[Dodi Swope]: Today’s topic is the role of prevention in addressing neonatal abstinence syndrome, or NAS for the purposes of today’s webinar. This training was developed under SAMHSA’s task order through the Center for the Application of Prevention Technologies. It is important that we let you know that the views expressed in this webinar do not necessarily represent the views, policies, or positions of SAMHSA or the US Department of Health and Human Services.

It’s also important that we let you know that the webinar is being recorded and archived. The reason that we do that is we often share very rich information and we want you to have the opportunity to go back and see the webinar again, listen to the speakers again, take a copy of those PowerPoint slides, and have the opportunity to share with your colleagues or anyone who you wish was on the webinar but couldn’t make it today. That will all be available to you on your CAPT Connect account a few days after the webinar. It takes a little while to get that up, but it will be up there very shortly.

My name is Dodi Swope, and I am a Training and Technical Assistance Specialist with SAMSHA’s CAPT. I work with the Northeast Resource Team, and I’m honored and pleased to be your facilitator for the day. If anything comes up for you during the webinar, please don’t hesitate to type us a little note in the chat, and we will make sure that our tech team helps you out with any kinds of issues that you might be having.

I want to briefly review our objectives for the day. We are going to be describing the prevalence of NAS, or neonatal abstinence syndrome, and associated maternal opioid misuse in the United States. We are going to talk about how big the problem is. We are going to identify risk and protective factors associated with opioid misuse among women of childbearing age and teenage girls who are also of childbearing age. We are going to
define strategies for preventing and lowering the incidence of NAS, and we are going to look at those challenges and lessons learned from the State of Tennessee. We have a wonderful colleague who is presenting today, and he will share what he has learned and the challenges he has faced in his work in Tennessee.

So, that’s what we are up to today. I hope you are in the right place. We have a lot to cover, so I’m going to continue to move us along. I’m going to briefly introduce our panelists for today, and you’ll be hearing a lot more from them in just a few minutes. We are thrilled to have the expertise of Iris Smith with us today. Iris is an associate with the CAPT, has worked with us for many, many years and brings an incredible wealth of expertise in a broad range of fields, and also has a real commitment to the work of prevention. Do you want to say a quick hello, Iris?

[Iris Smith]: Hi everyone. I'm looking forward to today’s webinar and hearing more from all of you.

[Dodi Swope]: Wonderful. Thanks so much, Iris. And we are also joined by Michael Warren who is the Deputy Commissioner for Population Health for the Tennessee Department of Health, and we are thrilled to have you with us today, Michael. Do you want to say a quick hello?

[Michael Warren]: Sure. Good afternoon everyone. Great to be on the call with you.

[Dodi Swope]: Thanks so much. And you'll be hearing a lot more from both of these lovely people in just a minute. I wanted to take a moment just to set some context for us, as prevention folks, as we hear the information today. As preventionists, we often talk about that river, right? We think about how can we go upstream, how can we keep moving upstream to prevent the issues that we are seeing folks suffering with. So, if you look at the top bubble there, "preventing opioid misuse among women of childbearing age and pregnant women," that's really the work of prevention. We want to prevent people who are in the process of thinking about raising a family or are currently pregnant away from using any kind of opioids because of the dangers involved. That's really where the work of prevention is.

But, what we also know is that there are many people who are already engaged in opioid use, be it under the care of a doctor or using those substances without the care of a doctor, and that is putting their children at risk, so we also need to be thinking about what downstream prevention of neonatal abstinence syndrome looks like. As I think you heard the CAPT say in many, many webinars, it’s very important for us to understand the work across the continuum for the purposes of alignment, coordination, and good use of all of our resources. We are not suggesting that folks go downstream and do that work, but we think it’s really important to understand the downstream work so that we can understand where we fit as we do our work upstream.

So, just wanted to put that context out there for us as we dive into today’s content, because you will be hearing strategies that straddle the entire river. If you have questions
about that, we’d really love to hear them in the chat.

I do want to pose this question just to get us started: Do any of you have experience with substance misuse efforts that target women of childbearing age, pregnant women, or young children? This doesn’t have to be recent experience. This could be experience that goes back maybe into previous kinds of work that you’ve done. For example, my background was originally as a Head Start teacher, and so I did a lot of work with women of childbearing age, worked a lot with families, and also worked with young children who sometimes came from homes where substance misuse was a problem. So, I think about that when I think about this work that we are embarking on today, and I think about what I learned back then.

So, we invite you, if you have had experience with that, to type your answer into the poll, here, on this screen. I think also we know that for many of us, this is a population we don’t have a lot of experience with, and that’s okay. For many of us, it’s sort of a new group of people. Someone responded that they worked in Ryan White. Yes, I’ve worked with the Ryan White branch too, “Part D (women and children with HIV/AIDS).” Wonderful. That’s great experience to bring to this conversation, and I think it really helps us understand that working with families and working with women with young children are a particular target audience, and we need to have some sensitivity to the challenges that they face.

Anyone else out there want to share experience that they might have had working with substance misuse prevention and women of childbearing age? Someone says, “Developing messages, coordinated a community and state task forces, coordinated workforce development opportunities.” Great. So, communication efforts, really getting those messages out. That’s really important, and again, I think it’s so important to be thinking about what are all the messages that are coming out to folks and how do we make sure that those are aligned and make sense to folks.

Someone else said that they’ve been a training or facilitator with DARE To Be You substance abuse prevention program for parents of preschool youth. That’s great. And I think it is really different when you are working with the “littles,” as we say in my family.

We have another person on the call who works with families as a public health nurse. That’s fabulous experience to bring to this conversation. We really want to engage you and hear from you throughout the webinar about your experiences as well. Someone else says, “Currently coordinating a 4 P’s Plus Project with four hospitals here…screening pregnant women who are being admitted for delivery.” I think you are going to hear some of these kinds of strategies in our content today. Wonderful. Thank you so much for sharing those, and we really invite all of you on the call to come forward and share your experience.

We are going to go back now and dive into our content for the day. Thanks so much for participating in that conversation. And with that, I’d like to introduce Iris Smith, who is going to take us through the first couple of sections of our webinar. Welcome Iris.
Iris Smith: Thank you, Dodi. I wanted to begin by giving an overview of what NAS is and give those of you who are not familiar with it, an idea of what some of the symptoms are in opiate-exposed infants. Basically, NAS, the neonatal abstinence syndrome, is a postnatal drug withdrawal syndrome that occurs primarily among opioid-exposed infants shortly after birth. Some symptoms of NAS can occur as a result of exposure to some nonopioid drugs, but generally the symptoms associated with those drugs are less severe and non-life threatening, so it’s primarily the result of exposure to opioids prenatally.

Babies with NAS may display a constellation of symptoms, and some of these are here on this slide. You will see the blotchy skin coloring, excessive or high-pitched crying, poor feeding, hyperactive reflexes and so on. The time of onset, and, to some extent, the severity of symptoms, has been found in some studies to differ based on the specific opioid that the baby has been exposed to prenatally. So, this just gives you an idea of the spectrum of symptoms you can expect to see in a child who has NAS.

