**Medicaid Innovation Accelerator Program Webinar**

**Widening the Lens – Treatment for Alcohol and Stimulant Use Disorders**

**August 8, 2019**

ROXANNE DUPERT FRANK: (Slides 1-4) I'd like to introduce Suzanne Fields, an IAP consultant and Senior Advisor for Healthcare Policy and Finance at the University of Maryland.

SUZANNE FIELDS: (Slide 5) Much attention has been paid to opioid and opioid use disorder (OUD). The purpose of today's webinar is to turn attention to the issues specific to other substance use disorder conditions and the increasing rates of alcohol and stimulant use across the country. While many of the OUD-specific strategies that states have adopted are relevant to other substance use disorder conditions, just as with opioids there are alcohol and stimulant-specific strategies that states can consider adopting to improve health and outcomes for persons with alcohol and stimulant use disorders.

Today we will learn about an integrated approach for treating alcohol use disorder (AUD) and risky drinking behaviors in primary care settings, and about treatment options to address participation in and retention in treatment for persons with stimulant dependence. We're very pleased to be joined by three panelists:

- (Slide 6) Dr. Connie Weisner, the Associate Director of Behavioral Health, Aging and Infectious Diseases within the Division of Research at Kaiser Permanente, North California. She is also an emeritus professor in the Department of Psychiatry at the University of California/San Francisco. She directs research addressing access, outcome and cost effectiveness of substance use and mental health treatment within health systems. Dr. WEISNER is a member of the NIH, National Institute of Alcohol Abuse and Alcoholism's National Advisory Council. She has served on other advisory councils including the NIH National Institute on Drug Abuse's National Advisory Council and those for SAMHSA within the Center for Substance Abuse Treatment. She has also received numerous merit awards from both NIDA and NIAAA.

- (Slide 7) Dr. Rick Rawson, an emeritus professor in the Department of Psychiatry and Biobehavioral Science at UCLA School of Medicine as well as a research professor at the University of Vermont. He has conducted an extensive portfolio of research on methamphetamines, including projects on behavioral and medication treatments with brain imaging measures. He was a member of the federal Methamphetamine Advisory Group for Attorney General Janet Reno, and during the past decade he has worked with NIDA, SAMHSA, the U.S. State Department, the World Health Organization and the United Nations Offices of Drugs and Crimes on international substance abuse research and training issues.

- (Slide 8) Ms. Marlies Perez will serve as a reactor to today's material. Ms. Perez is the Division Chief over Substance Use Disorders within the Department of Health Care Services of California Medicaid, where she oversees the substance use system including outpatient and residential treatment, licensing and certification, monitoring and compliance. This division is also responsible for the federal opioid grants oversight, certification and various aspects of the Drug MediCal

program under the 1115 SUD waiver. Ms. Perez has worked in the substance use disorder treatment field for nearly 20 years.

(Slide 9) Much attention has been paid through the headlines about the broader substance use treatment needs that patients and recipients are dealing with. We thought it would be helpful today for us to turn to some of the specific data that underlines the need in addition to the opioid use disorder (OUD), the data that underlies the need for more substance use treatment attention within the Medicaid program.

(Slide 10) The National Survey on Drug Use and Health provides up-to-date information on tobacco, alcohol and drug use, mental health and other health-related issues in the United States. This particular survey is conducted every year in all 50 states and the District of Columbia. This particular slide provides a breakdown by age group for alcohol use disorder in the past year for persons 12 years and older. The particular link at the bottom, where it says NISU2017, is an active link that you can peruse the additional details in the full report.

What this slide begins to show is that within that estimated 14.5 million people aged 12 and over have some type of alcohol use disorder within that past year, and that's about one in every 19 people aged 12 and older. So, while AUD has been changing and evolving for year to year in this particular graphic, we are beginning to see an uptake in AUD, particularly among the age group of 18-25 year-olds.

(Slide 11) We have here in this particular slide, unlike the previous slide which was showing past year use, this particular slide in a new data set shows past months cocaine use among people aged 12 and over. It was estimated in 2017 that nearly 2.2 million people were current users of cocaine and that that estimate has continued to increase year to year throughout this time period after a period of decline. So we are seeing again an uptick, particularly among young adults, for cocaine use as well.

(Slides 12 and 13) The next two slides show similar trends for two different substances. Slide 12 provides details about cocaine-related deaths from 2003-2017 and slide 13 similarly shows psychostimulant-related deaths for that same time period. Both of these show you information for conditions occurring with opioid use and without opioid use. During this period overdose deaths involving cocaine and psychostimulants continued to increase and again this was true for both cocaine and psychostimulants with and without opioids. And these increases were found across all age groups, all racial and ethnic groups, across various county structures, whether it be rural, frontier, city or suburban, as well as across multiple states. This particular information comes from the CDC and it is also an active link where you can find additional details about the CDC-reported related deaths for cocaine and psychostimulants.

(Slide 14) Recent efforts to curb access to opioids such as through changes to prescriber practices and access to prescription medications have had positive impacts, but we are also seeing some potential negative outcomes as well. This particular study looked at methamphetamine use for those persons who were seeking treatment. What the study found was among those persons seeking treatment past months methamphetamine use increased between 2011 and 2017. This is suggesting that, at least to some extent, efforts to limit access to prescription opioids may be associated with an increase in the use of methamphetamine. Again this reinforces the need for a state to consider adopting additional strategies to address broader substance use conditions beyond just opioid-specific-related conditions.

(Slide 15) Finally we'd like to highlight for you one final study, which examined prevalence of major medical conditions and the extent of disease burden among patients with and without substance use disorders. This was in an integrated healthcare system that served 3.8 million members. Medical conditions and substance use disorders were extracted from electronic health records and patients with substance use disorders were demographically matched to patients without substance use disorders and compared for 19 major medical and those results indicated that persons with substance use disorders had higher prevalence of major medical conditions and higher disease burden than those without substance use disorders. While this particular study was on privately insured individuals, we know that persons enrolled in Medicaid encounter additional social and economic challenges that further compound the health implication that this particular study highlights for us.

