Youth in the Legal System –
A Critical Prevention Population 6-14-2022 Audio Transcript

>> [Carrie Mulford] Excellent. Thank you so much and good afternoon. Welcome to all of our panelists and all of our attendees, and we're delighted that you're going to be here with us this afternoon for, I think it's afternoon in most places, joining us for this session on substance use prevention among youth involved in the legal system.

I'm Carrie Mulford. I am Deputy Branch Chief of the Services Research Branch at the National Institute on Drug Abuse. I also serve as the Science Officer on the two intervention projects that you're going to hear about today.

I'm going to be the moderator for today. In order to keep us on schedule, we're going to ask that everyone put questions in the Q & A box and we're going to either answer them in the chat or at the end of the session. We're going to allow some time for questions and discussion.

I think before we get started with the presentations, we have a poll? Yes. If you could just let us know what your professional field is and give us a sense of who we have on the call with us today. And you can let me know when the poll, when we have enough votes to close out the poll.

Are we ready to move to the poll results? All right, so we have mostly substance use prevention folks and a spattering of, and some mental health folks, and a handful of Juvenile Justice. Okay that's great. It's good. It's always good to know who we're talking to. So you can close that out and move to the next slide.

All right, so for the course of the next hour or so we're going to provide you with an overview of the HEAL Prevention Initiative, and a little bit about the framing of the importance of prevention for this critical population. And then you're going to hear about two innovative interventions that are happening in the field. And we've set aside, as I said, some time for questions and discussion at the end.

So in the interest of time, I'm going to have the panelists, are going to introduce themselves. I'm going to now turn it over to Barbara Oudekerk who is going to do the overview of the of HEAL and HEAL Prevention Initiative and the HEAL Prevention Cooperative.

>> [Barbara Oudekerk] Good afternoon. I'm Barbara Oudekerk, a Program Officer in the Prevention Research Branch at NIDA and the Lead Project Scientist for the HEAL Prevention Initiative.

I'll spend the next 10 minutes giving just a brief introduction to the HEAL Prevention Initiative. This is an initiative funded through the larger NIH, helping to end addiction long-term or HEAL Initiative, which is a trans NIH very large effort to speed up scientific solutions to the opioid Public Health crisis.

First, let me share some statistics that illustrate the importance of focusing on prevention of opioid misuse. If we think about this in a very simple way, everyone starts out not misusing opioids. Then at some point in time, a subgroup of people begin misusing opioids, and some of those people go on to develop an opioid use disorder. Effective preventative interventions disrupt this progression and could impact millions of lives each year.

According to the National Survey on Drug Use and Health, in 2020, 9.5 million people age 12 or older had misused opioids in the past year and 2.7 million people had an opioid use disorder. All of these people could have benefited from prevention. Effective prevention saves lives, reduces personal and societal costs, and promotes positive outcomes in general, including reducing risk for opioid and other substance misuse.

Recognizing the importance of prevention, NIH funded the HEAL Prevention Initiative. The HEAL Prevention Initiative vision is that healthcare organizations and public systems will be able to make evidence-based preventative intervention services available and accessible to all persons who experience risk for opioid and other substance misuse or use disorder. This vision recognizes the need to develop preventative interventions in partnership with systems that can deliver and hopefully sustain the intervention long term.

The HEAL Prevention Initiative funds research in four strategic areas. The first is risk identification, which includes research on risk and protective factors, trajectories or pathways to opioid misuse, and the development of screening and risk assessment tools. The second strategic area is social determinants, health equities and policy research. Another strategic area is intervention development which is a large focus of our HEAL Prevention Cooperative which I'll talk a little bit more about next. And our last strategic area is research on dissemination, implementation, scale-up and sustainment of Prevention Services.

This initiative started in 2019 and since then NIH has invested approximately 60 million dollars in research across these four strategic areas. The majority of this funding supports the HEAL Prevention Cooperative which I'll share a little bit about.

The HEAL Prevention Cooperative includes 10 research projects and a coordinating center collaborating to develop and test a diverse set of interventions to prevent opioid misuse and opioid use disorder among young people ages 15 to 30.

In general, the HEAL Prevention Initiative, that larger part of the initiative focuses on better understanding risk and how to disrupt risk during periods of time when we see initiation or increases in opioid misuse or use disorder.

The HPC or the cooperative part of the Prevention Initiative focuses specifically on the transition from adolescents into young adulthood because we know this is a key developmental time period for preventing opioid misuse.

For every 100 adolescents ages 12 to 17, about two misused opioids. By the time we get to young adulthood, ages 18 to 25, this number doubles to about 4 in 100. There has also been a recent increase in overdose deaths among adolescents ages 14 to 18. Adolescent overdose deaths increased 94 percent from 2019 to 2020 and then another 20 percent from 2020 to 2021. In 2021 there were more than 1,000 adolescent overdose deaths and the majority of these deaths involve Fentanyl.

Although we have interventions that work to prevent substance use, it's unknown how well those interventions will work specifically to prevent opioid misuse and use disorder among adolescents and young adults.

So the HEAL Prevention Cooperative is testing just that, interventions among that population, and this figure shows the focus of each intervention mapped onto the Continuum of Care framework. Each intervention is represented by a colored line here at the top. And although all of the interventions touch on prevention, as you can see here, the full set of the 10 interventions span across promotion to treatment within this Continuum of Care framework.

The HEAL Prevention Cooperative projects are focused on very diverse populations from communities that have been largely impacted by the opioid crisis and that often experience Health disparities.

We have two projects that are focused on youth and young adults in tribal communities.

I'm going to just click all the way through here.

The other projects focused on youth experiencing homelessness, youth receiving services, and school-based health centers or the emergency department and young parents receiving services in rural areas or referred to child welfare or self-sufficiency systems.

And then there are two projects that are focused on incarcerated adolescents and young adults, which are the focus of the webinar today.

And I will end by just acknowledging all of the HEAL Prevention Cooperative research project teams listed here. Everyone has contributed a lot to make this initiative successful and we hope that you will join us for future webinars.

This is the first of we hope many webinars to come from the HEAL Prevention Cooperative. So please do join us to learn more about the other projects as well.

Thank you.

>> [Carrie Mulford] Excellent. Thank you, Barbara, and we are actually ahead of schedule, so I want to make sure our presenters know, like, they should not feel overly rushed.

So next we're going to hear from Yang Yang who's going to talk about why it's so important that we focus on substance use prevention and opioid use prevented for this population. Take it away, Yang.