I also wanted to contextualize NAS a bit by providing you historical context for it. This particular timeline on this slide was taken from an article in 2014 in Pediatrics, and I use it to help place NAS within historical context. If you look at the left side of the timeline, you will see that our earliest experiences with opioid drugs dates back to the early 1800s and that was when morphine first went into commercial production as an analgesic. With the invention of the hypodermic needle and the development of the synthetic opiate heroin, our use of opioid drugs in both medical and nonmedical settings began to increase. NAS, although we are hearing a lot about it now, was actually first observed in a series of twelve infants in 1892, and the first treated case of NAS was in 1903. Over the past 10 to 15 years, we’ve seen a dramatic increase in infants experiencing NAS, and this increase corresponds to the increase in the use and misuse of prescribed opioids, as well as a resurgence of heroin use in some areas. In addition, which kind of complicates the issue, as you move more toward the right end of that timeline, there has been increasingly widespread misuse of some of the newer opioid pain medication and the increased use of other drugs in combination with opioids. The absolute risk of NAS increases with longer maternal history of use, alcohol or other drug exposure, including nicotine, and Dr. Warren will talk a bit more about that later on, as well as the use of other psychotropic medications.

So, let’s take a look at the scope of the problem a little bit more. This increase in NAS, as I said, mirrors the increase that we’ve seen in opioid use from either prescription opioids or heroin among pregnant women and women of childbearing age. And when we talk about childbearing age, we are defining that as women who are between 15 and 44 years of age, even though we know pregnancy can occur on either side of that age span. On average, about 21,000 pregnant women within that age group misused prescription opioids in the past month according to data from 2007 through 2012 from the National Surveys of Drug Use and Health, or NSDUH. When you look more closely at when during pregnancy women tended to misuse, the NSDUH survey revealed that pregnant women were more likely to misuse opioids during their first trimester than their second or third trimester.
Between 2005 and 2011, a little over 14% of pregnant women in the US were prescribed an opioid during their pregnancy, and that’s an important thing to keep in mind. In 2012, almost 23% of pregnant substance use disorder treatment admissions reported heroin use, while 28% reported non-heroin opiate use.

And let me just take a brief pause here. I think we are interested in hearing some of your reactions to some of what we have talked about before. Dodi, I believe you have a poll question for our audience?

[Dodi Swope]: I do. Thank you. We’d like to hear from you about what strikes you about this data. And just before we move to this slide, I saw someone was concerned about sound, so just giving a heads up to my tech people behind the scenes.

We’d love to hear your response to this poll question. What strikes you about the data that Iris just shared? Thanks so much for that—that was really compelling.

So, we just want to hear what popped out at you, what really made you go, “Woah, I didn’t think about that before this moment,” or, “Boy, I’m really concerned about that piece of information.” We’d like to ask you to please type that into the chat available. We’d love to hear from voices, but there’s just too many people on the call, so we will ask you to use your fingers.

“The widespread use of opioids among women of childbearing age.” Right? It’s much more—it’s a bigger problem than many of us understood, and I also think that piece that Iris brought out about the fact that many are using them under a doctor’s care is a really important piece. “That women are more likely to use opioids during their first trimester.” That’s really important, right? That’s a really important developmental time for the child. Women may be using more opioids during that period of time.

Folks are surprised all together about the prescribing of opioids during pregnancy. And “that OxyContin NAS symptoms weren’t seen first until 2010.” And that was when we really first started to see them. I’m going to put that question to Iris. It doesn’t mean they weren’t there before I’m thinking, Iris, but those were probably the first documented cases. Is that correct?

[Iris Smith]: Yeah. As new drugs begin to come on the scene and come into widespread use, we are beginning to see more of the symptoms associated with those drugs.

[Dodi Swope]: Yeah, yeah. That makes sense. Great. If there aren’t any other comments about the data, Iris, I think we can go back to the other layout, and we will hand it back to you to take us through the next set of information. Thanks so much.

[Iris Smith]: Alright. Thank you. I want to go on now and talk a little bit about risk and protective factors associated with opioid use and misuse.
First of all, when we talk about preventing NAS in infants, we are talking about two things. One is preventing prescription opioid misuse among women of childbearing age and pregnant women, and also preventing heroin use among women of childbearing age and pregnant women. And it’s important that we make that distinction, because some of the risk and protective factors differ between those two populations.

This slide shows you some of the factors that have been found in the research to be associated with prescription opioid misuse. Risk factors include a history of substance misuse, including initiation of prescription drug use before the age of 13, past year misuse of alcohol, marijuana and illicit substances, intoxication, 30-day current use of cigarettes, and having a previous history of alcohol or other drug misuse. Other risk factors include economic challenges, like being unemployed for ages 18 to 34, which is that young adult age, and also having a lower household income.

Finally, a history of physical or mental illness is associated with an increased risk of prescription opioid misuse. This includes having poor health, illness or injury, and a past-year diagnosis of anxiety or mood disorders, and that’s primarily within the 18 to 25-year-old group.

If we shift to the right-hand side of that slide, you’ll see some of the protective factors that the research has identified—and this includes attitudes toward the misuse of prescription opioids, greater perception of risks associated with substance misuse, as well as community norms that disapprove of nonmedical use of prescription drugs. Some of the research has also found that being married or being employed are both associated with decreased risk for opioid use. What I might add here is that many of these risk and protective factors probably sound very familiar to most of you, because they are very similar to the risks and protective factors that we see with other drugs that are misused.

This slide zeroes in on adolescent girls, which is where a lot of us have targeted much of our prevention efforts, and of course, from a prevention standpoint, early intervention during adolescence or earlier can prevent many of the negative outcomes associated with substance abuse.

You will see that there is some overlap between this slide and the last with history of substance misuse and history of mental illness as risk factors, as well as greater perception of risk with substance use as protective factors. But I want to also highlight that there are some other [protective] factors that have been associated with the misuse of prescription opioids among adolescents. You see school commitment, parental influence (having strong bonds with parents), attending prevention class (being part of what many of us as preventionists do, which is to create interventions for this group), and also having a higher income.

[Dodi Swope]: Great. Thank you so much. That was a lot to think about. I'm going to ask you to put on your hat in the work that you are doing today and think about what are the risk factors and the protective factors that Iris just covered for us that you would select with the work that you are doing currently in prevention. Where do you see some synergy with
the work that you are doing, and where do you see where you might be able to do some work on these same risk factors around NAS prevention?

I’m seeing folks are really thinking about those peer influences. They are thinking about those parental attitudes. Some of these are very, very familiar to us as preventionists. Some are also thinking about the large number of life events, those ACEs that we’ve been talking about a lot lately. And the history of substance misuse—so, tracking people’s use over time and thinking about the relationship to mental illness are also coming up. But we really see that the two big ones that are the most common are the peer influences and the favorable parental attitudes. But the history of substance misuse is gaining on those two as we speak. It’s always the fascinating thing about doing these polls. You sort of feel like you are watching the wheels spin.

On the protective side, the greater perception of risk. That’s a very common one for us preventionists to be thinking about is perception of risk, perception of harm—and lots of folks noted that that would be a protective factor they might select for a prevention intervention. Parental influence comes out as a pretty high-scoring one as well and school commitment, so there are lots of places. I think the point of this poll is to say there are lots of places where our prevention efforts can find ground and can begin to work also to prevent NAS.

And so we’d like to ask you why did you choose those factors? What’s going on in your communities and the work that you are doing in your states, tribes, or jurisdictions that made you select those particular risk and protective factors? I see that multiple people are typing. So, we really want to hear a little about why you selected the ones that you did. And, again, the winners were peer influences, history of substance misuse, and parental attitudes; and peer influences, parental influences, perception of harm on the protective factors.

