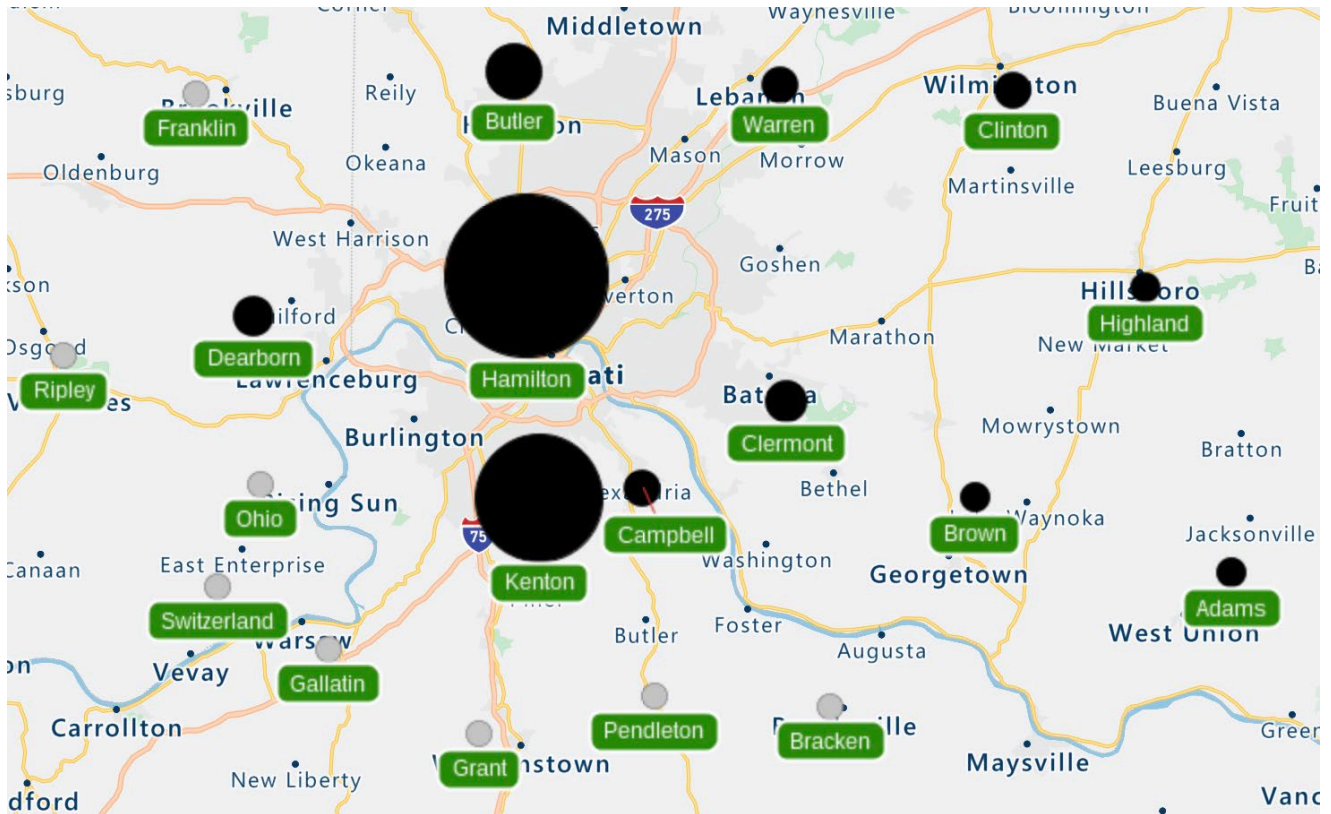


# Recovery Housing Gap Analysis



**Prepared for: Interact for Health**

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April 30, 2020

In this map, the size of the bubble represents the number of houses in each county; the larger the bubble, the more resources. The black bubbles indicate that one or more recovery houses exist in that county; the gray bubbles indicate the lack of any recovery housing in that county.

## Prelude

One week. It took just one week for everything they thought they knew about their sister to change. One week from apparent 'fine' to a mountain of messy truths. One week to receive a crash course in the world of addiction. And one week to navigate a new, unpredictable, uncertain world. The week started with a phone call learning that everything was being or had already been taken away – an apartment, a license, a car—all due to a 20-year addiction that no one had known about. What followed amidst worried calls and texts was a 5 day detox hospital stay, a failed attempt for placement at a behavioral health setting, a hospital discharge into the hands of confused and scared family, multiple intake assessments, a rushed 3 hour drive for a 4 hour assessment resulting in another failed attempt for placement, another 3 hour drive, and a sleepless hotel stay. One week for a normal family to become raw and completely overwhelmed. Despite all of this, they considered themselves lucky. Because the other sister knew who to call. The person who answered the call, dropped everything to send texts, make calls and even drive for in person visits. The person who answered the call found a placement facility with a bed, while also letting the family know what to expect and what not to expect, both giving them hope that everything would be okay and preparing them in case it wouldn't be. Most families and individuals struggling with addiction do not know who to call; they do not have that one person who will drop everything and help. Most people do not have the tools or resources to help them navigate a complex and uncertain world.

## Executive Summary

Substance Use Disorder (SUD) is a significant problem in Greater Cincinnati, directly affecting approximately 10% of the population over the age of 18 (SAMHSA 2018a). For those who receive treatment for SUD, an estimated 40-88% will relapse (McLellan et al. 2000; Chalana et al. 2016). Evidence suggests that recovery housing has the potential to reduce relapse (Knopf 2019), but because there is currently no required certification process for recovery housing, the landscape of and needs for recovery housing are generally unknown. This project addressed those gaps identifying the current landscape of existing recovery housing and needs for recovery housing in the 20 counties of the Interact for Health region across Greater Cincinnati in order to understand the current recovery housing resources for people with substance use disorder. The mission of Interact for Health is to improve health by promoting health equity in a 20-county region of Ohio, Kentucky and Indiana.

While substance use disorder is a diagnosable condition, and while Medically Assisted Therapy (MAT) is a form of medical treatment that has been shown to improve long term outcomes (e.g Mattick et al., 2014; Wegman 2017), the evidence suggests that substance use recovery requires addressing more than neurological addiction alone. According to the Substance Abuse and Mental Health Services Administration (SAMHSA 2012), recovery from substances is a “process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential.” Recovery housing is an intervention for the newly sober that brings together housing with supports including peer-to-peer support to facilitate long term recovery (APA Society for Community Research and Action, 2013; Knopf,

2019). Recovery houses are thought to give those who need it the time and support to practice habits of sustained sobriety while also rebuilding other aspects of their lives.

