Episode 37: Now is the Time

Chris Dall: [00:00:00] Hi, everyone. Just a note that we will be off next week, but we'll be back on January 7th with a new episode of the Osterholm Update. I also want to let our listeners know about some new Osterholm Update podcast merchandise that we have available. Proceeds from this merchandise will help fund research work at CIDRAP. You can find it on the Minnesota Alumni Market website and we'll have a link to that page on the Osterholm Update website. And there also will be a link in the podcast description.

Chris Dall: [00:00:30] Hello and welcome to the Osterholm Update: covid-19, a weekly 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.

Chris Dall: [00:01:06] It's December twenty third, and as we near the end of what has been a tumultuous and deadly year, we're entering a new period of uncertainty in the pandemic. We now have two authorized covid-19 vaccines. And the effort to immunize the population against the coronavirus is well underway. At the same time, covid-19 cases are still surging in the United States and the rest of the world. And new variants of the virus discovered recently in England and South Africa have shown the ability to spread more rapidly than other variants. Hope has arrived, but we're not out of the woods yet. On this final episode of the Osterholm Update for 2020, we're going to discuss these new sars-cov-2 variants and what we know about them and what they could mean for vaccines and other measures implemented to reduce the spread of the virus. We'll also take a look at the current state of the pandemic in the US and how the holidays may impact the trajectory of cases, talk about the next steps in the vaccine rollout, address additional questions about vaccines and pregnancy, and highlight a Christmas act of kindness from the Osterholm Update website. But first, we'll begin with Dr. Osterholm's opening thoughts and dedication.

Michael Osterholm: [00:02:07] Thanks, Chris. It's wonderful to be back here on this last podcast of the year, reflecting back on what we've been through over the course of the past nine plus months. On behalf of all the staff at CIDRAP, I want to thank you for the time you've spent with us over the course of the past 10 plus months doing these podcasts and the exchanges that we've had with many of you via email and letters and in some cases conversations. This has been the silver lining to a very dark cloud for the past year. In that light, I want this week's dedication to be from all of us to those families, those individuals who have lost loved ones in the past year to covid or other causes of death too, of which they will not be around the kitchen table at Christmas. So from that perspective, please know that those of you who are grieving this holiday season, our hearts go out to you. We realize there are no words that can provide the comfort of missing someone around that holiday table. But just know that we're thinking of you. I'd like to also just add some perspective to where we're going this week with the podcast having thought about that year end effort. We've titled this week's episode "Now is the Time'. A lot of the media this week has noted that Monday, December twenty first was the winter solstice, the darkest day of the year in the northern hemisphere. Trust me, I know that. But now the days will start getting brighter from here forward. And hopefully the same is true for our journey through this pandemic. We can see the light at the end of the tunnel, but make no mistake, we have lots of work to do, both individually and as a general population, before that sunlight that we're all looking for shines on our faces. We all know at this point that we've been on a journey since we started sharing this podcast in March. And I look back and I remember warning everyone at the outset, we were in for a long journey. When I appeared in Joe Rogan's podcast early March, which was a time when some of you became familiar with our work at CIDRAP, I offered up this simple warning that day. I said, "This is not going to be like a Minneapolis blizzard where we're sheltering in place for a couple of days. At this point, we're talking about something that I call a coronavirus winter. With a long season ahead of us, we have months and months to go". And even then, as much as I knew that, I could never have fully appreciated what that meant to go through those long months. Lots of people got the concept of a coronavirus winter and that we now hear people talking about that with regard to this pandemic. Not as a blizzard, but more like a long and sometimes desperately really cold and dark winter. But now we're at the end of 2020. Let's take a look at where we are at the moment by looking at some of the titles of our recent episodes of the podcast. I go back to the end of October. On October 22nd we had 'Failure is Not an Option' as our title. That's kind of the sort of

determination we've brought to this journey from the very beginning and we will continue to have. The next week was 'Finding Light While in the Tunnel'. There you go, two months ago already hoping the end will come to sight even as days were getting darker. And then the next two weeks were 'A New Dialogue' and 'Pay to Prevail'. These were discussions of various solutions we are seeking. And then we came out with 'Stop Swapping Air', 'Thanksgiving Perspective' and 'The Best of Times and the Worst of Times', all three of these messages were really hoping we can overcome this epic struggle by fearing the toll that it's taking. We kept considering in each and every instance, how are we going to get through this? And then we move to 'The Last Mile to the Last Inch', and last week, 'The Miracle in Brainerd', which, by the way, turned out to be an inspirational relevance to a number of people around the country as it became a story on the national news. This has really been a journey, you know that I know that we feel it. But you've done a heroic job in working through that journey. Many of you have done things that you may never have thought you could do to get through. For the front line healthcare workers, oh my God, my heart continues to go out to you. For the teachers who have been caught in the confusion of trying to educate our kids of vital and critical aspect of society, yet none the less confusing and sometimes scary. For all the essential workers, you've kept us going. We recognize you didn't have a choice not to swap air. You got put into a workplace because you had to be there so that people like me could continue living the life that I was living. We can't thank you enough. For the parents who struggled with the issue of school, who struggled with the issue of other family members being infected, thank you for hanging in there. And we need you all to continue to hang in there. And for all the rest of us, we've all struggled. No one, no one will get out of this pandemic without a struggle. And so we're all part of the journey. And now I have to say with honesty, calling the balls and strikes, we are now in our darkest hour. When you think about what's happening nationwide, things are dark in so many parts of the nation right now. A month ago, the state of California established a criteria, a set of rules, that would kick in if the county were to drop below 15 percent of their ICU beds being available. I remember at the time when that went into place wondering how long it would be before that unfortunate number would be reached. They implemented the rule on December 3rd. In less than a week, and just a week, they blew right past it down to zero ICU beds open. And now they're having to add ICU beds in halls, E.R.s, lobbies, tents, everywhere imaginable. When you look at what's happening in California, it is not isolated. With nearly three thousand people in Tennessee hospitalized with covid-19, their hospitals are reaching their breaking point, as reported by National