John says, “the school environment and peer influence are really important to adolescents. Those are the places they are living in.” That’s right, John. And “my work offers no opportunity to take on environmental changes such as neighborhoods and income.” That’s really hard, Sherrell. It’s challenging when you can’t feel that you can impact that environment, but we are hoping that maybe there are some ideas in here, that you might see a place where you could potentially do a prevention and education intervention to support some of those protective factors.

Kelsey says, “Adolescents are receptive to those parental attitudes, actions and beliefs.” If any of you out there have ever raised an adolescent, we don’t feel like we are that important to our kids at that time. They don’t make us feel like they are listening to us, but what we know from the research is that they are, and that our voices really do matter. And it’s important to tell parents that that’s still very true—even as their children start to look like they are not really listening to them anymore.

Linda says, “Risk has really increased with the dangerous analogs of fentanyl (even pills are counterfeit, etc.).” Yep. I think I just read a study the other day that said people really
don’t understand that they are, in fact, using fentanyl when they are. “Getting those consistent messages to children [in all those environments]”—Lola, that’s a great point. And “positive experiences in school tend to help girls feel they have a future, so there’s an incentive to make more positive choices.” That’s wonderful, Deborah, I love that. And I do think girls really need that kind of support. Mindy says, “Adolescents really need to have good mentors and many don’t have access to that.” And Fadia says, “Preventive classes can be helpful with getting those messages out.”

So, we really want to encourage you throughout today’s webinar to think about how can you layer in some of the information that you are hearing today with some of those places where you have experience, relationships, and you are already doing some really good prevention work.

Thanks so much to everybody for participating in that poll. I’m going to turn it back over to Iris to take us through risk and protective factors related to heroin. I’m going to click that forward for you. Iris, over to you.

[Iris Smith]: Okay, thank you. In addition to the factors that we’ve talked about associated with opioid use, there are some specific risk factors and protective factors that have been associated with heroin use in particular, heroin being an illicit drug. It’s a little bit different in terms of some of the risk factors. As you can see, personality characteristics in some studies have shown cynicism or a high level of internalized anger or anger towards others, and, of course, a history of substance misuse, including misuse of opioid pain relievers and a history of mental illness. Again, this comes up very often when we look at risk factors for substance use in general. Also, with heroin we tend to see young people who have had a lot of adverse life experiences, such as child abuse, multiple foster home placements, and other kinds of issues throughout childhood.

On the right side of this table, there is not much. We have two protective factors that have been identified. One is having a higher IQ score. The other is having a higher socioeconomic status. I’m not real sure why those two pop out. It may be that folks who are in a higher socioeconomic bracket may have access to other types of drugs besides heroin, or they just might be too smart to use it.

I want to move now to talk to what is probably of most interest to most of the people on this webinar, which is what can we do about all of this. Clearly, NAS is becoming an increasingly serious and critical problem, particularly in some of our states. And, again, Dr. Warren is going to talk more about what is going on in Tennessee with regard to NAS.

But, when we look at strategies to prevent NAS, we are looking at two types, or two categories. One is strategies to reduce opioid use among pregnant women and women of childbearing age—again, this includes the 15 to 44-year-old age group. The second is strategies that reduce harm among women using opioids. Now, as I get into this discussion, you will see that some of these strategies really have to do more with treatment and intervention with the mothers, which falls slightly outside of what you are charged to do in terms of prevention. But we will talk about some of the things that, as
preventionists, we can focus on.

One is educational campaigns and providing information to a variety of audiences is very important. Certainly, system-wide prescriber education informs healthcare providers about the dangers of prescription opioid misuse during pregnancy, as well as recommended practices—and CDC has guidelines for prescribing opiates for chronic pain, which is widely available. I also understand that they now offer continuing education credits for medical providers, who can take a short course on their guidelines.

CDC recommends that prior to initiating opioid therapy, clinicians discuss with reproductive-aged women family planning and the potentials of long-term opiate use on future pregnancies. There is no real empirical evidence at this point to support the effectiveness of these guidelines, but they certainly are consistent with evidence from other fields of study where provider guidelines have been very helpful in changing behavior.

You also, when you think about educating or universal education campaigns, want to think about the points of contact for women who are at risk of using opioids during pregnancy, and you would include in that group substance abuse treatment providers, mental health providers, behavioral health providers—also needle exchange programs, where they exist, or other points of contact that might be able to encourage women, who might be pregnant, to seek prenatal care and to seek medically-assisted treatment.

Other campaigns can educate family members and friends of women at risk, who may help to motivate these women to seek drug treatment and prenatal care. One of the things that I would note here, as I said earlier when we were talking about the scope of the problem, is that the NSDUH survey found that the majority of women tended to use opioids during the first trimester of pregnancy. One reason for that might be that many of these women are more highly motivated, once they realize that they are pregnant, out of concern for their unborn child, and we have found this to be true in working with women who abuse other substances during pregnancy. A lot of work has been done, for example, with fetal alcohol spectrum disorder, as well as cocaine-exposed pregnancies, and so this is really a good time to begin to intervene with women who are using.

Let’s move on for a minute. Universal screening is another strategy and encouraging the use of validated substance abuse screening tools, and that’s a way of beginning to identify the women at risk. It also provides a foundation for beginning communication between the health provider and the patient about the effects of prenatal substance use, and also for making those appropriate referrals to treatment. This universal approach targeting all women of childbearing age also helps to reduce the stigma associated with substance use by normalizing those conversations with health providers.

Again, this particular strategy has not been evaluated specifically for its effectiveness in preventing opioid abuse among women of childbearing age; however, it’s efficacy with other types of substances really points to its potential for being effective with this population as well.
This next strategy is also very important, and that is coordinating comprehensive prevention services. This is, again, a way that those of us who are working at the prevention side of this can really begin to talk to healthcare providers about the importance of coordinating medical, psychiatric, and social services. It strengthens the relationship, as the slide says, between the patient and the healthcare system, but it also provides a more holistic approach to the care of pregnant women. Again, this is not yet an evidence-based strategy for opioid misuse among pregnant women; however, we know, again, working with women, pregnant women, who are substance abusers of other drugs have found this particular strategy to be effective.

Many drug-dependent women will not know they are pregnant until later in their pregnancy. Unintended pregnancies constitute about half of the pregnancies in the United States and nearly 90% of pregnancies among women struggling with opioid abuse, so providing free contraception for drug-dependent women has been shown to reduce the risk of fetal opioid exposure and, of course, subsequently, NAS. Medically-assisted treatment (MAT) relies on the use of medications in combination with behavioral therapies to provide a whole patient approach to treating substance use disorders, and individuals receiving MAT often demonstrate dramatic improvement in their addiction-related behaviors and psychosocial functioning.

So, encouraging women to access medication-assisted treatment, where it’s available. Encouraging women who are not pregnant, but who are using opioid substances, to delay pregnancy while they are still using is also another important strategy that shows some promise. And, then, of course, pregnancy screening in substance abuse and behavioral health treatment settings to identify women who may not know they are pregnant and get them connected with treatment and prenatal care is very important.

I might mention here that CDC, with regard to fetal alcohol spectrum disorder, has a validated program, an evidence-based program, called Project Choices. Again, this has not been tested with regard to opiate misuse, but that particular intervention used a brief intervention, like an expert, to reduce alcohol use and also to encourage the use of contraception to postpone pregnancy. It was really implemented in those settings where high-risk women were likely to be, including jails, substance abuse treatment centers, and so forth. So, even though it’s not yet evidence-based, it’s something that may show some promise down the road in terms of intervening with these women.

