

PEDIAPOD OCTOBER 2021 TRANSCRIPT

Geoff Marsh

Hello and welcome to PEDIAPOD for October 2021. This month, how to implement rapid and safe SARS-CoV-2 vaccinations in pediatric populations.

Early on in the SARS-CoV-2 pandemic, the majority of infected children were either asymptomatic or had mild COVID-19 disease, prompting many to demand a higher acceptable risk threshold of vaccines for children as compared to adults. More recently, as children begin to make up a larger proportion of the infected population and following evidence of the mental and physical toll exacted by the pandemic on children, a pediatric vaccine is now more pressing but challenges to widespread vaccine uptake remain. In this episode, we meet Dr. Chulia Ulloa from the University of California Irvine about a recent commentary she wrote with fellow pediatric providers, physician scientists and advocates for children about these challenges and how they might be overcome.

Chulia Ulloa

My name is Chulia Ulloa and I'm a pediatric infectious diseases physician scientist in the Department of Pediatrics at the University of California Irvine School of Medicine and I also work as an attending physician at the Children's Hospital of Orange County, CHOC Children's Hospital.

Geoff Marsh

Where is the US at right now in terms of the vaccine rollout?

Chulia Ulloa

Specifically with regards to children, the Pfizer vaccine has been approved for children 12 years and older. And they're going to be evaluating pretty soon here the vaccine eligibility for children ages five to 11 years of age and I'm hopeful that it will be approved by the end of this month or early November.

Geoff Marsh

So basically a pediatric vaccine for all children is on the horizon?

Chulia Ulloa

It is yes, and they do have clinical trials that would go as young as six months, so six months to four years of age as well.

Geoff Marsh

But you and some colleagues have written a commentary for pediatric research this month, haven't you. What are the remaining issues and questions that need to be ironed out before this goes ahead?

Chulia Ulloa

Yeah, so we actually wrote that in the fall of 2020 and it was published in January of 2021. At that moment, a lot of the questions were surrounding the fact that COVID-19 disease is milder in the

majority of children than in adults and evaluating the risk benefit of Pediatrics, SARS-CoV-2 vaccine should be carefully weighed, that was one of the main issues. And also the fact that we really haven't had any clinical trials in the less than 12 age group and that we really needed to do that in order to assess the vaccine dosing and the immunogenicity in that age group, which thankfully we have now.

Geoff Marsh

Do you think that as the proportion of children that are making up infections and hospitalizations increases, that actually lends itself to us being able to better ask questions about the efficacy of vaccines now?

Chulia Ulloa

Yeh, so research has shown that the Pfizer vaccine is 100% effective in preventing the COVID-19 virus in children ages 12 through 15, whereas previous research has shown that the vaccine is 95% effective in preventing COVID with symptoms in people age 16 and older.

Geoff Marsh

Are there any particular complications targeting a vaccination program to the pediatric population from the very young, up to 16?

Chulia Ulloa

Yeah, from the very young to 16, I think we have large differences in maturation and also you may not need the same dose of the vaccine for an older age group than you would for a younger age group. So teasing out these differences and the concentration of the vaccine that one would need to generate the same immune response certainly needs to be teased out. So I think we need to learn more about how the children are responding to each of the vaccines at different doses at different levels. And is the vaccine safe? You know, what are the side effects? Are there side effects from the vaccine?

Geoff Marsh

What are the particular ethical considerations for a pediatric vaccine? And how do they differ from an adult vaccine?

