**Speaker 1:** Hello everyone, and welcome to today's webinar, Substance Use and co-occurring Disorders in Women and Girls. This webinar is paid for by McLean Hospital, a top-ranked freestanding psychiatric hospital, a leader in psychiatric care, research, and education, and the largest psychiatric teaching hospital of Harvard Medical School.

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A recording of this presentation will be emailed to everyone in about two weeks' time. That email will also include a copy of the presentation slides. During our time together, you will be on mute. You can communicate with us using the Q&A box located on your webinar screen. If you have a question for our presenters, we ask that you type them in using that Q&A box. A link to the presentation slides will be posted in the chat box. If you miss them, don't worry, we will email them to you along with the recording.

With that, I would like to introduce our presenters for today. We have Dr. R. Kathryn McHugh, Director of the Stress, Anxiety, and Substance Use Laboratory at McLean Hospital and an associate professor at Harvard Medical School. We also have Dr. Shelly F. Greenfield, Professor of Psychiatry at Harvard Medical School, and the Kristine M. Trustey Endowed Chair of Psychiatry at McLean Hospital, where she also serves as the Chief Academic Officer. Welcome, Dr. McHugh and Dr. Greenfield.

**Dr. Shelly F. Greenfield:** Thank you so much for that kind introduction, and welcome to everybody on this webinar. On behalf of Dr. McHugh and myself, I just want to thank you so much for the invitation to present to you all and tell you how excited we are to be here with you today. Let's see if I can- yes, I can advance this. I just want to say we have no disclosures or conflicts of interest related to this talk. I am the author of the *Treating Women with Substance Use Disorders*, the Women's Recovery Group Manual. I will mention that treatment later in my talk. I just want to acknowledge some NIH support that has funded both myself and Dr. McHugh.

What we want to do with you today, is provide you a brief overview of public health trends in the prevalence of substance use in women. We want to highlight sex differences and clinical presentations of substance use and co-occurring disorders, and then treatment strategies for women and girls with substance use and co-occurring disorders. Before the COVID-19 pandemic, what we saw in past year substance use disorders was between 2013 and 2019, a narrowing of the gap between men and women's past year substance use disorder diagnoses.

You can see these data from the National Survey on Drug Use and Health in age groups 12 and over and 18 and over. You can see from 2013 to 2019, in both of

those age groups, that the gaps have actually narrowed. In particular, though, I want to call your attention to this age group 12 to 17. What you see here is in this adolescent age group in 2013, the gap had actually not narrowed, but it closed completely. In 2019, for the first time ever, we saw that more girls than boys had a past year substance use disorder.

What we have seen over the last 30 years is a slow but steady process of a narrowing of the gap of alcohol use disorders. In 1990 the male to female ratio of alcohol use disorders was 5:1. By 2001, it had narrowed to 2.3 to 1. By 2012, it had narrowed to 1.9 to 1. Since 2012, we know that it has narrowed even further. As I showed you in adolescents, it's actually pretty much closed completely.

We know that women born after World War II, more recent birth cohorts have lower levels of abstaining from alcohol and higher levels of alcohol use disorders compared with earlier birth cohorts born prior to World War II. Whereas the prevalence in men has generally remained mostly constant. Although I would say, in fact, in men, alcohol use disorders have actually increased as well. The rise has been just not as steep as it has been for women.

I'm going to show you these data in particular. In the decade between 2001 and 2012, there was a 16% increase in the proportion of women who drink any alcohol. A 58% increase in women's high-risk drinking compared to 16% in men. By high-risk drinking in this instance, this refers to five or more drinks in men or four or more drinks in women on one occasion once per week. There was also an 84% increase in women's one-year prevalence of having an alcohol use disorder versus 35% in men.

Why are we concerned? We are concerned for many different reasons, but one of them is because of this phenomenon known as telescoping. Telescoping is a phenomenon that's been documented whereby women who drink progress more rapidly to serious alcohol related physical and social consequences than their male counterparts. What that means is that they have shorter time between first use to first problematic use to a first use disorder, first treatment. They have shorter time between these landmarks of illness progression happening at lower doses of alcohol consumed less frequently. This has been documented in multiple studies, and there's some evidence of telescoping with other substances as well, such as stimulants, opioids and nicotine.

Turning our attention to tobacco in the United States, the ratio of adult men to women users of tobacco was 1.2 to 1 in 2019. That actually probably has even narrowed a little bit more in more recent data and is pretty close to 1 to 1. We know that in adolescents smoke tobacco in 2012 was already equivalent in girls and boys. The latest data for vaping shows that that's still more prevalent in adolescent boys than girls, but we know that women's risk of dying from smoking has more than tripled in 50 years, and it's now equal to that of men.

Women have specific concerns around their tobacco use. Most frequently women cite weight and mood related issues as risk factors for smoking and also fear of post-cessation weight gain as a barrier to quitting. One interesting finding of some studies although it hasn't been replicated by all, is that for women of reproductive health age who are menstruating, the timing of quit attempts with menstrual cycle phase can be important for some women with greater success of quitting in the follicular phase, meaning the first 14 days of the cycle than the luteal phase, meaning the second 14 days.

I want to point out to you that there's a great website, women.smokefree.gov, and it's specifically for women who want to quit smoking. I would reference that to you for any of your patients who are women who are trying to quit.

