

## Episode 34: The Best of Time and the Worst of Times

**Chris Dall:** [00:00:05] 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:** [00:00:41] With Thanksgiving in the rearview mirror and a prediction of a surge upon a surge of covid-19 cases occurring in the coming weeks, the country is staring at a long, dark winter. But the light at the end of the tunnel is starting to appear. In the next few weeks, a Food and Drug Administration advisory panel will begin reviewing data on two covid-19 vaccines and authorization could come shortly thereafter. Though the pandemic is a long way from being over, the beginning of the end is in sight. On this December 3rd episode of The Osterholm Update, we're going to discuss what comes next in the vaccine authorization process, what the early rollout of vaccines might look like, and how the arrival of vaccines could impact the trajectory of the pandemic in the coming months. We'll also examine how Thanksgiving travel and gatherings are going to affect case loads in the coming weeks, explore how parents should talk to children about the pandemic, answer a listener email on quarantines, and highlight some acts of kindness from The Osterholm Update website. But first, as always, we'll begin with Dr. Osterholm's welcome and dedication.

**Michael Osterholm:** [00:01:38] Thank you, Chris, and welcome to all of you again to another episode on the podcast here. I want to begin by first thanking you in a post-Thanksgiving note for all the very, very kind emails, cards, all the different things that arrived. It was really very, very much appreciated. I have to tell you, and not just on my behalf, but that of our entire staff. And so thank you for that. I can't begin to tell you how much it meant to us. A number of you shared with us truly remarkable reasons why we need to be thankful this year. And it's a very important reminder that as it is dark in the tunnel right now, there is light at the end of it. And that today we'll be talking about, in a sense, the best of times and the worst of times with the idea we're heading for the best of times. And one of the reasons we're able to do that today is, in fact, because of who

I'm dedicating this podcast to. And that is the scientists in the private sector and government, places like the NIH, the FDA, academia, the pharmaceutical companies who are bringing us these vaccines, literally what I consider to be, in a sense, the miracle. One that we need right now to deal with this pandemic. And so thank you to all of you for the work you've done and for the creativity, the very difficult hours and efforts you put in, particularly in the past year, to get us these. These are really going to be the game changers. And so I dedicate this to you. I also want to add one last note here that I want to thank everyone who has sent me comments about being on the Biden/Harris Transition Team Advisory Group. And I just want to reassure you, because some of you wrote in and asked this again, these podcasts will continue. That was surely one of the issues that I wanted to be certain of before I agreed to do this, is that I would be able to continue to do these. And I am. But in that light, I just want to make it clear I don't speak for the Biden/Harris Transition Team. I am very respectful of the work that's going on there and my role in providing input. But the comments on today's podcast are mine and mine alone.

**Chris Dall:** [00:04:01] So as we discussed last week, while many Americans skip Thanksgiving travel and gatherings, there are many who did not. Data from the Transportation Security Administration showed that nearly 7.5 million Americans traveled through U.S. airports over Thanksgiving week, and that's just air travel. White House coronavirus officials say people should assume they are infected and should get tested immediately. Mike, how do you think Thanksgiving is going to impact covid-19 case numbers, hospitalizations and deaths in the coming weeks?

**Michael Osterholm:** [00:04:27] This is a challenge. It's a challenge to talk about this topic because it reflects, I think, a sense that as a population, at least for many, we still don't get it. We still don't understand what's happening. On Monday of this week, we reported one hundred fifty seven thousand nine hundred and one new covid cases. Eleven hundred and seventy two deaths. These numbers are surely skewed by what's been happening with the holidays and who's getting tested and how test reports are coming back. But it's notable on November twenty fifth, we hit twenty three hundred and thirteen deaths and on November twenty seventh we had two hundred and five thousand four hundred sixty new cases reported breaking that horrible two hundred thousand cases per day number. When we look at hospitalizations, as of Monday there were ninety six thousand thirty nine covid-19 patients in US hospitals, up from ninety

