The Recovery Housing System in Missouri:

Community-Based System Dynamics (CBSD)
Group Model Building Workshop Report

University of Missouri - Saint Louis Missouri Institute of Mental Health Addiction Science Team June - July, 2019

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Background

Missouri has been awarded two large SAMHSA grants to address the opioid overdose crisis. The Opioid State Targeted Response (STR) grant began in May 2017 and ended in May 2019. The State Opioid Response (SOR) grant serves as a continuation of the STR grant, and began in October 2018 and will continue through October 2020. These grants were awarded to the Missouri Department of Mental Health (DMH), with elements administered, implemented, and evaluated by the University of Missouri St. Louis - Missouri Institute of Mental Health (UMSL-MIMH). The majority of grant funds went towards direct treatment reimbursement for uninsured and under-insured individuals with opioid use disorder (OUD); however, there were also funds allocated for prevention, recovery, and harm reduction services. Recognizing that stable housing is a crucial factor in maintaining long-term recovery, grant-contracted treatment agencies were encouraged to utilize STR and SOR funding to support clients' housing needs by partnering with local recovery housing operations.

Around the same time the STR grant began, the Missouri Coalition of Recovery Support Providers (MCRSP) adapted standards created by the National Alliance of Recovery Residences (NARR) to accredit recovery homes in Missouri. The purpose of the accreditation is to ensure recovery homes provide a stable, clean, and safe environment for people in recovery. To be eligible to be reimbursed for housing individuals through the STR and SOR grants, recovery homes must become both NARR-accredited and deemed "friendly" towards the use of medication for addiction treatment (MAT) through a survey administered by DMH. The purpose of these requirements is twofold; 1) to incentivize recovery homes to become NARR-accredited, assuring a standard in quality across recovery housing environments in Missouri, and 2) to ensure individuals receiving treatment through the STR and SOR grants would not be required to discontinue or taper off their medications or feel stigmatized for using medication in their recovery at their home.

Both the NARR-accreditation process and MAT-friendly housing environments are still relatively new to Missouri and have not been without their challenges. Under the STR and SOR grants, grant staff at UMSL-MIMH worked with DMH and MCRSP to develop a robust evaluation of NARR-accredited and STR/SOR approved recovery homes in Missouri.

One of the components of the recovery evaluation included five Community-Based System Dynamic (CBSD) workshops across St. Louis, Springfield, and Kansas City, locations with the highest concentrations of NARR-accredited and SOR-funded houses. CBSD workshops provided an opportunity for stakeholders involved in the recovery housing system to voice their thoughts and opinions and share their experiences. Using the CBSD methodology allowed participants to be more engaged during the workshops than traditional focus groups. The workshops allowed housing managers and residents to think about the challenges they face through a systems framework. These workshops were crucial for understanding the recovery housing system in Missouri and ways to improve the system to ensure that all individuals have the opportunity to obtain and sustain meaningful recovery.

Get Involved

For more information, visit the following websites: NoMOdeaths.org or mcrsp.org

Community-Based System Dynamics

What is Community-Based System Dynamics?

System Dynamics: A way to understand systems through a combination of causal maps and mathematical equations. Systems are defined by their multiple, interconnected parts, which affect each other and affect the functioning of the system as a whole. For example, a recovery home is a system made up of its residents, including live-in house managers, the day-to-day interactions between the residents, and the relationships they build over time. Through these interactions and relationships, the environment of the home constantly changes

Feedback Loops: A key element of a system is its feedback loops. Feedback loops are processes in which an initial change in one factor reverberates throughout the system to cause a series of changes, which ultimately 'feed back' around to change the initial factor. If the factor is changed in the same direction as its initial change (i.e., it went up, and by the time its consequences fed back around, it increased again; or, it went down, and once the effects had fed back around, it decreased again), then it is called a *reinforcing loop*. If instead the factor is changed in the opposite direction as its initial change (i.e., the factor increased, and then once the effects made their way through the system, it decreased, or vice versa) then it is called a *balancing loop*. Reinforcing loops *reinforce* change – amplifying or accelerating change more and more in the same direction. They create vicious and virtuous cycles. A virtuous cycle can become a vicious cycle if it changes direction. Balancing loops *push back* against change by introducing regulating mechanisms that stabilize a system rather than create chaos. Balancing loops appear when there is a limit to how far reinforcing loops can take a system, i.e., a person can only use drugs excessively for so long before a balancing loop kicks in and halts the process. Reinforcing and balancing loops are not inherently good or bad; it is possible to stabilize a bad system so that it maintains its inferior state, and reinforcing loops frequently create instability and chaos.

Community-Based System Dynamics: System dynamics modelers generate causal maps by asking people who are part of the system of interest how that system functions. The goal is to understand what is *actually* happening in the system, not how it would *ideally* function. These conversations can happen in many settings, including one-on-one interviews or what are called "group model building workshops." In these workshops, multiple people in a system who have different perspectives are brought together as a group, and through a series of structured activities, they have an opportunity to share their view of the system with the modelers, as well as talk to each other and build off each other's contributions. The benefit derived is not just in developing a causal map, but also in the exchange of information between people in the system. Depending on the specific structured activities used, the modeler might create the causal map, or the participants in the workshops might develop their own. CBSD involves work with community partners to focus on problems that they are struggling with, using the wisdom and insight they have developed through years of experience in a system. The goal is to provide a tool both participants and system leaders can use moving forward.

Workshop Objectives

Generally, our objective was to provide an opportunity for recovery housing house managers and residents to describe what is happening in recovery homes. We had additional objectives based on the focus of each specific workshop. These objectives included:

- 1. Provide an opportunity for residents to discuss action ideas for improving recovery housing and how these fit within the model developed from previous workshops.
- 2. Learn about similarities and differences across St. Louis, Springfield, and Kansas City houses.
- 3. Learn ways for stakeholders to be more supportive of people in achieving recovery.
- 4. Understand how chaos is managed in recovery housing from the perspective of house managers.
- 5. Work with stakeholders across the recovery housing system to identify leverage points for improving the ability of recovery home operators and staff to support residents' recovery.
- 6. Provide an opportunity for residents to express the role of their individual treatment experiences within recovery home environments.

