Speaker 1: Welcome to Conversations on Healthcare. This week we welcome Dr. Michael Osterholm, renowned pandemic expert and director of the Center for Infectious Disease Research and Policy at the University of Minnesota. Now here are your hosts, Mark Masselli and Margaret Flinter.

Mark: The clock is ticking as President Biden prepares to officially end the COVID Public Health Emergency, and our guest has been in meetings at the White House in recent days to sort [00:00:30] out what this will mean in real terms, and you're about to hear his answers.

Margaret: Michael Osterholm earned his PhD from the University of Minnesota, where he now leads the Center for Infectious Disease Research and Policy.

Mark: Michael, welcome back to Conversations on Healthcare.

Michael: Thank you. Good to be with you.

Mark: Yeah, it's good to see you. And as you know, you served on President Biden's COVID Advisory Board, and the administration has really made a big decision to end the Public Health Emergency, probably about [00:01:00] three months out. And your White House meeting included a focus in on testing, and we know you think ending the Public Health Emergency is troublesome. What has been your advice to the president's team?

Michael: Mark, I think one of the things that's important to understand is there's a whole series of different actions that have been taken over the course of the pandemic, to either enhance our public health response or make resources available. So it's not just the Public Health Emergency, but there's actually a federal emergency. [00:01:30] There's the PREP Act, there was actually the Stafford Act, and even FDA had its own authorities on emergency use of various drugs and vaccines. And so all of these are somewhat overlapping, and I think what we're talking about is the Public Health Emergency going away in May. And actually that one may not be as onerous as many people think in terms of what it means.

The one that actually I think has attracted a lot of attention has been the one that we may be taking a number of people off [00:02:00] the Medicaid rolls that were kept on during the pandemic. As you know, Medicaid's operations go through and continuously check for eligibility for people to be on Medicaid, and if they shouldn't be, then they're moved off. And there's been wide-ranging estimates how many people have stayed on through the pandemic that shouldn't be on, that will fall off. The point about that one though is that the omnibus bill that was passed in December already de-linked those two before the Public Health Emergency [00:02:30] action were even to be taken. So this is not a new action by the Public Health Emergency.

If you look at the tools we have, the antigen test and so forth, the big challenge there really is not so much about the emergency, but it's about whether Congress will continue to fund making these available. Remember that at this point companies are not just going to make a lot of antigen tests that's not already purchased, because of the

outdating of these and the loss that they would have of revenue if they don't make [00:03:00] it. So we're trying to still work it out. But right now the U.S. [inaudible 00:03:03] Service program for testing still has a substantial amount of antigen testing there, but it'll eventually run out, and whether Congress comes back and deals with that or not, that's a challenge.

Same thing is true with vaccines. Right now we have quite a bit of vaccine, but we'll need resources in the future. So the emergency in and of itself doesn't change that. If Congress is not going to support purchasing more, then it will go to the private sector. The private sector [00:03:30] then will have its choice of how they want to sell it. We've already heard companies like Pfizer will charge up to $130 a dose. On the other hand, healthcare coverage for about 92% of the country will require as part of standard benefits that you have to get the vaccine and pay for it as an insurance issue. So we'll have about 8% of the public that won't be eligible.

And then the final piece is the drugs, the Paxlovid. Right now we have lots of Paxlovid. We should be fine [00:04:00] for some time dispensing that. The challenge again is we need to develop new and better drug. We need to continue to fill in behind Paxlovid. Comes back to Congress so they appropriate the money. So I think that this May date for relieving the Public Health Emergency is not quite what people think, as if it's a light switch on and off. There's a lot of other complexities among [inaudible 00:04:22] the FDA authorities over emergency use authorization will stay at FDA, all the issues around the PREP Act we've dealt with will [00:04:30] stay, all the Stafford Act and how FEMA funds and doesn't fund will stay. So it really is more limited impact than I think most people realize.

Mark: Margaret, I think Michael hits the right note of concern that we have is certainly on the Medicaid redetermination, which could be 10 or 15 million people, and also that 8% of the population for whom many of those who are listening today are part of a network that serves that population. I think both of those are big concerns for us.

Michael: [00:05:00] And they are for me too. And they are for me.

