## My Perspectives on Pandemics: Looking Through the Eyes of a 11-Year Old

The world has become more urbanized and viruses are traveling more swiftly, affecting millions of people around the globe. COVID-19 has turned my world sideways. "Social distancing" and "quarantine" are terms I had only heard in sci-fi books and movies. I never imagined this would become my new way of life. However, this is not the first time we have faced a pandemic. In the last two decades alone, humankind has faced multiple outbreaks, such as SARS, H1N1, MERS, and Ebola.

SARS, a pneumonia-like illness, began in Guangdong, China in November, 2003. The CDC issued a travel advisory warning people not to travel to China and nearby areas. Scientists published the genetic sequence of the virus within 12 days. It took 6 months for the outbreak to be contained worldwide. H1N1 happened in the spring of 2009. It was an influenza virus that affected children and adults. When H1N1 was first detected in Veracruz, Mexico, countries immediately began working on a vaccine and sharing early testing results. The US worked with the commercial supply chain, shipped critical supplies and testing kits to hospitals, and created an alert system in stages informing people of the severity of H1N1. Quick responses and an effective containment strategy by both the government and the CDC helped control these pandemics.

None of these diseases, however, teach us as much about pandemics compared to smallpox. Smallpox was the first disease to be completely eradicated due to herd immunity. Herd immunity is where 70-90% of the population is vaccinated in order to prevent the susceptible people from getting the illness. This prevents the disease from spreading. In order to establish herd immunity with COVID-19, a vaccine must be found quickly and widely distributed.

Every pandemic is unique. The R0 of a disease measures the rate of infection. The R0 gives us an understanding of how many people an infected person can spread the disease to. If the R0 is greater than 1, the illness is considered a pandemic. The R0 of COVID-19 is between 1.5 to 3.5. In comparison, the R0 of a common cold is around 2. Past epidemics, like SARS, H1N1, and smallpox, have an R0 of around 3, 1.5, and 5, respectively. Infectious diseases are risky, but they only cause about 13% of worldwide deaths. We should not panic over these outbreaks, but instead be prepared for them.

We are in the middle of a "Black Swan" event, which is a rare event that has severe consequences on our economy. In order to deal with this recession, the government created an aid package of about 2.7 trillion dollars so far. To put this in perspective, it would cost 1.5 trillion dollars to pay off all student loans in the U.S. These high costs will be a burden on future generations. Previous outbreaks, like MERS and SARS, have origins tied to animals. Stricter guidelines on handling livestock must be made mandatory to prevent pandemics that cause

economic disasters.

COVID-19 will go down in history as the "Great Lockdown". Malls, stores, restaurants, and many other non-essential businesses have all been shut down. My 6th grade came to an abrupt end with the schools being closed. Parents have now become the teachers. The school gives us remote learning documents, assignments, and online classes. Despite all these resources, it is a struggle for us at home. While parents have to tackle both working from home and teaching, they also have to keep the kids occupied. My family is adjusting to this new way of life. Organizations and online resources like Khan Academy, North South Foundation, and IXL have helped students cope by means of online classes, competitions, and webinars.

Things may not be normal again, so all of us have to work together to build a new normal. It may take some time, but we will be okay.

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Special thanks to my dad!