Workshop Overview

Participant Profile

We did not officially collect demographic information on participants during the workshops. However, the majority of the participants, both residents and house managers, were observed as white men, which reflects the general population of recovery homes across the state of Missouri. There were fewer than five women and people of color in attendance. The number in attendance at each workshop varied (see Table 1 below). We did not have access to communicate directly with residents or housing managers due to privacy and lack of email contacts for some residents; therefore, we relied on executive directors to assist with recruitment and logistics such as transportation. Although we could not enforce or confirm ahead of time, we stressed the importance of participants having received SOR funding and/or MAT services. Participants varied in how long they had been in the role of housing manager. Some participants had been a manager for as long as two years and some had only been a manager for a few weeks. Though we did not directly ask how long participating residents had resided in their recovery homes, through the workshops, we learned their time as residents varied from a single week to years.

Table 1: Participant Counts

City	Type of Participant	Number of Participants
St. Louis	Housing Manager	19
Springfield	Housing Manager	10
Kansas City	Housing Manager	7
St. Louis	Residents	5
Springfield	Residents	5

Observers

During the five workshops, the UMSL-MIMH team was intentional not to allow any outside observers. We wanted to be sensitive to the hierarchical structure of the recovery homes and provide a safe space for residents and housing managers to speak freely about the conditions of their homes and their experiences in the homes. The one exception to having an outside observer was the house manager workshop held in Springfield. The workshop was held at an affiliated Recovery Community Center, and the one observer was an employee of the community center, not the housing agency. The presence of this observer in no way compromised the house managers' identity or position.

Pictures

Participants signed a photo release form at the beginning of the workshop. We took pictures of participants and the activities for use in final reports.

Workshop Agendas

Workshop agendas followed the same format but varied slightly as workshop facilitators learned more information. Descriptions of the key activities are provided below:

Session One: St. Louis House Managers

Activity	Time
Dinner, check-in (photo releases & nametags)	5:30-6:00 pm
Welcome and Introductions	6:00-6:10 pm
Background and Goals	6:10-6:15 pm
Recovery Housing System and Your Part in It	6:15-6:20 pm
Hopes & Fears	6:20-6:50 pm
Activity followed by discussion	6:50-7:10 pm
BREAK	7:10-7:20 pm
Feedback Loops	7:20–7:30 pm
Small group activity followed by Discussion	7:30-8:20 pm
BREAK	8:20-8:30 pm
Reflections & closing	8:30-9:00 pm

Session Two: Springfield House Managers

Activity	Time
Dinner, check-in (photo releases & nametags)	5:00-5:30 pm
Welcome and Introductions, Moment of Silence/Prayers	5:30-5:40 pm
Background and Goals	5:40-5:45 pm
Recovery Housing System and Your Part in It	5:45-5:50 pm
Hopes & Fears for Today and for Recovery Housing (with Follow-up)	5:50-6:15 pm
Activity followed by discussion	6:15-6:40 pm
BREAK	6:40-6:50 pm
Feedback Loops	6:50–7:00 pm
Small group activity followed by Report Back	7:00-7:50 pm
BREAK	7:50-8:05 pm
Reflections & closing	8:05-8:30 pm

Session Three: Kansas City House Managers

Activity	Time
Dinner, check-in (photo releases & nametags)	1:30-2:00 pm
Welcome and Introductions	2:00-2:10 pm
Background and Goals	2:10-2:15 pm
Recovery Housing System and Your Part in It	2:15-2:20 pm
Hopes & Fears for Today and for Recovery Housing (with Follow-up)	2:20-2:40 pm
Review previous factors discussed	2:40-2:50 pm
Feedback Loops / Stock and Flow Diagram	2:50-3:00 pm
BREAK	3:00-3:10 pm
Stock and Flow large group activity (leaving 10 minutes for review/reflection)	3:10-3:50 pm
Action Ideas	3:50-4:20 pm
BREAK	4:20-4:35 pm
Reflections & closing	4:35-5:00 pm

Session Four: St. Louis Residents

Activity	Time
Dinner, check-in (photo releases & nametags)	5:00-5:30 pm
Welcome and Introductions	5:30-5:40 pm
Background and Goals	5:40-5:45 pm
Recovery Housing System and Your Part in It	5:45-5:50 pm
Hopes & Fears for Today and for Recovery Housing (with Follow-up)	5:50-6:10 pm
Feedback Loops / Stock and Flow Diagram	6:10-6:20 pm
BREAK	6:20-6:30 pm
Stock and Flow large group activity (leaving 10 minutes for review/reflection)	6:30-7:25 pm
QUICK BREAK	7:25-7:30 pm
Action Ideas	7:30-8:00 pm
BREAK	8:00-8:10 pm
Facilitated reflection & closing	8:10-8:30 pm

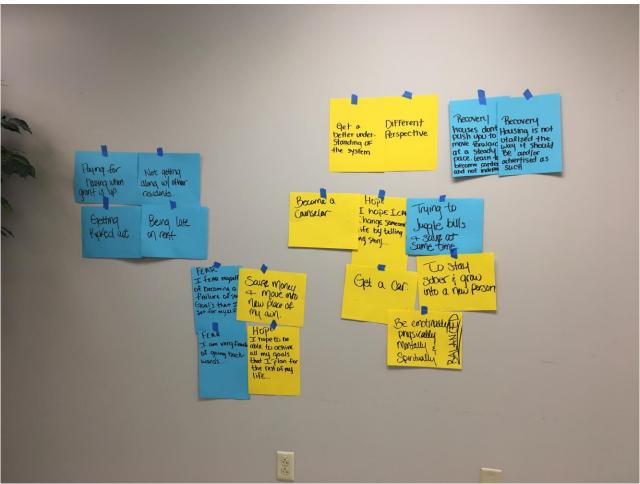
Session Five: Springfield Residents

Activity	Time
Dinner, check-in (photo releases & nametags)	5:00-5:30 pm
Welcome and Introductions	5:30-5:40 pm
Background and Goals	5:40-5:45 pm
Recovery Housing System and Your Part in It	5:45-5:50 pm
Hopes & Fears for Today and for Recovery Housing (with Follow-up)	5:50-6:10 pm
Feedback Loops / Stock and Flow Diagram	6:10-6:20 pm
BREAK	6:20-6:30 pm
Model review in large group	6:30-6:45 pm
Model review in small groups	6:45-7:00 pm
Small group action Ideas (coming up with ideas)	7:00-7:45 pm
BREAK	7:45-7:55 pm

