Evidence-Based Treatment of Perinatal Substance Use Disorders

Hira Khan: Hi, everyone. Welcome and thank you for standing by. My name is Hira Khan. And I am the program manager for the National Center for Early Childhood Health and Wellness. I am pleased to welcome you to today's webinar, Understanding the Opioid and Perinatal Substance Use Disorders. This is part three of our three-part webinar series, focusing on the effects of opioids. Before we begin, I have a few announcements. All participants will be muted throughout the presentation portion of the webinar. There is a slide presentation being shown through the webinar system.

If you have any technical questions, please type them into the chat box. My colleague, Robinn Yu or I will try to address those during the session. There is a lot to cover in the next hour, so please submit your questions to the presenters at any time, and we'll get to those at the end of the webinar. A feedback survey and your certificate will be available at the end. And lastly, this webinar is being recorded. We will send you a link to view the webinar in the following days. Now, I will turn it over to get Sangeeta Parikshak from the Office of Head Start to kick off the presentation.

Sangeeta Parikshak: Thank you so much, Robin. And thank you to the National Center for Early Childhood Health and Wellness for hosting this webinar series. I want to welcome everybody to the third and final installment of our webinar series focused on the effects of opioids and other substances on infants and their families. My name is Sangeeta Parikshak. I am the lead for early childhood behavioral health for the Office of Head Start. And I am here with Dr. Deborah Bergeron, who is the director for the Office of Head Start. As Robin mentioned, we have a really packed agenda today. So, I'm going to turn it over to Dr. Bergeron, who's going to start by giving us a brief overview about some of the work that we've been doing in Head Start and why the work that we're doing in Head Start and Early Head Start is so impactful when it comes to the opioid epidemic. Dr. Bergeron.

Dr. Deborah Bergeron: Great. Thank you, Sangeeta. I'm really excited to be here. I'm very, very happy with the work we've been doing in this area over the last year and we continue to have opioid meetings across the country. We've got them planned through this year to hit every region, but sort of born out of that is this opportunity to do these webinars, where we can reach more people in a more efficient way. And they have just been really successful and very popular. And I think, you know, the topic is very timely. I think a lot of people are being impacted. And so, I'm thrilled that you're here and hope that what we have to offer today is helpful to you. Just to sort of get started, I just thought I'd give you a little bit of a background to Head Start and Early Head Start just so you get a sense of where we are. Head Start is about a million strong in terms of children being served. And, of course their families are part of that. And we work with children birth to 5, but also pregnant women.

So, prenatal services are a big part of what Early Head Start does. And I think that's a place where this particular issue has hit home pretty hard for us. In addition to, of course, the school readiness piece, there is health and nutrition, social-emotional, and family services that go along with what Head Start does. And I believe it's actually this component, these sort of

comprehensive services that are the real difference maker for children long term. Certainly, being ready for kindergarten is important, but if they're, you know, ready academically for kindergarten, but don't have the foundation at home that doesn't last very long. So, we have about 16 under-grantees, including the territory. And we do a variety of care.

So, center-based care is probably most well-known, but there's family child care and also home visiting that takes place in Head Start and Early Head Start. To give you a little overview of what our staff would look like ... What grantees are saying about this issue, we did some surveying. And just so we could get an idea, I was hearing a lot of things just as I traveled around very anecdotally. And you just know that folks are experiencing things that are different than maybe what they have been in a lot of people who work in Head Start has been doing so for decades. So, they have a lot of history to pull from when they have new experiences. A lot of enrolled women using opioids and other substances while pregnant. As I said, Early Head Start really tries to serve women while they're pregnant.

We believe that's a great time to intervene and support both a healthy baby and a healthy mom. Infants and children who are entering care with neonatal abstinence syndrome on the rise, drug related developmental delays or trauma. And I really think that—and I'm sure we'll hear more later from our guests—but, you know, the NAS piece gets a lot of attention, because there really is nothing more difficult to listen to than a crying baby who sounds like she's in distress, but what we really see is the impact on children based on what their home life looks like. So, really, it's, you know, how chaotic is the home and what kind of impact is that having on the child in terms of trauma. And that's where we really see the trauma-related behavioral challenges of biking and things just that we didn't even see coming, like a shortage of bus drivers, because they can't pass drug tests. So, that's real, and that's not a one-off. We hear that over and over again. And we're sure that that's impacting staff just across different staff functions. This map pulls from a map we have. The dots on this map are actually Head Start classrooms. So, you can see the impact Head Start has on the country.

And these are, you know ... We're a federal to local reach. So, we have pretty good opportunity to influence. And we took the CDC map that is a heat map. The redder it is, the more severe that's talking about drug poisoning. And of course, this isn't limited just to opioids or anything like that, but it does give you a sense of where in the country we're seeing the biggest issues and where there are Head Start programs that can help address. And of course, you know, many of you could come from other programs that you know are on the ground. And if we were to look at this holistically, there's a lot of opportunity to make impact and to support programs, which of course ultimately support families.

We've gotten all kinds of creative grantee input in terms of what they've been doing to address this issue, as simple as awareness and sensitivity training. We've seen a huge increase in folks just making their staff aware, being sensitive about how you work with someone who's struggling with substance abuse. A lot of partnering with hospitals and medical facilities. I have personally found that those programs that seem to be the most effective, I think when programs try to do this work on their own, they're just not equipped. They don't have that kind of experience.

And hospitals and doctors tell us. And we don't have the experience in like early care. So, I have found that most physicians or medical services folks are very appreciative of programs like Head Start that can bring that education piece to the table. And together, it makes for a really nice partnership. There are monthly support groups for grandparents. We're seeing a huge increase in kinship care. We're going to talk about that a little bit later, too. And, you know, training; even training staff to carry and administer naloxone. And the key there is that's not something that came from this office. We didn't send out any kind of messaging that folks should be doing that. That is because they're seeing that as a need. And so, I think that speaks highly to how serious this is.

