

Dr. Anthony Fauci Shares Insights about COVID-19's Lessons and Challenges

He is a well-known fixture in many American households today. And despite the controversy that swirls around the pandemic, he tries his best to stick to the science.



Dr. Anthony Fauci spoke to the Miller School of Medicine community on Feb. 10.

True to form, [Dr. Anthony Fauci](#), longtime director of the National Institute of Allergy and Infectious Diseases and a leading member of President Joseph Biden's COVID-19 response team, did so on Wednesday. He attracted a virtual audience of about 1,800 that included Miller School students, faculty members, fellows, and residents when he spoke to them as a

Hoffman Ratzan endowed lecturer in the Miller School Department of Medicine's weekly Grand Rounds, which often features outside experts.

"Dr. Anthony Fauci has provided a powerful example as a scientist and physician. He is a towering figure in global health who has safeguarded and relied on the integrity of science, without bending to political pressures," said UM President Julio Frenk, also a physician and global public health expert. "I am honored to be here today as our residents and students learn from one of the world's best."

During his 40-minute lecture, "COVID-19 in 2021: Lessons Learned and Remaining Challenges," Dr. Fauci traced the nascent history of the novel coronavirus, which is the third pandemic-level strain of the many different coronaviruses that already exist (up to 30% of common colds are caused by less-harmful coronaviruses).

Three surges brought new peaks

Although the number of cases is beginning to decline in the U.S., Dr. Fauci noted that the nation has experienced three surges of the virus since its arrival last year. The first was centered in the New York City metro area during March/April of 2020; the second occurred last summer, after COVID-19 restrictions were lifted in many states; and the third started in late fall, fueled by cold weather and holiday gatherings. Unlike other viruses, he said, each COVID-19 surge has built upon the previous one, raising the stakes for hospitals and the overall number of deaths. At its height just last month, there were up to 400,000 new cases per day and up to 4,000 deaths per day.

“With the appearance of variants in our society, we have to keep an eye on that. And even though, thankfully, we are seeing a diminution in cases, we are not by any means over with this surge,” he said.

Dr. Fauci also discussed some of the other “unique and disturbing” traits of SARS-CoV-2, the virus that causes COVID-19, including how it disproportionately affects minority populations. To make his point, he showed a bar graph highlighting the number of COVID-19 hospitalizations and deaths among Native American, Hispanic, and Black people that far outnumber the rest of the U.S. public.

Another unusual trait is the novel coronavirus’s nimble capacity to spread, mostly through the air, Dr. Fauci explained. He said up to 45% of people who have COVID-19 have no symptoms, and 59% of people who test positive get it from an asymptomatic individual.

“This becomes extremely problematic when you’re trying to do identification, isolation, and contact tracing,” he said. “And in fact, this is unprecedented with any virus that we’ve ever seen – particularly with a virus that has the capability of causing such a high degree of morbidity and mortality in certain groups in our population.”

Watching new variants

Discussing the three new variants of COVID-19 from the United Kingdom, South Africa, and Brazil that have evolved in the past few months, Dr. Fauci said he is watching these “isolates,” carefully. So far, he indicated, vaccines available in the U.S. are still able to mitigate the most

severe effects of the U.K. variant, but the South African strain could be more challenging.

“If we have this new lineage become dominant in our own country, even though the vaccines would protect against serious disease . . . its overall protection would be compromised,” Dr. Fauci pointed out.

He also spoke to aspiring physicians about the different tests for COVID-19 that are available. He touted a new home test made by an Australian company, named Ellume, that can net results in 15 minutes and is now under contract with the federal government.

Dr. Fauci also called the rapid development of COVID-19 vaccines the “success story” of the pandemic, a favorable result he attributed to the groundwork laid by vaccine scientists, who over the past decade developed a platform that was quickly customizable.

“Something that would have taken years to do was accomplished in a matter of months, less than a year,” Dr. Fauci remarked. “This is purely a reflection of scientific advances and the work that was put in for the prior decade for the development of this platform technology.”

In addition, Dr. Fauci mentioned that some scientists are working to develop a [universal coronavirus vaccine](#) that could potentially address all the variants and maybe even help recipients fend off colds.

Pushing for herd immunity

Meanwhile, he urged everyone who can get vaccinated to do so

quickly – so the U.S. can reach the 70% vaccination threshold believed to be needed to reach herd immunity (where the amount of virus circulating in the population is extremely low, hindering more variants from evolving). Noting that close to 2 million people are being vaccinated daily now, he said he is hopeful that most adults who want it will be inoculated by April. And with vaccine trials now underway for children, he is optimistic that they may be able to get vaccines by late summer or early fall.

Yet, Dr. Fauci said, vaccine hesitancy is a real stumbling block. So, he hopes that people will change their minds as they see people like himself, President Biden, and Vice President Kamala Harris rolling up their sleeves.

“Efficacy is the result of a clinical trial. But in order to get an effective vaccine, we need to get it into people’s arms. And the reservations and hesitancy out there are things we must overcome,” he said.

Dr. Roy Weiss, the University’s chief medical officer for COVID-19 and chair of the Department of Medicine, said Dr. Fauci’s leadership through the pandemic provides confidence and trust.

“Dr. Fauci is first and foremost a scientist of high regard,” Dr. Weiss said. “He does not allow politics to influence the science. We are honored that he was able to present to the Department of Medicine and the Miller School of Medicine.”

To watch a recording of Dr. Fauci’s virtual Grand Rounds lecture, click [here](#).

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