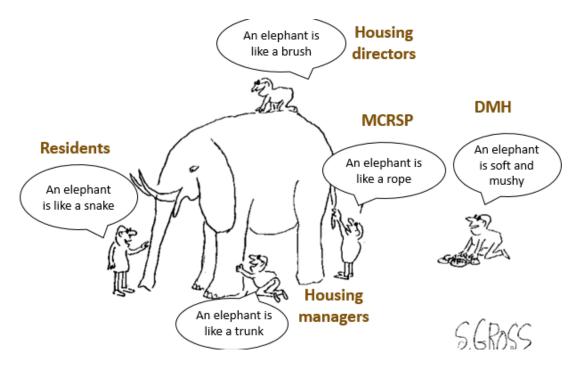
Action Ideas Report back and Group Discussion	7:55-8:25 pm
Closing and Next Steps	8:25-8:30 pm

Workshop Activity Descriptions

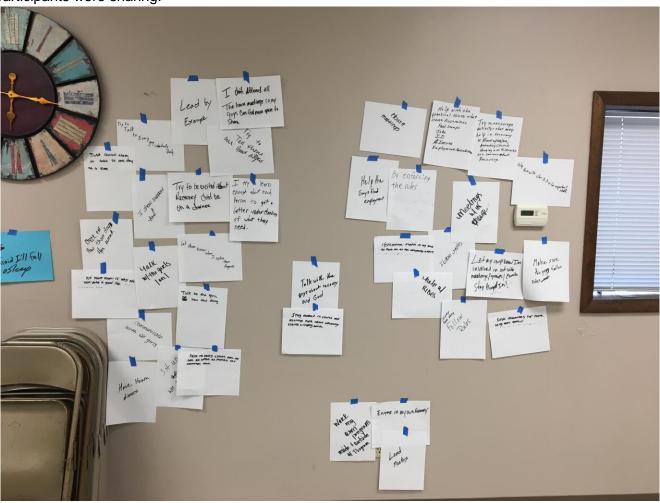
Hopes and Fears: This activity was used to elicit and establish group expectations at the beginning of the workshop. Participants were asked to write down their hopes and fears about the workshop, recovery housing in general, or their role as a house manager (one per sheet of paper). In a round-robin fashion, each participant shared one hope and one fear. The fears shared included those related to the actual workshop (e.g. "I think I'll be bored today") and broader fears about recovery housing (e.g. "Nothing we do here will make a difference"). A facilitator from our group collected each hope and fear that participants read and reflected back what the participant said for clarity. As the participants shared, the facilitator took each piece of paper and clustered them into thematic groups by taping them to the wall. After all participants have shared their hopes and fears, the facilitator who was creating the themes explained the themes of the hopes and fears and asked the group: "Does this resonate with you? Are there other themes you notice, or any hopes or fears you think should be moved?"



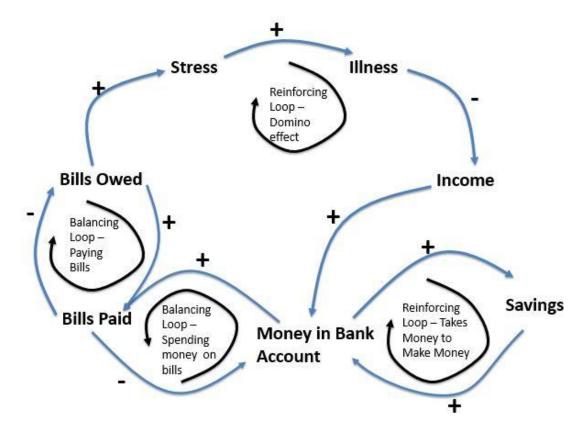
Elephant Parable: This activity was used to introduce participants to the concept of system dynamics. The purpose of the activity was to provide a universal and easy way to understand a metaphor for complex systems. Participants were shown a photograph of a large elephant with three blind men standing in various places around the elephant. The elephant represented a system and the men represent the different stakeholders within it. For the recovery housing system, stakeholders would include residents, executive directors, MCRSP, and DMH. Each stakeholder's position relative to the system (the elephant) impacts their perspective of the system itself. The example given was that the blind man who only feels the trunk of an elephant will believe an elephant is similar to a snake.



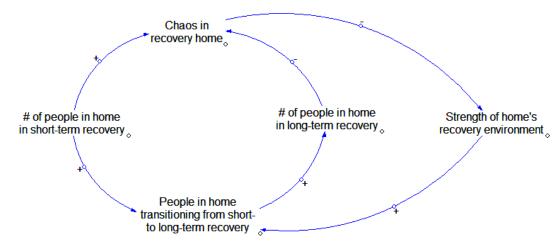
Variable Elicitation: This activity was used to facilitate a consensus-based group discussion about the model problem and boundaries early in the modeling process. Similar to hopes and fears, participants were asked to write down their ideas on sheets for paper. The prompt for this activity varied by workshop, but generally asked participants about things that relate to their recovery home. For example, in the first workshop, we asked: "What are the things that increase or decrease chaos in your recovery home?", and in the second workshop we asked: "What are the things you do to support the recovery environment in your home?" In a round-robin fashion, each participant then shared one idea until all ideas were shared. The facilitator took each idea that participants read and reflected back what the participant said for clarity. The facilitator then took each of their papers and clustered them into thematic groups by taping them to the wall. After each participant has shared all of their ideas, the facilitator explained the themes and asks the group: "Does this resonate with you? Are there other themes you notice, you think should be moved?" We were unsure how comfortable participants would be in their writing and spelling skills, therefore we had one member of our team assigned as a writer in the first session. Participants would share their idea aloud and the writer would do their best to capture the idea the participants were sharing.



Introduction to Causal Loops: Participants were further introduced to the concept of causal loops as they relate to system dynamics using a non-recovery related example (i.e. income). The facilitator explained that feedback loops are a visual way to show how things in a system are connected, and using an animated Power-Point introduced the concepts (i.e. reinforcing loops, positive and negative connections). The goal of this activity was to give participants a good enough understanding of feedback loops to be able to create their own diagram as it related to recovery housing.



Small-Group Causal Maps: This activity was used to get an initial idea of central concepts and their relationships to recovery housing. The goal of this activity is to create elaborate causal loop diagrams through inclusive conversations in subgroups. Participants were broken up into small groups and given a large piece of paper with a "seed structure" (i.e. pre-drawn causal loops) taped to the wall. The seed structure was different depending on the workshop – an example seed structure from the Springfield Housing Manager workshop is below. Participants were encouraged to use the ideas brainstormed during the variable elicitation activity and think about how they relate to each other on the diagram. Each participant group had a facilitator and note-taker from the UMSL-MIMH team to help answer any questions and to capture information that didn't get captured within the diagram. At the end of the session, participants provided a summary to the entire group about the diagram they created.