Public Radio this week. Hospitals are frantically constructing new covid units, while many of the alternative sites that they set up months ago to handle covid patients are empty because there's no staff to run them. Yesterday, The New York Times reported that the number of hospitals with full or nearly full intensive care units has doubled nationwide since the beginning of the pandemic. Currently, more than two in five U.S. hospitals with ICUs have reached occupancy levels of eighty five percent or higher. In many of them it's close to one hundred percent. You know, a month ago in my podcast and in my public statements, I predicted that hospitals would start collapsing in two to three weeks. There were people on social media who I guess thought I meant physical buildings collapsing, which, of course, hasn't happened. They've obviously gone after me for exaggerating the risk, but everyone knew what I meant. When hospitals are setting up ICU beds in parking lots, when they're bringing in freezer trucks for dead body storage, and they don't have enough personnel to take care of the patients that need care provided only by those personnel. If that's not the definition of collapse I don't know what is. We're there. These are true dark days. But now is the time to see and achieve the light at the end of the tunnel. As we will talk today, we do have difficult days ahead. And please don't assume we will go from the darkest day to the summer solstice overnight. We're not going to. Nor will our war with this pandemic be something that will just melt away. Nor will our war with this pandemic be simple, particularly until that day that most of us are vaccinated. However, I mean this from the bottom of my heart. We must keep remembering this is our time, and I will revisit that later in the podcast. Remember, this is our time.

Chris Dall: [00:11:46] So, Mike, let's start with these new sars-cov-2 variants, which were identified recently in England and South Africa and appear to be more transmissible. What do we know about these variants? What do we need to learn? And how concerned are you?

Michael Osterholm: [00:12:00] Well, recall, we've been talking about the virus, in a sense mutating, that term, that tends to be scary to a lot of people, since the very beginning of this podcast. Coronaviruses are not like influenza that go through reassortment. Rather, they continue to add on changes that occur because of mutations, deletions and certain genetic information on the virus. And because we have not had a previous pandemic with a coronavirus, we've not really understood necessarily how that viral evolution would play out with this pandemic. And only recently

have we talked about variants, those viruses that have continued to change genetically as to how they might impact the spread of the disease or even the severity of the disease. And there have been a number of papers written over the course of the past few months about previous experiences with a certain variant that became much more common in a given area and whether or not that meant that these variants were more infectious or were they in fact causing more severe illness? More often than not, we came back to the conclusion that what was really happening was the virus transmission was occurring in groups very vulnerable to high risk of transmission. Meaning the crowded living conditions or where they work, and that it had less to do with the virus itself. Well, now I think we've come upon a new time. We now have variants which raise serious challenge to one, can this virus get more infectious? Two, can it cause more serious illness? Three, can it avoid some of the testing methods that we currently use where we actually use certain genetic targets on the virus for the purpose of that test? And four, will it have some impact on how well our current vaccines and the immune response that we elicit from that vaccination actually protect us against these variants? So let me just back up a little bit and just kind of tell the story. On average, between five to 10 percent of all the sars-cov-2 viruses have routinely been sequenced in the UK overall, much higher than the rate here in the United States. And about four percent are routinely sequenced in the southeast England area since the beginning of the pandemic. From early October to that early part of December, over 50 percent of the isolates identified as the variant strain in southeast England. That compares to just a few percent at the beginning of the time period. And it was with the actual increase in cases that were occurring, even in what they called lockdown, and also seeing increased infections in 10 to 18 year olds, that actually highlighted the need to look at these from a genetic standpoint. And that's, in fact, how these were picked up. Now, if one looks at how these have changed, and I'm not going to go into the details of the twenty three mutations or the key 14 mutations results in an amino acid changes and deletions, but the bottom line message is, is that something very significant is happening in the UK. And this is why the concern was expressed as it has been on a global basis. I believe that the data are to me compelling, showing that there is truly an increased transmissibility of anywhere from 40 to 70 percent of what the previous virus strains were able to do. That doesn't mean that they get transmitted in different ways. It's just that they're occurring at a higher frequency, likely because people actually have a higher virus load. That is yet to be fully determined, but that surely makes sense. And right now, lab studies are ongoing to determine whether these viruses have different