The use of residences to support sobriety began in the mid-19th century, with rapid expansion in the closing decades of the 20<sup>th</sup> century. It was not until the National Association of Recovery Residencies (NARR) was founded in 2011 that the array of residences were organized into categories of recovery housing based on level of care: Level I are peer run institutions (such as the Oxford House™ system), Level II are monitored typically with a house manager (such as California Sober Living Houses), Level III are supervised residences that provide some level of professional care, and Level IV are residential treatment or therapeutic communities with licensed professionals on staff to offer services. The available outcomes research suggests that recovery housing, overall, shows moderate beneficial impact on recovery (Reif et al., 2014) with substantially improved long-term sobriety outcomes with a stay of 6 months or more in a recovery house (Jason et al., 2016; (Vanderplasschen et al., 2014).

### *Methodology*

To understand the current landscape of and need for recovery housing in Greater Cincinnati, we designed a research project that surveyed all existing recovery houses and used epidemiological and focus group methodologies to gain an understanding of the needs for recovery housing across the region. The research was approved by the Miami University Institutional Review Board, and data was collected between July 15, 2019, and Feb. 15, 2020.

### *Results*

We identified 103 recovery houses in the 20 counties of Greater Cincinnati. Of those, 92 (89.3%) completed self-report surveys, reporting a total of 1,259 beds: 35 houses with 781 known beds for the eight counties in Ohio, 64 houses and 456 known beds for the seven counties in Kentucky, and four houses and 22 known beds for the 5 counties in Indiana. An equal number of houses (46) are designated as men only or women only, however 109 fewer beds are available in women-only houses. Three recovery houses, reported accepting both men and women (56 beds total). A total of 10 houses were identified as accepting women with their children: one each in Kentucky and Indiana, and eight in Ohio. According to the self-report surveys, 36 houses (19 in Ohio and 17 in Kentucky) accept clients on some form of MAT, which is associated with long term abstinence for up to 60% of people using it (Weiss et al. 2015). In total, 22 houses reported certification, registration, or accreditation with a state or national organization. Notably houses with certification or accreditation were more likely to mention needs related to more “big picture” programming or processes (screening, treatment, more houses, and relationships with other providers). In contrast, recovery houses that not yet certified or accredited listed more day-to-day needs (more staffing, more referrals, transportation) and were far more likely to mention funding needs.

The comprehensive self-report dataset is a baseline to inform decision making and against which the impact of any new initiatives to facilitate substance use recovery can be measured.

By using the dataset to produce a Resource Guide (Appendix) of current recovery houses, this project has made a first step towards reducing uncertainty about resources across the region by providing information to guide decision making for those seeking recovery housing.

We used public datasets and published estimates to complete an epidemiological analysis of regional needs. Of the 1.77 million people over the age of 18 living in the region, approximately 181,580 people are estimated to have SUD (see Table 5). The overdose deaths across the counties in this region, after climbing steeply between 2014 and 2017, decreased in 2018 (see Figures 2-5), however the estimated shortfall of recovery supports remains significant. Assuming that 7.6% of people with SUD seek treatment on any given year (SAMHSA 2018b), and if between 30% and 50% of those people would benefit from a recovery housing option post-treatment, overall the region has a shortfall in recovery housing beds of between 2,885 and 5,647 beds respectively. Only Kenton County, Kentucky, is estimated to have sufficient recovery housing beds if 30% of those who go through treatment would need recovery housing, and factors such as gender are ignored in the calculation of sufficiency. None of the counties meets estimated needs if half of people in treatment need recovery housing.

We also conducted 40 focus groups with 194 individuals recruited through snowball sampling from across Greater Cincinnati. We had at least one focus group in every county, with the exception of a single focus group covering both Ohio and Switzerland counties in Indiana. Participants represented a range of stakeholders and community members. Among participants, 40% categorized their involvement with SUD as providers, 36% of participants reported personal SUD experience, and 24% reported they were family members of people with SUD. In total, 67 participants reported multiple types of involvement with SUD, with 22 reporting involvement in all three categories.

In order to understand the clarity of the concept of recovery housing, we used an exercise in which participants generated 504 unique words they associate with recovery housing. The most frequently used words suggest that the core concept consists of safe, supportive, structured environments that encourage sobriety, accountability, and hope. However, the sheer volume of different words hints at uncertainty surrounding the concept. Participants also grouped the generated words into meaning clusters which ultimately resulted in 5,851 pairings that once visually plotted, hint at the webbed complexity of recovery housing in people's minds in which the core construct of recovery housing is largely positive but it is threatened by doubts and challenges (See Figure 9). This conceptual lack of clarity also emerged in focus group discussions, with considerable communicative slippage between recovery housing, transitional housing, half-way houses,  $\frac{3}{4}$  houses, sober living, recovery sober living, and supportive living. The discussions and stories that emerged underscored the uncertainty, urgency, and cautious hope surrounding recovery housing. Treatment recovery followed by relapse was a normal reported pattern for people seeking recovery prior to entry into a recovery house. Some participants credited their recovery house experience with saving their lives. Conversations underscored how a recovery house that meets ideal characteristics of being structured, stable, supportive, affordable, in a residential area, with access to transportation and employment opportunities gave people with SUD the needed time to focus on their personal growth and

“work” their recovery in ways that protected them during the fragile first year of sobriety. However, stories of dirty, “pop-up”, or mismanaged houses, as well as of ongoing drug use in some poorly managed recovery houses were of deep concern. Family members particularly highlighted the opacity of the recovery house options, and both family members and people in recovery reported the difficulty of finding good options in urgent circumstances. Participants also discussed in positive terms the screening process for admission to a recovery house in which a potential resident is interviewed for fit with other residents to ensure a supportive house community. In this sense, fit was seen as a personal quality that would enable a new resident to integrate easily within the existing community. The qualifications for fit are experienced by people seeking recovery housing as idiosyncratic; because houses can choose, and in some cases vote, on whether to accept an applicant as a resident. When combined with the array of terms and the lack of consistency with the certification or accreditation of recovery houses, the scarcity of available beds particularly for parents with children, and the range of costs, family members and people seeking recovery often do not know much about a recovery house until after they arrive. Some reported bewilderment, not knowing where to turn if a house rejected an applicant because of fit or lack of an available bed. Nor were other options clear to those seeking treatment if a house lacked needed supports or was perceived as unclean or unsafe.

Not-In-My-Backyard (NIMBY) stigmatism against recovery housing establishments was a prevalent concern, particularly in more rural counties, and is a concern that is widely reported in the literature (see e.g. APA Society for Community Research and Action, 2013; Polcin, Mericle, Howell, Sheridand, & Christensen, 2014). One of the consequences of NIMBY attitudes is that recovery houses may strive to hide their locations, which augments uncertainty for people seeking recovery and their family members and may explain any incompleteness in our survey dataset. A related challenge that participants reported as concerning was related to the location of recovery houses, which are disproportionately likely to be in environmentally hazardous areas (cf. Cumming & Bacon, 2018) and economically disadvantaged areas which can trigger substance use (cf. Heslin et al., 2013; Mericle, Karriker-Jaffe, Gupta, Sheridan, & Polcin, 2016; Mericle et al., 2017). Two final challenges noted by participants surrounded tensions between 1) not-for-profit and for-profit recovery housing financial models, and 2) being a “substance-free” house and providing access to prescribed medications including MAT that, as of October 2019, is federally mandated (Knopf, 2019; Enos, 2019).