Margaret: Yeah. I think you're absolutely right. And the good news is we've seen it coming and there's plans in place, but we know that that 8%, as you say, is concentrated in community health centers and in public health clinics, so we need to have all the resources we've had around Paxlovid, around vaccines, around testing, to care for people. And as always, Michael, I really appreciate the broad 360 view you take of these issues when responding [00:05:30] to questions.

But I was thinking, listening to one of the World Health Organization leaders, how much words matter, and the comment was that the acute phase of the pandemic is ending. Now, maybe everybody doesn't listen to these the same way. I think, if acute is ending, then it's not like we're in end of pandemic, we're in a chronic endemic phase. I think most experts like yourself hedge their bets on predicting COVID's [00:06:00] future path. What does it mean in practical terms when the World Health Organization says the acute phase is ending?

Michael: Margaret, let me just say that I found myself in the very uncomfortable position several months ago in a New York Times story, several lines below the president having declared the pandemic is over, and me saying it's not. You never want to be in that position. It's not a good place to be. But what I did do is reinforce that what the president was saying is that, for most of the public, the pandemic is over. They see it as such. [00:06:30] And so that's a concern. But if you look, for the last 10 months, we have been somewhere between 380, often 400 to 550 deaths a day, and it just hasn't changed. Look at it today, we're at 460 deaths again today. And so we've been in this High Plains plateau of cases for the past year. If you want to get some sense of the importance of that number, just remember that the number one cause of cancer deaths every day in this country is lung cancer, and [00:07:00] that's about 350 a day. So this is still a very significant impact issue, and yet the public is done with it.

When we look at the fact that we have clear and compelling data, in fact the CDC has just released new data this week, supporting how effective the bivalent vaccine is among those over age 65 in preventing serious illness, hospitalizations, and deaths. You have a 14 times higher risk of dying from COVID if you're not vaccinated versus having the bivalent, and even [00:07:30] five times higher risk if you've been vaccinated but didn't get the bivalent. And yet only 40% of the U.S. population over age 65 have gotten the bivalent booster. That is different than getting the vaccine to the people. It's getting that last inch, getting the vaccine in the arm. And so I think we have a huge challenge yet, to say that we're not at the level we might want to be, and we surely don't know what the virus is going to throw at us next. And so I think from that standpoint, I would like [00:08:00] to think maybe we're in close to an end of a pandemic kind of time, but I don't think that we can say that at all yet.

Mark: The numbers are so discouraging, and [inaudible 00:08:10] asking me a question about the public health community, and whether or not they're tone deaf in terms of the type of information we need to provide people, or they have been so politicalized that Americans have turned a deaf ear to them, and all of that is problematic. But I do want to [00:08:30] talk about, speaking of ears, you and others have the administration's ears, and publicly warned a few months ago that we've not done enough to prepare for the next pandemic. And your piece in the New York Times even called for mandating a national indoor air quality standard. Margaret, we had maybe six months ago Dr. Joseph Allen from Harvard on, who's really the guru in this area, somebody we really enjoyed having a conversation, really talking about the importance, so Michael, I'm so [00:09:00] glad you stressed that.

There's a new chief of staff at the White House, somebody you're probably familiar with to President Biden, Jeff Zients. If there was anybody who would have a receptive ear about making the case for these air quality standards, I think it would be Jeff Zients, but I know there are a lot of priorities. But what's your take on the message you have for the chief of staff, or [00:09:30] is he pretty well informed at this point? Talk a little bit about this air quality, because I do think, in this whole notion of moving people back to work, this air quality standard is really going to be high on their mind.

Michael: Mark, I think this is a incredibly important point, not just for now, but for moving to the future. And let me just say I have had the wonderful gift of having Ron Klain as a dear friend, and Jeff, and having worked closely with Jeff [00:10:00] on the days of the transition team, and I think very highly of both of them. Very highly.

Let me just put into context what we're talking about. Most people might think that we want to talk about indoor air standards for the current pandemic, and I think we're beyond that. What I mean by that is, any real efforts to deal with indoor air and changing and improving ventilation is an infrastructure concept, and we've already learned just how far behind we are in infrastructure in this country [00:10:30] in roads, bridges, et cetera. Indoor air is one of them that has not really been addressed. And what we need to do is address it for the future. Let me just put this in context. I know people never want to hear this, and they surely might label me as an alarmist, but what we're doing right now with this pandemic, this is not the big one. This isn't. The big one is a coronavirus pandemic that has the transmission potential of SARS-CoV-2, very high, and has the ability to kill like MERS and SARS, where anywhere [00:11:00] from 15% to 35% of the people died, not less than 1%.

