



Strategies for Recommending HPV Vaccination for Pre-teen Youth
Public Health Live!
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TRANSCRIPT

Moderator Rachel Breidster: Hello and welcome to *Public Health Live!* I'm Rachel Breidster and I'll be your moderator today. Before we get started I would like to ask that you please pull out your online evaluation at the end of the webcast. Continuing education credits are available for a limited time after you take our short post-test and your feedback is helpful in planning future programs. I also want to let you know that our roll in speaker has disclosed that she has done research on this topic funded by Janson Pharmaceuticals. We do not have any affiliation with commercial entities or products whose services may be discussed in this activity and no commercial funding has been accepted for this activity. As for today's program, we will be taking your questions throughout the hour by phone at 1-518-402-0330, or via e-mail at phy.ny@gmail.com. Today's program is entitled Strategies for Recommending HPV Vaccinations for Pre-Teen Youth. Our guest today, Dr. Kristin Oliver, an assistant professor in the Department of Pediatrics, Environmental Medicine and Public Health at the Icahn School of Medicine in Mt. Sinai, New York. Thank you for joining us.

Moderator: Good morning, Dr. Oliver. Thank you so much for being here with us today.

Kristin Oliver: Good Morning. Thanks for having me. I'm really excited. I love this topic.

Moderator: Excellent. I'm excited as well. I know that today's webcast follows up on a March 30th webinar that was done that really focused on information and safety and efficacy of the HPV vaccine. Today we're going to shift a little bit to talk about how we communicate this information. So can you start by reviewing our objectives for today's program with the audience?

Kristin Oliver: Absolutely. So first we're just going to identify what are the reasons why HPV vaccination rates are really lower than what we'd like them to be? Then we'll discuss, and demonstrate, specific communication strategies to help increase these rates with really looking at way to address parents' chronic concerns about the HPV vaccine. Unofficially, I have an objective of sort of sharing my love for this vaccine because it is an amazing vaccine and I would really like to see us increase rates as much as possible, so I am hoping that some of that enthusiasm translates to a handful of people who are watching who then also become HPV champions and really help push our rates up.

Moderator: Terrific, thank you. So, with that in mind, can you talk to us and give us an overview of what does the uptake of the HPV vaccine look like currently in the United States?

Kristin Oliver: Right now the vaccination is the norm in the United States. Most kids are getting the vaccine. You are looking at here data of 13 to 17 year-olds. You can see numbers have been going up over time. At this point over 50% of boys and girls ages 13 to 17 have started this series. So that's fantastic. I wouldn't be here if we didn't want to see these numbers increase. So there are a couple of issues. One, we aren't where we want to be in terms of helping people achieve the 2020 goals. Two, these are initiation rates, not completion rates so we really want people to get the full series in, either two or three doses, depending on their age. Those rates are below 50% at this point. We want to see those increase. Three, we should be giving the vaccine at ages 11 to 12. We want this to be completed by the time they're 13 ideally. We want to see all these things move up.

Moderator: Given that information, can you talk to us a bit about why some of the reasons parents either choose to vaccinate or choose not to?

Kristin Oliver: One study out of Texas interviewed parents and said how important do you think these vaccines are on a scale of 0 to 10, 0 not so important, 10 you place a really high value on this vaccine. The parents all rated the vaccine really high in that case. Other studies looked at why have you not started this vaccine? One of the number one reasons they say is that the vaccine wasn't recommended by their pediatrician or their family medicine doctor or nurse practitioner.

Moderator: Interesting. Parents are saying they think it is an important thing. How does this compare to other vaccinations?

Kristin Oliver: Right, so if you look at other vaccinations, in the survey where they ask parents how important do you think these vaccines are, all of them were rated basically the same, basically 9, 9.4, 9.5. Parents think all these vaccines are equally important.

Moderator: If parents seem to think all these vaccines have an importance, how does that data compare to what clinicians believe?

Kristin Oliver: They asked separately, what do you think parents said about this? Not what do the clinicians feel, but where do you think parents rated the vaccines? Meningitis, hepatitis, they were right about where the parents were as well. But, when you look at HPV and influenza, the providers actually said, oh, we probably think the parents don't think these vaccines are as important so those numbers were a little bit lower.

Kristin Oliver: When we look at the data we see there is a bigger difference in terms of what they estimate in terms of importance for HPV?

Kristin Oliver: There's some kind of disconnect. Parents think vaccines are important. Providers feel like maybe parents don't think it is important. Not the providers don't think it is as important but that they think the parents think it is not important when in fact they do.

Moderator: Interesting. We recently spoke with a doctor from Upstate Medical University about their studies on parent, adolescent and clinician attitude on HPV vaccination. Let's take a look.

Manika Suryadevara: I'm faculty in this division of pediatric division of infectious disease and immunology. I've worked to develop a vaccine advocacy

program since 2012 to improve immunization rates specifically with a focus on HPV. While I'm in clinic, I see children with severe and unusual infections, recurrent fever illnesses, primary and acquired immune deficiencies, as well as families with vaccine concerns. We have studied vaccine attitudes and practices among providers and adolescents in New York State and have described several striking findings. One, the HPV vaccine is the most commonly cited vaccine by providers with regards to vaccine safety concerns. Interestingly, there is a subset of pediatric and family medicine providers who still think that the administering the HPV vaccine to their young adolescent increases their risk for unprotected sexual activity, and these providers are less likely to routinely recommend the HPV vaccine to their eligible patients. There's also a subset of providers who say they routinely offer standard pediatric vaccines but go on to state they do not routinely recommend the HPV vaccine, somehow them from all the other routinely administered family medicine vaccines. Providers report they are more likely to recommend the vaccine for HPV vaccine to the 13 to 18 year-olds when compared to the 8 to 12 year-olds. We found factors associated with adolescent vaccine uptakes were a strong provider recommendation and the understanding that the vaccine prevents cancer. Similarly, the factor associated with HPV non-vaccination was lack of provider recommendation. So, these data suggest that providers need to fully understand the safety of the HPV vaccine and its efficacy in preventing cancers so they can go on to routinely recommend the HPV vaccine to all eligible patients starting at 11 years of age to prevent them from developing HPV associated cancers later in life.