(Slide 16) As we begin to think about the needs that you have for information, your considerations within your Medicaid and state behavioral health programs, we would like to turn to one particular polling question for you to respond to. *What other healthcare issues have you seen in your Medicaid beneficiaries with substance use disorders? Infectious diseases; cardiovascular diseases; neurological conditions; or gastrointestinal conditions.* You can choose any and all that apply. We see (in responses) a high rate of infectious diseases occurring concurrently, nearly 56%, cardiovascular diseases about 20%, neurological conditions just roughly under 15%, and gastrointestinal conditions roughly at 7%. So as we can see the range of various issues you all see within your Medicaid programs for beneficiaries with SUD, these begin to highlight how today's conversation can help inform those integrative treatment needs within your programs.

(Slide 17) I now welcome Dr. Connie Weisner to talk about approaches to addressing alcohol within healthcare.

DR. CONNIE WEISNER: (Slide 18) Thank you. I'm very happy we're able to have this interactive format with questions afterwards. I will be giving you a bit of background about the importance of this integration, talk about approaches to integrate, about treatment and recovery. (Slide 19) I'm not going to spend a lot of time on this slide because we just heard an excellent overview of the importance of not forgetting about alcohol as we have epidemics that come and go, in this case opioids. The prevalence is high and has been for a long time. It's not only AUD but as I will show you binge drinking and heavy drinking take a very large physical and mental health toll in people as well. Still at this point only 1 in 11 people who need treatment get it.

One thing we're concerned about is that treatment programs seem to be really ramping up to address opioids, which is really important, and maybe not paying as much attention anymore to alcohol as really a primary problem as well.

(Slide 20) Who are those people with AUD? You'll be able to see that if you go to the link we just talked about. But basically about twice as many men than women meet criteria but it's still high for women. Prevalence is high among all race and ethnic groups, highest for American Indian or Alaskan Native individuals with almost 10%, for white, Hispanic, Latino, African American around 6%, and 5% also for Native Hawaiian. So this is something that is increasing and is an important problem for all demographic groups.

(Slide 21) When we start the language about what we would see in primary care this is a triangle you've probably seen other places. Take this as an entire population base of primary care patients. Most people are either abstainers, many times older people and many times people who are quite ill. Most people are low-risk drinkers. But then we have this almost 8% of people who are at-risk drinkers, also called hazardous drinkers or unhealthy use, and then a very small portion at the top, less than 1%, who are alcohol-dependent. So our job in healthcare systems is to keep these people at low-risk drinkers, the yellow folks, and keep the other two tops of the pyramid to bring them down to that other level.

(Slide 22) What is at-risk drinking? Let's present it from the perspective of what safe drinking is. For men up to age 65, no more than 4 drinks a day, no more than 14 drinks a week, so on average no more than 2 drinks per day. For women or adults over 65, no more than 3 drinks per day, no more than 7 drinks per week, and on average no more than 1 drink per day. This comes from many different studies that have been done on surveys. It can be find in the NIAAA physician handbook. Many of the screening done in primary care is based on these criteria. An important caveat is that criteria need to be adapted if someone has a chronic disease or is on medication. Again that information can be found on the NIAAA website.

(Slide 23) As was pointed out, heavy drinking and AUD are involved with many health conditions and many of you have talked about that through the poll. It's in different categories: They can exacerbate other conditions that are there such as hypertension, sleep and all those top categories here; It increases risk for all kinds of injuries, cancers, sexually transmitted infections, and it can cause, as we probably all know, cirrhosis, pancreatitis, and importantly what many studies in healthcare are finding is that heavy drinking use disorders reduce prescription adherence.

(Slide 24) This is a study done in Sacramento Kaiser Permanente, so again it's about 15% of these patients are Medicaid patients and the rest are employer-funded so pretty much of a working class population there in terms of the membership. But this shows in red the addiction treatment patients' health conditions matched in all the ways that we just talked about, social demographic measures in blue for the prevalence of health conditions and mental health conditions. As you can see they are much higher on all counts. Again I wanted to make the case we often pay more attention to the mental health part than to the medical conditions part.

(Slide 25) This is a study also done in clinics in Kaiser Permanente Sacramento in two or three different clinics that looks at hazardous users, at-risk uses and drug users rather than only AUD. You can see that among those patients they had higher prevalence of these five types of conditions listed here from injury, hypertension, respiratory, pneumonia, and so forth among 20 conditions that were looked at and also higher healthcare costs. So it's not just individuals with AUD but people who are drinking in an unhealthy way as well.

(Slide 26) So why integrate with healthcare? We'll give you several arguments as we go through the data here but it is the one service that everyone will use throughout life. Often problems are identified there including health problems that can signal problems with alcohol or other disorders as well. And they are a chronic neurological disorder and they need to be treated as other chronic conditions in healthcare. (Slide 27) There's a high prevalence of co-occurring problems we just talked about. Integration we are finding can help address health disparities, reduced costs for patients and family members, and reduced health outcomes.

(Slide 28) This is the way we're conceptualizing integration and it borrows from disease management models for other health problems such as diabetes and cardiovascular problems. I want to point out that there's no wrong door. Someone should be able to enter this in a cycle of services, continuing care services through any portal—primary care, emergency room, hospital and so forth. But the idea is that individuals are screened in primary care and treated there. If the problem is moderate they continue monitoring there, but they go to specialty care if that is warranted. However, after specialty care, they go back to primary care for monitoring. Many times individuals use specialty treatment as their healthcare home and where it's not possible for that to take care of all their other health issues and so forth. So the whole idea is to get them back to primary care where they will continue to be screened since it is a chronic disease, sent back to specialty care if needed.

