Mayo Clinic Q & A - Dr. Gregory Poland 12 13 21

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SPEAKERS

Dr. Halena Gazelka, Dr. Gregory Poland, Narrator

N **Narrator** 00:01

Coming up on Mayo Clinic Q&A,

D **Dr. Gregory Poland** 00:03

We're now at a place where Omicron infection case rates are picking up rapidly. This is a real, I guess warning for all of us. If we do not take the proper precautions over the holiday, we are going to see in January a major Omicron surge.

N **Narrator** 00:25

With the holidays here and the threat of Omicron and Delta variants, there is a way to protect yourself and your family. Make sure those who are eligible get their vaccine booster and,

D **Dr. Gregory Poland** 00:35

I can't say it enough is to wear a proper mask properly. Masks are effective, and vaccines are highly effective. That combination with washing your hands and appropriate distancing is key to getting through the holidays.

D **Dr. Halena Gazelka** 00:59

Welcome everyone to Mayo Clinic Q&A. I'm your host, Dr. Halena Gazelka. We're recording this podcast on Monday, December the 13th, 2021. Well, the news is still full of Omicron variant and CDC approval for vaccine boosters for 16 and 17-year-olds, and booster shots, and how well

they cover Omicron. So, it's great to have Greg Poland with us here today to talk about all of this.

D Dr. Gregory Poland 01:27

Thank you. Good morning, Halena.

D Dr. Halena Gazelka 01:29

Good morning, Greg. As you all know, Dr. Poland is a vaccine and virology expert from Mayo Clinic. Thanks for being here, Greg.

D Dr. Gregory Poland 01:38

My pleasure. We have lots to talk about.

D Dr. Halena Gazelka 01:41

I know we do, Greg. But I have one very, very important topic that I read about in the news that I have to ask you about first.

D Dr. Gregory Poland 01:48

Yes.

D Dr. Halena Gazelka 01:49

I understand that you're an advisor to Santa Claus, and I wanted to know how that works.

D Dr. Gregory Poland 01:54

Well, that was very interesting. I got called and asked would I be a special advisor to the North Pole. And of course, I said yes. It was really interesting to have a ZOOM call, and I actually kind of looked over and got a peek at the list. Halena, you're on the good list. I could see that much.

D Dr. Halena Gazelka 02:15

Yes. My Elf on the Shelf hasn't told on me yet, I guess. All right, Greg. So, catch us up. What do we need to know about Omicron, boosters, how well boosters treat Omicron?

D Dr. Gregory Poland 02:33

Well, you know, first, I think, three things to celebrate. Number one is, it's hard to imagine so much time and so much information has passed through our hands. This is the one-year anniversary of those first vaccines from Pfizer pouring out of Michigan, one year anniversary. I mean a remarkable human accomplishment. I think the second is just what you mentioned that booster doses have now been approved for 16 to 17-year-olds, and probably one we may talk about is we now have a non-vaccine, preventative measure really meant for those people who just can't respond to a vaccine because of immunocompromise. So, I think three things definitely to celebrate. The other side of that coin is sort of the reality of what's happening. We're now at a place where Omicron infection case rates are picking up rapidly. The estimate is that by next week Omicron will be the predominant variant circulating in the U.K. And where that has happened, it is never failed to be duplicated in the U.S. So, this is a real, I guess warning for all of us. If we do not take the proper precautions over the holiday, we are going to see in January a major Omicron surge. Now, there's good and bad about that. The good seems to be that the severity of those infections, this is very early and it could change, does not seem to be as high as what we saw with Delta. Having said that, we've already seen a couple of deaths in the U.K. from Omicron. I know one thing that people have been depending on, and falsely so with Omicron, is that they've gotten two previous doses or they were previously infected. And here, again while very early, the data are somewhat discouraging. In fact, the newest reports are that two doses of vaccine may offer very little protection against symptomatic Omicron infection. The same is true with previous infection. I know a lot of people who have been previously infected who falsely think, I'm protected now and don't have to worry about it. That's not what the data shows. In fact, in the U.K., the reinfection risk with Omicron was three to eight-fold.

D Dr. Halena Gazelka 05:28

Oh, wow. Greg, can you also speak to the efficacy of the various vaccines?

