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Barriers and Facilitators That Influence Providers' Ability to Educate, Monitor, and Treat Substance Use in First-Episode Psychosis Programs Using the Theoretical Domains Framework

Oladunni Oluwoye[1,2], **Elizabeth Fraser**[1]

[1]Washington State University, Spokane, WA, USA

[2]Washington State Center for Excellence in Early Psychosis, Spokane, WA, USA

Abstract

In this qualitative study, we explore providers' experiences with addressing substance use among individuals with first-episode psychosis (FEP) enrolled in coordinated specialty care (CSC) programs. Three focus groups were conducted with 24 providers from CSC programs for FEP in Washington. Questions were focused on barriers and facilitators to addressing substance use using the Theoretical Domains Framework (TDF) as a guide. Thematic analysis was used to code all transcripts. Identified TDF domains were then mapped onto the COM-B (Capability, Opportunity, Motivation, Behavior) intervention functions and behavior change techniques. Seven theoretical domains were identified as the most relevant to addressing substance use: "Knowledge," "Skills," "Environmental Context and Resources," "Social Influences," "Social and Professional Role and Identity," "Beliefs about Capabilities," and "Reinforcement." The use of the TDF provides a framework to explore barriers and facilitators for targeting substance use and suggestions for behavior change techniques when considering implementation of evidence-based strategies to enhance CSC models.

Keywords

coordinated specialty care; first-episode psychosis; focus groups; providers; substance use; thematic analysis; theoretical domains framework; qualitative; Washington State

Introduction

Approximately 50% of individuals experiencing their first-episode psychosis (FEP) meet criteria for a lifetime alcohol use or substance use disorder (SUD; Oluwoye, Monroe-DeVita, et al., 2019; Wade et al., 2005). Although the focus has been primarily on cannabis

Corresponding Author: Oladunni Oluwoye, Elson S. Floyd College of Medicine, Washington State University, 412 E. Spokane Falls Blvd., Spokane, WA 99202, USA. Oladunni.oluwoye@wsu.edu.

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use and its association with psychosis, other substance use, such as alcohol and tobacco, is equally, if not more, prevalent in this population (Cetty et al., 2019; Lobbana et al., 2010; Tan et al., 2019). Recently, studies have focused on the prevalence of substance use among youth and young adults with FEP and have demonstrated the subsequent impact of use on physical health, psychiatric symptoms, and treatment engagement (Abdel-Baki et al., 2017; Oluwoye, Monroe-DeVita, et al., 2019; Schoeler et al., 2016; Weibell et al., 2017). Several qualitative studies among youth and young adults with early psychosis have also examined factors (e.g., perceived norm, coping mechanism) that contribute to substance use and the impact of substance use on relationships and social networks among youth and young adults with early psychosis (Griffiths et al., 2019; Kirschenbaum et al., 2020; Lobbana et al., 2010).

Coordinated specialty care (CSC) programs for FEP deliver evidence-based psychosocial treatments and medication for youth and young adults with FEP (Wright et al., 2019). While CSC programs significantly improve psychosis symptoms and global functioning, findings from several countries (e.g., Australia, Canada, England, United States) have varied on whether CSC programs, with and without specialized substance use treatment, have an impact on reducing use of or initiating abstinence from substances among individuals with FEP (Wisdom et al., 2011). More recently, a study in England assessed the efficacy of a specialized substance use treatment, known as contingency management, and found no significant effect on reducing cannabis use among young adults with FEP (Rains et al., 2019). Although CSC models in the United States such as NAVIGATE include one module that utilizes a harm reduction approach to address substance use, findings suggest it has not been successful in reducing substance use or initiating abstinence (Cather et al., 2018; Oluwoye, Reneau, et al., 2020). There has been no research to date examining the barriers and facilitators to addressing substance use or the implementation of specialized substance use treatments in the practice context of CSC programs.