three thousand just the day before. Clearly all the trend lines are absolutely in the wrong way right now. And so to ask what might happen with Thanksgiving, we have to understand that of the 50 million you talked about, having confirmed this with AAA, many of these 50 million were people who took car rides to their Thanksgiving destination not airplane rides, but nonetheless, they were still with multi-family units for celebration. We know of many of those. And even to the point, I was stunned by the fact that I learned of one senior public health official in this country who had made a very specific plea about not getting together with others outside that immediate bubble you had for Thanksgiving. Nonetheless, they drove some distance to be with multiple family members. You know, I don't know what the disconnect is here with people who should know and still do that. At the same time, I look at all the others who said, "Well, you know, it's just been an inconvenience. It's been too long away from others". Boy, do I get that. You know, I was bubbled up in my house, never left for Thanksgiving Day. I did virtual Thanksgiving with my kids and grandkids. My partner and I had a wonderful dinner together, but understood the risk of what being out in the public and with others who we even love and know, what that could mean for transmission. I raise this right now because what's happening is that we're seeing an evolving epidemiology here that I think does not bode well for the future. And what I mean by that is that if you look at what's happened in the upper Midwest, we're actually seeing the number of cases beginning to drop here potentially. I think it's too early yet to conclude that this is actually what's happening before the potential Thanksgiving surge. But if you look at over the course of the past 10 days in Minnesota, Wisconsin, Iowa, North Dakota and South Dakota, we've actually seen some reduction in new cases. But let's put that into context of what's happening around the country. Right now, there are thirty seven states, including the District of Columbia, where cases are higher and staying high. That's a population base of over two hundred and eighty two million people. There are 11 states where cases are higher yet in that high level, but they're going down. That is only thirty nine million people. And if you look at the three states where cases are low and staying low, that is three point three million people. So the vast majority of the US population are in locations right now where cases are actually really high and going higher. And I think California is a good example of that. And just to show you how important just one state can be with a population base, California has a population of thirty nine million two hundred fifty thousand. That compares to 16 million in those five Midwestern states I just mentioned. So, you know, almost two plus times the number of people living in California and now they are beginning to be a house on fire. And so

even though we may see a slight reduction in the upper Midwest, nationally the numbers are still really, really going up. And I think that this Thanksgiving event is going to be like a super spreading event and that we will very likely, in seven to 10 days, could be seeing the number of cases increasing substantially. We'll have to wait and see. But there's nothing that would tell me that that's not going to happen. Why I'm so worried about that is we have a number of our hospital systems right now which are on the brink literally, of not being able to take care of additional patients. And as such, it brings us back to the fundamental question, why are we doing what we're doing right now to reduce cases? What I mean by that are all the orders in place by the different governors, different mayors, you know, what has been considered sheltering in place, business closed, that terrible term in some states is being used "lockdown", that I feel like every time I say that word, it's like a piece of barbed wire going down the middle of my throat. And the whole purpose, I think, right now is we have to understand is we're just basically trying to save our health care systems from potential collapse or at least being severely compromised to the point that many patients will be either rationed care or should receive substandard care. We're not talking about it like the Asian countries have been talking about it in terms of trying to get us back to normal. We're just trying to beat this thing down to get so that our hospitals can function and our health care workers can continue to do their jobs, even though they are really, really, really tired out and if anything, beginning to see an increase in incidence of post-traumatic stress syndrome. So if we add on another 10 percent or 20 percent of cases beyond what we have now in the next several weeks among this large part of the country that's seen this real increase in cases, this is really scary. I mean, I don't know how else to say, it is scary. And then if we slingshot that into the Christmas holiday season and if we don't see changes in how the public responds to that holiday season in contact with family, that could be the triple whammy. And so today, I'm telling you, just as I did weeks before Thanksgiving when others were not saying this, please don't get together with those outside of your immediate pod. And please also think about what it means to have a pod. You know, I realize this could be very confusing, but it goes back to that term that I want all of you to start using. Stop swapping air. Wherever you have people that come together, if they're not bubbled up with you and have no other outside context and you swap beer with them, that means being in the same room where you're exchanging air like that, you're putting yourself at risk. Now is the time to think about the remainder of the holiday season whether it be Hanukkah, Christmas, whatever. Please understand what you're doing. You're putting your family again in jeopardy. And I know this will not

