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ORIGINAL ARTICLE

Implementing contingency management into rural recovery housing: recommendations of a professional advisory expert panel

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ABSTRACT

Background: Rural areas in the United States have been severely impacted by recent rises in substance use related mortality and psychosocial consequences. There is a dearth of treatment resources to address substance use disorder (SUD). Rural recovery houses (RRH) are important services that provide individuals with SUD with an environment where they can engage in recovery-oriented activities, but dropout rates are unacceptably high, and evidence-based interventions such as contingency management (CM) may reduce dropout and improve outcomes for RRH residents. In this paper, we describe the results of a national convening of experts that addressed important issues concerning the implementation of CM within the context of RRHs.

Methods: Twelve experts (five female) in the areas of CM, RRH and rural health participated in a one-day facilitated meeting that used nominal group technique to identify expert consensus in three areas as they pertain to RRH: (a) facilitators and barriers to CM implementation, (b) elements necessary for successful program building based on group feedback, and (c) recommendations for future implementation of CM.

Results: Several RRH- and system-level barriers and facilitators to implementing CM were identified by the panel, and these were categorized based on the level of importance for and ease of implementation. CM funding, staff and resident buy-in, set policies, education on CM, and consistent fidelity to CM procedures and tracking were identified as important requirements for implementing CM in RRH.

Conclusions: We provide recommendations for the implementation of CM in RRH that may be useful in this context, as well as more broadly.

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Substance use disorder (SUD) consequences are pernicious across health and psychosocial domains. Rural areas in the United States have been hard hit by epidemics of methamphetamine, opioid, and fentanyl use (1, 2). The COVID-19 pandemic was associated with increasing overdose (3), and individuals in rural areas experienced many consumer- (e.g., distance) and provider-focused (e.g., limited workforce) barriers to SUD treatment (4). Rural substance use is exacerbated by low incomes and unstable housing (5). There is a need for services designed to enhance care for people with SUD.

Rural recovery housing (RRH) is an essential service for people in recovery (6). RRHs provide stable, substance-free living where individuals have access to therapeutic activities (e.g., 12-step groups, workplace reentry) and linkages to medical, social service, vocational, employment, and recreational resources. Research supports the effectiveness of recovery houses for improvements in substance abstinence, employment, and psychiatric symptoms (7).

RRHs also have limitations. Despite facilitating linkages to resources, it is up to the residents to utilize recovery-promoting activities. Given the myriad barriers among individuals with complex needs, retention in RRH is often a challenge. Thompson et al. (8) found that 56% of RRH residents stay less than 6 months. A meta-analysis

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reported the average dropout among a broad range of in-person psychosocial treatment programs was 30% (9). In rural communities, engagement and retention are important, as once an individual leaves the RRH there are few resources to prevent dire consequences of SUD such as homelessness, incarceration, HIV infection and overdose.

Evidence-based interventions such as contingency management (CM) may be useful for improving outcomes in RRH. CM, also called motivational incentives, can enhance RRH effectiveness through supporting engagement and reinforcing recovery goals. CM is a behavioral intervention that involves identifying and verifying completion of select target behaviors (e.g., drug abstinence and therapy attendance) that support recovery, and then providing incentives or reinforcers when the target behavior occurs and withholding incentives when the target behavior does not occur (10). Meta-analyses demonstrated moderate to large impacts on outcomes across CM models that use prizes, vouchers, and setting privileges as incentives (11–13). CM incentives can include gift cards or prizes, which serve the dual purpose of motivating an individual to achieve their goals and provide economic resources to people who are new to housing.

CM is ideally suited to RRH to improve resident retention and promote positive recovery-oriented activities. Because those receiving the intervention are residents in housing, traditional barriers, such as transportation and time demands, are minimized. Compared to other interventions, CM can be administered feasibly and effectively by non-clinician staff after training and with supervision (14). An additional factor supporting the use of CM in RRH is that it is cost effective in other treatment settings (15).