Theoretical frameworks have been used to provide guidance on implementation strategies (Morden et al., 2015), as well as intervention modifications and designs for substance use in community-based settings. Specifically, the Theoretical Domains Framework (TDF) has been used to explore behavior change and inform interventions for substance use (Lee et al., 2018). The TDF is an integrative framework comprised of 33 behavior change theories and 128 theory-driven constructs that can be used to examine implementation and inform intervention design at the provider and staff level (Atkins et al., 2017; Cane et al., 2012). The TDF consist of 14 domains (“Knowledge,” “Skills,” “Social and professional role/identity,” “Beliefs about capabilities,” “Optimism,” “Beliefs about consequences,” “Reinforcement,” “Intention,” “Goals,” “Decision processes,” “Environmental context/resources,” “Social influences,” “Emotion,” and “Action planning”; Cane et al., 2012; Michie et al., 2005). Information gathered using the TDF corresponds to a COM-B component (Capability, Opportunity, Motivation, Behavior), which can then be applied to understand the sources of behavior that need to be targeted by an intervention and behavior change techniques (Abraham & Michie, 2008; Michie et al., 2011).

Despite the need for integrating evidence-based substance use interventions within CSC programs, there is limited research examining potential interventions that fit within the context of these programs. However, prior to examining the feasibility and effectiveness of

potential implementation strategies and substance use interventions, understanding potential barriers and facilitators in addressing substance use within CSC programs needs to be assessed. Drawing on the TDF, we conducted a qualitative study to explore providers' experiences with client substance use to identify barriers and facilitators in addressing substance use within the practice context of CSC programs for FEP. We also identified possible behavior change techniques using COM-B.

Method

Procedures

A semi-structured interview framework was used to guide group discussions. A preliminary focus group guide was developed by the first author and structured based on the TDF domains and constructs. Next, an expert panel of five experts in substance use, qualitative research, and early psychosis provided feedback on the focus group guide to remove and refine questions and probes. Approximately two questions were formulated to explore each of the 14 domains to understand provider experiences with client substance use and behaviors. The final focus group guide included the following questions (see Supplemental Material): *What has been your experiences with clients who use alcohol and drugs? Tell me about the specific examples of the challenges that you have faced with clients who use alcohol and drugs. What do you see as your role in addressing substance use with clients?* and *Does your agency have resources for substance use that you can use for clients?*

A purposive sampling approach was utilized to adequately represent the wide range of mental health treatment providers and interdisciplinary nature of CSC teams (Conlon et al., 2020; Devers & Frankel, 2000). All CSC team members (i.e., family therapist, individual resilience therapist, program director, education and employment specialist, peer specialist, case manager, nurse) involved in the delivery of CSC services were informed about the purpose of the focus groups and invited to participate by email. During an all team in-person meeting, additional recruitment occurred whereby CSC treatment providers were provided with an information sheet outlining the structure and purpose of focus groups. Interested participants were provided with time and location for planned focus groups. Written informed consent and a demographic information sheet were completed by participants prior to the commencement of focus groups. After participants were identified and provided informed consent, each focus group was formed to represent a heterogenous focus group of different CSC positions and various programs. Heterogeneous focus groups can serve as a way to stimulate discussion and uncover deeper insight (Grønkjær et al., 2011). Both authors and a research coordinator, all with qualitative experience, each facilitated a focus group with approximately eight participants in each group. Three focus groups were conducted in separate conference rooms based on a university campus in October 2019, and on average last 50 minutes. All focus groups were audio recorded and transcribed verbatim. All procedures were approved by the University Institutional Review Board.

Qualitative Analysis

Data were analyzed consistent with the Braun and Clarke's (2006) six-phase framework for thematic analysis that includes familiarization of data, initial code generation, theme search,

theme review, theme definition, and development of the final report. Prior to coding each transcript, both authors familiarized and refamiliarized themselves with each focus group transcript. Using the TDF and domain definitions as the initial coding framework, both authors independently and manually coded each focus group transcript using thematic analysis. To reduce the risk of bias and to improve the validity of coding after the initial round, authors meet in person to review and discuss code choices and resolve differences in opinions for code selections. Based on the initial round of coding and discussion, the coding framework was modified. Data were then imported into NVivo 12 (QSR International Pty Ltd., 2018). Using the modified coding framework based on TDF, authors completed a second round of coding to identify any missing codes that would need further discussion. Data saturation has often been defined when no new information is revealed and when codes are repeated; thus, additional data collection becomes unnecessary (Kerr et al., 2010). Our operational definition for data saturation was based on the premise of code saturation, whereby large majority (80%) of codes had been identified, and codebook stability (limited changes to codebook; Hennink et al., 2019). After the second round of independent coding and discussion, it was determined data saturation was achieved. Several prominent domains from TDF emerged from the data. Summary tables were created based on identified and agreed-upon codes and key quotes.

