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[00:00:00] **Speaker 1** Yep. Look at me. We're going to cheat our bodies a little bit. Like pointing this way, but looking at each other. And do you want me to clap?

[00:00:10] **Speaker 2** Yep. So can we have you just give me one big clapper in front your face. Perfect. All right.

[00:00:18] **Speaker 1** Starting off. Good. Well, sorry.

[00:00:21] **Speaker 2** I follow instructions. Well. Well, I better features lately.

[00:00:25] **Speaker 1** Well, I want to thank you so much for doing this today. And I just want to start by asking, what have you heard from parents, if, if any, now that the approval of the COVID 19 vaccine has come out for kids under five?

[00:00:40] **Speaker 2** Yeah. As with everything throughout the pandemic, it's a mixed bag. There's a large group of parents that are actually really excited. They've been waiting a long time and really eager to get their kids signed up and are a little frustrated that there isn't enough vaccine yet this week. There's a group, pretty much the largest group, I think, that have kind of taken the wait and see attitude. Although it's kind of a split group, one group basically just doesn't want to deal with the hassle of it and trying to compete to get slots. And so they're kind of waiting and seeing mostly just to be able to get it easily. There's another group that does want to see a little bit more data come out from larger sections of the population. And then there's a relatively small group that are fiercely opposed and they're never going to get it no matter what we ask them to do.

[00:01:19] **Speaker 1** Now, if there aren't huge swaths of people getting the vaccine for their children, does that make the vaccine less effective?

[00:01:27] **Speaker 2** Well, I mean, in certain settings, it does mean we really depend on what we used to call herd immunity or what we now call community immunity. So if you're in a closed settings at your school, for instance, and only ten or 20 or 30% of the kids are immunized, you're really not going to have much of an impact if the virus gets introduced and starts to spread. You really are trying to shoot for at least 70 or 80% is where you can sort of diminish the impact of introduction. You're really talking about being able to eradicate or prevent any spread when you get up over 90%. So that's part of the reason that, you know, as people think about this, if we're all in it together, it really does need to be sort of a collective commitment to really doing all the same things.

[00:02:05] **Speaker 1** Are you understanding, though, of parents that are taking that wait and see approach?

[00:02:09] **Speaker 2** Sure. I mean, with everything, you know, throughout this pandemic, it's been a learning process and it's been happening, you know, pretty much at warp speed, at the speed of light. And it's a lot to take in. You know, I think that currently, you know, for the pediatric population, you know, the one thing we have to deal with is that the vaccines were sort of purported to be coming earlier in the year. And I think people got a little bit excited and then had their hopes dashed when it became apparent that it needed more study and we needed to understand how many doses and what was the right dosing. And so I think between that and then the combination of what was perceived to be a diminishing of the pandemic, I think sort of softened the eagerness. But I think as things are kind of moving along, as we're seeing more of these variants, we're clearly getting a lot more people that are more interested in asking a lot of questions. And I think that's, you know, really the biggest message we've got is that it's understandable that people are going to have questions, especially as this is kind of moving into this newer age group. And so we really encourage people to talk to their own providers and make sure that they've got all the answers before they make their final decision.

[00:03:10] **Speaker 1** Now, that's something that surprised me. A pediatrician on the DHS media briefing yesterday said that the most recent al-Muqrin variant hospitalized children at a rate five times higher than previous variants. Is this because it was more contagious or more harmful? Why was that happening and why was it not necessarily known as well to the public?

[00:03:37] **Speaker 2** Yeah, I think it's actually more complicated than people realize. I think it was a combination of things. One, it certainly was more transmissible and it was transmissible often before people even really had symptoms. So I think that there was a little bit of a limitation in how much people could do to mitigate on their own. Because I think when you know you're sick, most people have been pretty responsible. But this one was a little tricky in that people were shedding before they were sick. I think that was probably one of the larger features. I think the other, though, is that, you know, compared to where we were earlier in the pandemic with the Alpha, Beta and even the Delta strains, society was actually behaving much more what we would consider normal. There was a lot less mitigation. Certainly masks had been dropped in many communities, including in a lot of schools. And then the other piece of it was that, you know, so much of the population had been vaccinated. The largest unvaccinated portion of the population was the kids. And so I think that combination of features meant that kids got hit a little bit harder with this when they were a little bit more likely to be exposed. And they were one of the larger portions of the population that was still very vulnerable.