(Slide 29) An argument for screening in primary care and emergency rooms and other parts of healthcare is that the United States Preventive Services Taskforce has recommended it. They base this on the clinical preventable burden of a disease and also the cost effectiveness, the return on investment if screening were to take place. (Slide 30) Alcohol screening and brief intervention was ranked fourth highest out of 25. I want to point out that it is seen in terms of outcome and cost effectiveness or cost-benefit higher than many things that we do automatically screen for including hypertension, breast cancer, depression, getting an influenza vaccination. So there's a lot of evidence this should happen.

(Slide 31) Also we do know that brief intervention is effective. Studies on this are mounting. It lowers the proportion of risky drinkers. It lowers consumption, reduces cost, and can improve health. We're finding that every dollar spent on intervention screening and intervention, healthcare costs are reduced by $4. Some studies, for instance the study by Chi and JSAT in 2017, found lower blood pressure when alcohol was reduced. We're also in our office looking at seven other outcomes such as BMI, hemoglobin A1C, and other outcomes. This is really important to physicians. Physicians don't really care that much if someone's drinking is reduced but they do care about the management; they have to focus on the management of their patient's health conditions. So getting this information back to physicians has been very important in the sustainability of screening.

(Slide 32) What about treatment? As I talked about, when we talk about integrating healthcare we mean integrating with specialty treatment as well. Let's talk a little bit about that, leaving more in the questions period about how to do that. But there are many, many behavioral therapies. You can find them on the website of SAMHSA and I really suggest you look at the chapter on treatment and the Surgeon General's Report in 2016 where that's spelled out very well. But they all have important components of CBT, contingency management, which we'll hear about next, motivational enhancement therapy, 12-step facilitation therapy, couples and family therapy. They're all effective in reducing and sustaining abstinence and improving relationships and reducing intimate partner violence and emotional problems of children. There are many, many evidence-based treatments in this area.

(Slide 33) We also have new medications for AUD. These can be used in primary care as well as in specialty treatment. We call them medication-assisted treatment and the one that is probably the most use at this point is naltrexone, which can be given either in tablets or extended release injectable. It reduces cravings and diminishes the rewarding effects of alcohol. There's been a lot of focus on the extended release injectable because it has a 30-day supply. (Slide 34) Acamprosate reduces the symptoms of craving. It's used more for the maintenance of alcohol abstinence. Then there's disulfiram or Antabuse, which the

field is probably most familiar with, which isn't used as often anymore. It can cause severe physical reactions when taken in combination with alcohol. So we have really a big armament of both evidence-based psychosocial and medication services that really work best when they are combined.

(Slide 35) So what are the arguments for integrated care? I'm really going to put forward the argument that continuing care would include regular primary care as an anchor, addiction treatment when needed, and psychiatric services when needed. (Slide 36) We followed patients in Kaiser Permanente, the whole Northern California region over nine years, and we found that when patients did receive continuing care as I defined it before they were more than twice as likely to be remitted over nine years and they were less likely to have emergency room visits and hospitalizations over those nine years. So what's important is that the total healthcare cost went down but the costs that brought them down were emergency room and hospitalizations, not primary care. So we really see this as an important part then of continuing care.

(Slide 37) This is a continuum of collaboration between healthcare and specialty services that has been put out by Heath and within the Surgeon General's Report as well. At level one we have very minimal collaboration, which has been our field in the past, separate facilities, and up at the top, level six, we have full collaboration, which is probably not going to happen very often. Most of us are in level two or level three. Level three we do have in some of our integrated health plans throughout the country now, Kaiser Permanente, some of them, Geisinger, Baylor Scott and White, some of Harvard Pilgrim, Henry Ford and so forth, where they're not in the same facility or in the same office necessarily but they are owned by the same group and it is easier to collaborate.

However, in the level two, which is I think where most of us are at in the public system and in other private systems, we are in separate facilities, but there is some collaboration at a distance. This is something that I'll be happy to talk about in the question period if we want about some really innovative ways of doing this.

(Slide 38) But I want to spend a little bit of time talking about recovery as we call it often, the best well-kept secret that we have. There is so much more recovery going along than people know about, partly because our health systems, people really mainly see the people who are failing because that's when people come in. But there are a huge number of people and about one in 10 American adults actually are in remission. The subjective definitions are somewhat diverse but one survey found 23 million people reported being in stable recovery. (Slide 39) There is a whole range of recovery support services funded and voluntary. Certainly we often have the evidence base from AA. There is an evidence base for the role of healthcare. I gave you one of the studies that showed how to use primary care after as part of a continuing care model. Not to replace other things but as an adjunct to them. There's a very strong recovery movement that is really using paradigms and staffed by people in recovery, and there's a current evidence for recovery housing and recovery case management. This whole idea of recovery-oriented systems of care that is really community-oriented is very popular and growing. Again all of this can be better and more thoroughly described in SAMHSA website, but also I recommend a chapter on recovery in the Surgeon General's Report.

(Slide 40) So in summary there are effective strategies and services ranging from self-change to specialty treatment for the full spectrum of problems, including screening, intervening early, treating with both

medications and behavior, and to manage them after them. Many of these can be accomplished within healthcare and all of them can be done with integrating healthcare and specialty care. Thank you.

SUZANNE FIELDS: (Slide 41) Thank you. Now for questions and discussion. I want to start off with something that goes back to slide 38 about that continuum of collaboration. You were talking about this particular continuum of collaboration and the different ways it can be structured and what it looks like. As you think about alcohol treatment and specifically alcohol treatment or substance use in general, what are a few things you would recommend to participants on the fund who represent Medicaid and behavioral health authorities that they can consider within this continuum to promote and improve substance use treatment? Help us understand how we take this continuum and think about what we could operationally do to improve substance use disorder treatment.

