>> [Captioner standing by] >> Thank you so much for joining us this session. Before we begin the presentation, we want to take a moment to review today's platform. On the right side of your screen, you will see our engagement zone . There are four icons at the bottom you need to be familiar with to make the most of your virtual experience. First is Q&A. This is where you will submit questions for the presenters. Send in the questions at any time during the session and they will be able to respond. You will also be able to of vote, good questions your attendee s submit. There will be polls to test your knowledge. Third is react. This is a fun way to let dissenters know how they are doing. Last is help, which offers some triple troubleshooting tips. If your screen freezes at any point during the presentation, please do not panic. Just press EF5 or command are two refresher connection. If you continue to have issues, submit your issue under the Q&A tab on the right or email @ submit your issue under the Q&A tab on the right or e-mail@tran01.org. Now onto our presentation.

This presentation is entitled "Patient Interventions: Mutual Help, Psychotherapy, and Social Support" . I will pass it off to Dr. Paul Earley to begin the session.

Welcome back. It is good to be back with you again. At this time, I will be speaking about patient interventions , which include mutual help, psychotherapy and social support. As always, we will be available on chat. If you have questions during the course of this presentation, please feel free to enter that into the chat box on your screen. First, I want to begin with my financial and other disclosures. I am currently the medical director of the Georgia professionals health program, for which I received a salary. I am a principal in a small consulting firm, Earley consultancy, which I have a small salary and a have stock in healthcare company called DynamiCare Health, Inc.. DynamiCare Health, Inc. offers contingency management items. I will be talking about contingency management but will not discuss anything about DynamiCare Health, Inc.. Let's go ahead and begin. This is a super big topic. There are a lot of areas of care that people with addiction disorders need and it is our job to be aware of them, to understand them and to be able to make proper referrals for each of them. I will walk through them each, one by one and talk about the benefits of them and the areas where they proved to be the most helpful. As an addiction medicine physician, you should know about all of these. I encourage you to learn more than just this 45 minute presentation. We are going to start with something called recovery support services. Recovery support services are the wrap-around services that everyone with substance use disorder needs. They don't need all of them but almost everyone that walks in your door needs wrap-around services to ensure the best possible outcome from their substance use disorder. They may need translation issues if their primary language is not English and they have transportation issues, this could be bus vouchers, to support from friends to get them into a setting where they can get services for their addiction disorder. They may need help with housing or family. They may need help with parenting and child care. They may need help with understanding cultural and gender discrimination, deeply rooted around substance use disorders and if they are the victim of that, there are some conduits to help them with that. That is important. They may need help with employment. They may need help with

financial and legal services. They might need help with schooling and training. Understanding all of these is supercritical, if you're going to be able to provide a well-rounded care for your patients for substance use disorders. You may not be providing for all of them but getting to these services, having referral source, is critical. The next piece you may actually be doing some of yourself. It also may be done by an external psychotherapist or counselor. That is relapse prevention training. Relapse prevention training is a wide-field with wonderful evidence-based methodologies associated with it. Relapse prevention training provides definitive skills that can be taught and practiced in the course of proper and well-rounded treatment. Research supports at least two therapeutic approaches, the cog now behavioral approach and a mindfulness-based approach, a couple of references you see on the slide here. Both of these rows from Dr. Marlatt's group at the University of Washington, let's dive into these a little bit more. One of the most important things for individuals with substance use disorders to do is recognizing cravings. Cravings are a normal part of the human experience. Even if you don't have a substance use disorder, you have experienced cravings for chocolate , maybe for a little bit of fun at the end of a boring day or craving to be around your friends and relatives. Addiction disorder simply grab onto this process. In addiction recovery, these cravings can be quite intense and/or persistent. The strike, frequency and duration of cravings vary from person to person and from time to time. Importantly, they are not necessarily predictors of relapse, however, learning how to deal with cravings is critical to prevent relapse . For some individuals, cravings may never completely disappear. It is important to not judge her patients because they have them and, in fact, it is important to encourage your patients to discuss even minor cravings with you through the course of your care. Learning to manage cravings is a central part of the recovery. There are several different types of cravings, environmental cues, such as seeing a drug in front of you or even on a movie screen . Smelling tobacco smoke, or even hearing addiction related music , which could occur during periods of past use. There are also visceral events, things like body sensations, taste or smell . There are emotional events, things that an alcoholic, for example, used to drink over, an emotional mess event may trigger a craving for alcohol because that is the behavior that occurred previous to admission. Finally, there are types of memory tapes that play a scene in the mind, especially those that are especially strong with certain substances in certain circumstances. Getting your patients to recognize them, talk about them and normalize them is important in developing a specific behavior in response to prevent use. One wonderful model of relapse came from Dr. Marlatt's lab, as I talked about earlier. We will not go into details here about this, but if a process of relapse is not a singular event, one patient came to me and was talking about his relapse and said, I told him, tell me about how your relapse occur. He said, I found myself in a bar with a drink in my hand. That information is actually not helpful, is it? We need to know how he got to the bar. With thoughts, behaviors and actions had him move for the place he was into the bar, order the drink, which then led to relapse? The process model assesses this accurately. It highlights the situation by what seems to be an irrelevant decision at the time. That is part of the a tricky nests of addiction. There is either a coping response or a non-coping response. The coping response leads to increased self-efficacy and improved

