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Marianne O'Hare: Welcome to Conversations on Health Care. This week we welcome Dr. Maria Van Kerkhove, COVID-19 Technical Lead at the World Health Organization on the pandemic's latest threats.

Dr. Maria Van Kerkhove: We had members of China's CDC join our technical advisory group for virus evolution, where they presented an overview of what is circulating in the country. They participate in our technical groups. We've invited them to participate and they join. We just need a bit more information from them.

Marianne O'Hare: Factcheck.org' Lori Robertson checks in and we end with a bright idea. Now here are your hosts, Mark Masselli and Margaret Flinter.

Mark Masselli: January 20 is an ominous health anniversary. It's the date of the first official COVID case reported in the US. That milestone was three years ago and all of our lives have been upended since then. At the center of the storm is the World Health Organization. It's a United Nation's agency with a budget of over eight billion a year.

Margaret Flinter: Here to give us the latest details is Maria Van Kerkhove, she is the World Health Organization's technical lead for the COVID-19 response.

Mark Masselli: Welcome back to Conversations.

Dr. Maria Van Kerkhove: Happy New Year. Nice to be here.

Mark Masselli: We're glad you're back with us. We know WHO and others are tracking over 500 Omicron sub-lineages and that the XBB.1.5 is the one that's increasing the fastest in our country. You said it's the most transmissible subvariant that scientists have detected so far. Can you tell our audience what your current read on the situation is?

Dr. Maria Van Kerkhove: The subvariant that you mentioned this XBB.1.5 is one of more than 500 sub-lineages of Omicron that we're tracking. We, meaning WHO and the global community, this subvariant is actually a recombinant of two BA.2 sub-lineages. You would have heard of XBB, which caused some outbreaks in a few countries around the world. This is a further evolved variant of that one. It is detected in about 38 countries. But so far there are around 5000 sequences that are available globally. Most of the sequences are available from the US. There are some estimates of how much XBB.1.5 is circulating in the US.

US CDC has revised their estimates recently actually downward. It was around 40.5%. A few weeks ago, it went down to 27%. However, in the northeast part of the U.S., it's more than 70% of the sequences there. We have very little data to assess this subvariant, but all of these variants we look at several things. One is transmissibility, and this subvariant has a growth advantage. We look at transmissibility by growth advantage. This one has mutations in it that allow the virus to adhere to the cell and replicate very efficiently. But it also has properties of immune escape, which is similar to XBB, which is similar to all of the Omicron subvariants.

We do not have any data on severity yet and we don't -- we can't say if it's more or less severe compared to the other Omicron subvariants, but we don't have an indication that it's more severe. It doesn't have any of the mutations that are known to confer more severe disease. We recently published a risk assessment online, but I just want to put this in context. This is one of many sub-lineages that are circulating. I think the world is really kind of fascinated by each of these sub-lineages that are reported and detected. But for everyone that's out there what is important that they need to know is that all of these sub-lineages behave very similarly. They're incredibly transmissible. They have properties of immune escape, which means you will get reinfected.

We're in the fourth year of this pandemic, which I can't believe I'm even saying. People have been infected. They've been vaccinated, but there's been a certain amount of time from their last boost. Immunity over time wanes for infection, stays pretty robust for severe disease, but people will get reinfected. But our vaccines continue to work. What is important for the viewer out there is especially if you're in an at-risk group, make sure you're vaccinated. When was your last dose? Because it really matters, particularly if you're in a vulnerable group to get that boost four to six months after you've had your last dose. It's still out there.

I mean, to me, this just illustrates once again that the virus continues to evolve. It is not settled into a predictable pattern. We as a global community and scientists around the world need to remain vigilant to track and assess these. But everyone that's out there really just needs to know, what do I need to do to keep me and my family safe?

Margaret Flinter: Well, Dr. Van Kerkhove, I want to ask you a little bit about your thoughts on China's behavior throughout COVID. Of course, it's been somewhat troubling, but you spent time in China

early in the pandemic to get a good feel for how they were dealing with the outbreak. Now they've ended the COVID zero policy that really characterized their response. We're certainly reading of unofficial death estimates that are astounding. You've noted that they're not sharing sequencing or data on their experience. What's your assessment of what's really going on there?

Dr. Maria Van Kerkhove: You're right. I did spend some time there early on in the pandemic and I was really impressed by the level of information, the level of data, the level of analytics that they are capable of at sub national levels. Right now they're going through a massive wave of Omicron, lifting of those measures. This virus as transmissible as it is, is passing through the population. We are working directly with them. They are sharing information, it's just not enough. It's just not as detailed as we would like.

