

## Monkeypox Intradermal Vaccine Administration and Inventory Management Webinar Transcript September 25, 2022

This is the Department of Health's Monkeypox Intradermal Vaccine Administration and Inventory Management webinar. I am Phillip Wiltzius. I'm a school and childcare immunization health educator and I will be facilitating this webinar today. Just some basic ground rules, we've disabled the chat, but if you would like to ask questions, we do have the questions and answers panel. You can type in a question there, and at the end of the webinar, we will have time for questions. Okay. So, today, we have a variety of presenters covering a bunch of different topics. So, Kathy Bay is the section manager for the Clinical, Quality, and School section of the Department of Health. Jenny Arnold, if she does happen to hop on today, is the chief executive officer for the Washington State Pharmacy Association. Elle Cooper, Anne Tu, and Brittany Jolivette are part of the Tacoma-Pierce County Health Department Monkeypox vaccination team. And Heidi Kelly is the COVID-19 public health nurse consultant. And Janel Jorgenson is the vaccine management section manager, and both of those are also with the Department of Health. So, today, we are going to go over the JYNNEOS vaccine information. Kathy Bay will be covering that. And she'll also be going over errors and deviations in VAERS today. Then, we'll cover the intradermal vaccine administration tips and tricks, and then get some lessons from the field on that from our wonderful colleagues at Tacoma-Pierce County. And then, we will go through how to deal with the vaccine inventory management with all of this at the end. And then, like I said, we will have time for questions and answers at the end. So, I'm going to turn it over to Kathy.

- Thank you, Phil. Next slide, please. I'm just gonna do pretty quick highlights about the vaccine and just give a little bit of information about what we're hearing frequently, as far as questions about, specifically the intradermal vaccinations, but a little bit more beyond that. So, the JYNNEOS vaccine is a fully licensed vaccine for subcutaneous use in adult populations over the age of 18 or 18 and older. And the EUA that the FDA put into place recently in this month allows us to use an intradermal approach with a smaller dosage, to be able to provide more vaccine availability for a larger population. It is recommended that it is a two-dose series and that there's 28 days between the two doses. And we'll talk more about that in just a minute. But the key thing is that that intradermal dose actually does allow for those 18 and older, that it does allow for us to have more vaccine available to be able to vaccinate more people that are in need of vaccine. Next slide. So, using the intradermal approach, you use the dendritic cells in the skin to actually produce, it does produce a good immune response that's equal to or perhaps, better even than giving a subcutaneous approach. And because it uses that smaller dose that we talked about, it actually does allow for you to be able to get more doses out of the same vials. And so, you do get more localized redness and itching, some firmness, and a little bit of swelling, which we'll talk about the wheal that we wanna see, or the bubble that we wanna see in the vaccine, as we talk about the intradermals. But you get less pain at the site when you actually do an intradermal than when you do it as a subcutaneous vaccine. And so, the dosing for that intradermal is that 0.1 milliliter dose for an adult. It is not recommended for those with a history of keloid scars for you to use that intradermal, because they could develop a keloid scar. And so, you would use the subcutaneous for them. And then, for children under the age of 18, children and adolescents, that population should also receive the subcutaneous 0.5 milliliter dose. This does get the dosing with that TB syringe, which really is the recommended syringe. We've heard from some facilities and organizations that are vaccinating that they're having difficulty getting five doses out of the vial for intradermal use and using that smaller dose. And so, the key piece to that we hear is really using that short needle and using the TB syringe, so it has less dead space, so you can actually draw five doses. But we understand that it may not always be possible. The recommended site for vaccination is the volar aspect of the forearm. Next slide. So, the