DR. CONNIE WEISNER: One thing I would really like to put forward is something we have talked about with some of the federally qualified health centers (FQHCs) and the county specialty treatment programs in our area. That is doing some offsiting of people. So basically having someone from the county programs situated in the FQHC, community health center, and having some medical attention from the FQHC in the county alcohol and drug programs. There are many different ways of doing that. For me that's the most exciting and feasible one.

This can also be done through telemedicine, for example, so that one of the things we've been studying as a pilot and are now hoping to get funded for is having an addiction person available on the phone or actually FaceTime or Skype is what we're using. So that the FQHC physician who is screening—the reason people don't like to screen is they don't know what to do with these people when they're positive. They don't and they haven't often used prescription medications. They don't know how to get someone into treatment. They don't know how to persuade them to go because as we found, even though there's access, people don't want to go always, especially for alcohol.

So basically having kind of a city basis or regional basis of some kind, some addiction specialist who can be reached right there while the patient is in the doctor's office and seeing them right there on the screen in FaceTime or however we do it with an iPad, so that they can motivate the individual to come over for an assessment and talk to them about what they'll find and so forth, or help the physician prescribe the medication. Because the primary care physicians do not understand and are afraid of for some reason the alcohol medications. It's just not part of our field. But they're getting used to doing it when they have this kind of technical help. So this is a way that the programs get to know each other and can use each other's skills.

SUZANNE FIELDS: You talked about medications to treat AUD. We know there isn't necessarily a lot of uptake. There can be some concern by recipients of care, by clients about their use. Could you talk a little about why individuals may not see medication as part of a course of treatment, as well as what should be done to support providers in engaging clients around their potential use?

DR. CONNIE WEISNER: I think there are both patient and provider issues here to think about. For one thing, I think patients, when they think of medication, they think of Antabuse and that is very scary to them. They've heard a lot of stories about it, probably exaggerated stories, and they're really unaware of maybe naltrexone and Acamprosate and what that means. The side effects have been overly stated

sometimes in the community. In the past, Alcoholics Anonymous has really taken a stance against medications. That is changing. On the provider side, our treatment system, has not been very supportive of medications. In fact, many of our public programs don't have access to physicians to prescribe and to do the kinds of assessments that are needed, although that is dramatically changing. That's really in the past.

But there hasn't been a lot of focus on medications in our system, where it's really different from other diseases. We've never given it as a push the way medications have been used like buprenorphine, for example, for opioids. Look at the policy push that has been made for that. There are over twice as many alcohol overdose deaths each year as there are opioids, but we have never pushed medications like we have pushed for opioids. So I really do think that our field has the most responsibility to become educated about them and educate our patients.

SUZANNE FIELDS: I'm going to hold on other questions because I think those questions will be applicable for our other presenters to weigh in on as well. (Slide 42) Now Dr. Richard (Rick) Rawson for a discussion of stimulant use disorder and treatment.

DR. RICHARD (RICK) RAWSON: Thank you. Talking about treatment for individuals with stimulant use disorder is a different ballgame than many of you may be aware of if you've been doing a lot of work with the treatment of OUD. As I will get to in a couple of slides, we don't have any medications for the treatment of people with cocaine and methamphetamine use disorders. There has been about 20 years of intensive research and we're still looking for medications that seem to be helpful for people using cocaine and methamphetamines. To understand why that is it's important to understand the nature of the stimulant use syndrome and the clinical challenges. (Slide 43)

First, many individuals with stimulant use disorders don't recognize that they have a disorder. They think of using cocaine and methamphetamine as kind of like eating potato chips, that sometimes you can take too much and sometimes you really like it but it's not addicting the same way opioids are where you have a clear withdrawal syndrome or alcohol where you have the physical symptoms of withdrawal. With cocaine and stimulant use you can discontinue their use without a powerful withdrawal symptom.

Many of them are ambivalent about the need to stop using, particularly those who are on opioid medications. We've done some work with people on buprenorphine and methadone who are using cocaine and methamphetamine, and to a person they all say "I don't understand what the problem is. I'm on my buprenorphine, I'm not taking heroin. This is just something I like to do." And they don't understand the dangers involved and the kind of addiction these stimulants produce.

Oftentimes their cognition is impaired. They aren't able to remember treatment. If you're giving them complex behavioral therapies or CBT lots of times it goes in one ear and out the other. They just don't remember. Anhedonia really is the hallmark of stimulant use disorders. There is this flatness of enjoying the world; that is, they just don't get reward signals in their brain. Everything seems kind of gray and they don't really enjoy their lives and they think if this is how the rest of my life is going to feel I'm not going to be able to stay sober. So they need to understand how their brain has been changed and what the recovery will look like.

They have a powerful Pavlovian trigger craving response where things in their world and their affective state become associated with craving, and they will often get triggered to crave and they don't really understand why. They just know all of a sudden it's all they can think about and the only thing they want to do. They need to understand that and learn how to manage that.

From a treatment point of view, one of the real challenges is how do you keep them in treatment? We know from the research work on this that retention is the ballgame with patients with stimulant use disorders. Very rarely do they go through a residential treatment episode and not relapse, unless they continue in some sort of ongoing care. The relapse rates are very high. We finished a study at UCLA in 2015 where we did followup of methamphetamine users. Eighty-five percent (85%) relapsed in the first 90 days and it was over 90% at one year who had had some amount of relapse. So they really need to be retained in outpatient treatment. However, it's difficult to retain them. Also you see significant rates of psychiatric comorbidity, which often requires concurrent treatment or integrated treatment with their stimulant treatment.