Despite its efficacy, CM has not been widely implemented into community care, with a few notable exceptions. The slow implementation of CM has been attributed to barriers including cost, regulatory issues, and staff and administrative buy-in (16–18). The US Department of Veterans Affairs is the only national organization to implement CM in SUD treatment (19). The VA implementation was successful because it included administrative support, funding, a research-based CM protocol adapted for the VA setting, and centralized training and ongoing technical assistance. In 2020, Montana and Washington State began statewide CM pilot programs (18), and in May 2023 a large scale (>100 clinics) CM implementation began in California, supported by the California Advancing and Innovating MediCal initiative (18, 20) (CalAIM). Initial lessons learned in these programs include support for centralized funding of CM incentives, implementation of CM evidence and federal regulation-compliant protocols and appropriate site selection (18).

As health systems and payers seek to provide value-based care (improving outcomes while reducing costs), it becomes important to consider the use of CM in RRH. Longer stay duration in RRH is associated with better outcomes (7, 21). CM interventions seek to reinforce recovery behaviors and increase motivation by supporting the individual to overcome initial adjustment stressors. New residents may also feel that through CM RRH staff are investing in their success.

The Fletcher Group Inc. (a 501 c3 nonprofit that provides training, technical assistance, and research to advance recovery house services) convened subject matter experts to provide recommendations for implementing CM in RRH. To support a successful panel, planning was conducted to map relevant research areas at the intersection of CM and RRH. The invited experts (Supplemental Table) were selected because of their work using CM in the areas of substance use, housing, homelessness, employment, tribes, health systems, government, and rural communities. During the convening, participants were provided detailed information on RRH and were asked to consider this setting as the focus of the implementation discussion. We used a nominal group technique (NGT) to structure the discussion; NGT is a group-based technique designed to obtain a consensus among experts in a particular area of inquiry (22, 23), and has been used to establish clinical consensus with diverse groups of professionals (22, 24, 25). One important factor framing this meeting is that abstinence is already a requirement in many RRHs. Thus, experts were asked to consider appropriate recovery targets that may fall outside of the traditional application of CM for a negative urine drug screen, in addition to traditional targets. Additionally, RRH programs are often operated by people without professional clinical training, and participants were also asked to address implementation by peer professionals including issues related to fidelity.

The aim of this paper is to describe the results of this convening of experts that addressed issues concerning implementation of CM within RRHs. Panelists participated in a one-day meeting to systematically address these issues and devise guidelines for future implementation efforts related to (a) facilitators and barriers to CM implementation in RRH, (b) elements necessary for program building based on group feedback, and (c) recommendations for future implementation of CM into RRH.

Methods

Panelists

Panel members were identified by an advisory committee consisting of three experts in CM (DL, MM, RB) and two

experts in RRH (MS, DJ). The Centers for Medicare & Medicaid Services (26) guidance on technical expert panel was used to inform the panel size. The advisory group met and considered panel recruitment criteria, and created a list of nationally recognized experts in CM and one or more additional areas: 1) rural healthcare, 2) criminal justice systems, 3) health systems, 4) recovery housing, 5) policy, 6) fidelity, and 7) employment. The team considered what input was needed, our budget, and the work structure. Experts were evaluated based on contributions, reach, desire, and ability to participate. Nine experts in CM, including those with implementation expertise, and three in RRH were invited and agreed to participate. All content experts are included as authors in this paper, and a description of their expertise is included in Supplemental Tables. Panelists were provided with a $500 honorarium and travel expenses.

Procedures

Two interactive feedback sessions were conducted to capture participants' input on facilitators, barriers, and next steps for implementing CM in RRH. The first session was conducted after presentations on recovery housing and RRH networks. This session was designed to capture facilitators and barriers to CM in these settings. The second feedback session focused on next steps in implementing CM in RRH, occurred after a presentation on preliminary experiences with CM embedded in RRH.

Nominal group technique

Two rounds of NGT were employed during the meeting's first feedback session to capture CM implementation facilitators and barriers. NGT is a structured approach to reaching consensus among a small, diverse group of participants. During the NGT process, participants have an equal opportunity to share ideas, preventing domination by any single participant and resulting in a prioritized list of ideas/issues that represent the group's collective input (27). For each round of NGT, the process followed the same six steps (Ask the Question, Generate Ideas, Record Ideas, Discuss on Ideas, Vote on Ideas, Overall Ranking) described fully in the supplemental materials.

