How will pandemic end? Omicron clouds forecasts for endgame

January 3 2022, by Lauran Neergaard and Carla K. Johnson

A staff member from the National Health Organisation (EODY) prepares a booster Johnson and Johnson vaccine against COVID-19 at Karatepe refugee camp, on the northeastern Aegean island of Lesbos, Greece, Wednesday, Dec. 15, 2021. The fast-moving omicron variant is complicating a key question: How does the COVID-19 pandemic end and the world co-exist with this virus? Experts agree that the coronavirus is here to stay. Ending the pandemic won't be like flipping a light switch. Credit: AP Photo/Panagiotis Balaskas, File

Pandemics do eventually end, even if omicron is complicating the question of when this one will. But it won't be like flipping a light switch: The world will have to learn to coexist with a virus that's not going away.

The ultra-contagious omicron mutant is pushing cases to all-time highs and causing chaos as an exhausted world struggles, again, to stem the spread. But this time, we're not starting from scratch.

Vaccines offer strong protection from serious illness, even if they don't always prevent a mild infection. Omicron doesn't appear to be as deadly as some earlier variants. And those who survive it will have some refreshed protection against other forms of the virus that still are circulating—and maybe the next mutant to emerge, too.

The newest variant is a warning about what will continue to happen "unless we really get serious about the endgame," said Dr. Albert Ko, an infectious disease specialist at the Yale School of Public Health.

"Certainly COVID will be with us forever," Ko added. "We're never going to be able to eradicate or eliminate COVID, so we have to identify our goals."

At some point, the World Health Organization will determine when enough countries have tamped down their COVID-19 cases sufficiently—or at least, hospitalizations and deaths—to declare the pandemic officially over. Exactly what that threshold will be isn't clear.

Even when that happens, some parts of the world still will struggle—especially low-income countries that lack enough vaccines or treatments—while others more easily transition to what scientists call an "endemic" state.

They're fuzzy distinctions, said infectious disease expert Stephen Kissler of the Harvard T.H. Chan School of Public Health. He defines the endemic period as reaching "some sort of acceptable steady state" to deal with COVID-19.

People wait in line at a COVID-19 testing site in New York's Times Square on Dec. 13, 2021. The fast-moving omicron variant is complicating a key question: How does the COVID-19 pandemic end and the world co-exist with this virus? Experts agree that the coronavirus is here to stay. Ending the pandemic won't be like flipping a light switch. Credit: AP Photo/Seth Wenig, File

The omicron crisis shows we're not there yet but "I do think we will reach a point where SARS-CoV-2 is endemic much like flu is endemic,"

he said.

For comparison, COVID-19 has killed more than 800,000 Americans in two years while flu typically kills between 12,000 and 52,000 a year.

Exactly how much continuing COVID-19 illness and death the world will put up with is largely a social question, not a scientific one.

"We're not going to get to a point where it's 2019 again," said Dr. Amesh Adalja, a senior scholar at the Johns Hopkins Center for Health Security. "We've got to get people to think about risk tolerance."

Dr. Anthony Fauci, the top U.S. infectious disease expert, is looking ahead to controlling the virus in a way "that does not disrupt society, that does not disrupt the economy."

Already the U.S. is sending signals that it's on the road to whatever will become the new normal. The Biden administration says there are enough tools—vaccine boosters, new treatments and masking—to handle even the omicron threat without the shutdowns of the pandemic's earlier days. And the Centers for Disease Control and Prevention just reduced to five days the time that people with COVID-19 must stay in isolation so they don't sicken others, saying it's become clear they're most contagious early on.

India offers a glimpse of what it's like to get to a stable level of COVID-19. Until recently, daily reported cases had remained below 10,000 for six months but only after a cost in lives "too traumatic to calculate" caused by the earlier delta variant, said Dr. T. Jacob John, former chief of virology at Christian Medical College in southern India.

Omicron now is fueling a rise in cases again, and the country in January will roll out vaccine boosters for frontline workers. But John said other

endemic diseases, such as flu and measles, periodically cause outbreaks and the coronavirus will continue to flare up every so often even after omicron passes through.

Scientists at the Africa Health Research Institute in Durban, South Africa, work on the omicron variant of the COVID-19 virus Wednesday Dec. 15, 2021. The fast-moving omicron variant is complicating a key question: How does the COVID-19 pandemic end and the world co-exist with this virus? Experts agree that the coronavirus is here to stay. Ending the pandemic won't be like flipping a light switch. Credit: AP Photo/Jerome Delay, File

Omicron is so hugely mutated that it is slipping past some of the protection of vaccinations or prior infection. But Dr. William Moss of

Johns Hopkins Bloomberg School of Public Health expects "this virus will kind of max out" in its ability to make such big evolutionary jumps. "I don't see this as kind of an endless cycle of new variants."

One possible future many experts see: In the post-pandemic period, the virus causes colds for some and more serious illness for others, depending on their overall health, vaccine status and prior infections. Mutations will continue and might eventually require boosters every so often that are updated to better match new variants.

But human immune systems will continue to get better at recognizing and fighting back. Immunologist Ali Ellebedy at Washington University at St. Louis finds hope in the body's amazing ability to remember germs it's seen before and create multi-layer defenses.

Memory B cells are one of those layers, cells that live for years in the bone marrow, ready to swing into action and produce more antibodies when needed. But first those memory cells get trained in immune system boot camps called germinal centers, learning to do more than just make copies of their original antibodies.

In a new study, Ellebedy's team found Pfizer vaccinations rev up "T helper cells" that act as the drill sergeant in those training camps, driving production of more diverse and stronger antibodies that may work even if the virus changes again.

Ellebedy said baseline population immunity has improved so much that even as breakthrough infections inevitably continue, there will be a drop in severe illnesses, hospitalizations and deaths—regardless of the next variant.

"We are not the same population that we were in December of 2019," he said. "It's different ground now."

Think of a wildfire tearing through a forest after a drought, he said. That was 2020. Now, even with omicron, "it's not completely dry land," but wet enough "that made the fire harder to spread."

He foresees a day when someone gets a coronavirus infection, stays home two to three days "and then you move on. That hopefully will be the endgame."