Authors met in person and collaborated through discussion to identify barriers and facilitators within each prominent domain. Confirmability of the data was established by selecting and extracting participant quotes to provide context and support to key TDF domains and COM-B elements identified throughout the data (Lee et al., 2018). Similar to previous research that used the TDF, identified domains were then linked to COM-B intervention functions and behavior change techniques by the first author (Abraham & Michie, 2008; Michie et al., 2011). These were then reviewed by the second author and further discussions were initiated until consensus was reached.

Results

Participants

Twenty-four treatment providers from nine CSC programs located in community-based mental health agencies, called New Journeys, in Washington voluntarily agreed to participate. Participants were eligible if they were ≥18 years of age, English speaking, and employed in New Journeys CSC program. The only exclusion criteria were being employed in a CSC program for <1 month. Participants represented a variety of positions within a CSC program, including program directors (9%), individual resilience therapists (22%), family therapists (27%), supported education and employment specialists (27%), case manager (5%), peer specialist (5%), and a nurse (5%). The majority of participants were female (54.5%), the majority of participants self-identified as White (61%) and 28% self-identified as Latinx. The mean age was 38.41 (SD = 12.42) years and ranged from 25 to 61 years. The majority (63%) of participants had obtained a graduate-level degree (i.e., master's or doctoral degree). The average length of experience in mental health care was 7.97 years (SD = 9.10).

Below we describe how our findings aligned with seven domains of TDF and COM-B model (see Table 1).

Knowledge (COM-B: Psychological Capabilities)

In general, participants were aware of clients' substance use who often disclosed use to providers, common substances used (e.g., cannabis, alcohol, tobacco) among clients, knowledgeable of the impact that substance use has on psychosis, and witnessed how continued client substance use limited engagement in CSC programs:

> … the clients we been dealing with, it is all they really do use alcohol and marijuana. We do not have a lot of meth people or people using heroin or barbiturates. It's mainly alcohol and pot, and it's all social stuff. They're social drinking and smoking …

Several participants also highlighted difficulties educating and initiating abstinence from cannabis use among clients or motivating them to initiate change:

> … Having them understand their symptoms more thoroughly and can help see the connections that trigger their use … How do we get them to move from stage to stage when we are trying to shift the client from precontemplation or contemplation and so on. I kind of seeing that is why everyone is having a hard time and maybe it's something that needs to be adapted to where our clients are at …

> The individual resiliency therapist that was working with these individuals said "Yeah they didn't feel like it was necessary." They just wanted to focus on the first bit and try to find a job and go back to school, and quitting really wasn't in their wheelhouse—they were content where they were.

Participants also had difficulty suggesting treatment preferences for clients based on whether they were 21 years or younger. However, participants could not provide a comprehensive list of evidence-based treatments for substance use:

> … Marijuana is like THE most popular and if they are over the age of 21, and it's legal in this state, there isn't anything we can do. We can talk, we can preach, we can motivate, but if they are of a legal age, I feel like I have no power.

Skills (COM-B: Physical Capabilities)

Participants expressed the use of a variety of clinical skills, sometimes in combination, to address substance use with clients. Such skills included cognitive behavioral therapy psychosis (CBT-p), dialectical behavioral therapy, psychoeducation, and motivational interviewing. The skills used to address substance use with clients were somewhat role dependent. Individual therapists tended to use CBT-p, whereas other CSC roles, such as the supported education and employment specialist, approached substance use with educational materials, goal setting, and motivation techniques as it applied to obtaining and sustaining employment. However, the majority of participants stated that the harm reduction approach utilized in the CSC model (i.e., NAVIGATE) inadequately addressed substance use, was not helpful to participants, and clients were generally not receptive to such an approach:

> … I almost use a combination of two, of DBT and CBT, there is aspects of DBT that really will work but not the whole, combine parts of the two and you can differentiate what really works best for that client.