Program building exercise

Participants were divided into two groups to identify the steps required to develop programs for implementing CM at: 1) the RRH level, and 2) the systems level to support CM in RRH. Participants identified critical steps for supporting RRH implementation of CM in these two settings and assess them on their ease of and necessity for implementation. Participants were also asked to identify stakeholders, measures of success, funding opportunities, and suggest novel ideas for these programs.

Key takeaways

Panellists were asked to share their biggest takeaway from the meeting, and their biggest hope for this work going forward. This question gave participants a chance to reflect on what they had discussed and provided an interactive approach to summarizing the day's content and recommendations for CM in RRH.

Results

CM facilitators and barriers

The top CM implementation facilitators and barriers are shown in Table 1. Panelists identified training and coaching as the most important implementation facilitators in RRH, followed by fidelity to core CM principles. These facilitators reflect that CM should be administered by staff who are trained on the model and can deliver it consistently and in alignment with core principles to ensure its effectiveness. Other facilitators included staff, resident and administrator buy-in, funding for incentives, ongoing clinical supervision, sustainability planning, and providing a tailored menu of options to meet community needs.

Lack of funding was identified as the top implementation barrier, which was noted as essentially the inverse of the "funding" facilitator noted above. The second-ranked barrier was stigma with respect to SUD and CM. During the discussion, participants referenced a common opinion that "people shouldn't be paid to stay drug free." Two of the other top ranked barriers included insufficient workforce and staff turnover in RRH. The latter include staff being stretched too thin, or having limited bandwidth. Additional barriers included lack of SUD training both in treatment and educational settings, limited community supports in rural areas resulting in isolation and a "reinforcement desert", an "ivory tower effect" representing disconnect between academic settings where research is conducted and community settings where treatment is provided; and a clinical perception that evidence-based treatments are already being adequately provided when they may not be.

Table 1. Facilitators and barriers to implementing contingency management identified by panel members (higher scores represent greater endorsement).

Facilitator	Total score	Barrier	Total score
Training and coaching (plan for turnover, implementation support)	33	Lack of funding	39
Fidelity to core principles (design)	28	Stigma (with respect to SUD, CM)	23
Staff and resident buy-in	17	Insufficient workforce/staff turnover	21
Funding for incentives	14	RRH are staff too busy, stretched too thin, have limited bandwidth	19
Leadership buy-in	13	Lack of training on SUD, in settings and educational institutions	19
Supervision	13	Isolation and limited community support/reinforcement desert	18
Sustainability planning	10	Ivory tower effect	10
Menu of options (the model can suit the community)	8	Not delivering evidence-based treatment despite thinking they are	10
Trust and relationship building	7		
Keep it simple	6		
Site champion and dedicated staff time	5		
Unique to the community/community specific – ownership	5		

Program building exercise

CM implementation (RRH level)

Panelists identified 11 steps as being important for implementing an RRH-based CM program. Each step is described in detail in Table 2. Although there was considerable variation in the ease of implementation, almost all the steps were determined to be of high or very high importance for successful CM implementation.

CM Funding in RRH was identified as the first step and was ranked as the most difficult element to accomplish. The panel noted that one key to acquiring funding is education and alignment at the state and local levels.

Table 2. Recovery house and system-level factors needed to implement contingency management across RRH.

