Heading into fall, many Americans have concerns about two evolving viruses, the highly transmissible BA.5 SARS-CoV-2 Omicron subvariant, and monkeypox, which the White House has declared a public health emergency in the U.S.—building on the World Health Organization’s declaration that monkeypox is a public health emergency of international concern.

COVID-19 cases have spiked again with BA.5. The good news is most of the country has been exposed to the virus either through infection or vaccination, leading to a reduction in hospitalizations and deaths, noted virology expert Peter Hotez, MD, PhD, who helped develop the Corbevax coronavirus vaccine.

Still, COVID-19 remains the fourth-leading cause of death in the United States. And not enough people are taking advantage of the tools that medical science has offered—either opting against initial vaccination, skipping booster doses or avoiding immunization for their children, said Dr. Hotez, an AMA member. He is dean of the National School of Tropical Medicine, and professor of pediatrics and molecular and virology and microbiology at Baylor College of Medicine and Texas Children’s Hospital in Houston.

In an episode of “AMA COVID-19 Update,” Dr. Hotez discussed vaccine strategies to fight COVID-19 and monkeypox—and why people shouldn’t wait until the fall to get their SARS-Cov-2 vaccine booster dose.

Universal vaccine approach
Dr. Hotez admits he has mixed feelings about rolling out a bivalent vaccine that targets BA.5. “By the time it's ready in the fall, BA.5 may be past us and we may be on to something entirely new,” he said.

Given that the mRNA booster doses haven't prevented Omicron subvariant transmission as well as hoped, this might not be the best strategy, he added.

It may be time to examine other approaches for boosters. Scientists are looking at longer-term strategies to develop a universal coronavirus vaccine that uses alternative delivery mechanisms via mucosa or skin, he said.

This isn't a quick fix, he acknowledged. Such technologies are still a few years away and right now there's no funding for them.

“We still need a strong interim strategy,” Dr. Hotez said.

Read more about answering patients’ questions on second COVID-19 vaccine booster doses.

Booster offer best protection

The boosters now available offer the best defense against COVID-19. Dr. Hotez, who acquired SARS-CoV-2 and discovered firsthand what it was like to experience COVID-19, feels lucky to be vaccinated and fully boosted.

For people older than 50 who have had those two boosts, “that makes all the difference in whether you’re home working or doing whatever you want to do, versus sick in a hospital bed or an intensive care unit.”

People shouldn’t wait until the fall to get an updated booster shot, he urged. You might be waiting until December. With BA.5 transmission so high, people should do everything they can to protect themselves and avoid hospitalization.

Although he had a rebound infection following receipt of Paxlovid, Dr. Hotez believes eligible people should take it if they get sick.

With COVID-19 antiviral supplies now ample, quick action is key.

Could monkeypox become a pandemic?
While it produces less severe disease than COVID-19, monkeypox is on a worrying trajectory, said Dr. Hotez.

The disease most likely spreads through close, personal contact, although the scientific community is divided on whether it transmits through aerosols. Cases are going up, and reported numbers likely underestimate the extent of prevalence, he said.

“Unless we can get our arms around this, and really start to beat it back with vaccinations, it’s going to generalize across the U.S. population,” in addition to Europe and Latin America, he said.

Find out why we must learn from the past in responding to monkeypox.

The virus could become a permanent fixture if it gets into animal populations. The next thing that happens is a pandemic, which is why ramping up production of the Bavarian Nordic modified vaccinia Ankara (MVA) vaccine is so vital, he said. An older, more abundant vaccine used for eradicating smallpox may prove useful, if there’s a way to safely mix and match it with the MVA vaccine, he suggested.

Learn what doctors wish patients knew about monkeypox.

Get the latest news on the COVID-19 pandemic, vaccines and variants, and more reliable information directly from experts and physician leaders with the “AMA COVID-19 Update.”

You can catch every episode by subscribing to the AMA’s YouTube channel or the audio-only podcast version.