

Mayo Clinic Q&A - Dr. Gregory Poland - YouTube Audio - 01 17...

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SUMMARY KEYWORDS

vaccine, omicron, variant, people, greg, virus, infection, risk, vaccinated, disease, influenza, mask, listener, dose, hospitalization, mayo clinic, higher, mild, infected, mild disease

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
The only reason that we are seeing such high hospitalization rates is not because Omicron is more dangerous than Delta. It's not. It's about 50% less likely to land you in the hospital. It's because the number of Omicron infections is so much higher than what we saw with Delta related to its incredible infectivity and transmissibility, which again is an argument for wearing masks.

N Narrator 00:37
As hospitalizations continue to climb due to the fast-spreading Omicron variant, we would all like to know, is there a timeline for when this current surge might slow down?

D Dr. Gregory Poland 00:48
Can I use the Minnesota analogy? A storm blizzard of cases that will peak some time in January to early mid February and then start to see a decline. What will come after that is unknown. In general, I think what is safest to say is that SARS-CoV-2, COVID-19, is going to have many more surprises for us.

D Dr. Halena Gazelka 01:15
Welcome everyone to Mayo Clinic Q&A. We're recording this podcast on Monday, January the

17th, 2022. I'm Halena Gazelka, and I am your host. I have with me again today, Dr. Greg Poland, virologist, infectious disease, and vaccine expert from Mayo Clinic. Welcome, Greg.

D Dr. Gregory Poland 01:35

Good morning on this frosty morning, Halena.

D Dr. Halena Gazelka 01:38

Well, Greg I feel the news is full of nothing but Omicron. And boy do I have a bunch of questions for you from listeners. And they're pretty good today, too.

D Dr. Gregory Poland 01:48

Okay. All right.

D Dr. Halena Gazelka 01:50

Well, can you just fill us in? Greg, what's going on with the numbers with Omicron? When is this going to peak and then decline? What can we expect?

D Dr. Gregory Poland 01:58

Well, in terms of when it will peak and decline that might be the easier one to the answer in that there are hints of that potentially already occurring in some areas. And that has already occurred in South Africa. So, I do expect that we're going to see a continued, can I use a Minnesota analogy? A storm blizzard of cases that will peak some time in January to early mid February and then start to see a decline. What will come after that is unknown. Whether that is our entree into a lower endemic level is unknown. But in general, I think what is safest to say is that SARS-CoV-2, COVID-19, is going to have many more surprises for us.

D Dr. Halena Gazelka 02:56

So, Greg I keep hearing this narrative from individuals that I've heard everyone's gonna get it. So, why even bother to avoid it? Why not just embrace it and get infected and get it over with? Why is this a bad strategy? And what do you think of that?

D Dr. Gregory Poland 03:13

Yeah. Well, you know, one of the hard things about summarizing is it's so situationally dependent. If you are not fully vaccinated and boosted and/or you're very young, elderly, or have medical conditions that weaken your immune system, that is a really bad strategy,

because of the risk that you won't be protected against disease. That means hospitalization, ICU admission, mechanical ventilation, and even death, much less complications like long COVID. But let's say you're otherwise healthy like you and I are, and we've been fully vaccinated, we've been boosted. What that has done for us, it has blocked the possibility of disease radically so. I mean, the risk of you and I dying is something like point .003% at this point. What it does do though, is it shifts us away from disease and toward infection. So, in other words, the vaccines are really good at disease blocking, like all of our vaccines, less good at infection blocking. So, you and I absolutely could still get infected if exposed. However, instead of being at the hospitalization, on a ventilator, dying kind of spectrum, we would be in the spectrum of either absolutely asymptomatic disease or relatively trivial/mild disease. And that's a big, big difference. So, the idea of, you know, I've even heard it expressed as COVID parties to get it over with is a bad idea. And it's a bad idea on all of these levels.

D Dr. Halena Gazelka 05:10

That reminds me of when I was a child when my parents hadn't known that I'd had chickenpox. I had a very mild case. And so, they kept sending me to my friend's houses when they would get chickenpox to try to get me to get it.

D Dr. Gregory Poland 05:23

You know, that was popular back in the day, although still a bad idea.

D Dr. Halena Gazelka 05:26

Yeah, a bad idea overall. But I can imagine, Greg that on a population health level, you and I contracting an infection that is asymptomatic or very mild, could endanger others who might catch the infection from us.