### ***Is existing recovery housing sufficient to meet the needs of the Greater Cincinnati area?***

The short answer is no. The findings from both the epidemiological analysis and the focus groups underscore the need for more, high quality recovery housing. Providers in our focus groups repeatedly estimated that as many as 50% of people that go through treatment may benefit from recovery housing, underscoring that without recovery housing, people who are newly sober may be released to contexts likely to trigger relapse. The overall finding was that well-run recovery houses are an excellent and critical option for people struggling to rebuild themselves and their lives without being tethered to substances. The Resource Guide (Appendix) produced from this study, summarizes the current recovery housing landscape

which we trust will ease some of the uncertainty of finding recovery housing while serving as a baseline for future interventions to address recovery needs in the area.

### Specific recommendations based on our findings

1. More recovery houses are required to meet demand: Epidemiological data suggest that the overall need for recovery housing beds is particularly high in the Ohio counties in Greater Cincinnati. Combining estimates of need for beds with overdose death rates, there may be particular need in Gallatin and Campbell counties (Kentucky), Dearborn and Ripley counties (Indiana), and Butler and Brown counties (Ohio).
2. New recovery houses need to be located in safe residential areas, with access to transportation, supportive services like Narcotics Anonymous (NA) meetings, and employment opportunities.
3. Certification processes with regular monitoring to ensure well-managed, clean, and safe houses would enhance confidence in the quality of a recovery house for family members, people in recovery, and community members.
4. Processes that would better enable people seeking recovery to estimate potential fit in a house prior to arrival would help prevent stress and bewilderment during the often-urgent search for recovery housing.
5. Studies are needed that compare the recovery outcomes of different types of financial models for recovery houses. Studies could also explore a potential alternative financial model such as a social-business model, in which a portion of the profits are rolled back into the business which is designed to create a social good (see e.g. Yunus, 2010).
6. Anti-stigma campaigns to eliminate NIMBY are needed, particularly in rural areas.
7. Education campaigns developing consistent and coherent language about recovery housing and its attributes are needed. Pathways with examples of how and when one might seek different levels of housing might be useful to address uncertainty.
8. Greater Cincinnati has a wealth of committed individuals who seek to improve recovery options for people with SUD, many of whom are not connected to broader networks. This presents an opportunity for expanding the reach of trustworthy information, as well as widening the web of interconnected who could together create a stronger net to catch people as they struggle with SUD and find recovery house options that fit their needs.

*Post-Script:* The findings reported here were gathered in the months prior to the coronavirus pandemic that has quarantined people across the region beginning in mid-March and it continues at the time of this writing. The impact the pandemic is having on people with SUD or those in recovery is unknown. One could reasonably hypothesize that marked increases in social uncertainty, reorientation of social support systems towards the pandemic and away from normal operations, preliminary reports of increased rates of domestic violence due to isolation, and skyrocketing unemployment levels are factors that do not bode well for people with SUD or in the fragile early stages of recovery. Safe and supportive recovery houses may be even more crucially needed than our findings indicate.

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## Study Methodology

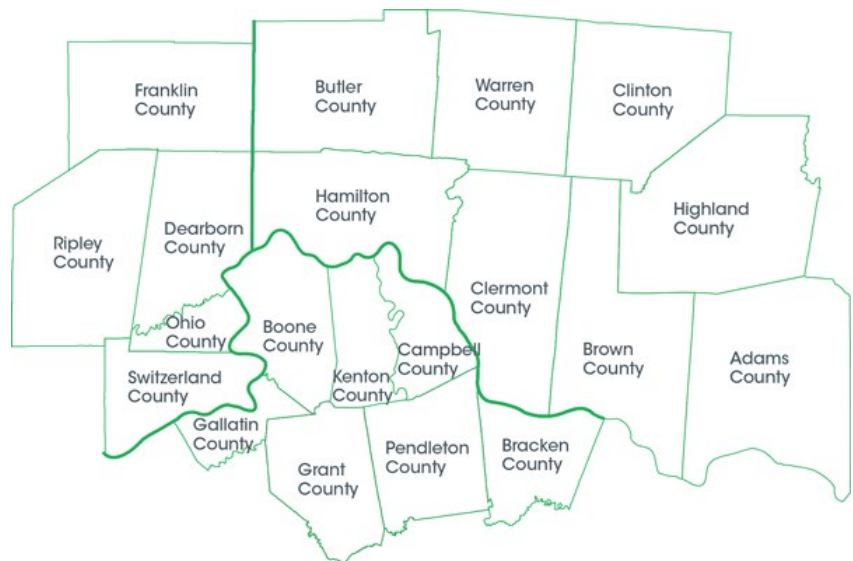
Multiple methods were used to meet the goals of the study. Data was collected between mid-July 2019 and mid-February 2020.

### *Recovery Housing Survey*

A survey was developed to capture information about existing recovery housing facilities located in the 20-county area across Ohio, Indiana, and Kentucky that constitute Interact for Health's service area (Figure 1). The goal of the survey was to establish a comprehensive database on recovery housing services that could serve

as a resource for providers to make appropriate referrals to clients, and potentially as a resource for clients and their families. The information needed for the database was decided in collaboration with Interact for Health. The survey captured information including but not limited to: the facility's location, contact information, conditions treated, populations served, services provided, cost, size of the facility, whether there are religious guidelines to follow, and whether MAT is accepted. In addition, the survey included several open-ended questions about accreditation, measurement of success, and needs for success. The survey link was emailed to known recovery house email addresses found online and was also shared by providers in the Interact for Health network. As needed, follow-up requests were made to housing facilities to complete the survey. Establishments that are day-centers or treatment centers only or do not offer residential housing for people in recovery from substance use disorder were excluded from the study. Establishments that exclusively provide housing for people in recovery from alcohol use disorder (AUD) or homelessness, and do not include people with dual diagnoses with drug substance use disorder were also excluded. In one case, a facility was included even though it indicated only that it treated people with AUD, but also indicated that it offered meetings specifically for people with SUD and focus group participants referred explicitly to it as a place for people with SUD.