Or think about again, influenza, which we're going to have more influenza pandemic. Remember in 1918, influenza killed 100 million people in two years from this country, at a time when the population was one fourth what it is today. And modern medicine wouldn't necessarily save a lot of these people, as they died acutely with this fulminating illness. And so we have to understand that, as bad as this has been, we have to better prepared for the future. And [00:11:30] so clearly air quality and how we can reduce the transmission by having better air exchanges, abilities to inactivate viruses for example in the air, is an investment that is so, so important.

This is one of those ones... When I was a young kid growing up, there was an old commercial on TV, an oil FRAM commercial, that said, "You can pay me now or you pay me later." And we're going to experience that. So we have to keep pushing this. And I know the administration is obviously very sensitive [00:12:00] to the infrastructure. They have been. But now how, do we help buildings be healthier? How do we help transportation be healthier that way? And we have a lot of work yet to do around that.

Margaret: We couldn't agree with you more. And I think even in the setting of healthcare from the perspective of primary care, the standards and the requirements for facilities, they're just not strong enough. You have a negative air pressure room in a facility. What good does that do if you end up in the wrong room and find out what the patient's issues are? So thank you so much for shedding [00:12:30] light on that.

I want to talk to an issue that's part promising and part concerning. Promising, a new interferon drug in development that is reported to cut in half a COVID patient's odds of hospitalization. But you've already sounded the alarm, and you noted this I think a few minutes ago, that we're not even getting Paxlovid to enough patients who need it, and still have, as you said, somewhere around 450 Americans dying each day from COVID. So even [00:13:00] if the FDA approves new drug treatments, we're going to have this issue of making sure they get to the patients who need them. And I guess my question to you

is, from talking to all of your colleagues, is it prescribers not really being serious about the recommendation and the prescribing? Or is it patients saying, "No, don't believe it, don't want it"? What are you hearing?

Michael: Margaret, again, you've framed a very, very important issue, not just for this pandemic, but going forward. [00:13:30] Let me use an analogy that... I did a podcast on my weekly podcast back in November of 2020 as the vaccines were beginning to roll out. And the title of the podcast was The Last Mile, The Last Inch. The last mile was actually getting, in this case, vaccines. You could just substitute the word drug. And then the last inch was getting it in their arm, or in this case, how do you get the consumer to actually take the drug?

Let's [00:14:00] take the big picture first. I'm extremely concerned that we are now watching investments in any kind of aspects somehow related to the pandemic drying up quickly. People want to move on. It's as much a psychological issue as an economic issue. And we're watching companies right now that have potentially very, very important new products to bring to market that are shelving them, because there's no financial model for them. If the government doesn't buy it and give you a guaranteed [00:14:30] price on it, financially it just isn't worth their while to do it, because you have to wait till the next pandemic, or will the consumer use it? We're missing golden opportunities there to bring forward new technologies, and we need to have that and we don't. And that's not just true in the U.S., that's around the world.

The second thing is, even if you have that technology, the question is, how does it get used? Just as you pointed out. The Paxlovid experience has been frankly a disaster from my perspective. Look at the VA study that showed only 4% [00:15:00] of eligible patients there were actually prescribed Paxlovid, when in fact they knew that they should get it. I was actually involved in a situation where several of my friends and colleagues who were VA patients who developed COVID, who had in fact all the risk factors for needing the drug, and who were within the timeframe of getting the drug, but were turned down. And it turned out that the VA had sent out a statement that was used by the nurse [00:15:30] line to say, "You only need Paxlovid if you're in the hospital and severely ill." Which is already way too late and you're not eligible any more. It was a mistake.

And we have seen so much misinformation. There's the information about Paxlovid rebounds. There's been several studies now that show rebounds are common, whether they're Paxlovid related or not. And so here we are now having this misinformation. You don't want to get this drug because you'll have a rebound with it. Well, that's not true. And so I think that we have challenges [00:16:00] about information systems to physicians, so that they can have a better sense of what they can do, and that data are clear and compelling. Paxlovid will reduce serious illness, hospitalizations, and deaths, and Paxlovid has even been able to demonstrate a reduction in long COVID development. So I think we have to go back and look at, how do we communicate this information? How does every practitioner out there know and understand?