Just to give you an idea of Head Start's reach, a little over 84,000 families receive mental health services last year. This is based on PIR data that we collect. A little over 68,000 families services responding to child abuse and neglect, 32,000 families with substance abuse prevention services, almost 10,000 families of substance abuse treatment referrals, and then more than 31,000 children living in foster care, which, you know, these are all things that kind of speak to how Head Start is right in the mix of all of what's going on. I'm going to turn it over to Sangeeta now. And she's going to take over from here.

Sangeeta: Thanks, Dr. B. So, we've been hearing a lot, as Dr. Bergeron said, about what's happening at the local level, which is really great. Head Start has that federal to local reach. So, we're able to hear directly from grantees. So, we at the Office of Head Start thought that it was really important to start learning from the experts in the field, the folks who are the neonatologists, who are working in the NICU with young babies who are exposed, other community members, other state leaders to hear, you know, what strategies are you putting in place and what should we be telling our grantees that, you know, what works. Because there's a lot of research out there, and we're all trying to play catch up.

And so, what we did is we first convened an expert work group meeting with the National Center on Early Childhood Health and Wellness, helping to spearhead those efforts a little bit over a year ago. And we met some really great experts in the field—one that you'll be hearing from after we speak today, Dr. Kaitlin Baston. And she was able to then come to the first of the 11 regional meetings that we're hosting. And these are Entitled, ”Understanding How the Opioid Crisis and Substance Use Disorders Impact Head Start Children, Families, and Staff.”

And we wanted to make sure that it was clear that we're going to be talking about the opioid crisis, but also understanding that substance use disorders is more broad than just opioid misuse. And so, we're partnering or we're bringing it together Head Start teams, you know, from the programs, but also state leaders in all of the different regions. We've done five of these so far. And really what this does is it allows folks at the regional level to hear about information about opioid and other substance use disorders, what treatment, what strategies, you know, from community panels and other folks, but it also provides a forum for state and grantee discussion, where they create—where state leaders and grantees create plans together of how they're going to address the opioid misuse, but also substance use disorder in their particular area. And we're hearing that that's making a big difference to those connections.

And those relationships are making a difference in the community. The other thing is that, you know, it also provided us the chance to hear about this point about kinship care that Dr.

Bergeron mentioned and how many children are being put in the hands of, you know, grandparents who didn't expect to be raising toddlers at this age while their parents are in treatment. And, you know, Dr. Bergeron really felt strongly that we needed to do something about this, that these children could really benefit from getting services from Head Start and Early Head Start. Is that correct?

Deborah: Yeah. And I think what ended up happening is, you know, we were meeting grandparents and even aunts and uncles and great grandparents, who were stepping up. And what we were hearing from Head Start folks was, you know, if you're in foster care, you're eligible for Head Start, but in kinship care, that doesn't have a consistent definition. And so, the states decide, does that count as foster, does it not? More times than not, it's not necessarily counting. And so, a lot of children who could benefit from Head Start are not qualified. Say they are living with a grandparent who's retired on a fixed income, they probably aren't living below poverty, but they can't afford to send that child to a quality education program. And they probably need more support than just preschool. So, we came back and really dug into the idea of kinship. And what does that mean? Because on its face, it's certainly a group of children that we believe could benefit and should be eligible for Head Start. And so, we put out an IM that really helped the grantees look at kinship care from every angle. And within those different mechanisms, they should be able to find eligibility, at the very least through the homeless definition with McKinney-Vento, if their state is not as open.

Sangeeta: Right. And, you know, I can put the link for the information memorandum in the chat box here in a second, but it really does weigh out all the different ways that children might be eligible for services under Head Start. So, it talks about being eligible based on income, receipt of public assistance, or in cases where the living arrangement is facilitated through true child welfare system through foster care. So, there's different ways that it's broken down. And that just came out not that long ago. So, we're really excited.

Deborah: No. A couple weeks. Yeah.

Sangeeta: Yeah. So, I'll put that in the chat in a minute. And just to wrap up the section on the Office of Head Start, this is just our website here, our landing page for ECLKC. We do have a substance misuse page. And we also have an app for our Head Start resources so if you're interested in looking. Now, all these resources, they're free. So, even if you're not part of the Head Start community, you can definitely access them. So, the next thing I'd like to do is to introduce our speaker for the day, Dr. Kaitlin Baston. Dr. Baston, we're so happy to have you here. She is the medical director of the Addiction Medicine Division at Cooper University Health Care in Camden, NJ. And she's the assistant professor at Cooper Medical School at Rowan University. She has dual-boarded in family medicine and addiction medicine. And in 2015, she started what is now the Division of Addiction Medicine at Cooper. As head of this division, she runs the Perinatal Substance Use Program, the Inpatient Hospital Consult Service, Outpatient Addiction Specialty Care, and medical education at both the graduate and medical school level. She has a lot of experience—really good hands-on experience. She strives daily to end the stigma of addiction and to ensure that all patients suffering from substance use disorders are for treatments that allow them to live full and satisfying lives. I'm going to turn it over to Dr. Baston.

Dr. Kaitlin Baston: Thank you so much for that lovely introduction. And I just feel humbled and so excited to be here with all of you. There are so many people from all over the country here. And I am just thrilled that you're interested in the topic. And I hope I can share some of my experience and some evidence with you on this treatment today. So, I'm going to go ahead and get started with a quick overview. So, there are three things that we're really going to focus on in this presentation. It's about 45 minutes. And I know we're all adult learners here and that this is an online, you know, didactic to help presentation. So, I'm excited to take questions at the end of this talk and have some interaction. And I will ask one question during the talk, but I'm going to try to bucket everything into these three take-homes so that people can really leave with some information that's … Hi, everyone. Sorry, my call got dropped. I'm back with you. Can you hear me again now?

Sangeeta: We can. Thank you, Dr. Baston.