D Dr. Gregory Poland 05:46

Exactly right, Halena. And that's one of the many negatives about saying, well I'll just go ahead and get infected. You and I particularly are around highly vulnerable people. But even folks out in the general population are around parents, grandparents, people too young to be immunized, and people whose immune systems might not be working well. I wanted to just share some data that had been published looking at about 1.3 million Americans. And if you look at, this was between December of 2020, and October of 2021, if you've gotten vaccinated, okay, your risk of a severe outcome is 0.015%. Your risk of death, as I mentioned, is 0.003%, if you have a normal immune system, and like I say, you've been fully immunized. That is not the case, those two provisos are not the case for a lot of people. And if you look at the rates of immunization in our society, you know, one out of five eligible Americans hasn't even gotten one dose of vaccine. And of course, we have a low rate among the five- to 11-year-olds, pretty decent rate among 12- to 17-year-olds, and a better rate but still in the 60 percentiles for adults.

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Dr. Halena Gazelka 07:23

Greg, while we're on the topic, when will vaccines be coming for children younger than five do you think?

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Dr. Gregory Poland 07:29

Yeah, we had really hoped that that would come by the end of 21 or early 22. In fact, and this was a Pfizer study, showed that the low dose that was being used in them, the three microgram dose, remember that the younger adolescents get 10 micrograms, adults get 30 micrograms. So, in the young kids they were using three micrograms. And that did not provide a high enough antibody response that was judged appropriate for protection. So, they're going to have to redo that study, likely using the higher dose rather than just giving, you know, yet more doses, so they'll probably go with the 10 microgram dose and test that, and that's occurring right now.

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Dr. Halena Gazelka 08:19

Okay. All right. Greg, tell me about the term Flurona, if I'm saying that properly, is that a coinfection with COVID and the flu?

D

Dr. Gregory Poland 08:29

Yeah, it's an invented term somebody came up with, and it gets at the idea, a valid scientific idea, of coinfection with both viruses. And people say, well, that's not going to happen, because if you got infected with one, it protects you against the other. No, it doesn't. It may reduce, if you get influenza and you have a vigorous immune response, the early release of some of the chemicals involved in that immune response, what's called an innate immune response, might lower but not eliminate your risk of COVID-19 infection. And the concern is on multiple levels, one disease might be more severe. You can imagine the panic and these times of somebody who, let's say, got influenza, they don't know if they have influenza, COVID-19, or both. And so, now we need to test for both, and why would that be? The treatments are very different. We have very effective antivirals against influenza. We have limited antivirals and limited monoclonals against COVID. So, it's really important, and you can imagine, you know, it's a little bit like, I can't remember the name of that game where you stack pieces of wood and eventually...

D

Dr. Halena Gazelka 10:00

Jenga.

D

Dr. Gregory Poland 10:00

Yeah, yeah, and eventually it topples down. Well, you know, if you're elderly, if you're diabetic, and you smoke, and you got influenza, and now you get COVID, at what point does it topple? So, that's the concern.

D Dr. Halena Gazelka 10:15

On a testing update, I saw an article this morning that the government is going to start distributing tests as of Wednesday, that each household, I think it's covidvirus.gov, can receive four tests through the postal service.

D Dr. Gregory Poland 10:29

Yeah, I mean, it's great. It's overdue, and I recognize they had problems with production and distribution. I don't know how long distribution will take. But it's a good idea. I think it helps people particularly after exposure or disease in making decisions about what to do. Similarly, I mean, this is the season where you could get COVID, you could get pertussis, you could get influenza, you could get RSV, Rhino virus, I mean, all kinds of respiratory viruses. And, you know, you're not going to be able to distinguish which one is it. Eliminating COVID, as one of those possibilities is extraordinarily helpful in making medical decisions, isolation, and quarantine decisions, etc.

D Dr. Halena Gazelka 11:21

Greg, I'm now going to hit that listener mailbag, and open it up. And I love this first question because it's a great question. This listener wants to know, where do the old variants go, when a new one arises? Do they die out as a new strain takes over?

D Dr. Gregory Poland 11:39

Yeah, they go to the variant junkyard. But seriously, they do in fact die out in the sense that they are out competed by other more highly transmissible viruses. That can be very regional. For example, we saw very little Gamma, unlike South America. We saw very little beta, unlike South Africa. So, you can have regional variations. You can have urban versus rural variations, and you can have variations based on age. But in general, that's exactly what happened. We're not seeing Alpha, we're not seeing Beta, we're not seeing Gamma, we're not seeing Delta in the U.S., it is essentially all Omicron. That doesn't mean they aren't in other places, although I don't think there's much Alpha anywhere else. But eventually, they do indeed just die out because they're out competed.

