Case-level Variables

- Urban/rural
- State
- Community role (e.g., person with lived experience, recovery coach, etc.)

Basic Template (see below for definitions, examples, and inclusion/exclusion criteria)

- Individual
  - Characteristics and qualities affecting substance use and recovery
    - Self-efficacy and self-stigma
  - Anticipated stigma
- Interpersonal
  - Disclosure
  - Separating
  - Relational environments supporting recovery
  - Discrimination (coded with Organizational: Discrimination)
- Organizational
  - Discrimination (coded with Interpersonal: Discrimination)
  - Faith-based organizations
  - SUD organization operations
  - Healthcare provider operations
  - Criminal legal system operations
  - Other organizational operations
- Community
  - Stereotype
  - Principles for recovery-ready communities/systems
  - Contextual recovery facilitators and barriers
  - Cross-system coordination
  - Workforce issues
  - Structural discrimination and power (coded with Policy: Structural discrimination and power)
- Policy
  - Structural discrimination and power (coded with Community: Structural discrimination and power)
  - Status loss and labeling
  - Policies needed for recovery
  - Fundamental causes
- COVID-19

Socioecological Framework Definitions

- Individual: discussion of personal-level knowledge, attitudes, skills, behavior
- Interpersonal: discussion of personal and professional/-school relationships and relationship dynamics
- Organizational: discussion of issues specific to one organization (e.g., law enforcement, school system)
- Community: discussion of interactions between organizations (e.g., how schools relate to and work with law enforcement) and social norms/values that shape organizational and interpersonal interactions)
- Policy: discussion of laws and regulations as well as government funding and use of resources

Coding Guidelines

- Consider all codes as tension codes, meaning they can be used to code statements about the presence or absence of a given construct (for later facilitator/barrier valence application)
- Avoid coding text spoken by facilitators
- Code at the shortest possible unit of text, coding more context as needed (can supplement granular codes with paragraph-level codes)

Socioecological Framework: Code	**Definitions (including tension codes), Examples, Inclusion/Exclusion Criteria**
Facilitator	Defined as discussions of facilitators to addressing the opioid epidemic in specific communities. Use any time participants discuss factors that support and help efforts to address the opioid epidemic and always double-code with at least one other code.
Barrier	Defined as discussions of barriers to addressing the opioid epidemic in specific communities. Use any time participants discuss factors that hinder or get in the way of efforts to address the opioid epidemic and always double-code with at least one other code.
Action suggestions	Defined as discussions of specific actions that participants suggest need to be taken to address the opioid epidemic. Always double-code with at least one other code.
Individual: Characteristics and qualities affecting substance use and recovery	Defined as elements of recovery related to individual factors such as substance use history, risk factors, access to resources for recovery (e.g., MOUD, treatment services, mutual support groups) or more broadly (e.g., transportation, employment, education), knowledge, attitudes, beliefs, and characteristics of the individual. If trouble deciding between characteristics and self-efficacy, err on the side of caution and use both. Inclusion criteria: Discussions about substance use history, individual experiences with systems, physical health concerns, mental health concerns, emotional toll of substance use and recovery from a personal

	perspective, individual faith/spiritual beliefs, personal causes of SUD (i.e., trauma, lack of role models as a child), lack of youth role models, co-occurring mental health issues, intergenerational SUD issues, self-medicating to cope with pain or challenging circumstances (potential to double code with Anticipated stigma). Potential for double-coding with Community/Policy codes. Exclusion criteria: Conversations about beliefs in personal recovery efforts (code to self-stigma/self-efficacy), attitudes about substance use/recovery/treatment (code in self-stigma/self-efficacy), community substance use (code in Community), receiving or needing to receive validation or recovery support from others (code in interpersonal), community attitudes about substance use, treatment, and recovery (Code in Community: Stereotype).
Individual: Characteristics and qualities affecting substance use and recovery *Self-efficacy and self-stigma (Child code under Characteristics)*	*Fox et al*: The extent to which people endorse the negative beliefs and feelings associated with the stigmatized identity for the self. In other words, internalized stigma represents the application of negative stereotypes and prejudice to the self. *Krendl and Perry*: negative beliefs that individuals with a stigmatized condition attribute to themselves and social identity threat. Stigmatization can negatively impact **self-esteem** because it creates an ambiguity for a stigmatized individual about whether negative treatment they might receive is due to their own behavior or their stigmatized identity. Self-esteem plays an important role in preserving individuals' **self-efficacy** (beliefs that they have the resources and ability to overcome any possible barriers), which is essential for successfully engaging in and completing treatment. If trouble deciding between characteristics and self-efficacy, err on the side of caution and use both. Inclusion criteria: Discussions around personal substance use knowledge, beliefs, and attitudes, personal knowledge, beliefs, and attitudes about treatment, recovery, and harm reduction, self-empowerment and goal setting, self-validation, holding oneself accountable, motivation and actions to support personal recovery (potential for double coding with interpersonal, organizational, community, or policy codes if relevant), managing emotions associated with recovery (e.g., hope, fear, guilt), may be double-coded with Anticipated stigma if perceived selfishness of taking help when others are in need is mentioned. Exclusion criteria: Discussions about facts or characteristics related to the individual such as demographics, substance use history, individual system involvement experiences (code to Characteristics and qualities affecting substance use and recovery).