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Moderator: It is interesting that Dr. Suryadevara really emphasized the importance of starting the vaccine at age 11. What do we know about the opportunities to vaccinate these early adolescents and getting folks in before that 13 to 18 age?

Kristin Oliver: Younger adolescents are still coming in for preventative care visits. Unfortunately this starts to decrease around age 13. My daughter doesn't want to go to the doctor, right? But I literally pick her up and put her on the bus and she comes with me but when she's 15, that's going to be a lot harder. We need to start getting these vaccines in earlier than we've been doing. Don't wait until the 13, 14, 15-year visit because they aren't coming as often. We want to start at 11 before those preventative care visits drop off. The other thing is, you want to start thinking about giving the vaccine not just to preventative care visits. But over 60% of vaccines are given at a preventative care visit but we can really give them at follow-up visits or at urgent visits. We really need to start doing that with the HPV vaccine.

Moderator: Sure. Now are there other reasons that pediatricians might be less likely to recommend the HPV vaccine compared to other vaccines for adolescents?

Kristin Oliver: I think part of the problem with HPV vaccine is as pediatricians, we aren't as intimately involved in the diagnosis, treatment and management of the diseases that are caused by HPV. But I feel intimately of the other diseases we are protecting against. I know specifically these procedures so I feel that very, very personally. I think most pediatricians do so we have a better sense of those diseases and are more likely to vaccinate against them as a result. I would like to then, for when I give a lot of these talks, I'd like to compare the rates of these different

diseases in our adolescent vaccine platform. This is the annual incidence of these diseases in the U.S. This meningococcal disease is .14 for 100,000. Pertussis is higher, 6.5. but if you add together oropharyngeal cancer, cervical cancer and other HPV-associated, that's double what you see in pertussis. The rates of these HPV preventable diseases are so much higher but we aren't seeing it in our offices. We don't feel it the same way.

Moderator: That makes sense. Does this hold true in terms of mortality from HPV related cancers as well?

Kristin Oliver: It does, absolutely. You can see, about 70 deaths a year here from meningococcal disease, 6 for pertussis, but over 4,000 women in the U.S are dying of cervical cancer every year. It's not that these other deaths are tragic, and it's not that we are not trying to prevent those, it's that we've done such a good job immunizing and we can do that with HPV. So, I want to come back here in 20 years and have this graph come shooting down and say look at this great success because we can do that because we have this effective vaccine.

Moderator: Excellent! So with all of that information, and it certainly is very compelling data, it really catches your eye and makes you think about how do we get those numbers down and get that bar graph when we come back in 20 years, how should we introduce this cancer preventing vaccine when we start the conversation.

Kristin Oliver: The first study done video- or audio-recorded the conversations that parents were having with their pediatricians. This is initially in the younger sort of baby group. They recorded and they listened to them afterwards. They basically broke up the conversations into two groups. In one group the pediatrician walks in and says, oh, Samantha's 1-year-old today, she's going to be due for her MMR, we'll get that done. In the other group the doc walks in and says what do you want to do about that measles vaccine? Not surprisingly, the group that got this is what we're going to do recommendation were much more likely to get vaccinated at the end of that visit. So then, a group did a randomized control trial. They actually trained one group of pediatricians in what they call the announcement strategy -- your child is due for. The other group didn't get that training at all. Again not surprisingly, the group that got the training in this announcement strategy, the uptakes for HPV were higher than the group that wasn't getting this training to do that strategy.

Moderator: Very interesting. Can you explain to us what it meant by the term "presumptive recommendation" as it relates to what you just discussed?

Kristin Oliver: There are a lot of things we do in clinical practice that we assume consent for. We're going to take your blood pressure. We're going to test your child's blood for lead today. Things like that, that we don't ask explicit consent. Often we do this for the childhood vaccines as well. You're due for this or that because you are over 1-year-old now. We should do that for the adolescent series as well, including HPV. Your daughter turned 11 this year. She need two vaccines today.

Moderator: Excellent thank you. Now, let's take a look at how a conversation with a parent about the HPV vaccine might take place in a clinical setting. Here the Dr. Suryadevara speaks with a parent about the HPV vaccine.

Manika Suryadevara: So now that your son has turned 11, he's due for three vaccines today to protect him from tetanus, HPV-associated cancers and meningitis. Do you have any questions?

Parent: Well, we definitely want him to get the tetanus and meningitis vaccines. I've heard of the HPV vaccine, but the school doesn't require it so we don't need that one.

Manika Suryadevara: So the reason we give the HPV vaccine to kids is to prevent them from developing cancers later in life, particularly the HPV-associated cancers. Both boys and girls can get the HPV infection and can go on to develop HPV associated cancers. We have a vaccine to protect them from these cancers. The only other vaccine that protects from cancers is the Hepatitis B vaccine and your son already got that as baby. So I strongly well that we do the HPV vaccine series to keep him healthy and protected when he becomes an adult and with the school vaccine requirements, they're meant mostly to protect the public health within the school environment. But I'm recommending that your son starts the HPV vaccine Series today to protect him from developing cancers as an adult.

Parent: Well, I know HPV is a sexually transmitted infection. My son's only 11 years old and he's not having sex yet so he's too young for this. We can give it to him when he gets older.