recovery process. A non-coping response has a cascade of problems, as you see here, leading to what Dr. Marlatt called self attribution, and reinforced justification for abuse. It is important to talk about this, especially with people of a long history of relapse so they can look at the actions which precede the actual substance use. Once the substance use is engaged, it is very difficult to disengage. It becomes easier and easier to go further back in this model. Or can be obtained by reading Dr. Marlatt's and Dr. Donovan's fine book . The last production was in 2007 but it is still relevant today. Important elements of this process model involve collating a list of high-risk situations and clues for when the may occur. This is something that is best done by a written process with the patient's . Considering the best coping response for the most likely high-risk situations, eliminating negative self talk and enacting coping responses when a high risk situation might occur, especially those that seem to be inevitable. Another model of relapse prevention is the mindfulness model. Mindfulness is a state which is achieved by focusing one's awareness on the present moment, while acknowledging and accepting one's feelings, thoughts and bodily sensations. Meditation reduces impulsivity and teaches a calming self-awareness of one's current state. Therefore, mindfulness-based relapse prevention teaches a patient to use mindfulness to decrease impulsivity, to be able to be aware of feelings and experiences and instead of reacting in a knee-jerk fashion, creating skillful responding. Dr. Bowen has another fine book about relapse prevention in the mindfulness model which you should read to understand this powerful technique. Let's move on next to another area of support. Those are called twelve-step support systems. Twelve-step programs are all over the place. There are a lot of them. They are not only frequent in their numbers in any given type of twelve-step program, there are multiple different types of twelve-step programs. In addition, there are other types of support groups which do a wonderful job of creating a network for an individual working on remission. There are also religiously affiliated programs and some less formalized programs that help with support. People with addiction need to be around others that are working to not continue their substance use so they can create mutual help and learning from each other. The granddaddy of them all is Alcoholics Anonymous. There are also two or three big offshoots, including Narcotics Anonymous, cocaine anonymous, Crystal Methvin anonymous and nicotine anonymous. For spouses of individuals who have substance use disorder, Al Anon and Nar Anon are excellent resources to help family members cope with the process of dealing with some of the substance abuse disorder, even on remission. Finally, wonderful organization helps adults who have suffered with a parent or caregiver who had an alcohol or other drug problem causing disruption in their youth. Let's dig into a little bit more about the twelve-step programs. Twelve-step programs help individuals recover through really frequent process mechanisms. These have been well studied by several researchers. Here is an incredible oversight article by John Kelly . Some of these mechanisms include self-efficacy, learning coping skills, creating increased motivation for remission and creating and facilitating this adaptive social network that will help an individual cross this immense valley from substance use into remission. It focuses an individual on long-term goals because our patients with substance use disorder can be focused on short-term goals and provides a holding place for that patience to get there. It teaches relapse prevention skills. It doesn't

do it in this clear and automatically you see in relapse prevention training but the skills are deeply embedded in the culture of Alcoholics Anonymous. It normalizes the experience of loss of control, the slippage of moral values and the trauma that is produced by B an individual with substance use disorder. People with substance use disorder literally auto traumatize themselves through the process of their illness, their drug problems, their alcohol problems, it causes very disturbing events which might even, by the way, need other types of treatment, which we will talk about in a minute.

