What doctors wish patients knew about COVID vaccines

Featured topic and speakers
In this episode of AMA Moving Medicine, two physicians share about understanding the concerns around COVID-19 vaccines and discuss what they wish patients knew about the efficacy and safety of them.

Speakers

Tyeesee Gaines, DO, an emergency medicine physician and a school physician for three charter schools in New Jersey.
Wayne Grody, MD, professor of human genetics, pathology and pediatrics at the University of California, Los Angeles David Geffen School of Medicine.

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Transcript

Todd Unger: Hello, I'm Todd Unger. And this is AMA Moving Medicine, a podcast from the American Medical Association. While states continue efforts for COVID-19 vaccine distribution, patients still need to navigate a sea of misinformation to address their concerns about the vaccine Dr. Wayne Grody and Dr. Tyeesee Gaines share what they wish patients knew about COVID-19 vaccinations.

Dr. Gaines: Well, I'm Tyeesee Gaines. I'm an emergency medicine physician. And also, I serve as a school physician for three charter schools here in New Jersey, and also work for an insurance payer right now. It's nice to be here with you, Dr. Grody.

Dr. Grody: Thanks Dr. Gaines. And we haven't met before, but I do know about your work in Jersey City, which is amazing. I didn't know about the your work in the schools, but that'll be very relevant when, if we get to talk today about, you know, when and how to reopen schools so I'm Wayne Grody. I'm a professor at UCLA. I've been here for long time. Primarily I'm a medical geneticist. So, I see patients with rare genetic disorders, but I also direct UCLA's molecular diagnostic laboratories and clinical genomics center where we do a lot of DNA based testing for cancer and genetic diseases and so on. I feel like a bit of an imposter because I'm not a biologist or an infectious disease specialist, and I'm not even, you know, on the front lines in the way you are Dr. Gaines. I'm still seeing patients, but they're not as far as I know infected with COVID when I see them. But because of my genetics work, I've been looped into about eight or nine different NIH grant proposals, most of which we're still waiting to hear about regarding, you know, host genomic factors of why some people end up in the ICU and others are very symptomatic and also developing new testing technology, not only for the viral RNA, but also for the host antibodies and things like that.

Dr. Gaines: That's so interesting and so needed, because I think that's, that's the burning questions,
right? Like why are some people getting so sick and why others aren't?

Dr. Grody: I know and so far, it's a mystery.

Dr. Gaines: Right.

Dr. Grody: And as you know, there's some racial differences too but I'm not sure how much of that's genetic, how much is socioeconomic and access to care. You know, it's all very complicated.

Dr. Gaines: Absolutely. I mean, today we're talking about obviously the COVID-19 vaccine and physical distancing and things that we wish that patients knew. But just even just sitting here to have this conversation, you know, I was just reflecting over the last, you know, what where are we now? 11, 10, 11 months now. And it's just like, what a year. Did you ever think that we would be in a situation that's like so scary and so absolutely disruptive to everything, everything that we knew?

Dr. Grody: Not at all and disruptive, even to our families, our patient care, but even our professional work, and you and I probably don't go to the same national meetings, but all those meetings have been canceled. And it's now getting into the second consecutive calcul, cancellation for some of my genetics meetings.

Dr. Gaines: I know. And it's just, it's frustrating for me anyway. And, and I won't speak for you, but, you know, there's just still so much misinformation out there about COVID-19 in general, about vaccines, you know, and don't get me wrong. I mean, there's a lot that we don't know as it is, but then on top of that, there's just so many folks spreading all these myths. I'm sure you've heard some of them. Do you have any that are like, kind of like your burning pet peeves that you've been hearing?

Dr. Grody: Yeah. I mean, it's, you put it in a nice way. So, I am just so outraged at the way our country has handled this. You're right. It's a new virus. We're kind of learning as we go along, but there's no excuse for the U.S. having the absolute worst record of COVID deaths. And it's both about the disease itself, that it's not real, or, you know, you don't really get sick. It's no worse than the flu. You and I know it's much worse than the flu. That's why it's overwhelming our ICUs. And then as you mentioned, the vaccine, and that's kind of interesting. I do a lot of my genetics work in pediatrics because many of our diseases present at that age and vaccine resistance has been a big part of that. As you know, it's nothing new now.
And you have half the country begging to get the vaccine and they're not on the list yet. And then in, in my city, Los Angeles, just last week, a bunch of anti-vaxxers literally shut down our biggest vaccine center. Namely Dodger Stadium, a drive-through thing was shut down for a couple of hours. So, the anti-vaccine mythology is not new with COVID. I think it's tied in a little bit to other hoaxes and misinformation that is sort of new now, but, but as you know, we've, we've had anti-vaxxers for pertussis and all the others. So, are you seeing that? I know you're mostly in the ER, but are you seeing that kind of vaccine hesitancy?

