# Episode 84: Imperfect Situations and Imperfect Solutions

**Chris Dall:** [00:00:00] Hi, everyone. Before we get started with this week's episode of the Osterholm update, I wanted to let you know that CIDRAP is commemorating its 20th anniversary this year. Since its inception in 2001, our team has created what is now a globally renowned center tackling the world's toughest challenges in infectious disease and public policy, including COVID-19, Ebola virus, Zika, antibiotic resistance, universal flu vaccines, and drug supply shortages. In celebration of this milestone anniversary and to ensure we're able to continue our important work into the future, Christy Walton has pledged a $4 million challenge to complete a $10 million fundraising campaign. A $1 match will be made for every $2 donated, helping to build a solid endowment to support CIDRAP's work. Please visit cidrap.umn.edu/donate and thank you. And now to this week's episode of the Osterholm update. Hello and welcome to the Osterholm update COVID-19, a podcast on the COVID-19 pandemic with Dr. Michael Osterholm. Dr. Osterholm is an internationally recognized medical detective and director of the Center for Infectious Disease Research and Policy, or CIDRAP, at the University of Minnesota. In this podcast, Dr. Osterholm will draw on more than 45 years of experience investigating infectious disease outbreaks to provide straight talk on the COVID-19 pandemic. I'm Chris Dall, reporter for CIDRAP News, and I'm your host for these conversations. Welcome back, everyone, to another episode of the Osterholm Update podcast, as we did last week, we're aiming for a shorter episode of the podcast this week, knowing that many of you are still in the midst of holiday travel and other seasonal obligations. And because the Christmas holiday has delayed much of the reporting on new COVID cases here in the United States and in other countries, we're not going to spend too much time on numbers today. Instead, we're going to take a look at the big picture and what the impact of the Omicron variant could look like over the coming weeks. But before we get started, as always, we'll begin with Dr. Osterholm's opening comments and dedication.

**Michael Osterholm:** [00:02:10] Thank you, Chris, and welcome everyone back to another podcast episode, one that we hope we wouldn't have to record, but in light of the events of the day, we feel it's important to provide this update. Well, here we are almost two years into this pandemic, and unfortunately, I think we still have at our own peril underestimated the impact of this virus and what it can do. And so today we'll try to provide an update of where I think the latest chapter in that great battle between us and the virus happens to be. Just to add some context to this almost two year period, I just wanted to note that this is the 84th episode of the podcast that we've recorded since March 24th of 2020. In addition, we did three live update episodes, one special episode "Unmasking" back in 2020. And then, of course, there's that very favorite one my special one of the Polar Express that I read to my kids and grandkids back on Christmas Eve of a year ago. So when you collectively put these 88 podcasts together, it's a remarkable history book of what's happened. And what I fear is that some of the most important materials to be written into this ultimate COVID history book are yet to come. And so today, I will surely lay that out in a way that I think gives a sense of what's happening now and what will be happening, particularly in the immediate future. But with the idea of we still got a ways to go with this virus, something that none of you really want to hear. This week's dedication really relates back to the holiday season. Thank you to many of you who sent very thoughtful comments and responses to last week's podcast and to my closing and the very personal nature of that particular information. And today, in light of many of the comments I received from you over this past week, I want to dedicate this podcast to all of you who are alone and have been very lonely over these holidays, and I know there are many. And while it's maybe of little consolation, we're here for you. We're the podcast family. You're part of it. Consider yourself that, you know, we're not there hand in hand. We're not there eyeball to eyeball, but we're here. And I hope that in that regard, if we can bring any comfort, any way that we can help deal with that loneliness over the course of this holiday season, the podcast family is there.

**Chris Dall:** [00:04:32] Mike, we're in a period of high uncertainty right now, and that is probably an understatement. As I mentioned, because many state health departments have halted reporting over the holidays, we don't really have a strong sense of how many daily COVID-19 cases we're seeing in the country right now. But we do know that cases are rising dramatically and the highly transmissible Omicron variant is playing a role. In fact, the seven day average of new daily cases in the United States has now surpassed last winter's peak. And even if we see the reduced severity of illness with the Omicron that's been reported in other countries, we're likely in for some rough weeks ahead. I know you're working on a piece that lays out your concerns about the coming two to eight weeks. Can you share with the audience what you're thinking?

