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WYOMING VISION COLLABORATIVE WEBINAR WITH DR. EDWARDS: WHY
SCREEN EARLY?

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>> JULIA LAUSCH: All right. First, I would just like to
welcome everybody. Thank you all for joining us today. We have
our webinar titled Why Screen Early? And we are hosted here by
the Wyoming Vision Collaborative. We are housed within the

Wyoming Institute for Disabilities. Our program is funded through the Wyoming Department of Health, as well as donations from the Wyoming Lions Foundation and the Miracles in Sight Foundation.

We have a presentation today by Dr. Nathan Edwards. He is an optometrist located in Casper, Wyoming, at the Family Vision Clinic. He has been extremely involved in the community and holds various leadership positions, including being a Board member on the Wyoming Optometric Association and the Chair of the Wyoming Optometric Association Pediatric Task Force. Which means they basically are working directly with us to figure out what screening protocol we want to use around the state to help improve screening practices.

We've been working closely with him when building this infrastructure. In a minute, I am going to hand the floor over to Dr. Edwards to begin. Note that we will have time at the end for questions and answers at the end of his presentation, so anything you have in mind, please feel free to jot it down, and then we can address at the very end.

All right. Without further ado, I am going to hand it over to Dr. Edwards.

>> NATHAN EDWARDS: Okay. So I guess I'll take it from here. Thank you, Julia. Julia and I have kind of gotten to know each other pretty well here in the last few months getting this thing -- actually, a year, I guess, now. We are getting close

here. Kind of working on this Vision Collaborative trying to better Wyoming's screenings, trying to get all on the same page so we can have the best vision screening that we can do and make them worthwhile so we can catch as many vision problems in our kiddos that we can. And make them worthwhile.

A little bit about myself. I graduated from Casper, Wyoming, Natrona County High School, '01, went to the University of Wyoming and graduated with a Bachelor's Degree in zoology and physiology and chemistry. Went to Pacific University College of Optometry, graduated in 2010. Wyoming was packed full of optometrists at the time, so I practiced a couple years in Oregon and was able to come back here in 2012. I am pretty excited to be home and taking care of eyeballs in my home town here.

I got involved on the WA Board, and from there I was kind of nominated or kind of asked to be the Chair on this Pediatric Task Force, so I've kind of been always involved in pediatrics in school, and this just kind of filled a pretty good niche for me. And it feels like I'm hopefully going to be able to be part of something big for Wyoming and kind of improve what we've got going here so we are more consistent in our screening process, a little bit better.

I am a Lions Club member as well, also a Board member on the ARC of Natrona County, which is -- if you are not familiar with -- is a group that provides respite care and in-house care

for special needs kiddos. So we do a lot of -- we have a facility where we take care of these kiddos and help them better integrate with kiddos of their same -- kind of their same nature and also give the families kind of reprieve as well. So we -- I'm part of that as well.

And then the real reason why I came back to Wyoming -- no, I am just joking -- I also guide on the weekends, I run a boat for a guy in town, and that is really a true love of mine as well.

So that's a little bit about me. This kind of came to mind when I was kind of putting this together, thinking about the collaborative and how spread out it is and how many different organizations that are involved. Julia and WIND and Canyon and the rest of the group has done an amazing job at really getting us -- keeping us all informed and trying to keep this quilt patches stitched together the best they can. There's a lot going on here that I think they've done a pretty impressive job of trying to keep everybody informed. And I think that it's a pretty big task, and I think this slogan here that the ARC uses is "Hand in Hand We Can," and definitely I think this is able to happen. You just have to keep kind in touch with one another and, like I said, Julia's doing a great job with that as well.

So going on here, let's look at vision in general. Okay? There's a lot more to vision than seeing, you know, being able to see. I mean, there's a whole eye health portion to vision, and that includes binocular integration, that includes how the

eyes are working together. That includes perception. What you see every day and how you recognize it, define it, and perceive it is all seen with vision.