D Dr. Halena Gazelka 12:38

Isn't it remarkable how quickly that seemed to happen around the world? We were hearing all about Delta all fall, and then all of a sudden, Omicron.

D Dr. Gregory Poland 12:48

Oh, yeah, I mean, you know, in the space of weeks really traveling worldwide. And that's why,

you know, this is our fifth major variant of concern, it would be foolish to relax our push for vaccines, for masking, thinking well, this is the last one. The virus doesn't count. The virus doesn't think that. And so, we need to maintain our vigilance at this point.

D Dr. Halena Gazelka 13:16

All right. Our next listener wants to know, can an individual who is infected with Omicron in a very mild fashion perhaps, still develop long-haul COVID syndrome?

D Dr. Gregory Poland 13:31

You know, this this is a really important question. And one of the things and, you know, I want people to be careful, particularly if they look at older episodes that you and I have done. This is a rapidly changing situation. What we knew about long COVID with Delta is very likely to be different in terms of what we will learn, but don't yet know, about long COVID with Omicron. We do know that in general, it's not an exact relationship, in general, the greater the severity of disease, the more likely people have persistent symptoms because of end organ damage that's been done. Ergo, the more mild the disease, the lower the likelihood, not eliminate the likelihood, but lower the likelihood. What will this turn out to be with Omicron? We really don't know yet. But for the vaccinated, it is as we said, a shift toward asymptomatic or very mild disease. So, we would expect lower rates of persistent symptoms or long COVID, because there's less in the way of significant complications and severe disease.

D Dr. Halena Gazelka 14:52

That does make sense.

D Dr. Gregory Poland 14:53

I wish I could give a number but unfortunately, we don't have that yet.

D Dr. Halena Gazelka 14:58

Our next listener has a pretty specific question. She states that she has myocarditis as a result of peripartum cardiomyopathy. Is it safe to get the COVID vaccine?

D Dr. Gregory Poland 15:11

That that is a good question. Let me just distinguish, she's suggesting that she had cardiomyopathy, and also myocarditis. It would be important to distinguish between the two. And then what I would suggest is that she talk with her health care providers to understand does she have ongoing symptoms and disease? Now, here's the concern, I'm sure, and I can understand what this woman must feel is, oh, my gosh, I've read about this with the vaccines. Couple of helpful points here, it's not a given that someone develops myocarditis from the

vaccine. In fact, roughly we're talking about one to two cases per 10,000, primarily, in younger males. It is far less likely in a female compared to a male. You can find those numbers on the CDC website. And it is not from the first dose, it's generally from the second dose, and much lower risk with the third dose. The other point I think that's important to make is 98 plus percent of those cases of vaccine associated myocarditis are very mild, benign, very quick, and resolve really quickly. They don't necessarily need hospitalization, there's really not much in the way of treatment, and in a day or two they're better. So, the other point about that is if she really does have postpartum cardiomyopathy, she is at far higher risk of cardiac complications from the infection than from the vaccine. And this is an ongoing thing we've talked about, but you know, I recognize is hard for the public. You're balancing risks and benefits. There is no decision here that is risk free. I wish there was, but there isn't. It's the considerable risks of getting the disease versus the tiny risks related to getting the vaccine.

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Dr. Halena Gazelka 17:31

And Greg, this might be a good time for us to discuss again, very briefly pregnant women receiving the vaccine. I saw a fairly large study, I think it was out of Europe, last week about the benefits for women of being vaccinated even if they were pregnant, because there's a much higher complication rate in women. And even they talked about, you know, fetal loss, etc., in women who had not been vaccinated. So, what do you think about that?

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Dr. Gregory Poland 18:02

You are right Halena. That's been shown in studies here in the U.S., as you pointed out this larger study that was just put out as a preprint. Absolutely. And it's the same thing that we're saying, and believe me, I understand. I remember when my wife was pregnant with our babies, you know, your protective instinct is so high. But what I would say is channel that protective instinct based on the data, not emotion. Because what the data clearly shows is a huge benefit to getting the vaccine to mom and baby, and a teeny, barely calculable risk from getting the vaccine. Whether we're talking about the baby, whether we're talking about the mother and myocarditis, or bleeding, or spontaneous miscarriage or premature delivery. I mean, those can be devastating events in a pregnancy. Why would you not want to prevent those when very large studies show that the vaccine prevents that in women who subsequently get exposed to COVID?

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Dr. Halena Gazelka 19:20

Our next listener asks, what are the recommendations for males in their mid to late 20s regarding the booster and myocarditis? You just touched on this briefly a moment ago.