Individual: Anticipated stigma	*Link and Phelan*: The stereotype becomes a threat or challenge either because one might be evaluated in accordance with the stereotype or because one might confirm the stereotype through one's behavior. *Fox et al*: The extent to which a person with mental illness expects to be the target of stereotypes, prejudice, or discrimination in the future. Because PWMI are likely aware of the negative stereotypes associated with mental illness and negative ways in which PWMI are treated, they may worry about people viewing them as weak or dangerous, being afraid or avoiding them, or being denied work. *Krendl and Perry*: According to theoretical models of rejection sensitivity, the salience of potential social rejection could reduce individuals' willingness to seek treatment and pursue help for SUD or to engage with health-care providers by exacerbating their distrust. Inclusion criteria: Discussions about self-medicating to address issues (potential to double code with Characteristics and qualities affecting substance use and recovery), lack of trust/support for opioid use disorder from public agencies and societal systems (potential for double coding with Community codes), individual concerns based on hearing about others' experiences (potential double code with Interpersonal codes), may be double-coded with self-stigma/self-efficacy to denote rejection sensitivity. Discussions about concerns requesting help with substance use disorder recovery, avoiding treatment-seeking and help-seeking behaviors (potentially double code with relevant stigma variable), perceived selfishness of taking help when others are in need (potentially double code with self-stigma/self-efficacy), interpersonal codes if specific caretaker relationship is mentioned), willingness to take advantage of opportunities/resources supporting recovery (e.g., mental health check-ups). Exclusion criteria: Discussions about substance use or treatment attitudes (code to self-stigma/self-efficacy and/or Characteristics and qualities affecting substance use and recovery), discussions of self-efficacy in recovery efforts (code to self-stigma/self-efficacy), community values, policy conversations.
Interpersonal: Disclosure	*Krendl and Perry*: Although **disclosure** can promote better health outcomes, it runs the risk of straining social relationships. In a large qualitative interview study of people with mental illness, participants reported that friends stopped contacting them, neighbors no longer visited, and social invitations declined once their psychiatric disorder or mental health treatment was disclosed, contributing to feelings of social isolation and alienation.

	Inclusion criteria: Discussions about advocacy efforts and the need for people to share stories, use of social media to build community and connect with others, being inspired by hearing others' recovery stories, and perceived inability to share recovery journey with others (potential for double coding with self-stigma/self-efficacy, anticipated stigma, and/or organizational codes). Exclusion criteria: Discussions of self-stigma or self-efficacy and anticipated stigma without conversations about sharing recovery stories, stigma preventing help-seeking behaviors (code to self-stigma/self-efficacy).
Interpersonal: Separating	*Link and Phelan*: Social labels connote a separation of "us" from "them." Thus, other components of the stigma process—the linking of labels to undesirable attributes—become the rationale for believing that negatively labeled persons are fundamentally different from those who don't share the label–different types of people. "Person-first" language is a response to this aspect of stigma to prevent people from being defined by their conditions (e.g., "person with epilepsy," not "epileptic."). Inclusion criteria: Discussions of isolation from interpersonal relationships due to substance use, such as separation from parents, siblings, intimate partners, and children (potential double coding with Structural Discrimination and Power if child welfare and criminal legal system involvement is also mentioned), efforts to reconnect and heal relationships, isolation of self from the larger community, being labeled as one of "those people" and/or other stigmatizing language (e.g., addicts, junkies). Exclusion criteria: Discussions of relationships needed or not needed to support recovery (code to Relational environments supporting recovery), network turnover as part of recovery efforts (code to Relational environments supporting recovery), being incarcerated for substance use without mention of being separated from specific relationships, general comments about child welfare and criminal legal system, discussions about general community attitudes and treatment of SUD treatment and recovery (code to Community/Policy: Structural discrimination and power), "not in my backyard" as a general community attitude when not referencing examples of specific organizations (Community/Policy: Structural discrimination and power).
Interpersonal: Relational	Defined as the relationships needed to promote substance use disorder recovery.