(Slide 44) These are some groups that have particular needs. The first two groups, injection users and users who use stimulants daily or in very high doses, are very different in their treatment response than people who either use by methods other than injection or people who use on a less frequent basis. And it's not just more is worse. There's something that happens to people that are the heavy users that makes their treatment response quite different than those who are less severe users. They often need to start treatment in a residential setting and be transitioned very effectively into ongoing outpatient treatment. Other populations that have particularly challenging prognoses are the homeless, the chronically mentally ill patients with high levels of psychiatric admission.

We've now for almost 30 years seen very high rates of methamphetamine and to a less degree cocaine use with men who have sex with men. They get it all entangled with their sexual behavior, which produces a tremendous HIV transmission risk, and that group has really been a focus target area to get them specific treatment. Users under the age of 21 and more recently this issue of people in medication treatment for OUD, we're seeing rates of cocaine and methamphetamine use go through the roof. In San Diego, where I did a training with a group of doctors doing work with buprenorphine, they reported about 60% of their buprenorphine patients were also taking methamphetamine. They didn't know what to do about it. Should they take them off buprenorphine? Kick them out of treatment? What do they do? That's a problem that's going to be increasing, and as we put lots of effort into OUD treatment we need to be able to also concurrently address their stimulant use problems.

(Slide 45) One thing I want to make a point about is we've done 30-plus years of research on treatments for cocaine and methamphetamine dependence, and among the behavioral treatments, the ones you look up in the SAMHSA tips and other documents, there really is no evidence that cocaine and methamphetamine users need different treatments. I've been to treatment programs where they have one track of treatment for their cocaine users and a different track for their methamphetamine users. There really isn't any evidence. In fact we've done about four or five studies where we've used the same treatment strategies and had half the patients cocaine users, half the patients methamphetamine users, and gotten identical treatment outcomes.

(Slide 46) There has been a lot of research as you're well-aware on treatments for stimulant use disorders. In the last 10 years there have been a number of meta-analyses where research groups have looked at the large literature on this to see when we look at the entire research literature, what stands out as the treatment strategies that produce the greatest benefit? Which are the ones that are really most outstandingly effective? This one has been very recent. It was just published last fall by a group in Italy that looked at the world literature on the treatment efficacy for individuals with stimulant use disorders. (Slide 47) They looked at 50 studies, had over 7,000 patients, 12 different psychosocial interventions, and their conclusions were the combination of contingency management and community reinforcement approach was the most efficacious and most acceptable treatment, both in the short and the long term. (Slide 48) Similarly, there is a Corcoran collaboration study where they reviewed all the interventions for cocaine and amphetamine use disorders. If you look at the paragraph, the comparisons between different types of behavioral interventions showed result in favor of treatment with some form of contingency management, both with respect to both reducing dropout and lowering cocaine use.

The literature on this is quite clear. There are very few areas in our field where we have such a clear picture of what works and what doesn't work. (Slide 49) These are some of the evidence-based strategies that have been used for treating people with stimulant use disorders. Let me say a little bit about them. (Slide 50) Contingency management, NIDA has researched contingency management for 40 years, supported a lot of studies. It's a technique employing the systematic delivery of positive reinforcement for desired behaviors. In the treatment of methamphetamine dependence or cocaine dependence, vouchers or prizes or some other form of reward are earned for submission of methamphetamine and cocaine free urine samples. We never give them cash. They have to earn either a voucher or movie tickets, grocery coupons, a variety of things that are individualized. But the use of these relatively small incentives produce whoppingly large effects in reducing stimulants.

(Slide 51) The principle is based on principles of reinforcement. Very simple. B.F. Skinner, 1933. If an organism delivers a response and you reward it, that response is more likely to occur in the future. In the case of our patients, if they come to treatment, if they give negative urine samples, if they're given an incentive, you see increased rates of the desired behavior. It's real simple. What do you have to do in order to do it? (Slide 52) You have to monitor the behavior that you want. The behavior has to be measurable. When they achieve the desired behavior they have to get a reward, preferably right away, immediately. And if they don't get the desired behavior they don't get the incentive.

So incentives are used, I'm sure you're familiar with giving kids stars for getting good grades, giving employees bonuses for exemplary performance. Incentives for the treatment of SUD are the same principle, no different. The message I want to convey over everything else is that they work. With a SUD that we've spent millions of dollars to try to understand and provide effective treatment, this is the one technique that really gives us a robust technique. (Slide 53) I've got a couple studies here on the efficacy. John Roll did a study published in 2006. The results—those receiving contingency management in addition to general counseling, the usual treatment, submitted significantly more negative samples and they were abstinent for longer periods of time.

When you look at the data—I'll show you a couple slides of graphs—the results are big. They're not these sort of incremental improvements. You know, this guy was able to stay sober four days and this guy could stay sober five days. These are big, big effects. This strategy has been developed by a researcher from the

(Slide 54) University of Connecticut, Nancy Petri, where they use kind of a draw prize system where it allows you to get more bang for the reward money because they get smaller prizes, larger prizes, and you have a variable schedule of reinforcement. This has been shown to be an effective way of stretching resources.

(Slide 55) This gives you John Roll the data from his slide. These are mean numbers of negative samples. They took one sample a week collected at a random time under supervision, and you get about a 50% increase in drug-negative and methamphetamine-negative samples over counseling as usual. (Slide 56) Duration of abstinence, almost a month on average they were able to stay abstinent, and this is in a 12-week trial. These are very short NIDA studies, but it's almost double what you see in treatment as usual. (Slide 57) If you look at retention rate, those receiving incentives on the top line, the red line, are substantially higher than those given treatment as usual across the board. As I said at the beginning, retention is the ballgame. If you can retain them in treatment, you see good things happen. If they don't stay in treatment, bad things happen.