So there's just a few things here that I'd like to kind of go over that was put together here in this program here. It's huge. I mean, almost over 80% of what we learn we learn visually. Okay? So the vision portion of learning and reading is very, very important to what we -- how we learn every day and how a kiddo learns. So if there's any one part of the visual system that isn't correctly working or functioning that can be caught in a screening, we can help them down the road for learning and comprehension and recognition of what they do learn through their visual system.

Again, this is just, again, pushing on vision is just huge. It is learned. If a kiddo cannot see very well or does have a problem early in life, that is, you know, maybe one eye is not as good as the other or maybe they are not working together, there's a lot of things that can interfere, be affected. Sports vision is also a very integrated system as well.

So just to keep things in mind, when we are doing our screening, we are doing more than just seeing if a kiddo can see. Okay? There's a lot more to a vision screening that we need to keep in mind when we are doing these screenings. And just because a kiddo may be able to see very well, that doesn't mean that they're integrating properly and their perception

skills are not up to par as well. That's something we look at in developing our screening process.

I kind of want to go over a quick eye health portion of this because there are things that in a screening that we can also, you know, notice or bring to attention, and this is all included in, you know, looking at the child and actually taking a physical look at the kiddo in the first part of a screening. Okay?

You know, pupil size is very important, and the photo screeners are also very good at picking up pupil size or pupil anomalies. The difference between pupil size, which is called an anisocoria, and that can be indicative of multiple different things. Also, if you do have anisocoria, a kiddo may have change in depth perception or may not be able to see as well out of one eye as the other one when looking at near. So that will affect, you know, reading and how both eyes work together to read.

Of course, another, you know, portion of the -- you know, the actual physical kind of observation of a child when they do enter into a screener, not a lot of things can be seen at a screening as to the anterior segment health; however, you know, on a cellular level, it's very difficult to say, okay, the cornea or the front of the eye is healthy. These are things that you can only really do in an eye health vision exam, and so that is -- I think it was worth showing here. If you do notice,

you know, something different between the eyes or something out of the normal with looking at a child, that should also always be referred for a second opinion from an eye care professional. Okay? So that's anterior segment health includes lids, lashes, cornea, the white part of the eye, the sclera, blood vessels of the eye.

You know, those things, there's a lot of things that can be observed from a screener's point of view that are pretty gross or pretty noticeable that can be kind of referred for second opinion or further investigation as well.

Media opacities are kind of a little more difficult. They are -- when I say "media," I mean cornea, lens, kind of vitreous issues. However, these are where the photo screeners again come in to really do a very good job picking up medial capacity such as congenital cataracts. They may even pick up some corneal scarring or anterior surface scarring on the front of the cornea. And those are taken with that photo that they -- that like the Sure Sight and Plus Optix and those screeners will pick up on that retroillumination photo that you see when you print that report off.

Of course, most kiddos have been looked at by a pediatrician in their first few weeks of life to kind of rule those things out; however, I'm still picking up media opacities in 6 to 7 to 8 to 9-year-old kiddos that complain of glare and halos in one eye more than an other, and I am finding mild media opacities.

Of course, surgical intervention at that point is not really necessary, but it is something that is good to know that is there or may be contributing to some decreased acuity or poor visual recognition, especially at night and, you know, glare involving situations, oncoming headlights, streetlights, TV at dark, things like that. So that's important.

Eye pressure. So much in a vision screening is not a real thing that you guys are really going to be doing a whole lot of. Again, eye pressure is one of those things that kind of fly under the radar until you do have a full visual, you know, health exam. So that's something that you may be able to notice some anterior segment issues that also might be going hand in hand with a high eye pressure or maybe a congenital glaucoma issue. These kiddos will present kind of with a larger cornea. You might look at the kid and go, wow, that kid's eyes are really big. That is perfect and a very, very important referral to maybe a further investigation where we can check pressures and make sure that they are not having any kind of ocular changes there.

And that would lead to an optic nerve head evaluation for, you know, possible changes in the optic nerve. Again, the retina, macula, these things are all eye health, you know, structures that really only can be looked at through a visual health exam or an eye health exam with a professional practitioner.

So with that, the main things that you guys were working on,

the anterior segment health, pupils, you know, you have a kid, you know, present with a crusty eye, red eye, obviously you are going to ask a few questions on that and hopefully get them referred, and to me, that is a successful screening. I mean, you've identified something that we can maybe investigate further and figure out what might be going on there.

