- Okay. So, hello everybody. We're gonna get started here in a couple minutes. Looks like everything's working well, I got the screen shared. We got people joining, so that's good. Probably give it, just turned new and so we'll probably give it a minute and then I will start. Okay I think we can get started so welcome everybody. So, this webinar is the management of COVID 19 vaccination of pediatric patients, hosted by the department of health. I'm Phil Wiltzius I'm a health educator. I'm just gonna be the facilitator today. So, I'm gonna cover a couple of things here before we get started and give it off to our wonderful presenter. So, everybody is muted for the presentation. We also have stopped everybody from using the chat. So, if you do have questions during the presentation, we ask that you use the question and answer box, so you can type in your questions there, and we will get to questions at the end of the presentation. I'd like to mention that please keep the questions on topic for the webinar. And we do have continuing education available for both nurses and medical assistants. And if you're watching in a group setting, please make sure that you register for the webinar separately and complete the evaluation separately. So, we can send you your certificate. Excuse me. And we also have a webinar page for this webinar, which you can find right here that I have linked at the bottom of this slide. On there you should find the, the slides for this webinar. We will also post the recording and the transcript for that probably within a week or so. So please check that out. We have more information about continuing education as well on the webpage. So, our presenter today is William Porter. He's a second-year pediatrics resident at the university of Washington and adult children's hospital. As a participant in the REACH pathway, he has partnered with the department of health in developing resources for clinicians, administering COVID vaccines to the pediatric population. Beyond his work with the department of health he has a specific interest in addressing disparities and access to mental health service and building capacity for communities to prevent youth mental health crises. Okay. So just two more slides here. So, disclosures, so both the planners and the speaker of this activity have no relevant financial relationships with any commercial interests pertaining to this. And we will have more information about continuing education at the end of this webinar. One thing that's kind of changed for this webinar is we're not able to offer pharmacists continuing education. We had education changes that we're trying to deal with the board of pharmacy. So, we're trying to work that out and figure out a way to continue to offer pharmacy credit, but we won't be able to do that for this webinar, but we still offer for nurses and medical assistants. Okay so with that, I'm gonna turn it over to you Will.

- Thank you so much and thank you all for having me today. I'm really excited to talk to everybody so we will get started. And please do take note of any questions. I'll try to answer them at the end. So, kind of looking at an overview of the plan for the talk. We're gonna start with talking about out the COVID 19 vaccine for pediatric patients in general, and then go through some technical considerations for vaccine administration. Pain management and positioning during the procedure, post vaccination care and management of reactions. And then we'll touch on and developmental considerations for pediatric patients, as well as some special pediatric populations that you may be vaccinating and finally communicating with parents about the COVID-19 vaccine. And so, the COVID vaccine that is approved for the pediatric population currently is the Pfizer vaccine. This is a nucleoside modified mRNA vaccine encoding the prefusion spike glycoprotein of SARS-COVID-2, which is the virus that causes COVID 19. And it is approved for ages five and up. The Moderna and J&J vaccines do not currently have approval for pediatric administration. We right now are still waiting about the six months to four-year age group and are hoping in the next few months to be able to start giving the vaccine to this group. But for now

only ages five and up are able to receive the COVID vaccine. One thing that's important to highlight, especially as we're thinking about having conversations with families who are thinking about vaccinating their child, is that the dose for the five to 11 year age group is actually one third, the dose of the ages, 12 and up. And so you give 10 micrograms to this population versus 30 micrograms for ages 12 and up. And anecdotally, I have seen patients receiving the lower dose with less of the side effects. So, you can tell parents, they may expect their child to tolerate it better than they tolerated the vaccine themselves. And a lot of parents are reassured by hearing that it's a smaller dose for their child. For both groups the primary series is two doses, which are 21 days apart. And just for tracking purposes, we use an orange cap vial