We've had several direct calls where we have three levels of our organization at headquarters regional office, country office directly with our counterparts in China to discuss transmission dynamics, what's happening? Has it peaked? To show us that epidemiologic analysis to look at the trends.

China is huge, even in terms of climatic zones, but more importantly we need detailed information about hospitalizations around the country, the proportion of patients requiring ICU. They have presented to us their program of response in terms of clinical care capacity, beds, access to therapeutics and use of those therapeutics. That is reassuring to us that they are looking at this comprehensively, and really focusing on their population, increasing vaccination coverage, targeting boosting at-risk groups, and that is encouraging, that is very helpful. But we really need better understanding on the burden and the hospitalizations. We need more information on the sequences.

We had members of China CDC join our Technical Advisory Group for Virus Evolution (TAG-VE) last week, where they presented an overview of what is circulating in the country. The challenge for that is, is they have detected known subvariants, mainly the BA.5 sub-lineages, but we need those sequences to be shared publicly because there's a handful of people around the world that really can look at this mutation by mutation and they work with us. We want China to work with us to really determine within those BA.5.2 sub-lineages those other BA.5 sub-lineages, is there anything else that is within those sequences that's different. We need a global

community to look at that.

We'd asked them to share more sequences publicly with GISAID, the platform like GISAID, and also to work directly with us to do a full risk assessment as well as to generate what are known as these phylogenetic trees, to look at the molecular epidemiology and to see how these viruses differ and how they diverge within the country, and if there's anything that's different. There is more information that needs to be shared.

Communication channels are open, and the dialogue is good. We just need more detail. We're working directly with them. They participate in our technical groups. We have clinical management calls, we have other types of expert groups, and we've invited them to participate and they join. We just need a bit more information from them.

Mark Masselli: Well, I think it's that anxiety that people feel that they're not getting enough information. I think some of the channels have resorted to using satellite images of crematoriums and the large increase that they're seeing there. That's led several countries, including the US to issue testing mandates for people traveling from China. There's been a push back to these measures. We just heard from a former longtime CDC leader, Dr. Richard Besser that he did not think it would really help because COVID and the subvariants are already in this country and they're also around the globe. What's WHO's position? What should countries do?

Dr. Maria Van Kerkhove: I mean, the virus really is everywhere. We have millions of cases that are reported every week. Between 10 and 14,000 people die every week from COVID, that doesn't make the news anymore and it's just an astounding number. The circulation of the different variants, in terms of which ones are where, it varies there isn't one specific one that's dominant worldwide, but the virus is everywhere. I think the measures that countries have put in place have put them in place because they didn't know, because they weren't getting the information out of China that they would like to see.

We always advise countries to do, to take a risk assessment, risk based approach and to ensure that the measures that they do put in place are reaching that risk. I think what people need to do everywhere, we -- a lot of people are focused on China right now as they should, because it's so acute right now. But we as WHO are not getting data from most countries around the world in terms of what we need to assess the impact of COVID going forward. We're in a completely different situation than we were three years ago. We will see cases and we will

see waves of infection, but the impact, the resulting hospitalizations and deaths has been declining over time. That's fantastic because we have diagnostics, patients are getting into the clinical care pathway early. We have antivirals for early in disease. We have many therapeutics focusing on severe disease, and we have vaccines.

What people need to know is that as they live their lives and people are living their lives, to do it as safely as possible. Think a little bit about what you're doing every day. Keep that mask with you, wear a mask when you're with -- around others, and especially when you're indoors, or you don't know where the ventilation -- if the ventilation is any good when you're on public transportation. Get vaccinated and look out for your loved ones who are in an at-risk group. Make sure that they get the care that they need.

There's so many tools that exist. I mean, of the global challenges that we face right now COVID has solutions, three, four years in now we've got flu, RSV, Strep A, Mpox, Ebola, cholera, there's so many other things that are happening. We have to deal with COVID in the context of everything else. It's about calibrating the response going forward. But as individuals, individuals should be empowered with the knowledge about what is around them, what is my risk? What do I do to go to work and to get my kids to school? But not live life and fear. Know that there's a lot that you could do to keep you and your kids and your parents and your grandparents safe.

Margaret Flinter: Well, that's so interesting. I was thinking as you said it, I really have developed my automatic risk assessment as I opened the door to a restaurant or to a store with your mask ever at the ready, so thank you. I do want to go back to this situation in China a little bit, but really, it's a question for the world. Experts, including our friend and now retired Dr. Fauci have noted the Chinese vaccines as being less effective than the western developed ones. What role do you think that is playing in the current problems in China? Of course, it leads to the question of what more can the world community do?