>> [Yang Yang] Hello, thank you Carrie, for introducing me. My name's Yang Yang, I'm a Research Scientist at Texas Christian University. I'm trained as an Experimental Psychologist and I have been doing research in substance use prevention and intervention for justice involved individuals. I'm part of the LeSA research team, which is one of the 10 research projects funded by the NIH Heal Prevention Initiative. I'm going to talk about the importance of prevention of substance use among justice involved youth.

So youth in the legal systems. Who are they? Youth are involved in the legal system because they are accused of a criminal or delinquent act. Some youth may get involved in the legal system because of status offenses, actions that are only illegal because of a youth's age, such as truancy, underage drinking, or running away from home.

Youth in the legal system are an important population for substance misuse prevention for a few reasons. First, they experienced several risk factors to substance use and substance misuse and disorder. Second, the prevalence of substance use is higher among them compared to the general youth

population. Third, they may experience an active behavioral such as recidivism and violence. And we are going to talk about each of them in the next few slides.

There are several different types of risk factors for substance use among youth in the legal system. First there are risk factors correlated with the involvement in the legal system, there are risk factors caused by the involvement in the legal system, and there are system level factors.

Youth risk factors correlated with the involvement in the legal system. Minority youth are over-represented in the legal system. As a result, a high proportion of them experience racism and discrimination.

Some youth in the legal system come from dysfunctional families and or from disadvantaged communities. As a result, they may experience a lot of childhood adversity.

Some youth may get involved in the child welfare system because parental neglect, abuse, parental substance use or inability to cope, parental incarceration, or instable housing.

Some families couldn't afford stable housing. As a result, they may become homeless.

And all of those negative experiences increase the allostatic load on the brain stress systems, which increase the vulnerability to experience mental health issues in a substance use.

When the youth's mental health needs are unaddressed, the chance to youth substance become very high. There are also risk factors caused by the involvement in the legal system. When youth get confined in a juvenile facility, they may experience trauma because of isolation or segregation, because of violence among peers, and also because separation from families and friends.

Confinement will also disrupt the educational plan and reduce educational opportunities. Confinement will also reduce the chance to establish positive social connections.

There's also system level risk factors. Fundings have been prioritizing to substance use treatment and addressing imminent needs. As a result, prevention is left behind, is not deemed as something that the Juvenile Justice System should be prioritizing.

Let's take a look at how the detention in juvenile system could impact substance use disorder. I'm going to walk you through a study that was conducted in mid-2000s and it was based on a nationally representative population of non-institutionalized U.S. adults.

So in that study, they were asked, they were assessed whether they had been in juvenile detention facilities or been in jail prior to age of 18. And then they were assessed whether or not they had experienced substance use disorder in the past year.

And I'm going to ask you guys to participate in this question, and the question is "let's guess the relative risk for substance use disorder among those who had been in juvenile facility prior to age of 18 to the everyone else" and there are four choices: equally likely, twice as likely, three times as likely, and four times as likely.

I'm going to give you some time to respond to the poll and then I will talk about the findings.

And this is what they find. This study found out that those who had been in jail or Juvenile Facility prior to age of 18 or experience three times as likely experienced substance use disorder compared to everyone else.

And next I'm going to talk about the prevalence of substance use disorder among justice involved among Juvenile Justice systems.

So it is a little tricky to find a recent public data that indicates the prevalence of substance use disorder, but the data out there show that youth involved in justice in systems are more likely to use misuse and experience substance use disorders.

The National Survey of Drug Use and Health assess the rates of substance use among populations nationwide. And in 2020, what they find was about, they asked the youth ages of 12, between 12 and 17 defining 6 percent of those youth reported substance use disorder in the past year.

Let's take a look at youth involved in the legal system. There was a study looking at youth in Juvenile Justice intake facilities and finds that 17 percent of youth who came through the intake process system reported substance use disorder in the past months. And this is a different time frame compared to the National Survey of Drug Use and Health and we can assume that the prevalence of substance use would be even higher if we look at past year disorder among this population. And what is more striking is when we add in older people.

So the National Survey of Drug Use and Health asks people who are 12 and older, and they find that 17 percent, that is about one in seven, reported substance use disorder in the past year.

Let's take a look at what happened to the youth in the legal system. There was a study of youth in the Chicago justice system, and it followed those youth 12 years after the intake and they find that 80 percent, that is translated into four in five, youth would report past substance use disorder within 12 years after the intake.

And let's take a look at how Covid impacts the prevalence of substance use disorder. And so prior to Covid, let's say you had two youths, one in a light pink who had used opioid but the the level of use hasn't bubbled to the level of disorder. And you have another youth who is in the dark pink and let's assume this use have substance use disorder.

Prior to Covid, both youths will be sent to a juvenile facility to receive treatment. However once Covid happened, the youth in the dark pink, who may still end up in the juvenile facility to receive treatment, but the youth in the light pink may be send back home. And as a result, the prevalence of substance use disorder in the system will be even higher than it once was.

So this means that if you are going to intervene with a group to prevent the onset of substance use disorders, the Juvenile Justice population makes a lot of sense. And well, some may say these data showed that the elevated use amount justice involved system indicate a need for treatment services.

However, as we mentioned earlier, prevention is not just about preventing the initiation of substance use. It is also about preventing the transition to substance use disorder among those who are already using. Let's take a look at the prevention of substance use may also have other benefits in developmental outcomes.

Adolescence is a stage, that is a phase, that during which brings steel development, developing, as a result prevention of substance use may also help prevent the development of deficits in cognitive functioning such as preventing the development of deficits in learning, memory, and attention.

Preventing substance use may also have other benefits in interpersonal relationships. If that applied in a school setting, that means less likely to experience school truancy, dropout, applied in social interaction that means less likely to experience social and family dysfunctions. Because the high cone mobility of substance use and psychiatric disorders, preventing substance use may also help prevent psychiatric disorders. The prevention of substance use may also help prevent risk sexual behaviors that will also reduce the chance to contracting sexually transmitted infections.

Preventing substance use may also help prevent the other behavioral, bring other behavioral benefits, such as a less risk to recidivism and less likely to escalate the seriousness of offenses. Now we know that substance use youth involved in a legal system are important population for substance use prevention and what we can do about it.

Next I'm going to turn over to Carrie who is going to introduce projects in the HEAL Prevention Initiative. And this project will speak to what we can do about it.

Thank you.