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Dr. Gregory Poland 19:30

Yeah. And again, here are some nice charts on the CDC website to help people figure out, well if I don't get the vaccine or a booster, what are my risks? If I get it what are my risks? It's a little bit hard to ferret it out. But yes, males in that mid teen to 30s or so are the group at highest risk for vaccine associated myocarditis. Again, the numbers vary Whether we're looking at

Israel, U.S., etc. But it seems the majority of that risk is confined to males, to that age group. As I mentioned before, 98 plus percent of those cases of myocarditis are resolved within a day or two. They're often put in the hospitalization, as we learn about this, treated with something like aspirin or a non-steroidal drug, may be monitored, and a day or two later released from the hospital. By the way, this isn't the only vaccine that does that. This isn't the only virus that does that. So, this is nothing new or surprising. But again, you have to look at that difference in risk depending on age, depending on which dose you're getting. And most of that risk is around the second dose, not the first, and importantly, not the third dose or booster dose. That risk is far lower than the risk of getting myocarditis from the infection. Now, as we move immunizations lower and lower, that risk calculation will have to be redone, because it appears that we don't see much myocarditis due to vaccines in younger people. If we were to see that, then we might have to change that calculus. But for right now, the risks of not getting vaccinated in terms of myocarditis are higher than the risks of getting vaccinated.

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Dr. Halena Gazelka 21:38

Our next listener question is one that we all want to know the answer to, Greg. As we move into 2022, what is going to happen with vaccine recommendations? Will we just keep getting booster after booster at the appropriate time interval, or will there be a point where we stop and start a new series each year? How do you see this working in the future?

D

Dr. Gregory Poland 21:41

I think you're right Halena. We all want to know the answer to that. You know, it is so dependent on this highly kinetic and dynamic environment. I think I could maybe hazard a guess if everything stayed Omicron. Well, we will get probably a periodic booster interval to be defined based on what are we trying to prevent, disease or illness. But if Omicron turns into Pi, or the next Greek letter variant, then all bets are off again. That's why a lot of people, a lot of laboratories, my own included, are working on so-called pan Coronavirus vaccines, where we would be able to induce immunity against a whole variety of potential SARS-CoV-2 variants. The problem with Corona viruses, and it's true with seasonal Corona viruses, the ones that cause the "common cold", is that immunity wanes with time, even with the actual infection. We've seen that. People who previously had Alpha, or Delta, or even Omicron infection are getting reinfected in time. So, that's one thing to say is previous infection is no guarantee of not getting reinfected and refacing all those risks. So, it really depends on what variant we are dealing with at the time. And it probably will also be age and medical condition dependent. In other words, healthier people like you and I, maybe it would be yearly. But for highly susceptible people, maybe it will take more doses. But I really can't, and no one at this point can say, well, how often and with what type of vaccine. One other thing that may change is that next generation vaccines are beginning to explore vaccines that would produce immunity in the mucosa in our noses and mouths where the virus enters. And those would be easy vaccines to take and distribute, right? I remember getting oral polio vaccine as a kid, I was delighted.

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Dr. Halena Gazelka 24:26

Sugar cubes.

D

Dr. Gregory Poland 24:27

Yeah, sugar cubes. Maybe it would be something akin to that, where it would not be onerous, and would be safe to do, and would keep our immunity at a high level. So, I think we're going to see more individualized recommendations, and that they will be based on burden of disease and what variant is circulating.

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Dr. Halena Gazelka 24:51

So, Greg what is the status of the current vaccines being tweaked to better cover variants?

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Dr. Gregory Poland 24:57

So, as an example Pfizer and Moderna has also announced the same thing, they are going to have a Omicron variant focused vaccine by March timeframe. Now, what does that mean? They'll be testing it and ready for testing prior to that. I don't think it means that by March we'll be distributing that vaccine. But manufacturers are looking at variant focused vaccines. The one thing that's clear and again, it's true with nearly all of the vaccines we have, they're very good at blocking disease, they are less good at blocking infection. So, the advantage of the vaccine is to switch from an infection that causes disease and complications to an infection that's asymptomatic or mild, and where complication rates are dramatically decreased. The only reason, and this is important, the only reason that we're seeing such high hospitalization rates is not because Omicron is more dangerous than Delta. It's not, it's about 50% less likely to land you in the hospital. It's because the number of Omicron infections is so much higher than what we saw with Delta related to its incredible infectivity and transmissibility, which again is an argument for wearing masks indoors. So, while your risk at the individual level is lower with Omicron than it was with Delta, the risk for the population is higher for hospitalizations as an absolute number because so many more are getting infected.