And, Dodi, I think I need to turn it over to you, here, for another poll.

[Dodi Swope]: Yes. Thank you so much, Iris. There’s a lot of activity in the chat and I wanted to just call out a couple of pieces before we turn to our poll. One was that John just mentioned how important poverty is as a risk factor in all of this, and I think we can all agree—it is such a hard issue to impact, but it is important to understand that it underlies so much of our work. Another person shared that they are using the One Key Question with their 4P’s Plus screening, offering immediate postpartum long-acting contraception prior to hospital discharge for those without coverage. So when you talked about offering
free contraception, there it is! So, I just wanted to share that example from the chat box and give you a chance to react if you wanted to, Iris, or I can continue on.

[Iris Smith]: Great. Well, that’s great. I don’t have anything to add, I don’t think.

[Dodi Swope]: Ok. Another person says “coordinated integrated care for pregnant women is critical.” I think we all agree with that. Deborah asks, “Are there any attempts to focus contraception efforts on women who are engaged in sex work?” So, the relationship between opioid use disorder and sex work is real, and she wondered if anybody had any expertise or experience with providing contraception to women who are engaged in that. Iris, I don’t know if you have a response to that, or if anybody else on the webinar does, we’d love to hear from you.

[Iris Smith]: Yeah. I’m not familiar with any specific research studies that have looked at sex workers in that regard. I know there has been some work around HIV focusing on sex workers and contraception. The project “Choices”, which I mentioned before, also did target women who were at risk of sex work, who were on the street, and who had a pretty severe addiction. So those high-risk populations are important to focus on, so I’m glad you brought that up.

[Dodi Swope]: Right. And we will continue to be looking at the questions that you pose to us, and we will continue to work on the CAPT end to get you additional information as we find it, so thanks so much for that, Deborah.

I think we can go to our poll. We know that this is fabulous information, and we also know that it isn’t quite that easy, right? So, we wanted to explore with you, as you listen to the strategies that Iris shared for nonmedical use of prescription opioids, medical use of prescription opioids, and heroin, what barriers might you potentially anticipate in implementing any of these strategies in your part of the world, be it a tribe, state, jurisdiction, or community? What kinds of barriers do you anticipate as you try to think about how you might implement some of the strategies mentioned here? Please type your answer in the box. So, we have one here that says, “Substance-abusing women may not seek prenatal care.” Absolutely, and I think Iris mentioned that, or they may not have a connection to primary care in general, so access to medical settings may not be so easy. I think adding that piece about many people don’t know they are pregnant for some time, that’s an issue as well.

I’m sure that there are parts of the country where the rural issue comes up, right? There are just not enough resources available in certain parts of the country, as well as the whole issue of stigma and women not seeking care. You know, “oh, I’m worried about my children” or “I’m worried about other people in my life, but I’m okay. I’ll put myself last on the list when it comes to getting care.” That’s a typical situation for some folks.

“Cost, cost, cost.” Yes. Absolutely. One of the barriers really is what it costs to do this work and so “the long-acting contraception costs vary, but generally you need to think about $1000 for the women that you are serving.” $1000 per woman? I just want to clarify that.
“Providers may be resistant to learning new counseling and clinical skills to address this issue.” I think that’s a very real barrier as well. That’s why development of relationships with providers is so key, to really sit with them and build relationships so that we can address some of that resistance. I think that’s important.

Another person mentioned MAT, or medication-assisted treatment, “fear of treatment is making NAS worse. Also, the belief that if you are getting MAT, you are not really ‘clean.’” I think that’s a really important barrier, and I think we are going to hear more about that in the next presentation as well, and we’d love to explore that further.

Another person mentioned that “state laws can be punitive, and as mentioned, they know they will lose their children even as they seek treatment.” We’ve been doing some work with some of our states in the northeast about this. That’s a real issue about working with DCF and thinking about how to work with families so that they don’t not get what they need because they are afraid they are going to lose their children. Then, just “educating women about their options” and really thinking creatively about where that education can happen is an important piece as well.

Wonderful. I’m going to invite you in, Iris. Any comments on this before we move on to our next presenter?

[Iris Smith]: Yeah. Those are some really good comments and I’m glad that someone raised the issue about state laws. There are currently 18 states which now have punitive laws on the books, which either consider prenatal drug use to be child abuse, or where there are issues around protective services with loss of custody. What I want to say here is we’ve seen this before. I worked very early on in fetal alcohol syndrome. Back then, that’s what it was called. With prevention, back in the 70s and 80s with crack cocaine, and with every iteration of the new drugs, we saw these laws come about, and you are absolutely right. One of the risks, of course, is that women won’t trust the system. They won’t come in for prenatal care. They won’t go see a medical provider for fear they are going to be identified. So, it’s a very delicate issue. On the other hand, obviously the priority is protecting that unborn child. So these are some very good comments here.

[Dodi Swope]: Wonderful. Thank you so much, Iris. And thank you for sharing all of that wonderful information. Iris is going to stay with us, and so if things come up that you want to ask Iris again later, she is going to be with us for the rest of our time together, so don’t hesitate to continue to think about that.

If we could turn back to our other layout, it would be my honor to introduce our next presenter for the day, and I think you will find this next presentation really helpful in getting a little bit more concrete about what you might do. I’m thrilled to welcome Michael Warren, who, as I mentioned before, is the Deputy Commissioner for Population Health for the Tennessee Department of Health. Welcome Michael. Michael is going to share his experience from his state.
[Michael Warren]: Great. Thank you, Dodi. And thank you to Dr. Smith. What a wonderful presentation, and I always find it fascinating when you are asked to talk on a webinar and you end up learning more from your co-presenters than you actually bring to the table, so I really appreciate the opportunity to learn from Iris and think about how we might frame this conversation.

I’m grateful to be here today to talk to you a little bit about the experiences that we’ve had in Tennessee and share some lessons learned. I want to share with you, to start off with, the picture of NAS just from a numbers standpoint. So, you see here about a 13-year span in Tennessee, and we started really thinking about our state-level efforts in 2012, and, at the time, the public health data that were available to us were only good through 2010.

There’s often a lag in accessing data, and so our state administrative data were showing us the picture that you see in the box there, but remember, we were in 2012, so what our partners in the community were telling us were that “we are bursting at the seams, so we are seeing so many of these babies in our hospitals. We don’t know what to do. Our nurses are being burned out on caring for these babies.” We actually had a hospital that had to build an entire new wing just to be able to care for these babies in a NICU setting.

So, we knew that there was something going on, but our data, again, really lagged in being able to tell that story. So one of the first things that we did was to add neonatal abstinence syndrome, or NAS, to our state Reportable Diseases and Events list. All of your states have these. Historically, these have been used for communicable diseases, things that might need quarantine for example or contact tracing, but in our state, the state health officer commissioner has the ability to update that list as appropriate, and so given the magnitude of this program, we added NAS to the list. That required hospitals and providers and those making the diagnosis to submit a report to us anytime they have a case of NAS, and they give us some basic information about the case. They offered some information about how they made the diagnosis and then also some information about the source of exposure.

What we were able to do with that data is to turn it around very quickly, and so now on a weekly basis, we publish online these surveillance reports. You will see an example of one of those reports on your screen. I say this is some of the most real-time data in Tennessee state government. We use the CDC surveillance suite, which runs from Sunday through Saturday, so the week ends on Saturday and on Monday morning our epidemiologist comes in, runs the data from the prior week and publishes this report, and usually it’s up by midmorning on Monday. So, you are able to follow across the course of the year the cumulative incidence of NAS and how many cases we’ve seen from across the state.