properties than we've seen with others in terms of transmission. We don't have adequate information at this time to say, absolutely, yes, there's more transmission. But I believe in the end that this will be found to be the case. Also, there are studies going on right now to understand whether or not the illness is more severe in these individuals. Now, remember, when we say that there's no evidence yet of increased severity, most of these cases with this new variant have occurred in the first two weeks of December. So when we think about lagging indicators, and we've talked about this many times on this podcast, of the fact that you get infected today, you get clinically ill five to six days from now, you become seriously ill needing hospitalization, potentially five to seven days after that. And you still live for, unfortunately, only two more weeks. And at that point, you die. Well, if you look and put that entire time sequence together, we wouldn't know yet of what's happening in England with the severity of this illness for probably another couple of weeks. And we're surely seeing that as a lagging indicator of deaths in the United States with the big peaks that we see. So I think that the verdict is still out about that one with this particular variant. In terms of the vaccines and does it have any impact on how well it protects? The general sense by most is, is that no, it won't. In terms of at least causing vaccine failure. Today, there is more discussion, particularly among some of the molecular geneticists looking at this, suggesting, well, maybe it might reduce the level of protection. I think we have to be very, very careful here. We don't know that yet, but it is being investigated. And we do know that the companies, if need be, could actually re-do their vaccines for a new variant type and it could be done within a few months. That would mean potentially in the short term, if, in fact, this were the case. And again, I want to be very, very clear, we don't know this to be the case. If necessary, we have a few months potentially with a reduced level of protection from what we saw earlier with that ninety five percent protection. So these are all questions that yet have to be answered. Now at the same time that this was happening in the UK, and of course, as you know, cases have also been now seen in Australia, Denmark, Italy, Iceland and the Netherlands from this UK strain, we've also seen a situation occur in South Africa. And in South Africa, the virus variant there is 501.V2. This 501.V2 variant was first recognized in Nelson Mandela Bay, then spread across other parts of the Eastern Cape to the Western Cape along what is called the garden coastal route and into the southeastern part of the country. Since early November its been spreading rapidly as the second major wave in the country is now starting in it's southern hemisphere summertime. What we realize is these are different variants, but it appears that some of the same challenges that we see occurring in the

UK are occurring here. A preliminary manuscript is under peer review right now, but it was posted on a site launched by a network of laboratories, scientists and academic institutions in South Africa that have the aim of sharing data for public health responses. In this manuscript, and as well as information provided in the African Center for Disease Control and Prevention website, states that studies are underway to see if higher viral loads are associated with this variant, as well as whether it causes more severe illness. A number of health care workers believes that is the case. And again, the questions come up, with is there any impact on vaccine efficacy, antibody efficacy or even diagnostic test sensitivity? This is the beginning of a new phase of the coronavirus pandemic, namely that of seeing these variants developed that pose challenges from a standpoint of transmission and potentially from vaccine. Now, I will say right now, and I have no specific expertise to say this it's my sense, that we will show number one that there is increased transmission. There may or may not be increased severity, I think that there likely will be. I think we're going to show that younger age groups, particularly the 10 to 18 year old age group, are going to be more impacted by this virus than what we've seen before. Number four is if there is any impact on vaccine efficacy, I think that it will be somewhat muted. It won't mean that the vaccines won't work and we'll have to come back and look at that. And last but not least, these are going to spread around the world. I am quite certain this is spreading in the United States right now. Unfortunately, we have done a terribly inadequate job of genetic sequencing here in the United States. Just to give you an idea, there is a web area that we deposit genetic sequences for viruses and specifically for this one. Since December 1st, the US has published thirty seven sequences for the coronavirus in the US to this website. Meanwhile, the UK is deposited three thousand seven hundred seventy four. They've been way ahead of us. Even the South Africans have been. So we don't know what's going on in the United States right now, but it wouldn't surprise me if the variant is here. So what does this all mean? What it means is, is that we have to understand the importance of everything we've been doing to date to reduce transmission. All the discussion that we've been having doesn't change anything. Distancing, understanding layer effect. Don't swap air. The idea of public gatherings, people coming back into the public setting will only enhance this. And why is this so critical? Well, you know, from the very beginning we've been talking about why are we trying to do anything about this virus? And I think our last gasp effort to do something was always about don't let our hospitals collapse. And again, you're taking the term collapse from my perspective, as meaning the inability to provide high quality care. And as I just shared with you in the opening, as we see in so