Kaitlin: OK. Sorry about that delay. If it happens again, they'll just be a slight pause. And I'll call right back in. So again, we're going to start by talking about screening and engagement—so how to identify these women who may be pregnant and struggling with substance use disorders or their families. We're going to work on understanding the risks of substance use disorders. So, what are the real risks, and what are things that we might think are risky, but actually are not that dangerous? And then how do we treat substance use disorders in an evidence-based way? This is actually a real case of a woman who came to see us not long ago. She was a young woman who had had two previous pregnancies and was currently pregnant. And she'd been stable on buprenorphine-naloxone, or commonly called Suboxone, for a couple of years, and then just learned she was pregnant. And she was excited about the pregnancy and wanted to parent and went in for counseling because of anxiety. But when she asked what she should do for the baby, the therapist she was seeing wasn't sure.

And so, I just wanted to pose this to all of you to know is this something that you've seen? Have you dealt with this? Of course, in this case, this woman is on treatment. And a lot of women may not be on treatment yet when they come in.

But for those of you who are on the chat, if you are looking at this right now, what would you recommend? But first here, you can type in the chat, "A," "B," or "C." "A" says counsel her on the risks of withdrawal and the involvement of Child Protective Services and recommend that she taper off of her medication to avoid the baby going through withdrawal. "B," recommend that she continue on her stable buprenorphine to keep both herself and her baby safe, or "C" counseling her that she should probably stop buprenorphine until she can see a specialist and get good risks and benefits discussion. And I'm just scrolling up. We have so many people, but I just wanted to get kind of a broad idea here. And I see a lot of B's, which is so exciting.

Some of these people are across the board, but overwhelmingly I'm seeing B. And it looks like there are some people that have lots of question marks or other things up here. So, there'll be some really good discussion. And I'll come back to this as we keep going here in the presentation.

So, let's talk about engaging this woman. First of all, when women are using and using substances in pregnancy, there's a ton of guilt and shame. So, we really need to think about

how they're feeling when they come to care. We know that this is really common. We're, of course, seeing large numbers of increases now because of the opioid epidemic. Alcohol use is still the most common from a population basis, and then cigarettes will follow that. And we have a lot of public health information about the dangers of alcohol and cigarettes, but one thing that we're seeing happen more and more now is an increase in opioid-dependent pregnant women presenting for delivery. We had a lot of prescription opioids that were out in our society. A lot of people have heard about this. And then some women are just starting on heroin, because also heroin has become more and more prevalent in our society as well. And it's also important to know that when women are using substances, it's common that they don't have regular periods or regular cycles.

They often think they can't get pregnant, because opioids actually interrupt that normal hormonal cycle. And so, a lot of women become pregnant. And it can be unintended pregnancy. And they don't know that they're pregnant. And we've seen that there's an unintended pregnancy rate among opioid-dependent pregnant women of 86 percent. That doesn't mean that they don't necessarily want to parent. They may want to parent and be involved, but it could also explain why some women are very late to care. And so, it's important to have empathy for that. And of course, I always think when I see women walking through my door, instead of, "What did you do," "What happened to you?" Right?

So, we know trauma is one of the biggest indicators or predictors of developing a substance use later in life. A substance use disorder and, of course, there are other maladaptive health behaviors and risk behaviors and other health consequences as well. So, most of my patients, the majority have some trauma history—whether that's childhood trauma or trauma later in life. Again, just another reason to bring a lot of empathy into that room with you.

So, what is she feeling? Overwhelmingly, what we see is shame, guilt, and fear, right? And sometimes even denial. Like I talked about, women may not have believed they could be pregnant. And sometimes women just think, “I just can't deal with this right now. It'll probably just go away. Maybe I'll miscarry.” But of the majority of women I see just think, “Oh my gosh, what could have happened to my baby? I'm so terrified.” And the number one fear that I hear when women want to parent is that they're going to have the baby removed from their care.

So, when we talk about engaging with patients, number one, I always think it's important to know that they have all that guilt and fear, right? Because they're not necessarily going to come out and just talk to you about what's going on. And number two, it's important to think about how we are feeling. So, there's a phrase in medicine that we always use when you're going into run a code, you know, when someone else’s heart has stopped.

Check your own pulse before you check their pulse, meaning you have to be calm, before you're going to go in and address that very high-risk situation. And I think of this as the same thing. Make sure you know how you're feeling and what you're bringing into the room when you're going to talk to a mom who's struggling with substances, because she's already carrying a ton of guilt and shame. And if we bring judgment, even a whiff of judgment into that room, she's going to run or she's going to be defensive or she's not going to be honest. And that's not because she's not a good person, it's just because of that shame and fear. And it's also important that we use really destigmatized language.

There's a website that I love called—it's ran by Recovery Research Institute—and if you just type into Google "addictionary," it'll come up. And it basically separates language into two different categories for you. And it kind of helps you understand as you go through a "stigma" alert word. So, we try not to use the words, “Oh, you had a dirty urine or even a clean urine,” because if you had a clean one, that is suggesting that you're dirty if you're using. We try not to use addicts or abuse, because substance use disorders, this is what happens in your brain is you have brain changes that make you keep using substances.

And so, it's not somebody that typically wants to continue to use at that point. There are changes in their brain that are not allowing them to just stop. Hence, medication and other treatments that we use and why they're so important. And then we really like using terms that I've been using here, like substance use disorder, or you might have had a positive test that was positive for a substance, or there was a presence of a substance in a test. And then I try to say the person had a return to use or had a recurrence, just like I would talk about with cancer. “Oh, your cancer was in remission.” “Oh, no, you had a recurrence. That's so hard." And I think of the same thing with patients with substance use. Their thing about screening is that it's really important that it be universal.

We can't judge on the outside who we think might look like they use substances and who might not. And we know from evidence that will miss a large percent of people if we do that. So, basically, what we say and what the ACOGs and other specialists recommend is universal screening. You can do that in two ways. You can do verbal screening, or you can do universal urine drug screening or testing. The one thing I will caution about, universal drug testing, urine testing is that there are a lot of false positives and false negatives in urine, in routine urine screens.