**Dr. Gaines:** I am, and I'm seeing it more so because I'm in circles where they are more ethnic and racial minority patients or just communities. And there is definitely hesitancy. I think that the most common things that I'm hearing are the vaccine came out too fast. How can we trust it? Which is a fair question, right? I don't get upset with folks for asking that. Another thing that I hear often is just they don't know, we don't know the side effects and that's, again, it's true, right? It's true that it came out faster than we normally will get a vaccine and that it, we don't know what will happen 10 years from now. But the, but the conversation that I have is that first of all, yes, there are, there are people who are just like you mentioned, shutting things down that that's on the, the extreme end, the people who just have concerns.

I understand it. I mean, I would be lying if I said I didn't have concerns as well, just because there's so much that we don't know. Right? And that's about how the vaccine will affect us. And that's also about how well it's even going to work in the grand scheme, will this, will this thing mutate along the way? So, I think it's, I don't think it's wrong per se, or I shouldn't say right or wrong, but I think it's understandable that people are concerned. The way that I approach it is I just remind them that look I agree with this, that making this decision is scary of whether to get the vaccine or not. There's a lot, that's unknown. There's a lot of people that have co-morbidities already, that have bad reactions to other things as it is.

So, they're nervous about putting something else into their system. But here's the thing, what we do know is what COVID has done so far, right? We know what it's done with respect to overwhelming our system, with respect to the deaths, with respect, to how sick, some of us have seen people that we know get, and then, you know, we're still seeing reports of people who were asymptomatic, meaning they didn't have any symptoms at all. And, but they still are having the longer-term effects of COVID with heart and lung issues. Even some of these people are young and athletes, right? So, here's something where they're right. We don't know what's going to happen if we take the vaccine per se, right. We have some data, but we don't have 20 years, 30 years data like we do with other vaccines, but we do know what COVID is doing.

We know how it's ravaging through communities and households and families. And we know that there's a chance that even if you get through it with a mild case that later on, you may still have lung and heart issues. I have colleagues that have gotten ill that still have symptoms months later, on and
off. So, I guess that's how I try to approach it for the folks that are, you know, humble enough to say
that they're worried, but they're not out here. They're not here preventing other people from doing it.
They're just having their own internal dialogue is that it's, it's normal to feel this way. It's normal to be
worried. There's a lot that we don't know. We are all taking a chance, but getting COVID, is also really
horrible. Right? It's potentially horrible. And like you pointed out in the beginning, we don't know who
you don't know who you'll be, so you can say, "Oh, I'll just get COVID and get it over with," but you
don't know if you're the person that's going to have the sniffles, or if you're going to be the person in
the ICU or the person that passes away.

And that's, what's just so tough about this is that we don't have those answers on either side.

**Dr. Grody:** Beautifully stated. I couldn't agree more with everything you've said. And I admit when I
walked in for my first dose of the Pfizer, I was certainly a little more nervous than I am if I get a
tetanus booster or whatever from my internist. In addition to the reasons you well laid out, you know,
this was done very quickly with a lot of government support and a lot of pharmaceutical people
working really hard to their credit, but it was pretty fast. I can see why individuals, even in health care,
a little nervous about it. I would add one more. That being a molecular biologist, I thought we'd never
had at least large-scale administration of an RNA based vaccine before. So that gave me a slight
pause. Although when you think about it, it should actually be safer than an inactivated viral vaccine,
which, which could reactivate itself, or, or if it's grown in, you know, chicken eggs, and you get allergic
reaction, this, this one should really have no real side effects other than just your immune system
being stimulated. So yeah, I'm sympathetic to that and you're right. The long-term complications.
We're barely seeing. We, we have better understanding of that yet. And to me it looks horrible.

**Dr. Gaines:** It's true. And then, you know, going back to the, talking about minority communities, the
other issue is this is happening at a time where unfortunately, not that it didn't exist before, but, you
know, disparity and racial bias and things like that are definitely being brought to the forefront even
more. And I think there's also pause because, you know, a lot of times people mentioned that there's
hesitancy because of all of these historical things that occurred. I was talking to another colleague
and she said, she said, this very well, is that it's not, it's not just about historical. It's about the current
everyday biases that certain communities are facing just to live now, now in 2021. And so, it's difficult
to trust a system that doesn't necessarily treat you very nicely on a regular day, you know?