key pieces again for the vaccine are really just ensuring that you cannot pull doses across vials. So, when we think about that infection control key piece from my standpoint is we have those rules that we use. This file does not have any preservatives in it. So, making sure that you're using really good infection control, which we'll talk about more in just a second, but really maintaining the storage and handling between the vial's usage, when you're using it for that intradermal approach, when you're getting those doses out. In between drawing a dose, it actually should go back in the refrigerator. And it does need to be discarded eight hours after it's been accessed, even if you haven't completed all the doses. So, making sure that you're thinking about that and planning your clinic is really key. Next slide. So, this is that infection control piece, and I'm gonna hit a couple of highlights here that are always really important to me from a clinical standpoint, and again, using really good aseptic technique to prevent cross-contamination of the vial. They have to be used within eight hours of access. And then the date and the time that that vial when it's opened, make sure that you mark that on the vial, so that you don't accidentally give it beyond that eight hour block of time. And have a good process that you're utilizing in your organization to verify that. We already talked about not pulling vaccine across open vials. We consider that to be something again, if you contaminate one vial, now you've contaminated potentially a lot of others when you're moving across vials. And so, that's not authorized under the idea of using this. It is a preservative-free vial. And then, again, using single dose disposable syringes and needles really to ensure that there's no additional cross-contamination. It's intended as... Each dose is a single. So, you're gonna pull it with that in mind, as you think about the use of the vaccine. Next slide. So, I'm gonna hit a couple of high points of things that I have heard. Actually, if you could just go on and go to the next slide and then I'll come back to the pieces of information about that. The most common question we hear and that they're gonna cover here in just a moment is what if I don't get a wheal when I do my intradermal approach? And really, CDC is saying, at this point in time, that if you don't get a wheal or a bubble as you start that intradermal approach, and you inject your vaccine and you don't get a wheal, you should immediately do another vaccine. It can be done in the same forearm area that you would use that same surface area, just separating out the space, so that you are leaving distance between that initial dose that you administered and the new location. But the key thing is ensure that you go ahead and do that at the same time, that same day, rather than waiting and calling somebody back later to get it done. And so, that's a key piece. If you just create and you have a wheal, but then your volume leaks out, again, CDC is saying, if you're not sure at least a half volume got in, then just go ahead and repeat as well. So, those are the key pieces. And if you can go back one slide for me, I'm just gonna hit a couple of other things. There's already on the previous, the slide that we just looked at, that information that takes you to the links on the CDCC website that talk about those administration errors and deviation, but I just wanted to hit a couple of them really quickly. The spacing or the interval between the doses really is recommended for 28 days. We are focusing on first doses right now as our priority in Washington, to make sure that everybody can get access to the vaccine. The exception to that is for individuals that are immunocompromised that are perhaps HIV positive or immunocompromised, they really should get that appropriate dosing at 28 days. There's been some research that said, although CDC uses a four-day grace period, so giving it at that 24-day mark might be okay, going too early, you can actually, you're not gonna get a good immune response from the individual if you give someone your a second dose at 14 days versus giving it at 28. So, you're not necessarily helping the individual by trying to get them fully vaccinated quickly. So, 28 days is the recommended interval. And again, two weeks after that is when they have the best protection from the vaccine. We've already talked about the dosing. And so, again, dosing errors are something that we hear quite a bit about. And again, the dosing for the intradermal is 0.2, excuse me, 0.1 milliliter. And if you're doing a subcutaneous dose, it's 0.5. In your storage and handling, it's really important that you do put that vial back in the refrigerator if you open the vial and access it. And in between draws, if you're doing a larger clinic where you have people that are coming in, know that you're using those doses right away, you can draw, but really important

that otherwise that you do put it back in the fridge in between. And if you're not following the appropriate storage and handling, again, concerns about the efficacy of the vaccine. So, there are recommendations for you to contact the company if you've not maintained those. So, I believe I am done. I'm gonna hand back over to Phil. And I'll stand by for questions.

- [Phil] Oh, okay. Thank you, Kathy. These are just some of the resources that were mentioned earlier. And in the reminder email that went out to folks an hour before the webinar, we do have a link for the PowerPoint slides. So, you can access those and check out all the links we have on our slides. Okay. So, now, I think, we're gonna go to Heidi to talk about intradermal administration.

