside of the Middle East. Through failing to manage this MERS outbreak, South Korea learnt to be much better prepared if it ever happened again.

Rapid responses save lives

As soon as COVID-19 started emerging in South Korea, diagnostic tests were developed and provided largely for free in over 600 locations. When anyone tested positive, any contacts they could have transmitted to were traced and they were also tested, breaking the human-human transmission chain. Moreover, law changes post MERS outbreak allowed the government to collect each patient's data and security footage during a pandemic. This information was logged and shared to alert people where to stay away from the path of infection. If people found they had been to a place where a confirmed coronavirus patient had been, they could get tested. Despite the almost Orwellian circumstance of tracing peoples every move, this allowed South Korea to visualise the virus's movement, which actually prevented overly aggressive isolation procedures, while effectively restricting the spread of SARS-CoV-2. Coming out of the COVID-19 pandemic, we must take this as a painful lesson to be more prepared for future pandemics that will inevitably arise. By putting into place thorough diagnostic and virus tracing procedures, as well as investing in scientists to better understand these infectious diseases, countless lives will be saved. Often the best lessons are learnt through making mistakes, and we have made many mistakes throughout this pandemic. We owe it to all those who lost their lives to SARS-CoV-2 to learn these lessons and strive to prevent such pandemics from happening again.

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