for the reduced dose for five to 11, and then a purple or gray cap vial for ages 12 and up. And here's just a chart for reference, which you can look at later to describe the doses and age ranges. Looking at the schedule here you can see that in the primary series for children five years and up, we use the Pfizer vaccine. The second dose is given 21 days after the first dose. Currently booster doses are approved for ages 12 and up only. And that should be given at least five months after the second dose, specifically for patients who are moderately or severely immunocompromised, which we'll talk about how to know if a child might fall into this category for any patient older than five years old, who's moderately or severely immunocompromised. We recommend three doses as part of the primary series. So that third dose is actually part of the primary series that doesn't count as a booster dose. And the third dose is given 28 days after the second dose. The booster dose in this population is still only approved for ages 12 and up. And so that is given three months after the third dose, I realize this gets quite complicated. And so, using the CDC website for reference is a great way to kind of double check if you're unsure and also to stay up to date on these kind of ever changing guidelines. Now, we'll talk a little bit about some technical considerations for pediatric vaccine administration. The COVID vaccine is an intramuscular injection, which means as you can see pictured here, you wanna be inserting the needle to a depth, to be in the muscle. If you go too shallow, then you'd be injecting in the subcutaneous tissue or fat, and then going too deep has the risk of reaching nerves, blood vessels or bone. And so, it's important to make sure you use an appropriate needle for administration. The gauge of the needle, or sort of like the diameter would be 22 to 25 gauge for an intermuscular injection. And the length of the needle may depend on some factors that we'll discuss in the next few slides. Regardless of where you're injecting or what type of needle, you're using you wanna make sure to inject 90 degrees to the angle of the skin. So for infants, less than 12 months, and I realize currently the vaccine isn't approved for this population, but this is just sort of looking ahead to be aware. You wanna inject an intramuscular vaccine into the anterolateral aspect of the thigh, which is the vastus lateralis muscle. You can see it shaded here in gray on the child's outer thigh. And this is because in this age group, that muscle is comparatively larger than the deltoid usually a one-inch needle is appropriate, unless it's a neonate less than 28 days, which case you might need a smaller needle. For toddlers ages, 12 months to two years, you still wanna use this site as the preferred site and at least a one-inch long needle. For an older toddler, closer to two years old, you could consider using the deltoid muscle if they have adequate muscle mass there. For any child greater than three years old, you should consider using the deltoid muscle. And you can see here, that's the muscle sort of on the lateral aspect of the upper shoulder, kind of covering the shoulder. Using a needle of five eighths to one inch long in children, ages three to 10 years should achieve the appropriate depth. But if you, for any reason, want to use the anterolateral thigh as an injection site, you may need a longer needle to achieve an intramuscular injection. For adolescents age 11 to 18 years, we do still prefer the deltoid muscle, and you may need a longer needle, like a 1.5-inch needle. If it's a larger child or they

have more subcutaneous tissue. And again, this is just a chart for a reference, which kind of provides ages, recommended needle lengths, and then injection site. But a good rule of thumb is any child less than three, you should be injecting in the leg and any child older than three in the deltoid. One topic that comes up frequently, especially in pediatrics, is whether it's safe to give the COVID vaccine along with other vaccines. You can confidently tell parents that it is a hundred percent safe to give the COVID vaccine along with others. And this is especially important in primary care settings, where children are coming in for check ups and they may be due for multiple other vaccines at the same time as the COVID vaccine. You wanna make sure that you separate any injection sites by at least one inch or more. And then just be aware that some other vaccines like the COVID vaccine are known to cause some localized discomfort and irritation. So you may wanna use more than one limb or for example, put one in the leg and one in the arm, if you're gonna be giving multiple vaccines. And then just be aware to counsel families that their immune system is perfectly capable of handling all of those different antigens at the same time. And it's completely safe for them, but they may be a little bit more uncomfortable or fussy, or feeling more symptoms if you're giving them multiple vaccines in addition to the COVID vaccine. And now we'll talk a little bit about pain management and positioning during vaccine administration. So some tips just to minimize discomfort initially, make sure that you're very efficient. So depending on the setting, if you're gonna be giving the vaccine in a private room, having all of the supplies ready before the patient enters the room can be helpful or having a tray with everything ready to go. You just wanna avoid the period of time before the vaccine is given. If you're gonna be spending a lot of time getting supplies together or fumbling around in the room, you're just gonna build up that anxiety and anticipation that the child's gonna be experiencing. So, working quickly and efficiently is very helpful. When you go to actually inject, make sure that you inject rapidly, and you do not need to aspirate first as if you were giving other types of injections. And then we'll kind of come back to this multiple times throughout the talk, but distraction is very helpful for children. So, depending upon the age of the child, having a toy or a book these days, pretty much everyone has a smartphone. So, encouraging the parents to pull up something on YouTube or Netflix to distract their child can be really helpful. And using that screen or toy or book to pull their attention away from both the needle and the administration site can be a great way to make the process smoother. Tactile stimulation can be really helpful, such as rubbing stroking or blowing on the skin at or near the injection site before or during injection. And this has been shown to decrease pain in children age four and older. For children, less than two years old, specifically, swaddling be helpful for comfort or slow lateral swaying movements after vaccination. For those that are breastfed, it can actually be very helpful to breastfeed before, during or after vaccine administration to reduce pain. And for those who are not breastfed, a sucrose solution or something sweet tasting in their mouth actually has a pretty powerful analgesic effect. So, you can give it one to two minutes before injection and that analgesia will last for up to 10 minutes. One trick that's been noted is just to have a provider rub an alcohol pad on the back of a child's hand or arm immediately before giving the shot. And then when the shot's ready to be given, have the child blow on the alcohol swab spot, and this produces a cooling sensation that will lessen their experience of pain. People often wonder about using pain relievers, especially in children to help with vaccine discomfort, topical anesthetics like numbing cooling ointments or sprays may be used, but basically you just need to follow the manufacturer's instructions and make sure that it's approved for the age of the child. And it's important to know that while these can be helpful, they're not necessary for routine vaccine administration. And we don't necessarily recommend that you have these on hand, unless you feel like there's a certain child that might have a reason why it would be helpful. Parents may wonder about giving medications like Tylenol

