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### Overcoming Barriers to Young Adult Vaccination: A Call to Action for Frontline Providers

Announcer:

Welcome to CME on ReachMD. This activity, entitled "Overcoming Barriers to Young Adult Vaccination: A Call to Action for Frontline Providers" is provided by Prova Education.

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Dr. Mayeaux:

Adherence to vaccine recommendations is a topic of great concern to clinicians. Superimposed upon that is vaccine hesitancy, whether by choice or because patients are reluctant or afraid of catching COVID at their providers' offices.

This is CME on ReachMD, and I'm Dr. E.J. Mayeaux. Today, I'm talking with Dr. Paul Doghramji about how clinicians can improve vaccine uptake and address those patients and families who exhibit vaccine hesitancy. Dr. Doghramji, welcome to the show.

Dr. Doghramji:

Thank you. My pleasure to be here.

Dr. Mayeaux:

Dr. Doghramji, let's open our discussion with your thoughts on why reduced adherence to CDC vaccination recommendations is such a public health issue. And perhaps you could also comment on how the current COVID-19 pandemic has made vaccine adherence even more complicated.

Dr. Doghramji:

Sure, I'd be glad to. And, before we do that, let's set a little bit of the stage. First of all, you know, vaccine development and administration has probably been the single most important success in medical history, especially in the last 100 years or so. It's done so much for disease prevention. And basically, it's almost a cure of a disease, in a sense. And in fact, let's go back in history a little bit and what happened before vaccines with infections and where we've come from it. An example is – let's go back to Christopher Columbus, who landed in Hispaniola, which is Haiti/Dominican Republic, in 1492. And listen to this: By the 1600s, all of the natives were wiped out because of all the diseases that they brought in. There were so many of the different diseases. So overall, between 1492 and 1900, the native population declined by 90%, while the European population increased by 444%. And this is all due to a lot of the diseases that were brought into the Americas by the Europeans, specifically smallpox, measles, whooping cough, chicken pox, bubonic plague, typhus, malaria, etc.

So this kind of sets the stage for how much morbidity and mortality, death and dying that infections have caused. And plain and simple, vaccination has therefore greatly reduced the burden of infectious disease.

The World Health Organization estimates that vaccination saves 2 to 3 million lives worldwide per year above its impact on reducing morbidity and above reducing costs and above reducing the healthcare involvement in this, and we'll talk about this a little bit more.

But herd protection, which is how much of a population is vaccinated and is protected from getting infection and the impact on those who remain unvaccinated. So if you're unvaccinated, you can only get the disease if it's brought to you in contact. And if you have a herd

that's pretty much protected, you're not going to get it as much. So that's also an important consideration.

Imagine a life without the vaccines that we currently have. You know, children and all the way to adulthood, by the time they're adolescents get vaccinated to 13 different diseases. You know what these are: DTaP, HPV, MMR, polio, rotavirus, pneumococcal infection, varicella, meningitis A and B, hepatitis. These are all the different vaccines. So we are vaccinating and preventing so many very important diseases that have significant morbidity and mortality. And, clearly, life as we know it would be drastically different if we did not have vaccination.

Now, one other thing I should mention is what's happened during the COVID era with vaccines towards the normal infections that are prevented in childhood. Blue Cross and Blue Shield-associated states nationwide have given us statistics that 9 million vaccine doses were missed in the year 2020. And in that year, vaccination rates were 26% lower than in 2019, and 40% of parents and legal guardians indicated that their children missed routine vaccinations related to back-to-school restrictions. And childhood wellness checks were missed, with estimates that nearly 4 in 5 wellness checks were missed were due to the COVID-19 pandemic restrictions. Now there's also communities and ethnic minorities normally affected by healthcare disparities. They've been more widely impacted. And also what this all suggests is that there's a wide concern that preventable disease such as polio will re-emerge, and some of the other ones will re-emerge.

Dr. Mayeaux:

Well, I'm sure everyone can see from your illustration that vaccination over time has seriously decreased the amount of morbidity and mortality related to many of these infectious diseases. Thank you for providing us with such a clear explanation of how and why vaccination is so critical to maintaining public health. Could you now provide our learners with a few examples perhaps highlighting the health value that specific vaccines bring to widespread immunization.

Dr. Doghramji:

Absolutely. So more than 15,000 Americans died from diphtheria in 1921. And this was before there was a vaccine. Interestingly, only 2 cases of diphtheria have been reported to the CDC between 2004 and 2014. I think that's a huge example. An epidemic of rubella or German measles that occurred in 1964 to '65 infected 12.5 million Americans, killed 2,000 babies, and caused 11,000 miscarriages. Now, since 2012, with vaccinations and everything, only 15 cases of rubella were reported to the CDC. That is absolutely remarkable. In 1974, about 80% of Japanese children were getting pertussis or whooping cough vaccine. That year, there were only 393 cases of whooping cough in the entire country, and not a single pertussis-related death. Then immunization rates began to drop until only about 10% of children were being vaccinated. And so what happened? In 1979, more than 13,000 people got whooping cough and 41 died. When routine vaccination was reinstated, the disease number dropped again. So remarkable benefits that science can add through vaccination.

Dr. Mayeaux:

For those just tuning in, you're listening to CME on ReachMD. I'm Dr. E.J. Mayeaux, and here with me today is Dr. Paul Doghramji. We're discussing the importance of adhering to CDC vaccination recommendations and how we can overcome vaccine hesitancy in our clinical practices.