[00:04:38] **Speaker 1** There's a misconception, though, that kids are less vulnerable. Do children and parents of kids of this age group feel left behind?

[00:04:49] **Speaker 2** Well, I think one of the things we always have to recognize is that the transmissibility is dependent on so many different things. And so certainly for the first year of the pandemic, with schools closed and people terrified and mostly staying at home, kids were really protected. We didn't need vaccines for them in most circumstances because they were protected by all these other behavioral things. I think then, as things have returned to more normalcy, we started to get a better understanding of really what happens to kids. And so, you know, compared to flu seasons, for instance, I mean, we've got high. Hundreds more kids dying from COVID. Currently tens of thousands being hospitalized. Know it's far worse for kids than the influenza viruses are. And so I think people had kind of mistakenly either lumped these things together or kind of convinced themselves that these really were milder and less severe illnesses. I mean, I won't argue the fact that most kids do do fine and recover from it. But we are seeing now the same things we see in adults. We're seeing kids with long COVID. We're seeing kids with permanent disabilities related to long and hard injuries or even neurologic problems. So I think we've learned a lot more with this last Omicron surge just because we had a very different dynamic as far as how behavior was, but also who was vulnerable in our communities.

[00:05:59] **Speaker 1** Now let's back up a little bit. So which brands of the vaccine have been approved and at what dosages?

[00:06:06] **Speaker 2** Yes. So currently we've got Moderna and Pfizer both with emergency use authorization for these youngest kids. Pfizer is coming in at 1/10 of the adult dose. So at three micrograms, the older kids are getting ten micrograms and adults are getting 30 micrograms. Medicine is coming in at a quarter of the adult dose. So they're coming in at 25 micrograms. Their booster dose and their dose for the younger kids. For the older kids is about 50 micrograms in the initial primary doses for adults or 100 micrograms. And the goal with both of those is really to see how far they could push, diminishing the side effects and still get at least decent immune response or decent immunogenicity that approximated what the adults got with those bigger doses.

[00:06:48] **Speaker 1** So kids are getting how many doses.

[00:06:52] **Speaker 2** So the Pfizer kids are going to get three doses. You know, when they originally seemed to be getting ready to submit their information back in February and March, people looked at it and said, it just doesn't seem to be effective enough with two doses. And so they continued those studies and basically extended them and decided on three doses. Moderna's coming in initially with just two doses at that 25 micrograms. I think most of the expectations are that these groups will eventually need boosters, the same as we've added boosters now for all the other age groups, including most recently the 5 to 11 year olds. So I think people have understood now that there is a waning or a bit of an immune exhaustion that happens over time, that that immunity just basically fades a little bit and needs to be reminded. And so I think the expectation is likely that both the Pfizer and Moderna kids are ultimately going to need an additional dose at some point.

[00:07:40] **Speaker 1** And that's part of why it took so long for this emergency approval to come out as they wanted some more data to understand the dosages.

[00:07:50] **Speaker 2** Yeah, I think when you look at any new vaccine, there's really two sides to the coin. Is it safe and is it effective? And so I think that, you know, we've learned a lot over these years now with hundreds of millions of doses of vaccine having been provided and what it is we need to understand and study. And so for all of the studies in kids, you know, they were primarily focused on the safety and trying to figure out what's the right dose that gets you a decent immune response and then giving it to a lot of kids to make sure that it was safe and didn't cause any unexpected side effects. And at the same time, looking at how decent was that immune response? And essentially what they've done is what we call bridging studies, where they basically tried to approximate what we saw with the adult response and the older kid response and shoot for a lower dose that still allowed these younger kids to get a similar immune response to what those older individuals got.

[00:08:37] **Speaker 1** Now, you've dealt with vaccines in younger humans for quite a while. And what is your message to parents or guardians that are unsure about vaccinating their child between six months and five years old?