many states in this country right now, the number of hospitals that are on the edge right now, states like California, Tennessee, a number of states, imagine if we were adding 20 or 30 percent additional cases for all the same kind of risk behavior that we were doing before. Now, I don't know that's the number. But when you look at what's happening in both South Africa and the U.K., where these variants have emerged, they surely give us a warning that this is now the time, it's now our time, to do even more to try to limit transmission and let the vaccines do what they can. And hopefully within the next week or two, we're going to have the information to say, no, the vaccines are still going to work here. But this is a huge challenge before us right now. So it's not insurmountable. It's not a fatal flaw to our plan to get to that sunlight next summer, next fall. But it means if there was ever a time now that we need to tighten up what we're doing, it is right now, right now during this season. We'll keep you updated on what's going on with these viruses and what this means in terms of our public health programs and what it means in terms of protection. And I also just want to emphasize that from a control standpoint, you're going to hear a lot of people being critical of "We should do this or do that, close borders", whatever. I would do whatever I could to slow down the transmission of this virus from coming to other countries in the world. I'm certain that the virus is here. It's going to spread here just like it is elsewhere and if the borders were closed down we might slow things down by a week or two maybe. The bottom line is we have to be prepared now to know that we could see a surge on a surge with the holiday season because of these. And this doesn't change our efforts, as I've said before, but it surely adds a new wrinkle to them. And we'll keep you posted. And let's just hope that we don't see the impact of these variants in a way that surely could happen. The other piece I just want to say is even if we get through these variants and we pick up our game, we're going to have new variants. New ones are likely to emerge. But again, remember, we're trying to get to the end of that tunnel. There's light there.

Chris Dall: [00:25:35] On the vaccine front, the US now has two authorized covid-19 vaccines after the Moderna vaccine was authorized by the FDA last week and the effort to get initial doses into the arms of health care workers and nursing home residents continues. Over the weekend, the CDC's Vaccine Advisory Board recommended the people over 75 and front frontline essential workers should be in the next group to receive the vaccine. Mike, what do you think of these recommendations?

Michael Osterholm: [00:26:02] First of all, I want to congratulate the ACIP for doing some very, very difficult work. It's clear that many people believe that they should be at the front of the line to get this vaccine. And we don't have enough vaccine to satisfy that demand when, in fact, you saw, even with the reduced number of doses coming into states per what had originally been anticipated, how many people express their frustration about the lack of vaccine. So this is a challenge. And for me, I think that they tried to balance the prevention of death, particularly in the older individuals, versus protecting essential workers who are on the front lines every day, and many of them impacted by the racial ethnic disparity that is really clear and compelling among essential workers. When I look at the age distribution, and one of the areas was very controversial, was only going down basically to seventy five years of age and older for a recommended vaccination as opposed to those younger, 74 and younger. If you look at deaths by age group for those 85 years of age and older, they account for thirty two percent of all the deaths in the US. If you look at seventy five to eighty four, that's twenty seven percent of all the deaths. So right there are fifty nine percent of the deaths from seventy five years of age and older. So it makes sense. However, if you look at the next age group, the sixty five to seventy four year old age group, there they have another twenty one percent of all the deaths occur there. Had you actually included that group in and actually made them part of the recommendation that would cover over 80 percent of the deaths. And so some thought we should go down to sixty five because when you get to the lower next category, 50 to 64, that accounts for only 14 percent of the deaths. And I say 'only', again, I want to remind all of us these are not 'onlys' these are our loved ones. But the challenge was in how to balance that off against essential workers who might be younger. And I have to say, I have a personal bias since I fit into that group, sixty five to seventy four, that didn't get picked right now. But I understand the logic and so I support it. I do think that it was a difficult call, but I can live with it and I just so can't wait for my vaccine turn to come up. Now I've surely been following what's happening across the country though, and for many of you who follow Twitter or social media are aware that there's an increasing number of states that are opting out not to follow the CDC's recent advice on the next priority group, particularly looking at just essential frontline workers and people over 70. Now, then many of these states, such as Florida and Texas leaders seem to be going to the sixty five year old and older as the next priority group and not emphasizing the essential worker groups that have been identified. You know, that's up to the states. I wish I could say I thought there was a right or wrong answer. I just hope that they all work quickly to get vaccine out, period. And

that we can actually make even one of these category groups something that gets moved up quickly because the group above them got vaccinated in every way we possibly could do it. Now, I remain very concerned about that. At the time of this podcast recording, we're still unclear as to what the federal funding might be to state and local health agencies to help get the vaccine out. We've got to have that last mile. We've got to have that last inch. We've talked about that before. We clearly need very well done public relations campaigns, educational campaigns to help the vaccine-hesitant understand what these vaccines are, what they mean and what we should do about them. What I'm concerned about is that we will have this initial surge of interest where we will get a number of people vaccinated over the short term, but then we can actually have more vaccine available and because of the vaccine-hesitant group, we'll see vaccine not getting used at all because we haven't helped them understand why they want the vaccine.

Chris Dall: [00:30:22] On last week's episode, we addressed questions on whether it's safe for pregnant women to be vaccinated. Mike, do we have any more information on this question?