Causal Mapping in Larger Groups: This activity is usually used in system dynamics to merge the diagrams created during the small group sessions into one large model using consensus from the entire group. We were not able to implement the activity in this fashion due to time limitations, however, this activity was used to replace the small group causal map activity during later sessions after the UMSL-MIMH team felt they'd reached saturation. Instead of working in small groups to create multiple diagrams, participants worked altogether in one group to add to a pre-existing diagram. System dynamics expert, Dr. Erin Stringfellow, added new concepts to the diagram within her modeling software as participants shared ideas. The model was projected onto a screen for participants to view the model as it evolved in live time.

Action Ideas: This activity was used to identify and prioritize actions after a model was developed. Participants were asked to 1) identify as many actions as they could that could impact the model from the previous exercise, 2) participants prioritize their ideas from most impactful to least impactful 3) participants share their ideas with the group including the following information: (a) describe the action, (b) identify where it would impact the model, (c) identify how easy or hard it is to implement, and (d) if successfully implemented, how much impact might this have on the recovery housing system. Ideas were taped onto the wall on a 4-grid table to visualize which action ideas were most/least impactful and hardest/easiest to accomplish. At the close of the final three workshops, participants were asked to identify original interventions or action ideas, focused on improving the recovery housing system and promoting long term recovery once residents were no longer living in the recovery home. Participants were also asked to consider where these actions would impact variables on the causal loop diagram created in the activity they completed previously. After brainstorming in small groups, participants ranked and shared the most important ideas with the large group which were then plotted on the axes of `Low Impact' to 'High Impact', and 'Easy to Do' to 'Hard to Do'. For the final two sessions, we ended with the participants voting on which plotted idea they found more important. The intervention ideas developed in the sessions are reported in Table 2.



Note: Session activities were based on preset scripts developed by system dynamic experts. More detailed information about the scripts can be found at https://en.wikibooks.org/wiki/Scriptapedia. Some changes were made to suit the needs of these specific workshops.

Model Outputs from the Workshops

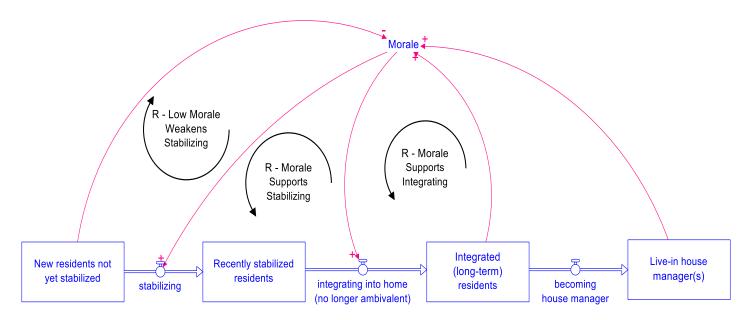
The following causal loop diagrams emerged from the five workshops as the result of an iterative process of variable elicitation and structure building or expanding on a provided diagram with participants, followed by synthesis, and refinement by the UMSL-MIMH team. Causal loop diagrams are meant to be understood as session artifacts, meaning that they are products of the specific activities, participants, and conversations that formed the workshop. These diagrams are qualitative models that embody and convey a set of hypotheses concerning the underlying structures that drive system behaviors. These hypotheses can therefore be accepted, challenged, revised, or refined.

A few notes on how to read causal loop diagrams: Text in blue represents system variables. Pink arrows represent causal links between variables. The small "+" or "-" next to the causal links describe the polarity of the links. For instance:

- The link between new residents not yet stabilized and morale has a **negative causal link**, which represents an inverse relationship between two variables, meaning as the number of new residents not yet stabilized increases, the morale of the recovery home decreases. The opposite is also true; as the number of new residents that have not yet stabilized decreases, the morale of the home increases.
- Morale and stabilizing have a positive causal link, which represents a direct relationship between two variables. An increase in morale increases the ability for new residents to stabilize in the recovery home. The opposite is also true; a decrease in morale decreases new residents' ability to stabilize in the home.

Finally, the letters embedded in circular arrows communicate feedback loops. Feedback loops describe system behavior in which an initial change in a variable causes a chain reaction that ultimately feeds back to create further change in the initial variable. Feedback loops can take two forms: reinforcing and balancing. Reinforcing loops generate exponential growth or exponential decay in a system. These behaviors are more commonly referred to as vicious or virtuous cycles. Balancing loops, on the other hand, create goal-seeking behavior, by dampening the effect of an initial stimulus or shock in the system.

Figure 1: Morale and Having a Sense of Shared Purpose



The basic process by which a recovery home ideally functions is through strong morale in the household, which supports new residents in stabilizing and integrating into the home. The morale of the home can be thought of as the overall 'feel' in the home. In a house with strong morale, residents are getting along and respecting boundaries and personal property. Many of the house managers brought up milk as personal property that is often stolen. There is trust and a feeling that "we're all in this together," which supports group accountability to rules and norms and individual accountability to recovery plans, but without the morale-sapping use of punitive measures such as fines and write-ups. While every home is different, morale typically manifests as regularly scheduled and attended social activities, the celebration of successes, strong mentoring relationships among residents and between residents and house managers, and a vibrant community space, among many other examples.

Every resident in the home contributes to morale, but it falls primarily to integrated (long-term) residents and house managers to ensure morale remains strong, especially because new residents who are not yet stabilized generally lower morale below what it otherwise would be (see link with a negative [-] sign below) either because they are having a difficult time getting along with others or because of their many urgent needs. By building morale, integrated residents and house managers support the development of future integrated residents and house managers who also build morale, continually renewing a sense of shared purpose within the home. Crucially, however, the largest effect on future morale is existing morale – meaning that it becomes easier and easier to build morale if it is already high, and harder and harder if it is already low. Moreover, it takes time for the overall 'feel' of the home to shift.