- Good afternoon, everyone. I just wanted to preface this slide deck with the fact that I got all this information off of the CDC monkeypox interim clinical practice guidelines site. So, you can see the pictures that I'm showing you as well as a really great video that's got a live feed of someone actually giving the vaccine, so you can actually see it in action, which makes it easier for me to understand as well. So, I've done a lot of these, but imagine if I'd had this back in the day when I started it, would've been more helpful. So, go ahead. Next slide. So, we're just gonna get right in. First of all, you gotta find a nice open site on the inner forearm or volar side of the forearm. And one note to keep in mind is that I try to make sure that it doesn't have ink on it. So, a lot of patients I've worked with in the past had ink on one side and not in the other. So, I try to go with the one that doesn't have ink on it. It makes everybody happier in the long run. So, just a little side note on that. So, you're gonna clean that area really well. Next slide. And then, another thing is you're gonna pull the skin nice and tight or taut, and try not to have the needle pointing at your finger like this picture, but you can actually have your fingers away from the line of sight of the needle, to make it nice and tight, so you can get a good firm grasp of the skin when you're going in with the needle. And you're gonna go in with the needle at a 5 to 10 degree motion, but we don't carry around protractors. So, you're basically trying to keep it as close to the skin as possible, getting it under that first layer of skin, or the second layer of the intradermal area. And you're gonna pop it in there right after the bevel. So, before you even put in the needle, you're gonna look at the needle to see where the bevel is to make sure it's pointing up, and then you're gonna pop it in. And this picture shows how you would hold the needle. But at the same time, you may not, depending on the size of your hand, you may not have enough room to actually have your fingers underneath it. You might have to have 'em to the side. Next slide. So, this is a good graphic of how far in you're gonna go with the needle. And then, also, the degree angle of where you're going and what you're shooting for. Next slide. When you're in, the needle will sit there easily if you're in the intradermal part. And you can definitely move your hand about to get it, so you can inject. So, at this point, once the needle is in, the bevel is cleared and in the skin, you can move your hand that was holding the skin taut, and start injecting the vaccine. And you'll see that wheal, or it's a pale little bump that will develop. And that means that you got the vaccine in the right place. So, you gotta do it nice and slow. So, if you pop it in there, it may actually push the vaccine further or actually squirt back out. So, this is a good picture of the wheal again. And I will say that it'll happen... At first, there'll be a wheal and it may go way over time, but you do wanna see that when you're first putting it in. Next slide. Then, after that, once you have the wheal and you pull needle out, you're gonna, like all other vaccines, watch the patient for 15 minutes, and you're gonna watch 'em for 30 minutes if there's any kind of reaction. So, super simple, quick, and again, you can get all this information off the [cdc.gov](http://cdc.gov) site for monkeypox. That's all I have for questions.

- [Phil] Awesome. Thanks, Heidi. And then, I think, at this point, I know that Elle, Anne, and Brittany, I think, now is a good time some field lessons you've had doing these vaccinations. And if you have anything you'd like to share.

- [Elle] Yeah. So, hello. I am Elle Cooper. And I am the vaccine lead for the monkeypox vaccine response at Tacoma-Pierce County health department. And I have my colleagues, Brittany Jolivette and Anne Tu, with me. I do a lot of the coordination and the training, but Anne has been out in the field with our clinic team. And so, mainly, I just wanted to share some really high level and then field feedback that we've been getting in our pivot from our subcutaneous to intradermal vaccine administration of the JYNNEOS vaccine. So, as it was with us, and as it is probably been with all of you, we wanted to pivot as soon as we could, but as safely and effectively as we could from our subcutaneous to mainly intradermal vaccine administration, for those who are 18 and older. So, when we got the EUA, we started pivoting to update our clinical documents and got to work, creating a training plan for our vaccinators and our clinical team that articulate our vaccine clinics. So, as intradermal vaccine administration wasn't really necessarily a part of all of our skill sets, what we did was we pulled our team to really see who had any experience intradermal administration. And we had a couple people who had done a lot. And so, what we did was we just pretty quickly created a training plan that has utilized a lot of the resources that actually have been shared here. What we did was we created just a blended training, like opportunity for our clinical staff, where we did some lectures. So, we showed the video and the slides that Heidi presented. So, we showed just best practice technique at a really high level. And then, we created a skills checklist, check off for our team, where we could give hands-on opportunities for our vaccinators to practice doing intradermal technique with normal saline, and we did it on each other. So, depending on whether you have, I don't know, sim lab access, or you have to get creative, we're all nurses, and we were very okay with training on each other. And to be quite honest, I think that that was really good to be able to just get hands-on, and see how the feel is, and how you can start building that technique and make sure that you're building capacity in your team. And so, that was pretty much how we have approached it. Our team found it really, really helpful to have the blended lecture, where we were able to go specifically in depth with some of the common errors and deviations that Kathy presented, things that they would see out in the field. And that specifically, if you don't get a wheal, if you do get a wheal, but some of it leaks out, what our vaccinators are gonna be most interested in hearing. And then, really just getting that hands-on experience. Most of our vaccinators have been getting a wheal, had no trouble. I think, the things that we have been finding it most helpful to train on, really that hands-on technique. That's really shown in the pictures, the slides that Heidi presented. Going really slowly is very important. That transition of technique from the Sub-Q and ID administration, that's really common for us, to intradermal going slowly. So, really taking into account the grip that you're taking and your dominant hand, and then the angle that you're advancing the needle is really, really important. And then, going slowly through all of it to make sure your depth is where it appropriately should be. And then, your ability to visualize that bevel under the skin. That one has also been really helpful. Again, I think, it's hard to describe some of this virtually when you're not seeing it in real time, but I think, having our experienced vaccinators with this technique do some direct observation and give feedback in real time to our vaccinators was very helpful to make them feel comfortable and then using that skills checklist, and going over the errors and deviations that they would see. We aren't getting five doses most of the time. Most of the time, we're getting three to four. But we're doing our best to see really what we can do to maximize that. But we haven't had a ton of clinics so far, but we haven't seen the five doses per vial for us. And I'm trying to think of what else have been important points for us. Other of my team, Brittany, Anne, do you have anything else to add to that, that could be valuable?