or ibuprofen before vaccination and we do not recommend that. It is okay to give these medications afterwards to manage some of the post vaccine symptoms that they may experience, but it is not recommended to give before or during the vaccine. Now we'll talk a little bit about positioning and what's most important is realizing that children are gonna be very distressed and you would of be surprised by some older children even getting really worked up during vaccination. And so, what's most important about positioning is just making sure that everyone in the room is safe. So, the child, and also everyone else is at risk with a sharp object and them potentially flailing around. So, you just wanna have a good plan before you start. Parents are experts in their child in every way. So, talking to the parents about how they've held their child for other procedures or other vaccines in the past is a good way to kind of create a safe environment that both the parent and child are comfortable with. Using parent to hold their child is always preferable, just because it's more comfortable for the child usually. Children less or greater than three years old, have been shown to experience less pain when sitting upright rather than lying down. And I think anecdotally, just holding a child down while they're laying down can just feel a little bit more distressing to everyone. So, trying to make it as normal and comfortable and just having a parent hugging their child and kind of sneaking the vaccine in there is usually a really effective way. You wanna be mindful of where you're gonna be giving the vaccine. So, if you're giving it in a leg, which as I mentioned is usually for a younger child, less than three years old. One way is to have the child kind of seated sideways and the parent will use one arm to kind of hug the upper body of the child. And you can see here, she's holding onto both hands securely. And then the other arm she's using to hold the lower body securely. You can even have the child's feet between the parent's thighs as kind of an anchor to hold them still like this. And then for a child getting a vaccine in the deltoid muscle, again, there's multiple ways to do this, but this image depicts the mother, holding the child facing forward. She's got a grip of both wrists securely and can use her upper arms to kind of cure the shoulders in place. And then using her thighs, she can hold the child's legs between her legs to kind of secure the lower body of the child. For a child that's older, you may need more than one person to hold them still. And so, it's important to be aware that for staffing, and just kind of planning to be administering pediatric vaccines, you may need to have other personnel available to help hold children. If a parent is not able to hold their child alone. Now we'll kind of go into some post vaccine care recommendations and management of reactions. So, in the immediate period, following vaccination, you wanna be on the lookout primarily for signs of anaphylaxis or an acute systemic allergic reaction. Another reaction to be aware of is syncope or fainting. And so, looking for dizziness, lightheadedness or pallor is important. And then localized reactions such as bleeding, redness, swelling, or soreness at the injection site. You will use a different observation period depending on the patient. And so, it's important to take a history of any prior reaction to a COVID vaccine or any vaccine, as well as any history of anaphylaxis. Before you administer the vaccine for patients who do have a history of a reaction to a COVID vaccine, a history of a reaction to any non COVID vaccine that was an immediate allergic reaction or anybody with anaphylaxis due to any cause they should be observed for 30 minutes for all other patients, they can be observed for 15 minutes. And keep in mind again for the setting that you're gonna be conducting your vaccine administration. You wanna have a space that's available to observe children and using those distraction measures, calming and supportive measures during the observation period can be helpful. So first we'll talk about syncope. And as I mentioned, syncope or fainting is a brief loss of consciousness. In children it can occur after vaccines simply due to the psychological fright related to the injections. And as I mentioned before, I've seen children with a wide variety of really severe distress related to vaccines because they often think about it a lot before they go in and then they get really worked up in the