**Michael Osterholm:** [00:05:16] Well, first of all, Chris, you're right on the mark. At this point, anyone who's a regular listener of this podcast is obviously familiar with my opening disclaimers about uncertainty, and nothing will change that going forward, I think. As you know, it's been a reoccurring theme since the earliest days of the pandemic. And in fact, as I just noted, this Friday, December 31st marks exactly two years to the date of those reports out of China, describing a mysterious cluster of pneumonia cases in the Wuhan area. Suffice it to say, we're no strangers to uncertainty. And while I recognize it can be unsatisfying and can sometimes leave us feel powerless and even lost, it's our reality, with this week being no exception. Over the past several days, I've really come to think of this entire situation as a complex calculus problem. In that equation, we've got what seems like an endless set of unknown variables we're trying to quantify. And as if that wasn't hard enough partway through our work in this equation, a whole nother set of variables gets added in. That's basically what it's felt like for me since all Omicron arrived. We've got a lot of moving parts and we're trying to figure out what they all mean. Well, I'm an epidemiologist and although I work with numbers every day, I'm unfortunately not some secret calculus whiz. I can attest to that with my college calculus. And we surely are not going to solve the new Omicron equation problem and have all the answers today or, for that matter, in the near future. But like always, I'll share my best sense of where I think we're at and what we might anticipate moving forward and what I think we should be focused on in the meantime. Let me make one point very, very clear. We have to avoid what I call the extreme views of the world. And what I mean by that is I see far too many of my colleagues out there who are looking at this situation through rose colored glasses, making broad statements about how much better we are prepared today. And therefore this won't be the same as 2020. You're right, it's not going to be the same as 2020, but as you'll see, we still have some big gaps in our preparedness. Many questions that haven't been answered. At the same time, I worry as these case numbers increase dramatically without linking it to seriousness of illness that we're accepting the fact that, oh my god, this is a doomsday event. And I've seen that happen when people talk about a million cases being reported today compared to the 100,000 cases that had been reported as of somehow, this was doomsday. It's not, okay? We are in a better place because of vaccines. We are in a different place because Omicron is not acting like Delta, and I hope that somehow we can find that middle place where I think we really are and how we need to approach this issue. So where are we now? Well, Omicron has clearly kept marching forward in the U.S. and as well globally. Earlier this week, CDC's estimates of the variant's prevalence dropped from 73% of all the SARS-CoV-2 viruses to 59%, which was a function of just iron out the data, as opposed to the reduction in Omicron, which still appears to be taking over Delta across this country. Some have tried to liken it to somehow it was a mistake, whatever. It's basically the imperfect nature of trying to deal with data like this on an ongoing basis. The bottom line is it didn't really matter to me from a scientific standpoint because I know that within a few weeks it is going to be virtually all Omicron. There's just no denying that Omicron is much more transmissible than the previous variants. Now, one of the issues we have to be very mindful of, though, is is that the proportion of cases that are due to Omicron versus Delta are important in one regard. And that is the fact as we're trying to interpret the number of serious illnesses and deaths. If we think that everything is Omicron and we keep seeing an increasing number of serious illnesses and deaths, we will ascribe that to Omicron. But in fact, if it turns out that a large proportion of that happens to be due to Delta, that's important to know. So we do have to work that part out yet, and that's something that is going to be important as we go forward. Now, if we look at what's happening with Omicron around the world, we have numerous examples of record breaking case surges in countries where it has established itself as the dominant variant. For some of those countries, case totals from Omicron have now shattered previous peaks. In the UK, average daily cases are nearly twice as high as they were during the peak of their alpha surge this past January. In Denmark, cases are at levels three and a half times greater than they've ever been, and the same pattern is playing out in other countries Canada, Ethiopia, Kenya, Nigeria, Ireland, Italy, France, Spain, Switzerland. All of these places have reported record high daily case numbers shortly after Omicron took over, and there are more. Even right here in the U.S., average daily cases are now at the highest levels they've been since the start of the pandemic, with more than 260,000 cases reported as of Tuesday. The previous peak, which was set last January, grew to just over 251,000. Having spent 46 years in this business, I can tell you that the transmission we're seeing with Omicron is unlike anything I've ever dealt with in my public health career. It is