We also have data on where NAS cases are occurring in the lower left-hand corner. We break it down by 13 public health regions, and then, very important to us and to prevention work and for partners like you, is thinking about the specific sources of exposure, so you will see that over in the lower right-hand corner. We actually break the cases down by what were the sources of exposure for the mother.
To give you an idea of the most recent year trend, we started surveillance in 2013 and saw a small rise of cases in 2014. We’ve been pretty steady since then. If you look statistically, there’s not a statistically significant difference across those years, and so we are hoping that we’ve reached a plateau in the number of cases, although it’s important to note we’ve still not yet seen a decline, and that is certainly what we are all working towards.

I mentioned earlier about the exposure source listed on the report. You will see on the left-hand side there are a variety of discrete exposures that can happen. So, you can get NAS if mom is taking a prescription drug as prescribed to her by a healthcare provider. You can get NAS if a mom is taking a prescription drug that wasn’t prescribed to her (we talk about diverted drugs). And then you can also see NAS in cases of illicit drug use, and we get all sorts of combinations of those. For reporting ease, we break those out into four mutually exclusive categories. You will see those on the right-hand side of your screen. What I’d like to point out is that if we collapse our data across four years, what we see is almost 80% of our moms are using at least one substance prescribed to them by a healthcare provider.

So, if you look at that first set of bars, prescription drugs only, and then the third cluster of prescription and illicit drugs, if you combine the totals of those two categories those are the moms that delivered an NAS baby that were using at least one substance prescribed to them by a healthcare provider, which I think is incredibly important as we frame this conversation. Often, you heard Dr. Smith talk about stigma, and often there is a tendency to say, well, these are those moms over there who are doing bad things. In fact, in our state, what we know is that the vast majority of these moms are actually getting these substances prescribed to them by healthcare providers.

Interestingly, if you look, and this is the most recent year, 2016, if you look at that prescription drug only category, the vast majority of those cases were ones in which the mom was receiving medication-assisted treatment, or MAT. So, we actually find that very encouraging and hope that that signals that the system is working well in the community and that women who desire MAT are able to access it. Also, that number has actually been increasing over time.

So, it’s good to know what your data show. It’s good to know when there is a problem, but then the question becomes, so what? What are we going to do about it? As we think about NAS, we want to think about prevention, and what you see here is classic teaching around prevention. People talk generally about prevention, but we know that there are varying levels of prevention, and in public health we often want to focus on primary prevention, and that’s really about preventing a disease before it ever happens. If we talk about neonatal abstinence syndrome, that means preventing addiction from occurring in the first place or preventing an unintended pregnancy in a woman of childbearing age, so exactly the kinds of strategies that you heard Dr. Smith talk about.

So, if we think about that at the state level, our Medicaid agency has been very interested in this, and when we first started having this conversation, they were very interested in looking at their covered lives and how many of their women of childbearing age had a paid claim for [a narcotic]. So, what you will see in the red box that’s highlighted here are the
rates per thousand women who had more than a 30-day paid claim for [a narcotic]. It’s interesting, when they first ran this analysis the numbers were very high and they said, “gosh, maybe it’s because we looked at very short-term prescriptions,” three days from the emergency department or five days from the dentist for example, so they went back and limited this just to women who had more than a 30-day claim for narcotics in the past year and the numbers remained very high. You can see 10 to 11% on average.

Because they have this claims data, they are also able to look at how many of those women had a claim for a contraceptive; and what they found was that only about 15% of those women who were getting more than a 30-day supply of narcotics also had a claim for contraception. So, if we think about preventing unintended pregnancy, certainly among that 85% remaining, there are some great opportunities there. The reason that’s important is if you think about the general population, the rate of unintended pregnancy in this country is 45 to 50%. That’s among all women of childbearing age, but if you think about women who abuse opioids, that number is much higher, maybe around 85 to 86%, so thinking about prevention of unintended pregnancy is very important in this population.

So, our east Tennessee region is one of the areas that is hardest hit in Tennessee and they engaged in a primary prevention project thinking in light of that Medicaid data I just shared with you. They started a partnership with one of their county jails where they actually go in and provide health education to the inmates. Part of that education is around preventing neonatal abstinence syndrome. So upon release, those inmates can actually choose to come to our local health departments for services. It’s important to note the services are voluntary. Those are only obtained when the individual requests those and provides informed consent for those, but what we found is that many of the inmates who receive that education wanted to come to the health department for services. Many of them opted for a family planning method, and among those, many of them, almost all of them in fact, chose one of those voluntary reversible long-acting contraceptives, or LARCs, that you’ve heard about.

It’s important when we think about approaches like this, particularly as a government agency, that we are always mindful of the voluntary nature of these services and absolutely not engaging in any coercion. So we had our Title X family planning federal site visitors come out last year and look at the program, and they reviewed that program very favorably and did not feel that any coercion was taking place. But it’s important to think about that if you are thinking about going in that direction.

That project, because of the local success, has been replicated, and so you will see with the purple stars, the places that it has been replicated across the state in Tennessee with 41 of our 95 counties now participating.

So, that was an example of local-level work. At the state level, there’s a lot of interest in this, and I’ve already mentioned our state Medicaid agency. One of the reasons that they are interested is that this is really expensive for them, so if you look on the right, the column that says NAS infants, this number of infants, it’s about 2.5% of all of the infants that Medicaid cares for in our state; but the cost of caring for babies with NAS actually
represents about 13.5% of their cost—so it’s a fairly small proportion of their total patient pool, but a fairly large percentage of cost, so they are very interested in this. Our state child welfare agency is also interested in this. If you look at babies who are on Medicaid who end up in child custody over the course of the first year of life, for all infants on Medicaid, it’s just over 1%, but for babies with NAS, it’s about 15% or 1 in 6.

So not only are public health folks interested in this, Medicaid is interested as one of the largest payers, as is our state child welfare system. And so, in our state, a number of agencies came together to form an NAS subcabinet working group. This was an approach that had worked well with other agency issues that span multiple agencies in state government, and what was really impressive was that cabinet-level officials came together from public health, child welfare, human services, mental health and substance abuse services, Medicaid, as well as our children’s cabinet. And they came together on a regular basis to talk about what we might do across agencies to address this.

One of the first things that the group did was to request a boxed warning. Sometimes people will call that a "black box warning," and we wrote to the FDA in 2012 and requested a boxed warning on narcotic analgesic to raise awareness about the concern for neonatal abstinence syndrome. In 2013, so almost a year later, the FDA did release a boxed warning. It was for extended release and long-acting opioid analgesics, and what this allows is a conversation between patient and provider. So, if a provider is going to prescribe these opioid analgesics or pain relievers to a patient, it’s a prompt to say, hey, ‘let’s stop and have a conversation about the risks and benefits of this medication,’ and one of those risks being neonatal abstinence syndrome.

Similar to that, our Medicaid agency, TennCare, worked on their prior authorization process. You may know that sometimes when a provider prescribes a certain medication, an insurance company might require some special certification or authorization before that medication could be approved. So in the case of long-acting narcotics, our state Medicaid program requires that the provider note that they have counseled the patient on the risk of neonatal abstinence syndrome, if they are going to prescribe one of these narcotic medications, they’ve asked about contraceptives, and that they’ve actually offered access to contraceptive services to the patient. Important to note, it is not required that the patient receive contraception, but that at least the conversation is prompted between the provider and the patient.