moment. So, you'd be surprised by how severely that distress can affect them. The syncope itself isn't as much of a concern as the potential for injury that can occur due to falling if they have a loss of consciousness. And so, you wanna create a safe environment for during the observation period to reduce the risk of injury, if there is a fall. That means having the patient seated so usually that would be in the parent's lap. And of course, it can be hard to keep a child seated. So using distractions or videos to keep them calm during that 15 minutes would be helpful. And then keep an eye out for symptoms, such a as paleness, sweating, coldness of the hands or feet, nausea, lightheadedness, dizziness, weakness, or visual disturbances, which could signal syncope. If a patient does have a syncopal event, lying them down, loosening tight clothing, putting a cool cloth on their face and just observing them closely until they recover is the recommendation. And now we'll talk a little bit about anaphylaxis. Of course, there are a wide variety of levels of providers who might be administering the vaccine and whether or not you have a physician with you. It's important for everyone to be aware of recognizing the signs of anaphylaxis and acting on that quickly in order to provide life sustaining treatments, if you are worried about it. It's important to know that anaphylaxis is extremely rare, especially with vaccine administration, but we all should be ready to act if it does happen. And I'll just go ahead to the next slide. So I can show the graphic here talking about all the different systems that can be involved in anaphylaxis. You should have anaphylaxis in your mind if you see patients developing signs or symptoms of hives, any serious or life-threatening symptoms, such as low blood pressure, respiratory distress, or significant swelling of the tongue or lips. And then any symptoms that involve more than one body system. So keep in mind if a patient has a COVID vaccine and develops new symptoms immediately afterwards, you wanna just be mindful that there's a wide variety of things that could signal anaphylaxis. In the respiratory system, the more obvious ones such as throat closing trouble breathing are kind of things you might think about but be aware that cough could also be a sign of anaphylaxis. In the GI system, nausea, vomiting, diarrhea, abdominal pain, cardiovascular system includes dizziness, fainting, tachycardia, or low blood pressure. In the skin or mucosa, you can have hives itching and then swelling of the lips face or throat. And then you can even have neurologic symptoms like agitation, convulsions, mental status change, or a sense of impending doom. So if you have a patient who develops abdominal pain and cough their COVID vaccine, you wanna be alerted that those could be subtle signs of anaphylaxis developing, even though they may not have hives or other classic symptoms, you should still be alerted to the possibility of anaphylaxis. The steps to intervene if you are concerned that a patient has signs of systemic reaction after receiving a vaccine, you rapidly wanna assess their airway, breathing, circulation and ventilation. The second thing to do is to administer epinephrine. The first line and most important therapy for anaphylaxis is epinephrine. And there are no absolute contraindications to epinephrine in the setting of anaphylaxis. So, for any patient that you're worried about anaphylaxising, you should be administering epinephrine. The third thing to do is to call 911, and then number four, you wanna very closely monitor the patient until they arrive. So, you wanna take vital signs frequently, especially blood pressure. If you're concerned for lower blood pressure, then elevate their legs to allow blood flow to the brain to be increased, and then make sure you keep track of when you gave epinephrine and if you've given more than one dose, continue to keep track of each dose. And so just to reiterate, if you're concerned for anaphylaxis, initially assess airway breathing and circulation, administer epinephrine, call EMS, and then place in a supine position. For anybody providing a vaccine to children, just make sure that your facility is equipped with appropriate emergency supplies for pediatric patients, including airway, equipment, medications, and things like that. We do see similar symptoms in children and adults for anaphylaxis. People sometimes wonder if there's like a skin rash or