>> [Carrie Mulford] Thank you so much, Yang.

Okay, so now we're going to be moving to the, sort of the meat of our presentations. We're going to hear from our two HEAL Prevention Cooperative projects that are actively working in the Juvenile Justice system to prevent opioid use disorder.

This slide here is a repeat. You saw, Barbara showed this, showing the Continuum from prevention to treatment and where the projects fall in this Continuum and both the LeSA project and the POST project cover that forum stage from the indicated prevention where we know are the individuals are at risk and into the care and treatment.

So, and those of you who work in this field know that there's not a bright line between prevention and treatment, it's definitely a very fuzzy line and all these sort of blur together, and people move, you know, between different phases in this.

Okay, so with that I think I'm going to turn the floor over to Danica Knight, who's going to introduce herself first, and then tell you about the LeSA project.

And I'm going to remind you to as you're thinking of questions, to put them in the Q & A and we will address them as they come up or later after she's done.

So, Danica.

>> [Danica Knight] Thank you very much Carrie.

It's been really great to hear Barbara and Yang's overviews because the work that we're doing in the Leveraging Safe Adults project, which we call the LeSA Project, really follows from all of the research that's been done prior.

So, my name is Danica Knight, I am Professor of Psychology at TCU and also serve as the Associate Director of Research at the Karen Purvis Institute of Child Development here at TCU.

So, I am privileged to be one of the grant recipients as part of the HEAL Prevention Cooperative and the PI on the Leveraging Safe Adults study.

So we're actually looking at whether we can implement a trauma-informed strategy in Juvenile Justice settings and if that approach can decrease or basically prevent the onset of opioid use disorders.

So when we think about the spectrum of legal involvement, beginning with pre-involvement, arrest, moving on to post-arrest diversion for some youth, or adjudication and conviction for other youth, some youth are placed on community supervision, others are placed in detention or post adjudication facilities where they're receiving treatment or intensive services, followed by post detention activities.

The LeSA project is focused on the back end of this spectrum, if you will, focus specifically on youth who are in custody, in secure residential settings, and looking at that transition as they leave those facilities and go back home, to their home environments.

So we've talked a lot about risk for opioid use, and Yang shared some data looking at, or the idea that we've seen, about changes in the prevalence of substance use among youth in these settings.

And this is data from our actual study. The first 45 youth who actually completed our baseline assessments. We're recruiting youth from 11 different facilities across two states, and as you can see here, there's already quite a bit of use of opioids. This is any use over the lifetime, so for some of these kids, they have used one time, maybe tried prescription opioids from a parent's cabinet.

Others may have tried other substances that were laced with fentanyl unbeknownst to them, but as you can see by the fact that we have four youth who confirmed an opioid related overdose, some of these kids are already experiencing significant opioid use activity and potential disorders.

So for our project, the LeSA project, our aim is to prevent the initiation or escalation of opioid use among youth as they transition home from these secure settings.

Our first question is "does trust-based relational intervention or TBRI decrease the likelihood of youth substance use?" So we have a primary intervention that's focused on the youth when they are in the secure facility. It involves youth and at least one caregiver. They're working with us in a series of intervention sessions aimed to teach them the strategies and principles of TBRI.

Our second question is "is it enough to train caregivers and youth while the youth are in custody, or are they going to need some sort of support after they leave the facility when they're back in the home setting?" And so we also have another component that occurs in the home setting that some of our youth will be randomly assigned to receive.

The third question is "is it most effective when we're actually not just teaching and training families about TBRI, but when youth are experiencing trauma-informed strategies while they are in these settings?" So can we teach and train staff to use TBRI strategies in the moment and when kids are exposed to that while they are in the facilities, and parents then build upon those lessons that have already been learned and actually serve as advocates, safe adults in the home setting, do we see better

outcomes for those youth?" And so we have what we call the secondary intervention where we're teaching and training individuals within the Juvenile Justice context on using TBRI in real time.

So what is TBRI? What is Trust-Based Relational Intervention? It is an attachment-based, trauma-informed, sensory rich intervention designed for children and youth who've experienced complex developmental trauma.

It's built on the three pillars of trauma-wise care, which are connection, felt safety, and emotion regulation. The foundation is connection and the idea here is that, as was mentioned by Barbara early on, many of these youth have experienced histories of trauma and oftentimes that trauma occurs within the context of relationships, or occurs within a context of unhealthy, unsupportive relationships that fail to meet the child's need for safety and security in basic health and provision.

And so what we learned, we've learned through research is that kids are able to move through those experiences of trauma, develop healthy relationships, and recover, make better choices, and regulate their own behavior better in the context of relationships.

So if we can support them with healthy relationships that better identify their needs and meet their needs we can provide a sense of felt safety, so not just physical safety but emotional safety where they feel safe and feel able to express their needs and be vulnerable and in the context of healthy relationships and felt safety, we can also teach and train and help kids learn regulation strategies, helping them identify the emotions and the triggers behind their behavior, and helping them learn to moderate their behavior in more appropriate ways.

So TBRI includes three primary principles: connecting, empowering, and correcting. Connecting principles include things like engagement strategies, such as eye contact, playful interaction with adults, and behavior matching. So if a youth is anxious and pacing, an adult needs to have a conversation with that youth, then matching their pace is going to be much more effective in communicating than requiring that youth to stand still when they're feeling agitated, for example.

Mindfulness includes things like empathy, having a physical presence, and an attention to not only as an adult what you bring to a relationship and how your biases or expectations might interfere with your ability to connect or understand a youth, but also the mindfulness about what is underlying the youth behavior. So if the agitation is right after a youth's phone call, it may be that they learned that their parent isn't going to come visit them this weekend as they told them and expected they would.

So they're agitated, they're frustrating. So being mindful of what it is that's underneath that youth's behavior, the emotional response, can really help the adult modify their discipline or correction or verbal and non-verbal behavior with that child, and be less likely to elicit an explosive or volatile response.

Empowering principles include strategies such as physiological strategies, nutrition, hydration. Our blood sugar levels go up and down. Kids are very sensitive to blood sugar levels and oftentimes, if they're hungry, if they're dehydrated, they're going to be more apt to respond inappropriately when their emotions are out of control.

Also kids have sensory needs. Some kids are over stimulated, some kids are under stimulated. So paying attention to their physical needs, not just for activity but for stimulation. Some kids need to fidget, so

providing those kinds of opportunities for movement or for moving with their hands can be really helpful to help kids regulate.