environments supporting recovery	Inclusion criteria: Discussions about how relationships impact substance use disorder recovery, such as interactions with advocates, practitioners, family members, friends, recovery peers, role models, and people who still use substances; network turnover as part of the recovery process; emotional, instrumental, and informational social support. Exclusion criteria: Discussions about separation from positive network members (code as Separating), sharing personal recovery stories with others (code to Disclosure).
Interpersonal/ Organizational: Discrimination	*Link and Phelan*: In the theory of reasoned action, the importance of attitudes and beliefs are thought to lie in whether person A's labeling and stereotyping of person B leads person A to engage in some obvious forms of overt discrimination directed at person B, such as rejecting a job application, refusing to rent an apartment, denying service. *Fox et al*: Discrimination (perspective of the stigmatizer) is defined as the unfair or unjust behaviors directed at PWMI. Discriminatory behaviors exist along a continuum from subtle to overt, but which result in the "differential and disadvantaged treatment of the stigmatized." There are four common types of discrimination directed towards PWMI described in the literature: **withholding help, avoidance, segregation, and coercion.** Inclusion criteria: Discussions about specific organizations excluding or treating differently people with substance use histories, being unable to participate in work events because of alcohol use, needing to change stigma in specific organizations, specific organizations not addressing the needs of current and potential clients, specific organizations being disallowed from communities due to substance use-related missions. Exclusion criteria: Discussions about general community attitudes and treatment of SUD treatment and recovery (Community/Policy: Structural discrimination and power), "not in my backyard" as a general community attitude when not referencing examples of specific organizations (code to Community/Policy: Structural discrimination and power).
Organizational: Faith-based Organizations	Organizations related to religion, spirituality, or faith. Can refer to churches that may have recovery resources but are not solely focused on recovery (e.g., churches with Celebrate Recovery meetings), or organizations that intertwine faith and recovery resources (e.g., AA/NA meetings that focus on a higher power), or faith-based organizations that are not involved in providing recovery resources (e.g., conversations about the Catholic Church).

	Inclusion criteria: Churches as physical places of recovery, religious principles and recovery, faith as a tool for recovery, spiritual health resources, decline of the church, religious stigma. Exclusion criteria: Belief in something greater than self (code to Characteristics and qualities affecting substance use and recovery).
Organizational: SUD organization operations	Conversations about specific SUD agencies and their localized operations. Inclusion criteria: Mentions of SUD agencies – recovery centers, peer support services, MOUD providers, harm reduction services - and how they operate, or how individuals have utilized these localized organizations. Exclusion criteria: Discussion about community harm reduction in general, such as how communities feel about harm reduction (code to relevant Community code).
Organizational: Healthcare provider operations	Conversations about specific non-SUD-related physical or behavioral healthcare agencies and their localized operations. Inclusion criteria: Mentions of specific healthcare agencies such as physical health or non-SUD psychiatric services and how they operate, or how individuals have interacted with these specific localized organizations. Exclusion criteria: Discussion about the healthcare system in general (code to a Community or Policy code).
Organizational: Criminal legal system operations	Conversations about specific criminal legal system agencies and their localized operations. Inclusion criteria: Mentions of specific criminal legal system agencies (e.g., X County Jail) and how they operate, or how individuals have interacted with these specific organizations. Exclusion criteria: Discussion about the criminal legal system in general (code to a Community or Policy code).