And so, they can often be misinterpreted and lead to a lot of struggle for patients. So, it's really important if you're going to do that, that you know how to back it up. This is a commonly validated and used verbal screening. And it's called the 4 P's Plus. This is a screen that I like, because you can use it in any setting. You can learn it. You can either print it out, or you can have it and have a patient do it, or you can verbally administer it. And I like it because it kind of demonstrates your ability to be nonjudgmental with patients.

So, you start by asking about their parents, which is also really important information. “Hey, does this run in your family?” “Did either of your parents have a problem with drugs or alcohol?” And then you talk about the partner, which is also really valuable information. “Does your partner or does the father of this baby have a problem with alcohol or drugs?” “How about in the past, have you ever had an issue?” “How about in the past 30 days, in the past month?” And you're kind of backing into the issue, you're being straightforward and kind, but you're also allowing the woman to share information with you slowly. And every time she shares it, you say, “Thank you so much for sharing that with me,” or you leave a lot of space. And you don't ... You have to really try to avoid using a judgmental statement along any one of her answers, or she's less likely to tell you about current struggles or current use. What I hear from a lot of people when I start talking about, ask everybody about substances is, “Well, what do I do if she says, ‘Yes, I am using substances?’ And how positive can I be? Isn't it dangerous? You know, how do I not be judgmental in the situation?”

And the reality is, we're about to go through risks. And you're going to have a lot more information to bring in that room and talk to that family or that mom about, but the one thing I want to make sure that everyone takes away is that if a woman tells you she's using substances, it's so important to just thank her for telling you that. And when I talk to my residents or medical students about this, I say, "It's important that you don't even have a neutral face, because if you just have a neutral face when you say, 'Yes, OK, you use substances,' the woman is going to project all that fear onto you and think, 'Oh my gosh, she's judging me,' and that's because she's judging herself, right? 'They're judging me. They think I'm a terrible mom.' ” That's where all that internal fear is coming.

So, it's important that you not only have a neutral face, but that you have like a calm and positive face like, “I'm so impressed that you told me that you so clearly care about this and you want to do the right thing and that means a lot.” So, I typically smile or have a calm positive face and thank her so much for telling me. So, then what do you do? How positive and reassuring can you be? Are these pregnancies really high-risk? What is going to happen to this infant? I think a lot of times that we're worried, we're worried because we think something's wrong with this pregnancy, just like the mom does. So, here are those risk categories that we talked about before here.

Here, the biggest things that I want to break this down for you. So, when you think about what's risky for the developing fetus or what's risky … Dropped again. So, here are the four categories that we want to talk about. One is birth defects. And this is an important category, because this is what parents are often the most afraid of. You know, “Oh my gosh, I used something. Now something's wrong with the baby. It has a birth defect.” The good news is that this is really unlikely, and really only happens with one substance. The next is neurodevelopment. So, what about brain development risks? This is what researchers and studies are always trying to look for.

And we are constantly, kind of concerned about what substance exposure might do to the developing fetal brain. And we're going to talk about what science has actually shown there as well. The next category is obstetric risk. So, as someone who delivers babies and a family doctor for a long time, I really focus on this category. And it's actually something that there's a lot of evidence to support, which substances cause which risks, and what other things can cause those risks in a pregnancy—pregnancy risks being like early delivery or low birth weight. And we'll talk a little bit about evidence there. And then, of course, the last thing that was brought up in the introduction is neonatal withdraw. And this has gotten a lot of societal attention. But good news is, it's usually very treatable.

And actually, it doesn't have the long-term consequences that some of these other categories could. So, I'm going to start with birth defects. And as I said, I always try to go over this evidence with parents, because this is the thing that they're the most scared about. The history here is that in the '70s, not all that long ago, we discovered fetal alcohol spectrum disorder. It was described at the University of Washington.

And it's interesting, because before that, there wasn't a lot of evidence to say that alcohol was, you know, definitively dangerous in pregnancy. And when we found out that alcohol was associated with this syndrome, which is a full teratogenic syndrome—so it actually is in the

category of birth defects. Alcohol causes birth defects. And that's not actually surprising, when you understand how alcohol works in the body, in the brain. So, alcohol is a substance that's actually cytotoxic, meaning at really high levels, really high blood levels, it causes cells to die. And what can happen there, with a developing fetus, is that at certain high blood levels, at a certain time in development, a subset of cells can die.

And when that happens, when those cells die, it results in a birth defect. This birth defect has head and facial differences and can have neurodevelopmental differences or cognitive deficits in the kids. So, when, of course, when this happened, there's a lot of fear. And a lot of people thought, "Well, if alcohol does that, what must other substances do?" And there are tons of studies where people try to find associations with other substances and possible birth defects. And I will say that when you get to larger and larger population studies, there is not a correlation at the level that there is with alcohol. And again, I'll just go back to it's not that surprising, because these other substances have not been demonstrated to be cytotoxic, meaning at the high levels that people typically use, they don't cause cells to die. So, sedatives have had some association with past studies of cleft lip and cleft palate you know, in larger population studies.

Again, this is correlation not necessarily causation. So, that risk has not been proven. There may be some risk, but it's not huge. With opioids, interestingly, the only one that has come up in several studies is codeine. And maybe there's some association with heart defects. Again, it's correlation, not causation. And those things are often seen as well with like low folate or like poor nutrition, which is probably more common in a population with substance use. So again, confounded and that risk is not proven. Good news is the treatment medications we often use, buprenorphine and methadone, to treat opioid use disorder have not been shown to cause birth defects.

And neurocognitive effects have shown to be minimal. And there has been no teratogenic pattern that is unique to cannabis or marijuana. The only substance that's had repeat proven teratogenic or birth defects is alcohol. And I think this is really important to know, because, you know of course, societally, we wouldn't necessarily think that. You know, if alcohol is legal, it must be safer, but the reality is you have to dive into science to say, there's actually a real reason for the fact that alcohol is causing birth defects and these other substances are not. So, what about brain development? This is a really next category of risk, and the thing that I think we're trying to dive into long-term studies of.

