

# 2/22 Poland audio\_only

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## SUMMARY KEYWORDS

vaccine, dose, greg, immunized, data, variant, people, vaccinated, doses, today, listeners, studied, injections, good news, patients, neutralizing, days, transmissible, steroid, transmission

## SPEAKERS

Dr. Poland, Dr. Gazelka

### Dr. Gazelka 00:00

prepared. Okay. Let me get to the right view to get the camera to flip. Welcome. Welcome everyone to Mayo Clinic q&a. I'm Dr Halina gazelka. We're recording this podcast on February the 22nd 2021. It's time for our weekly update and all things newsworthy about COVID. And while we know that vaccines have been rolled out under emergency use authorization, there is still research left to do. Today we're going to talk a little bit about the clinical trials that are underway in groups that have not been studied before, such as pregnant women and children. With us again, today is Dr. Greg Poland, infectious disease expert at Mayo Clinic. Welcome, Greg.

### Dr. Poland 00:45

Good morning. wonderful to see you again on a Monday morning. And you

### Dr. Gazelka 00:50

I can report that we're warming up here in Minnesota, Greg. So we're excited. We're going to be about 30 degrees today. Fantastic, a heat wave. Now, before we get started, Greg, I just have to ask you, what is on your tie today?

### Dr. Poland 01:06

Well, you know, quote, what listeners who and and those who view our podcasts have asked about this, sometimes this is influenza. And I wore it because one of the really interesting things that has happened by mask wearing and distancing is we have had essentially no influence of this year. Influences less transmissible than than COVID. But masking and distancing have worked beautifully for that disease as it does for Coronavirus. So I worked in memory of that.

### Dr. Gazelka 01:42

Well, I'm glad that you brought up some good news about influenza today. And I just I was so stuck on where does one find all these virus ties, like, who makes virus ties? It's really interesting. I guess there's something for everyone there is, you

**Dr. Poland 01:56**

know, we nerd out in science.

**Dr. Gazelka 01:59**

That's That's right. Greg, tell us a little bit about the numbers surrounding COVID-19 right now.

02:07

Yeah, well, you know, there's

**Dr. Poland 02:08**

like everything here. There's there's good news and bad news. The bad news is we're almost at 29 million cases, and we have crossed 500,000 deaths. So that means about one out of almost every 11 Americans has gotten infected and one out of about 640 Americans has died. That's that's the bad news. The good news is, I think that amount, and I don't know a word for it, other than devastation has gotten through to the American public because they are wearing masks. They are distancing, you still see exceptions, which are really unfortunate. But because so many Americans are doing that. The good news is that deaths in the US over the past week due to COVID have dropped another 30%. The number of cases have dropped by another 15% even compared to last week. So this is very, very good news. We worry a little bit about is this a law between a fourth wave with these variant viruses. But that's another topic.

**Dr. Gazelka 03:27**

Well, that is some good news, Greg, it sounds like people might be listening to your hands face in space. Oh,

**Dr. Poland 03:34**

and you know, we've gotten about 40 million Americans now have gotten at least one dose of vaccine.

**Dr. Gazelka 03:40**

Oh, that's wonderful. Another thing that will help is if we can get more groups vaccinated. At the top, I had stated that we were going to talk a little bit about other groups being studied, such as pregnant women and children. Can you give us an update?

**Dr. Poland 03:53**

Yeah, both Madonna and Pfizer have committed to doing studies in pregnant women. They're gonna enroll between 2003 1000 women, primarily in their second and third trimesters, and then follow post delivery follow those children and mothers for six months after delivery. So that'll be it'll be nice to have a richer data set that can really make all of us feel very comfortable with what we've observed so far, which is no risk associated with that, in fact, great benefit when you realize that pregnant women have about a three to five fold increase risk of hospitalization, about a three to 5% increase risk of death and ICU admission due to due to COVID pregnant women I've talked about. So the benefits are clear and large. The risks have been an identifiable so far. But the more you collect data, the the Better and better you feel about that?

**Dr. Gazelka 05:02**

Yeah, that is good. I'm glad you gave us that update, because that has been a concern of multiple of our listeners who are either pregnant or anticipating pregnancy. Yeah. And so it's good to hear those.

**Dr. Poland 05:12**

And the same thing is true Halina for children. Pfizer is now doing the study down to age 12. So they'll do 12 to 16. See what kind of dose they need and what kind of protection they get, it won't require the same numbers that it took in adults, because now what we're looking for is safety and immunogenicity. That will bridge to efficacy, and then they'll March it down to lower and lower age groups. So those data will probably be available this late spring summer. So by fall time, I think we're gonna we have a good chance of being able to immunize school kids.