Requirement for implementation	Necessity for program success	Ease/difficulty of acquisition	Level of Implementation
CM Funding – For incentives, staff training and ongoing delivery	Very High	Very Difficult	Recovery House
Staff Buy-in – Meeting to describe CM benefits and process/answer questions/provide ongoing support/recruiting champion	Very High	Difficult	Recovery House
House Policies/procedures – individual based on house/resident expectations about CM targets, reinforcer magnitude, frequency, staff involvement, tracking, etc. Remain consistent with CM principles.	Very High	Difficult	Recovery House
Education for RRH Leadership – Education on CM benefits/research in RRH to obtain leadership buy-in	Very High	Easy	Recovery House
Resident Buy-in – Meeting to describe CM and obtain feedback	Very High	Very Easy	Recovery House
Identification of CM targets – Done through meetings with residents	Very High	Very Easy	Recovery House
Documentation of CM sessions – How will data be documented and by whom.	Very High	Very Easy	Recovery House
Coordination of care – System to facilitate with substance use, health and mental health providers	High	Very Difficult	Recovery House
Data collection system/tracking – Identify who will be responsible for tracking at the house and how they will be collected (e.g., how will staff know when residents meet behavioral targets)	High	Difficult	Recovery House
House meetings - with residents to share policies/procedures, provide opportunity for input, share ideas about preferred incentives and specific recovery needs	High	Very Easy	Recovery House
Regular provider meetings – Regular meetings to share concerns, problems and successes and to allow providers to consult as a stakeholder workgroup on program improvements	Low	Easy	Recovery House
Incentive Payment and Taxes – For example, for total earnings payments over $599 per year (e.g., need for Recovery Housing programs to issue 1099 forms W-9 form)	Very High	Very Difficult	System
Person-centered Incentives – Tailored to the individual, but adherent to CM principles	High	Difficult	System
CM Education – provided across all levels of the system including RRH providers, policy makers, substance use and mental health providers	High	Moderate	System
Stigma Reduction - Messaging to reduce stigma about substance use disorder and CM by providing consistent messaging to providers and organizations	High	Moderate	System
Auditing procedures - Will ensure consistency and accountability that will support the integrity of CM programs	High	Easy	System
Model for CM across housing continuum – Useable at multiple recovery house levels and settings, and identifying workable, evidence-based protocols that fit a variety of RRH types	Low	Very Difficult	System
Reinforcement Targets – Develop a menu of CM reinforcement targets for various stages of recovery/settings including engagement (e.g., abstinence, retention), ongoing recovery (e.g., skills building, service access) and long-term recovery (e.g., employment)	Low	Difficult	System
Access to services – Through vouchers when clients are ready for services.	Low	Difficult	System

Participants noted that sharing successes with lawmakers and having peer group leaders on committees to tell their stories would make an impact. Several other important elements were identified and are listed in Table 2.

Panelists identified several ways to measure CM outcomes at the level of individual RRH. These included: How many CM goals were met? How many incentives were delivered? Did RRH retention improve? And did residents experience greater success during transition for RRH in obtaining stable housing, employment, treatment, healthcare, and other services? The panelists noted that measuring CM intervention success may also be essential for obtaining ongoing funding.

There were few disagreements among panelists. One was the extent to which strict adherence to rigorous methods of CM training and implementation found to be effective in clinical trials should be followed in the community (e.g., adherence to standards of visit frequency and reinforcement magnitude). Some felt these were critical standards that should not be deviated from, while others expressed that there may be a danger of reducing the feasibility of CM if procedures taxed the resources of the RRH. Another area of discussion was the extent to which abstinence-based CM (as opposed to other targets such as recovery-oriented activities) was feasible in RRH given that many of these facilities have abstinence requirements for residency.

CM implementation (system level)

Important systems level components identified by the panel to support CM are presented in Table 2. Panel consensus was that measuring success at the systems level would require examining aggregate data from community, regional, or state resources. One panelist noted that CM will increase outpatient health costs because recovery targets sometimes focus on accessing services. However, this panelist also noted that we may see a decrease in other services such as emergency room visits and incarceration as individuals stop using substances. Panelists also noted there would likely be reductions in SUD-related illnesses and overdoses, and that retention and initiation in treatment would increase over time. These hypothesized outcomes, shown in other studies, demonstrate potential for CM as a component of value-based care in RRH.

The panel brainstormed ideas for seeking funding, identifying specific sources at the house level that could benefit the broader system and reimbursement of providers, and provide recovery houses with resources that would make the implementation of CM more feasible. Solutions identified for supporting funding of CM at the house level included: providing housing vouchers; establishing a process to track the billing codes for urine screens to reimburse providers and track UA results simultaneously in cases where abstinence-based CM is the focus; and establishing a Healthcare Common Procedure Coding System (HCPCS) code for tracking CM through the Centers for Medicare & Medicaid Services (CMS) claims.

Several other solutions were identified by the expert panel. Panelists discussed the importance of obtaining buy-in at both system and program levels and seeking partnership with other interested parties at the systems level that could help to facilitate program success. Stakeholders included: the criminal justice system; insurance payers; residential and outpatient SUD and mental health treatment providers; other housing providers; and peers who may provide support and advocacy through their lived experience. The group stressed that having aligned stakeholders is important to address reservations of CM and to explore alternative funds for implementation. Finally, there was discussion related to how incentives help provide for basic needs and therefore can provide a resource that supports achieving recovery goals, such as money for a haircut or clothes for job interviews, or gas cards. Importantly, it was also stressed that incentives must be inherently reinforcing to be effective at changing target behaviors.