[00:08:55] **Speaker 2** Yeah, I think there's a couple of things that are really key to remember. I mean, one is this virus is unpredictable. And as much as we think we understand it, it does things and it changes. That actually then leads to unexpected consequences, some of which are pretty unfortunate. And so I think that that's a false narrative to convince ourselves that the virus is somehow getting milder or less invasive or less transmissible. You know, I think what we're seeing is a change in the dynamics just because more and more of the population has some immunity. And so it does change how it behaves when once it gets into the community. But we really don't want to leave kids vulnerable to something that really may surprise us and cause unnecessary side effects from those infections themselves. I think the other thing is that this virus keeps changing and as it keeps mutating, you know, unfortunately, people are not maintaining their immunity. And certainly we can't trust that the immunity from a wild type infection previously is going to continue to protect kids. I think people have seen some of the data that's come out that suggests that in some areas of the country and in some age groups, as many as three out of four kids have actually had a COVID infection at some point. But we can't let ourselves be fooled by that, predicting that then they're going to be protected and have a milder case or have no infection when it comes around. So we've got a tool now that is extraordinarily safe in all of these studies that we've done. And while it may not completely protect against all infections, and I think everybody's gotten used to the concept of breakthrough infections, these are. Things do what we need them to do. They protect against severe disease. They protect against hospitalization, intensive care, unit admission and obviously the worst outcome being death. And so I think that's really where we're looking at these as being something that's going to change. How we think about this is trying to give essentially equitable protection to all age groups so that they're protected against the worst outcomes that can happen as we continue to learn about this really, you know, sort of rapidly changing dynamic of this pandemic in front of us.

[00:10:46] **Speaker 1** Now, is this kind of the last step in, you know, ensuring that the general population is protected against this virus? Is this last age group of six months to five years old getting emergency approval for the vaccine? Is this kind of the last big hurdle we needed to get over and we'll finally see a little bit of a light at the end of the tunnel?

[00:11:11] **Speaker 2** Well, I wish I could say it was, and I know we were trying to lead me into saying that. But unfortunately, I think there are still a number of steps that are going to need to still come forward before we can really consider ourselves getting this under control. I think one is getting full licensure for all these vaccines so that they can be, at least in the younger age groups getting into that situation where we may see benefit from mixing and matching. So while these are under emergency use authorization, you really need to kind of stick with where you started. The other big thing, though, and I think the thing we're all really watching most carefully is the ability to develop vaccines in a real time and rather quick response to these new Omicron variants as they keep coming in, you know, ultimately to whatever new variants may come. You know, a lot of the companies now are working on these variant boosters. And I think that, you know, we hope that those are going to go forward very quickly for a review and eventually approval, so that those will ultimately then become the boosters, at least for the high risk populations, you know, the older individuals and people with underlying medical and immune conditions. But I think ultimately, you know, depending on how things turn out, we very well may end up with a booster program similar to what we see with influenza, where people periodically get doses of these vaccines. But they're going to have to be better and more responsive to what is currently circulating and not continue to go back to the original strains that started this whole thing.

[00:12:34] **Speaker 1** How do you foresee kids getting this regularly like they would when they're, you know, six months on getting other immunizations? Is it going to be normalized?

[00:12:46] **Speaker 2** I mean, I'm still an optimist at heart. And so I do still hope that we will be able to get this under control in a way that doesn't mean that this is going to be an inevitable, persistent thing. But I also won't be surprised if we end up in that setting. I mean, this is clearly starting to look more like an endemic virus that's going to hang around and continue to circulate for quite some time. So I do foresee that we're going to end up continuing to add boosters as we have, you know, a second booster for all these high risk populations. We're on first boosters for the healthy, younger populations. But I think ultimately what probably a booster for these younger kids, especially if the more common variants continue to circulate. And then I think time will tell. I think we're really going to need to understand, you know, does this virus continue to mutate and require updates the way we have to update the flu vaccines, or is this something that we only give to the select populations? I think we're gathering that information. We've got the right people sort of thinking about this. And I think from a regulatory and policy standpoint, I think everybody's kind of looking at that. I think we've gotten really good at looking in real time out data as it emerges now, processing that and even messaging it better than we did early on. And so I think ultimately, we're going to be able to make pretty clear decisions and get people to understand what it is we all need to be doing.

[00:13:58] **Speaker 1** So if a parent or guardian is out there listening to this and they are really eager to get their child vaccinated, can they just go to the pharmacy like so many of us have to get our COVID shot? Or is there a different procedure for this really younger group?