Integrated (long-term) residents and house managers do not always *build* morale. They can weaken morale by, for instance, gossiping about others or using fines and rules against each other. The more they engage in negative behaviors, the worse morale becomes, and the slower new residents stabilize and integrate. The slower the stabilization process, the greater the number of new residents in the home who are not stabilized, which further weakens morale and makes it even harder for those individuals to stabilize. Moreover, if residents do manage to stabilize and then integrate, they risk integrating by adopting the toxic norms of the home. This can lead to a vicious downward cycle of fewer and fewer integrated long-term residents, with the only

ones who remain perpetuating unhealthy norms, which is likely responsible for why some homes develop a reputation for being problematic or to be avoided. The lack of strong integrated, long-term residents also has implications for the house's ability to recruit strong live-in house managers.

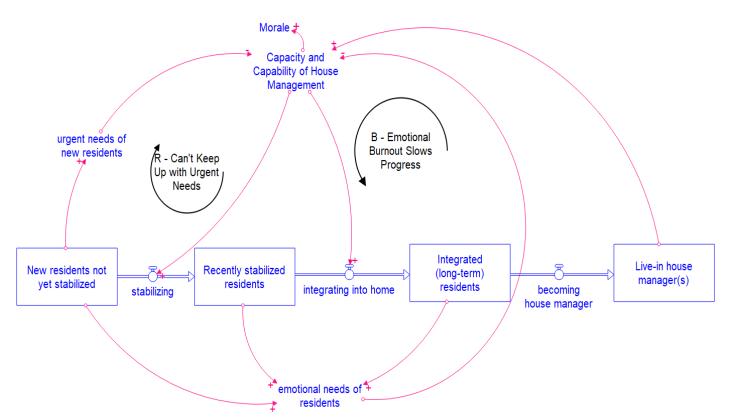


Figure 2: Capacity and Capability of House Management

The *capacity* of house management refers to how much work house management can collectively do/how many people they can 'manage,' given the constraints on their time and the amount of resources they must work with. The *capability* of house management encompasses "people skills" (e.g., resolving conflict, supporting mentoring relationship in others), knowledge of available resources and services, and a proactive approach to strengthening morale (e.g., organizing social activities) and preventing it from weakening (e.g., holding weekly house meetings to identify problems before they spiral out of control). House management needs to be strong in both; high capacity without capability, and vice versa, is ineffective.

The capacity and capability of house management is a key influence on morale, which in turn 'feeds back' around to affect the capacity and capability of house management.

As morale declines, stabilization slows, prolonging the period in which new residents have urgent needs and possibly resulting in new ones, which decreases capacity and capability of house management even more and therefore further lowers morale.

Identifying Strong Candidate House Managers

The recruitment process for house managers varies widely, with a more intentional approach at some of the larger, more established homes. Often, there are informal assistant house manager roles (also called floor monitors or house leaders) filled by people who emerge as "natural" leaders or who have been in the home the

longest, not necessarily by people who are best-suited to manage the home. Some housing manager participants complained about the lack of support they were getting from their assistants, while others had control in the choice.

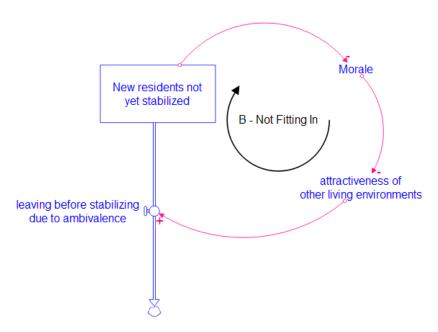
Given that capacity and capability of house management affects morale, which is necessary to stabilize and integrate residents into the home, it is critical that strong candidate house managers are identified and trained for the role. The quality of future house management is dependent on whether there are long-term residents in the home who are strong candidates, and the capacity and capability of house management to train those candidates. House managers need to be able to recognize strong candidates by assessing current residents' baseline capability (i.e., assuming sufficient capacity, how likely they are to naturally excel without any training). Furthermore, the stronger the capacity and capability of current house management, the better their ability to provide in-home training. Capability can and should be further developed through high quality outside evidence-based training and support, especially if current house management is weak.

Capacity and Burnout in House Managers

House managers can only support so many people. Even if house managers have received ample training, their capacity, especially, to manage the recovery home is affected by house-level factors, such as the number of resident needs they are responding to. Live-in house managers are emotionally on-call 24/7 for residents, and often try to help new residents meet their many urgent mental health, medical, and physical needs (not always succeeding). At the same time, they also try to respond to the ongoing emotional needs of all residents, including those who are stabilized or long-term integrated residents. Often, new residents have urgent needs that are time-consuming enough to weaken house managers' capacity and capability, which slows down the stabilization process for those new residents. As new residents fail to stabilize, the number and urgency of needs only increase, which creates a vicious cycle that housing managers can't keep up with. Over time, the responsibility of being emotionally on-call 24/7 and responding to so many urgent needs creates burnout, which jeopardizes house managers' recoveries and weakens the capacity and capability of house management. The lower their capacity and capability, the slower people progress through the home. This includes less support to help new residents stabilize and integrate. Thus, it is critical to stop burnout before it starts.

Housing manager participants who were paid for their work (which means they did not need to take on a second job) and given time off were much less likely to report being burnt out. Those house managers would be expected to have greater capacity and capability to manage the home, and therefore to support quality mentoring and the home's morale, both of which ease the burden on them.

Figure 3: Mismatch



Residents in recovery homes continually compare the benefits of staying in the home versus leaving. For new residents, the comparison might be to their prior living environment if that had more freedom compared to a strict and structured recovery home. For stabilized residents who have not yet integrated, they might continue to feel the pull of the drug culture and still not feel comfortable around the other residents in the home. For long-term integrated residents, they might be tired of the rules and structure and feel they are ready to live independently. New residents are more likely to feel like they fit in if their preferred path to recovery is closely aligned with that of other residents in the home, or if there is flexibility in the home for multiple paths to recovery. However, the risk of having multiple paths to recovery in the home is that it might be harder for residents to find peers with similar experiences.

A feeling of belongingness with other people who use drugs (PWUD) was described as feeling more comfortable with people who are using than those who are sober. This feeling of 'belongingness' can continue for quite some time, and thus part of the function of the other residents and house managers in the first few weeks is to help new residents feel comfortable enough with the other residents that they stay on to stabilize and integrate, rather than leaving without stabilizing (which sets them up for continual cycling through the system). The goal is to as quickly as possible integrate them into the home through strong mentoring so that they can engage fully with the recovery community outside the home. Indeed, participants described an approximately two-week time period in which it became apparent whether a new resident was going to stabilize or not, though this was often framed as primarily up to the individual, despite it also being clearly stated that the peer-to-peer relationships were critical for recovery.