itching or things like that about giving medicines like Benadryl or cetirizine. And they can be helpful in symptom management, but they should not ever replace epinephrine. So if you're concerned for anaphylaxis, you should be giving epinephrine. And then you need to be aware that if a patient is having any compromise of their airway, you don't wanna be giving oral medications that they could potentially aspirate. With pediatric patients something that commonly comes up is the fact that they get different dosing of medications based on their weight. Whereas adults generally have standard medication dosing. So, for epinephrine, the dosing for children is 0.01 milligram per kilogram. And it is an intramuscular medication preferably we have standard auto injectors, which I would recommend any facility that is gonna be administering the COVID vaccine, be equipped with, there are two concentrations. There's the 0.15 milligram EpiPen and the 0.3 milligram EpiPen. For children that are pre pubertal, the max dose 0.3 milligrams and for adolescences, the max dose 0.5 milligrams, this is administered in the mid outer thigh and it can go through the clothing if necessary. And it's important to know that if you administer epinephrine and you don't notice improvement, you can repeat doses every five to 15 minutes. And then also if you notice that symptoms return, you can give another dose and continue to keep track of when you've given the doses of epinephrine, to be able to report that to EMS when they arrive. This is another chart for reference, and it does get a little bit stressful to think about a patient who's having anaphylaxis and worrying about which dose would be appropriate for them. In general, if a child is less than eight years old, you would consider giving the 0.15 milligram dose. And then for children, eight to 10 and above, you would wanna give the 0.3 milligram dose. If any child is in severe cardiovascular compromise or you're worried about their airway or things like that, just go ahead and give the EpiPen that you have. It is preferable to deal with the side effects of a higher dose of epinephrine than the potentially life-threatening consequences of not giving epinephrine, because you're not sure which dose is appropriate. And just briefly on an EpiPen autoinjector, it has very clear instructions on it. And the steps that you would wanna take are to remove the packaging and then remove the blue safety cap, hold it in your fist. So, you wanna hold it kind of like this. You don't wanna put your thumb over the top of it because in the event that you're holding it upside down, you don't wanna inject the epinephrine into your own finger. You can see the tapered end, which is orange does have an arrow pointing where the needle comes out. You'll push the needle firmly against the side of the child's thigh, halfway between the hip and knee and inject the medication into the fleshy outer portion of the thigh. Try not to inject into a vein or the buttocks. You can give it through clothes or on the bare skin, and then you'll hold it in place for about three seconds. And when you pull it back out, you'll notice a protective shield will cover the needle and then just give that needle to EMS when they arrive. You can massage the area after the injection to help with the discomfort and also to help the medicine diffuse. Here are just a few different ways you might consider holding a child to administer an EpiPen. I think the important thing to emphasize here is that if you're administering this, it is a life sustaining treatment, and you wanna make sure that the child is very secure and it's more important that you give the medication where you're supposed to, and that you're able to hold the medication in there while it's being administered. Than to worry about, you know, the distress in the moment of the parents or the child. And so you may need to kind of take over and just hold them down kind of aggressively to make sure that they're not moving and jeopardizing them getting the medication that they need. And now kind of change pace a little bit and talk about some developmental considerations for vaccination of children. Here's kind of a brief overview of some developmental milestones that might be helpful to be aware of when administering vaccines to children. At birth, you know children can recognize their caregiver's voice. And then by one month they can be calmed by rocking cradling or

singing. By two months, they can hold up their head and track with their eyes. And by four months they would respond to caregiver affection, and also reach for objects. So be aware that even a try out that young might be able to try and reach out for a needle. If you're moving with an exposed sharp object near them. By six months, they recognize familiar faces and respond to their name. And then by one year they'll start having separation anxiety when a caregiver leaves the room, they can stand and walk and say their first words. By 15 months, they'll imitate actions and say a few words and walk well. By 18 months, they can identify body parts. They can show others something interesting. They may be able to run. And by two to three years, they should be able to follow commands, engage in imaginary play and name most objects. By four to six years, they can speak clearly, tell stories, start reading and writing and enjoy playing with others. So overall, I think each child is different. And just because they're a certain age, doesn't mean they're gonna be able to do something specifically, but for those infants and younger children, a lot of times, they may kind of quickly forget about what's happened to them. Whereas older children are gonna be a lot more distressed and it's going to be a little bit more of an ordeal. And then they're also going to have the gross motor skills to be able to kind of fight off attempts to give them the vaccine. So you wanna make sure that you have a good plan in place to hold them still. Some tips for parents, as I mentioned before, encouraging them to bring along a favorite object. If that's a toy, a blanket or a book for their comfort. Talk reassuringly to their child, making eye contact with them, smiling and cuddling, leading up to, and immediately following the shots. We recommend that they're honest and say, "It may hurt quickly, but it won't be you for long." And it's really important to, from an early age, reiterate that the vaccine will keep them healthy and it's good for them, instead of a negative approach to vaccines. They can try reading a story or just having a conversation with them and then make sure to reassure them that it'll be okay if they cry and it'll be over quickly. For providers we recommend being, upbeat, positive, and quick. So using phrases like "You got this, it's gonna be simple and quick," and then "Your vaccines are important," "it'll just be a quick pinch then it's over." Try to avoid being too apologetic saying things like "I hate giving shots, I'm so sorry." "This is really gonna hurt." We don't wanna, lie to them, but it's also good to just try to focus on the positives and being upbeat and not really over-emphasizing the pain and the apology can be helpful. Now we'll talk briefly about some special pediatric populations that you might encounter. Children with intellectual and developmental differences are actually at a higher risk of COVID 19 illness because of increased prevalence of underlying health conditions, suboptimal vaccination rates, and systemic inequities. And actually we see that a lot of providers are not comfortable giving services to these patients for whatever reason. And so they actually do experience a lot of disparities. And so it's really important for, especially those of you administering vaccines, to be comfortable giving vaccines to all children in order to help address some of those inequities. We would really prefer that more people be comfortable working with all children. Basically for this population I would recommend just having a flexible approach and more so than you would for other children being willing to work with the parents and come up with a plan for vaccinating their child and having some backup plans that may be helpful for children with sensory sensitivities or other differences in the way that they perceive the world. So maybe vaccinating them in a quiet area or allowing them to be vaccinated in their car or a space where they feel safer. And then being aware that children may be sensitive to even something like an alcohol swab or some of the preparation even before the vaccine can be helpful. Talking about what you're doing, being predictable and efficient when you're working. And then the autism speaks website has a toolkit for providers. Sorry, I think I froze there a little bit that you can read about more if you're interested in learning about patients with autism specifically, immunocompromised children actually includes a wide variety of