Turning our attention to marijuana, you can see in this national survey of drug use and health from 2019 that there was a significant increase in the percent of women with a marijuana use disorder in 2019. That's 14.8% or 21 million women. That's up significantly from the year before in 2018 where it was 13.4%. I want to turn my attention to opioid overdoses. I know that you know that drug overdoses in general in the United States have been increasing year over year inclusive of opioid overdose deaths, and that we've seen this annually, including 21 over 20 and now 22 over 2021.

This is just a statistic. It shows you a little bit of this up to through 2019, and it shows gender differences. One thing that's really important to know is that opioid overdose deaths still are experienced more frequently by males than females. If you look at data from 1999 to 2019, there was a 640% increase in women's in opioid overdose deaths in women compared to a 478% increase in men. A steeper increase amongst women, even though the absolute numbers of males at risk for dying of opioid overdoses still remains true.

I wanted to turn my attention to gender by race and ethnicity or intersectionality. It's been in the past harder to get really reliable data that shows us gender by race and ethnicity. There is a great report I want to call your attention to and we'll eventually put it in a slide in our resources that you'll have when you get this in a couple of days. This was a report that was put out by the Substance Abuse and Mental Health Services Administration. It's about 144 pages, and it includes all of the data between 2015 and 2019. It's tabled and it really shows you by every substance, race, ethnicity and gender. It breaks out all the way through.

It's been very rare for us to be able to get this type of data, but I wanted to highlight a few things here. This is illicit drug use disorder in the past year among people at 12 and older, by race, ethnicity, and gender between 2015 and 2019. A couple of things that are important to notice is here that in males as well as in females, the highest prevalence is in both males and females, is among people who identify as two or more races, and also among American Indian or Alaska Natives. You can see that this is true for males and basically as well for females.

I also want you to notice that for white, Black or African American women and Hispanic or Latino women, that essentially, if you go right across here, what you really see is it's almost equivalent. Asian American women have the lowest prevalence. This is for illicit drug use disorders. Now, if we go to the next slide. This is alcohol use disorder in the past year, again, by race, ethnicity, and gender between 2015 and 2019. Again, I really want to call your attention to these statistics. They're really important because here you see that in the American Indian or Alaska Native population, amongst males, this is the highest for any group by race or ethnicity and amongst males, it's the highest. The next highest being those who identify as two or more races.

This is also true for American Indian and Alaska Native women at 6.6%. You can see here that for white women they are the next for women have the highest prevalence, the next highest prevalence. Then it's followed by Black or African American women, by Hispanic or Latino women, and by Native Hawaiian or other Pacific Islanders, and again, with the lowest prevalence in Asian American women. There's a lot that can be said about this intersectionality and the additional research and treatment-related research that needs to be done for these communities.

I just wanted to mention one other area of concern for us, which is in opioid use and misuse, not opioid use disorder and gender differences. We've seen really this narrowing of opioid analgesic misuse, analgesic use disorder, heroin use, and heroin use disorder between males and females. We were particularly concerned in the data between 2015 and 2019 that showed opioid analgesic initiation, people first using it for the very first time between 2015 and 2019, that females had surpassed males in this area. This is of concern for how this will play out over the next several years.

What we know is that in 2019, 34.3 million adult women in the US had a mental illness and/or a substance use disorder, which was an increase of 6.8% over 2018 composed entirely of an increase of mental illness. This included 4.6 million women over the age of 18 who had both a substance use disorder and a mental illness. Again, I am showing you these pre-pandemic data, and we know that we've had rises throughout the pandemic in both substance use disorders and in mental health disorders as well.

Just to summarize where we are right now, we've seen this increased prevalence in women in the past three to four decades of alcohol and drug use. We've had lower levels of abstaining and higher levels of dependence with the heightened vulnerability of women to adverse medical and social consequences. We know we have this telescoping course, which I mentioned to you where women advance more rapidly than men from first regular use to first treatment episode, but also a treatment entry with fewer years of use. We see that women have more medical psychiatric and adverse social consequences than do males.

These data show that among people with lifetime alcohol use disorders, women are twice as likely to have an anxiety disorder, twice as likely to have a mood disorder,

and of similar likelihood to have a co-occurring drug use disorder. We also know that violence and trauma are common amongst people with substance use disorders. We know that women are more likely to experience childhood sexual and physical abuse, and there is a strong relationship between abuse history and substance use disorders in women.

What are the risk factors for substance use disorders, and are there any gender differences? Well, importantly for both men and women, there are genetic factors which form a biological basis that's significant for both men and women. That is family history, for example. We also know that earlier age of onset of initiation of use, meaning the first time you use a substance at earlier ages, that actually can pose a risk factor for both girls and boys of ultimately developing a substance use disorder. Of particular significance for women is heavy drinking or drug use by a significant other or a partner, a history of sexual or physical abuse or family violence and co-occurring other psychiatric disorders such as depression, anxiety, PTSD and also eating disorders.

More than two-thirds of women who report a Substance Use Disorder also had a co-occurring other psychiatric disorder. Among women with an eating disorder, more than 25% experience a substance use disorder. We also know that binge eating is more closely associated with alcohol consumption, and dieting and purging have been associated with sleep disturbance and also misuse of sedative hypnotics. Mood disorders, anxiety and PTSD as well as eating disorders and binge eating behaviors should be addressed in conjunction with substance use disorder treatment. Now I'm going to turn it over to my colleague, Dr. McHugh.