Figure 1: The 20-county region of Greater Cincinnati served by Interact for Health



Using snowball and internet search techniques, we sent an online survey out to any known or potential house managers. A house was identified or "known" if it could be found online or if multiple people offered corroborating details about the home, its location and/or its manager. If a recovery house indicated that they ran more than one house but only completed information about one house, they were contacted and provided the choice of either completing the survey again for the additional house or filling in additional information by



email. If there was missing data or data that needed to be confirmed, emails and calls were made to the facility. This did not always produce new or updated information. In these cases, the information was removed from the database. In order to provide a comprehensive list of all recovery houses in the area, the database includes not only the houses in which a representative completed the survey but also includes houses that were confirmed to be recovery houses in the area. Missing information in the database could be due to a representative from the house not completing the survey or those completing the survey choosing to not respond to specific questions. If a house was not represented through survey data, information was collected through online research and information that was publicly available at the time this resource was being developed.

### *Epidemiological Analysis*

The epidemiological analysis was the result of calculations based on the most recently available census and epidemiological evidence, in combination with estimates in the published literature to estimate any gap between available recovery houses and needs for recovery housing.

### *Focus Groups*

Focus groups were conducted with providers, family members and people with experience using substances. The original design called for three focus groups in each county, one each with these three populations with alternative design noted in the IRB proposal that recruitment would be targeted so that roughly half of the focus groups would be with providers and half with consumers (people with lived experience and their family members). Recruitment methods included systematic contacts via email and phone calls with recovery-related groups in each county (leaders of coalitions, pre-arrest diversion programs, community and social service organizations, and all recovery housing facilities), in-person presentations of the research as requested, and snowball sampling within each county, via emails, flyers, and referrals.

Focus groups included a demographic survey, a free listing-clustering task, and a series of questions designed to gain insight into the challenges of recovery, as well as to identify the characteristics of ideal recovery houses and the gaps in currently available resources.

The free listing-clustering task was designed to understand variation in people's definitions of or associations with recovery housing. Participants individually wrote words on Post-it notes, and then worked with the other focus group participants to cluster all generated words together. These data were gathered and combined across all focus groups, and analyzed using Gephi (2019) software to spatially visualize what participants associate with recovery housing.

Focus groups were audio-recorded, transcribed, and coded using a combined inductive and deductive strategy, and analyzed using Dedoose (2019) software. The IRB application for human subjects research was approved (01790r) on July 10, 2019, at Miami University.

## Characterizing Recovery Housing in Greater Cincinnati

In total, Greater Cincinnati currently has 103 known recovery housing facilities with a total of 1,259 beds. Of the 103 houses, we have completed or partially completed surveys for 92 of known recovery houses, an 89% survey response rate. These data are presented in the database (see Appendix A) and the Resource Guide (Appendix B) are accurate as of mid-February 2020.

Descriptive statistics of these facilities are in Table 1. Only one house limited the length of stay to 3 months; the rest supported long-term stays of 6 months or more. The typical rent is between \$75-120 dollars per week and rarely includes food, clothing, and toiletries. Thirty-six houses reported the number of admissions they turn down: an average of 56 people per week are turned away because of a lack of beds; others are turned away for not agreeing to the rules of the house or other lack of fit.

The gender demographics served by recovery houses differs by county and state (see Table 2). Whereas in Kentucky and Indiana there are more recovery housing beds available for women than men, in Ohio there are 1/3 more recovery house beds for men than women. In the literature, historically men had higher prevalence rates of SUD and continue to have a 40% higher rate of illicit drug SUD, yet associations of gender with substance use are complicated by age (with parity in use among adolescents) and by type of substance, for example, prescription drug misuse is nearly equal (2.3% for women and 2.7% for men) (McHugh et al. 2018). The two counties in Ohio with the highest number of recovery houses, Butler and Hamilton, are also the only counties in the region with houses that accept both men and women.

Table 1: Descriptive Summary of Known Recovery House Resources	
Total houses identified	103
Total beds	1,259
Total staff	228
Number of houses with paid staff	36
Length of stay (range)	90 days - 3+ years
Cost per week (range)	\$75-\$120
Cost per month (range)	\$300-\$600
Number of people denied access because of lack of beds per week	56
Number of certified houses	22

Through survey respondents and online research, a total of 10 houses were identified as accepting women with their children. These homes are located in Kenton County, Kentucky (1 house), Dearborn County, Indiana (1 house), Butler County, Ohio (1 house), and Hamilton County, Ohio (7 houses). There may be additional houses in the area that allow women to live with children but this was not captured through the survey or through online research.

		<b>Table 2: Number of houses and beds, by county, serving men only, women only or both men and women</b>									
		<b>Men only</b>		<b>Women only</b>		<b>Both men &amp; women</b>		<b>Unknown</b>		<b>Total</b>	
		<b># Houses</b>	<b># Beds</b>	<b># Houses</b>	<b># Beds</b>	<b># Houses</b>	<b># Beds</b>	<b># Houses</b>	<b># Beds</b>	<b># Houses</b>	<b># Beds</b>
<b>Kentucky</b>	Boone	1	7	2	111	0	0	0	0	<b>3</b>	<b>118</b>
	Bracken	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
	Campbell	1	7	2	20	0	0	0	0	<b>3</b>	<b>27</b>
	Gallatin	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
	Grant	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
	Kenton	19	201	10	110	0	0	0	0	<b>29</b>	<b>311</b>
	Pendleton	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
<b>Kentucky Total</b>		<b>21</b>	<b>215</b>	<b>14</b>	<b>241</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>456</b>
<b>Indiana</b>	Dearborn	1	8	2	14	0	0	1	-	<b>4</b>	<b>22</b>
	Franklin	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
	Ohio	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
	Ripley	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
	Switzerland	0	0	0	0	0	0	0	0	<b>0</b>	<b>0</b>
<b>Indiana Total</b>		<b>1</b>	<b>8</b>	<b>2</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>22</b>
<b>Ohio</b>	Adams	-	-	-	-	-	-	1	-	<b>1</b>	<b>-</b>
	Brown	1	6	0	0	0	0	0	0	<b>1</b>	<b>6</b>
	Butler	5	77	4	62	1	14	0	0	<b>10</b>	<b>153</b>
	Clermont	2	27	3	20	0	0	0	0	<b>5</b>	<b>47</b>
	Clinton	1	-	2	8	0	0	0	-	<b>3</b>	<b>8</b>
	Hamilton	13	301	20	178	2	42	5	-	<b>40</b>	<b>521</b>
	Highland	1	16	0	0	0	0	0	0	<b>1</b>	<b>16</b>
Warren	1	6	1	24	0	0	1	-	<b>3</b>	<b>30</b>	
<b>Ohio Total</b>		<b>24</b>	<b>433</b>	<b>30</b>	<b>292</b>	<b>3</b>	<b>56</b>	<b>7</b>	<b>0</b>	<b>64</b>	<b>781</b>
<b>OVERALL TOTAL</b>		<b>46</b>	<b>656</b>	<b>46</b>	<b>547</b>	<b>3</b>	<b>56</b>	<b>8</b>	<b>0</b>	<b>103</b>	<b>1,259</b>

Notes:

Kenton County, KY: Information about # of beds received for 28 of 29 houses and an average # of beds for 8 of 29 houses in Kenton County.

