What surprised you most about the COVID-19 pandemic?

I think the ability of the world to respond with clinical trials for vaccines, and, in some cases, an actual vaccine, to be approved rapidly. But also the ability of the world to turn around and try to respond with additional testing is truly amazing. If we had another 1918-like pandemic that hit hard in the young adult population, I think the response would not be as rapid. It would take us many years to recover from these losses.

What lessons are emerging from this pandemic that will help the world be better prepared for the next one?

I think the first lesson we are learning is that we were not ready for a pandemic like this. The planning for a pandemic like this—whether it be COVID-19 or another pathogen—was not as good as it could have been. We were surprised by the idea of "locking down" our economy to prepare for this. We were surprised by how long the pandemic would last. We were surprised by the unexpected numbers of deaths. We were surprised by the speed of the viral transmission.

One lesson that is emerging is that we need to prepare for pandemics better. We need to have a better response plan. We need to have more testing capacity. We need to have a better system for data collection. We need to have better communication with the public. We need to have better communication with the media. We need to have better communication with other countries.

What is your view on the role of vaccines in preparing for the next pandemic?

I think the ability of the world to respond with clinical trials for vaccines, and, to some extent, to produce vaccines is truly amazing. If we had another 1918-like pandemic that hit hard in the young adult population, I think the response would not be as rapid. It would take us many years to recover from these losses.

What role do vaccines play in preparing for the next pandemic?

Vaccines play a crucial role in preparing for the next pandemic. They can help prevent or reduce the severity of the disease. They can also help reduce the transmission of the disease. But vaccines are not a panacea. They need to be complemented with other control measures, such as social distancing and mask-wearing.