Again, a refraction, your guys -- in the screening process, what we're going to -- what you guys are going to look at here and in a refraction or photo screener/auto-refractor combo, like the Sure Site, Plus Optix, the Retina Max is a few that have been used in vision screenings with the CDC and the Lions Club. You may not really understand what those numbers mean. In a perfect world and what I would like to see in Wyoming and what I think we should all kind of maybe understand is those numbers that are kind of produced by that auto refractor, you know, a nearsighted kiddo may squint or have difficulty seeing in the distance. Okay? So those kiddos definitely immediate to be seen. Hyperopia, which is, again, a kiddo that might be very far-sighted, out of the norms, and again, astigmatism.

Their vision is going to be -- astigmatism. Their vision is going to be affected at a distance and near, depending on the amount of astigmatism that they have. I am going to get into refraction a little more as we continue in today and kind of explain that maybe a little bit more with reference to the photo screeners and the auto refractors that are being provided in the

screening process. And anisometropia, that's a big word, but pretty much what it means is a large difference between the two eyes. Most of these photo screeners and auto-refractors, software will automatically flag a large distance between the two eyes.

This one is pretty important, this one right here, because this can really lead to amblyopia, which is huge in a kiddo, and it will affect them permanently if we don't catch it within a particular amount of time. And also, it's very hard to have a kiddo actually recover from this if proper care is not found. The worry is that the kiddo will use just one eye, and the worry is the brain and the visual pathway will just shut that eye off that is seeing not so well or may have a large difference in prescription.

One of the most common ones is when one eye is way farsighted and the other eye is not as farsighted, the patient will almost always go to the not-so-farsighted eye.

Also, astigmatism is also another condition that is also an amblyopic kind of factor as well. So I've had many kiddos come in for testing. Mom and dad are like well, we are starting school. We need to get him checked out. You have them cover their left eye, they are like 20/20, everything is looking good. Then you have them switch over to the other eye, and they just kind of look around, and you're like oh, no. And you know, we push for catching those things earlier.

And a lot of things you can -- I mean, these screenings are -- they have the ability to catch these things if done correctly, and that's kind of what we're pushing for with the Collaborative, consistently using best practice to catch these conditions sooner better than later so there are hope for intervention and providing, you know, the best possible treatment plan that we can provide for these kiddos down the road.

In eye movements, these all are very, very important. In reading, if a kiddo has a tracking problem, if they have a fixation problem, a pursuit problem -- a pursuit is following a moving object, where you see a smooth pursuit where your eyes are, you know, kind of following a moving object, that's called a pursuit. Saccades are where you actually -- you read. I mean, the saccadic eye movements are jumping from one letter to the next, jumping one word to the next. If a kiddo has a saccadic eye problem, that kid is going to reread things, he's going to go back and read things, he is going to skip words, he is going to skip lines. We've been kind of working on doing extraocular muscle movements with our screening that may be able to catch some of these, you know, they may overshoot, undershoot with an extraocular movement, muscle movement, that we, with proper training in a screening might be able to catch a little bit sooner than later.

So in third grade they are not reading at a first grade level

and we are trying to catch them up and getting them back up with the rest of the kiddos in line there.

Those things are all very, very important in reading.

And of course, the most -- one of the most important things with reading as well is accommodation. And that's the actual act of the eye focusing at near to make near material clear.

It's amazing how many kiddos I've seen that they cannot accommodate. They cannot focus at near. That's why near acuity is important with these kiddos we are screening so we can maybe catch some more of these kids that really can't accommodate at near or they kind of check out early because accommodation is kind of a big -- kind of an underlying problem that a lot of kiddos have. I am beginning to see more and more of that in my practice, especially with the advent of all the iPads and cell phones and all that stuff. I am starting to see a lot more nearsightedness and a lot more kiddos with red eyes, uncomfortable eyes, because they're trying to focus as hard as they can to see that at near.

In a screening, again, near acuity is about going to be very important in catching some of these things, but we're developing a screening process to maybe weed out some of these as well. And hopefully catch them a little bit sooner than later.