Dearborn County, IN: Only have # of beds and clients served for 3 of 4 houses.

Adams County, OH: Do not have information on the # of beds for the one house in Adams County.

Clinton County, OH: Only have bed information for 1 of 3 houses in Clinton County.

Hamilton County, OH: Only have bed #s for 29 of 40 houses

Warren County, OH: Only have bed information for 2 of 3 houses.

### Levels of Recovery Housing

Table 3 summarizes the self-reported service levels of facilities in Greater Cincinnati. Of these facilities, the majority (34%) identified as a Level 2 (Monitored) facility. Level 1 (Peer Run) and Level 2 facilities together constitute 50% of recovery housing in this area. Level 3 (Supervised) facilities constitute 11% and Level 4 (Service Provider) facilities constitute 15.5% of recovery housing in the area. 24% of houses did not report a level of service.

Level 1: Peer Run	10
Level 2: Monitored	35
Level 1 & Level 2	6
Level 3: Supervised	11
Level 4: Service Provider	16
Unknown	25

### Reported Accreditation: Status & Reasons

Indiana and Ohio have an external organization that works with the state to offer certification/accreditation services to ensure that recovery houses meet basic guidelines or standards. These accrediting or certifying bodies include state level certifications through Ohio Recovery Housing and Indiana National Alliance for Recovery Residences (INARR), as well as national accreditation through Commission on Accreditation of Rehabilitation Facilities. Recovery Kentucky currently has recommended guidelines for recovery houses and a registration process, but no certification process.

Ohio, Kentucky, and Indiana recovery houses are not required to be registered, certified, or accredited. This lack of requirement has led to some concern in the greater Cincinnati area of houses designed for financial gain that claim to offer recovery support but are actually houses for selling substances (e.g. Haden 2017). Respondents were asked to identify if their house was certified, accredited, or registered by an external organization. Of the 57 respondents who answered this question a total of 22 houses (21% of the total 103 houses) reported certification or registration with some accrediting board. The distribution of those certifications as well as the associated number of beds by level of recovery housing is reported in Table 4.

In terms of certifications or registration, nearly half (47%) of respondents without current certification indicated that they are in the process of applying for or seeking certification, accreditation or registration, and an additional 13% reported that seeking certification was cost-prohibitive. While most organizations offer a sliding scale of fees based on the number of beds in a house, even a sliding scale fee may be prohibitive. For example, Ohio Recovery Housing annual fees range from \$575 for a house with one to five beds, up to \$810 for 71-100 beds. Note that the difference in fees is not much more for a small house with five beds than the \$810 annual fee for a house with 100 beds, although the smaller house with fewer resources might find covering the fee more difficult. In our data, other reported reasons (less than 10%) for not seeking certification, registration, or accreditation include: association with a faith-based community or program, feeling that there is not a need or does not serve an interest at this time, being self-managed, being unaware of accreditation. Interestingly, one person commented that passing a certification process was not listed as an option in the survey (although respondents were asked if they were accredited or registered). This final comment is telling, suggesting a lack of clarity in the process of seeking external validation of services

because whereas accreditation and certification are synonyms, they are perceived as so different among house managers that a certified house would not consider itself accredited.

		Table 4. Number of houses and beds, by level and certification													
		Level 1 Peer Run		Level 2 Monitored		Level 3 Supervised		Level 4 Service Provider		Unknown		Other		Total	
		# Houses	# Beds	# Houses	# Beds	# Houses	# Beds	# Houses	# Beds	# Houses	# Beds	# Houses	# Beds	# Houses	# Beds
Kentucky	Boone	0	0	0	0	1	100	0	0	0	0	2	18	3	118
	Bracken	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Campbell	1	7	0	0	2	20	0	0	0	0	0	0	3	27
	Gallatin	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Grant	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Kenton	9	71	8	158	0	0	0	0	8	48	4	34	29	311
	Pendleton	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Kentucky Totals</b>		<b>10</b>	<b>78</b>	<b>8</b>	<b>158</b>	<b>3</b>	<b>120</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>48</b>	<b>6</b>	<b>52</b>	<b>35</b>	<b>456</b>
# certified in KY		10	78	0	0	0	0	0	0	0	0	0	0	10	78
Indiana	Dearborn	-	-	-	-	-	-	-	-	4	22	-	-	4	22
	Franklin	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Ohio	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Ripley	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Switzerland	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Indiana Totals</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>22</b>
# certified in IN		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	Adams	-	-	-	-	-	-	-	-	1	-	-	-	1	-
	Brown	0	0	1	6	0	0	0	0	0	0	0	0	1	6
	Butler	0	0	6	80	0	0	4	73	0	0	0	0	10	153
	Clermont	0	0	2	14	1	6	2	27	0	0	0	0	5	47
	Clinton	-	-	-	-	-	-	-	-	3	8	-	-	3	8
	Hamilton	0	0	18	321	4	35	10	156	8	9	0	0	40	521
	Highland	0	0	0	0	1	16	0	0	0	0	0	0	1	16
	Warren	0	0	0	0	2	30	0	0	1	-	0	0	3	30
<b>Ohio Totals</b>		<b>0</b>	<b>0</b>	<b>27</b>	<b>421</b>	<b>8</b>	<b>87</b>	<b>16</b>	<b>256</b>	<b>13</b>	<b>17</b>	<b>0</b>	<b>0</b>	<b>64</b>	<b>781</b>
# certified in OH				3	56	1	14	8	69					12	139
<b>OVERALL</b>		<b>10</b>	<b>78</b>	<b>35</b>	<b>579</b>	<b>11</b>	<b>207</b>	<b>16</b>	<b>256</b>	<b>25</b>	<b>87</b>	<b>6</b>	<b>52</b>	<b>103</b>	<b>1259</b>
<b># certified Overall</b>		<b>10</b>	<b>78</b>	<b>3</b>	<b>56</b>	<b>1</b>	<b>14</b>	<b>8</b>	<b>69</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>217</b>

Notes:  
 Levels & certification/accreditation are self-reported.  
 Other: This column is for 6 houses that reported as being both Level 1 & Level 2.  
 Kenton County, Kentucky: Information about # of beds received for 28 of 29 houses and received an average # of beds for 8 of 29 houses in Kenton County.  
 Dearborn County, Indiana: Only have # of beds and clients served for 3 of 4 houses.  
 Adams County, Ohio: Do not have information on the # of beds for the one house in Adams County.  
 Clinton County, Ohio: Only have bed information for 1 of 3 houses in Clinton County.  
 Hamilton County, Ohio: Only have bed #s for 29 of 40 houses  
 Warren County, Ohio: Only have bed information for 2 of 3 houses.