And of course, because alcohol we know can cause neurocognitive deficits as part of that teratogenic or birth-defect syndrome, you know, right after it was identified in the '70s, came the '80s and the cocaine epidemic. So, there were a ton of people using cocaine in the population. And similar to the opioid epidemic, that then affected a lot of pregnant women. And the scary thing about that for them was, "Well if alcohol caused those problems, what must be happening to cocaine-exposed kids?" Hence that Time magazine article, right? "Oh my gosh, there are all these kids that are cocaine-exposed. What's going on with their neurodevelopment?"

The good news is, we had a lot of people study this—and study it over the period of their career. And we actually saw that when you control for environmental risk, similar, again, to

what they said in the introduction here, environmental risk and trauma, it turns out does have neurocognitive outcomes and changes with behavior and brain development in kids. But interestingly, when you controlled for those things, cocaine exposure alone did not. So, the important take-home here is that growing up in a using household—or a household with social chaos or a household with trauma—can impact intelligence and emotional well-being. And the take-home from all of the studies that we've looked at for cocaine exposure show that cocaine exposure alone does not cause those problems.

Again, just reiterating research with a neurocognitive view, research has not shown that medications for opioid treatment caused neurocognitive outcomes or minimal neurocognitive effects. And so, really what we want to do then is kind of take that focus away, say, “Hey, we know alcohol can be dangerous for the brain development or for birth defects. But when you look at all the other substances, really we're thinking it's environment, environment, environment.” And then this next category, which is obstetric risk. So, this is where I spent a lot of time counseling my patient. So, the thing with obstetric risk is that we have lots of research to show that when you use stimulant-like substances, stimulants themselves, amphetamines and cocaine or nicotine, which has a similar effect, it causes what we call vasoconstriction—or your blood vessels to constrict. And then you get worse blood flow to the placenta. And that affects the growing fetus.

So, that can have a lot of different poor outcome. It can cause growth restriction or like smaller fetuses, because they don't get enough blood flow and nutrition. It can actually cause placental abruption, where the placenta detaches from the wall and the mom can actually bleed. This is life-threatening for the mother and for the developing fetus. It can cause pre-term contractions, stimulant exposure and nicotine exposure, pre-term labor—and even miscarriage or fetal demise. Interestingly, when it comes to opioids, the thing that causes the most stress on the pregnancy is opioid withdraw. So, it's not when someone is exposed to the opioid. It's when they have a physical dependence to opioids and then that opioid goes away and the mother goes into a bad withdrawal syndrome, that can cause all these same risks to the pregnancy.

The other thing that's important to know is that injection drug use or if somebody has a severe use disorder and they have kind of malnutrition or just general psychosocial issues, that can have medical complications. Of course, the obvious one that we see a lot today is overdose. So, if somebody is using, actively using substances, they can overdose. And that's very dangerous and common with opioids. If you're injecting substances, there's risk to infectious disease exposure—HIV, Hepatitis B and C—and then just that injection drug use and then tough environments can have pre-term delivery, growth restriction, pre-eclampsia risks. Pre-eclampsia is an illness of high blood pressure and problems in pregnancy that can actually be very life-threatening to the mother as well.

So, I think this study is really interesting. And I included it for all of you here, because it's one of the only studies that controlled for nicotine exposure. So, one of the things that we see with a lot of women who are struggling with substances or using substances is that they also smoke. And then also, the number of women who smoke, which we saw in that population study, it's

the second most commonly used substance. And it's very common in pregnancy. So, what are the risks of cocaine alone versus smoking alone?

So, in this study, they looked at women who just use cocaine and did not have any nicotine exposure. And they saw that these are the risks of obstetrically to the pregnancy of pure cocaine itself, so pre-term labor, low birth weight, placental abruption, and fetal demise, all those things we listed. And then interestingly, when they looked at nicotine alone, it actually had the exact same risk. So, that's that stimulant risk that we were talking about. The only thing is nicotine has a lower risk of having these things than cocaine.

So, if someone is using stimulants, cocaine or methamphetamine, their risk is relatively high of having one of these things happen, but we see a lot of women who smoke or who use nicotine. And so, on a population basis, your impact when with counseling women with nicotine would actually have a huge societal and population impact. So, it's really important that we kind of have an awareness to that and not that we shame women about nicotine in any way at all, but that we help them be aware of these risks and help them support them in pregnancy to stop. When you look at a population basis, actually nicotine can account for about 5 to 8 percent of all pre-term deliveries, a fairly large percent of low birth weight term deliveries, and a significant, almost between 25 and 30 percent of SIDS cases—so Sudden Infant Death Syndrome—and then some pre-term related infant deaths as well.

The good news is that just like with other substances, women are often very motivated to quit during pregnancy. And it can be a great time to help that woman find motivation and support her in that. So, opioids is a main focus for today, because of the epidemic that we're dealing with. And I just want to reiterate again, that both use, because of infectious disease exposure, malnutrition, stress, and overdose, use can have risks in pregnancy, and withdraw can have risks in pregnancy—to the pregnancy itself. We don't know what's in illicit heroin, but as far as we know, most opioids don't cause neurocognitive issues or birth defects.

So, the biggest thing here is we want to stabilize those women and help them be safe during their pregnancy. So, really, we're trying to shift the focus away from them worrying so much about birth defects and brain defects, which I love as a message to my moms, OK, it's not a damage is done situation here. Like this is actually about helping you be stable and healthy for the rest of your pregnancy. And then you could actually end up having a completely normal, you know, beautiful baby with no neurocognitive problems for the rest of their lives. It's really about preventing obstetric risks and promoting a sober environment for child raising, which is why all of you are here today, so this is great.

And then there's the last category that everybody is often worried about, and parents are really worried about. They really don't want their babies to go through withdraw. It feels like torture for them—for the parents to have to watch that. And they have a ton of fear around it. And I think it's also very stigmatized, because ... The health care system is really worried about this. So, how do we mitigate those risks, and how do we decrease that length of stay in the hospital as much as possible? Whenever I talk to parents about this, I want to make sure that we have one thing in mind—and that's that your infant or your baby is not addicted. There's a physical dependence that the infant may have, because of a physical dependence on the mother.