It sets discontinuation of abusable substance of that primary goal and reinforces that over and over again, something that is incredibly critical. It also provides a path for reconciliation of the past behaviors. It provides a social network that is hopefully free of substance use or at least, way better than any other area around individuals with substance use disorder. With all of these benefits, why do patients not go to AA? There are some reasons patients report that our turnoffs for them. One is a focus on spiritual principles. For some, religious tenets. Not all AA meetings happen at a religious place. Searching around for a place which fits the individual's spiritual beliefs and practices is helpful. In addition a place could turn off indicate this is but it is not a commitment to anything to be a member of AA. Many suffer from social phobia. Social phobia is the most common problem with people with substance use disorders. It is not surprising that a place like AA might seem unnerving at first. Also, newcomers find the formal format somewhat unusual and they look for hierarchal structures were none exist. AA, by its very nature is nonhierarchical but they try to identify a hierarchy because people are so used to this way of thinking. Most patients, by the way, with addiction, are not naturally drawn to AA because it's values and systems are antithetical to the mindset and worldview that their illness has induced previously in individuals. I say to my patients AA will seem odd to you because it doesn't follow the principles by which you have been living all along. In fact, that is a good thing because it helps reengineer, retrain people to enter a reality of compassion for others, self compassion, non-impulsive actions in the world and looking at entire processes in one's life. Here are some of the things in this nice chart that looks around the issues fly patients just like AA. You know, patients approach their issues when they are addicted on short-term goals. Really, AA focuses on long-term goals. Most patients with substance use disorders are looking for quick fix. AA teaches a gradual change. Most patients arrive in treatment saying they are different from other people because the addiction process creates a. Your kind of narcissistic aloneness. AA teaches us we are all the same. People with addiction begin to focus on pleasure. AA teaches pain helps you grow. Patients who want to do this say they sometimes go through a period and say, I can do this, doctor. AA teaches we can do this and says basically the individual rarely has the strength on their own to combat their illness. A patient may want to fight harder to get better. AA teaches a paradoxical, almost Zen -like approach to getting better. You get better and improve when you admit defeat. AA teaches that the problems will improve extend all things get better. AA teaches problems will only improve when you approach the world in a different matter. AA also says I am the problem. People that come into treatment say, my substances are the problem. If they are in a place of

contemplation in the stages of change. What do patients like about AA? Most patients like listening to stories of hope and transformation. You are not forced to talk in anyway. There is no obligate Tory dues or fees. In fact, I tell people to not even put Adele in the hat when they first get there so they don't feel like they are obligated to do anything financially. AA is highly accessible. There are hundreds, even thousands of meetings throughout the day. There is a sense of warmth and belonging. There is an acceptance that often feels like unconditional love because that is really what AA works on. Some patients like to go because of coffee and cigarettes , not that I am happy that people smoke cigarettes around AA meetings, but, again, it is a path . There are some core concepts of AA. Proper implementation requires a familiarity with the core concepts . Everyone who works with addiction should understand these core concepts. First is acceptance of the illness. That means working through the denial and the fact that one is powerless , not over everything, but over their substance use disorder at this present time. Understanding the process of mentoring a sponsor or other individuals who provide support and helps the individual understand the process. Attendance at meetings has to be frequent at first. I tell my patients, it is like old-fashioned antibiotics, you know, you used to have to take penicillin four times a day. The upside is, if you do that, it works. You have to do it frequently at first. Finally, this sense of spirituality or surrender to a higher power of one's own choosing is optional but often talked about within meetings. People often start by saying, I don't how to do this. I will except that the group I am in can help me guide toward remission. I also tell people what is helpful and explore that and at first, discard what isn't. They are not told to adopt the whole thing because it is a very different way of looking at the world , one that has helped millions of people survive. There are some organized ways of teaching this involvement with AA. That is called twelve-step facilitation. If you are going to involve people with Alcoholics Anonymous, narcotics anonymous, cocaine anonymous or other support group meetings, the best type of handoff is the one that is warm or even manual Eric Wise. The cold hand-off is something like, you should go to an AA. Go ahead and look it up online. That is the cold hand-off. You're not going to get much response. I have physicians that come to me and say none of my patients want to go to AA. They don't like AA because it doesn't fit their worldview. You have to work with people to have them understand the benefits and risks