Manika Suryadevara: I see what you're saying. But the reason that we want to immunize him now at 11 is because he's already here getting other vaccines, tetanus and meningitis vaccines. We don't want to forget the big cancer prevention vaccine, and the vaccine works better in this age group. So, if he starts the series today, he'll only need two doses. But if you wait until he is older, he may ultimately need three doses to get the same protection. So I recommend that we start the series today.

Parent: I've heard so many things stories about bad things happening to kids after getting the HPV vaccine. How do you know it is safe?

Manika Suryadevara: Since 2006, there have been over one hundred million doses of HPV vaccine distributed across the country and they keep good records of every event that has been reported. The most common side effects for HPV vaccination is some pain and redness at the site of the injection, as well as some dizziness. These are typical of all pediatric immunizations, particularly for these pre-adolescents. Now, some teenagers faint with vaccines and that's not limited to the HPV vaccine, but to make sure that all is okay, we'd watch your son in the office for 15 minutes after he gets all his vaccines before we send him on his way. So, I strongly recommend that they get the HPV vaccine today.

Parent: Okay. Well I do want to protect my son from cancer so we will get all three vaccines today.

End of Roll-in Video Footage

Moderator: I think it is really helpful to watch an illustration of how that conversation could take place because I'm sure there are lots of challenging conversations that go into this. Talk to me about your opinion in terms of whether or not clinicians should approach all parents equally with the same information?

Kristin Oliver: Initially, yes. Everyone should be given this strong recommendation your child's due for these three vaccines. Recognizing that some parents have different feelings about immunization. So the vast majority are accepting the immunization that strong recommendation is going to be enough. They're really just looking for assurance from their pediatrician or other doctor this is what they should be doing. They hear that from you, they'll go ahead and vaccinate. Maybe a smaller group has delayed vaccines in the past and has more concerns and you'll need to have a longer conversation with them. We'll go over some of this in more specifics in a little bit but use more motivational interview strategy, asking open-ended questions to this group. There is this small minority of patients that occupy our head space that are just absolute vaccine refusers. They've declined all vaccines in past, or you've had challenging conversations with them in the past. Again this same group you'll start with a strong recommendation. We shouldn't treat them any differently than any of our patients. Their child still needs what's recommended, and you'll have a similar sort of open-ended conversation with them, but recognizing that you may not change their minds at the end of that conversation. With my patients that I know are going to have hesitancy or resistance to vaccines, they know me, they know I am really positive on vaccines so we have this understanding we may differ on this. I always say to them, you know I'm going to ask you about this again next time you come in. They're like, we know, Dr. Oliver. So they expect it from me and we maintain a good, healthy relationship, even though we differ on these.

Moderator: I imagine it is very important even if you disagree, keep their trust so the door is open to have the conversation again at the next visit.

Kristin Oliver: We are coming from the same place. We both really want to take care of their child.

Moderator: Great. With that variation, what's one important concept for clinicians to remember?

Kristin Oliver: You want to continue to have this vaccine conversation. At the end of the day, most parents are going to accept the vaccine. They just may have some concerns even the ones who initially say I'm not so sure we'll do this today. In the studies I talked about earlier, even the parents who said I don't think we'll do this today, in the cases where the provider kept pursuing their recommendation, about half of them just a little under half ended up getting the vaccine. That same day. There has been another study recently who interviewed parents who have ever at any point declined the HPV vaccine and they went on to interview them. It turned out that half of them that later date accepted the vaccine of the half who hadn't accepted the vaccine yet, another 25% said in the next 12 months we plan on getting this vaccine for our child. So, sometimes it just takes more than one conversation but they're going to get there. But, we don't want the clinician to give up before they get there.

Moderator: Sure. That makes perfect sense. Now I want to pause for just a moment to remind our audience that if you have questions for our speaker, e-mail them at any time to phlive.ny@gmail.com or you can call us at 518-402-0330. So, can you describe for us a scenario

where such a change to accept the vaccination took place? You are talking about some folks who maybe had a little initial reluctance but down the road are willing to shift their perspective or really have a more productive conversation. Can you describe such a scenario for us?

Kristin Oliver: So it is summertime right now, it is really busy. All the kids are coming in for their well child checks and working papers so we're seeing a lot of physicals right now. So, most vaccinations are given during this time period, so it is a great time to be having this conversation. One of these visits is an 11-year-old, comes for her well child check. You saw this webinar today, you're going to give the strong recommendation. Ella's due for these vaccinations today. You're like I'm going to nail this. Mom says, we'll do tetanus and meningitis but we're not going to do that HPV one today, and your heart kind of sinks because you expected this to go really well and you're behind already, and three other kids are already waiting, and two have three in the family. You know the day is going to quickly go downhill. You're interested enough, you watched this webinar, so you take a deep breath, gather yourself and you say to the parents, I see where you can have a couple concerns about the HPV vaccine. I get that with this one. Do you mind sharing with me what those concerns are? Start with an open-ended question and demonstrate to the family that you understand, this is reasonable, that they're not some -- you don't think they're being unrealistic. So in this case the mom says, I've heard it is a vaccine to prevent a sexually transmitted infection she is a long way from having sex right now. We just don't need to start it yet.

Moderator: I'm sure many clinicians hear that response and that hesitancy regarding childhood and entering into sexual activity and things like that.

Kristin Oliver: It is a really common response. They'll often just say, she's too young, which is code for she's too young to be having sex. They just don't want to say that in front of the child. So in this case what you want to do here is reflect back to the motivation strategy of what you heard and give them permission to keep talking, so you say I hear what you're saying, she's too young to have this vaccine because she's not sexually active yet. I totally get that. She's only 11! I thought a lot about this though, do you mind if I share with you how I think about this vaccine? And I never had a family say, no, you can't share that with me. But it is still a nice way to start the conversation even though I've never had a "no." So mom will, again, usually say yes, absolutely. So the next thing you want to do after this is sort of make sure you don't do the wrong thing.

