

CORONAVIRUS IN MARYLAND

Herd immunity a harder challenge

As COVID-19 variants multiply, the finish line keeps changing



Nurse Geraldine Wilson administers the Pfizer vaccine to Pastor Nehemiah Cole of the Agape Praise Fellowship Church of Dundalk. Amy Davis/baltimore sun

BY JEAN MARBELLA

Imagine a race where not only is your opponent finding ways to run faster, but hurdles pop up unpredictably and the finish line keeps moving.

This is where COVID-19 vaccination efforts are, health experts say, seeking to quickly immunize more people against a coronavirus that has mutated into faster-spreading variants.

Despite the challenges that poses, many believe there is reason for hope that at some indefinable point, we will reach herd immunity — when so much of the population becomes immune that the virus' ability to spread drops dramatically.

“I see a lot of optimism for where we are,” said Gypsyamber D’Souza, an epidemiology professor at the Johns Hopkins Bloomberg School of Public Health.

“That doesn’t mean there aren’t barriers — there are multiple barriers,” she said. “It just makes our race a little harder.”

The stepped-up pace of vaccinations, in which about 3 million doses are administered every day in the U.S., has many envisioning a return to some semblance of normalcy after more than a year shadowed by the pandemic and the restrictions imposed to curtail it.

About 20% of the country is fully vaccinated, and while there is some disagreement on the threshold for herd immunity, experts often place it at 70% of the population having some kind of immunity. That would include both those who have been vaccinated and those with antibodies from previous infections — groups with some overlap because doctors recommend even those who have had the disease get vaccinated.

As the focus remains on vaccinations, a recent rise in COVID infections and hospitalizations in Maryland — and to even greater extents in several other states — has raised fears of a fourth surge in cases.

Concern is centered on the so-called British variant of the coronavirus, known as B.1.1.7, which is now responsible for most of the new U.S. infections. The variant is considerably more contagious and fatal than the original virus — although current vaccines are effective against it and overall COVID deaths remain on a downward trend.

“It’s another reason to have more people vaccinated,” said Dr. James Campbell, a pediatric infectious disease specialist at the University of Maryland School of Medicine.

The more people who are immune to the virus, he said, the less chance it has to continue mutating into ever more dangerous variants.

Timetables vary for when we might achieve herd immunity, and depend on some largely unknowable factors: How quickly can vaccines get distributed? How many of those currently resisting them might change their minds? When will the FDA approve vaccines for use on children? Will more jurisdictions lift pandemic

restrictions, and how closely will people adhere to existing ones and help prevent transmission?

“We’re seeing a lot of states removing mask mandates, or opening up businesses too soon,” said Dr. Wilbur H. Chen, an adult infectious disease physician at the University of Maryland medical school. “Or people not adhering to mask mandates.

“I think people are tired of this so there might not be the compliance we need,” said Chen, who advises Republican Gov. Larry Hogan and serves on the national committee that makes recommendations to the CDC on how to use and distribute vaccines.

Still, Chen said he is optimistic that rising vaccine rates will prevent a repeat of this past winter, when COVID cases and deaths spiked.

“We’ll be in pretty good shape by late fall, early winter,” he said, “when normally we would see a surge without the vaccine.”

The number of people who need to be immune to protect the entire population from COVID is something of a moving target, experts say.

A range of factors comes into play, but one thing is certain, Campbell said: Children, who make up 24 percent of the U.S. population, have to be part of the equation.

“In the end, that is what’s going to be the answer to keeping COVID-19 at bay,” he said.

Campbell is the principal investigator of a trial of the Moderna vaccine on children under 11 years old at the Maryland medical school, part of a multi-site study that could lead to FDA approval for that population. Currently only the Pfizer vaccine is authorized for those as young as 16.

Expanding vaccines to younger age groups is critical with recent national polls showing one-fourth of adult Americans saying they won’t get the vaccine, he said.

“Let’s say 75 percent of adults will get vaccinated. You’re going to be lower than the herd immunity threshold if you don’t have children vaccinated,” Campbell said.