be satisfactory. This is going to hurt. It's going to hurt me. You know what? For thirty eight years, I have read The Polar Express on Christmas Eve to my kids first since they were little kids. And I continue to read it to them as they were adult. And when the grandchildren came, it became even more special on Christmas Eve. This will be the first year in 38 years I have not read in person the Polar Express to my kids or grandkids on Christmas Eve. This is hard, but all of us have to understand why we're doing this. Now, I'll do it virtually. All of us will have to find ways to do things virtually. But if I could ever help empower you, if I could ever be that voice in your ear saying this is not the year to do this, I know how lonely we are. I know grandma is alone. I know that this is very, very hard, even painful. But I fear desperately we will slingshot ourselves into a whole new level of cases, and it's so unfortunate, that it's just before the light of dawn with these vaccines coming. Hold out just a little longer. Now's the time to plan the holiday season where you don't swap air with anyone other than those who you know have not been exposed to anyone else that could potentially expose you. And please don't think that just because I know these people, I could have four or five people over for Christmas. I can have my kids or grandkids. I know we're going to see tragic stories coming out of Thanksgiving. We don't want you to be part of that tragic story. So what we're trying to do right now is we're trying to keep all of you safe. We're trying to keep you in a place where you're healthy and you're just waiting for those vaccines to arrive. And we're trying to keep our hospitals from collapsing. And let me just say one last word here again, because as you know, with the fund that we started several weeks ago, the Front Line Families Fund, which is to help take care of the family members of health care workers who have died of covid-19 infection. And again, I urge all of you, if you can please go online, take a look at that [frontlinefamiliesfund.org](https://frontlinefamiliesfund.org), help if you can. But even if you don't do that, if any of you know health care workers who are working right now, now's the time to send them emails, notes, you know, send them gifts in the mail. Just thanking them for being there. As someone very near and dear to me, who is an intensive care nurse, said this past week, please remember we're not the front lines here. We're the last line, we're the last one you have and they're running out. So I just leave it with the fact that we're in a bad, bad place. We are seeing case numbers increase in ways that are, frankly, our worst fears. If we don't change our activities for the holiday season, as we did for Thanksgiving, we will be basically bringing a gas tanker full of gas to put on the forest fire. And I can't think of it any more succinctly than that.

**Chris Dall:** [00:15:38] Now for an update on vaccines and some of the good news, the FDA's Vaccines and Biological Products Advisory Committee has scheduled meetings for December 10th and 17th to review the data on the vaccines from Pfizer and Moderna. And the CDC's Advisory Committee on Immunization Practices this week voted on recommendations for who should be first in line to get the limited initial doses. Mike, what's your sense on how soon we can see these vaccines authorized and what the initial rollout might look like based on the advisory committee's recommendations?

**Michael Osterholm:** [00:16:08] The very fact that we're talking about this is so exciting for me. This is a measure that we are on the right path, that the fact that we even have an advisory committee on immunization practices making recommendations. In just a few short days, the FDA's Vaccines and Biological Products Advisory Committee will be considering two different vaccines, one on December 10th and one on December 17th, says we're there, we're getting there. We're really getting there. Last week we talked about what had been a draft paper put out by the CDC suggesting that at that time the ACIP would likely support health care workers and essential workers. I understand the logic behind that, and I also understand the logic behind this one. I salute them for a very difficult decision. The vote was 13 to one to support health care workers and those living in long term care facilities to be first in line. That includes twenty one million health care workers and three million residents of long term care facilities. We know that both of these groups have been severely impacted by covid-19. Among the health care workers, it's interesting that seventy five percent of those twenty one million are women, many of them nurses or parts of other aspects of the health care team, including janitorial staff, etc.. It's still unclear what's going to happen with about three hundred and thirty thousand of these women who are currently pregnant and what the recommendations will ultimately be for them. The FDA is still looking at data from the two trials to ascertain what they might about pregnancy and how that might be handled. But I commend the ACIP. I think that the FDA and their process they're using right now through their committee evaluation, both external committee and internal activities really are outstanding. So it's coming. It's real. Our big challenge now is understanding, of course, how will we roll out such a vaccine and when will those doses arrive?

**Chris Dall:** [00:18:32] And it seems that one of the other big challenges with these vaccines will be the rising vaccine hesitancy that we're seeing here in the US and elsewhere. Then on top of that, you have concerns about how quickly these vaccines

have been developed and tested and about the safety of this new messenger RNA vaccine platform. So how should public health officials address these concerns?

**Michael Osterholm:** [00:18:53] In a perfect world, we'd have twenty five years worth of experience with these vaccines, we would have had many, many millions of people who had received the vaccine and had years of experience following that vaccine receipt in which they showed that they were well protected against whatever it was they were vaccinated against and that they had no safety adverse events occur. We don't have that. We live in the real world of where right now we have a very dangerous virus that is unlike any crisis we've had since 1918. And we don't have that perfect answer that gives everyone all the information that they insist they need. But we have a lot of information, and I think that's what's really important. So what are we up against in trying to share that information we have and the outcomes that we intend and believe are most important? The Gallup poll conducted a survey that was released on November 17th. And it was across the United States and done in their typical and outstanding survey fashion found that about 58 percent of Americans said they would get a covid-19 vaccine. The problem was that left 42 percent that wouldn't. And of the wouldn'ts, there was really a degree of those who were absolutely adamant, no. And those that were unsure. And we have a lot of work to do here because vaccine hesitancy is surely a well known problem that we've had in society in recent years for other routine immunizations, childhood vaccinations for which we have tremendous track record data on safety and effectiveness. And one of the challenges you just mentioned is, number one, these are new vaccines, the MRNA vaccines, or the messenger RNA vaccines, such as the Pfizer and the Moderna vaccines are new platforms the way to make vaccines. We do have data that supports that in a limited number of individuals prior to these trials that in fact, the safety profiles are quite good. We have had RNA vaccine trials in humans for CMV virus, for zika, influenza, rabies and for chikungunya. In addition, it includes a large number of cancer vaccines and therapeutic approaches that have been based on messenger RNA. So this is not a brand new platform. I think that's important. Now, what I have loved it had one hundred million more people having had it so I could convince you with more certainty? Absolutely. But I feel very confident right now that these vaccines overall have a relatively exemplary safety profile. I'm not going to sit here and tell you that there never could be a potential adverse event. But I can tell you that in relative proportion to your risk of dying from covid, there's no comparison. I would absolutely take this vaccine