## Reported Markers of Success and Needs

Survey respondents were asked to identify, as a facility, their markers of success. This was an open-ended question. Of those responding (N=66), over half (55%) stated that residents continuing in their recovery and maintaining sobriety were markers of their success. Additional reported markers of success include residents transitioning to independent living (30%), employment (17%), and residents being accountable for self and others (9%). The majority (60%) track outcomes through data collection, surveys, and maintaining a database.

To inform our understanding of gaps or needs as perceived by recovery houses, we asked two additional questions. Survey respondents were asked to indicate how many requests for admission they turn down per week on average because of a lack of beds or a lack of sufficient staff. Respondents turn down an average of 1.6 requests per week (range 0-10) because of a lack of beds, but they do not turn down admissions due to a lack of sufficient staff. Other reasons offered why houses may turn down admissions included a lack of houses or “fit” of the resident for the house.

When asked the open ended “what would make your facility more successful” of the 52 responses, the two most common suggestions involved issues of funding: 21% indicating financial assistance for residents and 23% indicated additional financial support or funding. Additional suggestions include: additional houses (13%), staffing the “right” individuals with the right fit (8%), more employment opportunities, more referrals, better transportation, and additional programming (all less than 4%).

When responses to the question about what would make your facility more successful were analyzed by certification status of the house, those with certification or accreditation were more likely to mention needs related to more “big picture” programming or processes (screening, treatment, more houses, and relationships with other providers). Recovery houses not yet certified or accredited listed more day-to-day needs (more staffing, more referrals, transportation) and were far more likely to mention funding needs.

## Current Landscape of Recovery Housing: Conclusions from the Self-Report Survey

The results of the survey provide insight into the current landscape of recovery housing in Greater Cincinnati. The comprehensive self-report dataset identified the volume, level, location, and certification status of houses and beds, the sub-populations served, the specific requirements of a house, as well as the self-reported challenges houses face as they strive to create communities that support long-term recovery. This dataset serves as a baseline for Interact for Health to inform decision making and against which the impact of any new initiatives to facilitate substance use recovery can be measured. By using the dataset to produce a Resource Guide (Appendix) of current recovery houses, this project has made a first step towards reducing uncertainty about resources across the 20-county region by providing information to guide decision making for those seeking recovery housing.

## Does Existing Recovery Housing Meet the Needs for Recovery Housing?

Given the existence of 103 recovery housing facilities, and their cumulative 1,259 beds, do they meet the needs for recovery housing in the Greater Cincinnati area? There are two ways to answer this question, and below we provide two analyses.

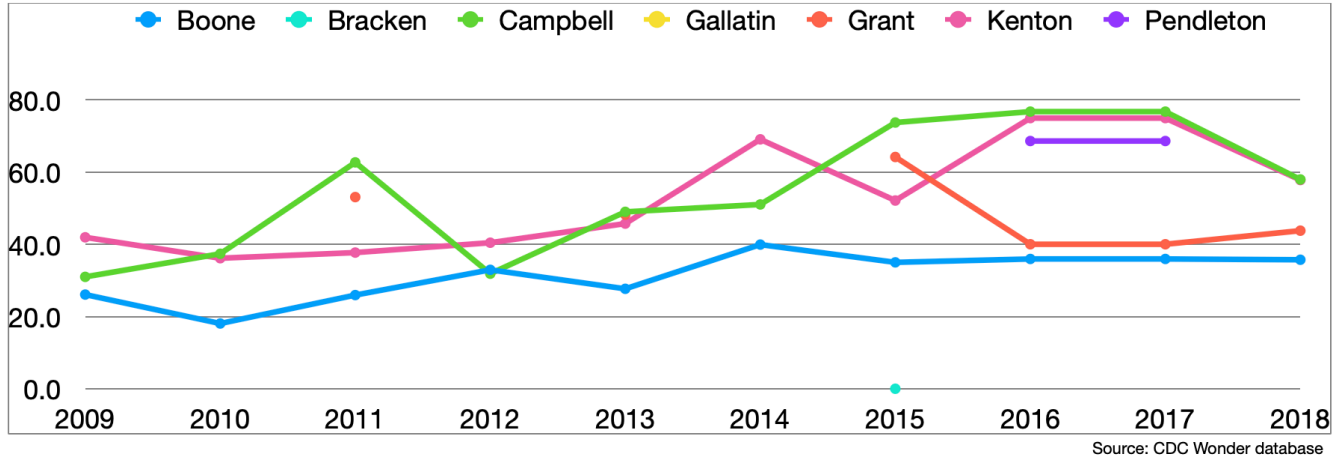
First, we provide an **Epidemiological Analysis**. This type of analysis is statistical and describes the population of the area, the overdose rates, the estimated percentage of people with SUD, the estimated percentage of people in recovery who would benefit from a recovery housing option based on the literature, and compare these estimates with the available recovery houses identified in this study. Epidemiological Analyses are the standard type of analysis used to inform public health decision-making to identify “what” the needs are using deductive strategies based on statistical patterns.

Second, we provide a **Mixed Methods Analysis**. This type of analysis is primarily qualitative coupled with demographic quantitative data, which explores the conceptual assumptions, experiences, and needs of stakeholders using an open-ended, focus group design methodology. These data are coded and analyzed to dive deeply into people’s experiences with and assumptions about recovery housing including its attributes, challenges, and opportunities as they are distributed across Greater Cincinnati. Mixed Methods Analyses are increasingly emphasized as the gold standard informing decision making about the “why’s” of human and social needs using inductive strategies.

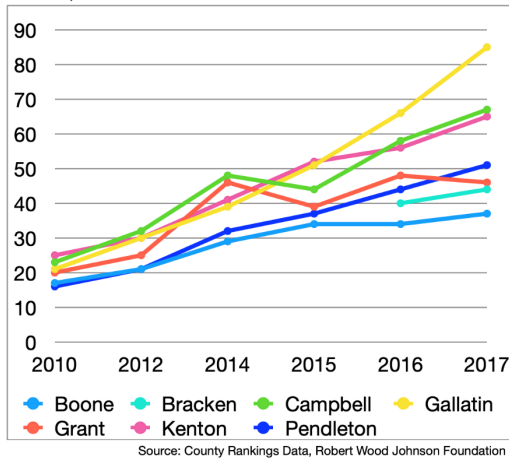
### Epidemiological Analysis

The epidemiological data suggest significant need for recovery support across Greater Cincinnati. Overdose deaths remain a significant concern, even though the latest numbers suggest a flattening or decrease in the rate of overdose deaths that have been climbing across the region since at least 2013. Data is from the CDC WONDER database, reporting annual unintentional, intentional, and undetermined overdose deaths. Overdose deaths that were categorized as homicides were excluded. Using the CDC annual data to calculate the overdose death rates by county, yield the three figures below illustrating the comparable published rates of overdose deaths reported each year from 2009-2018 (see Figure 2 and 2a: Kentucky; Figure 3: Indiana; Figure 4: Ohio). The CDC suppresses small reported incidence for reasons of confidentiality and notes that a threshold of 20 recorded deaths per year is required for reliability. Lower figures are not reported, and thus in the graphs below, data is shown as missing for counties with small populations, such as Grant, which has a single data point in 2011, and then as missing data until 2015 when the overdose death rate again surpassed the CDC threshold. Missing data does not mean the absence of overdose deaths, just that the data was suppressed in the CDC WONDER database.