Moderator: What is the wrong thing? What are the things that you don't want to say, once mom allows you to open the door and share your thoughts on it, what are things you want to avoid getting into?

Kristin Oliver: So, mom's worried about sex but you're worried about cancer. So you need to bring the vaccine back to cancer and really away from sex, if you can. If you say, you know, we have this data, a lot of kids are starting to have sex in middle school, but the good news is we have studies -- and we do -- that show kids who get the HPV vaccine are not nor more likely to have sex than kids who don't so I think it is okay to give it to her. Listen. All mom heard is sex. She can't hear anything else. That cancer message wasn't there. So that's not the way you want to have the conversation. Instead what I tend to say is, I used to think about this vaccine is something that's transmitted -- was a sexually transmitted infection but I realize it is really about preventing cancer. Most people are going to get this virus at some point and I really want to protect everyone, especially Ella, I really want to do this vaccine today.

Moderator: So, it sounds like the bottom line in this conversation is trying to open the door for conversation, then really meet the parent where they are in terms of their concerns?

Kristin Oliver: Absolutely. You aren't trying to win a debate. You're really just trying to have a conversation with them, address the things they are most concerned about. At the end, I often try to personalize it, my daughters aren't old enough for the vaccine yet. But I say when my daughter's 11, I'm definitely going to give it to her. I'll probably give it to her at 10. My nieces and nephews are getting this vaccine. I also say, at the end of the day you're the only one who can make the right decision for your family. What do you think you want to do today? That keeps things respectful and keeps the door open for further conversations?

Moderator: That sounds like a wonderful approach, both the endorsement personally of what you would do for your family member, but also giving mom some autonomy to say you are the one who is in charge of this decision. Those both sound like great strategies. Do you have any other recommendations for how to handle parents who seem hesitant to just having their child receive the HPV vaccine for whatever the reason might be?

Kristin Oliver: The first thing to remember, hesitancy is often just a legitimate question or concern, about the safety and effectiveness. Addressing that question, not feeling like it is an affront to your position as a pediatrician, and then really keeping the conversation open, asking open-ended questions. Using these motivational interviewing techniques where you are asking them to explain specifically what their concerns are, addressing them and at the end of the day making a clear, strong recommendation at the end. If you are confident that this is the right thing for their Child, they will be more confident, too.

Moderator: Excellent. Thank you. Now we also spoke with Dr. Suryadevara about how she addresses parents' most common concerns. Here is what she told us.

Manika Suryadevara: So there have been over 100 million doses of HPV vaccine distributed within the United States since 2006. The most common adverse effects that have been described are dizziness, pain and redness at the site of the injection, and fainting. So these are affects typically with pediatric immunizations in general, especially in the adolescent population. So we know the vaccines are safe. We also know there are over 33,000 associated cancers and over 6,000 cancer associated deaths among men and women each year in the United States, all attributed to HPV infections. We have a vaccine that's safe and effective in preventing our adolescents from contracting this. It is really important for providers to recommend this HPV vaccine to their adolescents emphasizing the vaccine as a tool for cancer prevention to keep these children protected from developing HPV associated cancers in adulthood regardless of their behavioral risk factors may be at the time of vaccination. When I talk to parents about the HPV vaccine, the biggest factor that determines whether they agree to immunize their child is the understanding that this vaccine is meant to protect their child from cancer. I have found that to be the most influential part of the discussion.

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Moderator: So that Dr. Suryadevara mentioned that she talks to patients about the vaccine being safe and effective. I wonder if you can tell us, what is the actual impact of the vaccine and how effective the HPV vaccine is in preventing the types of cancers we are talking about?

Kristin Oliver: I love this question! HPV vaccination is a great place to work because every week there is new evidence out about how effective the vaccine is. This is a couple months ago this study came out that actually looks at cervical cancer, oropharyngeal cancer outcomes, not just the pre-cancer. Now we have over ten years of data that can show us this. What you can see here, this is a study that's in some Nordic countries where they have great tracking with immunization rates and of any interaction the patient had with the health care system so we really know if they were screened or ended up with a cancer diagnosis. You can see here they compared the women who got the vaccine to the women who didn't get the vaccine and look at all those zeros. The women who got the vaccine, no HPV associated cancers. Compared to women who did not get the vaccine, there were ten cancers in that group. This one they calculated came out to a vaccine efficacy of 100%, which is the best number ever. That's just fantastic data. Important to note that they also looked at non-HPV related cancers in these two groups, those were similar, so it wasn't this just happened to be a group of women who were less likely to get cancer all together. It really was HPV specific. Very strong evidence this is a very effective vaccine.

Moderator: That is exciting information. Is the HPV vaccine equally effective in all age groups?

Kristin Oliver: Not quite. So this is the idea that came from Australia. Australia is amazing because in the first year they introduced the vaccine, about 75% of the girls got vaccinated and completed the series. That's pretty incredible. But it also means they can do some interesting studies looking at effectiveness. Here they looked at the age this child was at the time they got the vaccine, between 14 and 17 when they got the vaccine series. The outcome is cervical pre-cancers, essentially. You can look at the percent of dysplasia reduction. A higher number is better. The higher the percentage, the more reduction in dysplasia you got. The group that received the vaccine at the time they were 14 or under you should had a 75% reduction in cervical pre-cancer. The older group had about half of that. Still effective but not as effective the older they were when they started the series.

Moderator: That really kind of underscores what you are saying earlier about shifting the conversation away from sex because whether they are 11 or 12, you're talking about cancer and it seems the earlier we get this vaccine done, the more effective it is.

Kristin Oliver: Yes absolutely.