- [Colleague] Yeah, Elle, you covered most of it, but what I can add as what we see in the field to get that wheal, we've only had a few times where the intradermal administrations did not result in the wheal. And then, for those cases, it was actually due to the technique of holding the syringe. So, it's really important to hold the syringe with a thumb in the forefinger as you're inserting the needle, and not

having the fingers underneath to really ensure you get that 5 to 15 degree angle in the dermis, and so that hopefully will result in the wheal. And then, also, I would add the tuberculin syringes that we use has a safety cap in which the bevel is facing up the same direction. So, we've actually found that very helpful. So, if you guys are able to get those type of syringes, I think, it would help anybody that's vaccinating to know that the bevel's facing up.

- [Elle] Great. Yep. I think, that's all from us.

- [Phil] Awesome. Thank you very much for sharing. Okay. And now, I believe, Janel, I believe you're up to talk about IIS inventory management.

- Okay, great. Thanks, Phil. Hi, everyone. I'm Janel Jorgenson. And as mentioned, I am the vaccine management section manager here in our office of immunization. My SPAN is running on my computer, so I'm actually gonna turn off my camera for the rest of the presentation to preserve some bandwidth, but I wanted to at least turn it on and say hi to everyone. Next slide. So, to get started, it is a requirement that all providers receiving monkeypox vaccine track and manage their inventory within the IIS. I think, most of you are familiar with the steps of how to use the IIS. So, there are several slides here on steps for IIS, and we'll go through some of 'em, but we'll also skip a bunch, unless folks need more detailed instructions. But I do wanna point out that we do have a handy guide here for managing your inventory within the immunization information system. It covers how to add vaccine, how to receive a transfer, how to add additional doses and reconcile your inventory. And there's a link here for that. The next slide. This image here is just to reinforce the message that those that are getting vaccine directly from the stockpile will need to manually add the inventory in the IIS upon first receipt of the vaccine. And then, after that, it will be available to transfer to providers. Next slide. And we can go ahead and go straight to the next slide for transfers. So, after vaccine's been added to your IIS and is available in the system, it is then available for you to redistribute and complete transfers to other providers. By using the system, you can do electronic transfer and then that documentation is available for tracking purposes within the IIS. And so, we're asking about all LHJs who are distributing vaccine and providers who may be distributing amongst themselves, also use the transfer functionality, so we can track the movement of vaccine within the state. Next slide. So, when transferring, you need to submit an official request within the system. There's steps here to lay out how to create that request. Once the request has been created, it will be approved by Department of Health. My team are reviewing those daily, twice a day, and approving transfer requests. Once it has been approved, the status changes to approve, and then it is available for the receiving provider to accept the vaccine into their inventory after they have received the physical transport. And I'm sure if you're enrolled in COVID or childhood vaccine programs, you've been doing this on a regular basis for the past year. And you're familiar with this process. A couple things I do wanna highlight. Next slide. If the provider that you are transferring the vaccine to, the receiving provider is not displaying in the dropdown menu, the first tip would be to double check with the provider to make sure that you know what their display name is in the IIS. Sometimes, the name that they do business as and go by is not necessarily the same name that is in the system. So, first step would be to check with them on what their display name is in the IIS. Next slide. This is just a couple more steps on completing the transfer process. I'm not gonna go into those in detail. Let's go ahead and go to next slide. This slide shows the steps for receiving. Once the receiving provider gets the physical transport, a vaccine, the steps that they can take to then accept the vaccine within their inventory, and then it will be available for them. Let's go to the next slide. This is some new information for some LHJs that have reached out. If there is a provider that you plan to transfer vaccine to, and they have IIS access, but they do not display or show up in the dropdown menu, or they do not have a pin, you can go ahead and reach out to us. We will check their IIS account to set them up