**Dr. R. Kathryn McHugh:** All right. Thank you so much Dr. Greenfield. I'm going to pick up on the topic of why might we see some of these differences between men and women? When we think about what might be some of the mechanisms or some of the reasons why this is happening, they're tremendously broad and some of which I use the word sex and gender here, some of which really are biological, and some of which are certainly more social and cultural. This is where certainly, and Dr. Greenfield had mentioned, the concept of intersectionality. Where certainly as we're looking at things like gender identity, race, other cultural factors, you can see really significant influence of those factors.

Things like access to substances will vary based on somebody's gender identity. That's certainly not something that has anything to do with biological sex, but is more of a social or cultural factor. It's something that we know women actually have less access to most substances than men do, with the exception of certain prescription medications. Actually, if you look at some of the prevalence there that Dr. Greenfield just went through, when you look at the purely illicit, illegal substances, you actually see a greater difference between men and women. Then if you look at the prescription drugs where you actually will see more equivalent or even higher access in women relative to men.

Certainly things like perceptions of use and misuse and stigma towards substance use vary between men and women. These are also factors that can come into play, and when we get to the treatment section later, stigma also can play a really significant role in treatment-seeking in men and women and can be a really substantive barrier for women. Particularly women with young children or women who are parenting that there can be significant barriers to people getting into treatment.

All that having been said, there are certain biological vulnerabilities and processes that can also help to explain these differences, ranging from differences in how men and women metabolize certain substances to the impact of ovarian hormones on substance use. We know that some normal fluctuations in estradiol and progesterone will influence everything from mood and cognition to the degree to which a substance is actually reinforcing. At certain stages of the menstrual cycle, drugs will actually feel more rewarding. They'll be more strongly reinforced. At other stages, women will be actually more susceptible to the consequences of substance use.

Really, there are a number of things that are still subject to research and trying to understand how both basic biological differences as well, social and cultural differences may be influencing some of the differences that we see. One finding that I think is really interesting of note is, Dr. Greenfield mentioned, the narrowing gap in prevalence and that you actually see internationally, you see that any place in the world, where you actually see it narrowing more quickly, is in societies with greater gender equity. Societies with and countries with greater evidence of gender equity, actually have a smaller gap between men and women. Really, you can see where the cultural factors also play a role.

As we think about co-occurring disorders, there have been a number of pathways that have been positive for how people might end up with both a substance use disorder and a psychiatric disorder. We actually had some really great questions in the registration questions about this. You can think about three primary ones. The first one is what you can think of almost as a self-medication pathway, which is the psychological symptoms. This could be depression. This could be anxiety. This could be sequelae of trauma, those motivate substance use. For most substances, not only do they provide reward, but they're also going to provide relief, and not only are they going to provide relief, but they're going to provide it proximately in the short term.

If someone's feeling really anxious, and they use a substance, they're going to get that quick relief. The problem is with repeated substance use, certainly chronic substance use, over the long term that's going to increase stress and anxiety, further fueling those psychological symptoms. This is one pathway that people might land on to the co-occurrence of both disorders.

You can also see the reverse, which is that substance use comes first. We know that particularly with chronic substance use and heavy levels of substance use, it

heightens the brain's response to stress. Effectively, what it does is it turns up the volume on stress in the brain. The same level of stress is actually going to elicit a stronger physiological and brain response, which can itself lead to a number of psychological symptoms. Certainly substance use and substance misuse can also increase life stress, increasing those psychological symptoms, again, further fueling that cycle.

The third pathway is one that actually says are common risk factors to both. That there are risk factors that might underlie both substance use disorders and psychological disorders, and there are a number that are out there and pretty well established. Early exposure to trauma. Childhood trauma is a known risk factor for both heightened levels of neuroticism, and the personality level are known risk factors for both. Interestingly, there are also some other risk factors that should point in the opposite direction, that should increase risk for substance use and decreased risk for many psychological disorders. That's something that's still an area of a lot of research.

As you think about all three of these pathways, it's tremendously difficult to understand that either an individual level or even broadly, which one of these might best explain co-occurring disorders. In all likelihood, there's some evidence for all three pathways, and what we're probably seeing is variability across different people and how someone might land on the co-occurrence of these disorders. What we don't know is does that actually matter for treatment? If someone experienced depression for several years then developed an alcohol use disorder, would they need a different treatment than someone who had an alcohol use disorder and later developed depression? Those are really unanswered questions at this point, and I think will be very important questions for research moving forward.

When it comes to these pathways, we do know that there are some sex differences and Dr. Greenfield had mentioned some of these. Certainly, we know that there's disproportionate prevalence of certain disorders, particularly the emotional and traumatic stress-related disorders in women. Some externalizing disorders are more common in men, but certainly, you're going to see a higher loading of the emotional disorders in women.

We know that depression is more likely to precede an alcohol use disorder in women than in men. Men are more likely to have an alcohol use disorder onset first prior to depression. Women, the reverse. We also know that exposure to trauma and PTSD diagnosis are more likely to precede a substance use disorder onset in women. Again, you see not only just the heightened prevalence of these disorders in women but also a heightened linkage between that disorder and later development of a substance use disorder in women.