Key takeaways

Three themes emerged. First, there was an overarching perception that implementing CM in RRH can be accomplished. Second, the consensus was that implementation will be setting-specific and general guidelines, process, and procedures that need to be tailored to each RRH. RRH varies state-by-state and from one house to the next; therefore, implementation of CM will have to be adapted for the setting while remaining adherent to CM best practices. Third, group consensus was that there is a firm foundation upon which to base CM implementation in RRH; the CM literature provides several examples demonstrating intervention efficacy, as well as projects that have shown CM has been implemented successfully in other areas.

Discussion

Implementation of evidence-based interventions for SUD into any clinical setting is challenging. RRH are no different. There are myriad challenges to address at multiple levels from resident buy-in to policies and systems that provide regulatory and fiscal support for RRHs. This paper is the first to describe feedback from

a panel of subject matter experts in CM, RRH, and implementation science identifying challenges related to implementing CM in this setting. Our methodology for working with the expert panel was novel within the SUD literature and may provide an exemplar for future efforts to improve implementation of evidence-based practices.

The impetus for this paper was driven by The Fletcher Group, Inc., an organization whose mission is to support the success of recovery housing, and not by the project researchers. The process was driven by individuals who experience the challenges of working with people within a system that is chronically under-funded. The resulting collaborative process was born out of an initiative to improve care for RRH residents by introducing this evidence-based practice. It has a particular appeal for RRH as CM lends itself to supervised implementation by providers who have not traditionally provided these services (e.g., RRH staff members). The convening of the expert panel is an important step towards developing procedures and guidelines designed to broaden the implementation of CM in RRH.

Barriers and facilitators

Our panel identified multi-level buy-in (resident, staff, leadership) as essential for the success of any CM program. Factors include trust and relationship building, keeping the intervention feasible yet evidence-based, and having a site champion with dedicated time to support CM. Barriers included staff turnover and having staff members who were stretched too thin, with limited support, as well as a lack of CM training. Within some communities, staff may disagree with providing incentives to people for doing things they "should already be doing" to achieve recovery. This finding is consistent with previous studies that characterized negative opinions of CM by clinicians (often misperceptions that can be addressed with training) including concerns about relapse after CM ends, cost, selling incentives, undermining intrinsic motivation, philosophical opposition to "paying" for treatment goals, increased provider workload, and others (28). At the same time, studies of SUD professionals have found that those trained to implement CM generally have positive attitudes toward the treatment (17, 28). Providers also note important training-related (e.g., lack of supervision, feeling unqualified) implementation barriers (28). Yet others have demonstrated that provider background, demographics, orientation, and training may influence the degree to which providers are open to implementing CM (29, 30). These studies, along with feedback from our panel, highlight the need to take provider characteristics and training into account.

Organizational buy-in was also identified as essential for CM implementation. Few studies have explored this aspect, and none has examined organizational factors related to CM in RRH. One examination of organizational factors associated with adoption of CM among 318 publicly funded SUD treatment programs included espousing a supportive treatment approach, being research-friendly, offering outpatient care only, and serving patients in drug court (30). In a trial examining participants in both recovery and traditional housing, Rash et al. (28) found CM was related to longer durations of drug abstinence and treatment retention regardless of housing type. More research is needed to explore parameters that support the effectiveness of CM in RRH, as well as the extent to which we can foster organizational factors that would support its implementation. Notably, many RRHs have strict abstinence policies that preclude reinforcement of urine drug screening, but this may not universally be the case, meaning that there is a need for reinforcement target flexibility. Even in programs with abstinence policies, the impact on substance use is often highly variable, such that CM protocols reinforcing negative drug screens can still be beneficial (28). In a recent report, the US Department of Health and Human Services (31) has also highlighted many of the barriers identified in the research and recommends approaches for overcoming many of these barriers.