Michael Osterholm: [00:30:32] Well, we don't have any more scientific information, but we do clearly have more consensus developing from experts as to what we need to think about with regard to this recommendation. Let me just start out by saying at the outset, I understand the recommendation that was made by ACIP, generally supported across the board by groups, that said, you know, as a woman who is pregnant, lactating or possibly going to get pregnant, we can't tell you is this vaccine safe for your yet unborn child. Or in the case of lactating mothers, your baby. So because we can't tell you, talk to your provider about it and see what they say. And I've heard from more providers who have said, why did they do that? I don't have any more information than anybody else. You're the experts. Tell us. Give us more. And so typically in public health, when we get difficult issues like that, the first reaction is punt. That's what happened, they punt it. But it's not that simple. We know that there are over three hundred and thirty thousand women in our health care system working day in and day out to provide care to patients or all other aspects of the health care system. And they're pregnant and they want to know, should I get this vaccine or not. You know, the most precious cargo I'll ever carry in my life is with me right now, I don't want to do any harm. But we know that the ultimate harm is getting covid-19 and possibly dying or being

critically ill in an intensive care unit. So I'm happy to report that a number of groups have come forward with what I would call recommendations that I think are useful and helpful. Both the American College of Obstetrics and Gynecology, often known as ACOG and the Society for Maternal Fetal Medicine, have put out useful and helpful documents that really attempt to lay out in detail what we know about the virus itself, and what it does to a pregnant woman, what we know about the potential vaccine impact. And in one particular document, which again is on this website, it's from the Society for Maternal Fetal Medicine, they really lay out the vaccine mechanism and administration and how that might impact either a lactating mother or a pregnant woman. We must remember that although exposure to a pregnant mother can occur throughout the nine months of the pregnancy, we focus often in that first month when fetal development is going under, very critical changes. And that's at the time when we are most concerned also about could a live virus infection or any other chemical have an impact on the very critical development of the fetus at that point. The Society for Maternal Fetal Medicine document details that the messenger RNA vaccines contain mRNA, a genetic material that encodes the sars-cov-2 spike S protein, the predominant immunomodulatory target associated with adverse effects. They point out these are not live vaccines and preclinical data suggest rapid degradation approximate 10 to 20 days by normal cellular processes. There is no risk, as they say, for insertional mutagenesis as the mRNA does not enter the cell's nucleus. In other words, there is no risk of genetic modification to people receiving the vaccine. This document goes on and talks about the fetal risk and also the side effects of the vaccine. The most useful document that I found actually comes right here from our own University of Minnesota. It's entitled The covid-19 Vaccination in Pregnancy and Lactation Recommendations from the University of Minnesota Maternal Fetal Medicine Group. And as I've discussed before in the past, when issues have come up around pregnancy, my go to person who has been really, I think, a real thought leader for me in terms of these issues, Dr. Sarah Cross who is an assistant professor here in the department OB-GYN and she's actually the medical director of The Birth Place at the University of Minnesota Medical Center. Sarah is a mother. Sarah is someone who I have found is very, very up on most current information and also can incorporate this and is an outstanding clinician. And in this document, which I'd urge you to look at, they detail all of the basic information that we know in a very easily digestible way. And their conclusions and I just want to report this out as written "Specifically for lactating people, the theoretical safety concerns of receiving the vaccination while lactating do not outweigh the potential benefits of the

vaccine. And thus lactating individuals who otherwise meet criteria for the vaccine should receive it similar to non lactating individuals". I hope everyone heard that. Lactating individuals who otherwise meet criteria for the vaccine should receive it similar to non lactating individuals. For all of those who are listening to this who are breastfeeding, take comfort in the fact that you are by breastfeeding doing the very most important thing you can to support the health of your newborn child. They go further into this document and they say, "We know that pregnant women who contract covid-19 are at increased risk of developing severe infection, requiring hospitalization and needing ventilatory support. The risk of fetal harm is theoretical for any untested medical treatment and this vaccine would be no different. We support pregnant women being offered and receiving covid-19 vaccine to help reduce the risk of adverse outcomes for you. But ultimately, the decision is up to you." So I can't say it any better. I think they set it very, very well. Again, that's going to be your choice. You have to do what you feel is right and be supported in that. At the same time, you're hearing from professionals who are mothers themselves about what this means. And so I, at this point, in light of the fact that we don't have all the information we'd like, we'd like to have had thousands and thousands of individuals vaccinated who are pregnant to look at the outcome. We don't have yet completed what we call the development or reproduction toxicity studies or DART studies that are animal studies looking at this that should be done in the next month or two. But I think in the meantime, based on the information I just shared with you, go look at these documents from the most outstanding professional groups in the business, as well as my own assessment, our own expertise here at the University of Minnesota. And I feel very confident that these vaccines not only can be used safely in pregnant women and lactating mothers, but also that they will save lives, both the mothers and the unborn babies. And to me, that's the benefit that I think is absolutely overwhelming.

Chris Dall: [00:38:06] So let's turn now to the U.S. situation. The daily new case numbers remain extremely high, and as you mentioned in your opening, the hospitals, especially in California, Tennessee, Texas, are stretched incredibly thin. But the feared post-Thanksgiving surge of cases does not appear to be as bad as feared in some parts of the country. So, Mike, what do you think is going on right now in terms of the epidemiology of the virus?