And finally, I just have to tell you [inaudible 00:16:27] story that involved me that I thought was telling. So [00:16:30] I led a delegation last summer to Cuba, to look at their COVID vaccines. They actually have a unique technology, conjugated vaccine, that is really quite exciting. And so I have not yet had COVID, and I wear faithfully with my N95, but I contacted my primary care doctor's office and said, "Could I get a script for Paxlovid now? I won't take it unless I actually have a lateral flow positive test while I'm in Cuba." And they said, "No, we can't. But if you send [00:17:00] us a picture online of your test result while you're in Cuba, we'll email you a script." And I said, "That's going to do no good. There is no Paxlovid in Cuba." "That's all we can do."

I finally had to go through the healthcare system myself, knowing who I am, and actually was able to get through to the person who could say, "I'll write you one." But the average citizen would've been [inaudible 00:17:22] from getting that. And that's what we have to address. That's just wrong, and people have died unnecessarily because they're unable to get Paxlovid, [00:17:30] when they could have and should have gotten it.

Mark: As you know, you've been working on a roadmap for a better coronavirus. So important. I was just thinking over the last 20 years, SARS, MERS, COVID-19. I'm wondering, as you think about the vaccine, will we get a vaccine that prevents infection? Where do we stand on all of that? And maybe give us a preview of what we can expect from the report that you're about to release [00:18:00] soon.

Michael: Thank you, Mark. And in fact, yes, this report's coming out in just a little over two weeks, and it is a year long project which involved more than 60 of the world's leading experts in all aspects of coronaviruses, vaccines, immunology, et cetera. And this roadmap, like the one we did for influenza, is extremely detailed. It's over 70 pages long, and it gets down to measurable outcomes, when we should have achieved these outcomes, by [00:18:30] what date, and everything from something as simple as what is correlate of protection for a coronavirus vaccine, to what do we know or not know?

And what my concern is here, again, is when we look at funding, I don't see any major initiatives right now that have identified funds that will say, "This is going to take a while, but we got to stay on it." And even if the pandemic "goes away," it's not time to say we're done, because we don't know if we're going to have that big [00:19:00] one I just talked about a moment ago, where in fact it is a SARS, MERS, SARS-CoV-2 mixture that could be much worse than we have now.

And so I think this roadmap will be very instructive. It will provide us with granular detail about what needs to be done in sequence and how we do it. The challenge is going to be, who's going to support it? If you look at the federal government right now, the resources just aren't there. If you look at Europe, Asia, we just don't see it. So this is not the [00:19:30] time to have pandemic amnesia. This is the time to have pandemic planning front and center.

Mark: Michael, you've got the Gates Foundation, Rockefeller along with that, but what's the bread box or elephant size that's needed for this type of investment?

Michael: I think the challenge we have right now is, we're not really part of that other than just keeping track of it. We plan on being air traffic control to understand, just as we do again with influenza, who's investing what, when, and where, so that we know if we have underinvested [00:20:00] areas. The challenge is going to be likely in the billions of dollars ultimately, to bring a new vaccine like this to fruition. But the bottom line is that that billions could save trillions and trillions of dollars and many millions of lives. And so I think one of the things we've learned, if nothing else in this pandemic and both of you know this, I talked about this in my 2017 book Deadliest Enemy, that the cost of a pandemic is not just in [00:20:30] human lives, it's economic too. And when you look at the global economic crisis of the last several years and the inflation issues, this was all caused by the pandemic. And the one thing that added, of course, was the war that we've seen in Ukraine, but that has a late-comer and minimal.

Now, when you look at the cost globally, what this pandemic has done to us, and you look at what the investment could be to take that off the table, [00:21:00] talk about high quality insurance, this is it. And so we've got to help the world understand, don't let up now. Help us get the kind of vaccines, that next time that one of these viruses emerges, we will be able to act quickly, effectively, and then we cannot have just a vaccine that reduces severe illness, hospitalization, and death, but a vaccine that also prevents infection and transmission. Wow. What a gift to the world that would be.