Moderator: Can you give us an example of how you work that information on the efficacy and effectiveness of the drug into the conversation?

Kristin Oliver: Two parts. One I say, listen, the younger the teen is, they have a better antibody response to this vaccine and now we also have this great data that shows it is more effective, too, the younger we give it. If we give it today, Ella's only going to need two shots. If we wait longer, she's going to need three. So really, let's just get it done today.

Moderator: Dr. Suryadevara also mentioned that fact that some people are concerned about the vaccines safety. So, what do we know about the safety of HPV vaccine?

Kristin Oliver: This is a question that comes up a lot, both among parents and among providers. The first thing to know is that all vaccines are tested enormously before they come to market. All this testing is going on in preclinical trials, then clinical trials, then the vaccine comes to market. Even after market we have a lot of ongoing studies looking at effectiveness. Not just for HPV vaccine, but for everything. Lately, there are a lot of specific studies because people were concerned about HPV vaccine looking at things like autoimmune disorders, blood clots, premature ovarian failure, death. None of these are associated with the HPV vaccine at this point. Another study just came out looking at 12 specific autoimmune disorders, no relationship between the HPV vaccine and these studies will continue to go on.

Moderator: I think that's really helpful information especially knowing how much research is done before it comes to the market. Sometimes people hear this is a new vaccine and they think, we don't know yet what the outcomes are like or what the safety concerns are and don't realize how much research even brought it to the table in the first place.

Kristin Oliver: I think part of that we are responsible for. I was practicing and training when this came out. We were excited. This is a vaccine to prevent cancer, this is amazing. We went into the conversation initially with parents, this is the "new" HPV vaccine. That somehow still stuck. The reality is the meningococcal vaccines are about the same but we don't know about them because they are not as revolutionary in terms of cancer prevention. So, we did that to ourselves a little bit, unfortunately.

Moderator: So, with that context, how do you talk to a parent who's got concerns about the safety of the vaccine?

Kristin Oliver: I tell them I understand this question. I am concerned about vaccine safety, too. I really carefully follow these studies. Then, I say the vaccine's been available for over ten years, we've got a lot of really good data and it is very, very safe. It is as safe as the other vaccines that we're going to get today. Otherwise I wouldn't be recommending it. Sometimes you get some redness or swelling in the arm and those are the main side effects.

Moderator: Okay. So once you have that information to provide to parents about why they should vaccinate their child against HPV, how do you then work within the medical practice to get everyone on board to promoting the vaccination?

Kristin Oliver: This is so important. It is not just of the physician involved in these vaccine conversations and delivery. The kid who walks in the office asks everyone they see, am I getting a shot today? Am I getting a shot today? Am I getting a shot today? When they walk down that hallway. Right? It is the nurse that administers the vaccine but it is the patient administering the vitals. It is also the front desk person. They will schedule the patient for the second or third dose. They are the ones that do the follow-up phone calls if they miss their appointment. They're the ones that are going to get that patient to come back and the reality is, parents trust -- as much as they trust the pediatrician and family medicine doc's view, they also trust their nurses and they really trust their MA's and they want to hear the same message from everybody. My medical assistant who also does the front desk will stop at nothing to track down the kids who need their second or third dose. Numbers change all the time. She's going to find that child's number. She calls the cousin, the aunt, do you have that number. She gets that kid in for the second or third

dose. She is the one preventing the cancer. It's not me at that point. It is really important that everybody in the office understands that they're preventing cancer for these patients it is not just for the administrative task. When you are having this conversation with providers and doing updated training around HPV, you want make sure you include everybody. There's been a lot of quality improvement studies that the American Pediatric Association has done demonstrating the more you involve the office staff the better your results for these improvements. Specifically places that do huddle. When you do a huddle in the beginning of the day and everyone talks about the patients that are coming in, those practices have really good improvement in the rates, too, because everyone is involved and invested.

Moderator: Excellent. What a powerful thing to be able to think that you are part of a program, an administration, that's working to prevent cancer. I mean I would think that would be a great way to get everyone on board. Can you give us some examples of key office strategies that facilitate the uptake of the vaccine? Are there other strategies you recommend?

Kristin Oliver: We get through the strong recommendation, that's the number one thing, but then how do we get them in for that second or third dose, what can we put in place in the office apart from the strong recommendation. There's good evidence for all vaccines but also specifically for HPV vaccine around provider prompt. That just means how do you alert the physician that this child is due for a vaccine? It could be literally a sticky note that goes on the chart because someone reviews the charts ahead of time. It can be an electronic reminder pop up that happens. There's also reminder we call strategy. This means either calling the family or sending a letter or text message now that they're due or overdue for a vaccine. That's standing orders as well which we can go into a little more specifically.

Moderator: What do we know about the effectiveness of using reminder messages?

Kristin Oliver: So we know they are good for all vaccines. Now we know they are good for HPV, too. One study happened in New York in private, in academic practices. What they did, this is the study on the left. They sent text message reminders. That's easier and cheaper. There is good evidence that patients prefer it. Right? It's not so intrusive. They sent text message reminders to families who agreed to have them compared to families who didn't enroll in the program or an historical control group. Not surprisingly to me, the patients who got the reminder were more likely to get their next dose than the patients who didn't. Pretty clear. In case you think it is just text messages, there was also a study done out of Colorado where the families got letters or telephone calls compared to families who did not. Again, increased rates of HPV vaccination with these reminders. In fact, 3 out of the 4 practices in this study actually had an increase return on investment. They got money back from having these visits happen. So it wasn't cost losing. It was cost saving because sometimes we think this is a lot of administrative time and effort to do all this. But in the end you get those patients in for their visit, so you can recoup some of those losses, which is great news.