**Dr. Gazelka 05:56**

Oh, that would be wonderful. Yeah, I think you've given us a little update about where we are with vaccinating Americans, which no doubt in this last week has been hampered by the incredible weather that has been experienced over much of the United States. But can you tell us what's going on with vaccination rates in the rest of the world?

**Dr. Poland 06:15**

Yeah, you know, it's really quite variable. You look at some countries like Bahrain, Israel, the UAE, the UK, they've done better in delivering vaccines, however, we are very rapidly catching up. You know, the goal was a million doses a day, we are far beyond that. We are at about one and a half million plus doses per day, heading toward 2 million. So that ret rapidity, is starting to strain the supply. But this Friday, in fact, Johnson and Johnson and their partner company, Johnson, will be presenting to the FDA their one dose COVID vaccine, and they've got several million doses in storage. So that will roll out. I think very quickly next week.

**Dr. Gazelka 07:09**

Greg, you just mentioned the one dose of Johnson and Johnson vaccine. But there is some indication that one dose of the other vaccines that are intended to be two doses might also be efficacious, should our listeners continue pursuing and getting their second dose of vaccine until we learn more?

**Dr. Poland 07:30**

Yeah, and you know, Helene, and one of the things that you and I committed to, and I think we've been very faithful to is that we're going to go exactly by the data and be transparent in every way with the data as we understand it. So what the data says is that you are best protected with two doses, a minimum of three or four weeks apart, depending on whether you get Pfizer majorna. Now what's happening is people are looking at antibody levels and and protection after one dose. This has been primarily in Israel. And what they found is that after one dose, there's a reduction in symptomatic COVID, after 28 days of about 75%. If you look at all symptomatic, so not just all COVID, but just symptomatic disease, that's about 85% protection. So that's good data suggesting that we could at least start to think about increasing the intervals between doses which in effect expands the relative supply. But questions have come up might one dose alone be sufficient might one dose in people who have previously had COVID be sufficient, and the early data are suggestive of that, but the data are not

yet complete. So I would certainly not recommend to somebody, get your first dose. And don't worry about the second dose. We do not have that level of confidence in the data yet to say that.

**Dr. Gazelka 09:14**

Greg, could you tell us also a little bit about the CDC guidance regarding quarantine for those who have been vaccinated?

**Dr. Poland 09:23**

Yeah. So what they said is that for people who have been vaccinated, so they've completed now they've completed their vaccination series, once they are seven to 10 days past that, I think it's 10 days actually passed that if they happen to be exposed, they don't need to go into quarantine. If they have no symptoms. And for that three months, after the 10 days after their second dose, I know that's a little complicated. What it functionally says is that 10 days after your second dose, if you get exposed and have no symptoms, you don't have to quarantine in that next 10 weeks. Okay, so it's 12 weeks total, but you've got 10 to 14 days after your second dose before that kicks in.

**Dr. Gazelka 10:14**

Okay, it takes that long to be certain that you have full immunity.

**Dr. Poland 10:18**

Right. And, you know, that's based on data that doesn't say, you know, there's no chance you can't transmit it. It's based on data saying the practical reality is that the chance you would transmit it with no symptoms, and two doses is very, very low, and therefore acceptable.

**Dr. Gazelka 10:38**

Do you think that that 90 days will be extended at some point? Or what do we know about how long this vaccine lasts?

**Dr. Poland 10:45**

I do. And actually, thank you for bringing that up. Because, you know, I get calls and emails saying, Well, you know, the data changed, does that mean that scientists don't know what they're talking about? And let me just encourage listeners that that's not what it means. As we gain more experience and collect data, we've got really good data. In the first three months, we're headed toward having really good data after vaccination for four to six months, and that will march out. And as we learn new science, we use that science to modify our recommendations. And so it's not that scientists are flip flopping. It's that new data allows you to begin to expand those recommendations.

**Dr. Gazelka 11:35**

Greg, you said one other thing that I wanted to ask you to clarify you were talking just a moment ago about vaccines, those who have been vaccinated and transmission. Can you tell me what the current thinking or understanding is now regarding whether the vaccines help decrease transmission or severity of illness? Or both?

