

## Module 1 Interview - Michael Osterholm

So welcome to our first round of guest speaker videos in our course Journalism in a pandemic: Covering COVID-19 now and in the future. With me is Dr. Michael T. Osterholm of the University of Minnesota. We try to keep these videos to about 10 minutes. And that's a problem, because if I recited Dr. Osterholm full resumé, it would take up the whole video. So suffice it to say, he is a regents professor, holds an endowed chair, founded the Center for Infectious Disease Research and Policy, has been an adviser to governments and is the author of two popular books, *Living Terrors* and *Deadliest Enemy* about killer germs. Mike, thanks for joining this course.

Well, thank you very much for that kind introduction. There was one piece you left out, over the course of the years, you've taught me a lot about how to deal with the media. So if a journalist on here are challenging question or wondering.

You say I tried my best to learn from them. That's a super kind, thank you. So, for as long as I have known you and been quoting you, you have been warning that a pandemic was on the way and the United States and the world were not preparing adequately. And I'm wondering how it feels now to see that prediction come true.

Well, you know, I, at this point, I take no comfort at all having understood that this was coming. I think the thing that probably is most difficult for me right now is knowing what's left to come. And, you know, we are in the second inning maybe of a new game. The number of cases that are going to continue to occur in order for us to achieve what we might think of as herd immunity or enough people having been infected with hopefully the kind of immunity that will prevent re-infection over an extended period of time. Is a big, big gap right now. We may have 5 to 15 percent infection rates here in the United States. And we're going to have to get at least a 60 or 70 percent. Now, will a vaccine come along and save us? You know, I hope so. But hope is not a strategy. And I think that we have to be very careful about this, because there are some unique features of the Corona virus infection that could make it very difficult to, in fact, achieve a vaccine with long term protection and safety.

I worry a little bit about an expectation that it's going to happen overnight. It's not going to for the next eight to 10 months at a minimum. We're going to be, I think, in this fight all other than just our public health issues and our medical care. So I think that's the part of me that still is playing out, that part of that scenario we've been predicting that has not yet been realized. But it will be.

So talk to us a little bit more, if you don't mind, about how this emergency is going to roll out, and especially, as you just said, how long this might last, I have heard predictions that the earliest we could get a vaccine would be 18 months from now.

Yeah, you know, all of this in a sense as a guesstimate. In fact, our sanctuary has just released a report that includes some of the best minds out there in this prediction business. Marc Lipsitch from Harvard. John Barry, the well-known historian of the 1918 influenza pandemic. We've tried to do is lay out a series of scenarios. He said somehow viral gravity is going to take this virus to a point where it will continue to infect people until it does reach the sense of herd immunity, if we can achieve that.

And so the question is, is our leekie virus meaning no matter how much you try to contain it, it's going to leak out. But look what's happened, even in Asia, in countries that are declared victory and having eliminated it, I think are one day going to regret having declared victory too early. And so in that regard, how might it roll out? And we have to admit we don't know. You know, it surely followed the path of an influenza pandemic, specifically, as you might say, even 1918, where, you know, there was a spring set of outbreaks that occurred throughout the world, primarily in North America, where cities like New York and Chicago were hit hard. But yet cities like Minneapolis, Detroit, Baltimore, Boston and Philadelphia were not at all. And then, of course, the fall wave came.

So could we be seeing that kind of replay? Surely we could. And could have a waning of activity right now through the summer and then to have a big wave come back some time, about six months after the original introduction, we surely saw that in 2009.

For those who covered that pandemic for a number, while it was a milder pandemic overall, it emerged in late March, April, we saw a minor peak, you might say, in North America in May. And then it just appeared. And then all of a sudden in September of along comes the cases again peaking out in early October at a time when it was still very warm in the United States. So I think that we have to at least consider that model, which if that were a case or a lot of people left that would become infected with the virus to create a faulty. The other scenarios we play out include one where instead of a big peak, you see these constant kind of foothill, likely go up and down, up and down, geographically dispersed by time. And that just continues so we get closer to that herd immunity or it could just be a kind of a costly slow burn from here on out.

Well, we don't see a big flaming event because hopefully at least some of the distancing issues that we've put into place take place. But we have to acknowledge we just don't know. The one thing I know is this virus is not going to stop being transmitted and the will of the people have nothing to do with the gravity of the virus.

So a moment ago, you referenced the early experience of some countries in Asia and as we were talking about before we started taping, there are journalists taking this course from all over the globe. On the day that we're speaking, there are more than 5000 people registered.

And so I'm curious, as you look at the past four months, which is the age of this pandemic outside China. Are there any governments or jurisdictions that you think have done a particularly good job of handling this emergency, or is there anything in particular, any particular model to copy?