Some systemic issues centered around the legality of providing incentives, including logistical issues such as whether CM incentives are subject to taxation, for fear of running afoul of Medicaid-based anti-kickback regulations. Rawson et al. (18) highlight regulatory issues that have hampered CM adoption. Unless included as a covered federal healthcare benefit (e.g., Medicaid Waiver) or approved by the Office of the Inspector General, CM may violate regulations that prohibit the use of incentives with Medicaid enrollees. Important factors to consider include whether: 1) CM programs result in increased provider revenue; 2) programs place the provider at a competitive advantage; 3) there are sufficient protections against the misuse of incentives (e.g., audit trail); and 4) if CM is implemented as part of an individualized training plan and impacts patient outcomes. Although these issues are directly related to enrollees in federal healthcare plans, they are relevant to RRH as an increasing number of housing providers are directly or indirectly involved with healthcare. Importantly, the US Department of Health and Human Services (31) recently recognized that the potential application of federal fraud and abuse laws is

a barrier to CM implementation. With increasing interest in CM, we are hopeful that regulatory clarity will allow providers to implement CM in a manner that is effective and has protections against waste, fraud and abuse related to incentives (18).

Implementation fidelity and sustainability

Challenging implementation fidelity and sustainability issues are pervasive across health settings. In RRH, fidelity includes structural integrity of CM that will be clinically effective and the skillfulness with which RRH staff deliver those interventions. Several questions exist regarding fidelity barriers: How is structural fidelity to CM principles assured? How is fidelity maintained over time? How will program staff be trained to deliver CM, and what level of continuing oversight is needed? How will RRH settings onboard new staff when turnover occurs? How will CM be funded? Each of these questions has been addressed to some degree.

To be efficacious, CM interventions require fidelity to core elements including selection of an objectively verifiable target behavior for reinforcement, a desired incentive provided when the target behavior occurs, withholding the incentive when it does not, frequent monitoring of the behavior and other features such as incentive escalation that lead to maintenance of behavior change (10). Programs that omit these important features will likely not be successful.

Clinicians in SUD programs can implement effective CM interventions with a high degree of fidelity with supervision (14, 32–34). However, continuous long-term effectiveness and sustainability are unlikely without staff commitment and integration into organizational policy. Thus, RRHs are recommended to structure CM within their daily routine. As noted by our panel, it may also be helpful to have a CM "champion," someone who believes in its effectiveness and can follow through on its implementation. As noted in Table 2, the panel also noted other factors that might lead to success such as data collection, tracking and documentation of CM sessions, identification of CM targets, creation of a client-centered CM model, and ongoing education, among others. It may be useful for individual RRHs to partner with a CM content expert who is available to regularly provide feedback on program implementation.

CM intervention sustainability also required an ongoing financial commitment. "Who will pay for the CM program?" is a question that has been central to CM implementation for decades (35, 36), and it has implications for the types and magnitude of reinforcers that can be delivered, and for the types of target behaviors (e.g., abstinence or pro-recovery activities) that might be reinforced. CM can be conducted in a cost-effective manner (15). Although higher magnitude CM programs result in greater behavior change, lower magnitude CM programs can also be effective depending on the setting and intervention target (e.g., (37)), and initial drug abstinence (38). Two panelists (DD and CR) were involved in the implementation of a nation-wide CM program for treating SUD in the US VA, which demonstrated CM can be successfully funded and delivered across a large system (19). Projects have also described ways of funding to support individual CM programs (39). The panel noted the importance of making the case for the (cost) effectiveness of CM to third party insurance payers and policy makers who can advocate for funding through Medicaid or other public funders.

Recommendations for RRH

RRH is an important resource for people experiencing homelessness and SUD with the need for a community to engage and support their access to care. Recovery from SUD involves long-term services that address complex social, medical, vocational and behavioral needs. CM can play an important role in supporting these goals. Our panel identified the importance of key factors that can facilitate or hinder implementation. Recommendations are illustrated in Table 3. Implementation of the recommendations presented here may be facilitated by the inclusion of CM experts who can help guide the process, but there are also resources available to RRHs interested in developing these programs independently (31, 40). It is further recommended that CM experts continue to produce similar resources that may assist RRHs in the future.