Again, this is kind of a little bit -- binocular integration can be affected by amblyopia, which can be caused by

anisometropia. If you remember, that's the difference between the two eyes. If there is a large difference between the two eyes, of course, stereo or 3D vision at near is going to be affected because the kiddo will probably only be using one of their eyes. You need two eyes for a high level of binocular stereo, and if you are not having that, you're going to have a kiddo that's going to miss a baseball when throwing to him, he is going to constantly misjudge distances. Reading will be very, very difficult. And so this kind of goes back to our physical examination of a kiddo. If you look at a kid and one eye is hunting while the other one is fishing, okay, then you've got two eyes doing two different things at once, well, there's not a lot of binocular integration there, and so again, that would be kind of a referral for further testing, surgical intervention, or vision therapy, where we can have that kiddo be aware of what his eyes are doing so we can give him the best chance -- you know, give the kiddo the best chance to use both visions -- both eyeballs on the same plane and have a high level of stereo acuity.

Again, in a screening process, this is done by the smile test, the smile two test. We've also -- I've seen the Lane two test, where you have the elephant, the cat, the car, and the moon. Each have a different level of stereo integration there, and it's easily tested. It's quick. It sniffs out a lot of stuff when paired with the other elements of a good best practice

screening. But that's how we're testing for that and catching a lot of things as well in just decreased stereo. Again, you can also find out if a kid has a high amount of aniso between the two eyes with that test as well because their binocular integration, their stereo testing will be lacking as well.

A lot of these things that are affecting kiddos early that we are trying to catch begin at birth. Okay? If a kiddo -- vision is a learned process. That's one thing that I can't stress enough. Vision is learned. If a kiddo cannot see, they are not going to learn to see. They are not going to be able to learn how to see. That whole process of actual seeing is very, very important. So if you have a kiddo that's only using one eye, well, the brain is not going to learn to use the other eye, and then again, that's where you get suppression, that's where you get decreased stereo, that's where you get decreased binocular integration, and they're just set up for failure right out of the gate. So it's not always a need for eye glasses. It's getting the eyes to work together and getting them to use each other in building that cortex, the visual cortex in the brain that I think is very, very important, and I think that that starts at birth.

And we can kind of sniff out a lot of that stuff here.

So I mean, what are we -- I mean, how do we consider a kiddo ready for -- you know, ready for school visually? I mean, we have benchmarks, yes. We have certain cutoffs that we are

hoping to maybe tighten up and maybe with the Vision Collaborative kind of build a little bit better cutoffs and age norms and not let so many kiddos kind of slip through the cracks that may have -- be out of the norms that we would like to see instituted in our state. So those things, we are trying to increase sensitivity of the screen so we can better determine if a kiddo can, you know, do his best in school and that he is ready for school.

And of course, if we're going to do a screening, if we're going to provide a screening, why not do the best screening possible and provide the best practice that we can do, given the testing that we can -- that we have at our fingertips to do that, and build the practice that we want to see in Wyoming.

And that's kind of what the Pediatric Task Force and the WOA, that we want to see at least if we're going to do a screening, we'd like to see the best possible screening that we can do. And that means everything from a questionnaire, prescreening questionnaire, down to the actual tests and cutoffs that we are hoping to see in a screening. Okay?

Again, the most efficient means in determination of evaluation of vision would be a comprehensive eye health exam by a professional. But we're doing a lot of screening, and the screenings aren't going away. They are going to be here, and they are here to stay. And I think that with the right cooperation and the right education of our screeners and the

right handbook that Julia and the Vision Collaborative, we have been building, I think we have potential to have a very, very healthy, strong screening process along with the professional community in working together in building a net that will catch a lot of these problems before they become a bigger issue for the kiddo and they start to suffer later down their academic career.

In elementary school, first, second, third grade. We are talking very, very early.