And so, you know, I've heard, I've heard questions with respect to, you know, are there going to be
different batches of the vaccine for minority communities or poor communities or Medicaid
populations than they are for everyone else, right? And so, where does that question come from? It
comes from disenfranchised populations that are used to getting the short end of the stick in some
way, shape or form that are worried, that that same thing is going to trickle into their care because
maybe they do see it. Maybe they see those biases when they seek care for their back pain or their
belly pain. So, it's hard to convince them sometimes that that's not going to be the case here because
it's the same people. It's the same system delivering that care. And so that's a tough one, right?
Because we can’t speak for every single person and we can’t negate what they’ve already experienced either. So, there’s some of that creeping into this as well is just the everyday, you know, microaggressions or biases or things that folks are facing that they’re worried is going to be at play here with something that is, at least they feel, experimental.

**Dr. Grody:** Yeah. I, and I’m glad you brought that up. Cause I was going to ask you about it as well. You know, as we all know this COVID pandemic coincided with these police brutality murder cases and supposedly giving much more awareness to implicit bias that, you know, every, every medical school, including mine instituted all kinds of new programs about it. And also, as you mentioned, there’s a great disparity in general health care with underserved populations and minorities not getting the pain medicines that they would give to a white person, but even COVID itself. As we mentioned that the mortality rate is much, much worse with African Americans and you can’t describe all that to genetics or, or even socioeconomics. I think it’s co-morbidities. I think it’s their access and, you know, my field genetics believe me, we have a horrible, horrible history of eugenics and genocides. And so, I’m always very aware of that and it wasn’t just Nazi Germany. A lot of it happened right here in this country. I wondered among minorities, African Americans, Hispanics, especially, they weren’t particularly hesitant for other vaccines. Right? I mean, is this something new about distrust of the COVID vaccine?

**Dr. Gaines:** Yeah, that’s a good question. From what I understand, and from all the stats that I’ve seen, it’s not as much of an issue for the longstanding vaccines, particularly the ones that are that most people have gotten when they are children. I know that there, there has been hesitancy when you look at the numbers, the vaccination rate for flu shot is not always as high as we would like it to be in minority communities. And there’s, I’ve heard various myths about that as well. However, I would say looking at all the vaccines that we have, I see it more with the flu shot and then now definitely with the COVID vaccine. Absolutely. But far as like measles, mumps, those things, I don't see as much pushback. There is some, but I don’t see as much pushback. And I think just in needing to be compliant for schools and things of that nature has just, it's just one of those things where it just gets done.
It's not as much of a thought, but when you get to flu shots where, you know, unless you work in health care, it's not really required. Some schools now have started, you know, started requiring it, but some school districts can't so that once you start giving choice, then people, you know, like whowants to be stuck with a needle if they don't have to be? You're asking people to get stuck with a needle and to then feel crummy for a couple of days while their immune system ramps up. I get it. So, you know, people, you know, they're, they're going to do what they're required to do, or they're going to do, you know, if they are very pro-vaccine then, you know, they'll get it, they'll get it taken care of. But I do see some hesitancy around the flu vaccine. And then there's also been some hesitancy I've seen about Gardasil. So, as I'm talking, I'm thinking, it seems like the older vaccines are less of a fight and the newer vaccines, so Gardasil, and then, you know, we get the annual flu shot. Those seem to have had more pushback historically, but now with COVID, this is just a different level of hesitation.

Dr. Grody: Yeah. It's very interesting. And of course, they all have other factors, you know, the Gardasil brings in some sexual things. And so, it's always multifactorial, but I think you're exactly right. You know, since they say part of the mitigation aside from social distancing and wearing masks is, is frequent testing. I have to admit, I haven't availed myself of that, even though at UCLA, we can have it twice a week for free, but I haven't seen the point unless I thought I was exposed. But if that does become an important part even with the vaccine, do you think there'll be hesitancy for testing? I'm asking that partly because in my field, in the African American community, particularly, there's been a great distrust of genetic testing, even simple things like sickle cell carrier testing, and it's because of a long history of the eugenics and that kind of thing. I don't, I'm wondering, do you think that would carry over into COVID testing.

Dr. Gaines: If we're talking about the PCR testing or the rapid testing where it's either saliva or the nasal swab, things like that, I don't, I don't see as much of that. That doesn't mean that it doesn't exist, but I'm not encountering that as much. I don't know. I don't know if that would roll over into the antibody testing because I don't, I don't think that the average person is looking at antibody testing or the swabs or the saliva tests as genetic testing. I think that they're feeling, it's just like anything like, "Oh, let me get a strep screen or a flu swab, or, you know, to see if I have the flu and see if I have strep." But I think if we got into more complicated things down the line of, like you said, if we start identifying, oh, this group of people is getting it because of this or this particular genetic variant, those folks are getting it more. Would folks line up for that testing? I don't know. That that is a good question. But just simply being screened outside of the nasal swab, sometimes being a little uncomfortable. I don't, I don't see as much of that pushback as I think we would, if we started getting into some of the more complicated testing for sure.