We also know from a number of studies, that women are more likely to report coping motives for use. Effectively, women are more likely to report that their motivation for using a substance is to cope with either negative affect or for somatic states. Just to give you an example of this, these are some data that we published several years

ago, Dr. Greenfield, myself and some other colleagues from a large clinical trial of adults with prescription opioid use disorder. What you see here on the left is you both, again, see this higher loading of depression and PTSD in women than in men.

Again, these are people with opioid use disorder, more than twice as likely to have PTSD, more than twice as likely to have depression, slightly more likely to have chronic pain, although this isn't that different than the population base rate gender differences in chronic pain. Again, not only do you see that higher loading of co-occurring conditions, but you also see if you ask women and men, "What are the reasons that you're using opioids?" Women are more likely to say that they're using to manage their pain and to manage their negative affect.

As we start thinking towards treatment, the management of these co-occurring conditions might not only be essential for women's health and wellness and functioning but also essential for helping to reduce substance use, given how intertwine there.

Shifting gears to treatment, I did want to mention a couple of points because I realized people on this webinar probably say a whole range of presentations, and we've been talking a lot on the severe end of substance use disorder and addiction, but even if you look at lower levels of substance use. People who are regularly using substances even there isn't necessarily a problem, substance use itself can have a number of impacts on the treatment of co-occurring mental health disorders.

Certainly there is the issue of interference with therapeutic learning. Anyone who's doing exposure-based work, a good rule of thumb, and I imagine a lot of of people are doing this is if someone, say, is a social drinker and you're doing exposure-based treatment, discouraging any alcohol use the same day as you're doing an exposure is a good idea. Someone does some really good exposure, goes home and has a couple of drinks during that consolidation period, you're almost certainly going to interfere with learning. Both acute and chronic substance use can really interfere with particularly that type of learning.

Substance use can also really serve as a safety behavior or an emotion-driven behavior, one that's a relief or negative reinforcement type behavior that could interfere with recovery from a psychiatric disorder. Certainly, we know substance use can prolong negative mood states, depression or anxiety, again, depending on the drug. This is a really important one. Substances have a tremendously negative impact on sleep, even the sedating substances. Some of the sedating substances are actually some of our worst culprits, including alcohol tremendously negative effects on sleep that, again, can really exacerbate or interfere with recovery from another mental health disorder.

Certainly as you look towards the more severe end of the spectrum, you can see interference with psychosocial functioning such that it can make recovery from another mental health disorder quite complicated. As you think about how you might address a co-occurring substance use disorder and psychiatric disorder, it's really

important to think about that these are not two independent issues. If you try to pull out one and ignore the other, you can oftentimes feel like you're playing Whac-A-Mole.

I want to use the example of co-occurring panic disorder and alcohol use disorder and someone who has panic symptoms. I see a lot of folks like this, who they have panic disorder and their panic symptoms come up. They start increasing their alcohol use. In the short term, the alcohol use is actually going to be pretty good. It's going to decrease that autonomic arousal. It will help manage those panic symptoms a bit. The problem is, as that anxiety gets reduced, it either may be further increased or alcohol use can really exacerbate or get exacerbated or increase.

The problem is then you try to get someone to decrease their alcohol use, they start to experience withdrawal symptoms which look a whole lot like panic symptoms and you're back in the cycle again. This is one, and for folks who have worked with people with this type of presentation, you can really see this vicious cycle of recovery and relapse around panic and alcohol if you're chasing these symptoms individually without considering their integration.

What did the data actually tell us? I'll give the caveat that there are huge gaps in our understanding of the treatment of co-occurring disorders for a couple of reasons. One being that most treatments of psychological disorders exclude substance use disorders. For anybody who's read any clinical trials recently, maybe nicotine will be able to sneak in there, but pretty much anything else is usually going to be excluded. Oftentimes, we're not testing those treatments in folks with both disorders.

Substance use disorder trials oftentimes don't exclude people with psychiatric disorders, but they oftentimes don't report on psychiatric outcomes. We know we're getting the whole population, but we don't necessarily know how people's mental health is doing in many of those trials. That caveat aside, typically treatment is taken one of two major forms. The first major form is either single disorder or sequential treatment. Single disorder approaches are, I'm going to treat one disorder and see if the other one gets better. I'm going to treat the substance use disorder and we'll see if the depression gets better. That's one approach.

The related approach is a sequential approach, which is we'll treat one disorder, and then we'll treat the other. As someone who has worked in a number of mental health settings, particularly anxiety disorder settings, it is so common to have an anxiety disorder setting that says, "Go get your substance use disorder treated and then come back. We're not going to take you now." Oftentimes it might be get sober for three months, six months, a year. I can say that making referrals for folks for PTSD treatment. I hear that all the time. Have the person get sober for a year, and then we'll treat their PTSD.

There are lots of downsides to this, including treatment discontinuation, making sure that actually people get from treatment one to treatment two. Again, these really are integrated symptoms and conditions that really fuel off of each other. The idea that

we can pull out one and treat it and leave the other untreated, for many people is quite unrealistic. Where the data tend to be stronger is for either concurrent or integrated treatment.