different conditions. And so some things that you might encounter are children undergoing active treatment for cancer or malignancy. Children who've received a solid organ transplant, those on immunosuppressive medications and that includes long term steroid use. And then there's a number of genetic conditions that can lead to immunodeficiency. As I mentioned before, the decision to qualify a child as moderately or severely immunocompromised will affect how many shots they get. So they would get three in their primary series rather than two, if they qualify as moderately or severely immunocompromised. And we recommend that you have the child's primary physician or the physician who manages their immunocompromising condition, be the one to determine their level of immuno compromise, but also that they be consulted as to the timing of their vaccine. So it's just important to know if someone shows up for a vaccine, and they have an immunocompromising condition, there may be reasons why their provider would prefer to delay that vaccine. And so just making sure that anybody who could potentially be immunocompromised has had a conversation with their primary doctor and has approval to receive the vaccine is important. And now we'll kind of wrap up by just touching on communicating with parents about the COVID 19 vaccine. And I'll say, this is a very challenging area. And I know that probably many of you listening have already had these conversations, whether it be in the workplace or in your personal lives and so it's just really important to know that even if you feel like you're not getting through to someone or that they choose not to take the vaccine in that conversation, you may have a positive impact on a future decision for them or someone else just based on information you convey. So taking every opportunity you can to be thoughtful and providing clear information can be really important. So why should children get vaccinated against COVID 19? Since March, 2020, about 1.5 million children in the United States have gotten COVID 19. Children account for over 20% of new COVID 19 cases, getting vaccinated will help children stay safe at school and the activities they want to do. They'll be much less likely to get seriously ill, be hospitalized, or die from COVID 19. So I like to kind of emphasize the two pronged one it's for their safety, because children really can get sick from COVID, which is sometimes a misconception we come across. And then two, you can really frame it at as sort of a gateway for them to be able to get back to their normal lives. Cause there are many parents who are distressed by the mental health implications that COVID has had on their child and staying at home and things like that. So offering the vaccine as a ticket for them to be able to get back to some of the things they like to do can be an effective strategy. Children age zero to four and five to 11 are making up a greater proportion of total COVID cases over time for children ages five to 11 in the US as of November, 2021, there were 8,300 hospitalizations due to COVID 19. And one third of those required ICU admissions, at least 94 COVID-19 related deaths were documented. Multisystem inflammatory syndrome in children or MIS-C is a severe hyper inflammatory syndrome that occurs two to six weeks after an acute SARS-COVID-2 infection. It results in a wide range of clinic manifestations and complications, and it predominantly affects children less than 12 years old. If you're trying to explain this to parents in more, simple language, you can say that the infection with the COVID virus sort of over activates their immune system to start attacking their own body in an autoimmune mechanism. And this can lead to serious life-threatening complications, especially cardiovascular complications, such as coronary artery dilation. There have been over 5,000 cases reported and I'm sure more at this point and 44% of cases occur in children, five to 11, 25% in children ages zero to four and 60 to 70% of patients with MIS-C are admitted to the intensive care unit and 1% to 2% die. So these are really stark statistics in the pediatric world. And I think one thing that I find is really important to emphasize is that parents will say, well, they're just gonna get a cold from COVID. It's not that serious, even if they do get it. And that may be true in the acute infection for their child, but there's no way of knowing that their child is not