Michael Osterholm: [00:38:32] This virus, if it teaches no other lesson to all of us in public health and epidemiology, is the lesson of humility. I'm not sure I know. I have a good idea, but I'm not sure that I know. You know, you heard me throughout the course of these podcasts over recent months saying that I thought certain things would happen and they did. And I would give you my inning by inning assessment of where we're at, which today I think we are from the bottom of the fourth into the top of the fifth, and we could move quickly depending on how vaccine goes. But what happened around Thanksgiving was the fact that we did see this increased travel and unfortunatly we're going to see it again around the Christmas holiday season with up to eighty five million Americans now scheduled to either fly somewhere or drive more than 50 miles. That's almost 30 million more than did at Thanksgiving. And when we look at the upper Midwest, Minnesota, Iowa, South Dakota, North Dakota, Wisconsin, even if you can go a little further west into Montana and Nebraska, Wyoming, those were the areas that were what we call house on fire for lack of a better term, through early November, up to Thanksgiving. A number of efforts were put into place at that time by state and local health departments, governments, governors to limit potential human contact, restaurant closings, etc., gymnasium closings and cases began to come down. But I actually look at that and I see in some instances, these cases coming down almost a week or two before some of these were done. Now, I support every one of those actions that were taken. I will go on record here in Minnesota supporting what our governor did to try to keep the hospitals literally from overflowing with cases and here in Minnesota experiencing that same collapse. But I do have to acknowledge, I think that what we've seen in the first week in April, the second peak in July and now this peak, that there is evidence within these areas that the case numbers may start to bend. And I think what's happening is when they bend, I mean, they're coming down, is that they're these social networks. In other words, we don't call one hundred people in a room, have the same contact with all ninety nine people. We likely are close friends or colleagues to 12 or 14 or 18 of those people. And we may not even have contact with the other ninety or eighty five people. And social networks can play a very important role in how transmission occurs. And if you can shut down a social network from transmission and you accumulate enough of those, you can actually have a big impact. So if you shut down thirty five people out of the hundred I just mentioned in theoretical terms, that can have a much bigger impact than a thirty five percent reduction in the number of cases. And people who do high risk things together tend to transmit together. So if I'm going to bars frequently, I'm going to other public events that I may very well be part of a crowd that's

responsible for more transmission. And when you shut that group down, you can bring down transmission, but it doesn't stay. When those people go back to the risk behavior, just as we saw April peak, dropped. July a peak, dropped. And remember, every time the peak occurred, it got much higher. And every time the drop occurred, it got still much higher. I think the same thing could be happening here, and I would suspect and I hope I'm right that these states right now that have seen major increases in cases and deaths will, over the course of the next three to six weeks, start seeing the case numbers bend a bit. And I think the social network issue is there, but it's really important it doesn't stop the risk. There's nothing to say we can't have another peak in February or March that could be dramatic. And so I think that the challenge we have right now is keeping people on board with these prevention efforts, and I see day after day after day, pandemic fatigue and pandemic anger taking a bigger and bigger chunk out of what we should be doing to prevent transmission. And they're saying, well, look at the case numbers are coming down. Well, they're coming down for the time. I remember in Minnesota this past spring when we had case numbers at that time, the highest level, and they started coming down everybody said ah relax everything. And we've seen time and time again when that happens, we see this subsequent increase occur again. So I do believe that this very well could be the case. Now, if you add on the Christmas surge, I don't know what that's going to do. I know the super spreading events occur because of things like this. In Thanksgiving, I don't think it had a big impact in the upper Midwest. But I think if you look at the data in these other states that are hot now, it did have impact. And so you can't dismiss it. And we've actually detailed right here on this podcast written emails from people working in testing centers after Thanksgiving in which they said, "I can't believe all the people coming in who all got infected at Thanksgiving Day events". So that happened. Don't dismiss it. But at the same time, it may not have happened proportionally everywhere. What are we trying to do again? We're trying to keep the hospitals from collapsing. So if we do have a surge around the Christmas holiday travel. And if this, in fact, variant does end up causing more transmission in the United States and I don't know how it won't, I think it's going to. You know, we could be back in the soup pretty quickly. So we're not out of the woods yet at all with this, our darkest days could actually still happen. Now, clearly, vaccine is going to have more and more impact. But when you look at the projections for how much vaccine will be out even by the end of March, you know, it will only have a limited impact relative, the number of people who we want to get vaccinated. So I think we're at a very difficult time. Cases are still rising and getting much higher in twenty seven states.