Concurrent treatment effectively meaning that you have two providers or maybe one provider treating both conditions at the same time. This could be a pharmacological treatment, this could be behavioral treatment. It could be a combination of both or integrated treatment, which actually tends to treat the two types of disorders as a single disorder that have overlapping symptoms likely shared mechanisms. We're actually addressing this as one problem. What literature is out there really suggests that this type of approach has superior outcomes for things like depression, bipolar disorder, anxiety disorders, PTSD serious mental illness.

In general the work that's been done in this area really says that the outcomes tend to be the best in this type of treatment. In many ways this is at least according to the data on patient preference what people would actually prefer. They want to be treated as a whole person as opposed to trying to separate out these two conditions. One other point I wanted to make on this just as you're thinking about treatment targets and as we're talking about co-occurring disorders we're talking about a whole lot of heterogeneity.

There's going to be a lot of variability in terms of what the mental health illness is going to be, what the substance use disorder, but these are some common maintaining processes. These are particularly important targets in women again given the heightened load of emotional disorders. Things like heightened negative affect really common mechanism for both disorders. I can't emphasize enough the importance of addressing anhedonia and low positive affect particularly for people in early stages of recovery from a substance use disorder. Effectively what's happening is that reward system is getting hammered away at, and then you're pulling away that reward, and that low positive effect can be tremendously difficult.

It looks like a very anhedonic depression oftentimes, really focusing on that. There's some evidence that that's actually a bigger issue for women than for men with substance use disorders. Certainly physiological arousal is an important target here if you're looking at the more anxiety and PTSD spectrum. Back to the point about women being more likely to use substances to cope, and we know a good behavioral principle is it's better to replace than to remove.

As you're thinking about pulling away substances as a coping strategy, really thinking about what other kinds of strategies are you able to plug in there so that people are just sitting with all that negative affect and all that distress now with their go-to coping strategy removed. These are some things as you're thinking about co-occurring disorders that you might look to target. I believe I'm going to kick this back to Dr. Greenfield here. You're on mute, Dr. Greenfield

**Dr. Greenfield:** Thanks so much, Dr. McHugh. I appreciate all that wisdom and all that guidance. I wanted to address specific barriers that we see to treatment entry for

women. We know that women are less likely to be screened in primary mental health care. With regard to this audience today, I think in mental healthcare settings, it's so important to screen and discuss women's substance use for all the reasons that Dr. McHugh just outlined. Often women cite lack of treatment services for pregnant and also lack of childcare services for parenting women.

There are specific economic barriers and lack of insurance and other resources. Trauma histories can in and of themselves be barriers to women seeking treatment, especially if they're looking for an all-women's treatment program as opposed to one that's mixed gender. Dr. McHugh mentioned social stigma and discrimination. In our studies of social stigma and discrimination, what we find is that men and women with substance use disorders, both endorse feeling guilt and shame, but women specifically highlight social stigma, and that's a barrier to treatment especially if they are parenting.

Then we also know that there's this higher risk for certain co-occurring psychiatric disorders such as mood and eating anxiety and PTSD. Women really would prefer to be treated in a comprehensive holistic fashion and have their substance and these other psychiatric disorders treated. Sometimes this is a barrier just as Dr. McHugh discussed, because women do go and try to get let's say their eating disorder treated or their PTSD and they're told, "You can't come into treatment, because you have an alcohol use disorder." This is completely unrealistic actually for patients.

Let me see if I can move the slide. There we go. What we know is gender in itself is not a specific predictor of substance use disorder treatment, but there are known predictors of treatment outcomes that can vary in prevalence, severity or significance by gender. In particular, the ones we are just pointing out like co-occurring disorders or trauma history but also employment or educational attainment or social support.

These predictors themselves can have a different level of significance for men's and women's recovery. It's especially true for co-occurring psychiatric disorders and histories of trauma which are more highly prevalent in women, and they are predictors of substance use treatment outcome. They are more salient for women, therefore.

What do we mean when we talk about women-focused or gender-responsive treatment? Well, what we mean is treatment that addresses gender differences in antecedents and consequences of addiction and the treatment process, including things we've been talking about today like the high prevalence and significance of co-occurring other psychiatric disorders, and also trauma exposure, and the associated physical and mental health needs.

Also the central role that relationships with children, intimate partners and others play in women's addiction and recovery, and also for hope, treatment programs that are women-focused, they're more likely to provide adjunctive services that are especially relevant to women's outcomes. For example, some of those things are listed here. This is through multiple studies that have shown for programs that are

specifically focused on women who have substance use disorders, providing services such as mental health care, or services that are culturally responsive to populations of women, programming for women with trauma, et cetera. These are all things that actually can enhance outcomes for women.

I just wanted to spend two slides on women-focused treatments for co-occurring disorders. There are many that I could have listed here. In particular, many people in the community are unfamiliar with *Seeking Safety*, which of course was developed by Lisa Najavits for women with co-occurring substance use disorders and PTSD. At McLean, we've developed the Women's Recovery Group. This is for women with substance use disorders who have many are heterogeneous with regard to a lot of their clinical and demographic characteristics, but in particular, they have other psychiatric disorders such as depression, anxiety, eating and PTSD.