Environmental Context and Resources (COM-B: Physical Opportunity)

Environmental context and lack of immediate resources were discussed as barriers and facilitators for participants' ability to address and monitor client substance use in addition to the lack of integrated behavioral health and substance use treatment at the agency level. Several participants also stressed that there was no follow-up treatment to actively address substance use for clients who test positive for any substance use:

> It's important to note that when we do get positive results there is no follow-up. We don't do anything. I mean we address it [substance use] but we don't have treatment for it.

Some participants explained that a barrier to continuously monitoring substance use, through urinalysis, was the lack of immediate resources, which led to clients being referred to outside agencies, reducing the client's engagement in the CSC program. Participants also identified the inability to bill for such services if their agency did not have the ability to provide substance use treatment:

> We don't have readily accessible substance use treatment unless a [client] is pregnant or a parenting mum. At our agency, we have to refer out. But what we found is that if they are participating in both our program and a SUD treatment outside of our agency, their engagement with our team typically decrease because they are required to go to multiple groups a week.

Several other participants were located at integrated agencies that offered outpatient SUD services and had the capacity to test and monitor substance use. Participants suggested that the lack of funding was a barrier to obtaining additional training and resources to address substance use.

Social Influences (COM-B: Social Opportunity)

Several participants identified the impact of the clients' home environment and family dynamics as a barrier to encouraging clients to reduce substance use or initiate abstinence. Participants provided specific examples of how family members' substance use history was a barrier to addressing substance use among clients, citing difficulties when substance use was utilized as a bonding activity with family members such as parents:

> The problem that I've had is that parents will often have alcohol or marijuana in the house.

> Yeah, some of the parents—you can see how that could trickle down. A lot of the parents have things going on as well … but also, a lot of parents are great and are supportive.

> We have a lot of the inner family drug use too. So [we have to] make sure mom and dad understand that their use is impacting their kiddo … what can they do about that?

The majority of participants mentioned the influence that peer norms have on client substance use, stating that substance use among clients is often initiated to serve as way of forming connections with peers and overcoming social discomfort:

> Client [was] hanging out with [their] friends and wanted to have a hit of marijuana like the rest of [their] friends, but it doesn't affect them in [the same] way. And not she has [relapsed] with her psychosis.

Social and Professional Role and Identity (COM-B: Reflective Motivation)

Several participants mentioned their professional boundaries with entering a home environment with a history of family substance use and feeling uncomfortable. Participants' beliefs about who bore the most responsibility in addressing the client substance use were not role dependent:

> I mean the clinicians are more trained—I'm a supported education and employment specialist so I would take the normal guy, buddy role … Clinicians would take a more clinical role I'm sure. So I would say we are capable and qualified of doing it; it would just be what route you would take to do it [address substance use].

It was noted that the psychiatrist and nurse practitioner were the ones to order urinalysis for clients if there was a concern and several participants stated that they received support from probation officers and nurses to perform urinalysis to monitor substance use. Participants' beliefs across all three focus groups suggested the value of and need for integrating a chemical dependency professional with the CSC model, as a professional trained to educate clients and provide evidence-based treatment for substance use:

> I work on another team that has a chemical dependency counselor like specifically on our team full—time. So, I always wonder why [CSC programs for FEP] doesn't have one—you know—I don't know that—I'm not educated as a chemical dependency counselor—so I can tell someone what I know and what I feel is best for them but I can't do all that work.

Beliefs About Capabilities (COM-B: Reflective Motivation)

Participants expressed high perceived competence and professionalism in educating clients on substance use and its impact on symptoms, as several participants utilized harm reduction approaches and educational materials:

> I feel comfortable addressing it, but don't feel comfortable in giving them direction in how to quit. Maybe smoking cessation because I'm a nurse.