(Slide 58) We did a study looking at contingency management and CBT for people on methadone maintenance looking to reduce their cocaine use. The data were really clear. (Slide 59) We have actually four groups. People who received methadone maintenance only, people who got methadone maintenance plus CBT, people who got contingency management and CBT with their methadone, and a group that received just contingency management. These are the data on the mean number of cocaine-free samples. The two higher groups reflecting better performance, more drug-free samples, were delivered in the two groups that received contingency management that were double or more than double the effectiveness of methadone maintenance only and significantly greater than those who received CBT.

(Slide 60) Community reinforcement approach (CRA) is an approach that's been developed for the treatment of alcoholism. (Slide 61) It's been adapted for stimulant use disorders and it's a combination of strategies that address the role of contingencies in helping to discourage drug use, and they attempt to rearrange your life reward system so that things that are rewarding nondrug use are rewarded more than your old behaviors. These are some of the strategies that go within the community reinforcement approach. There is a manual that's been developed to deliver this. A group out in New Mexico has done a lot of work on this. They also have combined it with voucher-based reinforcement or contingency management. (Slide 62) Just to give you a sense, in 1993 Steve Higgins here at the University of Vermont did a study with this and got rather outstanding results. (Slide 63) This is the percentage of negative urine samples over a 12-week trial. The contingency management, plus CRA, were far greater than the standard counseling treatment in terms of people's ability to stop their cocaine use. Higgins has done a number of other studies, and a large number of researchers have done studies on this and the results are very consistent. When you use contingency management properly, it reduces stimulant use. (Slide 64) I mentioned there's a manual for this available through NIDA.

(Slide 65) Other therapies, that have less evidence, but some evidence of efficacy, include cognitive behavioral therapy (CBT). (Slide 66) The group at Yale, Kathleen Carroll, have done a lot of work on this, and certainly these strategies can be useful in working with people with stimulant use disorders. However, the data to support them hasn't been nearly as robust as what we see for contingency management. This is some of Kathy's studies on CBT. (Slide 67) I was involved in developing a model in Los Angeles for

treatment of stimulant use disorders. We did a large trial, produced some evidence of efficacy, although in retrospect in my own mind we really sort of overdid what we had in this. It has everything but the kitchen sink and it does require a tremendous amount of training. And the results are certainly not as potent as what we see with contingency management in reducing stimulant use.

(Slide 68) Other strategies that have some evidence of support: motivational interviewing, physical exercise. We did a large trial showing physical exercise was useful in reducing relapse with methamphetamine users, and there's been some work with mindfulness meditation. These are in much earlier stages of data support, however. (Slide 69) There are some medications being researched. Some have some positive findings. This is the list for methamphetamine use disorder. Bupropion and mirtazapine, which are both antidepressants, have shown some promise, as have the others, but right now we don't have a single bullet. We don't have a buprenorphine or a methadone for the treatment of stimulant use disorders. (Slide 70) Similarly for those who use cocaine, the medications that we see that have the greatest promise include topiramate, which is a medication that has been used widely and has a great safety profile. This one is the one that seems to have the best evidence currently for treatment of patients with cocaine use disorders and we have others, modafinil and bupropion being two of the other leading candidates.

Medicines will continue to receive a lot of attention as we try to move more of our treatment into primary care settings the way Connie was describing for AUD. These behavioral strategies don't fit as well in a primary care setting, particularly the therapies. Lots of groups and lots of stuff that you have to have. Contingency management, we're doing some work here in Vermont with getting contingency management into primary care to help doctors who have patients on buprenorphine who are having to struggle with cocaine use. I think contingency management, if done properly could be very well-suited to a primary care setting, but we're still at an early stage of looking at that over time. I will (Slide 71) wrap up and say thank you.

SUZANNE FIELDS: (Slide 72) Thank you. I'll take a few questions for Rick. I want to start. The data you presented is very compelling for the effectiveness of contingency management. Given the amount of data available about the evidence to support it, why do we not see it being used more frequently and what could those opportunities be for us?

DR. RICK RAWSON: It's a number of things. It's been looked at. There's real clear evidence as to why it's not being used. One is old dogs and new tricks. People working in drug treatment programs are used to doing counseling things and they're often uncomfortable with this idea of giving people rewards for doing things they should be doing on their own motivation. To which I always say, after having treated people with addiction for almost 50 years, I don't really care why they do it. If they are able to stop using in response to a $5 McDonald's coupon or gas coupon, I'm more than happy to provide the coupon. So, training and getting an acceptance of the method is one thing.

The second thing is where do you get the money? If you're going to set up an incentive system where do you get the funds to buy these incentives. Some people have been very creative in getting donations from communities and a variety of other strategies. Hospitals using extra funds they have that they can have flexibility with. So oftentimes people can find the money.

But the biggest issue, and I'm glad I'm talking to this audience, is the concern about using contingency management with a population that is being treated with Medicaid funds and the conflict between this looking like a kickback to the patients. This has a long history. I wrote a letter to the Inspector General in 2005 to get their view on this and the Inspector General's office, after like a 2-year review process of the data, we did get a letter saying we approve the use in your treatment program, but it was a very narrow opinion. The issue has really stopped many people. We've done lots of training around this and people say, "I would love to use this but I can't because of the Medicaid restriction about giving patients anything for anything." So this is a real challenge and it's one that really has obstructed the use of contingency management.

SUZANNE FIELDS: As you think about participants on today's call again representing Medicaid and behavioral health authorities across the country, what are the top two or three things you could recommend supporting their use or their consideration of emphasizing more contingency management approaches? Operationally what would you be recommending for participants to consider?