following the transmission dynamics that I talked about four weeks ago on this podcast when I first used the term, we are going to experience a viral blizzard. Amidst the news of these dramatic omicron case surges, we're also seeing more and more signs suggesting that the risk of severe disease and death has been reduced with this variant. I will tell you at this point, I remain somewhat confused as to exactly what the reduction in severity is, seeing conflicting data even as recently as just 10 minutes before we started to record this podcast. Over the past week, reports out of Denmark, England, Scotland and South Africa have lent support to the possibility. But it is confusing. It is very confusing. As recently as 10 minutes before we started recording this podcast again, conflicting information was released about the severity of illness from the United Kingdom. But if we look at what data we do have, for example, from Denmark, which looked at cases detected between November 22nd and December 15th, found that Omicron cases were three times less likely to be admitted to a hospital compared to cases caused by other variants. In South Africa, a team of researchers found that the risk of hospitalization with Omicron was 70% lower than the risk of hospitalizations for other variants. Then a study out of Scotland had similar results to determine that Omicron cases were associated with a two thirds lower risk of hospitalization compared to other cases of Delta. And in England, a study out of the Imperial College estimates that the Omicron cases were 15 to 20% less likely to present to a hospital compared to Delta cases. Even when Omicron cases did present to a hospital, the study estimated that they were 40 to 45% less likely to be admitted overnight compared to the Delta cases. So although each of these reports are preliminary and they have all of their own limitations, they all provide what I believe is valuable information that can give us a sense of what we might expect with Omicron in the days ahead. One piece of information has yet to be fleshed out is whether any reduction in severity is primarily the result of the protection that has been built up in the population through vaccines and previous infection, or if it's a signal that Omicron is inherently less virulent and each fact both could be playing a role. This is important in understanding how this virus will actually cause severe illness in various populations who may or may not be vaccinated or may or may not have had previous infection. Regardless of whether the Omicron virus is less virulent, places like Denmark, England, Scotland, and even Singapore, reminding the public that although there appears to be some reduction in risk for severe disease with Omicron infection at the moment, a majority of the cases in the earliest phase of their outbreaks have been younger individuals that have often been vaccinated. Remember, the vast majority of individuals in each of these countries has been vaccinated, so this is not unexpected. It's still unclear what the complete picture of severe disease with Omicron might look like as cases grow among older populations, much like they've recently done in London. Surely vaccinations will help reduce the risk of severe disease and death. But what might Omicron do to these remaining individuals who lack immune protection from either previous infection or vaccines or because of their underlying immunocompromised condition may in fact still not be protected from these vaccines? Here in the U.S., our vaccination rates lag behind countries like Denmark and the UK, leaving us with bigger pockets of immunologically naive individuals. What's their risk for serious illness from Omicron? We just don't know yet. Even among those who are vaccinated, how many doses have they had? How long has it been since their last dose? What type of vaccine do they get? What is their age? Do they have any underlying health conditions that could limit an effective immune response, etcetera, etcetera, etcetera? Again, all these things are important variables in this calculus equation we're trying to solve. Of course, in an ideal world, we'd have plenty of time to evaluate these things, double check our work, and come up with some pretty solid, simple, straightforward answers. But this is not the ideal world, and we aren't afforded the luxury of time or simple questions. In fact, I believe it will be a matter of weeks until we're deep in the throes of the Omicron surge here in the U.S., what would happen if we hit a million confirmed cases a day in this country? Even if we anticipate some reduction of disease severity, how would such dynamic transmission translate into severe disease, hospitalization, and death? What repercussions might this have for our health care systems, which are already under immense strain in numerous states? And beyond just a health care standpoint, what ripple effect could we see on the societal level? These are some of the tough questions we need to grapple with now, since we could very well be face to face with them in the next several weeks. So as it stands, I think there are really eight critical issues, Chris, related to the developing Omicron surge in this country that need to be acknowledged, understood and clearly communicated if we have any shot of assembling an adequate and hopefully effective response to Omicron over the course of the next six to eight