Also ecological things such as strategies such as routines, rituals, simply giving a youth a warning "okay we're about to transition to group, you've got five minutes and then we're going to be leaving so wrap up". Those kinds of strategies can help with transitions and also decrease the likelihood that a child will become dysregulated.

And then finally correcting principles include proactive and responsive strategies. Proactive strategies include things like offering choices and doing redo.

So if a youth mouths off to a staff member, rather than coming down hard on them immediately, the first thing would be to defuse their anger, help them calm, and then potentially do a redo where we ask them to actually model what would be the better approach. Not just saying it, but actually doing it and going through the motions.

We also talk about doing what we call an ideal response where correction oriented behaviors on the part of the adult are immediate. They're direct. They're efficient. They are action based like a redo, and they're leveled at the behavior not the child, because we want to avoid shaming if we can possibly do so.

So oftentimes in justice settings, we focus heavily on correcting. We want to control behavior. We want to make sure that everyone is safe, and we want to address things quickly and swiftly. Oftentimes we do that without thinking about the needs, the emotional needs, the physical needs of the youth.

And so what we do in TBRI is really focus on balancing what we call structure and nurture. So the goal is always to get back to the lowest level of correction and keep things as playful and connection oriented as possible, but we can't do that with also providing structure and support.

So the primary LeSA intervention that is provided in the facility before the youth is discharged includes these four components: the first is a one-on-one conversation with the youth caregiver, because they have often experienced trauma themselves.

They have histories of challenging relationships themselves, and we know from attachment research that the way we were parented when we were growing up also is our model for how we parent our own youth or our own children.

And so one of the first things we do is have that conversation for them to explore their own attachment histories and help them become open and ready to new and different ways of interacting with their youth.

We include eight caregiver only sessions. Those are all virtual and eight youth only sessions that are all in person.

Then we have the youth and the caregivers come together in what we call virtual nurture groups and in those groups, there are four of those, every other week, and in those groups they're practicing the principles and the strategies that they've learned.

They're also engaging in what we call nurture groups, which I'll just explain in just a minute.

And then finally, in the home setting we have three different support options.

So families are randomly assigned to receive either no support, four sessions of support, or unlimited sessions for supporting the use of TBRI and becoming a safe adult for their youth.

So this list basically shows you a few of the topics that we cover in the youth sessions, and these are paralleled in the adult session so we're teaching and training youth and adults with the same information.

In part to help increase understanding, but in part to help increase felt safety for the youth because we're changing their home environment in the way that they will be parented in the future, so youth need to be a part of that and given voice in that, in those decisions.

So for example, one topic is balancing structure and nurture, helping families work through what that might look like in their home environment.

Another is talking about attachment. What has their relationship looked like up until now? All relationships have conflict and difficulty so rupture happens. The most important thing is how we repair those ruptures.

And so we teach and train and practice strategies for doing that. We talk about mindfulness, helping kids understand and recognize their own behaviors, their own triggers, that occur in the physiological environment and internally that set them off. We talk about and practice supportive communication, ecological strategies that I mentioned previously, and we talk a lot about sharing power, and the use of life value terms. So each family is creating their own set of values and terms that they can use to communicate their needs efficiently and effectively with each other.

So the nurture groups are a central component of TBRI and incorporated into the primary and secondary portions of the intervention. So in this particular picture here you see a group of young men and one of the Direct Care folks on the the unit, and you see this this one young man carrying a flag. That flag is passed around from person to person and it's basically a regulation activity.

We begin with a check-in and so each person explains kind of how their engine is running, if you will. We've pulled in pieces from Theraplay and also the Alert Program into the TBRI nurture groups, and so red, if you say "I'm in the red" that means you're agitated or you're anxious or you're feeling hyper, over aroused at some level. If you're in the blue, that means you're calm or you're bored or you're tired.

For example, if you're in the green, that means you're alert, you're ready to learn, you're engaged, and you're feeling pretty good. So our goal is to get in the green but we acknowledge that we don't spend all of our time there and neither do youth.

And so each participant talks about where they are. They also talk about and learn to recognize the triggers that move them into the red or ways and strategies to get them from the blue into the green as well.

We usually begin these groups where they're led by the facilitators, but over time we see the youth taking more and more responsibility for the activities and the actions and the content of what happens.

One of the other things we're doing in nurture group is practicing giving and receiving care. And so this is opportunities to really talk about hurts, to talk about ways to repair problems and challenges. It's also opportunities to really practice regulation activities.

So in the middle of the group there's some fun playful activity that kind of gets them a little little bit dysregulated, and then we practice strategies for regulation. And those are different for each person.

You can see this young man is really attached to his teddy bear, and we find that a lot of justice settings, youth are actually beginning to use things like fidgets or weighted blankets or, you know, kind of soft fabrics or stuffed animals that can really help youth regulate when they're feeling out of control.

So in our pilot work, we asked caregivers, youth, and staff for their reactions to these, this primary intervention.

Caregivers shared that "TBRI gave me hope", it began to empower us to speak up for him in a way that hasn't before because we felt that we were now part of a team and could request information.

Youth shared "I'm given voice and encouraged to speak up for my needs and learning how to communicate to my family about my needs when I go home." And a staff member shared "what I saw is that those students involved in it, in the LeSA study, were able to communicate their needs better." And one of the things that we heard over and over from caregivers and youth is that "we want more, we didn't want these sessions to end", which tells us that this is not only feasible and appropriate but it's something that is desirable for participants in this context.

so what does it look like as a secondary intervention? Well, TBRI, even though it was originally developed for younger children in foster and adoptive families or learning that it is appropriate for all children and youth of all ages in all contexts and we're even learning ways to adapt it for different cultural contexts.

What you see here is a picture of the group rules for nurture groups that is posted on one of the facilities that we're collaborating with. So the rules are: stick together, have fun, no hurts.

And this is incorporated not just into nurture groups, but it becomes the language of group rules for all of the interactions within those juvenile settings, regardless of whether it's a school classroom, regardless of whether it is a group setting, a therapeutic setting within the the facility.

And we see and hear from those agencies that we're working with that TBRI is being used in detention facilities, in courts, in secure residential treatment facilities, by all different members of staff, including security staff, and in cases many cases some of the security staff are the ones that are most effective at balancing nurture and structure in terms of being able to be playful and then correcting in subtle ways before actually moving into more specific structured forms of correction.