So here I wanted to kind of talk about photoscreeners because I think photoscreeners are becoming very, very -- they have become kind of a staple in a screening. And I think that they are very, very good for kiddos that are quiet, they're shy, kiddos that are under four to five years old, three years old that you may not be able to get an actual visual acuity or a test of what they can actually see on a chart. They are also becoming integrateable in EMRs, electronic medical records, which we are all pushing towards and building a database of screening data in the State as well. And they are very, very good. I think in -- along with the other tests that we've developed in a vision screening, I think they can be very, very important.

What my worry is with photoscreeners is that we become so reliant on them that they might not be flagged as having a large refractive condition or a large difference between the two eyes that the database or the default settings on these screeners may

miss a lot of potential problems. And my worry is if we don't have screeners that are properly educated on these screeners and kind of understand a little bit of kind of cutoffs that the state is pushing towards, then a lot of kids with a high amount of astigmatism or a large difference between the two eyes that are out of the default range may slip between the cracks that could potentially down the road have a problem.

In the article that we are kind of basing a lot of our screening methods off of in the -- it's in Optometry and Vision Science, and that came out in January of 2015, and it's kind of -- it kind of explained the data systems and, you know, best practice, acceptable practice, unacceptable practice, practices in screening methods. There's three screeners or screening devices that were kind of talked about, and the three main ones were the Sure Sight, the Retina Max, and the Plus Optix. And they are all good. The best practices -- what makes a test or a screening process considered to be the best practice is a practice that is evidence-based data, a large database, and they have a very high specificity or sensitivity.

The Plus Optics was kind of noted as an acceptable and not best, and I think that that's going to change as it gets used more, as it builds its database, and as it has a little bit more data to back up its findings.

The Sure Sight is pretty cool in the fact that you can change the cutoffs. This is what I -- I really like this idea because

we can actually change the cutoffs that we would like that machine to flag. So the screener would not really have to understand refractive error as much as they would with like a retina Max. The retina max is just an autorefractor that spits out numbers that you would then have to compare to cutoffs whereas the Sure Sight is neat because you can change to whatever cutoffs you'd like.

As far as I know right now, the Sure Sight software is kind of built off of the vision in a preschooler study group, and those cutoffs are a little -- they are a little loose. Hyperopia cutoffs are, you know, three and a quarter and above, which is pretty high. I mean, if a kiddo, depending on age, is about a three and a quarter plus, that's a little high. I mean, that should be flagged. If it's -- -- there's proven science that plus 2, any hyperopia over a plus 2 can have potential for Strabismus, eye turns, amblyopia, amblyogenic factors, one eye isn't used as much if it's a plus 2 difference between the eyes. I think the Sure Sight is a pretty good apparatus, and I am sure that the other devices are going to probably go down that road too of having the numbers be able to be manipulated and changed in the cutoffs for myopia, nearsightedness, hyperopia, farsightedness, and astigmatism because right now, according to the vision and preschooler study group, they are a little loose. I would like to see that a little bit tighter cutoffs on some of those ranges because a lot of them kind of can have some factors

down the road that can find amblyopia, things like that.

Again, photoscreener is very good in gathering data. Again, the new ones with their printouts are showing, of course, refractive conditions. A lot of them have their pass/fail criteria like I just talked about.

Pupil size, it will show kind of that retroillumination photo, where the pupil is more shown in that. I am sure -- I am hoping that most of you have seen those printouts from, like, the spot or the Plus Optix or the Sure Sight, they have pupil sizes based on the photo that it takes. Again, I touched on media opacities. You know, a lot of those retroillumination reflects light off of the back of the eye. That's how that is captured. Sometimes in that retroillumination photo, you can see a dark spot or something that does not look the same as the other eye. That would be -- could be a cataract, could be a corneal scar of some kind or a corneal anomaly that needs further investigation. Coloboma is actually kind of a large term. It's pretty broad spectrum. A coloboma is pretty much where two pieces of tissue don't fully develop, so you may have an iris, the colored part of your eye, that is not fully all the way round.