A warm hand-off, however, might be, you know of a meeting at 8:00 on Pine Street every night during the week. Would you like to consider when we meet next? When you come to see me again, we can talk about it. Finally, there is a more organized way of doing this, which many treatment programs are doing which is a manual Eric Wise approached. The manual Eric Wise approach walks through a manual and teaches one how to use the tool of Alcoholics Anonymous insist organizations to support recovery. An individual will find a meeting locally and report back what happens. This type of manual Eric Wise process, there are two excellent manuals, both of which are free. One is part of the project M.A.T.C.H. and is available through NIAAA. The other one is available through a group called making alcohol anonymous easier there has been a lot of controversy and people say, G, you know, I don't think AA works. It is important that we look at what the data shows. Just recently, John Kelly, Keith Humphreys Marcia

Feri posted the Cochrane Review, the gold standard in understanding evidence-based practices. This 2020 Cochrane Review went over 27 studies with over 10,000 purchase of inns, 21 randomized controlled trials or quasi-randomized controlled trials. They compared motivational enhancement, cognitive behavioral therapy with twelve-step programs and twelve-step facilitation. The conclusion of this evidence-based review showed that Alcoholics Anonymous and twelve-step facilitation produced higher rates of continuance of abstinence than the others that were established treatments of MAT and CBT and it may be superior to other treatments for increasing the percentage of days of abstinence,. We in the longer-term. As physicians, we used evidence-based techniques. I encourage you strongly to consider these that the Cochrane Review is telling us that Alcoholics Anonymous is an ex lentil in helping people with their illness. The conclusion of this review , as shown here, there is clear evidence for this modality with alcohol use disorder. John Kelly says it is the closest thing in public health we have to a free lunch. It is essentially free. Now we can add AA to the evidence-based treatment for alcohol use disorder. For drug use disorders, the problem is more murky but many people have shown improvement in that area, as well. I would also consider it for people with drug use disorders, as well. Here is one study, for example, about opioid use disorder. This study from this group had treatment with intensity of service and drug testing results. They used something called recovery oriented systems of care. The benefits of active referrals of twelve-step programs and opioid use disorder are less clear, as we know, but this large study of 21,000 patients provided three types of care, medication management only, limited psychotherapy , limited psychosocial therapy and, finally, recovery wanted twelve-step orientation. The resorts are shown before. The urine drug screen test for opioids at the time of the second view for forming prescription were 34% for medication management, 56% for limited psychosocial and 62% for recovery oriented systems of care. We need to think about using the sources. They are free and readily available. It takes learning on your part to use them effectively. Let's move on to a newer construct, which is happening across the United States today. That is recovery coaching. What is recovering coaching? Recovery coaching is a paraprofessional led outreach that is designed to sustain connection with individuals and help with day-to-day choices and actions. It is not psychotherapy. It is not really even counseling, per se. Recovery coach is a nonjudgmental individual who encourages self reflection, promotes action that promote remission or induce remission, recovery coaches work with those who are actively using at times and in early remission. You can use a recovery coach to decrease the negative effects of the substances they are using in an Patricia Burry prevention plan or decrease substance use itself with using a recovery coach and they can also be used in the remission stay. There helpful across the spectrum in individuals with substance use disorders. It is important to note that recovery coaches do not offer primary treatment. They do not diagnose and they are not associated with any specific means of recovery. It is mostly strength-based support. Recovery coaches are ad hoc, often via telephone or electronic communication. This is obviously getting more intense in the post COVID era. It is also linked with contingency management, urine drug screening and social services. We have limited research showing improved relationships with providers, increase satisfaction with treatment overall and reduced rates of relapse and increases retention.