But implementing TBRI in Juvenile Justice settings is very tricky, so the goal when we're implementing TBRI as a trauma-informed practice is to be able to see the needs of the youth and meet those needs through connection with safe adults.

So to do this, agencies have to be ready to change their culture of care. Because in Juvenile Justice, most of our focus when it comes to working with youth is corrections oriented and safety oriented, both for

the safety of the youth and the safety of the staff. And so to shift our focus to a more trauma-informed strategy means really changing the culture and the expectation.

It requires leadership buy-in for a culture to change and also one of the interesting things about TBRI is that we found that the selection of change agents is critical, so the best champions are those who are actually working directly with youth using these trauma-informed strategies in real time so that they can adjust and kind of figure out what works.

Then they can teach and train others in that agency so that it fits within their culture and they can hopefully, preferably, be the the trainers for all staff in all roles across the facility because the more continuity we have across people using these strategies in various roles, the better those lessons are in terms of more consistency in how youth are responding to those adults.

One of the things we do is we capitalize on contradictions. So we encourage agencies to think about what's tricky here and why is that tricky. So if you're coming from a boot camp approach where you're very much rigid and you want to be more responsive to youth needs but you don't have room in your schedule or in the way you do your business to provide options for youth then that's going to be a really tricky thing when it comes to putting this in place. And so thinking about, you know, we say we want this but we do this other that becomes an opportunity for change, and for really getting buy-in among the staff.

And finally, in order to sustain these types of changes within these agencies, we have to think about changing policy as we go forward. Because changing the culture to be more flexible is something that really, we have to see it also written in policy, so that as new people are coming in they're trained in those new policies, or as people are resistant, then we can kind of provide explanations and and be consistent in the way that we implement these new practices.

So in summary, our key takeaways. TBRI can be adapted for adolescents in the legal system. Youth and adults are responding favorably to TBRI whether they're caregivers or staff in these agencies. Implementing TBRI within these secure settings takes time, requires a long-term commitment from staff at all levels to truly be successful, and finally TBRI appears to be a promising approach for strengthening relationships, both between youth and justice staff and between youth and caregivers, which can build resiliency and help prevent substance use and other problems as they transition home.

I want to thank our team. Yang is among many that have made this possible and continue to make this work possible and look forward to sharing our results with you in the future as we conduct this study.

Thank you.

>> [Carrie Mulford] Thank you so much for that great presentation, Danica.

And I just remind folks if you have questions about the TBRI intervention or the LeSA project overall, please put them in the chat, actually in the Q & A, sorry not in the chat.

Next up we have Kym Ahrens who's going to introduce herself first and then tell you about the POST project. So take it away.

>> [Kym Ahrens] Hi, as was said previously my name is Kym Ahrens. I'm a Pediatrician and Adolescent Medicine Specialist by training. I am jointly appointed at Seattle Children's Hospital and Research

Institute as well as the University of Washington and I also hold a position as the Medical Director of the Washington State Juvenile Rehabilitation System, which supervises 11 institutions and group homes across Washington State. My Co-principal Investigator for this project is Kevin Hagarty.

POST stands for Positive Outcomes through Supported Transitions, and the overall goal of this study is to evaluate opioid prevention intervention strategies of various intensity levels among both youth with and without substance use disorders, who are similar to the LeSA project, transitioning from incarceration settings back into the community.

Also similar to the LeSA project, we are intervening as prevention at the far end of the Juvenile Justice spectrum, so we are working with youth when they are in detention and as they transition out of detention settings.

POST is a partnership between Seattle Children's Hospital as well as the University of Washington and the Washington State Department of Children, Youth, and Families Juvenile Rehabilitation System.

Next I'm going to talk a little bit about the base interventions that we used to develop our different intensity interventions that we are being, that are being studied in this project.

And the base interventions include the Adolescent Community Reinforcement Approach or ACRA. It's a partner intervention called Assertive Continuing Care, or ACC, and a trauma skills program called Trauma Affect Regulation Guide for Education and Therapy, specifically the four session version of this program as well as motivational interviewing.

In this next section, I'm going to go a little bit more into detail about each of our base interventions, starting with the Adolescent Community Reinforcement approach.

This is a behavioral skills-based program. Its overall goal is to make non-use more rewarding than use, and there are additional positive reinforcements built in such as refreshments at each session. It's evidence-based for SUD treatment however it's never been studied as a prevention approach.

Although it's been conducted several different ways, ACRA classically consists of 10 sessions with the client that are focused on skills as well as some case management, and then two optional components.

One with sessions with a caregiver natural support or even a significant other and these are conducted typically alone with the support person and then there are a couple of sessions that can be conducted with both the caregiver support person and the youth themselves.

The other thing to note about ACRA is that it is broad in its skills, so it's not just things related to substance use, but broad skills related to communication, job searching, anger management, in addition to a couple of procedures that are focused on alcohol and drug use, such as relapse prevention and drinking, drug refusal.

As I mentioned previously, Assertive Continuing Care, or ACC, is kind of a sister component to ACRA and it often is used in conjunction with ACRA. This is the case management portion of the intervention package and it consists of home visits as well as active linkage to community resources.

So where a lot of case management, if the person disengages, you wouldn't necessarily pursue them. In this approach, if they're trying to disengage, you actually step up the effort to connect and do things like going into the home and sharing meals with them to try and engage the person a little bit more closely.

Next T4 is the trauma skills program that I talked about. It's a strengths based approach to education and treatment for trauma survivors. It's important to note that it's skills not exposure based, so this does not include a trauma narrative or any anything around going through the trauma. It is more focused on the future and giving the youth the skills to recognize the sequela of trauma and the emotional responses they may be having and how to sort of build their life that they're interested in working towards and use skills to get to move towards that.

The session that, like I said before, there's a 10 session version of this program, but we used the four session version in our intervention development.

The last base package we used was motivational interviewing, and most of you are probably familiar with motivational interviewing as an intervention.

We specifically use motivational interviewing for engagement and retention purposes, but also integrated it into the ACRA and ACC curricula.

So our goal was to test two different intervention intensities, as I said in the beginning, and I'm just going to go over each of those a little bit in this next slide.

So the first column are high intensity intervention we call Enhanced ACRA, and we call it this because we have the goal setting ACC based case management associated with the classic Acro package, as well as motivational interviewing strategies, the ACRA T4 skills, and we also try to involve a caregiver or natural support.

With the lower intensity intervention which we call Assertive Community Support to distinguish it from, it's not exactly ACC but similar. It has goal setting as well as the ACC-based case management and some MI strategies incorporated into it but it does not include the skills or caregiver components.