Let's switch gears and discuss the big elephant in the room: vaccine hesitancy. Can you provide us with a primer on some of the causes and outcomes of vaccine hesitancy?

Dr. Doghramji:

Sure. Vaccine hesitancy, also known as anti-vaccination or anti-vax, is a reluctance or refusal to be vaccinated or to have one's children vaccinated against contagious diseases. And people who subscribe to this are commonly known as anti-vaxxers. So now the reasons for refusing vaccination or being an anti-vaxxer is that parental concerns that the vaccine has not been on the market long enough, belief that their children are at low risk for the disease so why bother vaccinating them? They'd rather have their children get the disease, saying let me give them natural immunity like varicella, and suggesting that the risk of adverse effects are too high. These are some of the reasons that they give, and they're propagated by a lot of different things. They're propagated by non-health professional sources, practitioners of complementary medicine and alternative medicine, social media, social networking, all these play into anti-vaxxing and anti-vaxxers and what they say. Now there's also a couple of other things like safety concerns for the newer vaccines and the newer ones like HPV. The rates of them are very, very low. So the newer the vaccine, the more of a chance that there's going to be anti-vaxxing. But the one other thing that's really interesting to add is that surveys are suggesting that physicians who graduated more recently believe that their children receive too many vaccinations. And as a result of it, there's some anti-vaxxing that's occurring specifically as a result of physician involvement.

Dr. Mayeaux:

That's really interesting. And it raises the question about the total amount of antigens that folks are receiving in the vaccines. And of

course, we all know from evidence that current vaccines have so many less antigenic determinants. They're more specific to produce this particular immunity that we're looking for that really they're being exposed to much less antigens because the older vaccines were just wider in the amount of determinates in them. So overall, they're actually being exposed to less even if they're getting more vaccines.

Dr. Doghramji:

Absolutely. And the other thing that I think is really important to note is that for children born in the United States from 1994 to 2013, vaccination would prevent an estimated 322 million illnesses, 21 million hospitalizations, and 732,000 deaths during their lifetime. This is some of the information that we need to share to patients and saying that even though there is anti-vaxxing going on, look at all the good that it's doing. Look at all the good that it's doing to the community, to the population, and your child should be involved in that benefit.

Dr. Mayeaux:

Well, that's a great point. So now that we kind of understand the foundation of vaccine hesitancy, how do we overcome this hesitancy so that we can improve vaccine uptake in the United States? In essence, what has worked and what has not worked?

Dr. Doghramji:

Well, there are several different ways of approaching vaccine hesitancy. And a lot of it has to do with proper information going to patients. An educated consumer is our best customer, as we always say. But that education can happen in many, many different ways. One of the ways is proper information being disseminated through the media – television radio, podcasts, etc. – by even governmental agencies. The Centers for Disease Control can disperse information. And it does happen about vaccinating children and giving them the right information to make the right choices.

The second area of education is, oddly enough, is pharmaceutical company advertisements. I see this all the time. Vaccinate your child or talk to your doctor about vaccinating your child to this disease or that disease. And I've seen them for HPV. I've seen them to meningococcal disease. So I've seen them for several different things that are coming out. That's decent education to patients.

And finally, the whole patient-physician interaction. And this is a very, very important one. As I said earlier, some of the newer doctors coming out seem to be anti-vaxxers themselves. We have to dispel that. We have to get that out of the way. And we have to have our clinicians becoming scientists who understand that vaccination is the single best way to cure a disease. If a disease never happens, then you have to consider it to have been a cure, in a sense. But physicians and their interactions with patients can have such a remarkable impact. When a patient trusts a clinician and the clinician has the right scientific information, anti-vaxxing and the hesitancy can be warded off real nicely.

Dr. Mayeaux:

I'd like to mention the position that how they introduce vaccination is very important. They should use presumptive language just like we would for any other public health recommendation that's out there, to be very empathetic and to acknowledge concerns that are out there. But overall, to explicitly communicate to your patients that we really care about you and we really feel that this is the best thing for your health. Those kinds of clear messages help patients to move forward in their thinking, whereas a little more wishy-washy message often does not and actually may reinforce the patient's fears.

Well, this has certainly been a fascinating conversation, but before we wrap up Dr. Doghramji, can you share your one take-home message with the audience?

Dr. Doghramji:

The one take-home message is remember this: one of the most important things that science has done for us in curing disease – in a sense it's a cure – is preventing the disease. And vaccinations have come a long way with a tremendous amount of research and tremendous amount of information for us to be able to provide to our patients such that we can prevent 13 different diseases by the time they are 12, 13 years old, and up to 17 diseases throughout their lifetime. And it's an important point to share with our patients. And when you get that trust with your patients and they know what's best for them coming from you – scientifically approached and in your ways, as you said, Dr. Mayeaux, you know, the ways that you're describing how to approach a patient and how to voice your opinion about them, it can make all the difference in the world. Let's also discuss with them the best ways for them to get the COVID-19 vaccine and also to dispel any kind of rumors and issues that are circulating around about the negative aspects of it.

Dr. Mayeaux:

And I would add that to make sure that we as providers are up to date on the most current and accurate information so that we can speak with confidence and authority when counseling our patients.

Unfortunately, that's all the time we have for today. So I want to thank our audience for listening, and I want to thank you, Dr. Doghramji,

for joining me and sharing all your valuable insights. It was great speaking with you today.

Dr. Doghramji:

Thank you very much. Great being here.

Announcer:

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