Dr. Maria Van Kerkhove: I mean, there are many, many safe and effective vaccines that are used around the world, and some are of -- are more effective than others. The data that we have seen on the Chinese vaccines that are being used, and there are several that are in use right now. They're introducing more as we speak. When you boost with them the immunity really increases. I think it protects against severe disease and death.

What is really critical within the population of China of 1.4 billion people is that everyone over the age of 60, anyone who is immunocompromised really needs that third and that fourth dose. That's what they're focused on right now, because that boost really kicks up that that immunity level.

I think the challenge in China is that because they have had this dynamic zero, this zero COVID policy, there was no population level immunity increasing because of infection. Many parts of the world that didn't have access to vaccine have had immunity increased because of infection, and several waves of infection. Remember, this is the fifth variant of concern. We've had many waves over these three years.

The vaccine use in China was really how that population level immunity was increasing. Now that's changing. Now they have more of this hybrid immunity because they've had this massive wave of Omicron. If you remember, a year ago, try to think back when Omicron was first detected and what we saw around the world. At WHO when we were drawing our epi curves, we had to recalibrate the scale because at the peak, we had 23 million cases reported in one week. We knew that that was a gross underestimate of what was actually circulating. Now it's around five, six, no sorry, it's around maybe two to three million reported to us. That's in the back drop of a significant decline in sampling and testing.

They're going through what most countries went through about a year ago, but they didn't have that population level immunity from infection and/or vaccination. I think that's the challenge. That's what the focus is now. Make sure those vaccines that are in country are targeting the at-risk. We've offered and many countries have offered to add additional mRNA vaccines into their portfolio. It's a matter of them willing to accept them and to use them, but the global community is there to support.

I think we hear a lot about the politics and the fights and the arguments, but the global solidarity from public health professionals, from scientists, I think you know this firsthand, doesn't matter who is in power, who is in authority, we're here for each other. I think that's the real human spirit and the real solidarity of this, which to me has helped get me through these last three years.

Mark Masselli: I want to pull the thread on two things that you said. One, it’s not just China, where you're not getting information, places like Brazil, even parts of the United States which makes this forecasting a challenge. Yet on the other hand, you have

partnerships with scientists in all these countries. I think in your own words, WHO superpower but tell me is there a disconnect between governments and the maybe the private scientists that you're having a relationship with, or is everybody in sync here?

Dr. Maria Van Kerkhove: I think on a scientific level, on a public health level, I feel that we are in sync. During this pandemic, we as WHO have had the opportunity to reach out to so many more technical disciplines, so many more scientists in countries because everybody went virtual. Our reach and our listening ability has really grown. I do think it is a superpower of ours. People want to work with us because they want to contribute, I really wholeheartedly believe that.

I think there is a challenge between the scientific and public health world and the political world, because there are different factors at play. We come to this looking at it from a scientific and a public health point of view. But we also have changed our view in saying it's never only a health issue, it's an economic issue, it's a political issue, you need people that are in power that will stay in power. You need the economies to be able to rebound. You need the financing to deal with this.

Most of the financing for COVID was pulled from somewhere else. Now governments are saying we don't have the fiscal space anymore. It's contracting over time. What we're trying to do is work with governments to ensure that the threat assessment is accurate, that it's realistic. We can't just stick our head in the sand and say no one wants to talk about COVID so we're not going to talk about COVID anymore. In fact, I would love to not talk about COVID. Maybe you can invite me back sometime when I don't have to talk about COVID.

Margaret Flinter: We will.

Dr. Maria Van Kerkhove: We have to deal with this because COVID is here to stay, but we can manage it. We have to manage it from a health point of view in our stronger sustained health systems. We need the financing to support our workforce and our health systems. We need the political backing to be able to say this is a priority. That's the shift we're in. I think we're in a long, messy transition. Everybody's just like, okay, when are we done with pandemic, make it endemic, let's move on. But I think this transition phase of getting to longer term respiratory disease management will take a little bit more time unfortunately.

Margaret Flinter: The World Health Organization Director General recently

predicted 2023 would be the year that COVID would no longer be deemed a public health emergency or based on what you're seeing in this first month of the year are we likely to be into this for a longer period? I know that's a little bit of crystal ball gazing versus scientific analysis. But what's your thought?