myself if it were available tonight. As I said before, I can't wait for my loved ones and I to be in line at our appropriate time. I surely don't want to get ahead in line of those who have a much higher need for the vaccine due to occupational exposure or because of their increased risk for serious disease. I can't wait to get this vaccine. The same thing is true if you look at the AstraZeneca vaccine made with the chimp adeno platform. This is a vaccine that actually we have a lot of experience right now with Ebola. There have been many clinical trials that have validated the safety and strength of chimp adeno vectors in humans, as I pointed out, again, used in Ebola in Africa with no serious adverse events, even in children. So at this point, what's our challenges? Well, the first thing is we have to tell the story of Operation Warp Speed. We have not told that story. What people have heard are almost screams from behind the research lab bench. This idea, Operation Warp Speed. I understood at the time that it was named people thought that it was catchy and so forth. I don't think anyone was a communication expert when they made that term up, because what it plays out here to people is something warp speed. How could it be safe? How could you be careful? And again, I come back and defend the process of how these vaccines were developed. I give great credit to the research scientists, as I pointed out earlier in my dedication, both from the private sector and from government. I have tremendous appreciation and respect for the vaccine regulatory science experts at the FDA. I'm convinced they're going to do an outstanding job in review of these vaccines. I feel very confident in them from that perspective. So at this point, our problem has been we've not told our story. We have failed miserably as a country right now to actually mount a proactive public relations campaign, for no other word, campaign, to number one, explain to people how these vaccines came about and why the shortened timeline didn't mean anything about shortcuts in safety. Number two is that we have to explain to them, while these are different kinds of vaccines, they represent an advance in modern medical technology. And we shouldn't be frightened of them any more than we're frightened of new cancer drugs or any other kinds of new therapeutic agents that come out. New vaccines. For all of you here who have ever suffered shingles. Remember the old vaccine that protected us about 50 percent of the time and you still got shingles and boy, did it hurt. Oh, man, did it hurt. And today, we have a vaccine that protects you almost 100 percent of the time. That's technology advance. That's what we have here. We have to understand that. So it is really critical that the federal government immediately launch a federal, state and local based campaign to educate health care workers so that they, in turn can provide adequate information that's based on data that they can actually show people. I can't tell you how

many people I've had talked to me just in the last several weeks with their doctor said, "Well, I'd wait a while. Let's just get this out there and see what happens with it". Do you know what that wait to while means? That wait a while means you could be dead. And I don't want that. You don't want that. Your family doesn't want that. So we have to help share the context of what these vaccines can do and why you want to get them. Now, having said that, we also have to be very candid about them. This vaccine are going to cause significantly noticeable side effects in terms of the first day after exposure. We know that up to 10 to 15 percent of people can actually end up suffering from redness and pain at the injection site. And some can have fever and chills, muscle aches and headaches. That's a small price to pay for avoiding a covid infection that could kill you. So, but we should be upfront about those and say that's likely what's going to happen. And frankly, if you get one of those reactions that's telling you that the thing's working. So my message right now is, please, we need a national campaign that we all can get behind to help explain these vaccines. If I had a nickel for every time I heard a rumor about these vaccines were just absolutely not true, I think I could take us all to dinner tonight, of course, distanced. And I just hope that we launch that soon. Now, the hope is that CDC is going to come forward with a new campaign, vaccinate with confidence, and that this will be information. This should have been out there a long time ago. The fact that it's not, you know, we can't change that, but we can change now to do the right thing, to get it out there. And I hope all of you who are on this podcast to hear this, you know, I'm a skeptic by nature. I'm one of the ones you heard in the podcast earlier this fall, was very concerned about some of the FDA procedures around approving things like hydroxychloroquine. You know, just try to call balls and strikes. This is one where I do see light at the end of the tunnel. And please, I hope all of you avail yourself to these vaccine when it's your turn to get it.