[00:14:15] **Speaker 2** You're not quite yet. I think that, you know, currently the supplies are just starting to roll out and they're just shipping from the federal government to the state government and then being allocated out. So at this point, I think everybody's going to have to be looking for appointments, whether it's through pharmacies, whether it's through public health or whether it's through health systems until there is, you know, much more supply available. I think most of us learned our lesson early on in this pandemic that we didn't want to offer appointment slots until we actually had vaccine in hand. So I think that people are going to have to play that game a little bit until there's more supply available. I think ultimately once we have plenty of supply, then it'll be more like it's been for the adults where you can basically just show up and get them. But I think for the time being, at least, certainly for the next couple of weeks and probably even the next month or two. The other thing I think we're going to see, though, is that, you know, we've probably, you know, at some level depended on the centralization of delivery, delivery of these vaccines for quite some time, where we've, instead of giving them in people's routine medical offices and places like that, have sort of kind of channeled people into select places just to be able to manage the supply. In the workforce. But I do think that there's going to be more of an effort now to move the vaccines now out into primary care offices to make it both easier for people, but also to do it in a place where they're more familiar and comfortable and where they can actually talk to people and get their answers and the people that they've been working with and have dealt with for many, many years. So I think that's going to be the biggest change that we're going to see probably over the next 3 to 4 months. But at least initially, I think it's still going to be an appointment only thing until we get a lot more supply.

[00:15:45] **Speaker 1** And does Wisconsin law say that children three and under do have to get it from a physician or need a prescription? I thought I heard something about that.

[00:15:56] **Speaker 2** Yeah, it's been complicated. You know, basically, the state legislature has gradually moved the age down for when pharmacies can provide vaccine, but between the emergency use authorization statutes, as well as the state statutes. Underage three kids do need a prescription from a provider. And so most of the providers are gearing up to be able to do that. But that's another reason. And I'm glad you reminded me why people need to make an appointment, because then the pharmacy can reach out to your primary care provider. And we're working on, you know, pretty nimble ways to provide those electronically over the phone so that people don't actually have to go seek and get a written prescription. But, yes, under age three. People do need something that's been provided to the pharmacy that a provider has prescribed it.

[00:16:39] **Speaker 1** All right, Dr. James Conway, thank you so much for this information.

[00:16:41] **Speaker 2** Thanks for having me.

[00:16:44] **Speaker 1** All right. Great job. Thank you.

[00:16:46] **Speaker 2** It all highpoints as usual.

[00:16:48] **Speaker 1** Well, I always have too many questions, so I could I could keep going. But personally, I am curious if we're going to be doing some reporting on long COVID. And I don't know what the past bility of talking to a family with a child that has long COVID.

[00:17:08] **Speaker 2** But yeah, you know, it's interesting. So so we don't actually end up following them. Okay. This side of things, I mean, in the adult side, Aurora Theater, last name, it's hyphenated like village pop or populist or something like that. She's basically opened up the big comprehensive Long-Covid clinic. I don't know what the youngest age that they go down to, my understanding is they were going to be seeing some teenagers at some point, and I'm not sure if that worked out for the kids that end up with long COVID. They mostly get followed because they don't have as many of the diffuse problems as the adults do. They usually have more kind of focal things. So for the ones that have, you know, long lasting lung injury, they're good. They go to the Pedes pulmonary clinic, the kids with pins, you know, that have heart stuff. They got a Pedes cardiology, the kids that have sort of the long standing kind of fog headache and all that kind of stuff are mostly ending up in Pedes Neurology. Okay. Is kind of the three homes that have mostly taken those kids on. But since we don't have a whole lot to offer from an infectious disease standpoint, they sort of end up, you know, going to wherever the people are that can meet their needs and actually help them.

[00:18:14] **Speaker 1** Got it. I just said.

[00:18:17] **Speaker 2** Oh, yeah.

[00:18:19] **Speaker 1** Her room tone. Yeah.

[00:18:22] **Speaker 2** Yeah, sure.

[00:18:22] **Speaker 1** Oh sure. No. Yeah.

[00:18:26] **Speaker 2** Rolling on to.