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Dr. Halena Gazelka 26:52

That's interesting, Greg, because that tells us why our hospitals are getting so full. And it's the sheer volume.

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Dr. Gregory Poland 26:59

Absolutely, exactly right. And that's part of what we're seeing with children. You know, we've got about 20,000 kids, I think it is, nationwide in the hospital. So, you know, this is not a benign disease in children. And sometimes it gets portrayed that way. But, you know, compared to the to the COVID peak last winter for example, cases are up 320%, hospitalization is up 100%, and deaths are up 50%. That's not because it's a more virulent virus. It's just what you said, it's the incredible number of people getting infected as a property of the virus. And you know, what to call it, COVID fatigue, people abandoning masks abandoning precautions, and getting infected unfortunately.

D Dr. Halena Gazelka 27:56
Although we are starting to see, Greg, some communities and states requiring masking again.

D Dr. Gregory Poland 28:02
Yeah, you know, in Rochester there's a new mask mandates. So, those things definitely help. They're long overdue. You know, we have consistently maintained that as a policy at Mayo Clinic, and that has been extraordinarily helpful and protective of our patients and staff.

D Dr. Halena Gazelka 28:25
Well, Greg the last question from a very savvy listener is that they still know individuals who have declined to be vaccinated because of potential long-term risks of having this vaccine. What is the current thinking on that? And how would you respond?

D Dr. Gregory Poland 28:42
Well, a number of comments. You know, at this point, the people who refuse the vaccine either have a valid medical or maybe religious exemption, or reason why they don't want it, or fear. At first, it was, well it was rushed. Then it was, well they're under emergency use, I'll take it when it's fully licensed. That really didn't change anything. Then it was, well, not enough people have gotten it, I want to wait and see. Then it's, oh, I've heard about these side-effects. And it just goes on and on. You can't get ahead of it because fundamentally, the basis of that rejection is fear. So, what do we know about vaccine safety in the long history of vaccines? With the exception of an association with Guillain-Barre with influenza vaccine within six weeks, the only other complications we see that occur weeks later, is with oral polio vaccine, not used in the U.S. anymore, and with yellow fever vaccine which is only used in some travelers. So, in fact, we don't have evidence of safety issues that pop up months and years later that we don't see originally. We have given well over half a billion doses of vaccine in the U.S. over a year. These vaccines are safe. Perfectly safe? No. Nothing made by man is. Perfectly effective? No. Nothing made by man is. But extraordinarily safe and effective? Yes. In fact, I think it would be an interesting study to turn it around and do a study where you gave the risk of the vaccine being what the real risks of infection of the virus would be, and the risk of infection being what the real risks of a vaccine would be and ask people to choose.

D Dr. Halena Gazelka 30:59
Well, I learned so much today. Great, thank you.

D Dr. Gregory Poland 31:03
Well, I always enjoy knowing what's on our listeners minds. Those are important things to ask, and our listeners are really pretty savvy. They ask questions that we sit around in our laboratory meetings wondering ourselves

laboratory meetings pondering ourselves.

D Dr. Halena Gazelka 31:20

That's wonderful. Any last words of wisdom for us today?

D Dr. Gregory Poland 31:23

Oh, I think again, just because we're not yet at the peak of this, because this is such a highly transmissible variant, your best chance of protecting yourself is to avoid crowded indoor settings. If they're unavoidable, wearing a mask. A lot of new information released, even as of Friday, when the CDC updated their website. The best mask is an N95 or a KN95. Those are widely available. You can look on the CDC or FDA website to be sure you're not about to purchase a counterfeit mask. Next best are so-called paper or surgical procedure masks. Last is cloth masks, and CDC gives guidance on those. So, the important thing is wearing a mask when you're indoors around people who are not your family. The role of testing and of getting boosted is critical to our response to this. And remember, even though we might have mild disease, every time this virus infects somebody, it is the opportunity for further mutation and yet another variant. We've been through five of these. We have the means at our disposal to stop this from continuing to happen. We need only take advantage of those means.

D Dr. Halena Gazelka 32:55

All right. Thank you, Greg. Thanks for being here today.

D Dr. Gregory Poland 32:58

My pleasure.

D Dr. Halena Gazelka 32:59

Our thanks to Dr. Greg Poland from the Mayo Clinic for being here today to give us our COVID updates. I hope that you learned something. I know that I did. We wish each of you a wonderful day.

N Narrator 33:11

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