weeks. Let me go through these eight issues with you. First, issue one. Basically pushes back on the narrative I keep seeing about how the U.S. is in so much better shape now than it was back in March of 2020, simply because we have vaccines. This is part of that rose colored glasses approach that I fear everyone wants to hear, but I don't believe is necessarily what they should hear. Yes, we have vaccines and they're remarkable tools. You've heard me say that time and time and time again. But let's not confuse vaccines with the vaccinations. Having widespread access to vaccines isn't enough. It's only when we bridge that last inch where the needle actually gets into the arm when a vaccine becomes a vaccination and we unlock any protection it can offer against infection, severe disease or death. Remember, there are still 89 million Americans who have yet to receive a single dose of vaccine. Of course, this number includes those 19.3 million Americans between the ages of zero and four who are not yet eligible to receive a vaccine. However, it also includes more than 31 million children ages five to 17, 39 million adults, and six in every 10 pregnant women. And finally, there are still more than 138 million Americans who have been fully vaccinated by the current definition, but have yet to receive a booster dose as it's called, or a second dose for J&J, a third dose mRNA vaccines. In other words, there is ample opportunity for Omicron to spread far and wide in this country, and I expect it to do so. Issue two relates to disease severity. What impact might Omicron have in the U.S. in terms of hospitalizations and deaths? Well, as I mentioned earlier, we're seeing some indications that the risk of hospitalizations from Omicron might be 15 to 80% lower than that of the previous variants. Of course, we can and should hope for the risk reduction to be closer to the 80% mark, but we must plan for a less substantial reduction. With more than 78,000 patients already hospitalized in this country today with COVID, a growing number of which are pediatric admissions, there's little margin for error. This gets us to issue three, as many have started to realize by now, the weakest link in the U.S. health care system is not about the availability of hospital beds. Instead, it hinges upon the availability of highly skilled and specifically trained health care workers who can actually treat admitted patients. Data from the U.S. Census Bureau shows that there are around 9.8 million doctors, nurses and high level medical technicians employed in this country. Tragically, a significant number of these workers have already suffered first and second hand effects of the pandemic, including the personal and or professional tragedies brought about by COVID, long hours, increased workloads, patient deaths, etc.. In fact, I'm very concerned about the potential downstream consequences that could be brought about by the growing feeling of burnout, stress and all the post-traumatic stress syndrome like issues that so many of these outstretched workers have experienced and which will play out in the years ahead. For example, a study that was led by the American Medical Association and published earlier this month surveyed more than 20,000 health care workers and found that around one in five physicians and two in five nurses plan to leave their current practice within the next two years. At the same time, I'm worried about what these coming weeks might bring as far as workplace disruptions go in the health care settings, which might further exacerbate the mental, emotional and physical toll many of our country's health care workers are experiencing. It's possible that we can see 10 to 20% of health care workers become infected with Omicron during this surge. In South Africa, nearly 20% of health care workers were reportedly infected with Omicron. We're also seeing a rapidly growing number of COVID related absences in health care settings across the United Kingdom. London in particular, and now we're seeing this in Denmark. Even if it's temporary, we cannot afford to lose 980,000 to 1.8 million health care workers in this country, where many systems are already plagued by extreme shortages of workers. Even with the CDC now allowing shorter periods of isolation and quarantine, which I know we'll cover in more detail on this episode, the sheer number of absences could be significant and extremely challenging to navigate. If you've kept up with the news this past week, you're likely already aware of the disruptions that Omicron can cause, whether it's thousands of flights around the world canceled due to inadequate staffing as a result of individuals out with COVID or teams even pulling out of college bowl games. We're hearing now of large department stores, hardware stores, operations closing because they have so many ill employees, they can't even staff it. The signs are there, and they clearly extend far beyond just the health care system standpoint. A study published by The Associated Press on Christmas Eve stated that in addition to COVID related staff absentees at London hospitals tripling in just one month, almost 10% of the firefighters in the city called in sick this past week due to COVID. The same story reported that nearly 2,700 police officers in New York were recently absent, which is double the average. Another article published by The Guardian on Monday spoke to the impact disruptions