gonna be one of these children who gets severely ill from the after effects of MIS-C. Is the COVID 19 vaccine safe for children? The answer is yes, there were no serious side effects detected in clinical trials of the vaccine in the five to 11 year old population. And while we're continuing to follow patients, the US has very strong vaccine safety systems to catch any early warning signs of a serious side effect. The vaccine was shown to have very few side effects in children and protects them well from disease. And another point to drive home is that the benefits of vaccination far outweigh the risk of getting COVID 19. One vaccine reaction that we hear a lot about is myocarditis, which is inflammation of the heart muscle or per carditis, which is inflammation around the heart. And we do see that this happens very, very rarely in relation to the COVID 19 vaccine. The important point to emphasize with this is that it's usually self resolved. Meaning that the child has some transient inflammation in their heart, which will get better on its own. I really like to compare this to the effects of MIS-C on the heart, which can be life threatening and permanent. And so just reiterating that the vaccine may have transient discomfort or effects on the child, but not getting the vaccine and getting infected with COVID can be causing severe illness that is so something they wouldn't recover from. And then of course, anaphylaxis and other severe reactions are exceedingly rare. Children cannot get COVID 19 from any COVID 19 vaccine. And there is no evidence that the vaccine causes fertility problems. The most common side effects that we see are kind of similar to what adults would get, which is just, feeling localized soreness in the arm. And then some general symptoms like feeling kind of fatigue, malaise, nausea, headache, sometimes low grade fevers as well. Generally you can educate parents that the second dose might cause more symptoms than the first, but I do think it's reasonable to tell parents that with children getting a reduced dose in the five to 11 eight group, we are seeing that they're tolerating it with less side effects than the adult dose. To manage the common side effects of the vaccine, recommend that they keep their child really hydrated. They can dress lightly, or they can use medications like Tylenol and ibuprofen if their child is fussy or feeling ill and then using kind of like ice packs and other measures locally at the injection site can help with some of those symptoms as well. And I'll briefly just touch on the fact that there have been some studies talking about specifically mistrust in the COVID vaccine, among BI pop communities, which is rooted in a long standing history of injustice that those communities have experienced at the hands of medical institutions. So it's really important to kind of meet families where they're at and here are just listed a few motivational interviewing techniques that emphasize if you do have time in an encounter, spending that time to listen and affirm the things that you can affirm and then trying to offer guidance and assistance where you can. But we really don't wanna approach this topic with judgment or trying to kind of like force someone to do something they don't wanna do, cause that has proven to be ineffective. And isn't sensitive to the very valid concerns that families often express. And these are just some more examples of different ways you might approach certain concerns that families would have. Here are just a list of resources for providers and families about having conversations about the COVID 19 vaccine for children. Most of this talk comes straight from the CDC website. So anytime you have a question or you wanna refer someone to a source of information, the CDC website would be very helpful. And of course the Washington state department of health website also has a lot of good information. I'll specifically highlight pediatric COVID 19 vaccine toolkit for providers, which you can search online. It's a really great kind of clear and simple language summary of a lot of this information that can be provided to families. And then it also includes a number of different communication samples that you can use to reach out to families. So there's like texts and emails and letters, and it provides them in a whole host of different languages so that you can send them out to families in your

community to encourage them to get the COVID vaccine. And I'll hand it back over to you, Phil. Thank you all so much.