The other difference between the two is that in the Enhanced ACRA package, there are eight weeks of in-person sessions or virtual sessions prior to the youth being released, and then 12 weeks, up to 12 weeks, of in-person sessions or virtual sessions afterwards, whereas with ACS, there is one in-person or virtual session as well as three phone check-ins prior to release, and then one in-person or virtual session, and up to seven phone calls Post Release.

Next I'm going to talk a little bit about our intervention refinement process, which we completed during our two-year pilot phase prior to starting our full study. We had an intervention supervisor who delivered the intervention prior to supervising staff and then gave feedback. We used a combination of virtual and in-person sessions with an emphasis on virtual sessions due to Covid, especially early on in the pilot.

We had a weekly, if not more frequent, intervention development meetings. We also had periodic meetings with the ACRA and T4 developers to get feedback on how to incorporate these two different interventions successfully with each other. And over the course of the pilot, there was fluid modification of intervention content to allow us to test the modified content and then get successive iterative feedback from our intervention supervisor. Finally, we incorporated participant feedback and and used that to revise the intervention as well.

A little bit about some of the changes that we made during the pilot process. I'm going to go through a few different categories of changes we made.

This first was changes to screening. First thing we had to do was, we realized very quickly that our state was missing some youth with substance use disorder, and so we needed to build in a procedure to confirm or correct the classification using our Baseline survey data.

We also changed the definition we were using for substance use disorder or problematic substance use for youth who are over 21 because, primarily because marijuana is legal in the state of Washington at age 21, and we needed to adjust the definitions we were using based on that fact.

Secondly, we made some changes to our recruitment. This included obtaining a parental consent waiver for some youth. We quickly realized that while some parents were able to respond and make a decision about youth participation for minor youth very quickly, there were other parents that were not actually involved in their children's lives and we successfully worked with the IRB to obtain a parental waiver so that if we try three times to contact a youth and we are unsuccessful, then the youth can participate without parental consent.

We also adapted our flyer, created a video flyer, and translated our materials into Spanish, based on participant and staff feedback.

In terms of changes to our intervention, we, as soon as we were able to increase the number of in-person sessions versus virtual sessions, because we felt that this was needed to maintain engagement and also to initially establish rapport with the youth.

We also defined minimum session numbers for both intensity interventions and revised the content to make sure that they were more distinct. So even if a youth didn't receive all of the content in the high intensity intervention, it would look still different than the lower intensity intervention.

Next I'm going to go over some insights from our three-month surveys, which is our first post intervention time point to give you a little sense of what youth are getting from the ACRA based interventions that we've been using.

The first quote is "I think that lady that first talked to me, she would talk to me and check in. Having somebody to talk to, someone just constantly reminding me what I want to do. I've been better with my anger, I think I've been better at understanding what I want with life." So this was the person's quote in response to a question related to what they had learned from the intervention.

The next quote is "My communication is a lot better and managing my emotions is a lot easier now because there'll be times where I'll catch myself." Next is "noticing the respect that another person can have for my good decisions." And finally "I had help at the lowest part of my life. I didn't ask, but you all gave me what I needed, and my coach looked out for me. I have a lot of respect for him." In terms of the key insights that we noted from our pilot process, there are several I think are worth noting.

The first is that it has actually feasible to develop a university hospital state agency collaboration which was not a foregone conclusion when we started this process. We did need two years of planning time to ensure success of the full study and the other thing that we needed was not to just have personnel on our research team, on the research side, but also personnel within the DCYFJR system who were champions of this study who understood the procedures and who was eligible and who could help with logistics to make sure that our interventionists were able to meet with youth that our surveyors were able to do the surveys with youth etc. And to troubleshoot issues as they arise.

The other thing we learned is that partnerships in one aspect can lead to other collaborations. So I was not Medical Director of the state system prior to starting the POST Project. I was a clinician who worked in one institution and I think that having the close relationship with folks in the state system that came from the POST Project resulted in me becoming Medical Director. So I think it just opens the door for other potential collaborations that can benefit all groups.

And then finally we do feel based on the pilot data and our qualitative data collected thus far that an ACRA based intervention approach with Motivational Interviewing and T4 is a promising approach to prevention of opioids and it will be very interesting to see with our study which intervention intensity is the most effective while youth are in care and then after they transition out of care, similarly which intervention intensity is most effective.

Thank you. I would like to thank my POST team and this is a list of our team members, both within and without of the DCYFJR system. If you have any questions, you can contact me here.

Thank you.

>> [Carrie Mulford] Thank you so much, Kym, that was fantastic.

I'm just gonna say like, if you can go to the next slide, a few words and then we'll move into a discussion. If there are any questions, I haven't seen any questions in the chat yet. I mean, everything was just so perfectly clear that we haven't had any questions, but I, hopefully, there'll be a little bit of opportunity for some discussion.

So first of all, these presentations have made it very clear that youth in the legal system are a very important prevention priority population. I think that seems obvious and Covid-19 has made prevention for this population even more imperative.

Another key takeaway from today's presentations is that preventing opioid misuse and opioid use disorder may impact other outcomes further down the line like violence, and social connections, and other outcomes.

There are a variety of promising approaches that we can see. Two of them here that are designed to serve this population so there is promise.

And one of the things that I love about prevention, although most of my work is in treatment, but I love about prevention is sort of the optimism and the, you know, the hope that we can do something to disrupt that pathway before someone moves into, you know, misuse or a disorder problem.

Next slide.

If you want more information about the HEAL Prevention Initiative or Cooperative, you can sign up for the Prevention Cooperative listserv or you can visit the HEAL Prevention Initiative website. The QR codes and web addresses are on the screen.

And I just wanted to mention that we would love to get your feedback on the webinar. Lori put the feedback form Link in the chat just now, I see that. Your feedback helps us to make improvements for future webinars so that would be very helpful.

The other thing I want to let everyone know is that all the registered attendees are going to receive an e-mail with an attendance certificate and a link to meeting materials.

Next slide.

And I'm, just put that up while we're seeing if there's some questions, let me say, I do see I see a couple things the chat, I don't think that's, I think that's from Laurie. Okay, so we have one comment in the Q & A that I will pass along. "I hear the reward based interventions are positive. They receive gifts, meals, and time with peers, and have beneficial outcomes." I'm gonna ask Danica or Kym, to...