In Maryland, a Goucher poll conducted in February found nearly two-thirds of residents saying they wanted to be vaccinated. That was up from October, when almost half said they would not get a shot.

“We have a population that’s really willing to get the vaccine,” said Mileah Kromer, the associate professor who directs the poll.

Many, particularly in the past, have pointed to African Americans as being particularly wary of vaccinations, stemming from a long history of mistreatment by

the medical profession. But the Goucher poll found little difference between Black and white Marylanders, with 62% and 68%, respectively, saying they planned to get vaccinated.

“In October, the narrative was it was the African American community,” Kromer said. “That’s not where we are now.”

Now, she said, the resistance to vaccines is more political, with polls showing Republicans, particularly men, against getting vaccinated. Close to half of Republican men have told pollsters they won’t get the shot, alarming health officials who have watched the fight against the pandemic — from mask mandates to restrictions on businesses to now vaccinations — get drawn into political partisanship.

With Maryland a majority Democratic state, that is less of an issue here than elsewhere, Kromer said.

Currently, about 21% of Marylanders are fully vaccinated, with others awaiting second doses. Within the state, though, there are variances, with majority-Black Prince George’s County having the most COVID cases but the lowest rate of vaccination at about 14%. In Baltimore City, also majority African American, more than 17% are fully vaccinated.

The mayor of Greenbelt, in Prince George’s, took the opportunity of Hogan’s visit Wednesday for a mass vaccination site opening there to say the governor had blamed people of color for having lower vaccination rates due to hesitancy. Rather, Mayor Colin Byrd said, Black residents have had trouble getting equal access because of how the state rolled out vaccines.

Similarly, Baltimore City has tangled with Hogan over its share of vaccines, particularly when data showed much of the city’s allocation actually going into the arms of nonresidents, such as those who work in hospitals.

Add to that an appointment reservation system that, particularly early on, required going online to multiple websites and competing for exceedingly limited slots, and it’s no wonder the city has a lower vaccination rate, said Yvonne Bronner, a professor of public health at Morgan State University.

“I think we all are very aware of the rollout, how the systems were not user-friendly and we had a tremendous demand and a tremendous undersupply,” she said.

Bronner is part of a city vaccine outreach campaign that has been meeting with traditionally underserved communities, such as immigrants or those with disabilities, to develop ways to get them information about the vaccine and the shots themselves.

Dr. Letitia Dzirasa, the city health commissioner, said mobile units have been deployed for those with transportation issues.

“Not everyone can necessarily get to a mass vaccination site,” she said.

Dzirasa said she has set what she calls a “lofty goal” of getting 80% of the population vaccinated by early next year.

Campbell said getting vaccines approved for children will happen in stages over time, as trials test younger and younger groups of them, and various dosage levels. There are already Pfizer test results for 12- to 15-year-olds, showing 100 percent efficacy, and data from a similar study for Moderna is expected shortly, he said.

That bodes well for potential authorization for that age group perhaps getting vaccinated before the next school year, Campbell said. Younger students, though, likely will have to wait longer, closer to the end of the year, he said.

He and others are warily watching the recent uptick in COVID metrics for signs of where the country is headed — toward another surge, or perhaps a leveling and dropping off.

Hopkins’ D’Souza said her heart sank when she saw photos of spring breakers partying in crowded locations, when there are ways to gather at the beach with friends without risking transmission.

“We have the tools we need,” she said. People just have to use them, from getting vaccinated and following the now familiar guidelines for wearing masks and social distancing.

“The key point is,” she said, “we can achieve population immunity.”

On the ground, there is a similar sense of possibility in the fight to control the disease.

“It feels like people are becoming more educated about COVID and more open to receiving help and resources,” said Will Smith, part of the Baltimore City Health Corps working to train community workers to reach the neighborhoods hardest hit by the pandemic.

“I don’t know exactly what lies ahead,” he said, “but we are getting stronger in our response.”