So, if the mother is using on a daily basis or on a stable medication, that mother has a physical dependence, meaning if that is taken away, she's sick, but that's not the same thing as an addiction. So, an addiction is actually the brain disease, the changes that happen in your brain that result in compulsive use and impulsive behavior. And that's not present in the infants. So, there aren't like chronic brain changes that are happening in these infants.

So, they don't have addiction. They just have a physical dependence. And that's also good news. We know that whether the baby was substance-exposed or not, it doesn't increase their risk of having a life-long addiction, either. The only thing that increases their risk of life-long addiction is genetic. So, that means it runs in the family. And if it runs in the family, they have that genetic risk. That genetic risk is there.

And when you control for whether the infant was exposed or not exposed during pregnancy, there's no difference. The other thing that's important to know is that withdrawal can happen with recommended treatment for women for opioids. And so, we don't want to judge whether a if a woman is doing well or not based on whether the infant withdraws or not. It's not dose-dependent. It doesn't matter how much treatment medication that mom was on. And the risk can also happen with antidepressants, and nicotine, and other substance combinations.

So, it's really important that we just treat these infants and we kind of have a good idea of what's going on. There was a very—a sentinel study—when it came to neonatal withdraw a long time ago that actually compared the two medications we used to treat opioid use disorder in pregnancy—methadone or buprenorphine. This was called the MOTHER trial. And what we learned from that trial is that actually the incidence, meaning the amount of babies that needed treatment for neonatal withdrawal syndrome was about the same. It wasn't statistically significant for methadone or buprenorphine, but we saw that women who are treated with buprenorphine, the infants needed less morphine overall and then had a shorter length of stay that they required in the hospital.

And this was a multi-site trial that was actually double blind. So, the researchers didn't know what the infants were exposed to. And it was done all across the country—and actually internationally. And so, this was not a biased trial. So, it really gave us great evidence to say that, you know, in a totally unbiased situation, when infants are exposed to buprenorphine, they did need less medication then methadone. But interestingly, even after that, we have even better evidence that other things decreased that hospital stay even more than the different medication you're on.

There's a study at Yale done by Matt Grossman—it was actually a QI project—where they were looking at improving care of infants with neonatal withdraw by doing non-pharmacological interventions, meaning keeping babies with their parents with their mothers doing skin-to-skin breastfeeding, decreasing stimulation. They really wanted to keep children—if at all possible—out of the ICU environment and onto a general pediatric floor. And when they did this, they watched how much morphine was given. And they saw something pretty dramatic. The average length of stay went from 22 days all the way down to less than six days. And the infant treated with morphine went from 98 percent all the way down to 14 percent. And cost of care decreased dramatically. And this included moms who were used … Had to be on methadone for treatment, and their infants who were exposed to methadone.

And so, really what we found from this study is that even more than the medication that we choose to treat the mom with, just keeping baby with mom, doing skin-to-skin and soothing is actually the best treatment for neonatal withdraw. Then they took this even further and found that the classic scoring system we used to use for withdrawal, the Finnegan score, actually is not a validated screening tool and was resulting in infants getting way more morphine than they needed.

So, they validated a new assessment tool, which is not a score, but it's really just an assessment of can the infant eat at least an ounce, sleep at least an hour, and be consoled within 10 minutes? And when they used that scoring system, they notice an even more dramatic decrease in need for morphine.

One of the biggest keys here is breastfeeding. We know that breastfeeding is safe with buprenorphine and safe with methadone. When it comes to other substances, the next question we often get when trying to promote breastfeeding for mom is, how do you know she's not using something else? And how do you counsel that mom, and how do we know when it's safe to breastfeed? It's really important when we're working with moms that we make sure that they know that, you know, if you're using other substances, it's important to pump and dump and that we can help her in a non-judgmental environment talk about what's in her system so that the baby can get breast milk when at all possible, and the baby is often known to do better and have a shorter length of stay in the hospital.

So, when treated appropriately, immediately withdraw actually looks like this. And this means that baby is snuggling with mom in a low-stimulation environment. And we know that above all else, what's really important is that moms get the medication that they need and that babies are treated with this new and novel approach so that way they don't have to be in the hospital that long. So, just to go a little bit—I'm going to go through the treatments really quickly—but what treatments are there that are evidence-based for these moms to make sure that we're getting them everything they need and setting them up for success? I tend to put this in two buckets, because science right now, unfortunately, we don't have equal medications or treatments for all substances.

We have great medication treatments for opioids, excellent medications for opioids. We have pretty good medications for alcohol use disorder. And we have nicotine treatments. For stimulants, PCP, and marijuana, unfortunately we don't have good medical or pharmacotherapies. So, for all of these, it's really important to do psychosocial treatment. So, therapy, environment, and support for the mom, but with the bucket on the left, there's even more that we can do ... For parenting women with opioid use disorder. And there's an ACOG committee opinion that came out in 2017. This is important for everyone to know, because it is now far and away strong evidence to say that opioid pharmacotherapy, meaning buprenorphine or methadone is a recommended and preferable treatment for pregnant women of opioid use disorder. And that's preferable to medically supervised withdraw. We know that when we stabilize woman, NAS or neonatal withdrawal is an expected and treatable condition, kind of as we talked about.

So, we can make sure that babies are safe when they're on those medications. And we know that if we try to help a woman to withdraw on pregnancy, it's actually associated with really

high return to use, which has worse outcomes for both mom and baby. So, we know that long term we should be having these women on medication. When you look, there are a lot of studies that say, oh, look, we can safely treat. We can safely taper women off of these pharmacotherapies in pregnancy.

Well, when you really look at them long term, many of them end up returning to use. And if we want to set these babies up to be in a sober environment and have this, you know, whole family care, then we really need to be treating these women with evidence-based care. And we know for opioids, that means long-term treatment, not just a brief treatment or a taper, but long-term treatment with pharmacotherapy. I just put this in here so that people knew when we talk about long-term treatment with pharmacotherapy, we have really good evidence that support that. This graph here is from the initial—the very initial—randomized controlled trials to see whether buprenorphine—that's the Subtutex or Suboxone brand name—whether buprenorphine is effective. It was a randomized controlled trial, where they admitted patients into an inpatient, you know, safe setting.

