## Module 4: After vaccination, what is the future?

[00:00:10] Hello, welcome back to our MOOC, Covering the COVID-19 Vaccines: What Journalists Need to Know. I'm Maryn McKenna, I'm your chief instructor and this is our fourth and final module. Congratulations on making it this far. Thank you for going on this journey with us.

[00:00:31] In our modules to date, we've talked about the history of the pandemic and the achievement of vaccines that may stop it, the logistical and political barriers to getting vaccines distributed around the globe, and the enormous problem of misinformation and disinformation aimed at discouraging people from being vaccinated.

[00:00:54] In this last module, we're going to try to imagine the questions we need to consider as COVID vaccination rolls out around the globe and begins to have a real impact on the occurrence of disease and death.

[00:01:10] On the day that our module one went live, we got some very good news about the impact of vaccination. The Centers for Disease Control and Prevention, the US CDC, announced that in a study of vaccinated health care workers, the two messenger RNA vaccines, by Pfizer and by Moderna, made it 90% less likely that recipients will become infected.

[00:01:38] Remember, the vaccines were authorized because clinical trials showed they prevented serious disease and death. Those trials did not say anything about whether the vaccines prevent infection, and that was important to know, because without infection you can't transmit the virus to other people. Without transmission, the pandemic will peter out.

[00:02:04] So this is very good news, provided we get enough of the population vaccinated all around the world to stamp out the virus and not let it continue to smolder and adapt. What we'll explore in this module is some of the things that we need to worry about as we move toward getting the whole world vaccinated. The first challenge is vaccine supply. We talked about this in module two, but since I recorded that segment, two things have happened.

[00:02:37] The first is that the United States has joined other rich nations in donating to other countries, announcing that it will send four million doses of vaccine to Canada and Mexico. The second is that India, which planned to distribute vaccines to 43 other countries, has changed its mind, suspending most of the shipments of vaccines made in that country that were going to other places in the world.

[00:03:05] At the point at which it stopped shipments, India has sent more than 60 million doses to more than 70 countries. But now, with a new wave of cases peaking, India needs all the doses it can get. As a result, potentially more than one hundred million doses will be kept at home, leaving both poor nations in Asia and also rich nations elsewhere, including Britain and Saudi Arabia, with short supplies.

[00:03:36] The point of calling out both these changes in policy is not to praise the United States nor to blame India. It is to point out that vaccine supply is going to be dynamic and that any country's plans to vaccinate its citizens may be dependent on actions taken by another country far away.

[00:03:59] This is important, of course, because slowing down vaccination and leaving people vulnerable to the virus gives the virus a chance to adapt to the presence of the vaccines and make evolutionary changes to preserve its existence.

[00:04:15] Making those mutations is what produces the virus variants that researchers are concerned about, some of which may make the virus more transmissible or more deadly and some of which allow the virus to cheat around the immunity conferred by vaccination and make people sick. Variants have already emerged in countries around the globe, and in some places they are making the local experience of the pandemic worse than it would otherwise be.

[00:04:47] In Brazil, for instance, the city of Manaus has been experiencing a devastating outbreak this spring. That is its second outbreak. The virus moved through there in the spring 2020, a year ago, and the reason it was not immune the second time may be explained by a virus variant that is just different enough to evade the protection conferred by having been infected.

[00:05:15] We talked two weeks ago about the ethical challenge of vaccine equity, about how vaccines are becoming something the rich parts of the world are hoarding and not sharing with the rest. That makes virus variants an equity issue, also, when we allow vaccines to take longer to reach parts of the world. We put those parts of the world at risk for mutated viral strains.

[00:05:42] We should also remain aware of other places where the virus can find a home in which to mutate, that is in animals. It's taken for granted now that the virus behind COVID, SARS-coV-2, originated in bats and spilled over from the animal world into the human world to make us sick.

[00:06:07] But now it is clear that SARS-coV-2 can also spill back into the animal world. Among other animals, it has shown it can infect minks. All across Europe and in the United States, millions of minks on farms that grow the animals for fur have been killed to keep the virus from moving into the farms and infecting them. And now mink in the wild have shown they can pick up the infection too.

[00:06:36] At the moment, there is nowhere in the world that performs enough regularly scheduled genetic sequencing to be able to predict where variants will emerge in people or in animals. That is one of the topics that will be a possible story going forward. What is happening with variants, whether countries can deploy enough testing to spot them and understand them as they emerge, and crucially, whether vaccine manufacturers will be able to develop booster shots that are tuned to new variants, if those variants are not blocked by the first round of vaccines.