It might have a notch in it. Colobomas can be pretty detrimental to vision if it is in the retina. It can affect the retina, the iris, the eyelid. Of course, if you see a kiddo doing your gross evaluation in your screening, you are going to notice a kiddo with an eyelid coloboma. They are very, very

noticeable. If you are doing a preschool screening and catching a coloboma, that kiddo has not been examined very well. Iris colobomas are a little bit tougher to see, especially in a brown eye with, you know, a darker pigmented eye. But again, a retinal coloboma will affect -- you know, will affect the vision. I mean, they're very rarely is a kiddo going to be using that eye if that one eye has a coloboma. It does not develop properly. It's almost always congenital, almost always presents at birth, but again, you are not getting a very good look in the back of the eye unless you are getting that kiddo in early for an eye health vision exam.

So ptosis, another item that's kind of picked up pretty good. On just your visual observation and evaluation of a kiddo. One eyelid usually can be a little bit lower than the other. That's called ptosis. So when that screener takes that photo, one pupil might be covered a little bit more than the other one, and that can be very, very amblyogenic because that kiddo will only use the one eye that's more open. So that is also another item that is probably going to be caught earlier than later, but it still is something that it can be used for in using a photoscreener there.

So I think they are great, I think they're really good for kiddos. But you know, as the American Academy of Pediatrics states, every kiddo that is five and older should be tested with

a visual acuity chart. Okay? I really believe that these kiddos need to be asked to see what they can see with each eye covered. Best practice is patching. Acceptable is a blurred-out lens or something that will occlude that eye. Acceptable practice is also an occluder. But best practice is patched eye and actually having the kiddo look at a crowded symbol and having them read an actual acuity chart. And the American pediatric -- American Academy of Pediatrics really pushed that every kiddo that's five years and older should have visual acuity testing to see exactly what they can see. And so that's where kind of we're headed in our screening methods here.

So I am just going to grab a sip.

So that's another piece of that puzzle as well.

In kiddos that were less than four years old, the photoscreener was found to be very effective. In kiddos that were five and above, it was not really found to be more superior, inferior based on the studies that have been documented and kind of teasing out these visual conditions that these screeners are screening for.

Again, I see this almost -- very, very commonly. Screenings, they may unintentionally let parents think that third kid just had an eye exam. Great -- that their kid just had an eye exam. Great, my kid had an eye exam, he can see, he is ready for school. But in all reality, if the screening method is not a

best screening method or an acceptable screening method and only parts of a screening are being accomplished, there's a lot of things that are not being found in a vision screening that otherwise would be found in an eye health vision exam. So it's very important. That's why I feel very passionate about getting these screenings as close to best method as possible so we can say, well, my kiddo had a screening, and he really excelled and did very well. And so that's kind of where the best screening methods will come in.

Because if we do pass a child that, you know, does have a problem that was not tested or was slipped through the cracks, then we definitely need to -- that gives that kiddo's parents and that kiddo a false sense of security knowing that the screening that they had didn't find anything of significance there.

So this all comes with education of our screeners that, you know, I think it's important that we also reiterate this is not an eye health vision exam. But your kiddo did very good on our screener, but this was not an actual eye exam.

I'll have people come in and I'll ask them when their last eye exam was, and they are like, well, I had my eyes checked at the DMV. It was pretty good. It's kind of funny to hear that because that's so far from even a screening than an actual eye health exam there.

So again, this is just kind of reiterating what I have said

about our screeners so far. These kiddos that do pass and they do have an accommodation problem or they don't see very well at near, maybe they do have one eye that's seeing better than the other one, these kids almost always end up being kind of classified in this, you know, this ADHD kind of group of kiddos or a lot of them end up on IEP plans where they need -- where all they may need is a little help with, like, a Plus reader at near, something to help them with reading at near or training the accommodative system to work better. Remember, it's a learned process. So these binocular integration, this, you know, reading at near can be learned. It can be taught with vision therapy and other processes there that we can get these kiddos in and hopefully maybe avoid some of these broad-spectrum diagnoses of, well, your kid has ADD or ADHD. And so -- and get those kind of sniffed out a little bit earlier and get their eyes focusing and working so maybe we can avoid some of the other things that these kiddos are kind of pushed towards later down the road.