**Dr. Poland 11:54**

Yeah, no question that they do decrease severity of illness. I don't think there's any argument there. In terms of asymptomatic transmission. In other words, you've gotten your vaccine series, what is the reduction in the chance that you could without symptoms transmitted, and the data looks to be somewhere around 60 to 70 plus percent reduction in that chance that you would develop a symptomatic transmission that you would asymptotically transmit? Let me Let's re answer that. Okay. Because I stumbled over it, what the data show and these are really pretty good data. After you have gotten your vaccines series, the reduction in risk of you asymptotically transmitting to somebody else is on the order of 60 to 70 plus percent. So it's really pretty good at that, given that these vaccines are not vaccines that produce what's called sterilizing immunity. In other words, know

**Dr. Gazelka** 13:07

that for sure now, Greg,

**Dr. Poland** 13:09

I think I think we are I think we're clear on the data with that. But even with a symptomatic transmission that is suppressed by about 60 to 70%, which is really good. It's also an argument you can see your mind jumping to it. It's also the argument for why we have to widely vaccinate because 60 to 70% reduction in asymptomatic transmission is not 100%. So how do you so to speak, make up for that and decrease number of cases by all of us getting immunized and reaching herd immunity?

**Dr. Gazelka** 13:49

Greg, I know that there had been talk about the Johnson and Johnson vaccine, in particular decreasing the severity of the disease if it's contracted, but but we understand that all of the vaccines have a similar effect. Is that true?

**Dr. Poland** 14:03

We believe that will be true. So it hasn't been strictly studied in all of them. It's been studied pretty well in the AstraZeneca vaccine. And it's been studied well in the mRNA vaccines. We don't know yet about the Johnson and Johnson data until those are published.

**Dr. Gazelka** 14:22

Well, no discussion about COVID-19 would be complete without a discussion about what we know about variants. This week, this has been the big something new is always popping up. And this is definitely out there. Can you share with us what we know right now?

**Dr. Poland** 14:37

Well, you know, in the US, so for the vast majority of our listeners, that concern is the so called UK variant, the B 117 variant in what the data show on that thus far, is not encouraging. It's in the the numbers vary because it depends on where you're looking at. But let's take UK data where this where they were devastated by this variant and collected a lot of data. It was between 30 and 70% more deadly. If somebody got this variant, it was about a 60% increased risk of hospitalization, and about a 40% increase risk of ICU admission if they got it. So this is a bad actor. And the best evidence suggests that sometime it will already in the US this variant, and the number of cases is doubling about every 10 days. Wow. So I'm going to use this as a moment to encourage people despite all of us, me, too, I'm

fatigued of COVID precautions and requirements, I want to be able to hug my son and daughter in law, but until they're immunized, even though I've been immunized, I don't want to take that risk. So it's doubling every 10 days and many people feel that we're going to hit another surge in March with this variant peak because it's so much more transmissible and yet we're starting to hear of various states loosening precautions, we've seen large sporting events. Those are all things that make control of this virus more difficult, particularly in the face of these highly transmissible variants. Now, the good news is that for people who get their vaccines, even though there's a reduction in what's called neutralizing activity, in other words, we immunize you take your blood and put it in a test tube with a virus, it neutralizes it, that is kills it, if you will. But the the there's a reduction in that neutralizing ability. Nonetheless, these and these vaccines raise such high levels of antibody, that it appears immunized people will be protected against the UK variant.

**Dr. Gazelka 17:16**

So Greg, going when you're trying to test this to see whether the variants are susceptible to the vaccines? Do you do it actually in a lab in test tubes? Or is it more observational and people who've had

**Dr. Poland 17:31**

the vaccines both are done? So so the in the first study, like I say, we take blood from immunized people, and we mix it with the virus and say, okay, normally, this, this will neutralize 100% of it. Now with this variance, we say there's about a six fold reduction in the neutralizing ability. But then we do the observational study that you just mentioned and in otherwise healthy people who were immunized, they seem to be protected. Now, the Johnson and Johnson and Novavax vaccines when they tested those against the South African variant, an actual clinical study, they only protected about 40 to 60% of the time, though, those cases were more mild than people who were not vaccinated. For that reason, many of the manufacturers as a precaution, are getting ready to study a booster dose against those new variants. So that's news to come.

**Dr. Gazelka 18:41**

So from what we Excuse me. So from what we understand, Greg, all of the vaccines have efficacy against COVID-19 that we are aware of, and so individuals shouldn't brace getting the vaccine that they're offered.

**Dr. Poland 18:58**

Absolutely. I mean, those data and let me say it as clearly as I can. Those data show safety. In fact, I think we talked some last week about CDC releasing data on the first month of the rollout identifying no safety concerns other than the known risk of anaphylaxis in a very small number of people and high very high efficacy with these two mRNA vaccine. So, you know, this is better than as a vaccine ologists we could have hoped for, to have a vaccine of first generation vaccine, be this effective and have so little risk associated with it is almost nothing short of a miracle.