**Figure 2: Kentucky Overdose Death Rates (Deaths/100,000) per County as Reported by Year of Death**  
 Threshold for recording as reliable data in the CDC database is 20 deaths/year. Gallatin and Bracken did not meet the threshold, and Pendleton only met it beginning in 2016.



**Figure 2a: Kentucky Counties Overdose Rates (Deaths per 100,000)**



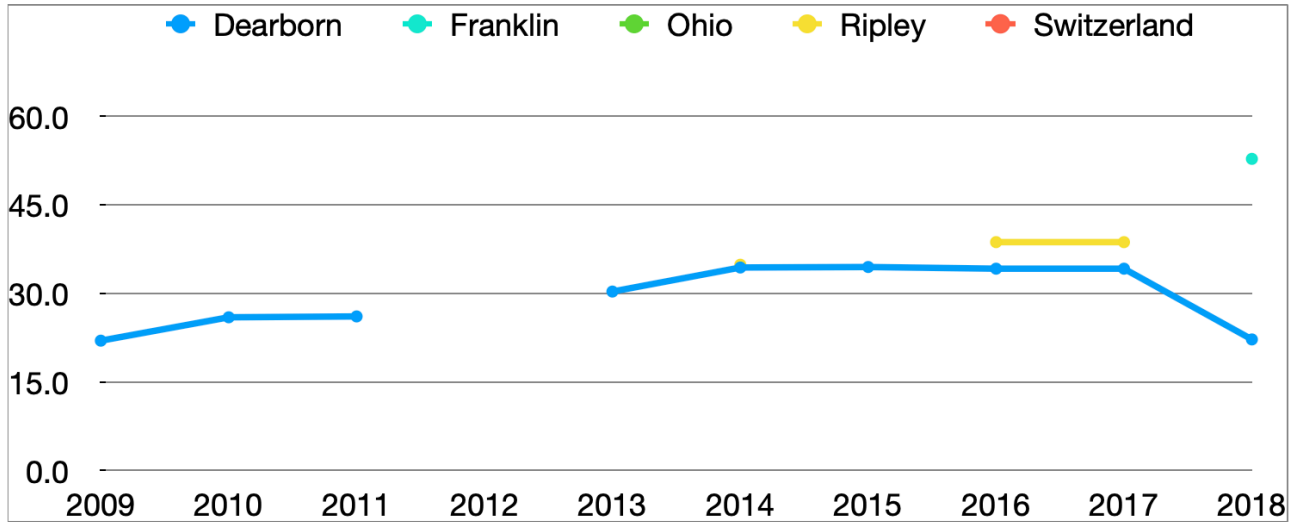
Although the gains in accuracy of the above graph ultimately outweigh the losses, it masks problems suppressed because, statistically speaking, overdose death is a rare event. Other sources deal with this by averaging data across a number of years. To highlight otherwise suppressed data, Figure 2a is a graph of Kentucky counties' overdose death rate, using averages: the year marked 2010 is an average across 2004-2010, 2012 is an average across 2006-2012, 2014 is an average across 2012-2014, 2015 is an average across 2013-2015, 2016 is an average across 2014-2016, and 2017 is an average across 2015-2017. For example, Gallatin County, which doesn't reach the CDC threshold in any single year, when averaged across multiple years averages a higher overdose death rate than any other county reviewed in this study, with an overdose death rate of 85/100,000 between 2015-2017.

Gallatin was the only county in which overdose death was invisible using the CDC methodology, thus for the other state counties, only the CDC data is reported.

Across all the figures, 2018 marked a decrease or a leveling off of overdose deaths. The one exception to this was Franklin County, Indiana. The 2018 figures show that aside from Gallatin County, the counties with the highest overdose death rates, in order are Brown (59.6/100,000), Campbell (58/100,000), Kenton (57.8/100,000), Franklin (53.8/100,000), Butler (47.3/100,000), Hamilton (46.3/100,000), and Grant (43.8/100,000). Overall, the cumulative overdose rates also declined in 2018 for the relevant counties in Ohio (283.7/100,000) and Kentucky (195.3/100,000), both still significantly higher in comparison to the lower rate in Indiana (75/100,000), see Figure 5.