On the contrary, participants also conveyed concern about their ability to encourage clients' readiness to change that would lead to reduced use and/or abstinence. Seemingly, participants felt that information they provided to clients was not readily received because of clients' perceived view of participants as an authority figure:

> They [clients] see us as an authority figure that is telling them they shouldn't be doing something that everybody else—or at least they surmise that everyone else is doing.

Reinforcement (COM-B: Automatic Motivation)

A number of participants spoke about incentivizing clients with positive rewards (e.g., gift cards to restaurants) and the gradual success that clients achieved in reducing substance use:

> … Sometimes I take clients one-on-one to the gym or to do an activity … I tell them that they have to be clean for extracurricular activity, I find that I can actually reduce their intake by almost three days.

Other participants also mentioned coaching family members to develop reasonable incentives and consequences and training family members to perform home tests. They mentioned that while they have included family members in reducing substance use, participants pointed out that coaching and training family members consumed large amounts of time and was often affected by the family's level of engagement in the client's treatment:

> When I was doing it [positive rewards], it was very difficult for families to come up with what is a reasonable incentive, what is a reasonable consequence.

COM-B Intervention Functions and Behavior Change Techniques

The seven identified theoretical domains and six COM-B components can be used to identify possible intervention functions and behavior change techniques using the Behavior Change Wheel. For the Capability component of the COM-B, education and training were selected as intervention functions and information about consequences, instruction on how to perform a behavior, behavioral practice/rehearsal, and demonstration of the behavior were selected as behavior change techniques. Taken together, we were able to provide suggestions for intervention strategies. For example, to address the lack of knowledge on potential substance use treatments for youth and young adults, providers should be provided with information about evidence-based interventions for youth and young adults with co-occurring disorders. Based on providers' feedback, training in a specific intervention should be provided in person and supplemented with online material and providers should participate in training demonstrations. Additional details on the intervention functions of Motivation and Opportunity are outlined in Table 2, which links COM-B components to intervention functions, selected behavior changed techniques, and possible intervention strategies.

Discussion

To the authors' knowledge, this is the first study to use a theoretical framework to conduct an in-depth exploration of factors that influence providers' ability to educate, monitor, and treat substance use in the practice context of CSC programs for FEP. Seven theoretical domains influenced providers' abilities to address substance use with clients experiencing FEP: "Knowledge," "Skills," "Social and Professional Role and Identity," "Beliefs about Capabilities," "Reinforcement," "Environmental Context and Resources," and "Social Influences." Within each of these domains, multiple barriers and several facilitators were identified and linked to the COM-B components and intervention functions. This study serves as an important first step in establishing a theoretical base for tailoring CSC resources and selecting and modifying existing evidence-based interventions for substance use.

To date, there have been no studies that have examined barriers to implementing substance use interventions in CSC programs; however, there have been several studies to examine barriers to implementing other interventions in CSC programs and substance use interventions for individuals with serious mental illness. For instance, previous studies have revealed providers' cited lack of confidence and insufficient training as barriers to successfully implementing interventions (Bucci et al., 2016; Trainor & Leavey, 2016). Although providers revealed they felt comfortable with providing educational materials and talking about substance use with clients, our findings suggested that the lack of knowledge on evidence-based substance use treatments (Knowledge) and lack of training on how to assess, monitor, and/or treat substance use (Skills) limited providers' ability to address substance use among clients with FEP. Based on behavior change techniques, there is a need to increase knowledge on effective substance use treatment options for youth and young adults and provide multifaceted trainings on the delivery of substance use interventions, which would increase providers' capabilities.

We found that lack of sufficient materials addressing the impact of peer and family influences on client substance and how providers can address such influences (Social influences) and access to immediate substance use treatment (Environmental context and resources) affected providers' opportunity to effectively engage clients with FEP. Developing additional resources and materials with stakeholder input (i.e., clients, family members) and improving communication with external substance use treatment and the integration of treatment plans and appointments may serve as way to address these organizational-level barriers. Furthermore, future interventions that address client substance use may benefit from incorporating components focused on social connectedness to prevent forming connections with peers initiated by substance use (Lim & Gleeson, 2014).