Dr. Grody: Yeah. That's an excellent point. And you know, even though the molecular techniques are the same, PCR is PCR you're right. This is not a genetic test. We're looking for a, you know, a foreign organism that's invaded the body. You're exactly right. If our research, which is still really in its infancy, but if we ever do find out there's some HLA type or something that gives you more risk, you
know, that that could lead to some, some possible discrimination or at least fear of discrimination.

**Dr. Gaines:** Absolutely. Well, let me ask you, what are your thoughts about folks who have already had COVID-19, already been infected maybe six months ago or maybe right at the start, or maybe they were sick before we even realized it was here? So very, very early on, and then they did get tested, had antibodies. What do you think about them getting the vaccine? Because I know there's been some questions too, of folks that said, look, I had it already. And, you know, we have, you know, we, meaning not we as doctors, we as a general public or a lay public, kind of feels like, well, once I get something, I can't get it again. Right? Like that's kind of assumed way of how diseases work. And I hear that a lot. So, in the urgent care setting, when people say, I just had a call last week, why do I have another cold again? And you have to explain to them the differences, but you know, there's definitely this sense of, well, I got it. So, I'm, I'm done. What are your thoughts about them getting the vaccine and you know, why they still should get the vaccine? Like what, what are you telling people about that?

**Dr. Grody:** Yeah. You know, what you've related is just one more unusual thing about this particular virus. It's very strange that the, the immunity is not lifelong. It may not even be a year-long, you know, we're still doing the follow-ups. I think, you know, some studies have shown, you know, there's both B and T cell immunity. I don't claim to be an expert on all the details of the immune response, but apparently, they, they do start decreasing within a matter of months, at least from natural infection. From vaccine, I don't know that we have enough follow-up yet, except maybe from the clinical trials, we'll have to see. My guess is there's something about the immunogenicity of this virus that it's not going to be like tetanus or, well, you can't just, hopefully you never have the disease, but, you know, getting measles, which I had as a child, I never needed another measles vaccine. I don't think this virus is like that. And it's not even like influenza. The reason you need as, you know, a new one every year is because the virus strain changes each year. And I think your immunity just decreases with some half-life. So that's why I think they're recommending people who have recovered get it. One of my colleagues who had a really bad case was in the ICU actually. But recovered and had the worst reaction to the vaccine of anyone I know. And it makes sense because that person had high antibody levels, but I have a feeling all of us may need a booster of this thing every, maybe twice a year, it remains to be seen.

**Dr. Gaines:** Absolutely. And it's interesting because I mean, there's been cases of people who had it more than once, right? So that, that totally goes with what you're saying of, maybe it's not everyone, but there's at least some cases of people who their immunity didn't even last long enough to get us through the first wave of this, let alone, you know, the second wave. They were basically the start of the second wave.

**Dr. Grody:** Yeah. You're exactly right. And those have been well-documented. I mean, from my reading, a few of those cases, they may not have totally cleared the initial infection. Maybe it was
dormant for a while, but there's others they can tell by sequencing the viral RNA, that it was definitely a new infection. And then even if they're not infected in a way symptomatic or not, there's this thought now, which I don't totally understand. Maybe you can explain it to me, that even people who are immune or vaccinated can still kind of carry the virus and transmit it. That doesn't make total sense to me because if the virus is not replicating that, I mean, essentially, you're saying these people are like a fomite like a, an inanimate object that you're touching. Do you understand why they could still be spreading the virus?

Dr. Gaines: It's funny because I heard the same and I tried to figure it out and that's that's as much as I could come up with is that it must just be that it's on your person, you know? And maybe if I'm immune, but I'm living with someone who's, you know, not vaccinated and they get sick and then it's on me, it's on my hand and then I shake your hand. Right? And so, you're right. It's almost like, you're just like, like anything, like a doorknob that basically, you know, bacteria or viruses on it. That's as much as I could come up with as far as the theory, because you're right. Otherwise, it doesn't totally make sense, but I know that that is a concern. That that is a concern.

Dr. Grody: Yeah. I'm glad it's not just me. And, you know, the doorknob thing reminds me of something like norovirus, which is easily transmitted that way, but that's because the infective dose can be as little as like five virions. I don't know that COVID is that infectious.

Dr. Gaines: Thank you, Dr. Grody, this has been such an interesting chat. I appreciate the fact that we've been able to swap minds here on this. And I look forward to speaking to you again.

Todd Unger: I'm Todd Unger. And this is AMA Moving Medicine, a podcast from the American Medical Association. Get more insights from physician colleagues in the special edition of AMA Moving Medicine on what doctors wish patients knew about COVID-19. Find it at ama-assn.org/whatdocswish. Thank you for listening.