There are also a myriad of laws that have been passed over the last four to five years in our state. Some of those are aimed at very upstream prevention. Dr. Smith talked about preventing misuse from occurring in the general population, so we’ve got a very strong prescription drug monitoring program. Providers are required to check the database before they prescribe most controlled substances. Some specific laws are around prescribing in terms of quantity that can be prescribed and some chronic pain management guidelines that help support providers in good prescribing practices. Also, some laws are around dispensing and how much medication can be dispensed at a given time. Recently, we’ve moved toward increased regulation of our pain management clinics. There are also some laws around treatment. For example, in our state, we have something called the Safe...
Harbor Law, where women who are pregnant get priority in line for state-funded substance abuse treatment services.

We also did have a law on the books for a couple of years that allowed a woman, who illegally used narcotics during pregnancy and who delivered a baby that was subsequently deemed as being harmed as a result of that use—she be could be charged with a misdemeanor. That was an interesting law that, as compared to other laws that passed, had something called a “sunset,” meaning that if the legislature didn’t take additional action within two years that law would go away. There was quite a bit of concern from a number of folks about unintended consequences, including women not seeking prenatal care or accessing appropriate medical services, and so when that two years was up, that law actually went away and is no longer in place in our state.

You’ll also see naloxone there—a lot of effort thinking about how we increase the availability of this drug to reverse the effects of drug overdose, so increasing the availability of that in the community.

In addition to those laws, we’ve thought about our programmatic efforts from a public health perspective, and so I just included the strategic map to give you an idea of the breadth and depth of things that we are doing from a public health perspective in Tennessee. This is really across our department, and various divisions and offices are involved in these efforts.

We are excited to see that some of those are starting to pay off. So, the National Security Council has recognized us as one of only four states that are making progress in this area, meaning that we have met five of their six key indicators for laws and regulations that are strong that should hopefully help address the prescription drug epidemic. We also have seen some results in increasing the number of providers who are accessing our prescription drug monitoring program before they prescribe, and so giving them better information about what other medications have been prescribed to patients and having those conversations with patients about potential risk.

We’ve also seen a substantial decrease in the amount of opioids that are dispensed to patients. So, 2012 was the year that our law passed requiring providers to check that database before they write a prescription. What you will see since that time about a 14.5% decrease in the amount of opioids dispensed. MME is milligram morphine equivalence, it’s just a common way to talk about the amount of opioids that are dispensed. So, we are really excited about, again, thinking very upstream and reducing the availability of these drugs in communities.

One of the things that we know is that, despite the scope of this problem, there are still a lot of unanswered questions. So we’ve used some of our flexible federal and state funding to support a number of research questions that were answered by folks in our state. If you are interested, if you want to follow the link at the bottom of the slide, you could actually visit that site and see the study summaries and the reviews that were done as they worked to answered these questions. But, we were specifically interested in a very quick fashion in
getting folks from our state to better understand risk factors for neonatal abstinence syndrome to understand barriers to contraceptive use among women who are attending substance misuse programs, thinking about how best to take care of mom and baby during this time, and then also thinking about provider knowledge and behavior.

I will lastly share a more recent and very exciting research project that is actually still underway. This is funded through the Centers for Disease Control and Prevention in conjunction with the March of Dimes. Our CDC-funded EIS officer, Dr. Mary Margaret Phil, who is pictured there, was able to combine Medicaid and education and public health data and follow a cohort of babies to look at educational outcomes. One of the important things that she found is that babies with NAS, once they reach school age, are more likely to be referred to disability evaluation, and then go on to meet criteria for disability, and then to have special education diagnoses of developmental delay and speech or language impairment—so certainly helpful. Lots of folks have questions about what happens to these babies long-term. That can be a really difficult question to answer, because as you all know very well, there are lots of confounding factors that also can influence development, and so we are happy to be able to add to the literature in this area.

So, I’ll wrap up by hitting a couple of points. One is we talked about primary prevention of neonatal abstinence syndrome, and, again, there are two main strategies for that: preventing substance misuse or abuse among women of childbearing age, generally, and then among women who are using opioids, preventing unintended pregnancy from occurring. The other thing that I think is really important, as you’ve seen from the various efforts that I shared, is that preventing NAS is not something that lives within one state agency or one program alone. You really have to think about engaging a broad group of stakeholders and implementing multiple approaches, which requires collaboration. Not one particular state agency or community group owns this problem.

I wanted to share with you a couple of links. That top link will take you to our weekly surveillance summaries. You will see those again. Those are typically posted on Monday morning so you can get the latest counts for NAS in Tennessee, and then the second link takes you to monthly and annual NAS reports, which have a bit more aggregate detail and some interpretative data, or interpretations about the data and what we are seeing over time.

Lastly, I just wanted to acknowledge the fantastic team that we have at the Tennessee Department of Health, our state health officer, chief medical officer, our epidemiologist who manages who manages our NAS surveillance system and then the data that I shared about the pilot project in east Tennessee was provided by our east Tennessee regional health office staff. It certainly takes a team effort, and I am very fortunate to work with an incredible team of folks who are really trying to help tackle this problem in Tennessee, and I’m grateful for the opportunity to have talked to you today. And I will turn it back over to Dodi.

[Dodi Swope]: Thank you so much, Michael. That was such a rich presentation, and I hope you have a moment to take a deep breath. We have some time for all of you out
there to engage both Michael and Iris in discussion and questions. This is a really unique opportunity, so I do hope folks will start typing in the chat box. You have an opportunity here to ask either of our presenters a question, or ask them both a question, and we can get them into having some back and forth, which we’d love.

As people are starting to type and think about the questions that they have for you, I had one question that I wanted to throw over to Michael. I think you spoke really eloquently about how important it is to get multiple players together to tackle this problem, and I wanted to ask, you know, one of the things that you spoke about at the beginning of your presentation was this real commitment to having real-time data that really showed the nature of the problem and showed the cost of the problem. And I wondered if that was really key in getting that collaboration across multiple departments to actually be effective and happen?

[Michael Warren]: That’s a great question. You know, I think data often drives action and having that real-time data has been very helpful. When folks look at data that are two or three years old they say “well, that’s great, but what is happening now,” and so having that real-time data helps get folks a little bit more excited I think. I think in the case of NAS, it lend some credibility to what they were hearing anecdotally or what they were maybe feeling was going on and allowed them to ask different questions.

So for our partners, for example, in Medicaid, they were sensing that they are getting a lot of claims for this and that their expenses or expenditures for this diagnosis were going up. So they started thinking in different ways around, you know, what’s going on in our population with this problem. They did this great analysis that looked at the amount of opioids that were dispensed to women of childbearing age, who were on their Medicaid roles, so I think it really prompted people to think differently.

We’ve also found that having that real-time data is really valuable for our local partners. For example, our community antidrug coalitions really use that data to help target their efforts, particularly around the exposure source. You can imagine that, while there are some overlap between risk factors, for example, from heroin and prescription drugs, the way you might approach that from a prevention standpoint might also be different, and so it’s been helpful for those community partners to have that real-time data as well.

[Dodi Swope]: That’s great. Thank you so much, and that did give people a bit of time to share some questions with us. Amanda asks, “Why isn’t the western side of Tennessee as engaged as the rest of the state?” I think she’s thinking of that slide where you had the purple stars maybe.