There is a paucity of literature examining evidence-based treatment for substance use among individuals experiencing early psychosis (Bello & Dixon, n.d.). A recent study found that contingency management did not reduce cannabis use among individuals with FEP enrolled in an early intervention program (Johnson et al., 2019; Rains et al., 2019). However, previous studies have demonstrated the effectiveness of contingency management on increasing abstinence from alcohol, tobacco, and cannabis among individuals with co-occurring substance use and serious mental illness in an array of treatment settings (Forster et al., 2019; McPherson et al., 2018; Oluwoye, Kriegel, et al., 2020). It is unclear why findings from Rains and colleagues (2019) were not consistent with previous contingency management studies among individuals with multi-episode schizophrenia. Based on feedback from providers on the use of positive rewards (Reinforcement) and its perceived impact, a possible reason for why an evidence-based treatment such as contingency management was not effective may be rooted in its implementation. Future research should examine implementation strategies of an adapted contingency management as a viable evidence-based substance use treatment for youth and young adults with FEP and how it would integrate with a multicomponent, interdisciplinary treatment such as CSC models (McDonell & Oluwoye, 2019).

Limitations

This study has important limitations that should be noted. First, we recruited participants who utilize one CSC model (e.g., NAVIGATE) implemented in nine community-based mental health clinics. The experiences and perspectives from participants represent CSC providers from Washington State and are unique to specific organizational-level barriers and facilitators. Although the CSC model that participants have experience with has been widely used throughout the United States, findings may provide insight for other programs. The lack of racial and ethnic diversity of participants should also be noted and may indicate the limited diversity of CSC treatment providers in the United States, which should be further explored. Second, a potential limitation that occurred when coding focus groups using the TDF was the overlap of certain parts of the data with multiple domains. Previous studies that have used the TDF for focus groups attributed this limitation to the lack of clarity of domain definitions (Francis et al., 2012; Islam et al., 2012). The use of a theory-driven approach, such as the TDF, allowed for a more comprehensive exploration of factors that influence CSC providers' ability to address substance use. Furthermore, our findings have the potential to inform potential implementation strategies to address behavior change targets.

Conclusion

This study is the first study to identify barriers and facilitators in CSC programs that can provide valuable insight for future studies focused on the implementation of evidence-based treatment for substance use among individuals with FEP. These findings highlight important areas that need to be addressed and potential intervention targets that should be included when selecting or tailoring an existing evidence-based substance use treatment to support providers and address substance use among clients with FEP.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Author Biographies

Oladunni Oluwoye is an assistant professor in the Elson S. Floyd College of Medicine at Washington State University and the co-director of the Washington State Center of Excellence in Early Psychosis.

Elizabeth Fraser is first-episode psychosis research coordinator in the Elson S. Floyd College of Medicine at Washington State University.

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Table 1.

Facilitators and Barriers Linked to the TDF and COM-B.

TDF Domain	Corresponding COM-B Component	Identified Barrier	Identified Facilitator
Knowledge (*an awareness of the existence of something*)	Psychological Capability	Lack of knowledge on evidence-based substance use treatment that have worked for individuals with co-occurring substance use and mental health disorders. Delays in identifying substance use due to client lack of transparency.	Knowledgeable about commonly used substances among clients. Knowledgeable on the impact of substance use on client symptoms and engagement. Knowledgeable on legalization of cannabis laws.
Skills (*an ability or proficiency required through practice*)	Physical Capability	Uncertainty with how to address substance use especially if there was current substance use by family members in the home environment. Lack of consistency with techniques used between providers. Lack of providers trained to assess, monitor, and treat substance use.	Familiarity with multiple techniques (e.g., motivational interviewing, cognitive behavior therapy) to motivate clients to change. Different approaches and skills used by different CSC roles to address substance use.
Environmental context and resources (*environmental stressor, resources, salient events, organizational culture*)	Physical Opportunity	Inconsistencies in follow-up procedures after a client tests positive for substance use. Ineffective program materials to address substance use. Limited access to substance use treatment. Lack of communication between providers and outside substance use agencies. Lack of ability to bill for substance use services.	Integrated substance use and mental health agency.
Social influences (*those interpersonal processes that can cause individuals to change their thoughts, feelings, and behaviors*)	Social Opportunity	Uncertainty with how to address substance use especially if there was current substance use by family members in the home environment. Attitudes toward addressing peer influence on client behavior.	-
Social/professional role and identity (*a coherent set of behaviors and displayed social qualities of an individual in a social or work setting*)	Reflective Motivation	Professional boundaries during outreach services to home environment that has known substance use. Perception that CSC programs lack chemical dependency specialist.	Nurses have the ability and resources to collect UAs and monitor substance use. Substance use can be addressed in all professional roles on CSC team.
Beliefs about capabilities (*professional confidence, beliefs, self-confidence, self-esteem, empowerment*)	Reflective Motivation	Lack of confidence on how to treat substance use. Limited ability to influence change among clients who are 18 years and older. Limited ability to encourage behavior change around substance use for clients 21 and older due to cannabis legalization.	Providers felt comfortable in addressing substance use.
Reinforcement (*increasing the probability of a response by arranging a dependent relationship between the response and a given stimulus*)	Automatic Motivation	Time to coach and continuously engage family members. Family members enforcing abstinence, with high expectations for immediate results.	Providers were able to use family members to monitor substance use. Providers were able to coach family members to provide positive rewards for behaviors and consequences for continued substance use.