D Dr. Gregory Poland 05:34

Yeah, well, you know, where we have, actually the only place we have data is with the mRNA vaccines, predominantly Pfizer, and with the AZ vaccine, which isn't used here in the U.S. And both of those show essentially the same thing, very poor protection against infection. Now, what we don't know is will we see the same phenomena we've seen with other variants where we still have relatively high protection against death and severe disease. I think that will turn out to be the case. But all of that boosted tremendously with that third dose. So, just to give you some examples, it appears that the neutralizing ability of two doses producing antibody drops about 25 to 40-fold. That is a huge drop. The good news is that getting a third, a booster dose increases those neutralizing antibodies about 100-fold. So, the way I have thought about this is we face two threats right now in the U.S., Delta, which is 99% of infections, and Omicron, which is rapidly and likely going to outpace Delta. But both of those threats have really one solution. And that solution is what we have consistently talked about. We have hit this nail on the head in the advice we have given in this podcast, and that is masking and boosting. Those are key to protecting yourself and your family as best anyone can be protected against this new major variant.

D Dr. Halena Gazelka 07:34

And Greg, speak to the types of vaccines. What are the booster recommendations for those who have had Moderna or J&J vaccines?

D Dr. Gregory Poland 07:43

Sure. So, if you've had J&J vaccine and want to be boosted with J&J, you're eligible for that after just 28 days, I think it is you can get your booster. For mRNA vaccines, we are generally saying six months after your primary series you're eligible for that. Now, I don't think those need to be hard and fast rules, especially in the face of Omicron. If you're immunocompromised, you've gotten two doses, what was called a late additional dose, and then, in essence your fourth booster dose. So, that's important to talk to your healthcare provider about for those immunocompromised individuals, again, because this is significantly good news. There is now a monoclonal antibody that has been approved under EUA for pre-exposure prevention. In other words, you don't have to wait until you're infected. And it probably covers you for about six months. It's two simultaneous injections for any immunocompromised person over the age of 12, has about 83+% efficacy, though we don't have numbers specifically for Omicron. But this is a this is a great advance for, you know, both of us have patients that are very immunocompromised, and we basically had to tell them get their vaccines, wear masks, and isolate in their home because of the risk. Now life can become more normal for them.

D Dr. Halena Gazelka 09:26

Greg, is that the product from AstraZeneca?

D Dr. Gregory Poland 09:28

It is, yes, just approved. Yes. It's actually two monoclonal antibodies, which oddly is why you get two simultaneous injections. You get one injection of each of the two monoclonal antibodies.

D Dr. Halena Gazelka 09:43

Interesting. Alright, well, we can move on to some listener questions, Greg.

D Dr. Gregory Poland 09:50

Sure.

D Dr. Halena Gazelka 09:50

Opening the mailbag again. An individual asked, remember back in the beginning of COVID, think way, way back there. We were talking so much about herd immunity? Well, we don't really talk about that anymore

really talk about that anymore.

D Dr. Gregory Poland 10:06

Yeah, the reason for it is it became clear that we were not capable of reaching herd immunity because people were not getting immunized and not wearing masks. So, herd immunity is very elusive. In addition, the bar for herd immunity went up with Alpha variant, went way up, doubled, for Delta, and is probably two to four-fold higher yet for Omicron. So, we can't get there with the current lack of acceptance, I would say, by the public of vaccines and masking.

D Dr. Halena Gazelka 10:46

Okay, our next listener wants to know if natural immunity is what is acquired when you have experienced the virus, have been infected, what kind of immunity is it called when you are vaccinated?

D Dr. Gregory Poland 11:00

Natural immunity. It's just natural immunity from another mechanism. So, you can have disease induced protection, assuming you survive it, or you can have vaccine induced protection, which offers little in the way of risk compared to infection.

D Dr. Halena Gazelka 11:22

Alright, next, this listener says I keep reading about COVID treatments. I'm 74 with multiple medical comorbidities. I'm fully vaccinated and take precautions with diligence. If I get a breakthrough infection, can I have a treatment? Can vaccinated people get monoclonal antibody treatment or take the anti-viral pill?