[Michael Warren]: Great question, Amanda. So, if I were to show you a map of the distribution of neonatal abstinence syndrome cases, far and away, those are most heavily concentrated in our east and northeast parts of the State of Tennessee. That map really overlays nicely with maps of opioid overdoses and opioid prescribing, and so we tend to see those clustered there. We are starting to see the incidence of NAS increase in our counties in the western part of the state, and as we see that, I think you are starting to see
a progression of those prevention programs move west as well. The other thing that I think, and you are very astute to pay attention to, is that any time you’ve got holes in your map, you need to think about why that might be the case. Why are there disparities in our data? So on our NAS survey, one of the things that we have looked at is are the hospitals in that part of the state aware? Do they know about the reporting requirements? Are they reporting as we would expect them to? So that’s been an ongoing effort for us, but I really appreciate that question.

[Dodi Swope]: Great, Amanda. I hope that answered your concern. Candace writes that she is interested in getting more information on the study that you mentioned about the long-term effects of NAS when you mention the educational outcomes and the disability diagnosis. Is there a reference for that in the slides?

[Michael Warren]: So, there’s a reference to a poster that has been presented, but we are actually in the process of writing up a manuscript that will hopefully be published within the next year or so. But, Candace, if you want to email me, I’m happy to share with you the abstract that’s already been presented and actually maybe, Dodi, we could get that and share that with the webinar participants. I’d be happy to get that to you if you could share it.

[Dodi Swope]: That would be wonderful, Michael. Thank you so much. We’d love that. We will put it with the packet that we put on CAPT Connect for everyone. Thank you. That’s very generous. We appreciate that.

We also have a question from Sherrell. She says her Alaska Medicaid program does not cover Immediate Postpartum LARC. She wonders if Tennessee’s Medicaid program does, and she wondered if you had any suggestions for her because of the cost of that, that’s a huge issue.

[Michael Warren]: That’s a really important question, Sherrell, and you are exactly right—cost is a big barrier. And so, even though some of our hospital champions have been great supporters of this, when it’s not covered as part of the global delivery bundle, there really are not incentives for them to provide that. So, very recently, our state Medicaid program has worked out the policy to be able to do this. I will say they’ve been engaged from the very beginning. There were just a number of logistical challenges that they were trying to work through, and so they’ve stuck with us from the very beginning. They have been very active, for example, in our subcabinet, and this has been a conversation that’s been going on for several years. We just did start to see that in Tennessee, and it’s actually being rolled out now.

I know there are a number of other states that have done this well. South Carolina comes to mind. And so, looking at examples of other successful policy, I think, in terms of your question about what suggestions do you have, the thing that may compel payers is to look at the costs that they have associated with a particular diagnosis. So, just as our Medicaid program did, getting them to take a look at how many babies with NAS do they have, what are the costs associated with that, and getting them to think about upstream prevention
efforts, may be a good way engage them in that conversation.

[Dodi Swope]: That’s very helpful. Thank you. Thanks so much, and thanks for the question. We have a deep question from Michael about any progress in addressing those community conditions that contribute to the problem, like joblessness, housing, and related mental health conditions? So, Michael wants to go much farther upstream and consider some of those issues. Any thoughts on that?

[Michael Warren]: What an important and, as you said, profound question. I think, as we think about any of the major public health problems of our time, certainly one of the areas that we have to think about involves the social determinants of health, and that’s exactly what Michael is getting at there. That being said, I think it’s probably one of the most challenging things that we deal with.

You know, many of us are trained in traditional medical care, for example, and so we can diagnose you and we can tell you what prescription that you need; but if housing is your challenge, or employment is your challenge, we don’t necessarily have those tools in our toolkit. So I will say that it’s something we’ve continued to struggle with, but that’s why it’s so important to engage those other stakeholders who are involved in this problem as well. Community antidrug coalitions can be a great resource, because they’ve often got those partnerships and connections in the community with housing resources, or job placement services, or job training services, for example, to be able to start to make some of those connections.

We have looked at a small pilot that is fairly new, but looking at wraparound and recovery support services for moms who have delivered NAS babies. That’s something we’re funding in the northeast part of our state, where we are looking not only at making sure the mom is connected to treatment and that baby is getting the medical care that it needs, but also that mom is getting assistance with getting back on track from an education standpoint, if that’s a priority for her, getting stable housing, getting connected to employment. Certainly sometimes that requires an extra little bit of help. So, we are hoping to learn from that pilot. So I think you hit the nail on the head. As Dodi said, that is very upstream thinking, and it is really important to think about those social determinants of health and understand what those challenges are in your community.

[Dodi Swope]: Thanks so much for that response. I’d also just like to invite Iris back in. Any comments now that you’ve listened to the rest of the presentation, Iris? Or any responses to any of the questions that Michael took a stab at there?

[Iris Smith]: Thanks, Dodi. I don’t think there’s much I can add to what Michael has already said. I whole-heartedly agree. I think addressing those social determinants of health—they are important and they can be overwhelming to think about, particularly if you are working in prevention, there is only so far you can reach; but forming those collaborations and setting up a pattern for making those referrals is critical. The more sectors you can involve in the effort, the more effective you are going to be with that.
[Dodi Swope]: Wonderful. Thanks, Iris. I'm going to do a last call for any remaining questions that are out there. This, again, has been such a rich conversation, and we will be sharing this information with you, along with the recommendation for that additional resource that Michael just mentioned. All of that will be on your CAPT Connect account in a few days. It takes us a while to get the recording organized, but that will be available to you.

Are there any other questions? We do have a few more minutes if there are any other lingering questions out there.

One of the things I wanted to mention is I've heard this presentation a couple of times because I've been on the planning team and every time I hear it I get another level of “Oh my goodness! I didn’t pick that up the first time!” I believe that will happen to many of you and you will want to go back and hear the recording again. We would love it if you have interest in digging deeper into this topic. There is a question specifically related to that on the evaluation, and if you let us know that you are interested in going further in this discussion and learning more, diving deeper, we will be very happy to produce a part two. And, yes, we will absolutely put a list of the products that will be available on the archive page in just a minute in the chat box. Thanks so much for that question, Carol.

Before we end today, we did want to turn just for a moment to thinking about all of you as you leave the webinar today and think about where you’re going to go with your prevention efforts, moving forward. So what we’d like to do is ask you to just put back on your prevention hat, think about the community or the state, tribe or jurisdiction that you are working in, and think about where you might move this information that you learned today forward.

Is it reaching out to a new partner? Is it thinking about gathering some data in some new ways? Is it thinking about maybe talking to an existing colleague and understanding what the scope of the problem is locally? All of those things are important. But we do want to offer a simple framework that might help you start to think about that planning, and so we have this roadmap, and I’m going to invite Iris back in to sort of walk us through that. Iris?

[Iris Smith]: Sure, Dodi. Actually this diagram was adapted from a paper by Irwin et al, which I think is in publication this year, and it’s actually from east Tennessee, which is interesting. Michael I invite you to chime in as well. This paper describes a collaboration between Knox County Health Department, the east Tennessee Regional Health Office and the University of Tennessee to develop a planning model to build community capacity and readiness to address NAS in their community. It’s called the Public Health Driver Diagram, and I think it nicely summarizes much of the discussion we’ve had in today’s webinar.