Then another gender-responsive or women-focused treatment that you may not know is also something called female-specific CBT and individual group formats. I mentioned that not because it's focused on co-occurring disorders, but it's a highly studied also treatment that's alcohol focused by Elizabeth Epstein and Barbara McCrady, and their treatment manuals are forthcoming.

I wanted to spend one slide just telling you about the Women's Recovery Group, which we developed at McLean Hospital with other colleagues. This was an NIH-supported randomized controlled trial for developing and testing the women's recovery group. We have 15 peer-reviewed publications, and it is a single-gender group treatment for women with substance use disorders. The manual, it's a manualized treatment. It's a relapse prevention group therapy. It has structured sessions and women-focused content. It's empirically supported, and it's an effective gender-responsive component of care. It can be used in outpatient practice and in outpatient treatment programs.

It's currently disseminated into practice in the United States. The dissemination manual has been available since 2016. There have been three adaptations actually. The most recent one is to women military veterans. Another one was with young adult women who are in transitional age, and the third was for women with eating disorders and substance use disorders. We're working on digital adaptations of the content to further enable women to make use of some of this information.

Just to begin to wrap up, in terms of principles of treatment, we encourage using women-focused and gender-responsive approaches in treating women. Integrating conceptual and empirical evidence about gender differences in the antecedents and consequences of addiction and the treatment process include treatment for co-occurring, other psychiatric disorders, and trauma exposure and the associated physical mental health needs. I would for mental health providers, flip that if you are providing treatment for psychiatric disorders or for people who are exposed to trauma, you should be including co-occurring substance use disorder treatment when treating women.

Address the central role, relationships with children, intimate partners and others play in women's addiction recovery and as you can provide appropriate and necessary adjunctive services and referral to those services.

What are the guiding principles just for assessment. Well, assess all of your patients and women patients for their substance history, alcohol, drug and tobacco use. Complete a refer for a full medical evaluation including reproductive health assessment and always evaluate for the full range of co-occurring psychiatric disorders, mood anxiety, eating and PTSD. Examined potential motivators and rewards for substance use disorder treatment and recovery and also potential obstacles for recovery, which include partner, alcohol and drug use co-occurring psychiatric disorders, shame and stigma, family, legal, and employment obstacles.

If you can conduct a safety risk, including intimate partner and domestic violence as well as a risk of trauma and also past history of trauma, and then any risky behaviors for HIV and other sexually transmitted infections. With that, I thank you and this is our time for audience Q&A. Thanks so much for your attention.

**Dr. McHugh:** Thank you, everybody. I'll get us started on some of the Q&A here. I can actually take one quick one that Dr. Greenfield had mentioned. Someone asked, do we suggest that the assessment of substance use disorders be included in the initial assessment for every client? Absolutely. I would expand that from not just substance use disorders, but also substance use. Again, if you're thinking about even something like alcohol use as an example. Even alcohol use that doesn't reach heavy or binge drinking patterns can have an impact on things like mood and sleep. Again, I can't emphasize the sleep piece enough here.

Certainly, adding that assessment. One thing I can point people towards is there are wonderful free quick screening tools out there. The NIDA National Institute on Drug Abuse, quick screen is one. NIDA on their website also has loads of resources for different types of screeners. Those are pretty readily available. One question, Dr. Greenfield, that I think would be great if you could take this one. We have lots of questions about the management of substance use in pregnant women. I know that's a massive topic, but any thoughts on that topic or guidance for folks?

**Dr. Greenfield:** Thanks for the question. Yes, it is a very large topic, but just a couple of quick things that I think are really important for people to know. For pregnant women with opioid use disorder, the American College of Obstetrics and Gynecology and the American Academy of Addiction Psychiatry, the American Psychiatric Association, and its Counsel on Addiction Psychiatry. I could go on with all the professional organizations have all endorsed the evidence-based treatment that women who have opioid use disorder, the treatment is medication for opioid use disorder, the FDA-approved medications which include buprenorphine and methadone in pregnancy. That is the evidence base for having a safe and healthy pregnancy and immediate postpartum period.

Now, there are decision tools that have been piloted and tested by constant skill at the Medical University of South Carolina to actually assist in people in discussing preference on the part of pregnant women with opioid use disorder. We know that this is the indicated treatment. Then there are all the other psychosocial supports that can be provided to women with opioid use disorder. The medication component is very important, especially in this time where we actually have been seeing overdose deaths from illicit opioids, and we've been seeing them more in pregnant and also immediately postpartum women with opioid use disorder.

With regard to alcohol, it's a little bit of a different story because what we really would like women to do is to not be drinking alcohol during pregnancy. A lot of preventive work can be done there. For women of reproductive health age, it's really important to talk to them about their use of family planning if they are active and might become pregnant and if they're drinking alcohol or if they think they might become pregnant and/or wish to become pregnant, that they should not be drinking alcohol during this period of time. Because basically in terms of preventing any type of fetal alcohol spectrum disorder, the answer to how much is indicated in pregnancy is zero alcohol.

We know that a lot of women actually don't know that they're pregnant until later or at the end of their first trimester and may have been drinking alcohol for women with an alcohol use disorder, having medical stabilization and helping women to come off of alcohol and then helping them remain alcohol-free. There's a lot of actual evidence-based treatment and care. Dr. Grace Chang is somebody who's published very widely on this particular area.