Twenty three, they're high, but they're actually level or coming down, and in one it's staying the same, Hawaii. So that's your you're 50 states/the District of Columbia. Deaths are going up in twenty six states right now, climbing quite dramatically. If you look at some states like Tennessee, one hundred and thirty seven deaths per hundred thousand persons for seven days, that's as high as it gets right now. So I think we're seeing a series of different, you might say, regional epidemics contributing to the national pandemic. It'll be very important for us to understand what's happened over the weeks ahead. I urge you again, please do not let the holidays be a reason that you let your guard down. We're getting closer to those vaccines for everyone. We're getting closer to having people around the holiday table next year and the year after and the year after. If people want to accuse me of being the Grinch who stole Christmas, go for it, OK? I don't. All I care about is I want you around and I don't want to have a discussion with a family member who wants to know why one of their sibs brought the virus home and now mom and dad or grandpa and grandma dead. And we've had those conversations all too often. So I hope at this point people can understand that there are parts of the US today that are in the worst shape they've been. There are parts that are getting better. But all of us have to remember that we could be in much worse shape in just a few weeks, a few months ahead if we don't continue to do everything we can to protect ourselves. Stop swapping air, keep the distance, wear your mask. That's what's really important.

Chris Dall: [00:47:06] So we have a Christmas related email question this week, and it comes from Rita who asks, "Is it OK to share my homemade Christmas cookies, including krumkake, with my friends and neighbors? Is it safe to eat cookies given to me by my friends?" And just a note for our non-Minnesota listeners here, krumkake is a Norwegian type of cookie that's popular among Nordic people.

Michael Osterholm: [00:47:28] Well, Rita, I got really good news for you and I have a cautionary tale for you. The good news is absolutely this food should be shared. It does not pose any health risk and no one's lived until they have your krumkake. OK, I know that. So everyone should do that. The cautionary tale is the exchange. How does it occur? Don't go to someone's house and deliver the cookies and then stay and have a conversation and kind of catch up and all the things that you hadn't thought about, the cookies made happen. So as long as you do that same exchange process we talked about before. You know, leave them on the front porch or even just hand them to them

outdoors and back off 10 to 20 feet quickly, and then I think this is the best of Christmas. And I look forward to the day that this pandemic's over and I might be able to even borrow a krumkake from you and future Christmases. So that's what we're going to plan on. OK, so, Rita, thank you very much for that, that very thoughtful question.

Chris Dall: [00:48:40] We also have a holiday themed act of kindness from the Osterholm Update website. What can you tell us about it, Mike?

Michael Osterholm: [00:48:46] Yes, thanks, Chris. This this act of kindness comes from Nissa. And as I will read it, you'll I think, quickly understand the the magic of this act of kindness, she writes. "I'm a nurse midwife in the Twin Cities. A retired nurse on my labor and delivery unit offered the nurses, midwives and doctors virtual Santa visits for any health care family on our unit. Her husband is the perfect Santa with a real white beard, which he mentioned to the kids he keeps trimmed shorter this year so he can wear his mask properly. They set up a 10 minute Google duo, meetings with each interested family of the health care providers in our unit. It is lovely. My kids got to chat with Santa after being told earlier that we had to skip Santa this year. And better yet, instead of asking for money, they asked each family make a donation to their favorite charity. Many chose to send money to the local food shelf. Children of health care providers have to take the same extreme precaution as their parents because by default, they could put patients at risk. My kids know they stay home because of the mamas and the babies and mom's work. Virtually. Santa's visits brought a little normalcy and charitable donation. Win-Win for our kids and community. Thank you for your weekly updates that help educate and inspire the community". Thank you very much for that very thoughtful and kind gesture. Please let Santa know and his family how much we appreciate that. And also, the idea of being able to donate money to the local food shelf. It's hard to appreciate the fact that it's estimated today that one out of every 10 Americans is experiencing food shortage. If there was ever a time to be kind, this is it. And so this is the act of kindness that we're all talking about, and I am completely supportive of a massive pandemic of this act of kindness. And so keep them coming in. You have sent us some wonderful acts of kindness over the recent weeks, and we love reading them and talking about this. Thank you.

Chris Dall: [00:51:03] Just a reminder to our listeners that if you want to share your acts of kindness and contribute to that pandemic of kindness, please email us at

osterholmupdate@umn.edu. Mike, I'm looking forward to your closing thoughts today on this last episode of 2020, as I'm sure most of our listeners are. So what have you got for us?

Michael Osterholm: [00:51:23] Well, as you recall at the beginning of this podcast I talked about, now is the time. Now is the time to realize how close we are to the light at the end of the tunnel. Now is the time to realize what we must do to get to the light at the end of that tunnel. And you know, I've wrestled with this one, I want it to be a gift, I can't give you much in life except my words. And at the same time, this is a very personal situation. But I think it illustrates the moment. It's now the time. Let me tell you a story. And some of you know who have read my book, I talk about this. I'm the oldest of six kids. I was born and raised in a small town in Iowa. I was born to a family where my father who was a photographer for the local newspaper was a seriously troubled man from a mental health standpoint and from his alcoholism. He was a very violent man. I spent a better part of my childhood as the oldest of six kids trying to protect my siblings from him and my mom. In October of my senior year of high school, I came home from a football game that night, we had won. I had played. And I found my mother on the kitchen floor. My father had beaten her to within an inch of her life. And I had never, ever done anything to him other than just in a defensive posture, tried to cover myself when his fist would get thrown. He had a terrible habit of when he got drunk, he'd come upstairs when I was sleeping and I'd wake up to him pounding on my head. I always hated the night time like that. This particular October, it was it. I could do it no more. I literally went and found my father and physically threw him out of the house. And I told him he was never welcome back again. He left town within a day and our family never saw him again. From that October to that Christmas, it was tough. Financially, my father was largely the sole breadwinner, even though he drank away a lot of his weekly paycheck. My mother worked as a nursing assistant at a long term care facility at nights just to try to help make the budget meet. Well, between that October and Christmas, that December, it was tough, very tough. I remember two of my sibs who, because the size of the feet didn't work out real well, we didn't have any boots for them to wear. My mother couldn't afford to buy new boots. Having to send my sibs to school with bread sacks over their feet in the snow with rubber bands to keep them up. That was hard. Christmas came and the week before Christmas, we had no tree. We were just trying to have enough food on the table and obviously, it was a tough time. A very tough time emotionally in ways that I can't even begin to explain, some of you