**Chris Dall:** [00:27:51] Obviously, the vaccine news is incredibly exciting, but the initial doses will be limited and only a fraction of the population will be getting immunized, so the pandemic won't immediately be over. So, Mike, what does life look like and what are some of the next questions we have to answer once we do have a vaccine?

**Michael Osterholm:** [00:28:10] Well, the first thing we have to understand is that while the vaccine is going to be coming soon to our areas, we still have a lot of work to figure out how to deliver these vaccines, how we will effectively work with hospitals, health care facilities, health plans, the private sector who will be administering the vaccines

and many of our long term care facilities. A lot of questions yet about that. So that's that last mile. That's not what I was just talking about. What I was talking about is kind of the first four miles of a five mile bridge. That's the part of the research development showing that the vaccines work, manufacturing them. This last mile is critical. Turning a vaccine into a vaccination is the ultimate final answer. If you don't have that, you don't have an answer. And so we have to keep reminding ourselves of that. One of the challenges are going to have and I worry about this because this is kind of being discussed in almost an offhanded way about when will vaccine arrive. I watched in 2009 when at that time there were a number of statements made by a variety of different individuals about the arrival of the H1N1 pandemic influenza vaccine that surely were not based on what I would call realistic estimations at the time. And it didn't arrive for almost six weeks after what had initially been the estimated date of arrival. And people were very upset. They felt that somehow the system had failed them or broken down. The problem we ran into was the fact that it took longer to make the vaccine than we realized it would. And so the failure in communication here of not allowing for that possibility that it wouldn't be there quite on a date, but a general range caused problems that were, in a sense, unforced errors. I hope we don't do that with these vaccines. Right now when we look at the amount of vaccine that we might have by the end of the year, we will be able to vaccinate about twenty five million people. Now remember, there are twenty one million health care workers and three million long term care facility residents, that's about the twenty five million people that could be vaccinated. Remember, that's 50 million doses. It takes two doses for one person. So that's what we're expecting yet in this year. Now, I don't believe that necessarily by January one, we're going to have all those twenty five million people vaccinated. I think it's going to take longer than that, particularly as we're trying to vaccinate into hospitals right now where everything is already in great turmoil. How to find people to actually help vaccinate, how to vaccinate people who are working 16 hours a day and now may have a sore arm, developed a slight fever, that's going to be a challenge. So I don't think that's the case. What I don't understand and I don't think anyone I've talked to can give you a straight and clear answer is how much vaccine can we expect by month in 2021? We keep hearing about by the end of the second quarter, sometime in there. Both Pfizer and Moderna actually have international obligations on their vaccines as well as national with us. And so while they may be able to produce collectively, Pfizer 1.3 billion doses by the end of 2021, Moderna is talking about five hundred million to a billion doses globally in 2021 also. If you add that up, that's about two point two billion doses at most, which is about one billion people. Well, that surely

should take care of, you know, the United States. I raise another issue with that, though, because it then also becomes really critical to understand what will happen with the rest of the world. As an infectious disease epidemiologist, I can tell you, if we have many countries in the world where this virus transmission is still going largely unchecked, it will be a constant threat for us here in the United States in terms of the virus coming in with people who, unless we're going to force quarantine everyone for X number of days under kind of watchful eye in a almost a containment like facility, we're going to keep seeing the virus come in. And I don't have any hope that we're going to vaccinate the vast majority of this country. I think if we get seventy, seventy five percent of the country vaccinated, I think that'll be really quite an accomplishment in those first months. Well they're still going to be a lot of people that could become infected. So we need to really understand we have an international obligation here. And this is not just about being altruistic. I like to think we are that, we should be that. As a nation, we should be part of COVAX, the international vaccine program that's been developed with WHO and a number of foundations so that we do take care of the rest of the world as well as us. That is the only way we're really going to successfully suppress this virus. So I will continue to push hard for an international response that is comprehensive, that is equitable around the world, whether you're a high, medium or low income country and just know that, yes, it is the right thing to do from what I believe is a human rights and just a good citizen standpoint. But it's also really smart from an infectious disease epidemiology standpoint to take care of this. So at this point, I'm kind of setting my calendar towards sometime in July maybe I can take my grandkids back to the Twins game. What will be one of the greatest days of my life. So I hope we all can set our clocks around that, but now it's going to mean we got to make sure people take the vaccine and then get ourselves protected that way. One other thing that I want to add that we're going to have to understand in trying to get back to our new normal with vaccines, is how are we going to handle some of these difficult questions that I'm about to share that are kind of what I say, how do we crack this nut? If we are going to open things up again, as we all want to be, whether it's the economy or everyday recreational activities, seeing our family, how are we going to deal with the history of vaccination? Will we want proof that people have been vaccinated to be in public places? Will immune status, meaning you have antibody, be something we look at? We surely have said immune passports were not the way to go. How about masking and distancing? How will we think about that? At what point will we decide that it's no longer necessary to have a mask on? Will we decide that? How will we know about if it's OK to open up