You know, I think at this point we surely can point out, some might say midterm successes. But I come back to the point that, you know, this was not going to be over till it's over.

And countries that have the advantage of having some landlocked kind of equality such as islands or places like Singapore surely have, I think demonstrated that you can impact them.

But Singapore has also demonstrated a country that basically did a remarkable job early on in one blind spot. And that was the fact that the migrant population would be a very important source of virus in this community.

Other areas like China, for some of what we call by far the most overreaching kind of population movement restrictions that we've ever seen in modern history have software beaten down what was a horrible system in Wuhan. And the big problem in general, but we continue to see cases there throughout China.

Something's going on the Guangdong province, we see something off the northeast border with Russia.

I do not understand in China how you can have 100 cases a day of asymptomatic infection reported and only two chronic cases. This doesn't make sense. In China now is getting back in to the close contact setting that is avoided, and has been for months and the Hubei province area. I don't think that chapter has been finally written yet.

Countries like New Zealand, which are country near and dear to my heart, will be New Zealand.

And I think that they have done a remarkable job of what they have done to be able to contain that island, but to declare that the virus eliminated, and to understand that tomorrow a newer individual infected could come in, there would be news. And that very well could turn it all over again.

And so I think that we have a lot of challenges. Let me just say that there is clearly evidence of early on. You can catch the virus with testing, with more extensive contact tracing. You probably can diminish it.

But I would suggest to you also that if we have a big event like this fall, it will completely overwhelm anything we're doing with they're. To me, it would be almost the equivalent kind of plan for flowers in a forest by Burkean. You know, it's not going to work.

And so that's the thing. We fear what will happen in that regard in many parts of the world. We still have a lot to understand why. You know, we talked about countries like Italy, but we talk about Lombardy, in Milan, we didn't see the same activity in southern Italy. Same thing with the United States. Why was New York so different from some other areas?

And we have a lot left to learn here. But I just know one thing and I can say with certainty, and that is that the virus will continue fighting for humans and not able to transport the part of the herd immunity or use for natural infection or vaccine.

So you are easily the most prominent epidemiologist in the United States working outside the United States government, which we should probably be grateful for because the epidemiologists within the US government have been more silent than I think some people would have expected.

So I'm really curious whether there's anything you could say about what roles, and not just in the US, but but globally, what role epidemiologists ought to be playing in the pandemic response and to what degree they can be spokespeople for understanding, helping the public understand the complexities.

Well, you and I both understand, obviously, the importance of CDC and their work in public health in general.

Let me just say right now, I think the single most important Four-Letter Word in this entire episode is data. Our data. We need data. And public health is where data come from.

Whether we're looking at incidents of disease in communities, how we're responding to outbreaks, what happens when we exercise certain control measures. Those are the data that we need. And I think the absence of the CDC and public health in general are going to major understanding of what I consider to be of public health lacking response. And so from that standpoint, I would very much urge that any governments in the world, I don't care what country you're in, you have to involve your public health as an analogy.

CDC, you have a federal lot of experience in the area of pandemic preparedness and planning. They know how to work up outbreaks and understand what's going on and present that to the public in a meaningful way. And so that's, I think, the biggest regret that I have in terms of public health response.

One of the challenges also that we learned very, very much in the public health arena is that we don't have all the answers. And our job is to tell the truth.

And the truth is when we know something, tell it and explain why you know it. And if you don't know it, say you don't know it and explain how you're going to try to get the information to really respond to it. And I think that's a hallmark of public health. It's about trust and credibility. You know, you can't get people to do a lot of things, sort of imprisonment, if, in fact, that's what it's going to take.

Public health has done this successfully for many, many years by convincing the public. This is the right course of action and this is why. And I think that that kind of approach right now we need. And I would just add one last thing. I know there are certain theories of the public health, but I very much fear the future days we haven't had. I think they're going to get a lot worse, not better.

And that's going to take the kind of leadership that to me is much more akin to what FDR did with the fireside chats with Churchill than a World War II where the brutal truth is told, but it's told in a compassionate, empathetic way and are told and also our sense of we're going to get through this, we're going to basically come out the other end.

But how we come out the other end all depends on what we do now. So we'll need to rally the other. You know, I've said from the very beginning recently we've heard debates about red and blue states, responses to the virus.

By the time we're all done, there won't be red and blue states. All covered at all. I don't care if you're in a community and you're seeing people or you're in a metropolitan area of 50 million people. This was going to be a great equalizer. And that's also a public health understands that we're we're in a position to help provide the data to make sure people understand the significance of the virus, no matter where you live or no matter what we do.