were having on things ranging from schools to shipping in the UK, with the union leader stating that the public services there are in a perilous state due to staff absences from Omicron. What plans do we have in place to navigate these challenges in the next six to eight weeks? Issue four relates to the reliability of the over-the-counter rapid test, something that I think has plagued us for many, many months. How effective are some of these tests with Omicron specifically? Although there was reassurance that was provided fairly early on that many of these tests shouldn't be impacted by Omicron, I'm aware of more and more instances where individuals, including those who are fully vaccinated, are negative by rapid test days into their illness, but positive by PCR. In fact, in an update to their website on Tuesday, the FDA announced that there were early signals of reduced sensitivity in some of these rapid tests with Omicron. As of Wednesday, we're still waiting for more details on what this exactly means and what tests might be impacted, but this news speaks to a broader point. There are many members of the public who frequently use these tests and rely on their results before deciding to gather with family, go to work or visit certain public settings. The NIH and the FDA must immediately prioritize research related to the performance of these available rapid tests and advise people on their reliability and best practices for using them during this surge. The FDA could do these studies in two days or less by simultaneously having some of the thousands of people being tested every day tested by both PCR and tested by lateral flow. One swab up one nose, one swab up the other nose. Same person doing the swabs, you can't suggest that there's a bias or an impact because of the type of swabs that were collected. We could understand this. How would this impact what you think about these tests and how you use them, if I tell you that up to 60 percent of the time, they could actually tell you you're not infected with the virus when you are? And we really have dropped the ball on this one. This is when we need to do much more to get the message out because we have so emphasized getting tested, we've not talked about the quality of the test and what the result means. Issue five, data on Omicron case activity in the U.S. are incomplete and will be unreliable for several weeks. Let me repeat that. Data on Omicron case activity in the U.S. are incomplete and will be unreliable for several weeks. This is a very important point. Why? Most COVID positive cases that are picked up now by the over-the-counter rapid test are unlikely to be reported. In addition, bottlenecks created by heightened demand and growing paucity of PCR testing means many COVID cases will go untested and unreported. This is not just true in the U.S. right now. We're seeing this same situation emerge in Europe, where they thought they had a much more comprehensive and readily available system of testing. Of the tests that are documented, pronounced increases in Omicron cases will definitely overwhelm reporting resources at state and local health departments, resulting in backlogs. Then this is going to exacerbate reporting delays brought about by the holiday season, further complicating real time data interpretation. So although case counts can help provide a glimpse into the future, they should be used with extreme caution over the upcoming weeks to prognosticate about Omicron. This reality underscores the importance of following more stable and reliable metrics, particularly hospitalized COVID cases receiving oxygen. So when the media makes a dramatic statement about case numbers increasing, it's very likely that there are substantially more cases and they're even talking about. But again, I want to remind people this is not information linked to disease severity. Issue six, most vaccine doses administered now and over the next few weeks will have little impact on the overall trajectory of this immediate Omicron surge. Remember, it takes 10 to 14 days for even a third dose vaccination to increase immune protection. For those receiving their first or second doses, there may be some limited protection provided against severe illness or death, but the window of time to act is closing very quickly. Now, this does not mean vaccines are insignificant, they are the best tool we have available for reducing the risk of symptomatic disease, hospitalization and death and must be prioritized. Regardless of what happens with Omicron, this pandemic will not be over in eight weeks. Vaccinations now will protect against the next surge, but recommendations made in the meantime should acknowledge our current reality that the immediate increase in vaccinations is going to have only a very limited impact on this surge. It's going to happen no matter what. The seventh issue, masking can be helpful. You've heard me say that time and time again, but only if you're routinely using high quality respiratory protection. This means non-fraudulent N95, KN95 or KN94 respirators, all which have satisfactory filtration efficiency. In addition, they should fit properly with a secure seal over your nose. Cotton or surgical masks are more for show than effective protection, especially against Omicron. This has been one of the great shortcomings in this pandemic is our lack of public health understanding of good respiratory