Chulia Ulloa

At the start of the pandemic there was a lot of talk about the ethical considerations about vaccinating a population that really only was infected about 3% of children at that time. And so there is an ethical consideration, right, so vaccinating children at that time was seen more as preventing spread of the disease and protecting those that are more vulnerable, AKA those that are older or maybe have underlying health conditions. I think as we've been moving forward, we've been able to appreciate that children have also suffered significantly from this pandemic. So now, there are more children that are infected with COVID-19 but you know, the school closures etc, have also negatively impacted kids. The pandemic, I think for us, has allowed us to realize that schools certainly provide a benefit to families beyond providing education, such as childcare, nutritional, support, health care and social services, and without in-person instruction, children are at increased risk of falling behind academically and exacerbating these educational inequities. And so throughout, because of the school closures, it has

negatively impacted kids in many ways. So they haven't been able to go to school, they haven't been able to go to the well-child checks, they haven't been able to get their primary immunizations, a lot of them have been locked indoors so they haven't been able to exercise and there's been a huge mental health crisis amongst children as well. So I think, now looking back at the pandemic, and looking back and how things have changed, in order to move forward safely, I think the best way to really deal with this virus is to prevent it. You know, I'm in California right now and I think that in terms of the number of cases, the largest numbers of cases of COVID-19 that we're seeing are currently in the Latino, the Hispanic community and so the vaccine uptake has also been lowest in this community. So I think it's the responsibility of physicians to go out into communities that are underserved or have language barriers, etc, and provide education and reach out to them. And so that is something that we have been doing a lot in the Hispanic communities, Vietnamese communities, underserved communities, and so it's important for us to go and educate communities and also bring the vaccine to them- sometimes it might be harder for these communities to go out, transportation might be an issue, people work and so they might not be able to go to vaccine clinics during regular hospital clinic hours. And so that's another thing that we've been working on, providing vaccine clinics into largely underserved communities.

Geoff Marsh

Another big challenge that we've seen all across the world is, of course, vaccine hesitancy. And I can imagine that when it comes to pediatric vaccines that's stronger than ever?

Chulia Ulloa

The challenge with vaccine hesitancy, at the end of the day, is just providing education and answering questions for families. So I think that a lot of the vaccine hesitancy can be solved if we have open communications with individuals and so going out into communities and talking with people. It can also be done on an individual level, you know, in your primary care offices, but also on a larger scale. So one of the ways that we've been doing this is that we've been liaising with a lot of our school districts, particularly in communities where the vaccine uptake has been low, in order to educate. These zoom informational sessions have also been recorded and they're aired on Facebook and YouTube, etc, to try to just educate communities.

Geoff Marsh

Did they work? Were those zoom sessions useful?

Chulia Ulloa

Well I think it's hard to say but we do do a survey for the families and everyone who participates. And we do a survey before and after these talks and obtain their opinions. For example, a question that we'll ask is, 'would you vaccinate your child?', and we have seen an increase in that number after the talk, as compared to before the talk. And sometimes we'll have these talks before we have a vaccine clinic or vaccine fair in the community and we have had a good turnout at these vaccine clinics.

Geoff Marsh

It sounds like we have a good understanding now of a lot of the challenges when it comes to rolling out a pediatric vaccine. Where do you think our efforts need to be focused to get this over the line?

Chulia Ulloa

Yeah, so I think we have made a lot of progress over the past year with regards to learning more about the SARS-CoV-2 virus, or COVID-19, particularly in children. And I believe that the strongest challenges ahead are working to combat vaccine hesitancy and health misinformation. At the end of the day, in order to get a better hold of this pandemic, we really need to vaccinate a large number of people that are largely unvaccinated, including children and we are headed into difficult times. There's a lot of misinformation out there, especially on social media outlets, in English and in other languages, and this information is a huge source of confusion and mistrust that is ultimately harming people's health and overall, undermining our public health efforts.

Unfortunately, there has been a demographic shift in COVID-19 cases with pediatric patients making up a growing share of COVID-19 infections. They are accounting for up to 27% of cases and this is opposed to the start of the pandemic where children accounted for 3% of all cases. So essentially, what we are seeing is that COVID is becoming more and more of a childhood illness because we have a fully susceptible population of children less than 12 that are not yet eligible for a vaccine and an unvaccinated population between 12 and 17. And as vaccines are expanded to these younger age groups, we as physicians, and as pediatricians have a huge responsibility to work with our patients, families and communities, not only to debunk these myths and misinformation about COVID-19 vaccines, but to also really just educate them on the importance of children getting vaccinated in order to halt the spread of this disease and to prevent ongoing morbidity and mortality.