**Dr. McHugh:** Thank you for that. I know that's a tremendously large one that I lobbed at, so thank you. I can take this next one. We have a couple chicken and egg questions here. We had a handful of people ask about do the psychiatric disorders tend to present first that people see that typically, and also questions about the utility and distinguishing primary versus secondary psychiatric disorders? This person's referring to substance-induced disorders.

I would say two things. As a general rule, what occurs first, matters but only sort of matters. The reason I say that is if you actually look at the developmental risk periods for a psychiatric disorder versus a substance use disorder, they tend to be different. Something like if we pick social anxiety disorder, you will typically see symptoms, if not the full syndrome of social anxiety disorder, oftentimes in youth or adolescents, which is typically going to be before someone's even exposed to a substance.

The fact that the psychiatric disorder presents first doesn't necessarily mean that it's causing the substance use disorder. It's certainly going to increase risk, but I would be a little bit wary of putting too much weight on what comes first, just because some of that might simply be what is a developmental risk period for this illness. One good example here is PTSD, which it actually appears to occur about equivalently in either direction. Which may be because PTSD really can have such a broad risk period.

The question about secondary versus primary, it's actually really interesting. The early data on that used to say it mattered a lot. For example, if you had an alcohol-induced depressive disorder that you just treat the alcohol use disorder and the depression will improve. With more longitudinal data, and there were some really wonderful studies on this probably a decade or so ago, they found that oftentimes people who had, for example, a substance-induced depression had very high risk of having a full major depression within the next year.

If you see the co-occurring disorder, even if it is substance-induced, the risk of development of an independent psychiatric disorder is tremendously high. Certainly, treating the substance use disorder will be a priority there, but really the recommendation is now that you should be paying attention to both if for no other reason that you're likely looking at potential relapse to the other one.

Here's another good one because I'd actually love to hear your answer to this Dr. Greenfield. We have a bunch of questions that seem to circle around motivation for treatment. Questions about what do you do if people aren't being forthcoming with their substance use? What do you do with adolescents, who might not be motivated to change their substance use? I imagine this is an issue that a lot of people are facing. I guess any guidance for people who are dealing with those types of issues around motivation willingness to be forthcoming about substance use. Any tips?

**Dr. Greenfield:** That's a great set of questions, and obviously, it's very nuanced depending on who is the person that you're working with. A couple of just basic ideas and points that could be made. I know all of the people in this audience are aware of the multiple decades on motivational interviewing principles, but just to highlight those principles and the most important part of them. I think that what they really highlight is trying to identify within any individual patient, the kinds of desires they have on the one hand to attain certain kinds of goals. On the other hand their use of substances and perhaps maybe what their motivations for their use of substances are.

When you hear those things to try to as they say in MI, develop discrepancy, meaning, hey, you say this and you also say that, "Gosh, I wonder about these two things they're in. They seem maybe to be in conflict with one another. I wonder just how you think about that. How will you do this if you're also doing this? How does that work for you?" Developing discrepancy for the individual patient is the way for them to basically begin to wrestle as opposed to you wrestling with them about that. How that applies to different populations is different. There's much that's been written about MI for adolescents. There's also craft for adolescence, which is a family reinforcement type of intervention that's been very useful.

The other thing I would just say is I believe that education is a very powerful tool, and I think the more educated you are about substance use and substance use problems and the effects- I'm going to talk specifically about women and girls right now, the effects that they have on the health and well-being of women and girls. The more

you can reflect that back to women and girls, I think that you will find a level of engagement around some of those topics that you wouldn't have imagined.

We just did a digital study of some of the information with adolescent, or I'd say transitional age, young women 8 to 25, who were at our hospital for a variety of other mental health conditions, some of whom did not think they had a substance problem, but were referred by their clinician. Several of them endorsed that they had never heard, or understood some of the information they were provided.

Interestingly, even though this was just a 45-minute digital intervention, pre-post showed that these young women, actually, changed their attitudes to whether they might be interested in modifying their substance use. This was really from essentially a psycho Ed intervention around things like some of the things we just talked about today. I believe education is an actually very important tool.

Then finally, I'm going to provide you some resources in this slide that's going to come to you forthcoming when you get an email. There are some amazingly excellent websites that are provided across multiple things, including on the NIAAA website, rethinking drinking, which is great for individuals, including women and girls, just to actually examine one's own drinking behaviors, and think about whether those are helping you with your own goals for health and well-being. Those are just a couple of thoughts.

One more case, since we're talking about co-occurring disorders, here's one more. The other one that I think is really important is, sometimes people are very motivated around wanting to feel better from their depression, or from their anxiety, and that's where their heart is living. They really want to feel better from those symptoms. I think you can really help people appreciate. It doesn't happen overnight, but that, the use of a particular substance, and it could be alcohol, it could be cannabis, it could be something else, could be pills, that in fact, if they actually want to feel all the way better just like Dr. McHugh showed you, this is actually interfering with their ability to actually feel better, and that you can help them in trying to understand ways that they can cope and have adaptive coping instead of using the substance to try to contend with it.