You can see the reference there below. Next, we will move on to Contingency management. Contingency management is an interesting tool. It is a treatment tool that happens to be among the most thoroughly researched behavioral approach to substance use disorders with over 100 randomized controlled trials and multiple meta-analysis. Contingency management is an effective clinical program and cost-effective simultaneously. It could be used with patients across the change spectrum, as we were talking about with recovery coaches, from decreasing use to looking for Pro health behaviors to attaining and maintaining remission. Yet, it is really used. What is Contingency management? It is based upon operant conditioning or behavioral economics and breaks down the recovery process into a series of goals that are concrete, attainable and realizable. The size steps the hopelessness of many individuals with addiction diseases and it subtly and subconsciously establishes priorities by rewarding critical recovery behaviors. What happens is, an individual is rewarded for positive behaviors. Rewards should be immediate. Immediate rewards are twice as effective as delayed rewards. The have to be tangible and match the patient's needs and have to be intermittent, interestingly. Such as pulling a ticket from a punch bowl having prizes of varying values. That is as effective as reinforcement that is consistent yet it is also cost-effective. Low value rewards are half as effective as high value rewards but that does not increase gambling. In Contingency management, you set a series of behaviors, whether it is a negative drug screen or drug level which is lower or a showing up at the psychotherapy session with the counselor. All of those would be behaviors which would be rewarded very rapidly , a small financial reward. $1.00, $2.00 or, as I said earlier, may be pulling a ticket from a punch bowl as Nancy Petrie designed many years ago. Some of the rewards would say, good job. Some of them would say, here is a $50 gift certificate. There are examples of efficacy in various different venues all the way from cocaine and methamphetamine using patients across 14 clinics, a prize based Contingency management I talked about in a 12 week study, psychosocial clinics, which rewarded up to $70 a month per patient with high retention. Methadone clinics to encourage cocaine abstinence. You see some of the articles here for further study about each of these different areas. Contingency management theory is effective across multiple stages of change, multiple different types of substance uses and multiple different clinical presentations . There are some limitations of Contingency management. It costs about $100 a month. That is usually in prizes. Most studies we know about our three month trials. There are some longer trials in place today. Also, the effects dissipate after six months. It is possible that Contingency management shapes, but does not transform behavior. Therefore, combining it with transformative options may be best . Staff have to understand what is going on, the logistics are complex. This is not something you can just start up without thinking it through. Technology may be the easiest way to implement contingency management. Next, let's move on to affect regulation and recognition. People with substance use disorders have difficulties with their feeling states. Some of them have strong feelings and they are always rocked about by them. Other individuals may have difficulties understanding their feeling states. Either one of these extremes causes albums with remaining in remission. Recognizing and understanding feeling states, responding in a productive manner to those feelings are issues of difficulties for people with substance use

disorders because many of their feeling states have been rerouted or funneled into the substance abuse, either to elicit or feeling states. It produces difficulties in handling those emotional triggers. Finally, a concept which I think is not understood widely is the condition of Alex Thi Mia, the inability to recognize and name feeling states and it plays a role in a different population of those with substance use disorders. If you can't respond, you can't respond to your feeling states and it gets diverted into behaviors, such as substance abuse. It becomes part of the process of relapse prevention and having a healthy, formative and impactful life. One of the approaches to handling the individuals, especially those that have strong affective states, have difficulties containing or controlling them is Dialectic Behavioural Therapy. There are four basic skills in Dialectic Behavioural Therapy. There commonly talk to patients in a classroom setting with well-designed skills that patients will learn. These skills are not thinking about something, but learning how to behaviorally walk through handling things . You see these four skills. They including motion regulation, mindfulness, interpersonal effectiveness and distress tolerance. DBT is a cognitive behavioral approach to engender healthy emotion regulation. This was initially tested in its formation in those with borderline personality disorder, but found to be helpful in many patients that have affect dysregulation alongside their substance use disorder. What about partner therapy? Everyone knows when someone gets into trouble with her addiction disorder, their partners, family or loved ones suffer nearly as much. How to help an individual recover and a family recover ? One way is by engaging in partner or couples therapy. Several of these have been studied. They are shown to be effective in increasing remission in the patient. You can see the reference there. It is important to explore that the partner relationship responds well because if you have one individual that has substance use disorder who is living with another individual with substance use disorder who is not in treatment, the individual in front of you obtaining the care has a terrible prognosis. This is actually best studied with tobacco remission . Individuals who are trying to discontinue their tobacco consumption do very poorly if individuals in the household continue to smoke. It encourages a reasonable accommodation by the partner during remission to support remission and it encourages partners to explore their own damage that is caused by your patient's problems. One thing I would like to say is remission is often problematic when the patient is on the downside of a significant powered differential. In the United States, we see this in couples where one half of the couple is the subject of cultural bias and is born and raised in the system where they have power in the relationship that is greatly lessened . Misogyny is one of the bigger problems, if you have a female alcoholic who has a misogynist husband, those individuals definitely need partner therapy, if you expect the woman to obtain remission. Our next area, I told you this was a long series of different treatment modalities, this is just a taste. The next one is EM DR. We all know that physical, emotional, sexual or religious trauma , migrates with addiction disorders. The incident of addiction is higher in traumatized populations. We don't understand the exact etiology, but this past trauma paradoxically bonds individuals who use substance into a traumatic relationship with the substance they use, as well. There is a suggestion that trauma from early trauma could additionally traumatize from childhood and trigger relapse. Some of those could be quite negative and