Margaret: Right. And [00:21:30] I have to make the point as well that, as important as it is to have that vaccine on the shelves, there was a level of training, recruitment, deployment, of frontline staff to manage that vaccine train, the refrigeration chain, get it out to where people are, give the vaccines, that we can't let that workforce tone down their readiness and preparedness, because it was not easy to stand it up around the country, and we need to make sure we keep those skills really crisp.

Michael: I couldn't agree more, Margaret. And [00:22:00] I use the analogy, imagine if every year Major League Baseball teams fired everybody after the World Series, and then tried to go hire them again in March if they could. [inaudible 00:22:09]

Mark: You must be talking about the Brooklyn Nets. Sorry.

Michael: There you go. I'll leave that expertise to you, Mark.

Margaret: Yeah. Me as well, I don't do sports analogies. But Michael, we talked about using this time now wisely, the report, the implementation, [00:22:30] being ready. I'm just not sure we're going to have a long lead time. There's so much going on. And I wonder if you could just speak to this outbreak at a Spanish mink farm, and bird flu, that's proven to be so deadly in the past. You've just told us, do not take this for granted. What's the current status of that? I know people are overwhelmed sometime with this news, but it's important for people to understand. So current status of that threat, and what can people do to protect ourselves?

Michael: Let me just take a step back and [00:23:00] tell you, I've been dealing with this H5N1 issue since 1997 and its emergence in Hong Kong, and I've been very involved with it.

I've been in Indonesia, Thailand, and Vietnam working on H5N1. I was on the National Science Advisory Board in 2012 when researchers brought to the board the fact that we were probably only one mutation away from H5N1 becoming the next pandemic virus. I was part of a major effort to lead an investigation [00:23:30] in 2015 with the major bird die-off in North America. So I've been eating, sleeping, and living H5N1 literally since 1997.

Having said that, this virus has continued to make us concerned and then make us unconcerned. And when I say make us unconcerned, I don't mean it's gone away, but every day we are not on the precipice of a new pandemic. When you look at what's happened, there's been 868 cases [00:24:00] of confirmed H5N1 globally since basically the 1997 time period. Of those, over half have died. It's a very, very serious disease. But if you look at it, countries like Indonesia and Egypt had major increases in cases over the course of this time period, most of them five to seven years ago. At one time we had over 105 cases in a year in the Nile River Valley in Egypt. Everybody said, "It's ready to go. It's going to happen."

And so [00:24:30] I think we have to be very careful here. I've seen a lot of hype, for lack of a better way to describe it, over the past several weeks around H5N1, because of this mink farm infection in Spain. And I don't want to suggest that that's not important, or all of the other animals that are now becoming infected outside of avian species. And surely we've had another bad year here in North America with 58 million birds dying or being culled out this year, versus what we saw in 2015 [00:25:00] with 52 million.

And so I want to add though a sense of, we've been here before with this virus multiple times, and for some reason it has not just made the jump where it could be transmitted human to human. That doesn't mean it couldn't happen tomorrow, but like some, I don't think it means it's absolutely going to happen tomorrow. And I think we have to be careful. But it's a reminder that it could happen tomorrow. And therefore all of this work we're talking about that needs to be done really is [00:25:30] very, very timely. And we could have another 1918-like influenza pandemic that would be so much more severe than anything we've experienced with this current pandemic.

Mark: Those lethality numbers are so high, 46% or whatever I think I read. I wonder how it really spreads, what the point is in terms of the spread on that. But I do want hear from you on why vaccine development for avian flu is more challenging than what we've seen [00:26:00] with the development of the mRNA vaccines for COVID. Maybe you could enlighten us on that particular.

Michael: Yeah. If you look at the human vaccines, let's [inaudible 00:26:10] and then I'll talk about the animal vaccines for a moment. When you look at human vaccines, just take a step back and go to 2009. Remember when we were already living in a world with H1N1 as seasonal flu, and then along comes this new pandemic H1N1 from Mexico. And we learned very quickly that the [00:26:30] old vaccine that we currently were using seasonally had virtually no protection against the new H1N1, even though they're the very same. They come from that same H-N combination. And one of the challenges we have is that, even if we make H5N1 vaccines now, which there's not much appetite

surely to do that or stockpile them, that we'd have no guarantee that when H5N1 emerged that in fact the vaccines we had [00:27:00] already made would be protective against it. They might provide some protection, but they won't necessarily provide that much. And 2009 makes that point.