Dr. Maria Van Kerkhove: It is a big crystal ball and it's very difficult to predict. I mean, the short answer is I don't know. But I think we can end this emergency everywhere because we have the tools to do so they exist. They exist at the right supply. We're just not utilizing them most effectively around the world. I mean, 30% of the world still has not received a single vaccine. We're doing better at trying to reach the targets of a 100% of our health workers around the world, a 100% of our at-risk populations, but we're not there yet.

In every country in the world, including in the US we're missing key demographics in terms of that. We have to deal with access and reach. We have to deal with misinformation and disinformation, which is absolutely rampant. Trust has been eroded over time and it's so hard won and so easily lost, so we have to keep up that dialogue. But I am really hopeful. This is the scientific hopeful, this is -- we can do this. No, I really believe it because we have the tools that exist.

If we didn't have a vaccine, I would love to see new inhaled vaccines that could focus on preventing transmission, that would be a game changer. We have therapeutics, others need to be a lot cheaper and need to be more accessible. But they cover the full spectrum of disease from the antivirals early on all the way through corticosteroids, it's possible. The thing that scares me the most is the complacency and the sheer fatigue and trauma we've gone through, because I think the entire world has gone through something quite incredible. We have not even begun to mourn the loss of tens of millions of people. I think that that's something that we're going to have to deal with the mental health aspect of this going forward, Long COVID, of course COVID condition is going to be with us for some time, we have to focus and research that. But I am hopeful with that we can do this. We have to collectively put our efforts together to do that. That's also in the context of war and other crises and other conflicts.

Mark Masselli: Let me just ask a question about trust and treaties, if you will. One, you sort of made the point that it's hard to win people's trust, easy to lose it, we seem to have lost it. I'd love to know what your message is to individuals who have basically said I'm believing all of the other information that's coming out to --

how do we move them, because what we're doing now hasn't moved them. Then the issue of treaties, government to government, so how governments work with each other. You all have launched an initiative around treaties, but if you could talk about both the individual trust and then maybe the trust that happens amongst governments in terms of laying out a strategy for moving forward.

Dr. Maria Van Kerkhove: I think in the individual trust I think those who are really -- who don't trust government who don't trust scientists who believe in the conspiracy, which are incredibly persuasive. I wonder how many of them will be watching this, because I think what we need to do is reach individuals and listen to individuals in different types of forum, with different types of channels, with different types of engagement. We've worked really hard to work with communities, faith-based leaders, youth leaders, any leaders in communities, to understand, first and foremost to understand where it's coming from. Is it the misunderstanding the vaccines were produced so quickly, so perhaps you've skipped some steps. I mean, some of these are questions that can be answered. There are others that are will be very difficult.

I think this is something we as an organization fighting this infodemic dealing with misinformation and worse disinformation is something that we're really going to have to tackle and come up with innovative ways to do so going forward. The treaty to me is a promise, are promises by governments to each other, to their people, to the world. To me, I find it quite inspiring that these discussions are happening.

I'm not involved in the day-to-day discussions of those. We have some amazingly dedicated people who are and it's complicated, and I know that. But to me, that treaty or accord or whatever it's called is a promise. We owe it to our people, whether you're a government leader or not to do better the next time. It didn't have to be this way. We didn't need to have this level of death and devastation, but we're dealing with it and we are doing our best to minimize the impact going forward.

Margaret Flinter: Well, Dr. Van Kerkhove, thank you for your work and the World Health Organization for its dedication to promoting health and public health and keeping the world safe. Thank you to our audience for being here. You can learn more about Conversations on Health Care and sign up for our email updates at www.chcradio.com. Dr. Van Kerkhove thank you

again, so much, and best of luck.

Dr. Maria Van Kerkhove: My pleasure. Thanks for having me and Happy New Year.

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Mark Masselli: At Conversations on Health Care we want our audience to be truly in the know when it comes to the facts about health care reform and policy. Lori Robertson is an award winning journalist and Managing Editor of FactCheck.org, a nonpartisan, nonprofit consumer advocate for voters that aim to reduce the level of deception in US politics. Lori, what have you got for us this week?

Lori Robertson: Several European countries have reported a spike of group A Strep infections, mostly among children, including cases of rare but deadly bacterial infections. There is no evidence the increase is being caused by nasal spray flu vaccines as social media post have baselessly suggested. Flu vaccination may even indirectly prevent Strep A.

Strep A can cause several diseases such as scarlet fever, strep throat, or impetigo, but in rare occasions it can get into certain parts of the body or bloodstream causing a serious disease called invasive group A strep or iGAS. Several deaths associated with iGAS have been reported in children in the UK, France and Ireland since September.