Moderator: That's a really important point to make. People do have concerns about the important time of administering and making sure all of the paperwork happens, sending letters or making calls, sending text messages. Seeing that not only benefits the patient long-term in their health outcomes or uptake of the vaccine, but also it is good for your practice as well.

Kristin Oliver: It is a heavy lift and it is asking everybody in the office to do it, too. That's why the training and messaging is so important.

Moderator: So, talk to me about how exactly standing orders work.

Kristin Oliver: So standing orders are basically saying instead of writing an individual order for each patient who comes in for each vaccine that they need, you look and you say for any patient that meets the requirement -- the right age, they don't have any medical contraindications, they're going to get this vaccine. One complete order is written that covers the whole practice. Immunization action coalition has them for all sorts of different vaccines. Logistically what happens is usually the nurse will review the patient's immunization records and see what they're due for. Check to make sure there aren't any contraindications for that patient. They then tell the patient, you are due for these today, and they go ahead and give those vaccines even before the doc enters the room. All of that can happen while you are seeing another patient. It is funny, my mom is a pediatric nurse. She says, of course. You take the doctor out of the equation, you work through the nurse. It is going to get done. This is basically what happens with the standing order.

Moderator: Okay. How is it helpful in increasing uptake?

Kristin Oliver: Almost one of the most effective strategies. For children it is associated with an increase of about 28% improvement in vaccination rates which is really a big improvement when you compare other strategies. Lots of evidence for lots of different vaccines. Basically the presumptive recommendation and action. Everyone should be getting this, so we're putting in an order, everybody should be getting this. So it happens.

Moderator: Do you have any evidence that shows this effectiveness of this strategy?

Kristin Oliver: Specific, a group out in Colorado decided to do this. They specifically said our immunization rates are the same as national rates and same of the rest of the rates in Colorado. This is specifically in Denver. They decided they'd implement standing orders for everybody, from infants through adults. Then they did this for the adolescent platform with the T-dap, MCV, HPV vaccines. Basically, there was one standing order. The nurse would look at it ahead of time, administer the vaccine. Most of the time the provider wasn't involved at all unless the family had a specific question. They implemented this. They went and then looked at the rates a little while later. You can see the hash bar is the group Denver health that implemented the standing orders. Rates went up for everything, but really for HPV there was a huge difference compared to the national and Colorado averages. It had a huge impact on a lot of people.

Moderator: Certainly very promising for others looking to do the same. So how can or how do providers and offices ensure that these systems are in place and that they're working?

Kristin Oliver: Especially standing orders, that's a little bit tricky. It is not just sending a letter or message. American Academy of Pediatrics has a lot of good information. A lot of quality improvement case studies that you can access and get additional MOC credit for. CDC puts out a lot of good materials in how to respond to common questions that parents may have. I recommend you use those a lot. Then paying attention to the webinars and the things that you guys have been putting on.

Moderator: Terrific. So, let's take a moment now to hear again from Dr. Suryadevara about some key points and tools for conversations with parents and teens.

Manika Suryadevara: So we know that provider recommendation and the understanding that the HPV vaccine prevents cancers associated with increased adolescent HPV vaccine uptake. We also know that the vaccine works better in the younger adolescent population as they produce more robust antibody response, and that as teen's age, they're less likely to come back to the medical office for routine well visits where immunizations are reviewed, and therefore they are less likely to be immunized as they get older. So with this information, it is very important for providers to routinely recommend the HPV vaccine to all eligible adolescents starting at 11 years of age emphasizing the importance that the vaccine can prevent HPV associated cancers, and then maintaining the strong recommendation even if parents are initially hesitant and that reinforces how strongly the provider feels that this vaccine is important for the adolescent to receive. We developed a brochure in collaboration with Roswell Park Comprehensive Cancer Center to bundle HPV vaccine information with other cancer prevention guidance that's routinely provided to adolescents. These brochures review cancer prevention strategies for teens and preteens, such as the risk of smoking and smoke associated cancers, as well as sun exposure and tanning beds and the risk of UV associated cancers. The brochures can be used as a tool to facilitate the discussion between providers and the parents to emphasize that the HPV vaccine can prevent HPV-associated cancers. What we did with these brochures is combine the distribution of these cancer prevention brochures to adolescent patients with provider education so we can teach providers the importance of HPV vaccine for their adolescent patients. We found that it did increase practice-specific adolescent HPV vaccination rates. However, to further sustain these increases, it is really important to combine these tools, such as this brochure, with systematic changes within the practice, such as reminder recall systems, standing orders, and reviewing immunization records at each visit so as not to miss opportunities to immunize these adolescents. When I talk to parents about the HPV vaccine, the biggest factor that determines whether they agree to immunize their child is the understanding that that vaccine is meant to protect their child from cancers. I found that to be the most influential part of the discussion.

End of Roll-in Video Footage

Moderator: So, certainly a lot of good information. Again, good strategy that you've both provided throughout the show today. Before we take questions from our audience, can you just summarize some key points for us about communicating about the HPV vaccination and increases the uptake.

Kristin Oliver: So number one, the strong recommendation. I sound like a broken record but your 11-year-old is due for T-dap, HPV, Meningococcal. Say it firmly, loudly, and believe it and own it. The same way you would do for all the other vaccines. Number two, when parents first say I don't think so for HPV vaccine, it is not that they don't value it, not that they'll come away with that visit. They just have some legitimate concerns that need to be answered, whether it is about her age or the safety of the vaccine. Be comfortable. Ask open-ended questions but explore a little bit more about what they might be concerned about and have the evidence that we talked about today to answer those questions. At the end of the day, most parents are going to take this vaccine. And know that. Also, office strategies for implementation. Once you get the first dose

in, you need to get the second or third dose in depending on their age. Implementing some of these strategies, standing orders, reminder recall, are really going to help complete that process. We're at this amazing time where people are talking about eliminating cervical cancer. Which is extraordinary. The reason we can do that is because the vaccine is so effective. It is going to be through a combination of vaccine, and then still cervical cancer screening. But we aren't going to get there at the immunization rates we are at right now. You've got to be at 90% with the Immunization completion before you can say we'll eliminate this disease. What I really hope people do is starting to do more because what we are doing right now is not quite enough. I hope people come away saying I'm going to make a specific change in our practice and the way we recommend the vaccine or how we're doing provider prompts. And that's how we're going to increase these rates and eliminate cervical cancer.