Organizational: Other organizational operations	Conversations about specific organizations that cannot be categorized as CLS, health, harm reduction, or faith based and their localized operations. Inclusion criteria: Mentions of specific agencies or social services (e.g., men's clothing stores, mutual aid organizations, children services agencies, etc.) and how they operate, or how individuals have interacted with these specific organizations. Exclusion criteria: Discussion about cross-organizational efforts in general (code to a Community or Policy code).
Community: Stereotype	*Link and Phelan*: Involves a label and a stereotype, with the label linking a person to a set of undesirable characteristics that form the stereotype (or a "controlling image," in Patricia Hill Collins' theory). According to the social cognition literature, categories and stereotypes are often "automatic" and facilitate "cognitive efficiency" (this is often the basis for unconscious bias training). Activation of stereotypes depends on context. *Fox et. al*: Stereotypes (perspective of stigmatizer) are beliefs, or "cognitive schemas" about the characteristics and behaviors of groups of individuals. *Krendl and Perry*: Public stigma: negative beliefs that members of society attribute toward stigmatized individuals contribute to social distancing and social rejection. Inclusion criteria: Discussions about people only seeing an individual's SUD (rather than other talents or skills they may have), pre-conceived ideas about what PWLE look like or what sociodemographic characteristics they may have, negative media attention about SUD, words/affect expressing prejudiced feelings about people with SUD, need for education to combat stigma, perceived efficacy of harm reduction, normalization of recovery resources and harm reduction. Exclusion criteria: Communities acting on stereotypes such as refusing to fund harm reduction programs (code instead to Community/Policy: Structural discrimination and power), references to withholding help, avoidance, segregation, and coercion (code instead to Community/Policy: Structural discrimination and power).
Community: Principles for	What is needed to make communities and systems better prepared to prevent and treat SUD and promote recovery. Ideals for a recovery-ready community/system.

recovery-ready communities/systems	Inclusion criteria: Need for early intervention in the life course, need for early intervention in system involvement, meeting people where they are in their recovery with compassion, need for urgency in addressing opioid crisis, addressing stigma and resistance from professionals, holistic service provision, individualized recovery services, consideration of all of a person's obligations (to children, pets), community belonging, acceptance, and embracing people in recovery. Potential of double-coding with specific organization types. Exclusion criteria: Issues with SUD and recovery collaboration between systems (code to Cross-system coordination), staffing issues (code to Workforce Issues), individual beliefs about recovery, individual advocacy efforts.
Community: Contextual recovery facilitators and barriers	Localized social determinants and contexts that act as barriers and facilitators to recovery. Realities of recovery resources in specific contexts. Inclusion criteria: Rural vs. urban differences in access to resources (potential double-code to other Community codes), physical spaces needed for recovery, opportunities for recreation, deadlier drug supply, perceived community decline (e.g., industry loss, lack of care given to buildings and roads), lack of advertising to harm reduction programs, known drug use locations. Exclusion criteria: Community stigma, individual beliefs, staffing issues, interorganizational collaboration, principles of recovery.
Community: Cross-system coordination	Issues with lack of coordination between different systems and consequences for quality of recovery services provided. Inclusion criteria: Discussions about challenges navigating systems (e.g., CLS, healthcare, child welfare), the need for model programs to learn from, learning from non-SUD programs, lapses in the care continuum, CLS-treatment partnerships. Exclusion criteria: Discussions about specific, individual organizations and their internal issues.
Community: Workforce issues	Issues related to the community's ability to maintain a trained SUD recovery and treatment workforce that is prepared to meet the needs of those in recovery.