- Yes thanks. Great presentation a lot of awesome stuff in there. So I'm gonna go over a couple things and then it looks like we have a couple questions. I think we've got a little bit of time to answer some questions. So as I mentioned at the beginning of this webinar, continuing education is available for nurses and medical assistants. All you need to do is either watch this webinar or the recording and then fill out evaluation. So the way we have the evaluation set up at the end of this webinar, when the webinar closes, you should get a webpage pop up with the evaluation. If you don't, you'll also receive an email tomorrow, which will include that evaluation link. You can also go to our webinar web age, which should additionally have that information. So you just need to fill that out and then, we usually take about a week or so for folks to fill those out. And then we have an administrative assistant compile those for us and then we, we send out certificates out to folks. If you do have any questions about that process, you'll obviously have my email because it's attached to the webinar, but you can also email Trang Kuss and her email's listed right there. I briefly wanted to mention the power of provider's initiative. So this is an initiative we've been doing to encourage providers to, I guess, encourage COVID 19 vaccination. And it also includes providers who don't necessarily administer vaccines, but and still encourages them to work with their patients and refer them to give vaccination. So just in general, we encourage providers to seek out their patient's vaccination status, ask them if they wanna get vaccinated and educate them about COVID 19 vaccination. If you're a vaccinating provider, we ask that you vaccinate your patients. And if you're not that you refer them to where they can get COVID 19 vaccination. And then the last bit is just empowering your patients, encouraging them to share their vaccination status with their community. So if you sign up for this initiative, you can find it at DOH.wa.gov/pop. We, I think we send providers like a box of goodies around the power providers initiative. And we have a variety of resources on that page as well, to help people with COVID 19 vaccination. And so, yeah, this is the page right here that shows that. I believe we have over I wanna say we gotta be close to 70,000 providers in the state have signed up for this. So a pretty significant amount and so it's just kind of like a good way of encouraging your patients to get vaccinated. So if you'd like to participate, you can sign up. Okay so I'm gonna jump to the questions here. I haven't looked at them yet. Let's see hope we've got some good ones. Okay this question, what special guidance and equipment should we have on site for children under five years of age, any special instructions or procedures? So we are ready to administer a COVID 19 vaccine when it becomes available for the under five year old population or over five year old population.

- I'm gonna guess that there's probably gonna be an official like list of things that are required to have, which I don't know all of the pieces of that, but just more generally, I think having an appropriate ability to give epinephrine to any age or weight child that you're gonna be giving the vaccine to is number one. And then having equipment for giving like bag, mask ventilation, and other kind of like first aid supplies appropriate for different age children like defibrillators and things like that. Otherwise I think just making sure that your office is equipped with space to have an observation period for children and things like that, where, some of these younger children, maybe a little more chaotic. So you just wanna

think about how that might take place if you've got multiple children waiting and it's not gonna be quite as smooth sailing as with older kids and adults.

- Okay. I have a question I think hopefully I can answer. Who is the state of Washington expecting to administer COVID vaccination to pediatric populations. I'm assuming this is for under five year old population. So in general we do have a variety of provider email lists, but my guess is we'll tap into any provider who's, familiar with the childhood vaccination program that we do at the state. I'm sure there will be other opportunities as well for folks to sign up if they're pediatric providers to offer COVID 19 vaccination. So I would encourage you to keep an eye on your email and the department of health website for when we announce that. And there will probably be ample opportunity for you to, to sign up and get access to that. Let's see here. Somebody was saying that the statistics about pediatric surveillance refer to US data. Do we have any state Washington state data? I don't know if you have access to that, Will.

- I am not sure. I think that if it's available, it probably would be with the department of health. I was using more of the CDC data just generally, but that would be really interesting to know. Cause I know family in Washington state probably would like to know based on our prevalence rates here, how at risk their child is and things like that.

- I do know on our department of health website, we do have a COVID 19 page. And I do believe we have a kind of, I don't know, like a epidemiology kind of tool where you can see prevalence. I don't know if it's specifically for pediatric patients, but I would maybe encourage folks to check out the website and kind of dig into state data there. Somebody was asking if we can send a link to the presentation afterwards. So it is on our website. And I believe when you get your follow up email tomorrow, I also linked that website. So when you get your email, you'll be able to pull up the page. One more question. We haven't really had too many clinical questions. So this is basically the last question and I can answer this and then we can wrap up. Do you plan on making COVID 19 vaccination part of mandatory vaccination schedule for children going to school? So just so you're all aware and the department of health doesn't choose to make that decision. That's a state board of health decision. And so they do have regular meetings and I know they're discussing that, but we have not heard of anything specifically related to that. So I would encourage you to, to check out the state board of health website and follow along there and see kind of where that's at. So that's about all the questions we have. So I wanna thank everybody for attending this webinar. I hope you have a great Friday and I appreciate you hanging out with us on your lunch hour and we appreciate all the work that you do with your patients and education and outreach and all of that. So thank you everybody and I hope you have a great day.