protection and how to promote that within the public. Issue eight, we have too few therapies to dent the Omicron surge. The two main monoclonal antibody cocktails appear ineffective against Omicron. Meanwhile, a third monoclonal that retained effectiveness against Omicron is in very short supply. Ditto for the much heralded COVID oral drugs. There are less than 180,000 doses of the Pfizer drug available in the United States, and it's going to take months to manufacture more. We have learned in the past week remdesivir, one of the drugs that we've talked about before, may be more effective than we once thought, but it too is still in a very limited quantity. So what's happened with this surge? We are now seeing the loss of two very critical treatments that were actually reducing serious illness, and they're not being replaced in any timely way with other treatments. So we could expect to see a substantial increase in number of severe illnesses with this surge because of the loss of the monoclonals and yet not having these new drugs on board. So what does this tell us, Chris? To answer your question in a succinct way, I don't know. I think it's very clear that we are going to see an unprecedented event take place in the next six to eight weeks. Many, many people will get infected. In fact, I hear among my colleagues for the first time, them acknowledging they're probably going to get infected. Now, I believe we should try to postpone these infections as long as possible for two very specific reasons. One is, even with a lower disease severity, we could choke our health care systems even more than we have with Delta because of the sheer number of cases coming in. That will compromise care not just for COVID, but for all of our health care system. Whether it's your heart attack, your stroke, your automobile accident, your broken bone. The second thing is the fact that these new drugs do appear to be powerful. They appear to be very effective against the likelihood of developing severe illness. So if we can wait and put yourself at risk several months from now, not intentionally, but because it happens, but you have those drugs available, the outcomes might be very different. So it's not like I'm sitting here with my own rose colored glasses on saying, you know, you'll never get infected with SARS-CoV-2 virus, whatever variant it is. We all probably are going to one day experience it. But wouldn't it be great if we are doing that in a world where in fact we also have these drugs as well as our vaccines? And so to me, this is the strategy that we have to continue to push forward and look at as we go through these very unprecedented days ahead.

**Chris Dall:** [00:29:55] Mike, you mentioned that the CDC last week updated its isolation and quarantine guidance for health care workers, and the CDC followed that up this week with new isolation and quarantine guidance for the general population. That guidance cut the isolation time for people who have COVID, but are asymptomatic from 10 to five days. Now there's been a lot of criticism of those new guidelines. What do you make of them?

**Michael Osterholm:** [00:30:19] Well, it's one of the things we've learned about in this podcast and working at CIDRAP over the course of this pandemic is the word nuance is lost consistently in any discussion we have about what's happening. I want to go back to a quote I had mentioned earlier, former defense secretary said once, "you don't get to go to war what you want, you have to go to war with what you have." And we are in a situation where over the course of these next weeks, we're going to see this major surge of infections in our communities. Many of them will be milder illnesses, but nonetheless, if you're positive and you then therefore present to the either the quarantine side of the house where I've been exposed and I need to basically separate myself so that I don't become infected and transmit to others in the earliest days, or I now have to isolate because I am infected and don't want to transmit to anyone else. Now, for many, many individuals who have cold like symptoms, they're saying 10 days out of work right now is going to be a substantial burden. I don't want to transmit the virus to anyone else, of course, but you know, 10 days? And what CDC, I think attempted to do, and I give them great credit for this, I'll stand up to even some of my colleagues who disagree. They were trying to find a way to say, how can we keep society going? This is an imperfect situation that will have imperfect solutions, but at the same time ones that we have to acknowledge we need. Which would you rather have, somebody who is in the fifth day of their infection with COVID, who is feeling relatively well, who's in an N95 respirator and who's at the bedside of that patient? Or because we've lost so many health care workers, good luck, patient, you're going to see anybody for eight hours? Nobody's going to be by your bedside. You know, that simple question is what this is all about, how do we maintain society, this is not trying to put people at greater risk. I will be the first to say right now, you know, when you look at the data, whether it's five days, 10 days post infection status, are you still infected and infectious? We've had great debates about that all along. How long that lasts? I mean, even to the extent whether you're vaccinated or not, which vaccines, when's the last time