Note.TDF = theoretical domains framework; COM-B = Capability, Opportunity, Motivation, Behavior; CSC = coordinated specialty care.

Table 2.

COM-B Intervention Functions, Behavior Change Techniques, and Possible Intervention Strategies.

COM-B Intervention Function	Behavior Change Techniques	Possible Intervention Strategies to Support Providers and Clients
Influencing Capability		
Education (*increasing knowledge and understanding*)	Information about health consequences	Information about the effects of alcohol, cannabis, tobacco, and other drugs on psychosis; the interactions with medication; and the impact on vocational goals such as employment and education
Training (*imparting skills*)	Instruction on how to perform a behavior Behavioral practice/rehearsal Demonstration of the behavior	Online and in-person training, in-person and online were suggested preferences with the ability to shadow potential how to deliver the substance use interventions that may be integrated
Influencing Opportunity		
Environmental restructuring (*changing the physical or social context*)	Prompts and cues Adding objects to the environment	Additional roles on teams (e.g., chemical dependence counselor, peer educator) Accessible equipment (UA cups) to assess biological samples (e.g., urinalysis) for substance use Protocol to ensure follow-up appointments with the nurse or psychiatrist about substance use
Modeling (*providing an example for people to aspire to imitate*)	Demonstration of the behavior	Training that demonstrates incentive-based interventions for substance use among youth and young adults such as contingency management or motivational enhancement therapy
Enablement (*increasing means/ reducing barriers to increase opportunity*)	Social support (unspecified) Commitment Action planning Problem-solving	Techniques for clients to foster positive social connectedness and ways to avoid peer pressure Include family members in the monitoring of substance use at home Protocol for substance use assessing and monitoring
Persuasion (*using communication to induce positive/ negative feelings or stimulate action*)	Credible source	Delivery of substance use educational material, monitoring, and/or treatment by a peer specialist
Influencing Motivation		
Education	Prompts/cues Credible source Demonstration of behavior	Education and training to address providers' capabilities and professional roles suited to treat substance use
Modeling	Feedback on behavior Feedback on outcome(s) of behavior	Fidelity monitoring and external coaching for providers that includes audit and feedback Providers coaching family members to conduct in-home substance use tests and provided feedback from family members
Incentivization (*creating an expectation of reward*)	Self-mentoring of behavior Mentoring outcome of behavior by others Behavioral contract	Client incentives for reduction in substance use and/or abstinence Family members to provide positive rewards for abstinence at home Providers establish a behavioral contract between clients and family members and monitor progress
Training	Instruction on how to perform a behavior Behavioral practice/rehearsal Demonstration of the behavior	Online and in-person training options with hands-on practice of how to deliver the substance use intervention Training for providers on how to develop behavioral contracts with clients and families

*Note.*COM-B = Capability, Opportunity, Motivation, Behavior; UA = urinalysis.