InfantSEE is a program that I want to reiterate, in the State of Wyoming, there is optometrists that are InfantSEE doctors. We provide an eye health eye exam to kiddos in the first year of life free of charge. This is a pretty powerful statement here, that I think -- I mean, I had to read this a couple of times to really wrap my head around it, and it's amazing that in an InfantSEE exam, that we can identify that almost 400,000 kids

that have potential problems that need follow-up rather than the 80 to 120,000 problems that are identified by screening. That's a big piece of information right there that I think we need to take home.

And also, this program is very, very important to -- and I don't think it's utilized a whole lot in the State of Wyoming. I would like to see it utilized a little bit more. I know the WOA, we are working on, you know, getting our population, our pediatricians to understand that there is a exam available for these kiddos.

Again, in regards to the screening, we are kind of working on a I think every screening should have a questionnaire that we are working on as well that anytime that there is a yes to any question on here that we need to definitely investigate this further, and the kiddo should probably more than likely be referred for an eye health exam with a professional. Okay?

So these are all, you know, some questions here. Again, this is being recorded. You guys can refer back to this if you'd like. But these are just some of the things that have been brought up that, you know, a parent will fill out or maybe be the historian on anything that they notice, any behaviors they notice with the kiddo.

Again, like I said, if any of these here are a yes, that kiddo should be referred to an eye health professional to conduct a full eye health vision exam.

Again, you guys can read over that here. You know, a lot of this stuff is going to be caught in your -- kind of your initial observation of the child. And so you guys can -- again, we are developing maybe a questionnaire for our screenings, and I'd like to see a consistent one across the board. I'd like to see one that everybody is using that we're all having the same questionnaire filled out in the state. If we could do that, that would be amazing. And again, that's what the Vision Collaborative and what we are working on, trying to get accomplished here.

Again, there's a lot of systemic disease that can lead to potential vision problems. Any kiddo that has any obvious evidence of a physical anomaly, that's where you will see the ptosis, an eye turn, anything that is just not working or properly observed in that kiddo, a coloboma, for example, anything like that, they should be referred. A lot of our central nervous system issues, a lot of our developmentally delayed kiddos, they have a lot of eye problems that go hand in hand with these things. A lot of them are on medications that affect the visual system. A lot of our ADHD medications and our ADD medications will affect the accommodative system and make them not be able to accommodate very good at near. I mean, I have a lot of kiddos that are on ADD medication that was not on it when I first seen them.

They were put on a medication, and now they can't focus very

well at near. So those kiddos need a bifocal or a -- some kind of help at near. And so that's kind of what we push for with these higher kind of priority kiddos that may need to be seen and just without a screening, they go straight to an eye care professional. Of course, most of them are probably going to be educated -- hopefully -- by professionals that are managing these kiddos' conditions as well, and push for an eye exam as well. It's also been brought up that uncooperative kiddos in a screening be rescreened in six months. The Pediatric Task Force and the Vision Collaborative in the State of Wyoming are kind of pushing for an automatic referral. Okay? We're kind of trying to get these kiddos that are not cooperative, that are not working very well in a screening, just to be referred to an eye care professional so we can get some other testing done that we can do in the office, that we can successfully do with an uncooperative child.

So that's another thing that Julia and the Collaborative and one thing that we've developed as well.

That I'd like to see happen in the state as well.

This is referencing kind of the three articles that we've kind of been building our vision screening on, using the proposed data definitions for our screening. It provides very, very good data based on testing methods that are provided for the best screening possible. And the testing methods that are more towards the acceptable screening methods and, of course, we are

pushing for best screening methods in the state because that's the best proper screening we can provide. And these three articles are very, very good articles, and Julia has electronic copies of them. I have electronic copies of them. And we can definitely get these out to you if you guys would like to read them. They're very, very informative, and we can go from there.

Again, this is just kind of reiterating that the American Optometric Association and a couple other pediatric associations in the area or in the professional arena are pushing for increased screening methods and identification of some of these conditions that may be missed. Of course, no matter what, there's going to be an expert panel that recommends something. But when you have two or three groups that are agreeing, then obviously there's kind of some meaning to their madness here.