>> [Kym Ahrens] Yeah, I think I totally agree with that and I think one of the things that both of our interventions do is, both of our interventions have a, sort of, fundamental focus on positive connections with people.

Danica's is a little bit more emphasizing the connections as the main way of intervening, but ACRA also has not only positive connections, sort of, with it caregiver but also other folks in the community, and in terms of other rewards, there's also a piece of it where the interventionists will bring food to the meetings so that the meetings themselves are rewarding and so I completely agree with what you said, Angela.

>> [Danica Knight] Yeah, and I will add there's a lot of research on contingency management and the effectiveness to change behavior particularly if someone is learning a new behavior or, in the case that Kym's talking about, in terms of just feeling appreciated or feeling, you know, sometimes those kinds of rewards can be just an incentive in a sense for participation and connection.

But they can be misused also in that sometimes the way we structure Juvenile Justice settings is that they have to participate in a, they have to have appropriate behavior to receive rewards. And so what happens then is the kids who are able to regulate their emotions are able to earn rewards better than the kids who are not able to regulate their emotions.

So if we think about misbehavior or dysregulation as kind of a survival mode, that this youth, their brain and their body has been programmed to respond in an aggressive way and they need to be retrained and they need to figure out how to regulate their own brains and their own bodies.

If part of what's triggering them has to do with their environment and they're not getting, like for example, one of our agencies has a couple of animals, they've got some goats and chickens, and some of those kids need that time with those animals just because caring for another animal can be very therapeutic.

And to use that as a reward for good behavior then deprives kids who have a need for connection, and so when we use rewards, we have to think about are we using them, you know, to truly reward and teach and train a new behavior, or are we withholding things that a child needs that would really help them in their journey toward healthier functioning.

>> [Kym Ahrens] I think that's really interesting, Danica, and I totally agree with what you're saying and I think another thing that's fascinating is when we looked at the initial evidence for ACRA, they've done studies, the original developers did studies looking at more traditional contingency management for clean UAs and they looked at ACRA, ACC alone, ACRA ACC plus Contingency Management for clean UAs, and then Contingency Management alone.

And both Contingency Management alone and ACRA ACC alone were more effective than the combination so you have to also be careful in that sense as to what you're rewarding versus not. For us the reward is for participating in the intervention, not for the clean UA. Something about the way those two things work, they don't quite work together well. I thought that was really interesting.

>> [Danica Knight] That is, it just goes to show the complexity, you know, rewards seems simple but they're not.

>> [Kym Ahrens] Yeah.

>> [Danica Knight] They can be very complicated to implement well.

>> [Carrie Mulford] Yesterday I was at a panel and Dr. Micah Johnson was talking about, he works with Juvenile Justice youth in Florida, and he was talking about their sense of community and the lack of-- their perception that there was no one in the community that cared about them.

And I thought that was really interesting, particularly in light of some of the TBRI things and wondering if there's any possibility of bringing in other, because I think also for people in the community, it's hard to know how to show a kid that you care about them. You don't want to seem creepy, you don't want to... it's sometimes, it's just awkward if you're not used to interacting with adolescents. You don't know how to do that.

Like, I just wonder if there's ways to to help bring other people into that circle in TBRI as they're transitioning back home.

>> [Danica Knight] Yeah, that's a great point. When we originally designed the study, we wanted to include as a safe adult, anyone that that youth chose, so a caregiver, or a teacher, or somebody in the community that they already had a relationship with. And it became difficult because, you know, for one, you may not get the commitment of a teacher, or a coach, or, you know, a family friend like you would a caregiver. And number two, the caregiver spends more time with the youth when the youth is living at home.

Not to say that 18 year olds are not always, you know, at home. They sometimes will leave and then come back, but it gets tricky.

And so I think one of the extensions of this study is doing something like that, Carrie, where we look at "can we teach and train people in that youth supportive network to become safe adults using TBRI strategies?" We know that if a youth experiences, you know, it is given voice, they're able to express their needs in one context, like in a home but not in a classroom, they're going to adapt their behavior accordingly.

But if we can be consistent in the way that we support youth in those various contexts and then youth are actually you know, their behavior is being shaped and they're given voice in the same ways in those different contexts, then we're going to see more profound changes in that youth's adjustment over time.

We haven't done that study, that's hypothesized, but it would be awesome to do. I think it'd be so powerful if we had this, you know, ecological approach where all these different contexts are trained in TBRI.

>> [Kym Ahrens] And we may be able to, I mean, it's not exactly that study, but I think it will be really interesting when we are done, both of these studies are done collecting data, to do some combined analyzes and look and see are there youth with certain characteristics they that may respond better to one of these interventions versus another, so we may be at the end of the day able to kind of learn more about, even more about what works for who and what the characteristics are of somebody who would respond to TBRI better versus ACRA, so I'm really grateful to be a part of this collaborative. I think that's one of the huge advantages of this grant funding mechanism is that we can do things like that at the end of the day so I'm super excited to.

>> [Carrie Mulford] That's awesome. Yeah, that's a great, great point.

>> [Danica Knight] Thank you Kym, and I just want to thank Angela for her comment on the the Q & A. I agree wholeheartedly that...

>> [Carrie Mulford] The other participants can't see the comment, so…

>> [Danica Knight] Okay, you want me to read it?

>> [Carrie Mulford] Sure if you want to.

>> [Danica Knight] Angela says "These kids, adults know if you like them or not. They really want to be accepted and valued. There's no fake or phony that's going to get past them. If we can go in with no judgment and sincere authentic kindness that seriously makes a difference."

Absolutely. Well said.

>> [Kym Ahrens] And I think there was another one that I answered, Angela put in, I had answered it not realizing other people can't see it, which was she pointed out that she said in there in her, where their agency that clients that attend every so many groups or individual sessions, they get a gift, and we, you know, in our study do it similarly for the high intensity intervention. Every two sessions they get put into a lottery where they have a one in 10 chance of winning a $50 gift certificate, so I think it's one of the things Danica and I presented together a few times.

One of the things that's always interesting to me when I listen to the other grantees as well is there's some similar themes that keep coming up over and over again and having some rewards for participation is one of the things that I've seen as a theme that's not just in our study.

And then Evan Holloway says how can we shift the focus within the JJ system to targeted prevention versus responding once a youth has progressed to meet the criteria for SUD? What role should researchers have in policy advocacy and lobbying to this end? That is an entire webinar in and of itself in my opinion so maybe that's part two of this.