D Dr. Gregory Poland 11:45

Those are great, excellent questions because you're right Halena. There's been confusion about that. And the answer to all of those is definitely, yes. So, if you are somebody who's been immunized, first of all get boosted. That is your best chance of avoiding any significant or severe disease. Now, if you're elderly, like this listener with multiple comorbidities, or immunocompromised in some way, yes, both anti-viral and monoclonals are available for treatment. And now as we just talked about, monoclonal is available for prevention in those highly immunocompromised individuals. I should add one other criteria for people who cannot get vaccine because of contra-indications, this monoclonal antibody preventative can be used in them too. So, there's really no reason that anybody above the age of 12 can't be protected against significant COVID disease at this point.

D Dr. Halena Gazelka 12:54

All right. Our next question, Greg, addresses the issue of how long after an infection with Covid,

should one get vaccinated? This individual is specifically asking about their son, their child who had COVID in October of 2021, right before the vaccine was available.

D Dr. Gregory Poland 13:13

Well, you know, this has been a little confusing because the recommendations have varied anywhere from three months to six months. I think 90 days is the more appropriate time period to use. So, any time after 90 days. Now, there have been a couple of documented infections that have occurred earlier than that. But at the population level, 90 days seems to be probably that best window to wait.

D Dr. Halena Gazelka 13:42

And can I ask you to clarify, Greg is that because if you've already just had the infection, you've developed immunity against it, which helps you fight it off, to recover. And if you take a vaccine, you won't have the same boost that you would.

D Dr. Gregory Poland 13:59

Yeah, that's right. It turns out that our immune systems work best when that when it has periodic exposure. Too close and it doesn't distinguish them as separate events. Now having said that, there's nuance in this, and I don't want listeners to get the wrong idea. Let's say you were fully vaccinated and got disease, got infection because you don't have a normal underlying immune system. That I would treat and make different recommendations for. But, you know, your standard otherwise healthy person, we would generally wait 90 days after that infection before then immunizing them.

D Dr. Halena Gazelka 14:43

Okay. All right, next question. This individual says that they are nervous about the unknown potential long-term side-effects the vaccine could have on young children. They're wondering if there are any ingredients in the vaccine that would cause any concern for problems later in years for children, and how does the COVID vaccine compare to other vaccines that we give our kids, in regard to what we know about its safety?

D Dr. Gregory Poland 15:11

Yeah, great questions again, and of course, you know, when you're immunizing your, your children, as for yourself or other members of your family, you're very concerned about safety, and rightly so. And that bar for safety should be very high. At the same time, that one takes into account the risks of not getting vaccinated. And as we've stressed, there's no risk-free option here, I wish it were otherwise, but there is no risk-free option. So, the very small risk of a vaccine, or the much higher risk of getting infected and the disruption that that causes. So, we're talking about risks of the vaccine of myocarditis, a mild inflammation of the heart muscle. No child has died of that, to our knowledge. All of those cases recover very quickly and

spontaneously. A number of them have been hospitalized as a precaution, generally, for a day, or maybe two days. A recent report that was just released in circulation showed again, that these very, very quickly resolved. So, are there any long-term side-effects to that? None that are known. On the other hand, this vaccine has not been used in children for say, three years or five years. To have that data means that you would have to say, I'm not going to get the vaccine in the face of this rapidly developing pandemic with the Omicron variant, instead, take the risks of that. So, let me put that risk in stark perspective. The risk of myocarditis from getting infected is about 16 times higher than the risk of myocarditis due to the vaccine. So, for me that would make that choice easy.

D Dr. Halena Gazelka 17:18

That is quite a difference. Greg, can kids receive monoclonal antibodies if they become infected with COVID?

D Dr. Gregory Poland 17:26

Yeah, again, another good question because there's misinformation out there about that. Right now, kids that are 12 and older, are authorized to receive monoclonal antibodies.

D Dr. Halena Gazelka 17:38

Greg, I wanted to ask you one question about children's vaccinations. It seems to me, I'm a grandma, but I would rush out and get those kids vaccinated. And yet, I was reading in the news this morning that the vaccination rates for children are actually quite low. What do you make of that? And how do we encourage parents to get their kids vaccinated?