In the UK, there were more than 27,000 notifications of scarlet fever from September 12$^{th}$ to December 18$^{th}$ compared with about 3000 for the same period in the last comparably high season. Health authorities have said cases of iGAS remain rare, but are also higher than normal. England has reported 94 deaths in all age groups, including 21 deaths in children under the age of 18. In the US the Centers for Disease Control and Prevention is examining a potential increase in iGAS among children as well.

The WHO and the CDC have said the surge is likely associated with the increase in other respiratory viral infections such as influenza and RSV. The CDC noted that people with viral infections are at increased risk for iGAS. But people who oppose vaccines are pushing a different theory, baselessly suggesting a link between the spike and deadly strep infections and nasal spray flu vaccines.

The CDC recommends that everyone six months and older get a flu vaccine every season. The nasal spray flu vaccine, one of several options, is approved for healthy people who aren't pregnant, ages 2 to 49. During the 2019/2020 season, the flu

vaccine prevented more than 100,000 hospitalizations and 6000 deaths associated with the flu.

There is no evidence that the nasal spray flu vaccine causes or increases susceptibility to strep A. The nasal spray flu vaccine contains weakened flu viruses that are not able to reproduce in the lungs. Strep A diseases are caused by bacteria, not viruses. Instead, being sick with the flu can facilitate the entrance of bacteria into the body. That's my fact check for this week. I'm Lori Robertson, Managing Editor of FactCheck.org.

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Margaret Flinter: FactCheck.org is committed to factual accuracy from the country's major political players and is a project of the Annenberg Public Policy Center at the University of Pennsylvania. If you have a fact that you'd like checked, e-mail us at www.chcradio.com, we'll have FactCheck.org's Lori Robertson check it out for you here on Conversations on Health Care.

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Margaret Flinter: Each week Conversations highlights a bright idea about how to make wellness a part of our communities and everyday lives. While the world grapples with the global pandemic, public health experts have been simultaneously battling another ongoing health threat. Mosquitoes are considered one of the deadliest animals on earth, leading to hundreds of millions of illnesses and some 2.7 million deaths per year globally. Diseases such as malaria, dengue fever, and Zika are on the rise.

Dr. Scott O'Neill: This one mosquito called Aedes aegypti that transmits a range of different viruses to people. They include viruses like yellow fever, dengue fever, chikungunya, Zika. The consequences can be very dire, from a loss of life through to crippling social and economic cost.

Marianne O'Hare: Dr. Scott O'Neill is the Director of the World Mosquito Program which has developed an innovative approach to eradicating the threat.

Dr. Scott O'Neill: I was particularly interested in this bacterium called Wolbachia. This bacteria is present in up to 50% of insects naturally, but not this one mosquito that transmits all these viruses. When we put the bacterium into the mosquito the viruses couldn't grow any longer in the mosquito. We're seeding populations of mosquitoes with our own, mosquitoes

that contain Wolbachia. We're able to spread the mosquitoes across very large areas very quickly. Once the mosquitoes have it, they're protected from being able to transmit viruses. When they are protected, the humans are protected as well.

Marianne O'Hare: Dr. O'Neill's team released the genetically modified mosquitoes into a targeted area. The results showed a dramatic reduction in human infections.

Dr. Scott O'Neill: In northern Australia, we deployed the Wolbachia over quite large areas, entire cities, and we've seen essentially a complete elimination, 96% reduction in Dengue in those cities. We believe if we can scale this intervention across entire cities, we can completely prevent the transmission of diseases like dengue, chikungunya and Zika.

Marianne O'Hare: The world mosquito program is one of six finalists in the MacArthur Foundation's 100&Change competition, which awards a $100 million grant to innovative public health interventions.

Dr. Scott O'Neill: We're hoping that over the next five years we could bring this technology to protect 75 to even a 100 million people. We would hope within 10 years we could bring this intervention to 500 million people.

Marianne O'Hare: The world mosquito program, an effective targeted genetic engineering approach to eradicating the threat of deadly mosquito borne pathogens, leading to a dramatic reduction in harm to public health. Now, that's a bright idea.

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Mark Masselli: I'm Mark Masselli.

Margaret Flinter: And I'm Margaret Flinter.

Mark Masselli: Peace and Health.

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Marianne O'Hare: Conversations on Health Care is recorded in the Knowledge and Technology Center Studios in Middletown, Connecticut, and is brought to you by the Community Health Center now celebrating 50 years of providing quality care to the underserved where health care is a right not a privilege, www.chc1.com and www.chcradio.com.

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