DR. RICK RAWSON: In the letter we got back from the Inspector General's office I thought the people who did that did an excellent job. They said number one, you can't use contingency management to get people into treatment. You can't go out to users in the community and say hey, if you come in we'll give you a $50 coupon. That's not contingency management. So that's one way that it should not be used. Every single patient does not need contingency management. Some with the standard counseling and cognitive behavioral will do quite well. In the ruling we got it said it needs to be individualized. There needs to be a rationale for why you're using contingency management and that it should not simply be applied to every single patient with stimulant use disorders. Also they recommended the application of it to issues about treatment performance, that is, giving drug-negative urine seemed like it would be an easy one to approve and make possible. Other treatment activities they participate in that you could document getting them involved in would improve their retention and their ability to reduce drug use. I think the letter that we got from the Inspector General's office was a great place to start and gives a framework for how this could be done without risk of it being in any way misused in a kickback sort of framework.

SUZANNE FIELDS: Thank. Your presentation addressed a variety of different treatment options available, so contingency management, cognitive behavioral, the matrix model you had studied, medication, motivational interviewing, mindfulness exercise. As we think about this range of treatments and potentially making them available or supporting further access to them where they already exist, how can a person in authority in Medicaid or behavioral health make decisions about which populations benefit from which options? How can they consider how to prioritize those?

DR. RICK RAWSON: Two of the populations that stand out, the heaviest use group, those patients really do need some time to get themselves started in treatment in a residential setting. So having the availability and funding for some form of residential care would be very important for those folks particularly. After that the use of contingency management as part of any kind of outpatient anything is important. I think when patients come in and they're doing their urine samples and earning their vouchers, certainly having behavioral treatments including CBT and CRA, and materials on the matrix model that are developed for their sample, it's hard for me to say in isolation of a setting. Because the context is important. We've done a lot of help for the state of South Dakota on how to create a package of these things. If I was a Medicaid authority I would be very interested in somehow getting exercise improved.

That gave us a real strong signal of an efficacious strategy, not by itself but in combination with other things. That list gives you a good starting place for the kinds of strategies and you'd need a rationale for exactly which combination for which population and which location.

SUZANNE FIELDS: (Slide 73) Now Marlies Perez from the California Department of Health Care Services, serving as a reactor today, providing context both to the efforts that California has been doing for a number of years but also highlighting some opportunities for all of us today.

MARLIES PEREZ: I wanted to start really quick letting you know what our statistics look like here in California. In 2017 we had a total of about 2,194 opioid-related overdose deaths, but we also had close to 2,000 amphetamine-related death as well, which was primarily methamphetamines. So we've really been watching this issue, especially with amphetamines and recently really watching cocaine as well, as we're seeing really substantial increases occur here in California. Also I want to acknowledge our expert speakers and recognize I'm so glad they were talking about alcohol, because I'm constantly having to remind folks that really is such a deadly disease, AUD, and it's very surprising how many times I will mention that publicly and people almost seem shocked. So I think it's really important. It's really difficult with an AUD because it's so legally accepted, but it really concerns me, especially as a lot of our states have been having more recreational use of marijuana, cannabis, that I think that unfortunately we're going to see that trend with marijuana as well.

What are we doing here in California? Some of the things we're doing that have really been helping as we look at these other issues with AUD and then amphetamines and cocaine, we've really been looking at our licensing laws for our providers. One example is our opioid treatment programs traditionally only used to care for individuals with an OUD, but now they legally can prescribe all MAT, so they're serving individuals with an AUD, which is pretty exciting. Then the way we wrote the law is they'll be able to utilize any FDA-approved medication. So someday hopefully when there are other medications for other disorders they'll be able to prescribe them without us having to go through that rigorous process to change the laws.

We've also really recently been looking around our residential facilities laws. We've since passed legislation where doctors can now go on sites to prescribe medication, any sort of MAT. But once again really looking at loosening up and really de-siloing our treatment providers and giving them that ability to even be treating these individuals through that licensing lens.

Some other things we've been doing, we've really been looking at how we can continue to leverage our SUD portion of our 1115 waiver. We've had that since 2015 and actually when we were designing that waiver it was prior to the height of the opioid epidemic. Interestingly enough we were fortunate that we were already broadening out treatments for OUD, and really as we wrote it, it covers all SUDs. So we really didn't do a single lens focus, which was really fortunate for us. We've also really embedded a lot of integrated approaches just like the experts have been speaking about. I'll talk a little bit more about some of the other settings that we've been looking at as well outside of the traditional ones.

We're actually coming on our renewal, which is exciting and also a little shocking that five years are almost past. So now we're really looking at the waiver, too, with the lens of amphetamines. In our waiver we have the requirement to utilize two out of five best practices, but we're really looking to see how do we

broaden that and how do we continue to expand upon once again getting back to allowing our providers to use all the tools that are available.

Another thing we have that's been really super exciting in our waiver and one of the speakers mentioned it, it's around recovery services. So we modeled our system of care after ASAM, however we did add one extra service of recovery services because we really, really felt it was important since this is a chronic, relapsing brain disease, that we made it so providers would have the ability the continue to reach out to individuals that are in long-term recovery and for them to be able to reach back to those individuals themselves. This is really, really important and goes with Dr. RAWSON's point about especially with amphetamine use this isn't one and done and we really need to have those supports in place for them. So this has been a really interesting modality of service that we've been watching very closely because we want to see A, how effective it is, but B, how do we continue to refine that so we can stop treating this like an acute disease and really provide the supports that are needed for this chronic condition.

Another thing I want to mention really quickly is how we've been utilizing our federal STR and SOR dollars. One thing we've been a little bit bold about but we go on record all the time is while we are definitely building out our system here for OUD, we are not being so singly focused to miss these other issues with AUD and with amphetamines and such. So one of the things we do with all our projects that are funded with STR and SOR, we do some things like training on addiction and about SUD. And of course, while the majority of our training then focuses on the OUD aspect and MAT, we just really feel like if people don't understand the basic framework of the disease of addiction, then we're really missing the boat here.