D Dr. Gregory Poland 18:01

Well, you know, I'm a new first-time grandfather too. So, you know, I watch this very closely. And the fact of the matter is that kids five years of age and older can be immunized. And I think that low rate reflects the hesitancy that the parents, or guardians, or families have over these vaccines. And I think they need reassurance, they need to hear the data, that's on us. You and I attempt very hard to deliver that kind of information, just as we talked about myocarditis, for example. I think what isn't clear sometimes to parents is that, you know, kids that get COVID are really unlikely to die, thank God. But that doesn't mean they can't get sick. That doesn't mean they can't lose weeks of school, or develop long-haul symptoms that may affect them for a very, very long time, potentially a lifetime. So again, to me that calculus is pretty easy. The difficulty is convincing parents to do it. And so, some states and notably LA in California is mandating it for children to attend in person school. And this is the dilemma is you finally say, we've done everything we know to educate people, and our medical system is overloaded, flooded. People don't get good care when they're overloaded like that. And finally, a community a city, a state has to say, well, we have to mandate protections. We have to protect people from themselves, even though they don't think they're at risk. And so, you know, I think that's

the dilemma that states are facing. Again, I think for you and I as grandparents, this is easy. We've got a safe and effective vaccine, just as my children are fully immunized with every vaccine available where there is a disease threat to them.

D **Dr. Halena Gazelka** 20:13

Greg, I'm wondering when we're going to get vaccines to a lower age, such as two-years-old. I know multiple coworkers whose children who are, you know, toddlers, two years to five years, have had to quarantine three or four times in the past year causing the parents to miss work. And it's a big financial burden as well as other burdens. What's next for vaccines for little guys?

D **Dr. Gregory Poland** 20:42

So, the plan is studies that will go down to age six months, just as we do for influenza vaccine for example. Now, let's just take the Pfizer vaccine as an example. As adults, we get 30 micrograms, the five to 12-year-olds, they get a 10 microgram dose. The dose that's going to be tested in those very young children will be 3 micrograms. So, a really teeny dose, and tremendous immunity that's induced. Let me mention one other thing since I know the biggest concern about the mRNA vaccines is myocarditis. We really see that in that kind of 15 to 29-year-old. We're not seeing it, at least not in any appreciable rate, in the younger kids. So again, this changes that math, that calculus, over the risk and the benefit of getting the vaccine or not getting the vaccine.

D **Dr. Halena Gazelka** 21:55

Alright, well we're closing the mailbag for the week, Greg. But one last question. We are eagerly anticipating the holidays, so many are hoping to get together with family and friends this year. What advice would you give our listeners about being safe over the holidays?

D **Dr. Gregory Poland** 22:11

Well, you know, this is something that faces virtually all of us, I've given long and hard thought to this because it involves my family too. First of all, get on Santa's good list by getting a booster. And I mean that. The safest, safest thing you could do for yourself, your family, for the nation in the midst of this pandemic, is to get boosted. The second thing, and I can't say it enough, is to wear a proper mask properly. Masks are effective. Masks are effective, and vaccines are highly effective. That combination with washing your hands and appropriate distancing is key to getting through the holidays. One other strategy I would recommend, so get boosted 14 or more days before you're going to gather that means today or tomorrow depending on when you're going to gather here. So, that's one strategy. The second thing is the day or so before you're going to travel, you can get rapid testing. All the major pharmaceutical chains offer that. It costs nothing. It's free. So, you can know when you're traveling that I do not have evidence of being infected, even though I am asymptomatic and don't know it. So, that combination of rapid testing, boosting, wearing a mask is the best that you can do. And with that, I think absolutely go ahead and gather with your family.

D Dr. Halena Gazelka 23:54

Oh, I love to hear you say that.

D Dr. Gregory Poland 23:56

It's important socially, medically, psychologically, and economically even. That's important for families to be together. But just please, a plea, do it safely. We're having somewhere, it depends on where you live, about 1300 to 1600 people die a day in the U.S., and it's a tragedy. None of them think they're going to die. And yet they do. So, please, please, please, get boosted and wear your mask and enjoy your family in the holidays.

D Dr. Halena Gazelka 24:36

Wonderful. Thank you for that, Greg. Thanks for being here today.

D Dr. Gregory Poland 24:41

My pleasure.

D Dr. Halena Gazelka 24:43

Our thanks to Dr. Greg Poland for being here today to give us our COVID 19 updates. I hope that you learned something. I know that I did. And we wish each of you a wonderful day and very happy holidays and a Merry Christmas.

N Narrator 24:59

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