I also wanted to put this in here. For all screeners to know and to understand that there are -- you know, there are resources available for comprehensive eye health exams in the state for people that meet certain financial criteria. Again, a big one right out of the chute when you have a young, in the first year of life, InfantSEE is a free exam. It's a free exam if you're an InfantSEE doctor, and an InfantSEE doctor, you can go on the American Optometric Association, AOA.org, and you can look up an InfantSEE doctor in your area. Also, there's the Sight for Students, KidCare Chip, and these are all online applications that are readily available, they can be referred

to, you know, well, my kid, I can't afford an eye exam. Well, these are outlets for them. I know here in Casper, we fund a lot of vision exams and glasses help for people that meet a certain financial criteria.

We probably do four to eight exams and glasses in a given month, which totals around \$2,000 to \$3,000 a month that we help people do, you know, help people financially that can't afford eye health vision exams and glasses.

So again, throughout this whole talk, I kind of wanted to reiterate what is Wyoming doing to improve, and I don't expect you to really read this and digest it because it is a wild web that Julia and Canyon and WIND and this Vision Collaborative is built around. But like I said, there are a lot of stakeholders involved, and I think if we are successful, if we are all hand in hand, if we are all on the same page, I really do believe that we can provide a consistent and effective and sensitive and accurate screening in the State of Wyoming that will allow us to maybe decrease our kiddos that are struggling in school and where we could have caught it earlier and really could have helped these kiddos see better and understand vision better and learn to see better consistently with this.

So again, this is what's going on. This is what we're doing. And this is the plan. So it's very convoluted, but we are getting through it. With everybody involved.

There's a few people I'd like to thank with helping me with

getting this presentation together. Dr. Lowe was very helpful in providing some of the statistics for me for this talk. Dr. Jordan and her both have kind of helped me with the history of vision screeners in the State of Wyoming and how they have been run and the process that we've gone through in the past. So they kind of -- kept me up-to-date on that.

I'd like to also thank the Wyoming Optometric Association for allowing me to be the Chair and for their confidence in me to accomplish this task. The Pediatric Task Force members that have also had input on building the -- our screening criteria, providing cutoffs, suggestions. In the future, the pilot studies that we are going to be working on, running pilots around the state, different CDCs, in schools, to see how our screening is going to work real time. That's going to take a lot of help from around the state, and the Pediatric Task Force members as well.

I'd like to thank the Wyoming Lions Club for all they do around the state in screening. They truly do try to do the best screening possible and stay educated on the new screening methods. They are a big screener in Wyoming, and I'd like to thank them for all their work that they do. Again, I'd like to thank, you know, Julia and Canyon and the WIND group for tackling this. I mean, this is a huge, huge task that I think if we get everything going there, that we can be very successful, along with the CDCs and all the other vision

collaboratives that -- or all the other stakeholders that are involved in this Collaborative. I think if we all kind of come together and work well together, I'm thankful for every one of you that are involved in this as well. And of course, all the screeners.

I mean, you guys are kind of the gatekeepers, if you will, to what's going on, and you know, if we can get you guys educated on what to look for, what's important, what needs further investigation, what needs referred, and make you feel more comfortable with what you are doing in a screening, I think that that's going to be very, very important as well.

So I guess we'll now kind of open it up to questions if we have time here. I'm not really sure if I can kick this down.

>> Thank you so much, Nate. That was very informative. I realize it's 5:00, so if there's anyone that has to run, we want to excuse you. If there's anybody that has questions, please feel free to unmute yourself or message me and we can unmute you, and we can go from there.

No questions? Aside from that, please feel free to email me as well if you have any questions moving forward or if you'd like to talk with us further. We are excited to work with everyone as we build an effective statewide screening program. So thank you very much, Dr. Edwards. I am not seeing any questions. So with that, I will let everyone go. Did you have something to add?

>> NATHAN EDWARDS: Me? Are you asking me? Oh, okay. Sorry.
No. No, I don't have anything else to add. So I just
appreciate the opportunity, and thank you for all you're doing,
Julia.

>> JULIA LAUSCH: Thank you.

And if you did not register for this event and you need STARS
credit, please be sure to do so so I can get your information.
And other than that, thank you very much.

>> NATHAN EDWARDS: Thank you, guys.

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