That, in fact, those two things together are what they must do if they actually want to attain their goal of feeling better, let's say, from their depression, or their anxiety. The same is true for eating-related disorders to where we see people, women, especially going back and forth. That somehow if you can go where the person is, and the place they're most motivated to change, a lot of times, if you can really show them this linkage, that can become helpful to them in trying out some new ways and some different ways to try to cope. That's just the other thing I wanted to add.

**Dr. McHugh:** Thank you so much for that. Also, one other thought just to chime in on the truthfulness and reporting, I think it's important to keep in mind that this is not just a substance use issue. I think sometimes this gets stigmatized as a substance use issue, and I would argue, I think I'm probably told as many mistruths from someone

who's struggling with depression, or PTSD, or anxiety as someone who's struggling with substances. That if the incentives are aligned in a way that the person feels like they're better off being less than truthful, a lot of people are going to be less than truthful.

I think, really being thoughtful about what are the consequences, being very clear, what the consequences would be if someone did report something to you, and biological verification is not a bad idea. I think that the general recommendation if you have the ability to do biological verification, so for example, breathalyzer, or urine drug screen, is to try to have it be something that does not feel like a you versus them struggle.

Same thing when you're when you're having families who want to do biological verification is, you really want to make sure everybody's pointing towards the illness, and not pointing towards each other, because as soon as you get into that, are you lying tug-of-war things, I think report goes out the window very quickly. Sorry, did you have something else to say on that Dr. Greenfield?

**Dr. Greenfield:** Yes. Is it okay if I just say out loud, answers to two questions I'm seeing in the chat?

**Dr. McHugh:** Please.

**Dr. Greenfield:** One person asked whether we could speak to anything about the variance in presentation to treatment or therapy between women and men. One thing that I really wanted to mention that we have seen and noticed, and I think is still true, is that men often feel more comfortable coming forward with an alcohol-related problem, but actually are more reluctant to talk about feeling depressed. We find the flip is true for women who are more likely to come to treatment and talk about their depression, but actually do not want to talk about their substance use, especially their alcohol use. We have really seen that as almost like the mirror images of the two things. Those are very particular things.

Another thing that's really interesting is that there are definitely certain issues that women say they will not discuss in groups in front of men, and there are some issues that men say they will not discuss in group treatment in front of women. With regard to our women's recovery group study. Women say they won't really talk about some of their intimate partner related issues and also trauma, and it's much harder for them to have those kinds of discussions. They'll only do it in the context of of being with all women.

For men in some of the groups where we've done some studies, what they have said is that they're reluctant to talk about anger, and they're reluctant to talk about certain kinds of feelings where they don't feel like they've met up to their own standards around work or employment success. Those are two things that we have actually studied and seen, so I just wanted to answer that one live.

**Dr. McHugh:** Thank you so much. This is one we both might want to take a whack at. There are a bunch of questions about harm reduction versus abstinence. I can start us off with this one on the, I don't think it's an either or. It's a both and. Certainly the majority of the data suggests that absence is going to be associated with the best outcomes, particularly for the severe substance use disorders. In part because if you think of the symptoms that are at the heart of a substance use disorder are loss of control over substance use. Continuing to use the substance, even in a lesser degree, is asking people to do the thing that their disorder doesn't allow them to do.

If someone is on board for abstinence in general, the data actually support that better as a better option for long term recovery that haven't been said certainly at lower levels of severity. There is a lot of data to suggest that harm reduction approaches can be sustainable in the long term and certainly if we're looking at things like reduction of overdose risk, keeping somebody alive is better than feeling like we need to die on the hill of abstinence. I think particularly with the opioid epidemic, there's been such a really important and essential emphasis on harm reduction approaches as the more socially just, as the more compassionate support people with what they're willing to do as opposed to turning people away at the door if they don't share your treatment goal.

Again, it's very complicated. There's lots to it. There's lots more data that needs to be collected, but from a public health perspective, we need every tool in the toolbox. Doctor I don't know if you have any thoughts you want to add to that or anything else.

**Dr. Greenfield:** Only that, I agree with everything you said, but also that, in some ways we have conducted lots of our studies with what we would now think of as harm reduction approaches. Meaning that we have been really looking at reduction in use both in days and quantity for decades now, where we have always said that a treatment outcome where somebody was using a substance 30 out of 30 days is now only using 2 out of 30 days. We've considered that really like a highly effective treatment that's produced that outcome. We've been demonstrating those outcomes about treatment for a very long time. We now call that harm reduction because it's reduction in use as opposed to total abstinence.

We've been looking at those kinds of treatment outcomes for years, and it's good to have the fields now begin to catch up with the fact that reduction in use is ultimately an excellent goal. We are coming up on time, and it sounds like we have some closing remarks. I'm going to then give it over to the APA webinar folks and thank everybody for their attention, and thanks for coming today. Go ahead, please.

**Speaker 1:** Thank you both so much, Dr. Greenfield and Dr. McHugh. Thank you to all of our listeners for your participation and your great questions. We'd also like to thank McLean Hospital for making this webinar possible. Recording will be emailed to everyone in about two weeks. That email will also include a copy of the presentations slides. Soon as the webinar has ended, a short survey will appear on your screen. We ask that you take that survey and give us your feedback. Thank

again for you attention, and to both of our speakers today, and we hope you all have a wonderful rest of your day.

**[01:00:00] [END OF AUDIO]**