And then they stabilized them on buprenorphine, because they were all using opioids previously. But for some of the patients, they used it just to taper them off. So, they tapered them off onto a placebo, which is how it used to be used. They would give it to people to help them detox. And then for the other half of the patients, they kept them on buprenorphine chronically. So, interestingly, people signed up for this. And it was a double blind. So, nobody knew which one they were getting. And what they saw was that in the group that was kept on buprenorphine, about 60 percent of them retained in-treatment, long term. And in the control groups, the ones that were tapered off to nothing, 0 percent retained in-treatment. Every single one of those study participants dropped out of treatment. And four people overdosed and died.

So, the reality of this is that we know that buprenorphine is a life-saving medication. And that when you taper people off, they have a risk of overdose and death. So, we know that it's really important to be offering our pregnant women this evidence-based therapy. And it's not really you know, a do you feel like this is good, or do you not? It's should be treated just like we treat all other chronic illnesses. It's treatment and medication. We should be continuing it long term, just like diabetes. I counsel my patients, hey, lifestyle changes and therapy and social support, they're so important.

And we know that people have better outcomes with their diabetes when they do all that, but I would never hold their insulin hostage, right. I would never say, “Hey, unless you go to that nutrition counseling, I'm not giving you insulin this week.” I would say, you know, “Both are super important. We're going to start this medication, because we know it's going … It's lifesaving for you, because your diabetes is severe.” We also know that all these other things are going to help you have long-term success. And we definitely want to treat the whole family. The other thing that for everyone here to know, because you're so empowered to do this, is that empathy is evidence based.

This is actually a study looking at therapists. And the therapists that had higher empathy ratings actually had their patients stay in treatment longer and use less. This is an alcohol study. So, they drank less. So, knowing that you can be kind and that empathy really helps people actually be sober. So, back to our case in the beginning, most people, you know right away, were

putting B up there, which is great to hear. I'm just going to go over a little bit, because I've seen both of these things happen, young woman asking whether she should stay on medication or not. I had one woman who was told she was really afraid the baby would have withdraws and that child protective services would get involved and take her baby. And so, she was counseled to come off of her medication.

And this actually happened from an outside provider. And what happened was that she went through withdrawal and ended up in our emergency department. She had returned to use because she was tapered off her medication, and she went into labor prematurely. I've also seen other outcomes, where people say, “Hey, I just don't feel like I have the evidence to tell you what to do right now. So, I'm going to send you to a specialist.” But women often have a really hard time finding specialists for this in pregnancy. And what happens there is that they don't end up getting any help. And so, they have that same bad outcome.

So, for those of you that said, B, we should all on this call, after this information, be empowered to say, we know that this is evidence based. We know it's safe to stay on this medication. And it's the best Thing, not just for you, but the best thing for your baby. Babies are more likely to be born at term and have higher birth weight and be healthier when you stay on your medication. And we know we can actually treat neonatal withdrawal and have good outcomes. So, when that happens, mom and baby can be together and be happy. And hopefully, we can do whole family care in the hospital.

So, we talked about screening and engagement. The main takeaway there is not a whiff of judgment. We talked about understanding risk. The most harmful substance in the development is alcohol. And really the rest that we focus on our obstetric and then sober environment. And then treatment, we know for opioids, it's recommended that stabilizing and continue on medication long term and to include biopsychosocial care. So, housing, whole family care, and all of that. This is a chronic disease, like many others, but actually it's easier to treat than hypertension or asthma.

So, as a family doctor, I'd say let's get out there and start treating, because we're going to have great outcome. And thank you all so much for listening. And I look forward to questions at the very end here. Here is just a picture of some women who agreed to be on our brochure for our clinic and what this can look like when moms and babies are in great care.

Sangeeta: Thank you so much Dr. Baston. This is really amazing medical information that I know we all need. I have heard it a couple of times and I'm still learning so much every time I hear from you, so thank you. I know people had a lot of questions. I do want to turn it over though to our next guest stars, which is from Sesame Street Workshop. So, we have Kama Einhorn, who is the senior content manager for Sesame Workshop U.S. Social Impact Group. She develops multimedia outreach materials for children, parents, and providers. Prior to joining the workshop, she wrote and edited early childhood teaching resources for Scholastic. And she holds a master's degree in education from University of California at Berkeley. Really excited to hear about all the great work you all are doing on parental addiction, so I'll turn it over to you.

Kama Einhorn: Thanks so much. It's a pleasure to be here. And I enjoyed that presentation very much. So, we're giving a furrier and fuzzier presentation today, a quick look at our recently

launched initiative on sesamestreetincommunities.org And we create materials for vulnerable children and families and the providers who serve them. So, please have a look at sesamestreetincommunities.org This just launched last week. You may have seen it. And we developed this little girl, Karli, who you will see a video of shortly. It's multimedia resources—videos, a story book interactive, articles, printables—largely Muppet-based, but some provider facing and some professional development that will help you serve the families and children in your care and offer hope and optimism in your work and to pass along.

So, like all of our initiatives, it's about building awareness and offering support, as well as providing, you the providers, with concrete strategies for working with kids and families. So, I don't need to tell you these numbers. Instead, you'll have these slides afterward and if you'd like to peruse them more carefully. But I will just continue by saying that we go to the experts for materials like this. At Sesame Street, we know about using media to teach and to impact public health. And we know about developmental psychology and the A, B, C's and the 1, 2, 3's, and social-emotional learning.

We did not know much about parental addiction. So, with all of our topics, we convened an advisory board of leaders in the field from different sectors, such as advocacy and research. And here are a few of the expert advisors that we relied on to help us fine tune our messaging and especially find language that will be kid appropriate and meet the needs. So, what we learned from these advisors was that the factors of shame, and isolation, and stigma were themselves traumatic and that, of course, the trauma, the sustained trauma of living in a home with a parent struggling with addiction can cause short- and long-term mental and physical health effects, but that this does not have to change the trajectory of a child's life.