you had the vaccine? So there's so many moving parts here. What CDC was trying to cut through was basically to say, we have to keep society going. And we don't want to enhance the likelihood of more transmission, but I'd say right now we don't have good data on showing how many people actually isolate themselves now when they're infected for 10 days. So let's not again use our rose colored glasses to say, Oh, we've got to be 10 days now. You know, we've known all along that people weren't adhering to 10 days in many instances. The same thing with quarantine. You know, if in fact you are vaccinated, fully vaccinated with a booster, what is your likelihood of get infected and transmitting? Well, it's real. But what is the risk of so many of you not being able to be at these critical jobs? I mean, I just heard this morning of a major retailer who we all know well in this country has started to close down large, large operations. Because so many of the workers are sick, they can't even get a skeleton staff to open the establishment. This is going to keep happening. So what CDC was trying to do is balance that. We don't want more people to get infected. And for anybody who is ideally and saying, Oh well, you have to have this data, that data, that data, it's not going to happen. Now I do have challenges with the CDC efforts and the following. One is I wish we had testing. I think that would be helpful. But I just got done telling you I don't have a hell of a lot of faith in that testing. I don't. If it's a lateral flow test, I don't know what it means. PCR testing is going to be severely challenged. We just don't have enough. So now if we put that testing requirement in part of this new definition of what we should do, we've automatically put a roadblock in there that's going to be real because people aren't going to get tested. So if you can't get tested, why put that in? I have great concerns about the issue of masking. You know, I have been a very, very strong supporter of respiratory protection, but adequate respiratory protection. Face cloth coverings, even surgical masks are nothing more than fashion statements. They do not protect you in any meaningful way. Read the two commentaries that we've put on the CIDRAP site about this. Many of these studies that have been published, basically, if one of our graduate students did them, I would have flunked them. They're so bad, but they're getting major media attention and they basically make the case you can put almost anything in front of your face on a regular basis, and you get protection. Not true. And Omicron is really on the cutting edge of that, so you can get some real benefit with N95 use or KN95. And remember again, at the beginning of the pandemic, we urged people not to use these in part because we didn't have them. We were short N95 respirators and we wanted health care workers to have them. We have an ample supply now. So I wish that there was a much greater emphasis on educating the public about how to best protect themselves with respiratory protection. And this should fit into this whole scenario that we're talking here now about, you know, if five days in of isolation or I'm, you know, five days in with quarantine where I'm trying to make sure that I'm not infected from someone. At that point, I think it becomes really important that masking is a critical piece of what goes on there. So at this point, I support the CDC. I think that's an imperfect situation. I'm not at all excited about where we're at with testing. I'm not excited where we're at about masking, but I think we're just trying to get through. This is a triage situation. This is really going to be one where we have to make hard choices and it's not acceptable to think that we can, whether it's our health care systems, critical infrastructure whatever, we can just shut down for the next four to eight weeks because we've got so many people waiting at home to find out if they were infected or those who are infected who are feeling quite well and maybe five or seven days along the road and therefore much less infectious. Do not tell me there is a body of data that gives me the exact date and time that people are going to no longer be infected and infectious. We don't have it. We're making judgment calls and this is where leadership is going to have to really be front and center. It won't be perfect. Please do not expect it to be. But we cannot let a situation like this unfold because we don't have perfect answers. We are going to have imperfect responses to a very imperfect situation. So thank you, CDC for taking it on and for all of those who are very critical of the CDC, you know, add your comments in relative to specific issues, but this was not a business driven issue. This was not something where the economy by itself was all about this. This was about keeping us moving as a society.

**Chris Dall:** [00:37:37] Just a reminder to our audience that next week we'll resume answering your COVID queries and sharing your beautiful places, so please keep sharing them with us at osterholmupdate@umn.edu. And Mike, before you get to your closing thoughts today, I would just like to wish all of our listeners a happy new year. As Mike often says, we thank you for being part of this podcast family, and we all here at CIDRAP really appreciate you listening and tuning into us every week. So thank you. And Mike, with that, your closing thoughts.