understand exactly what I'm talking about. You've been there. You felt that. You know that pain. But as some of you also read my book, know that I was very blessed to be adopted, in a way, by the wife of the owner of the newspaper where my father worked. Nana, her family name and who I dedicated my book to in 2017, was a renaissance person in every way, multilingual. She's the one that got me into this business because it was her that provided me with the copies of The New Yorker. When they would come, I would get to read her copies in which the Annals of Medicine articles by Burton Roget were medical who done it stories that in fifth grade I knew this is what I wanted to do. I wanted to be like that. And she was such a incredible force in my life. And to the extent the life of my family. Three days before Christmas, a letter arrived. I knew it was for me, it was her typewriter. All said was Merry Christmas in an envelope and it had fifty dollars in it. The most important fifty dollars I will ever know in my lifetime. My two sibs got boots that day. We bought the last Christmas tree at the local grocery store, it was a pretty scraggly one, but it was a Christmas tree. And we each got very cheap, but absolutely incredibly meaningful presents and Christmas took a complete turn and that one letter. But it still was very troubling to me. I was still pained by all that was happening. Angry at my father for what he had done to us and how he had done it. And then on Christmas Eve, another letter came. This one from Nana too, but she signed this one. And it was to me, the many letters she used to send me, talking about the future and how this Christmas would not have to be like this again. And that now is the time to know that. And she sent me a poem from a book that was yet unpublished by MacKinlay Kantor, I was kind of a poet laureate and Nana had struck up a relationship with him and they exchanged things and he actually sent this to her before it actually was published in the book I Love You, Irene, which was kind of autobiographical yet novel written about his relationship with Irene. And he talked about an experience that they had had, which was tough. And in this book, he wrote the following and Nana shared this with me, "My child, you will see many strange things. You'll watch holly berries wither and freeze while the nettles are pressed tenderly. The good deer will starve in icy thickets when the rat grows portly amid his corn. You will see the inspired creator neglected and his smug imitators extolled. Heroic nord and presumptious coward, foetid richly. These you will observe. The shyster shall dwell long in luxury. The diligent and dependable will fall early. And on the dole, a kindly nation may shiver in terror of the iron harshness adopted by its neighbors. Bright universe eclipsed. Black tarned guilded by a prominent sun. You see your future so. And yet in their season, the candles will be lighted again, the cone smell pungent. Men may sing with the tongues

and throats of angels amid the saintliest frost. There is time now for consideration of the noblest fairy tale of all, if one be willing to believe. God rest ye Mary in the midnight clear". MacKinlay Kantor. Now it's time. For all of you who've had such a horrible, painful year, now's your time. For those of you who are lonely today, and will be lonely over the course of this week, now is our time, for those of you who have lost loved ones, now is our time. We have to remember that in the saddest of moments for those who have lost loved ones this year, whether it's from covid-19 or other causes, Christmas is going to be tough. But you know what? I learned that lesson that Christmas. Fifty dollars changed a life around of six kids and a very scared, lonely mother. One letter gave me a lifetime. A belief in what the now moment meant, yes, the time is now. We can do this. We're going to get through this together. We are. We got to get to that vaccine. Now is our time to commit to that. Now is our time to understand that we're just about done. But we got a few more months to go and we've got to make that work. I do believe more than ever now is the time for consideration of the noblest fairy tale of all, if all of us are just willing to believe. So I leave you on this Christmas holiday without regard to what your religion or your beliefs are, without regard to what this holiday means to you from the past, it's all about now. I thank you for the Christmas gift that you have given me day after day after day in sharing these podcasts with you. The response has literally been like that fifty dollar bill coming into my house day after day. Thank you. I wish Nana could be here. She unfortunately died many years ago. You would like her a lot and she would like you. Merry Christmas. Stay safe. Please keep up the acts of kindness. And I look forward to next year when we're going to make this so different. So different. Now is our time. Thank you.

Chris Dall: [01:01:52] 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. The Osterholm Update is produced by Maya Peters, Corey Anderson and Angela Ulrich.