Switch for a moment, from human public health to to public health more broadly, since early in your career, I think you've championed the concept that most people know as one health, which is this idea that the human and the animal worlds and that's wild animals are domesticated, animals are food. Animals should all be considered as one realm with organisms and pathogens that cross back and forth. And we clearly see that COVID-19, the novel coronavirus is a one health problem. It's a virus that jumped from wildlife.

So I'm really curious what your thoughts are about, what are we not doing? What sort of surveillance should we be doing to catch events like that when viruses, pathogens leap into the human species, things that we aren't doing yet?

Well, you know, back in the 1860s, a very famous event occurred, that set the table for modern public health. That was when John Snow, physician in London, understood that power in France played largely by the water systems that were provided by private companies.

And then in some cases, even certain wells that had been put in place in parts of London. This was well before anyone, even with the bacteria, cars, cholera.

Many people thought of my mother. That order and the term for the apartment came out of an event where John Snow unable to convince people that they should stop drinking water out of one of the well.

So, went in the darkness of night and basically pulled the plug the handle off the well, although the story is embellished, the city had started to understand him and agree. The bottom line was it was all about taking proactive action to prevent something rather than having to respond to it. And I think what you read out here with one help is absolutely critical and understanding.

You know, wouldn't it be better if we could figure out how the viruses effect very terrified move in all the world, including the animal population to a human and what they cause? We don't have to be reminded one more time certain that species are very important in providing us with the kind of exotic viruses that truly are big challenges, whether it's Ebola or NEPA or in this case, even the coronavirus.

And so we need a much, much more comprehensive response to this. We largely paid lip service to this part of our defense. We pay a lot of servers to military defense and understandably, borders are important. The micro-organism deals every understanding of why borders are even much more of horrors and threatened by microbes. Today there are somewhere in the world more they can be everywhere. And so we have to, as a public health community, say, OK, what do we do to pull the popular vote?

Understand what was going on in these animal postulates. Understanding the wet markets in Asia are going to be a constant gasoline fire combination.

And what do we do wrong? Understanding that when we detect certain viruses like this, we need to have in preparation at least on a shelf vaccine platform that, for example, could be immediately brought out for coronaviruses and might very well be successful. And we just haven't done that. We we pay lip service to public health. That benefit has been diminished in position and funding. We need to pay much more attention to one health.

One health is very important because so many diseases we deal with originate in the animal. And I mean, even to the extent that I worry now about people misinterpreting the data on pets and the coronavirus.

And maybe some that will recommend getting rid of all the pets we have based on some very limited data saying that pets can get infected. For many people in the world, pets are the big difference between a life of loneliness and a life of fulfillment. So it would be a challenge.

So I very much take your point about one health, and I can't say enough about how when we come out of this experience, we have to go back when visit these situations and and understand that we take a whole new looked at them because if we don't, they will be bad news. Martin Bernard Derb, your former Demming, doesn't mean it's the final act. As I said before, we're in the second inning of a 19 game with your particular reason.

But more importantly, in life in general, we're just getting started again in from the lead potentially to.

So I've never forgotten that a few years ago you told me to read a book called The China RX, which exposed the degree to which medications and medical supplies that are commonly used in the US and in Western Europe are actually made offshore and might be nationalized in an emergency in the countries where they're made, such as India and China. And that's turned out to be an accurate prediction.

So seeing the situation that the industrialized west has been in with personal protective equipment, PPE and some medications, do you have any thoughts about how when we come out on the far side of this, should manufacturing, food production, trade be reorganized in some way?

Yes. And again, you have been someone who's on the forefront of that issue also in terms of recognizing our vulnerability. I wrote a series of pieces back in 2005 that were published in the journal Internal Medicine, Nature and Foreign Affairs.

Each laying out why we were vulnerable to a pandemic and urging is imperative that we so desperately need to do. Well, I wish it was 2005 again. Frankly, we were a lot better prepared back then than we are today. Why is that? Well it's the same reason why in 2003, when SARS became a global challenge originating out of China, nobody talked about China's supply chain being at risk. Or if the world would suffer because of this, because frankly, it didn't have that many. I mean, what's happened between 2003 and today has been nothing short of remarkable. And how the private sector of the world has in order.

And there today manufacturing many of the critical supply chains for products that are absolutely essential for everyday life are now made in China.

We started a project about 18 months ago funded by the Walton Family Foundation, to look at this very issue to determine what we might do to help support drug shortage issues in many of the high income in some parts of the world.