**Dr. Gazelka 19:47**

That is good news.

19:48

No.

**Dr. Gazelka** 19:49

I have one question from my own practice for you before we close today, when I'm not here with you. I'm often out seeing patients in our pain clinic here in Rochester or I am doing interventional procedures for patients. Often those involve injections that have corticosteroid in them. So joint injections or epidural steroid injections etc. What is currently known about whether individuals should avoid having epidural steroid injections or steroid based joint injections etc, related to their COVID vaccine? Yeah, very good and very practical question. In fact, I've

**Dr. Poland** 20:27

worked with our orthopedics department because that's such a common question. So I'm going to give the strict data and then the practical implication of it. The strict data are when you exceed a dose the equivalent of 40 milligrams of oral prednisone. So if an injectable dose is more than that, you can see a slight decrease in antibody response. So what do we do with that in terms of practicality, the ideal thing would be to not get that injection in the 30 to 15 days before or after your injection, so that there's no chance of any suppression, that's not practical for some of our patients, as you and I know. And for those patients, I would say, you know what, we're giving two doses. As long as you're not getting that with both doses, I would proceed ahead, because you're also talking about a quality of life issue here. There are some patients that simply cannot wait a month. And I think they should go ahead and be injected, recognizing that we're going to give a second dose of vaccine where they will not have been injected. So I think it's overall a safe thing to do. In general, we're giving injectable doses of steroids that are within the boundaries, where we say it's acceptable to receive vaccines.

**Dr. Gazelka** 22:05

And as a point of clarity, Greg, there is quite a difference between taking steroid orally and having it injected into a localized area. My colleagues and I know a number of years ago actually did some studies with epidural steroid injections to see how much steroid was absorbed into the bloodstream over time after those injections were performed, and it was relatively small minor. And so is there a difference for people who have to take oral steroids? Regarding the COVID vaccines?

**Dr. Poland** 22:35

Well, I know I just learned something today. So thank you for that. But yes, you're exactly right. You know, you think about what we're in general doing, we're injecting a knee, a shoulder a hand, those are generally low doses, as you say, they tend to be confined to that joint space, their action is aimed at that joint space. So you're not getting anywhere near that amount of steroid in the bloodstream where it could affect that immune response. And that's why I say, you know, there's the strict data, and then there's the practicality and the practicality would tell me that I just wouldn't overly worry about that, particularly in the setting where we're giving two doses of vaccine.

**Dr. Gazelka** 23:24

Any comments about those who have to take their steroids orally?

**Dr. Poland 23:28**

Well, probably can't be avoided if they're on them. Yeah, if we're, if you're taking 20 milligrams of oral prednisone for 14 days or more, or taking a dose of 40 milligrams of prednisone, that's when we begin to worry not talking about orally, that you have enough systemic suppression of the immune response, that that might be important. Again, we have patients where it's not practical to reduce below that dose. And if we think that's not going to change in the near future, I would go ahead and immunize them. Because maybe instead of 95% protection, you're talking about 90 or 85. Well in the face of this pandemic, so what gets your vaccine?

**Dr. Gazelka 24:17**

Well, and just let me say, Greg, that it is music to my ears when you say that you learn something from me today. You know, a famous broadcaster told me that one. Anything else you'd like to share before we close today, Greg,

24:33

you know, I

**Dr. Poland 24:33**

again, I just take every opportunity I can to encourage our listeners, they're doing the right things. You know, you and I have gotten really, really encouraging email and notes from our listeners. Thank you for that. Yes, thank you. Lena and I this has been a long haul of working more hours than we would have ever expected to do what we always do at Mayo. It's your needs. You're the patient's your needs come first. And so we're willing to work as hard as it takes to be able to deliver this information. So thank you for the encouragement, and just encourage you to continue to send in questions. We want to help you understand what can be confusing data out there. I spend my full time on this. And I'm more than willing to help people. That's wonderful.

**Dr. Gazelka 25:27**

Thank you. I echo what Greg said, Thank you all for listening and for sending your comments and questions. Thanks to you to Greg until next week.

**Dr. Poland 25:36**

Thank you. This is all of us together.

**Dr. Gazelka 25:40**

Our thanks to virologist vaccine and infectious disease expert, Dr. Greg Poland for being here with us today to talk all things COVID-19 thank you to you too, for listening in today. I hope that you learned something I know that I did. We wish all of you a wonderful day.

**Dr. Poland 26:01**

I didn't know that about epi epidurals because that tends to be a little higher dose doesn't it? They do

**Dr. Gazelka 26:07**

so in the first couple of days.