quite damaging, such as an individual who was raped while intoxicated. Memories such as that need to be dealt with and managed if you expect the patient in that situation to obtain remission. Developed in 1947, Dr. Shapiro developed this where the therapist gently guides the patient to briefly focus on the trauma memory while engaging in eye movements or other forms of light --right-left stimulation. It is repeated with multiple sessions to qualify the target memory, process the memory through to an adoptive response and evaluate the outcome. EM DR is a well systemized type of therapy that is especially helpful with limited trauma events but even helpful with individuals with recurrent trauma. Considering the MTR as a treatment and finding a provider should be easy for us in moderate and large cities, as it is adopted by many therapists because of its efficacy. Here is a study that looked EMDR, reprocessing something I called earlier the addiction memory. Individuals with the trauma history often began using substances to manage flashbacks , trauma victims will use alcohol and other dissociative but the thing that is so unusual is paradoxically, they also misuse stimulants and cocaine, which are really the more traumatizing experiences, especially later on in the addiction use paradigm. EMDR may be helpful in disengaging and disinfecting addiction related memories another trauma resolution techniques could be helpful, as well. Should be used in individuals with the trauma history. Where are we now? First of all, we went through a wide variety of psychosocial interventions, psychotherapies and other things that are available to assist in recovery from substance use disorders. I strongly encourage you to end -- to understand as many of these as you possibly can to ensure your patients are sent to all the right services to manage their illness. To do this, careful assessment is the first and most important step in matching treatment to a particular patient for issues. Not addressing psychosocial or psychotherapeutic issues leads to a worse prognosis. Engaging patients with all psychosocial interventions requires an approach based on compassion and ongoing concern because you may find that patients don't walk in the door with a willingness to discuss all of their issues. Therefore, we have to have a basic understanding of the many types of interventions in order to help when indicated. That is all of my talk today. Thank you for spending time with me. It was a joy to talk about all of these issues. I wish you well on the exam. >> Okay. It is time for the questions. Let's go over the questions in my area. The first is, which is the most accurate statement about recovery coaching? A, recovery coaching is the only effective way with individuals who are currently abstinent. B, one primary task of a recovery coach is to help individuals recognize a have an illness. C, recovery coaching works with other disease remission strategies. Or D, none are true. A, only effective with individuals who are currently abstinent, B, helping individuals recognize a have an illness, C, works with other disease remission strategies or D, none of the above are true. I will give you a moment to think about these answers. The answer is C, recovery coaching works with other disease remission strategies. The next question, contingency management is comprised of which of the following? A, consistent rewards that are provided at a consistent time, once per week. B, baby deer rewards that have value and matched to a patient's needs . C, must be the same value each time for the best response and are paired with the desired behavior . D, rewards are given only in the form of cash. Which is the best answer to that ? A, B, C, D? I hope you are remembering the lecture and thinking

back about what we talked about, about Contingency management . The answer is B, immediate rewards that have a value and matched to a patient's needs. As we talked about before, consistent rewards at a consistent time once per week, that is actually the antithesis, in many ways, of Contingency management. C says the same thing, almost, the same value each time. No, different values are fine. D, rewards are only given in the form of cash, you can give any type of reward that matches a patient's needs. In many clinics where individuals have difficulties finding food, they were given food vouchers, for instance. Our next question, it has a typo in it. Which of the following is not recognized as a risk factor for promoting the development of a substance use disorder? Which of the following is not recognized as promoting the development of a substance use disorder? Initiating drug use at an early age is A. Genetic predisposition based on family history , C is weak or immoral personality structure. D , increased tolerance to the drug's adverse effects each of these are interesting because they talk about many of the things , take a look at the sentence structure carefully on this one. The answer to which of the following is not recognized as a risk factor is weak or immoral personality structure. I know this seems like a somewhat obvious answer, but around the 19th and even the 20th century. There were those that believed it was causative in the generation. We do know that drug use at an early age is a predictor of the adult substance use disorders. We also know there is a strong genetic predisposition for substance use disorders. People with substance use disorder have varying responses to a drug's adverse effects. Some people, many people with substance use disorders, the effects get worse over time when you have a substance use disorder. Well, that’s all the questions for today. Thanks for spending time with me. [Captioners transitioning]
[Event Concluded]