But I think as Medical Director, my thought is that one of the first things we need to do is to screen well and to know what the situation is when we youth are coming into the system.

For a lot of these youth in incarceration settings, they're already, I would estimate actually with Covid the bumps up in substance use and Covid related diversion we're at like the 90 mark in terms of youth with problematic substance use or SUD.

So it's kind of the ship has sailed by the time they get to that level of involvement.

So we need to be intervening with initial involvement in the court system rather than, you know, I think that's the place to start working on prevention conversations in terms of like really upstream primary prevention.

And so that's what I would like to see is even before they get to incarceration settings, early intervention.

And there's some other projects that we are collaborating with that are looking at policy level ways of doing that and integrating real-time data feedback to counties to help them do some, integrate more prevention approaches or early treatment approaches.

>> [Danica Knight] I think this is a great question and a previous project that NIDA funded that I was a part of called JJ Trials actually addressed some of this. We worked with agencies, justice agencies, and partnered with Behavioral Health Providers and basically helped them look at their systems and the degree to which their youth had exhibited some level of substance involvement and their policies and practices around referring to some sort of an intervention whether it be prevention or treatment and we found that most often youth who received a referral for either an intervention or a treatment service were more likely to actually initiate those.

So if you think about the role, the potential role that the Juvenile Justice system has in getting kids who need some sort of prevention or intervention or treatment services is quite profound. But a lot of kids slip through the cracks and even though the agency had a screener that indicated there was a problem, a referral was not necessarily made. Or if it was made and the youth initiated treatment, getting them to actually stay in the system long enough for that service to really make an impact was tricky.

I think for me, your question about advocating, you know, advocacy and lobbying the way I look at the research that we do is always in partnership with people in the field. The LeSA project grew out of Juvenile Justice agencies who were already implementing TBRI in their settings, basically said "Okay we're seeing a difference for our kids when they're here, they're making great progress, but then they're going home to dysfunctional families, to the same communities, the same schools, the same kids in their networks." And so we're not doing enough to support the youth as they're leaving and support parents.

So what we are doing in this project is really working collaboratively with partners in the field to address their needs and to be able to help them advocate for what they need within their systems.

>> [Kym Ahrens] I also think we need to be pushing to massively expand the amount of community-based mental health and substance use treatment options for youth. I mean, it's not hard to predict who's going to wind up in our system and who's going to struggle with substance use.

There's, you know, I think there's just a complete dearth of resources for, in particular, for youth who are low income and and their racial and ethnic minority communities that have far... other communities as well, and I think we have to be lobbying to change that.

I don't see this changing in a meaningful way in terms of the amount that we get we get in our incarceration settings or even or in terms of the amount of youth we're incarcerating until we invest massively in upstream mental health substance use treatment or prevention, really prevention.

>> [Barbara Oudekerk] We just have one question to tack on to… Evan had just asked, and I don't see any more open questions, right?

>> [Carrie Mulford] Nope, you're good.

>> [Barbara Oudekerk] Okay, so I think Yang made such a great you know, point that this is such a priority population for prevention, it really is, it could be a great focus for prevention, and I just wonder, you know, what what we've heard from the field sometimes is that there can be pushback from the justice system saying "well that's not really our mission" and it's easier to infiltrate the justice system with treatment services than it is prevention services, even when there is a great prevention need.

So you guys have done that, you have infiltrated the Justice systems and you're working very closely with them. How did you do it?

>> [Kym Ahrens] Well, we're doing kind of, we're doing treatment as prevention in a way so we're treating existing SUDs as a way to prevent OUD, so I'll just be honest and say like we kind of are looking at the whole, you can provide, you can define prevention in different ways and I think we're looking at it in a way where we're trying to prevent some of the higher, and use the most impactful, the most likely to result in mortality.

So I think part of it is that you have to, in a way, address the treatment needs and Lisa Saldana, we were just, some of us were just at the Society for Prevention Research Conference and Lisa's plenary session, she's one of the other recipients of one of the prevention grants and I think we all, she said something that really resonated with me is that you have to find a way to address the treatment needs in order to put prevention on the agenda so I think they kind of have to go hand in hand is my opinion on that based on my experiences.

I think you have to be able to kind of address both levels at the same time.

>> [Danica Knight] I think in our case, there is a movement within Juvenile Justice to be more trauma informed in our practices and so lots of Juvenile Justice systems are engaging in trauma-informed care training, a basic understanding what is trauma and what have our youth experienced.

But oftentimes trauma-informed training stop at the "what do we do?" What does a culture or a daily routine or an interaction look like if it's trauma informed? And so we've had a lot of Juvenile Justice agencies come to us and say "help" because we, you know, what what TBRI provides are specific strategies.

Here's what you do in the moment. There's creativity, you have to, you know, adapt these strategies for that particular moment in time, that particular interaction, so there's a lot of flexibility but it's the "how". It's the what you do in the moment. It's the way you can be trauma informed. And so that's appealing, that's a real something that's very specific that Juvenile Justice agencies really like.

Unfortunately many of them think, well all I have to do is train my staff and they're good, we're good, and what we know is that you know when your staff are concerned about their own physical safety, playful engagement is not an easy thing to do.

And so changing their behavior is a long haul and a long process and that's where it gets it gets tricky so what we have found is that we can't just provide training. We have to provide ongoing consultation with the people who are, and help them overcome those barriers. And so we have to do a lot more what we call scaffolding of their learning and their applications and implementation of TBRI in Juvenile Justice settings compared to some other settings.

So we develop relationships, we stay in relationship, we help them through these different challenges, and we back off slowly and and they take it on on their own and then they feel really great when they see these terrific outcomes among their kids.

And some of them are collecting their own data and seeing lower recidivism among their kids and fewer kids being placed in state custody so they're seeing, you know, actual non-substance use related outcomes that are really motivating them.

>> [Kym Ahrens] That's exactly what I was going to say. I'm going to modify what I said before, which is, I think what it needs to do is meet an immediate need of the agency. So it doesn't have to be treatment but there has to be, or treatment of substance use necessarily, but there has to be some way that you're meeting a priority, I think, for the agency in some way shape or form.

And that's kind of a critical ingredient.

>> [Carrie Mulford] And with that, thank you all so much to our presenters and to all of you who stayed with us to the end. We really appreciate, and if you provide your feedback, that would be great too. And have a good rest of your week.

Take Care. Thank you all.

>> [several speaking] Thanks everyone.

Bye everyone.

Thank you.