appropriately, so they will display and be available for you to complete the transfer in the IIS. So, that's new. I think, some providers have been moving vaccine and then just manually adding it, but we can set them up, so the transfer functionality will work appropriately. And then, there's documentation of that transfer. Next slide. Okay. Let's talk about reconciling your inventory. Let's go to next slide. There's some new information here for everyone. As mentioned, it is a requirement to manage your inventory in the IIS. This is so the department can pull data from the IIS and submit it to our federal partners every week. And a key piece of information that's just come about really this past week is due to all of the changes in intradermal administration, whether it be you got only three vials or three doses out of a vial, or you needed to give a subcutaneous administration to a patient and use that whole vial, creating a lot of discrepancies in vial count and dose count, our federal partners are asking that we report to them number of vials rather than number of doses for our inventory on hand. So, we are asking and requiring that all providers report inventory as vial in the IIS, and to reconcile that information daily. That's not necessarily how the IIS is designed to work. The IIS is designed to work by doses. So, every time you administer a dose to a patient, it is going to subtract a dose from your inventory. So, I expect that every day, your inventory count in the IIS is going to say, you have less vaccine vials than what you actually have in your physical inventory. And you will need to add additional doses. But it's important that we have everyone do this. As mentioned here, it's helping. If we do it daily and we do it by vial, it helps us monitor our usage. So, we can meet an 85% threshold that is required. We have to demonstrate that we have used 85% of our vials in order to obtain additional supply from our federal partners. And then, daily reporting just to know. It's only working days. So, if you're closed on the weekend, you don't need to go in and report. Next slide. This is just to illustrate the requirement. Reconciling really is making sure that your account of your physical inventory in your fridge or freezer matches what the IIS inventory says that you have on hand and making corrections. Next slide. This shows you where you can locate that information by going to the lot numbers and then reconciliation tabs. You can print the sheet if you're gonna do a large inventory count, but it shows the column there of where this physical inventory count needs to be entered into the system. And then, let's just jump to next slide. So, I've mentioned since we're probably getting multiple doses out of a vial, but we need to report vials. It's gonna be necessary to make adjustments every day, to read inventory. There's really two ways that you can do this in the system. And either way is fine. The IIS guide that's posted to the webpage lays out instructions for adding more doses, using the lot number maintenance page, which is perfectly fine to do it that way. But most of you are probably more familiar with using the reconciliation page. And that's what this little image on this slide is demonstrating is the reconciliation page. Here, you can enter your number of vials on hand in the physical inventory column. And then, you need to enter a reason for the adjustment. So, in the reason category or the category, you can select order received. And that's the closest match that's available to us. And then, the reason is dose count variants for a multi-dose vials. You can do this for each lot number that needs to be adjusted. And then, save the information. No need to click submit inventory report. If you do that, it could impact requirements for your childhood or COVID program participation, if you're enrolled in those programs. So, no need to click submit, just reconcile the correct information and click save. Next slide. Here's just a couple links for resource tools, the vaccine management guide, there's Q and A on the website. And then, we threw in some storage and handling guide information for good measure. Next slide. I think, that's all I have.

- [Phil] Awesome. Well, now's the time. If any of you have questions to type them in the questions and answers panel, and we have a decent amount of time still. So, if you do have something that's tickling your brain, please let us know. So, Kathy, I don't know if you'd be interested in answering this question or not. It's not necessarily administration-related, but somebody wanted to know what might be the status for this vaccine for people under 18, if we have any additional information on that.

- Yeah, that's a great question. So, the vaccine is authorized for those under the age of 18 with a 0.5 subcutaneous dose. And so, you would need to do it as that full 0.5 milliliter dose in a subcutaneous route. You would use the normal consenting process that you would do for vaccinations. So, there is a requirement for consent for those under the age of 18. And so, you can use either the mature minor doctrine as your guidance for it. And there is some information posted on the DOH web page about that. We're actually putting up a sample consent as well, for awareness, just for you to be able to see one. We do not give legal advice at the Department of Health, but I do know that there are organizations, who are utilizing that doctrine to be able to administer vaccinations for those under the age of 18. And I don't know if Elle or someone from Tacoma-Pierce might like to talk about the way that they're utilizing that doctrine to do vaccinations in the field right now for those under 18.