I think the other thing is that, when you have a vaccine like this, it has an outdating problem where it's only good for so long, and how long can you keep it? And so buying five, ten million doses of the vaccine may seem like a wise idea for at least the early part of the pandemic, [00:27:30] but five to ten million doesn't get you very far in a population of eight billion. And the cost of trying to supply a much larger volume of vaccine is so, so high that I don't think it's going to be done.

So for me, the real answer is, how can you scale up quickly a scalable vaccine program that, as Margaret you talked about, getting it out there and having that infrastructure in place, allows you to do that? And that's not necessarily easy to do, because remember right now we primarily grow all [00:28:00] of our influenza vaccine in eggs, chicken eggs, which one of the things we have to be worried about [inaudible 00:28:06] we have those chickens around, or will they too be, if there's an avian influenza situation, what'll happen to them? So that's a concern.

The second issue around the birds. We've heard a lot about vaccination of birds themselves, particularly the poultry in many parts of the world, but these vaccines are very, very difficult. Unlike standard vaccines we use in poultry production today, such [00:28:30] as Newcastle and so forth, they're stable vaccines that can be given in water or in the air. Here, basically you have to individually inoculate each bird with an unstable vaccine that needs to likely be changed every year. And there are 9 billion broilers, the chickens we eat, produced in the United States every year. You know what that means, to try to hand-vaccinate each one of those? And so it's not as practical as some of the recent media reports suggest, let's just vaccinate the animals. And so again, another challenge [00:29:00] that we have to deal with, but it's one that, as I said earlier, pay me now or pay me later.

Mark: Michael, let me just get one last question in before we close, about masks, because there've been some flawed studies about a mask, and I want to know the efficacy of wearing a KN95 or a respirator, and then maybe just tell us, is the 15 minute rule still something that's operative? Take the mask first.

Michael: I just have to say, and [00:29:30] you may want to cut this, I hope you don't, but you know what? One of the reasons I love coming on this program is, I never deal with two more informed interviewers than the two of you. You are always current, comprehensive, and authoritative. And in this case, you're absolutely right about the issue around respiratory protection. Studies that have recently come out, including the Cochrane reviews, are seriously flawed in their understanding of how to evaluate respiratory protection. Suffice it to say, for in the occupational area, there is [00:30:00] no question that we've already answered the question about, do you need to have that fit and filtration combination to keep out aerosols? And we've learned, unfortunately

through this pandemic, the absolute importance of aerosol transmission with this virus. So yes, you do need to have that.

And one of the ideals is to have everybody face fitted, but we don't even need to do that. We can get quite good protection with fit. Remember, procedure masks leak all over [00:30:30] because there's nothing that's tight around the face. Also, again, to breathe air in a tight environment like that, you have to have a material that air can move through relatively easily. Why does that work with an N95? Because they have an electrostatic charge in the material, so that air can move and the virus gets trapped, not because it's plugged up or stopped, but because it gets trapped by the electrostatic charge. If you put any other kind of mask on, that won't work.

And so I think it's so important to [00:31:00] understand that a lot of people are wearing what they think is adequate respiratory protection and procedure mask, cloth mask, and they're just simply not. And I find it really very challenging, because they think they're doing the right thing, and yet they're still just as vulnerable.

The 15 minute issue, Mark, that worked earlier with the previous strains or variants of the virus, but as we've got these much more highly infectious variants, what we've just seen in China in the last two months has been [00:31:30] transmission that puts us on the upper end of measles transmission. That is aerosol, aerosol, aerosol. And it's clear that we have to have that kind of respiratory protection, or it's basically more cosmetic what you're doing.

Margaret: Michael, you just gave us a whole lot to think about, and perhaps get you back for another visits soon with those last comments.

Michael: Thank you.

Margaret: But we want to thank you so much for this return visit to our program. We always appreciate your insights and your information, and thank you to our audience [00:32:00] for being here. There's more online about Conversations on Healthcare, including a way to sign up for email updates. The web address is chcradio.com. Michael, thank you so much for your incredibly important work and being with us today again.

Michael: Thank you.

Mark: Absolutely.