This is another reminder of the importance of maintaining morale in the home, even when there is a greater number of new, not yet stabilized residents than usual. If the person leaves without stabilizing, that "solves the problem" whereby there are now fewer new residents in the home – "tranquility" is restored – but the problem is not solved for that individual or the system as a whole. Moreover, the pull of drug culture can remain months after someone has entered the home. The goal is to support them to transition to a 'recovery culture,' and to have their sense of belonging to that culture eventually outweighs their sense of belonging to the drug culture. This, too, is supported by morale and house management, but that quality is dependent on there being enough long-term residents in recovery in the home, which requires continual support of stabilized residents – including

those who come in already stabilized – so that they can become long-term residents. Long-term residents play a critical role in stabilizing new residents through their mentoring. In the workshops, for instance, participants would describe how long-term residents reassure new residents that they can trust the housing managers to be working in their best interests. Long-term residents also support stabilized residents to work on their recovery, such as encouraging involvement in the external recovery community, which supports residents' recovery in the home. The more there are residents in long-term recovery, the more they can "pay it back" and serve as role models to incoming residents.

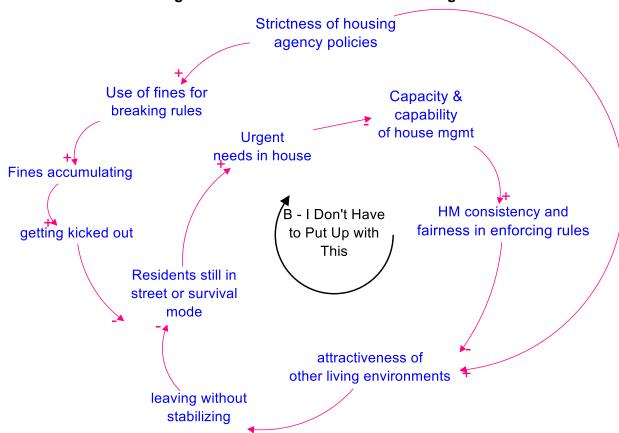


Figure 3.1: Strictness of Housing Policies/Attractiveness to Other Living Environments

Attractiveness of Other Living Environments

The other major factor affecting whether someone stays is how attractive the recovery home is relative to other living environments. Similar to the pull of the drug culture, there is almost always an alternative living arrangement for a person in a recovery home, including going back on the streets – and participants suggested this is preferable to some people. For residents still in street or survival mode, other options might be especially attractive when compared to a house with low morale and inadequate mentoring, thus leaving the person unable to stabilize and integrate. There is a sense of not fitting in for them, which combined with feeling like they *do* fit in with other PWUD and have better alternative places to live, leads them to leave before stabilizing. However, in truth, at all stages of being in a recovery home, when a person decides to leave it is likely because they have identified an option they think is better for them at that time. For stabilized residents in early recovery or long-term residents in recovery to decide to stay, they must continue to benefit from the home. A key way of doing that is to maintain high morale and strong mentoring. Of course, there is a limit to this – eventually, all must leave the home to make room for more people who could benefit, but the idea is that they leave the home

after having become long-term residents or even managers, and they leave because they feel ready to maintain their recovery while living on their own.

Strictness of Housing Agency Policies

A common theme arising in the workshops was that the strictness of housing agency policies and rules affected whether people decided to stay or leave, by increasing the relative attractiveness of other living environments where there are fewer or no rules. For residents still in street or survival mode, strict housing policies make the home seem especially unattractive, whereas for those who have lived in the home longer, they eventually "get tired" of all the rules. The rules are generally set at the level of the agency/recovery program, not the house, and are enforced by the house manager – with accountability processes in some homes from other residents – but overall it appears the rules cannot be changed by the residents, so there is no endogenous or feedback process involving the strictness of the rules. There are some common rules across housing agencies (e.g. cleaning duties, attendance at house meetings, relationships with people in the house), and there are some rules that vary across houses (e.g. attendance at religious services, job requirements, program fees).

However, there is a feedback loop involving the house management's consistency and fairness in enforcing rules, which came up several times in the workshops. House managers play "favorites," which weakens morale (and thus weakens all the recovery-building loops related to morale) and makes other living environments appear more attractive. There was very little discussion of why house managers might have difficulty enforcing the rules, though clearly both capacity and capability are involved. Capacity to do so might be especially strained when there are many urgent needs and the house managers are becoming burnt out, setting them up to have little patience for dealing with people fairly.

When house managers are inconsistent in rule enforcement, the unfairly-treated resident concludes, "I don't have to put up with this." If the sense of injustice is strong enough, the resident could just decide to leave, which, like other instances in which someone who is having a difficult time leaves, solves the problem – temporarily – for the home and the house manager, but does not solve the larger problem of people getting the help they need, or the challenge of *sustainably* stabilizing the home.

Another strategy of stabilizing a home is to kick people out, and in some extreme cases, this is necessary (for example, when a person is violent within the home). But in other cases, people are kicked out due to fines accumulating, and possibly not being applied fairly (i.e., some residents are given breaks on these fines while others are not). Moreover, the use of fines for breaking rules was consistently described negatively, indicating that it harms morale, especially when fines applied to an entire house for one person's infraction.

Intervention Ideas/Action Ideas

Below are the results from the Action Ideas activity we conducted in three of the workshops. The below are ideas from participants. For ideas that were determined to have a medium impact, they were placed in one box or the other and marked with an asterisk. Please note that not all of the ideas were discussed and plotted on the high/low and easy/hard quadrant, those ideas can be found below the following table.