Limitations and future directions

The process used to establish our recommendations are limited. The expert panel included a varied group of individuals with relevant scientific and implementation backgrounds. However, this group was selected by a smaller group of investigators, and other individuals may have provided different perspectives on issues discussed. Importantly, this analysis did not include other stakeholders such as RRH residents or staff members. Further, because of the small panel size, we could not ensure adequate representation of race/ethnicity, urban/rural diversity, or lived experience. We view this paper as a starting point for a broader discussion on the improvement of SUD care in rural settings through the implementation of evidence-based interventions.

Table 3. Facilitators and recommendations to address barriers to implementation of contingency management in rural recovery housing.

Barrier	Description	Solutions and Facilitators
Engage local, program and system leadership for collaboration and alignment		
Stigma and trust	• Recovery housing faces social stigma and can have a low level of trust toward collaboration • Contingency management can be viewed negatively by recovery home operators, residents and those who do not believe in "rewards" for persons with SUD	• Education and messaging on the value of CM to address stigma • Consider use of rewards that support health related and social needs • Reinforce the idea that residents are to integrate with the culture, norms and expectation and CM is for goals that are harder to reach
Values, belief, and attitudes	• Recovery houses may subscribe to a particular treatment philosophy and be resistant to implementing new program • Stakeholders may subscribe to treatment philosophies	• Provide material support to allow for multiple programs to be offered • Engage stakeholders in opportunities to share their work and learn about new models
Funding and payment	• Concern about the use of funding to reinforce treatment attendance can be seen as a conflict of interest • Medicaid waiver is required	• Utilize grant funding for a demonstration to track compliance and obtain Medicaid waiver • Use private funding • Provide incentives for recovery-related activities
Agree on a model and build a project charter		
Person centered and evidence based	• Limited understanding of the concepts across the sectors • Limited training is available for appropriate models of care	• Training on CM and its alignment to person-centered care
Time and financial constraints	• Recovery houses operate under limited budgets and staff/residents have limited time.	• Provide financial assistance to facilitate implementation and evaluation • Consider flexibility of the programming while maintaining fidelity to the evidence-based protocols and their foundational behavioral principles • Keep evaluation instruments brief
Bring stakeholders together for alignment and consensus for implementation		
System knowledge	• There is limited awareness of process and cost of implementation	• Develop an outline, timeline, milestones and budget for your project's planning, implementation, and sustainment
State agency engagement	• The state agencies and others who pay for services are not aware of CM and its value for persons with SUD	• Engage state leaders on the opportunities and utilize national efforts as case studies
Secure funding to support training, implementation, payment, and sustainability		
Payment for training and implementation	• There is an absence of funding for funding for training and implementation support	• Seek federally funded technical assistance from a Rural Center of Excellence
Payment for services	• CM is an intervention delivered by trained personnel and sometimes credentials are required for reimbursement	• Train RRH staff to deliver CM under the supervision of clinicians • Work with grants and Medicaid waiver to support reimbursement
Payment for rewards	• There are limited fund sources to pay for rewards • There are limits on rewards amount • There are legal interpretations around use of reward related to conflict of interest	• Explore how other states and programs have addressed this through system coordination and partnership • Engage state agencies to explore use of grant and other state funds • Use private funding
Ensure system support for data, measurement, and oversight		
Technology access	• Recovery houses have limited access to devices and reliable internet. These resources are often needed to support tracking and oversight	• Provide needed devices • Prepare digital evaluation alternatives

Taking these limitations into consideration, several future directions may be explored. One is to broaden our approach to obtain perspectives of additional RRH stakeholders. Another is to examine how other housing models might benefit from CM implementation. Several issues related to cultural considerations and generalizability should also be examined including: the role of rural culture in the implementation of CM; the role of CM in addressing challenges of geographic isolation and limited access SUD treatment; generational poverty, limited economic opportunities and cultural attitudes toward authority impacts on sustainability and scalability. Future work should assess the extent to which cultural differences might impact the acceptance or impact of CM in rural settings, and what logistical solutions (e.g., telehealth) might address these challenges.

Conclusions

We sought to understand the barriers and facilitators of implementing CM into RRH. Though the intervention and its success are documented across studies, settings, and populations, CM's efficacy is not available to all who would benefit from it. In hopes of enhancing its uptake, the panel outlined

multiple factors that influence implementation. Importantly, implementation is most effective when engaging leadership and all relevant stakeholders toward community collaboration to agree on a model that adheres to best practices, and addresses challenges in funding and regulatory oversight.

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