theaters and actually sit next to somebody again or go to restaurants and not worry? How will we consider that again with the rest of the world if they're still having widespread transmission? What will happen? And how long does my vaccine work? What do we need to know about if I need to get boosters? I raise these questions not to answer them at this moment, but let's not wait until next spring and to get then into this kind of harried situation, let's start thinking about it now. Let's start thinking about how we're going to do more vaccine trials with additional vaccines coming down the pike where we may not be able to have a placebo controlled trial because some old judge that is unethical. How could you give somebody an inert substance when we know we have vaccines that work and the outcome of them getting infected could be death. So we haven't been real good at taking these questions on except in almost a partisan manner of which, you know, imagine having this discussion about masks, base cough coverings, and not having it be partisan and saying now is the time that we can actually talk about this and say, OK, should we say at some point, some given endpoint, that is no longer necessary and do it in a scientific and non emotional way? Or what do we need to do about distancing? How do how do we do that? So I raised this not to be provocative at this point, but I worry that we've done too many things right at the last minute that have made them rushed, made them challenged. And at this point, these are going to be issues next summer when we're going to have to confront these. Now is the time to start thoughtfully thinking about them. Bringing in everyone, you know, open up for a lot of people to input in this and then see where it takes us and go from there.

**Chris Dall:** [00:37:28] Our listener email this week comes from Deb, who asks about some changes the CDC is considering, according to media reports, regarding the quarantine period for people with covid-19. Deb writes, "Can you comment and share your opinion on the CDC's possible recommendation to shorten the quarantine period for covid-19? Do you think this move is wise? Does the scientific data support this change?"

**Michael Osterholm:** [00:37:50] We have to remember, just 12 months ago, we'd never heard of this disease. We had no idea for many of the issues that we've had to make recommendations that we were going to have to do that and they would somehow be carved in stone for the remainder of the pandemic. This is one of those ones where I think initially the recommendation for this more extended quarantine period was justified based on what data we had. And I mean by data, both from a scientific standpoint, in

terms of shedding of the virus, but also from a practical standpoint of what people could or will do to protect others from becoming infected if, in fact, they themselves might become infected. And I think we're at a point where we need to go back and look at this again and understand that what may be most practical isn't going to be scientifically sound one hundred percent of the time. But it may in the end, actually have a much greater impact because I might be much more likely to actually adhere to quarantine for seven days, 10 days, than I would 14 days. And in the end, that may have much more impact on overall transmission because we know that transmission tends to be front loaded on these infections, meaning in those two days or three days before you get sick or in the earliest period, should you test positive. If we look at the data, there are several studies now that have done what we call systematic reviews or meta analysis that found that if they collect all the studies that have been out there, that there's a mean incubation period of six days that basically says that that is by that point, half of the people will have already developed symptoms if they're going to become ill, and that only in one study that presented a 95 percent confidence interval, meaning you know, what's the chances on either side of very early days or more days of quarantine are necessary? Only one study found that it extended beyond 10 days. I think based on the data that we have right now, I think if you had a quarantine that lasted seven to 10 days and you had a negative test at that time, during that seven to 10 days, it should really identify the large, large proportion of cases that might be infectious. Not suggesting it's foolproof, but I bet you more people would be willing to adhere to that quarantine, which in the end would actually stop a lot more transmission. So I support CDC looking at this. You know, I've talked to a number of my colleagues, we all agree that really what we're trying to do here is have the most impact on transmission and that's getting more people to comply with those early days when they might not be sick even or in the earliest days of their illness to isolate themselves. So I think this is a great idea. I support it and hope that, you know, it becomes a part of our public health program soon.

**Chris Dall:** [00:41:10] The CDC also has recommendations for how to talk to children about the pandemic. Now, this isn't something we've discussed previously on the podcast, but it's become more pertinent as the number of people affected by this pandemic increases. What do you think of the CDC's advice and what would you tell parents?