**Michael Osterholm:** [00:38:08] Well, thanks, Chris. And let me just amplify on one piece of this, I want to thank the podcast team at CIDRAP starting right with you for helping us to put this together. This was time that we had hoped people would able to take off and be with their families during the holiday season. You know, we're not on the front lines of health care. We don't have a sense of the drama and the pain that is experienced on that front line. But there are people at CIDRAP who have virtually worked every day over the course of the last almost two years working on this particular challenge. And so the fact that you're here today on your days off, thank you very much for helping to make this happen. I want to thank all the team for the podcast efforts. Like you, I want to offer also a very happy new year to everyone, and I say that intentionally. It's not just a trite statement. I hope this next year is going to be happy, happier and that in fact, we will see us make advances and take advantages of things like the drugs, getting more people vaccinated, and moving forward, meaning that this is the last holiday season that we will have those same situation. Now, as long as the variants exist and new variants can develop, you know, we're always going to have to be responsive to this virus. Please, we must not ever underestimate what this virus can do, and I think we have time and time again. So from that standpoint, you know, we have to look to the future. But at this point, I am looking forward to having a holiday season next year that is not at all similar to what we've had in the last two years. Now let me just leave you with a closing that I've thought about, you know, last week was a very personal closing. Well, in a sense, this one is too. It's one about what these podcasts have been all about. I hope it's one where you can feel the energy and you can feel the intent of what we do every week and sharing this information with you and you in turn, sharing back your feedback. The closing I'm using today is one I've already used three times in the course of these last two years, and yet I don't think it ever runs out of being a good one to use. I first used this on September 17 of 2020 Episode 24, "The Long Haulers." I used it again on March 23rd of this year for a live update night, and this was the closing. And then finally, as recently as August 12th Episode 64, I used it with the "Straight Talk" episode that day. This is a song written and sung by Bruce Springsteen. It was one that was recorded and released in October of 2020. It was part of the album, "A Letter to You," his 20th studio album, and it's one that I think has deep, deep meaning for me as I read it over and over again and think about what I attempt to do on a weekly basis to share with you. Its entitled "Letter to you." "Beneath the crowd of mongrel trees, I pulled that bothersome thread, got down on my knees, grabbed my pin and bowed my head. Tried to summon all that my heart finds true and send it in my letter to you. Whoa. Things I found through hard times and good. I wrote them all out in ink and blood. Dug deep in my soul and signed my name true and sent it in my letter to you. In my letter to you, I took all my fears and doubts. In my letter to you, all the hard things I found out. In my letter to you and all that I found true. And I sent it in my letter to you. I took all the sunshine and rain, all my happiness and all my pain. The dark evening stars and the morning sky of blue and I sent it in my letter to you. And I sent it in my letter to you. In my letter to you, I took all my fears and doubts. In my letter to you, all the things I found out. In my letter to you, all that I found true. And I sent it in my letter to you. I sent it in my letter to you." Bruce Springsteen. Well, that's what this has been all about. These are my letter to you, and I hope they've been helpful. I hope in the past year we've been able to provide some perspective, some guidance, some direction. We've been able to lay out the questions that remain unanswered. But at least now you know what those questions are. And most of all, I hope that we've been able to connect with you like you've connected with us. I want to thank all of you for your feedback, your input. Thank you for your very kind comments about last week's podcast. I want to also make certain that you know, we're here, we're going to stay the course. We will be here for you. And in that regard, we really are one big family. So thank you. If there ever is a time right now to keep a level head and be kind, it's now. It's tough in these holiday seasons. For those of you who are alone be kind to yourself, be kind, be thoughtful. Be safe, be safe right now. Don't risk it right now to get infected. If there is any way you can possibly avoid it. And don't be afraid of that. I was just in a situation recently where someone wanted to get together who is not fully vaccinated. We didn't understand that. And I mean by fully vaccinated of course, my definition means that third dose and within hours of the event supposedly happening, this was just a small get together, it was canceled in that regard just because I wanted to be protected against a possible infection, even though I've been fully vaccinated. Don't be afraid to do the same. Thank you. Have a good week. We'll be back next week. Hopefully, I'll know more and not less. And on behalf of all the podcast crew, we appreciate you so much. Remember, remember, remember, everything we talked about today are real loved ones, our families, our friends, our colleagues, our kids, our moms and dads, grandpas and grandmas. Don't forget that. Thank you. Be safe, be kind.

**Chris Dall:** [00:44:30] Thanks for listening to this week's episode of the Osterholm update. If you're enjoying the podcast, please subscribe, rate, and review, and be sure to keep up with the latest COVID-19 news by visiting our website CIDRAP.umn.edu. This podcast is supported in part by you, our listeners. If you would like to donate, please go to CIDRAP.umn.edu/donate-now. The Osterholm update is produced by Maya Peters, Cory Anderson, Angela Ulrich, Meredith Arpey, and Sydney Redepenning.