- [Elle] Yeah. We had created a COVID-19 vaccination protocol for mature minors, those under 18. And we actually consulted Kathy when we had this question, and we're creating our protocol based on that, and basically creating that and then creating a consent that it was modeled after the DOH template. And then, the screening questions aren't really any different 'cause at this time, we don't know really any additional risk criteria for youth. So, we're using the screening consent that we're currently using. And then, we are attaching and using our protocol that we're coming up with vaccinating mature minors and those under 18. And I shared that on base camp, but I can also share as a template or discuss what that looks like in terms of the clinical documents, if anyone has additional questions.

- Great. Thank you. So, Heidi, this might be a question for you. "What do you do if both attempts to administer are unsuccessful?"

- I'm coming, I'm coming. So, the reason why we're trying not to do more than two is because it can turn into quite an ordeal. So, I think, at that point, if there's two, I would have a colleague step in, and maybe do the other arm and try it. So, that's where I would be with it, but there's gonna be a point where you're just... And we don't have guidance on that. And Kathy's gonna step in right now and help me out with this, because there's no specific guidance on that

- Yeah, there are actually...

- to help you. I don't believe there's written guidance on it, but I have heard from CDC directly that they're recommending it. At this point in time, if you've attempted twice and don't get a wheal, they do think that the individual is probably received enough of the vaccine to not do a third attempt. That is considered to be sufficient that you would not go to the other arm. So, I anticipate that will come as they continue to update their website, but there's not a recommendation at this point for an additional dose that you would just do the 28-day mark afterward. And so, we'll ask them to add that to their FAQs as they update so that we can have that posted as well.

- Okay. Janel, we have some IIS questions for you. Somebody-

- Okay.

- Somebody asks, "The IIS does not give a listing as vials. Do we interpret units as vials?"

- [Janel] Yeah, in the IIS inventory, if it says units or if it says doses, please instead report vials. On the reconciliation page, I think, it just says physical inventory. That needs to be account of vials. And when you're adding inventory for the first time through the search ad feature, enter vials.

- Okay. And then, somebody else asked, "Will the other option for inventory correction be added to the DOH adding inventory documents?"

- [Janel] Yes, we will add it to the monkeypox inventory, the IIS vaccine management document. I think, that's currently under review. I don't think that that document reflects the need to enter number of vials rather than number of doses. So, there's a couple changes that need to be made to that document. And we are working on it right now.

- Let's see. Somebody asked for the slide links. Trang, I don't know if you have the link available for you right now, if you could maybe respond to that question with the direct link to the slides. Let's see. So, generally, the only on-topic questions we have. If the folks have anything else, please feel free to type them in. Otherwise, we can probably wrap up. Well, I did wanna mention that we are recording this webinar, so we will make it available as a recording hopefully within a week or so. We will probably share that link when we have it available. I'm assuming probably through YouTube. I can answer this question or I can ask this question. Kathy, it might be directed towards you. It's again, not administration-related, but somebody asked if we've reviewed timing for when our stricter, the national eligibility criteria might be loosened.

- Yeah. So, I can't give you specifics. I know that we're really continuing to work with local health partners and I think, it might have been a local health person who actually is asking the question. So, one of the things we're really trying to do is make sure that we have sufficient vaccine available for first doses, for those that are really at highest risk right now. And then, to go back and reassess the guidance for next steps for that. And so, really important that we're continuing to do those things that like Janel talked about as far as ensuring that you're doing your inventory check and you're doing the right work for that to be reported. And for us to be able to know what's happening with the vaccine doses that are available. So, we're trying to think about future things that could happen. We definitely wanna make sure that we can vaccinate those who are at highest risk. And that includes those that have had a definite exposure based on doing case review for someone who has developed monkeypox. So, those are critical pieces that help us make those decisions about next steps. And then, I think, this still is going back to at the national level, it's true, and we're continuing to think in Washington. We don't think that there's a risk to the general public. At this point, the risk in general is low. And so, considering that, it's not that everyone should have this vaccine. So, we're trying to be careful that those who actually need it, have it available. So, that would be my only thoughts on that right now, but keep watching the DOH web page, and let's keep making sure that we're communicating that to ensure that those who need it can access it. So, thanks, Phil.

- Yep. Great. I think that's all the questions we have. So, I think, I will give everybody back 15 minutes of their day. As I mentioned before, once we get the recording, we will share that out through our regular channels. And I assume we might also post it on our immunization training webpage on [doh.wa.gov](http://doh.wa.gov). So, be on the look out for that, if you would like to send it to a colleague who maybe missed this webinar. So, thank you, everybody. I hope you have a great day. And I hope MPV vaccination goes well.