Table 2: Systems Intervention Ideas from Participants

Hard to Do, Low Impact	Hard to Do, High Impact
	Don't dwell as much on the petty stuff
	 Open more treatment centers and make them easier and quicker to
	get into to detox your body from chemicals and provide a jumpstart to
	a structured environment
	 Funding for full-time house managers
	 Have house managers and assistants/ floor monitors
	 Change people's perception of how "difficult" the house is
	Open more treatment centers
	More staff for support
Easy to Do, Low Impact	Easy to Do, High Impact
	 Have MAT doctors associated with the treatment facility that comes of
	your housing fee
	 Property value in recover homes' neighborhoods (neighborhood
	watch, clean up, community service, dugs bring property value down
	and recovery brings it up)
	Stay Focused
	 What is your plan of action before leaving and offer suggestions*
	Teaching people how to ride the bus to get to their jobs, court, etc.
	(someone to ride along and show bus routes)*
	• Time off
	What can I do to help with what you're going through
	Communication with staff
	Refer them to HHH take advantage of these resources
	First-aid training, overdose education training
	 Housing 1st, then treatment evaluation which one is better for yourself
	and situation
	Give stability Palitable transportation*
	Reliable transportation* A lab Support
	Job Support
	 Housing holding residents accountable to treatment appoints and medications
	 Be transparent with staff about resident's issues

^{*} Determined by the group to have a medium impact on system

Action ideas mentioned by participants but not discussed by the group:

- Annual reunion for new people
- Take baby steps
- Vote Trump
- Introducing/Encouraging community service
- Transportation
- Daycare or assistance with daycare fees for single parents
- Be more hands-on- caring, asking questions
- Take home what is learned in treatment
- Teaching more for those who haven't been in treatment
- GED classes on-site
- Different treatment centers for different levels
- Open a call center
- Build relationships
- 1on1s with residents

Implications for Policy and Programming

- 1. To consider the difference between new residents who overall have low morale versus high morale, we might ask what it would look like if residents were pre-matched to a home whose recovery path norms are similar to their own. If not possible, then how can perspectives be changed so that pathways are seen as more similar to each other than different?
- 2. At a minimum, house managers who are struggling should receive significant outside training and support. This will help a weaker house in the short-term, as well as build sustainability in the house by improving house managers' ability to train new house managers. If there is not a current standard by which to train and assess house management (including both capability and capacity) then this should be developed.
- 3. If house managers lack capacity, all the other functions of the home suffer. If possible, housing managers should be paid for their work so that they do not need to work second jobs, and can instead devote themselves fully to the residents and the home. At a minimum, management should ensure that house managers have time to work on their own recovery and should periodically be given time off. House manager assistants could be beneficial, likely beyond what current house managers can do, especially if they are burnt out, but they should be carefully selected and be given adequate training (see above).
- 4. The narrative that emerged about when or why someone leaves was communicated by those who had not left and was almost entirely based around individual choice rather than structural factors that the house imposed let alone the outside world. Therefore, the perspective from residents who left unwillingly (i.e., were kicked out) was not taken into account. A stronger grievance policy encouraging former residents to report the conditions in which they left would be beneficial to identify why people leave recovery homes involuntarily.

Challenges and Perspectives

Planning and organizing CBSD workshops required both sensitive and strategic planning and communication. It is important to understand and work within the culture of the recovery world. We relied on executive directors to recruit participants for the workshops which provided its own challenges. Due to the role power dynamics may have played in honest discussions with house managers, executive directors were not allowed to attend or participate in the workshops. However, some directors were concerned that residents and house managers representing their agency would provide false or inaccurate information which would lead to punitive consequences for the housing agency. It was important to assure them that information gathered was to be used as aggregate data to inform potential areas for improvement, not to reprimand individual housing providers. Transparent communication with executive directors was crucial.

Getting housing managers and residents physically to the workshop was also a challenge that required flexibility from the facilitation team. Oftentimes residents had inconsistent means of communication, work nontraditional hours, and relied on public transportation. Additionally, recovery programs can require any number of the following commitments: support groups, treatment services, community service, and church. Bringing them together required flexibility, monetary incentives, and providing food. In addition, the facilitation team offered to pick any participant up that needed a ride and generally held the workshops in accessible locations in the evening when residents were off work and had fewer recovery program commitments.

Though most of the workshops went smoothly, there were several technical challenges. During two workshops, the facilitation team faced several issues with the ability to display or even access the necessary presentation and were forced to adapt accordingly. Knowing the material and ultimate goals was critical to implementing last-minute changes and effectively executing a successful workshop.

Follow-Up Feedback

Once all workshops were completed and information was summarized, members of the UMSL-MIMH team followed up calls or in-person meetings with the participating housing agencies. The purpose of the follow-ups had three goals: (1) to see if our summary of the housing system resonated with residents and house managers before disseminating the information to stakeholders, (2) our potential action ideas reflected their needs, and (3) gain additional insight about the information that may not have been addressed in the workshop. Follow-up discussions were held during each individual agency's house manager meeting. Unlike the workshops, executive directors were allowed to participate and provide feedback. Due to turnover, many of the current house managers had not participated in the workshops but were still engaged in the follow-up discussion. Each agency was provided a handout with summarized findings (see Appendix) so that information could be shared with residents who participated in the workshops but would not be in the house manager meeting. Contact information was included on the handout so that individuals could reach out if they had additional feedback. Obstacles such as turnover rates for residents and house managers as well as agency structural changes limited our ability to follow up with all who participated. Overall, housing leadership and staff agreed with the summary that was presented. Below is an overview of the feedback we received after completing follow-ups with all participating agencies.

Potential Action Ideas

Collaboration between housing and treatment: A few of the housing agencies noted that although they may have previously established practices to promote collaboration with treatment providers, all housing agencies would like more guidance from DMH and MCRSP in creating positive relationships with treatment providers as well as a more in-depth referral process, including additional screening to ensure a resident will fit into the organization. Agencies also brought up funding issues between housing and treatment. They suggested there be more transparency, particularly with how many days a resident has left before their grant funding is cut off and they are asked to leave the house. One agency representative mentioned that better documentation and "less word of mouth" may help with transparency. Housing agency representatives also expressed concerned that treatment providers are "not being held accountable with how they use funds", yet they are "given the ultimate responsibility of dispersing grant funds" to housing providers.

Housing manager requirements and trainings: All agency representatives agreed that additional trainings for housing managers could be helpful. Some housing agencies already have required trainings such as the Certified Peer Specialist training, First Aid and CPR, and the Overdose Reversal Training. Other training topics suggested include de-escalation, mediation and stress management training, or having the Missouri Credentialing Board create a training specifically for recovery housing managers. However, an unintentional consequence of additional required trainings for managers could be that they further contribute to burnout among managers who already feel overextended. It was also brought up that new house managers can destabilize the house, implying that despite having previous training, some house managers just may not fit within a house or not get along with certain residents and that could disrupt overall morale. Agencies mentioned that signing an agreement to be a manager for a predetermined amount of time could also help decrease turnover and capacity issues.