	Inclusion criteria: Difficulty finding people to work due to low salaries and high college debt, disconnect between higher-level employees and those in the trenches, work stressors that lead to burnout or desensitization, poaching trained individuals across organizations, incentives to lead people to work in this field. Potential for double-coding with specific organizational codes. Exclusion criteria: Conversations about stigma, lack of resources for people with SUD unrelated to staffing.
Community/Policy: Structural discrimination and power	*Link and Phelan*: Structural discrimination is all manner of disadvantage can result outside of a model in which one person does something bad to another. For example, institutional racism refers to accumulated institutional practices that work to the disadvantage of racial minority groups even in the absence of individual prejudice or discrimination. Another example is the concept of a "a disabling environment" created by the barriers to participation that reside in architecture we humans have constructed; NIMBYism is given as an example. *Krendl and Perry*: Structural stigma: Systemic rules, policies, and practices that constrain opportunities and resources of a stigmatized group. Structural stigma affects individuals with SUD in myriad ways, including through laws and policies that regulate substance use and limit access to health care. *Link and Phelan*: Stigma is entirely dependent on social, economic, and political **power**—it takes power to stigmatize. Thus although the patients might engage in every component of stigma we identified, the staff would not end up being a stigmatized group. The patients simply do not possess the social, cultural, economic, and political power to imbue their cognitions about staff with serious discriminatory consequences. Inclusion criteria: Not in my back yard, exclusion of people in recovery from social activities, discussions related to separation of people with SUD from larger societal structures (e.g., via criminalization of drug use, general conversations about child welfare)(potential for double coding with Interpersonal—separating), voting disenfranchisement, people avoiding certain areas because of negative perceptions, parents afraid to allow children to go to certain areas because of negative perceptions, categorization of people with SUD by systems (e.g., criminal, bad parent, etc.), community resistance to SUD treatment, MOUD, and harm reduction, ignoring those in need, rigid recovery programs that do not recognize individualized recovery paths, burden of time and knowledge to navigate services and systems, CLS as primary SUD intervention point rather than healthcare system, punitive treatment policies, criminalization of houselessness, power dynamics – who gets to make decisions about recovery, lack of housing options

	or employment options for PWLE, can act as a tension code in discussions of how people exist in and react to power structures. Exclusion criteria: Discussions related to separation of individuals from friends, children, family members (instead code to Interpersonal: separating), isolation of self from personal social networks (Interpersonal: separating), interpersonal and organizational levels of withholding help, avoidance, segregation, and coercion (instead code to Interpersonal/Organizational: Discrimination), policies and programming needed for recovery (instead code to Policy: Policies needed for recovery).
Policy: Status loss and labeling	*Link and Phelan*: A general downward placement of a person in a status hierarchy connected with the expectation-states tradition, in which external statuses, like race and gender, shape status hierarchies within small groups of unacquainted persons even though the external status has no bearing on proficiency at a task the group is asked to perform. Group members use external statuses (like race and gender) to create performance expectations that then lead to a labyrinth of details that involve taking the floor, keeping the floor, referring to the contributions of others, head nodding, interrupting, and the like. A relevant concept is labeling: a label is something that is affixed. In the absence of qualifications, terms like "attribute," "condition," or "mark" imply that the designation has validity. Inclusion criteria: Being criminalized due substance use, lack of experience with employment/parenting/etc., struggles with finding employment due to criminal background, inability of incarcerated pregnant people to make prenatal and postnatal decisions, child welfare barriers, consequences of public records, voting disenfranchisement, Good Sam/Casey's law, fear of calling 911 and being rearrested, and facing repercussions. Potential for double-coding with Characteristics and qualities affecting substance use and recovery. Exclusion criteria: Conversations about stigma or labeling that are unrelated to loss of status, interpersonal/organizational labeling or stigma
Policy: Policies needed for recovery	Broad public policies needed to promote SUD recovery. Inclusion criteria: Health insurance and treatment costs, reducing costs due to CLS involvement, MOUD advertising policies and competition between providers, embedding SUD services in jobs, who pays for implementation of resources, need for variety of recovery services and options.

	Exclusion criteria: Attitudes toward treatment (code instead to Individual code), values around SUD and recovery (code instead to Community: Stereotype), discriminatory rules, policies, and practices (code instead to Community/Policy: Structural discrimination and power).
Policy: Fundamental causes	Root causes of substance use disorder and the opioid epidemic related to societal and cultural structures. Inclusion criteria: Historical pattern of disinvestment in community, healthcare system's role in creating the opioid crisis, culture of individualism, culture of instant gratification, for-profit healthcare system, shifts in societal culture and values. Exclusion criteria: Trauma, mental health issues, individual houselessness, individual physical illness, intergenerational substance use issues (instead code to Individual: Characteristics and qualities affecting substance use and recovery).
Z - other	Definition: Data that do not clearly align with existing codes but seem important to put in a "parking lot" for discussion.
COVID 19	Anything that mentions the COVID-19 pandemic, double-code with other categories as needed. Inclusion criteria: Discussions of different government and community responses to COVID-19 vs. SUD, lessons that the SUD treatment and recovery field can learn from COVID-19, inability to seek and receive recovery services due to COVID-19, COVID-19 as a facilitator of implementing new and innovative recovery services, changes in system involvement due to COVID-19. Exclusion criteria: Anything that does not mention COVID-19 and its impact.