And it turned out that we identified a hundred and fifty six drugs in the United States that can be defined as a critical lifesaving drug. Meaning you've got to have them right now. Here we are in the emergency room, in the ambulance ride during the intensive care unit. And if you don't have them, people die within hours.

When you look at those drugs, all hundred and fifty six were generic. Sixty two of them were already in sorted status before Wuhan ever happened. And over 85 percent were produced only outside the United States. China and India were major sources of production.

And just as you let into if your question is as this pandemic unfolded and the need for these drugs became even more apparent, both China and India started to unfold in the exports for the rest of the world. We are in a way of hurt right now. We're tracking drug that we know are going to be in short supply.

In fact, just in this country alone in the last month, we've been very soon started running out of drugs. There are desperately needed as intimate some.

You can't graciously put someone out. They can't be intubated because they're struggling to remove the tube. And wouldn't it be something if we are to run out of drugs before we ran out of general antibiotics? Eighty five percent of the antibiotics for years never fade from outside the US media and trying to play huge roles in that.

We're very vulnerable. We have a number of drugs or as I pointed out earlier, or even for a status that even now we are drug allocation status, meaning that this is a very tight, tight situation with three surge capacity increase. So I mean, you hear a very important issue we're going to have to go back and ask ourselves, is this the vulnerability we want to expose ourselves to, the fact that our own Defense Department, whole drug war supplies are vulnerable to the same thing that everyone else.

Imagine if the Department of Defense said we're going to outsource munitions production to China and oh by the way, we're going to work within what seems that the additional supplier. That's crazy. And so I think that you're going to see a lot of the private sector taking a step back after this pandemic run with court and asking ourselves, do we want to be vulnerable to these very isolated location supply chain issues? And what does redundancy mean? Are they cautious? But it may be a wise investment in the future. We have similar situations who were brought down. Economic cost of their standard and to the world is almost immeasurable.

And now people understand what do we do? You know, we buy insurance all the time. None of us want to use our insurance policy until we fully buy it because of the issue of something catastrophic that happened. And I think fear from a supply chain standpoint, particularly things like political drug of kinds of other things you mentioned like a personal protective equipment. We really are going to have to reevaluate how we do that and not only reevaluate it, but then plan for the future. How do we make sure that we don't choose who's just in time inventory that causes that great risk?

When you look at a major in 95 manufacturing in this country, you pretty far not all of those each month want a hospital in New York. It goes to 2 million a month.

That right here gives you a sense of how much capacity do we really have. If you wait for the last minute, you haven't stockpiled it. If you haven't planned, you're not going to have it. And I think that's going to be one of the lessons learned from this. And hopefully will make it better prepared for supporting.

So I'm glad that you mentioned those pieces that you wrote back in 2005. Because I have one of them in front of me. In 2005 in the journal Foreign Affairs. This is what you wrote.

You said some day after the next pandemic has come and gone. A commission, much like the 9/11 Commission, will be charged with determining how well government, business and public health leaders prepared the world for the catastrophe when they had clear warning. What will be the verdict? So Mike, what is your verdict?

Well, you know, let me consider myself an umpire right now and who all the people from around the world baseball stuff on the stands before it, and I'll try to call balls and strikes between now and the end of the game.

And then I can sit down afterwards and go back and give a critique on the pitching and the coaching. Right now, I'm going to stick with the fact that we have so much more work to do that I want everyone to do stuff without regard to nationality, leadership or whatever.

I think we're gonna have a lot of lessons to learn. And I hope that with time we have fewer new ones to have to learn as we go servers. But again, I hope for that. But I've said before, I hope is not a strategy. So we'll we'll have our work cut out.

The most important thing is that we do do that. We do go back. We don't just move on because to paying for retiring to keep talking about it. Because if not, we'll be doomed to repeat the same mistakes.

And I think that's a very important one. So.

Thank you for sharing your wisdom with this course. I'm really, really grateful that you joined us.

I should say one last thing that I just really want to get this in.

Thank you for doing this, because right now, informed citizenry is so important. All of it was ever a time that we need to get the right information out to the public that's not vetted or vented through certain megaphones. And journalists today are playing a critical role.

So, you know, all of you out her who are journalists, please you don't give up, don't stop, don't don't shy away from the hard questions. I don't care who they are.

Me, whoever asked the hard question becomes how we survive versus how we get through this, how we will one day go back. And after those, what we hear, it will be about what we knew, when we knew it, where we knew it, and who knew and generally who plays such a critical role in that.

I see this as an absolutely essential part doing fine. So thank you. However, you can do your job, please do.

Well, on behalf of all of our thousands of journalists, participants in this course, I will thank you for all of them.

Thanks. Thank you. Good day.