[00:07:15] We should also think about what happens as vaccines get deployed around the world at unequal rates, and some societies are able to return to almost normal, while others are still waiting for their shots.

[00:07:29] Several countries and also businesses such as airlines are now developing vaccine passports that will prove that someone has been vaccinated and thus is entitled to free movement.

[00:07:43] Israel already has what it calls a green passport. China and Japan are working on their own versions. The European Union is developing digital green certificates. The

African Union is doing similar, and in the United States, political strife is rising over whether a vaccine passport will be acceptable.

[00:08:06] Vaccine passports seem inevitable, and yet many ethicists are saying they must be worked out very carefully. Many of you who live in the global south or travel there will be familiar with the international yellow card issued by the World Health Organization, which attests to vaccination against yellow fever. I myself have had one for almost 20 years.

[00:08:31] But the vaccine passports being discussed now for COVID are not paper cards like the yellow card. They are digital, and that immediately raises privacy concerns and also concerns about equity and access. Almost everyone in the world now has some kind of mobile phone, but not everyone has a smartphone, yet those are the basis of the digital community passports being developed now.

[00:08:59] We should not want to create a world in which the right to movement is restricted to affluent people who can afford both the shots and the devices to prove the existence of the shots. Whether and how a vaccine passport gets developed is an important question for our coverage going forward. And then, of course, we'll also need to deal with whether vaccine passports are being counterfeited and what the existence of counterfeits means for global security.

[00:09:32] Finally, an important question to talk about with regard to ending the pandemic is whether children will be vaccinated. You all know that the vaccines were not developed for children, but right from the start, there have been concerns that COVID poses some unique dangers to children. That realization began with a small group of kids who fell ill last year in England with fevers, rashes and swollen hands and feet, a cluster of symptoms that came to be called multi-system inflammatories syndrome in children -- MISC.

[00:10:10] Several of those children went into shock, one died, and a year later, it's still not clear how common this COVID-related illness is. But it is clear that children play a role in circulating the virus in society, as we all do, and it is becoming clear that even if they do not get very sick, children could provide a space for the virus to mutate.

[00:10:34] So vaccinating children is likely to be the next frontier and one of the last big policy questions to be decided and as we move into the next stages of the pandemic. So, we've spent the past four weeks talking and thinking about the role of vaccines and vaccination in ending the COVID pandemic, but there are some thoughts I want to leave you with as we wrap up.

[00:11:01] The first is that all of our societies will have to confront that vaccination alone won't get us out of this crisis. Globally, we're going to have to confront that COVID-19 will probably stay around in some form. And thus we're going to have to work harder on diagnostics to detect the virus quickly and cheaply, and treatment to handle the virus' most severe cases. So we never again face the kind of death toll we have already endured.

[00:11:33] Diagnostics and treatments kind of fell behind the vaccine and priority, but now that we have the vaccine, we're going to have to turn to tests and treatments as important components of living life in the world. After COVID, they will have to be not just achieved, but affordable. We'll have to ask the same questions about pricing and hoarding and global equity that we asked for the vaccine.

[00:12:00] Finally, we're going to have to ask as a global community what we're going to do to make sure this goes better next time. COVID showed us the pandemics can happen. We have no reason not to believe another one will come down the road. This pandemic poses a severe challenge to the international community, supply chains, to political cooperation, to transparency. It seems pretty clear that if we're not going to make the same mistakes the next time, some new or additional form of global governance or agreement is necessary.

[00:12:41] In the last days of March, the World Health Organization put forward a possible solution and proposed a new international treaty for pandemic preparedness and response that would commit world nations to working against pandemics nationally, regionally and globally.

[00:13:02] Such a treaty would give the WHO the kind of enforcement, power and political muscle it has lacked thus far. In a sign that countries are thinking seriously about this, the leaders of 20 nations cosigned the proposal, including not only Germany, France and the United Kingdom, but Kenya and Rwanda, Korea and Indonesia, Ukraine and Serbia and Chile. Notably, several nations were missing from that initial list. They included China, Russia and the United States.

[00:13:42] So that's a lot to look forward to. How will variants emerge? What new measures can we put in place to stop further spread? What hiding places will this virus find and what systems can we create to detect it there? Will we ever be done vaccinating? And what will our lives look like on the far side of the vaccination campaign? These are the questions that will be important moving forward, we hope we've given you some space to think about them and some tools and resources to help you develop the stories you are going to do.

[00:14:19] We can't wait to see what you come up with, and after this course is over, we hope you'll stay in touch and keep supporting each other through our Facebook group. Thanks for joining us. And as I always tell you, stay safe.