Moderator: I think you certainly provided a really strong foundation to empower physicians and nurses and other practitioners to be able to start doing that. Are there any specific resources that you would like to share?

Kristin Oliver: I think the AAP has a great HPV prevention tool kit that I use a lot, also the hpvroundtable.org has some great resources. There's a list through CDC that I think we will make available at this webcast.

Question & Answer Segment

Moderator: Terrific. So now that we've gotten through your talking points, we have gotten a number of questions in from our audience. So, I am going to pull those up and start with the first question that we have. It says, can you talk more about the HCIP recommendations for HPV vaccination for younger teens. You said it is more effective?

Kristin Oliver: So, we know the vaccine is more effective the earlier you complete the series. We saw that data before. Antibody response is higher the younger they are. Once we got that data with the higher antibody response that is what led to this recommendation for kids who start the vaccine series before they're 15th birthday. For that group they only need two doses. If they start it on or 15 their 15th birthday, three doses. Now the official recommendation is to start at 11 or 12 but you can start at 9 or 10. The reasoning for the 11 to 12-year-old recommendation is because it fit nicely with the other vaccines we were giving, the T-dap and Meningococcal. That's really the reason we're doing 11 to 12 and not 9 to 10 at the start. I've been switching anecdotally to the 9 and 10-year-old age group when I start to recommend it. Anecdotally, I get a lot more acceptance. Kids are even younger so the parents are further from thinking about sexual activity. Everybody's interested in this topic. People are starting to research it more closely to see if it really is better to offer it and you get more acceptance. Personally, I think it is worth trying. You can certainly start at 9 to 10.

Moderator: Great, thank you. Another question -- I understand HPV vaccination is important to prevent teenagers from getting a sexually transmitted disease. Is it safe in the long run especially for girls? Will it affect other reproductive organs?

Kristin Oliver: We get this question a lot about people concerned about reproductive organs and fertility. Not just me but everyone gets this questions, there's been good research on this. There is no effect on fertility and there's no other effect on reproductive organs. The reality is HPV

disease can affect fertility. So if you get HPV disease then you definitely have an impact on your fertility. All the more reason to get vaccinated.

Moderator: Excellent, thank you. Another question -- could you comment on the transmission routes or pathway in regards to skin to skin transmission?

Kristin Oliver: Okay. So HPV lives on the skin. It can be transmitted skin to skin. This is important when you start thinking about my child isn't sexually active or not having intercourse yet but there is a lot of activity that preteens and teens are up to that can transmit HPV. Any kind of oral-genital touching, genital-genital touching can transmit the infection. It is often transmitted before the first actual intercourse, you can transmit it in other ways. There is a lot of study looking at how much HPV is under the fingernails of college boys. There's a lot of HPV underneath the fingertips of college age boys. With that in mind, you really do want to start this earlier, long before this kind of activity starts.

Moderator: Really interesting information. Next question -- we find that parents have reservations about giving the HPV vaccine at the age of 11 or 12 because their children are not sexually active and not perceived to be at risk of infection. Do you have any other suggestions for how to address this common concern? I know you talked about this during the show and bringing it back to cancer. But anything else you would add to --

Kristin Oliver: For this I specifically focus on the effectiveness the earlier you give it. The antibody response is better. We know it is more effective the earlier we give it so we want to give it now when we know it is most effective. Only two shots rather than three if we give it now and I just focus on the effectiveness and the fact that you'll prevent more cancer the earlier you start.

Moderator: Terrific. Another question -- thanks for the webinar. Do you have any suggestions about how to address some of the crazy internet reports about strange neurologic side effects of the HPV vaccine? I think anybody who's been on social media probably knows what kind of things this viewer is referencing.

Kristin Oliver: I generally say, I pay attention to all of this stuff, too. I'm worried about safety, so I really carefully follow these studies. What they've looked at in terms of neurological or autoimmune side effects, we have a lot of close studies in kids who did and didn't get the vaccine to see who ends up with any kind of disability or disorder. They've proven that it is not the HPV vaccine that's causing this. Often when we hear these anecdotes, it is one kid who got the vaccine. What you don't hear about in those YouTube videos is all the kids who got the vaccine and didn't have that outcome. Then all of the kids who did not get the vaccine but still have that outcome. We need all four bits of that information before we can decide if it is really because of the vaccine. So that's why I pay attention to these studies and am confident it is a safe vaccine. I always come back to, if I didn't think it was safe, I wouldn't be giving it to your daughter, or to my daughter. I often go back to my own personalized recommendation.

Moderator: Thank you. Another question, how do you address parents from different faith communities who have concerns from that perspective?