With these projects we've been really fortunate. We decided to use a lot of our funding to really focus on any setting where an individual with a SUD—wherever they show up we want those folks that are interacting with that individual to either A, if they're in charge of their healthcare needs at the time we want them to be able to provide services for them, and B, if they're not responsible for their healthcare and they recognize they have an SUD, we want to be able to refer them to where services are available. But you can't do any of those things if folks don't basically understand what is an SUD. So once again focusing a lot of our training aspects as well, like the experts were talking about, an individual may not just have an OUD. They might be concurrently using other substances like alcohol or methamphetamines.

In some of these settings we've been working—in prisons, jails, emergency departments, hospitals, tribal teams, justice-involved settings—in all those projects once again that are funded through SOR that are only being able to fund and treat individuals with an OUD, we are still providing a lot of training and a lot of assistance in the sense of education around an SUD in general. Also, we're really looking at, for those individuals we are funding under SOR that have an OUD, also being able to provide wraparound services with methamphetamine as well.

SUZANNE FIELDS: (Slide 74) Thank you. I invite participants to submit questions through the chat box. Marlies, one question for you. As you think about those substantial increases California has had for alcohol and stimulant use, as you mentioned, and your initial policy actions, how would that inform what you would be recommending to participants on this call about two or three actions they could quickly put in place for some of those similar data trends they're seeing in their own data for alcohol and stimulant use? What initial steps could states take that would be easier to do and most effective?

MARLIES PEREZ: One of the first and foremost I think has been really, really effective is training my own team. So we make the assumption that our own team really understands these trends, so we actually took a full day and had an expert come in and train us on all the alcohol, amphetamines, opioids, really doing a deep dive on the disease of addiction. Then we filmed it. We actually have the videos available on our website, anyone can use them. Those have been amazing because those we've been able to use with our other partners, like I mentioned the prisons and jails, so it's actually fanned out.

What really shocked me is I thought people knew a lot more than they did. So I made a lot of wrong assumptions there, but really getting your own team up to speed in the way of having each just a set number of talking points. What are your trends? What are you seeing? What are the most important evidence-based treatments for alcohol and stimulant use? Things like that. Then also really making some time to train other folks, and it doesn't always have to be you yourself but we've done a lot of different trainings we've made available. So once again make sure everybody's on the same page, and I've been quite surprised about how many people, even in our own field, don't really understand a lot around the evidence-based practices. So using those providers that are already really doing a great job to help train other folks as well.

SUZANNE FIELDS: Very helpful. You also mentioned leveraging your federal grant as it related to opioid projects with some of your work around alcohol and stimulant use disorder. You mentioned having a common framework, a common understanding. Could you speak more to how you've been leveraging those federal grant opportunities and broader efforts to address SUD?

MARLIES PEREZ: Yeah, so we have about 40 different projects here in California with the dollars that we've received, but for all of them we kind of have a basic framework across with how we've been rolling them out. Really the first step after getting the project initiated has really been investing some time into training. And like I stated, it really has been starting with step one of really training folks about what is an SUD, helping them understand all the different drugs that are really illicit and nonillicit that folks are using, understanding that it's more than just opioids. Because there's been such a public campaign around opioids, I'm surprised that more people aren't surprised that there are others. So really laying that out. Then really helping them, where obviously we have not been using funds to treat individuals that don't have a primary or secondary OUD, just helping educate the providers themselves in this service settings about it and then helping them link to other resources as needed.

SUZANNE FIELDS: Very helpful. A few questions I'll open up to any presenters today. The first question has to do with prescription digital therapeutics. That would be any evidence-based therapeutic interventions driven or delivered through software programs alongside other more traditional talk therapy or other treatments. Have any of the three of you had any experience with those prescription digital therapeutics and what insights can you offer our attendees today about that?

DR. RICK RAWSON: Just one quick one. There are CBT programs. Kathy Carroll has developed one called CBT for CBT. It's a computer-based therapy for cognitive behavioral treatment. And a group in Massachusetts has developed something called DynamiCare, which is an app-based, all-encompassing strategy for the delivery of contingency management. I don't know how much they're actually being used in the real world. I think CBT is being used. I think DynamiCare is a bunch of projects being looked at for evaluating it but I think it has great potential.

Dr. CONNIE WEISNER: I would agree that there's a lot of potential there. The only one that I know of that has actually been passed by the—I'm very sorry, I should have that at hand—there's a pharma company that has worked with people at Dartmouth, Lisa Marsh's group, and they are SCH. It is actually a prescription. Everybody is very excited about it. I believe it is for substance use more generally, but again it's very recent. Other than that I don't know of anything other than what Rick has said. There are some that can be put in primary care for screening and there's a lot of interesting work being done with how to do brief interventions for alcohol. Some things are using avatars. I've seen one. Again I think these are all still under development but I've seen them in an ob-gyn perinatal clinic. Women while waiting to see the doctor log onto an avatar, get their demographics and someone comes up that looks a lot like them and so forth. They are given screening and then some intervention things. I think there is a lot of promise for screening and brief interventions with them. Again it's just in early development. Unfortunately so much of this is costly. There was a pharma company that developed a lot of these things or whatever. I think that is going to be an issue for public programs and private programs as well, or the public at large.

SUZANNE FIELDS: There are many more questions we could have discussed that the richness of the information provided. (Slide 75) What we set up to do today was highlight the need to focus on substance use disorders more broadly, highlight ways that AUD, particularly in primary care, how we can strengthen those integrative approaches, and how we can consider particular treatment approaches for persons addressing a stimulant dependence, incorporation of those, particularly contingency management approaches, into our benefit array for Medicaid beneficiaries. (Slide 76) In addition to the information provided in the previous slides, we want to provide two additional references for other information that may be helpful as you consider ways to approach your Medicaid program. (Slide 77) Thank you for participating in this national webinar and to Dr. Connie WEISNER, Dr. Rick RAWSON and Ms. Marlies Perez for their insightful information. Complete the evaluation form following this presentation. Thank you again.

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