**Michael Osterholm:** [00:41:25] Well, as a grandfather and a parent, I still consider this relevant to me. Let me first of all, just start out by saying I want to remind all the listeners that on October twenty ninth, ironically, the twenty ninth episode, I actually did a review of many of the recommendations for getting through this pandemic, many of them related to our mental health, to what we could do to improve in our everyday lives. And I'd refer you back to that October 29th podcast because it was quite an exhaustive list. But one of the ones that I think is really important as this pandemic continues to rage on and unfortunately, more and more of us are losing loved ones where death with children in itself is a challenge, regardless of why or how. But in particular with this disease as it's on the news all the time, it's being talked about a lot, it's caused such heartache financially for so many families. You know, imagine you're one of two young children who's single mom lost her job as a waitress. And is just trying to keep food on the table and a roof over their head and how difficult that can be. You know, the stress in that situation is so painful to think about. But I do think that you know children themselves and, you know, we all look back on our days, you know, sure, they worry about themselves, but they worry about their family. They worry about friends getting covid-19. And what does that mean? You know, "Mom, you know, I just found out that Sue, my best friend, is infected with that covid virus. What does this mean?" And, you know, we as adults need to play really critical roles in helping these children make sense of what they hear and how do we do that in an honest, accurate and thoughtful way that does minimize anxiety and fear. And so the CDC had a series of tips for talking to children, and I commend them. I think it's very important. One is to remain calm. You know, when children see you upset, they see you animated about an issue. They see you angry. You know, they pick up the cues from that conversation. And then that in turn, is how they often will communicate about it. You know, you must reassure children they are safe. And I'm a little bit cautious on that one recommendation because I don't want them to feel betrayed if they are in school or wherever and they do get infected. I think you put it into perspective where you basically say, you know, if you run across the street, you may put yourself in harm's way if you haven't looked both ways. There are things that happen, but that, generally speaking, very, very few children ever get severely ill with this. Now, again, we're talking about young children, those in, you know, under eight or nine years of age, and let them know it's OK if they feel upset and just reassure them that you're there to deal with their stress and that you will do whatever you can to talk to them about this. You know, make yourself available to listen and talk whenever they want to. And they may ask you questions that at the time you don't have

an answer for. I've been stumped by my own grandkids on that issue. But I think having that conversation. Make sure you pay attention to what they're seeing and hearing on television, radio or online, I can't emphasize that enough. You know, if they're seen these evening news headlines with ambulances and sirens and, you know, the situations from the emergency rooms, that may be something you need to see so that you have some better sense of why you're making the choices you are. But there's no need for the kids to see that. So I think just reducing that amount of screen time is really important. You know, always provide information as truthful and appropriate for the age and developmental level of the child. You know, talk to them about stories of covid-19. And there are actually a number of resources on the Internet about covid-19 resources for children. And that you want to also point out to them there are a lot of things on the Internet that are not correct and you need to monitor that. So if they come back with, you know, this is caused by so-and-so and there may be gender, racial issues or whatever involved, you want to basically address that right away. And you want to teach kids, you know, about actions, reduce the spread of germs as it's laid out. I always said hand washing is next to godliness, but in this case it really is about swapping air. Now, kids can't do a lot about that, but the point of it is that you share with them that they should wash their hands. Coughing and sneezing, they should basically have their nose covered with a cloth, that type of thing. And most of all, if their school is open, be sure you're talking to them about any new actions that may be taken at the school to protect the children and their staff and ask how things are going. Ask what's being talked about there and then have that discussion. And so, you know, at this point, these kids will remember this time for a long time to come. Just as I've shared in this podcast before how I remember so many things in my childhood. This is going to be remembered for a long time. And we can't ignore our kids on this just because they may not come talk to us about it. We need to take an active role in talking to them and understanding the pain that this is causing them.

**Chris Dall:** [00:47:25] Mike, I know you have a brief update on a celebration of life, we did a few episodes back. What can you tell us about that?

**Michael Osterholm:** [00:47:31] Well, good news, as you recall at the time, I talked about a young lady, Bethany, who was an individual who died from covid, and I announced at that time that her sister, who is a nurse, had just become ill. I received an email from Brenda, their mother. Thank you, Brenda. It's good to hear from you. We

think of you often and we have wondered about about Carol. So Brenda wrote, "Thank you for dedicating your episode 32 to our lovely daughter, Bethany. I want you to know that our daughter Carol is doing much better, but is unable to return to work right now due to a lingering problem with a racing heart rate at rest". So the key factor here, Carol, is out of the hospital. She's doing better. And Brenda, to you and your family, we think of you often. And thank you for getting back to us and updating the entire podcast family about the status of Carol and and what's happening in your family. Thank you.