There is lot of reason for hope and for optimism, as you know. And we can use the Muppets to convey that this story—for children, the story is not the whole thing, that this is a part of a family story and that many adults who seek help—the right kind of help from the right grown up, because this is a grown-up problem—it's another important thing we share, that there is reason for sunnier days ahead. We did a lot of formative research to create these materials in focus testing. What we came away with that was most valuable was specific language to use in explaining these tough topics to young kids.

We also got a sense of what parents in recovery most needed, what were their deepest struggles in terms of their children. And we got special language that we put right in the mouth of Muppets to remind children of these important ideas, such as that they're not alone and it's a grown-up problem. And it's not their fault.

And you can have a look at these resources when you have more time, but you'll find several Muppet videos. And in most of them, we're providing a definition of addiction. Elmo is learning about it. And we're watching Karli, our little friend, demonstrate coping strategies and resilience.

So, let's have a look at a conversation between Elmo and Karli and the caring adult in their lives, one of them. This is Chris from Hooper's store.

OK, we really apologize for these technical difficulties. So, please go to the site and have a look, as well as have a look at the human child who is sort of the complement to Karli. And this girl is

10. And from ... It's important at Sesame Street that we show the child's perspective; it's something that Muppets have the special power to do. And here, Karli is inviting a young human to do so. So, we found there was a lack of material for very, very young children that showed this experience from their perspective.

So, in the videos, you will meet Salia, who is 10 and whose family is thriving. And she's demonstrating her strategies. She's taking us through a day in her life. And it's a beautiful glimpse into a family that has asked for help and who are thriving in their recovery and working on their wellness every day. So, please check that out, as well as some very valuable professional development materials. We spotlight providers in a lot of our professional development materials. And in this one, we have Cynthia Galaviz, who is a children's counselor at the Betty Ford Hazelden Center, sharing strategies that providers can take right into their program. Very concrete, actionable strategies.

So, you can have a look into that program. You'll also find a story book, which spotlights a beautiful moment in play therapy, because we know that play is the work of children. And here we have Karli enacting some anxiety that she's having with her mom. Her mom is in treatment and about to return. She'll be in recovery. And this caring adult is Karli's teacher, who is helping her work through her big feelings in this scenario. And that's available digitally, as well as in print. There's also this interactive.

So, the seven C's were a really big part of the work here, a lot of resources showing it in different ways. And of course, this is developed by the National Association for Children of Addiction and used widely in the community, starting with the things that children cannot control. The first three are that. The next four are things that they can do. So, that's the valuable sort of container for us to convey these really important things for kids to remember. So, this is an interactive coloring activity, where they're tapping the screen and completing each picture.

And as in all of our material, all of our topics, we have printable pages. So, you can print these and distribute them as you like. You can send them along. Everything on the site is shareable. So, you can send links to everything and use them in any way you see fit with the people you serve. And you'll also find articles. I think the most useful ones are the ones that actually provide the language that adults can use, when explaining addiction to young children, because in our focus testing, what we hear again and again is, “I don't know how to explain this difficult topic. I don't know how to answer the question. Just give me the language.”

So, what we did with our advisors help and guidance is develop suggestive response—give them a common question and develop suggestion responses for adults to consider when having these conversations.

So, Andrea Cody will just say a bit this slide.

Andrea Cody: Sure. So, I'm Andrea Cody. I'm the project manager for these resources. And if you have any questions, you can feel free to reach out to me if you would like to know more about the resources. And you can also find them all for free at sesamestreetincommunities.org. And something I'm not sure we mentioned is that everything is bilingual—English and Spanish. So, the entire website is bilingual. And everything in this topic page is bilingual.

So, I encourage you to visit the website today and take a look at that video, that unfortunately had some technical difficulties with, but it's right up at the top of the page. So, you should see it right there. And we might be able to include a link to that video with the slides as well.

Sangeeta: Thank you so much. I think I'm getting a little feedback if can hear me. Yeah, I really appreciate you taking the time to come and present today. We really wanted you to be a part of today's discussion in particular, because I think so much of what your materials do is they really highlight the importance of empathy when it comes to parental addiction. I did have the opportunity to watch the video with Salia, the 10-year-old girl that you mentioned.

I really encourage everybody—in addition to going and watching the Muppet video, which ends with everybody holding hands and is just a really, just a wonderful visual around support for young children—going and watching Salia and seeing how she copes, has learned coping skills, has gone to treatment with her mother, but how she even has empathy for her parents and the things that her parents are doing to talk with her about addiction, are great ways that we can also message how we talk with parents.

And as Dr. Baston said, thanking parents around if they tell you that they have a problem with addiction or are seeking help for substance use disorders, thanking them first and foremost for being so open and honest. I mean, that is the way to really start that conversation and start the treatment and the healing process. And, you know, children are a big part of their parent's treatment and healing process.

And so, I really think that all the content that—that we had today really just married well together and also goes along with the tenets of Head Start and Early Head Start. So, Dr. Bergeron and I really want to thank you all for joining us today and for staying on a little bit longer for our discussion. I know we had a lot of questions. Unfortunately, we have run over time. And so, what we're going to do is post answers to your questions on MyPeers. If you're not a part of MyPeers, please go on the ECLKC and join.

And we do have a MyPeers Community specifically for everything related to opioid misuse and substance use disorders that we're doing in the Office of Head Start. You can find more materials and resources there. And we will post some answers there as well. Thank you all for joining us today. Have a great rest of your day.

Robinn Yu: Thanks, everyone, for your engaging presentations. We're so sorry we don't have time to answer your questions. For more information, you can contact the National Center on Early Childhood Health and Wellness at health@ecetta.info or call us at 1-888-227-5125. A quick reminder, you will see the survey link and instructions to that after the webinar. And you'll also be able to get your certificate. Alright. Thank you so much for your participation, everybody.