Kristin Oliver: That's an important question. It is across a span of faith communities, it's not one in particular. The first thing is, I teach them as same as everybody else with a strong provider

recommendation. I don't make any assumptions based on their level of religiosity, how they are going to feel about this vaccine. The number one thing is the strong provider recommendation. Number two is addressing questions, in our community no one has sex before marriage is generally what sort of comes up. Sometimes I point out that, absolutely, I understand that. But we still screen for cervical cancer in your community. Women in your community still get HPV-related disease. Guidelines aren't any different. That's why we want to give this vaccine to prevent cancer because it can still happen in your community. Anecdotally, a colleague of mine just started working in a practice that has people from some strong religious communities of different types. She joined the practice a few months ago and since she joined, they've run out of HPV vaccine because she's giving the strong provider recommendation. She does a lot of the HPV work with me so she is giving the strong recommendation. The patients are accepting the vaccine. It is the same patients that are seeing all the docs in the practice. They've actually run out twice! Because they have to order so much more that she is there. So, giving that strong recommendation really does work, even if you've had some more challenging conversations in the past.

Moderator: That is really exciting. Yeah. All right. We have another question, caller is wondering -- if a child gets the first HPV shot at 11, how long do they have to get the second shot before the first one has to be re-administered?

Kristin Oliver: So, they can come back five, three, six, seven, eight years later and you would never have to restart the series. So, it doesn't matter when they come back, as long as they started the first before 15, they only need one additional dose.

Moderator: Okay. Excellent. Thank you. We have another question -- do you recommend anything -- this one came up already. I apologize. You mentioned motivational interviewing. Can you talk about how that works? Maybe an example from where you work.

Kristin Oliver: Sure. So basically we sort of went over this a little bit. But the idea is you ask open-ended questions and try to find out where the patient is coming from. Ideally, loop back around to get them to understand that their concerns are the same as your concerns, and that by giving the HPV vaccine they are going to be addressing their concerns. You say to them will, tell me why specifically do you not want to give the HPV vaccine. "I'm just worried about this one," "it's relatively new," "I'm not sure it is safe yet, let's just wait until we have a little bit more evidence." So, then you reflect back and sort of say back to the patient, it sounds like you are worried about the safety. You really want to make sure you are keeping your daughter safe or your son safe. And I have the same objective. I want to keep them safe. We really want to keep them safe from cancer, too, though. Right? They say, yes, I guess, that's true. The best way to do that is with this vaccine. So that's sort of generally how I have the conversation.

Moderator: Even though I'm on the same page as you, even sitting here, I'm like, oh, yeah, you brought it full circle even without having to convince me. It was a very convincing way that you presented that information.

Kristin Oliver: The other thing is, my patients know me. I get excited about vaccines in general and this vaccine. So I think why do you think I care? Why do you think I talk to you about this at every visit? Because, Dr. Oliver, you don't want my son to get oropharyngeal cancer. Exactly! And they are like okay.

Moderator: If we were having that conversation before and having them know and really trust you makes a big difference. Another question -- is there any new evidence about waning coverage of the HPV vaccine or information about how long it will last?

Kristin Oliver: This is a great question. It comes up a lot. One of the interesting things about HPV vaccine, is that for most diseases if you have natural infection, your immunity is higher. For HPV vaccine, you get higher immunity, higher antibody response with the vaccine than you do a natural infection, which is amazing. It bodes well for how long the response goes on. Right now we have up to ten years of data and there is no evidence of waning immunity, so it looks like it is going to last for a very long time, if not lifetime. You can't say that right now but those studies will continue to go on. At this point I am pretty confident or very confident that the immune response is going to last so it doesn't look like we'll need a booster dose later in life. I feel comfortable now that I'm starting to recommend it earlier at 9 or 10 that the immunity is going to stay with them throughout their peak sexually active years. So I think you can feel confident giving the vaccine at these younger ages and knowing that you are going to protect them.

Moderator: Excellent. Thank you. Another question says, I wonder if this webinar will be archived? It can be useful to share with some of the practices that participate. I can answer that -- yes, the webcast will be archived. I will reference that in just a few moments but it will be available on demand on our website within just a few weeks of today's show and will remain out for quite some time so you can share that with interested and other folks who can benefit from this information. I think we have time for one more question. Do you find that parents are concerned about giving three shots at 11? What do you do when a parent does not want to give three shots at 11 years of age? Do you have an alternate plan that seems to be acceptable to parents?

Kristin Oliver: My number one plan is then giving it at 10. I say let's give the HPV vaccine today because that way when they come in at their 11-year-old visit they don't need as many shots. That works really nicely. The other thing is that a lot of schools -- most schools require Meningococcal and T-dap. So, I tend to give T-dap and HPV because I know the school is going to catch that Meningococcal dose. They'll make sure they come back and get that. Whereas the school is not looking to make sure everybody got their HPV vaccine dose. So, that's been my strategy.

Moderator: That actually sounds like a terrific strategy and a great way to make sure people are being protected from all of these different conditions and diseases.

Kristin Oliver: We also know the risk for HPV, acquiring HPV is higher than it is for acquiring Meningococcal disease in that sort of time period. That's why I push that one.

Moderator: Well I think we are just about out of time. So, I want to thank you so much for everything you shared today and for answering so many of the questions that came in this morning. I think this has been tremendously helpful. A lot of really good information to share with folks that are looking to promote and increase the uptake of this vaccine. Thank you so much.

Kristin Oliver: My pleasure. Thanks for having me.

Moderator: Thank you very much for joining us today. Please remember to fill out your evaluations online. Your feedback is always helpful to the development of our programs and continuing education credits are available for today's program for a limited time. To obtain nurse continuing education hours, CME, and CHES credits, learners must visit www.phlive.org and complete an evaluation and post-test for today's offering. This webcast will be available on demand on our website within two weeks of today's show. Please join us for our next webcast on August 2nd. The *Breastfeeding Grand Rounds* focused on increasing skin to skin contact to improve perinatal outcomes. Additional information on upcoming webcasts and relevant health topics can be found on our Facebook page. Like us on Facebook to stay up To date. Now you can also let us know how you use public health live by taking a brief survey at phlive.org. I'm Rachel Breidster thanks for joining us on *Public Health Live*.