**Chris Dall:** [00:48:43] And we continue to get great pandemic of kindness submissions to The Osterholm Update website. Can you share a few with our listeners?

**Michael Osterholm:** [00:48:51] Yes, you know, one day this could be a book, I think we could actually write this up, the art of the act of kindness maybe, or something like that, because you all have been amazing. You know, we haven't picked many, many, many of them that have come in. But if we had time, we would. So here's one from Beth who wrote, "Our act of kindness will be when we celebrate our family Christmas via Zoom. We usually do a drawing for the kids for presents and a white elephant drawing for the adults. This year, since we'll be getting together virtually, we decided to still do the drawing, but whoever's name is chosen gets to pick the charity of their choice to donate the money, the money that would have been used to purchase their present. We are doing a live drawing during our Zoom Christmas party. We should make it fun to all. It is truly time to give. Thank you, Beth". In addition, I received one from Louise, an act of kindness. "My husband Rick has been supporting our neighborhood hairstylist by continuing to pay for haircuts he hasn't been receiving. Recently, she and her medically fragile husband were diagnosed with covid-19. He sent her some money directly, not via the salon. My husband has been extra generous with tipping and offering a word of encouragement to so many people. He is my inspiration, Louise". Well, first of all, Beth and Louise, thank you so much for your updates and your acts of kindness. Beth, my warmest regards and compliments to your family. Louise, I'd tell you, you got a good guy here. Keep him. That's a great thing, Rick. It's wonderful that you think about that and think of those who are so impacted. So keep up the acts of kindness. They are definitely taking on this pandemic. And I can't say that enough.

**Chris Dall:** [00:50:44] Just a reminder to our listeners that if you want to share an act of kindness for us to highlight on The Osterholm Update website, email us at

osterholmupdate@umn.edu. There's also a page on the website with instructions on how to submit your act of kindness. Mike I understand we have a musically related closing today.

**Michael Osterholm:** [00:51:02] Yeah we do know it came from Holly, thank you very much, Holly. It's a group that I've enjoyed very much over my adult life, love their concerts. This is actually from REM. It was the song Everybody Hurts. It was from their 1992 album, Automatic for the People that actually got to twenty nine in the U.S., Billboard Top one hundred in nineteen ninety two. It was co-written by members Bill Berry, Peter Buck, Mike Mills and Michael Stipe. And I think it really is quite fitting for this very moment. "Everybody hurts. When your day is long and the night the night is yours alone. When you're sure you've had enough of this life, well, hang on, don't let yourself go because everybody cries and everybody hurts sometimes, sometimes everything is wrong. Now it's time to sing along when your day is night alone. Hold on. Hold on. If you feel like letting go, hold on. If you think you've had too much of this life. Well, hang on. Because everybody hurts, take comfort in your friends, everybody hurts, don't throw your hand, oh, no, don't throw your hand if you feel like you're alone. No, no, no, you're not alone if you're on your own in this life, the days and nights are long when you think you've had too much of this life to hang on. Well, everybody hurts. Sometimes everybody cries and everybody hurts. Sometimes, yes, everybody hurts sometimes. So hold on. Hold on. Hold on, hold on. Everybody hurts, you are not alone." Thank you, Holly. That was very thoughtful and a great song. I urge all of you to go actually hear the music if you haven't. And it couldn't be more fitting right now. Let's hang on. We're close to that wonderful day when these vaccines will be widely available and we can get over with this pandemic and get back to those things which we love and need so very much. And let me just close by saying again, thank you so much for the kindnesses you have shared with us here at CIDRAP. And these are tough times. They started out this podcast. It's the best of times and the worst of times. I'm so excited by these vaccines, but I'm so worried what may be happening in the weeks ahead. But we're in control of that. We are in control of our own destiny. Don't swap air. That will make all the difference in the world. Also, continue these acts of kindness. You know, go find someone out there who is alone, someone who just could use a friend, a conversation. Internet by the phone, whatever. Now's the time for us to become creative as much as it is just being kind, be creatively kind. And so I close this one. Thank you very much for spending your time with us. As I've said over and over again, I know you have many

places that you can get this kind of information. We appreciate you being with us. So thank you. Have a great week. Be kind. Be safe. Thank you.

**Chris Dall:** [00:54:36] Thank you, Dr. Osterholm, and thanks for listening to The Osterholm Update: covid-19, a weekly podcast from the Center for Infectious Disease Research and Policy. We'll be back next week with another episode. Until then, you can keep up with the latest covid-19 news by visiting our website [CIDRAP.umn.edu](http://CIDRAP.umn.edu).