Pay and time off for managers: Some housing agencies pay housing managers so they can be full-time without working another job. Managers who work for agencies in which they are paid report enjoying being able to

dedicate themselves to their house full-time. However, among housing managers who do not get paid, a concern was brought up that pay could change the motivation behind becoming a house manager and the application of their management style. This concern did resonate with house managers who are compensated for their roles; they recognized how adding a new payment component could change the culture of house managers in an established agency. Both paid and unpaid house managers acknowledged the challenge of "catching" housing managers before they burn out, so an alternative suggestion was having another manager or support person to rely on when needed so that one person does not carry the sole load of responsibilities without reprieve when needed.

Remaining Questions

There were additional questions that arose from the workshops. We asked these remaining questions during follow-up calls and meetings with housing agencies.

How do people know when it's time to leave after they have become long-term residents?

From what was shared, residents and managers alike just "know" when it is time to leave a recovery residence; when they are stable in their recovery they are able to move out. Commonly acknowledged indicators were consistent employment, rebuilding damaged relationships with family and friends, and self-accountability in recovery program expectations. Housing organization structure is also helpful, having a tiered system where residents advance through levels of housing limits stagnancy and encourages residents to continue working towards independence. With this structure, more stable residents can move into an "outer house" that has fewer restrictions but they are still a part of the organization and making smaller steps to total housing independence. One housing agency recognized that for the most part, people are either ready to leave or know when it's time to leave to give up space/funding to someone in need. A larger issue related to housing capacity is the general lack of housing support outside of the recovery housing community in Missouri. Housing agencies reported feeling frustrated and conflicted when they have to make the decision to kick an individual out of housing without being able to point them towards alternative housing arrangements.

How do people stay engaged and contribute to peer modeling after they leave the home?

Some housing agencies attempt to keep up with residents who have left, or residents take it upon themselves to come back and visit and use other services offered through the housing organization (e.g. support groups). It was noted by one agency that once a resident leaves a housing program they have no obligation to stay engaged, and often their continued engagement depends on how strong their relationship-building was with residents during their stay.

Other discussion

In some of the follow-ups, housing agencies discussed the best way to support residents "without enabling them," which seemed to be a common struggle from managers. This was a topic that was discussed during the workshops and continues to be a point of focus for those engaged in the housing system. Some agency representatives shared with us new programming that they are working on to support people moving out of the homes or supporting new housing managers. Although we do not have details at this time, it's a positive step in the right direction that housing agencies are working towards improving the recovery housing system.

Conclusion

The UMSL-MIMH team was able to successfully conduct five CBSD workshops across Missouri to gain insight and knowledge on the recovery housing system. Housing managers and residents had the opportunity to share their experiences, knowledge, and thoughts about this system, and express their ideas for future improvements.

Key Takeaways

- Strong morale in the house between housing managers and residents can positively affect resident outcomes
- Being in strong recovery is not enough to make a good manager given the demands placed on these individuals.
- A mismatch between residents' recovery paths within households can affect morale and may encourage residents to leave before they are in strong recovery

To address these main issues, some possible solutions could be:

- Improve collaboration between treatment and housing agencies through increased state guidance
- In-depth referrals from treatment to housing agencies to ensure a good "fit" for residents
- Provide more resources and training opportunities to support housing managers
- Identify ways to prevent manager burnout

Ultimately the CBSD workshops were a valuable experience for all involved. Participants reported enjoying the workshops and appreciating the opportunity to be involved and for their voices to be heard. We were intentional in setting a realistic expectation for what would come of these workshops but many still had high hopes for the future and ongoing conversations about improving recovery housing. To accomplish this, there will need to be strong and ongoing collaboration between all stakeholders.

Appendix - Summary Handout to Housing Agencies

Summary of Community Based System Dynamics Workshops

We conducted five, 3-hour Workshops with NARR-Accredited and SOR approved houses

- 3 workshops with live-in housing managers (36 managers total)
- St. Louis (19)
- Kansas City (7)
- Springfield (10)
- 2 workshops with housing residents (10 residents total)
- St. Louis (5)
- Springfield (5)
- 2 individual interviews with State partners
 - 1 Department of Mental Health
 - 1 Missouri Coalition for Recovery Support Providers (MCRSP)

Goals of the workshops:

- Learn about similarities and differences across St. Louis, Springfield, and Kansas City recovery homes.
- Find ways to improve recovery homes' ability to support residents' recovery.
- Provide an opportunity for residents to express what is happening within recovery homes and how that relates to treatment.
- Provide an opportunity for residents to discuss action ideas for improving recovery housing

Key Findings:

1. Morale Affects Everything:

In a house with strong morale, residents are getting along, respecting boundaries and personal property. There is trust and a feeling that "we're all in this together," which supports group accountability to rules and norms and individual accountability to recovery plans, but without the use of punishments such as fines and write-ups.

2. Expectations of Housing Managers and the Impact on Morale (capacity, capability and burnout): The capacity and capability of house management is a key influence on morale. Over time, the responsibility of being emotionally on-call 24/7 and responding to so many urgent needs creates burnout, which puts the house managers' recoveries at risk and weakens the capacity and capability of house management.

3. Mismatch:

New residents are more likely to feel like they fit in if their path to recovery matches the path of recovery of other residents in the home, or if there is flexibility in the home for multiple paths to recovery. However, the risk with having multiple paths to recovery in the home is that it might be harder for residents to find peers with similar experiences. For example, a non-religious person in a very religious home may not relate to other residents. Additionally, a resident may have trouble relating to other residents if they are one of the only people in the house taking medication for their opioid use.

Potential Action Ideas to Explore:

- Collaboration between housing and treatment (referral process) –better matching where possible BUT ALSO open dialogue about accepting ALL recovery paths
- Length of stay should not be the only requirement for selecting new housing managers
- Appropriate, regular training for housing managers, which means defining standardized requirements or skills
- Pay and time off for house managers to prevent burnout, which reduces morale of whole house

Note: There is no one "right" or easy answer to addressing some of the challenges that recovery homes face in supporting people in recovery. However, based on recommendations from housing managers and residents themselves, we feel some of the action items listed above could be a move in the right direction.

Next Steps:

• We are going to share this information with state-leaders (i.e. MCRSP and the Department of Mental Health).

Please reach out if you have any questions, additional feedback, or recommendations. Your information will remain anonymous when shared with state leaders.

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Appendix – Photos from CBSD Workshops