This abbreviated model is an example of how communities can begin to develop a plan. To the left are four broad prevention goals: improving preconception health, encouraging early entry into prenatal care and early identification of infants at risk of NAS, and decreasing the prevalence of unintended pregnancy of women who are using or addicted to opioid drugs as well. To reach those goals, you have to act in three domains, and that’s that
middle column. You have to look at service utilization, and that includes not only access to prenatal care, but also to mental health. One of the comments in the chat was how do you deal with concurrent mental health issues in some of the women who are at risk of giving birth to NAS infants, and obviously you have to link to those resources.

What is also important is that you think about making pregnant women a priority, and again going back in history, we’ve had these discussions every time there is a new drug that poses a risk for an unborn child. But you have a very narrow window of time to really impact pregnancy. So being able to get women into the appropriate MAT treatment program, as well as into prenatal care and provide them with other kinds of support services, becomes very important. And the stigma that they encounter can come from within, feeling ashamed or frightened or what have you. It can come from family members in the community and the way women who use these drugs are perceived, but it can also come from the institutional side where some providers are reluctant to work with pregnant women or do not have the skills and the knowledge to address the issues that are more specific to pregnancy.

So that’s one domain. I know Michael addressed the issue of integration of services very well: improving communication within the different components of your community system, awareness of NAS between partners, including law enforcement, of course healthcare, the judicial system and community systems is incredibly important. And being able to access the women at whatever point they enter the system, whether it’s through the correctional law enforcement system or the prenatal clinic, it’s very important.

And then, in a more general way, just encouraging healthy behaviors and environments, and that gets back to reducing the stigma associated with mental health and substance abuse treatment services.

The other thing, which came out in this discussion, was the importance of postnatal follow up. Dr. Warren talked about the follow-up study that they are doing on children who have experienced NAS. It’s very important that we think about those children as being in a risk group, not only because of the exposure to the drug, but also the environmental conditions that go along with being in a family where there is still active substance use or addiction.

Recently I’ve been reading some articles about children who are exposed to Fentanyl, because of discarded needles, so there are all kinds of issues that may require attention as these children grow and develop. As well, we need to be aware that the woman’s life has to come back together after pregnancy. And while we concentrate a lot of our efforts on the upstream, there is also what happens after the baby is born. And to keep in mind that women who have had one child exposed to opiates or other drugs of abuse, are at risk for giving birth to another. So having those supports in place is also upstream prevention. Even though, as a preventionist, that’s not something you would do—you would do it through collaboration with others—it’s still really important to keep in mind.

[Dodi Swope]: Thank you so much, Iris. This is really helpful concrete information to help folks think about where they can go as they return to their work today and going forward.
Really helpful roadmap I hope you folks out there found it helpful as well. Thanks so much for that overview.

If there are questions, please do continue to type in the chat, and we’ll continue to answer them for the limited time that we have left.

We did want to point to a resource that we’ll be sharing, again, at the archive site, and this is an at-a-glance resource on Preventing Neonatal Abstinence Syndrome: Facts, Factors and Strategies. A lot of the information that was presented today is in this resource, so that you can see that here. It’s also available in a file share that we’ve just pulled up, both the at a glance document and the PowerPoint slides for today, but we will also have them in the archive site with a recording of the webinar. So all of that will be available to you in a few days.

I think one of our people from the tech site is addressing your question, Deborah. We will make sure that we get the numbers right so that the references are easy to identify. Sorry about that if that was a typo on our part.

So, we did want to leave this file share up here for you. All you have to do is just move your cursor over to the file share pod, and if you click on that, it will ask if you want to download it, and you can download it right to your desktop. We will make sure that it is connected when we send the slides out after the event, Debra, so sorry about that glitch. We will make sure that everybody gets what they need from the webinar, post-webinar.

We did want to just close with a moment of reflection and ask you to think about what was one thing that you heard today that was either a real “aha” for you, a moment where you took out your pen and said, “oh, I’m going to go do that when I get back to work tomorrow,” or “boy, that’s something I really want to learn more about.” If you could just share that in the chat, that would be really helpful. We hope that there were a few moments there where you said, “oh, now that’s something I hadn’t thought about before, but that’s something I can do.” So we’d ask for you to share those in the chat.

I think there was a lot of really good focus on where preventionists can work upstream of this issue and in support of their colleagues that are working further downstream, so we’d ask you to think about that and please share your ideas in the chat. As Dr. Warren said so eloquently, we all need to work on this together; not any one sector or any one person can turn around the tide on this problem. We need lots of people working on it.

“It was really good to hear about how the issue can be addressed on a statewide level in Tennessee with leaders from state agencies participating.” It’s a wonderful model to see the collaboration that has happened in Tennessee, and I think it’s a nice model for the rest of us to start to think about how do we build those kinds of collaborations in our own states. If you have other thoughts from today or if you are particularly interested in going deeper on a particular area that you heard about today, we’d love to hear that as well.

“Sharing of Tennessee’s data was really helpful.” Sherrell will be taking that to their
epidemiologist and encouraging them to add that to the session. That’s great. I do think data, as you said, drives action, and when we ask the questions, that’s when we really start to see that movement.

Deborah is interested in linking this with special education records and would like to know if they also looked at whether kids were served in the part C Early Intervention system before SPED. Debra, I'm an early childhood educator by my beginnings, and I thought that too. I thought, “is early intervention is involved in this? They should be part of this system.” Michael, I don’t know if you have an answer for that?

[Michael Warren]: Absolutely. So we are looking at both of those. Our challenge is that in our state the early intervention system data is stored in a different database that’s not as easily extractable, if you will, and so it’s involving some manual searches. So the special education data for school age was actually easier to get to. That’s why we started there, but we absolutely have been working with our part C partners and hope to be able to look at that data as well.

In our state, NAS is one of those automatically eligible conditions for early intervention services, so our hope is that the vast majority of these kids are getting referred, although we suspect that some of them may not be, so we are very interested in looking at that.

[Dodi Swope]: That’s wonderful. Thanks for that response. It definitely was a light bulb that went off in my head as I heard you speak about that study. That’s great.

Kelsey also remarked that what she has usually heard in regards to this topic is around treatment and recovery for pregnant women, but she really appreciated the focus on contraception as being a really important option for women using opioids and other substances, so I just wanted to mention that too. That’s great, Kelsey, I’m glad that was helpful.

We can take just a couple of more comments, and then we are going to wrap up our time today. This has been fabulous. I want to take the opportunity to thank our presenters today. Both of you were just fabulous and shared such wonderful information, so thank you so much Iris and Michael for being with us today.

I think we’ll move us right along now to wrapping up our webinar. If you have further questions or comments about today’s webinar, you can contact Amanda. Her contact information is here on this slide, and it will be in the slides that you can access on your CAPT Connect portal. We would like to ask you to take a few minutes to fill out an evaluation for us. We really value what you think, and as I said, if there are areas where you’d like us to go deeper or explore further, there will be a place to do that on the evaluation.

We’ve given you a popup here to make it really easy for you to come right in and do your evaluation for us. You can keep this screen up, and if you still want to see the slides for another minute, we are just another tab over on your browser bar. So, we’d love to ask you
to fill out your evaluations.

And Fadia says “the top-down approach for preconception health to pregnancy prevention will be our topic for discussion.” Great. Wonderful. Well we’re glad you’re taking that out of today’s webinar.

Thanks so much. You can do the evaluation either now, as it has popped up on your screen, or you can go to the link that’s available on the slide, so we do encourage you to do that evaluation.

With that, again, I’d just like to thank Dr. Warren and Dr. Smith for being with us today and all of you for participating. It’s been a rich and wonderful day. Thanks so much for your time and, with that, we will close the webinar.

Thank you.