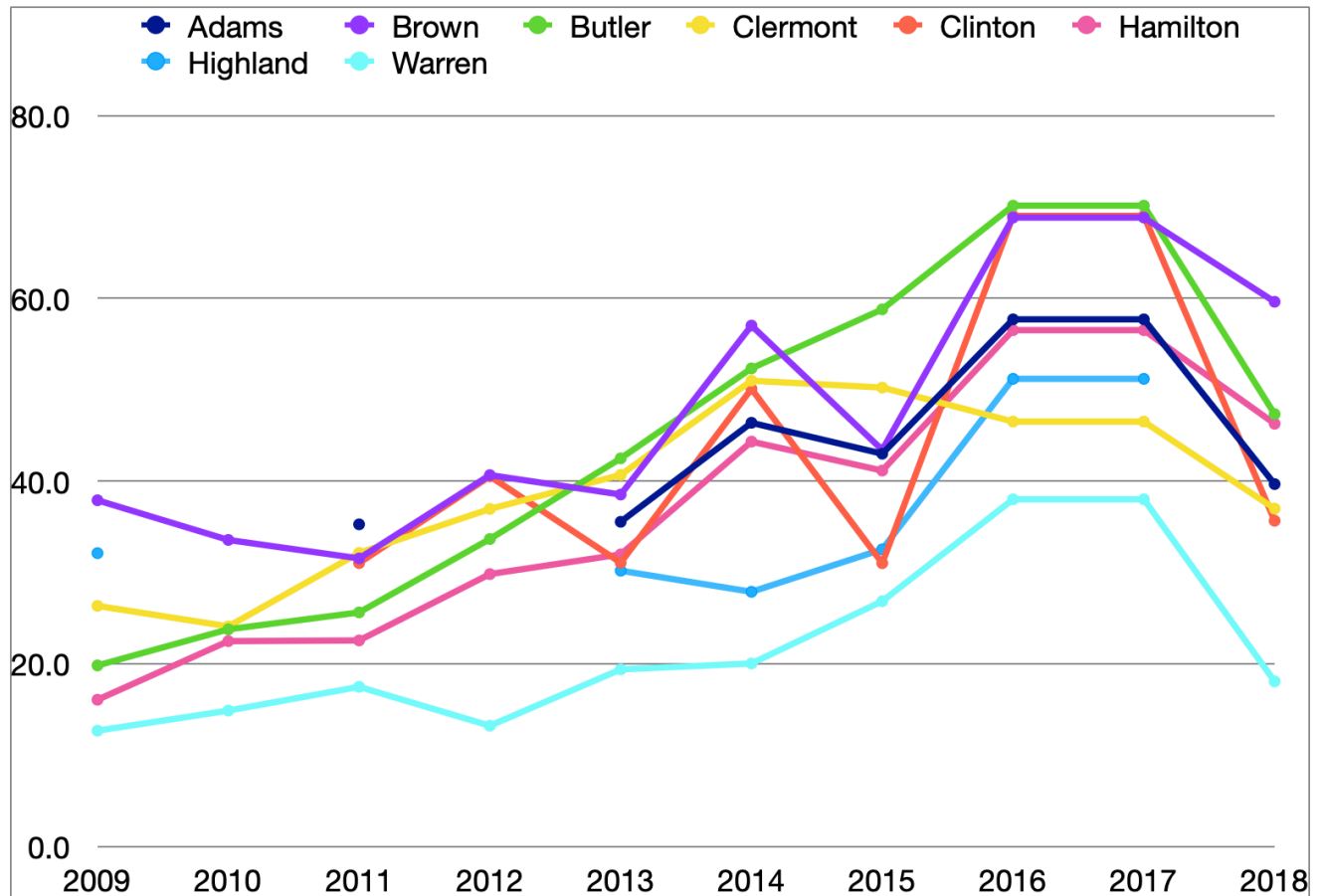


**Figure 3: Indiana Overdose Death Rates (Deaths/100,000) per County as Reported by Year of Death**  
 Threshold for recording as reliable data in the CDC database is 20 deaths/year. Ohio and Switzerland did not meet the threshold, and Franklin only met it beginning in 2018.



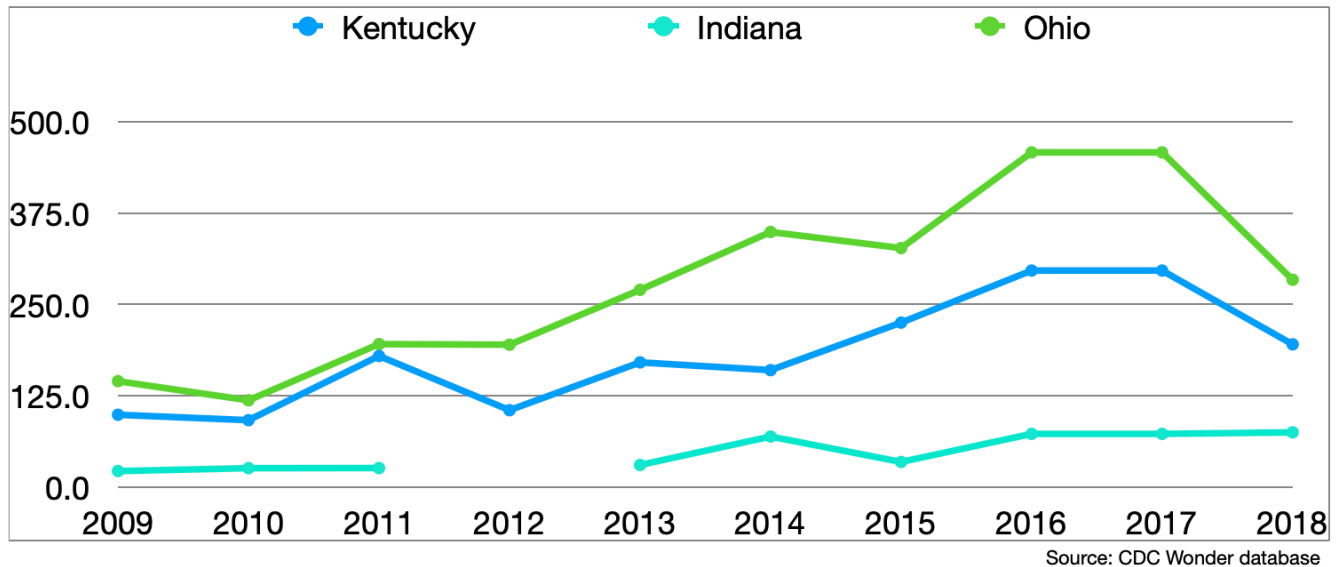
Source: CDC Wonder database

**Figure 4: Ohio Overdose Death Rates (Deaths/100,000) per County as Reported by Year of Death**  
 Threshold for recording as reliable data in the CDC database is 20 deaths/year. Between 2013 and 2017, all included counties met the threshold for reliable inclusion in the dataset.



Source: CDC Wonder database

Figure 5: Twenty County Region across Three States Overdose Rates (Deaths per 100,000) as Reported by Year of Death



Using other available statistical evidence, we made a number of calculations to estimate need for recovery housing (Table 5). We multiplied county level census estimates of people age 18 or older by the SAMHSA state-level data on substance use prevalence for those 18 or older. Lipari and Van Horn (2017) calculated that 7.6% of adults over 18 who use substances seek treatment in some kind of facility, thus we multiplied the estimated prevalence by 7.6% to estimate the total number of people in need of treatment. Given the literature that between 40-88% of people experience relapse post-treatment, and given that recovery housing is not a panacea, we estimated that between 30-50% of people who receive treatment would benefit from recovery housing post treatment.

This analysis is based on the completed 92 surveys from recovery houses and best available epidemiological data; however, prevalence rates likely vary by county across a state, which would distort the estimates on the number of adults using substances in each county. The rate of adults seeking treatment is a national average, which again may underestimate the findings. Conservatively then, the estimated shortfall between available beds and needed beds is 2,909 and 5,671 beds.

If we combine these estimations for likely demand for recovery housing in light of the overdose death rates, it might suggest that the counties with the highest need are, in Kentucky, Gallatin (potentially), Campbell, and Boone; in Indiana, Franklin, Dearborn, and Ripley; and in Ohio, Brown, Butler, and Hamilton. That said, the sheer volume of potential need in the Ohio counties, given the generally higher population sizes and higher estimated prevalence rates, and generally comparable or higher overdose rates, the overall need for recovery housing beds is particularly high in the Ohio counties.

Table 5: Epidemiological Estimates

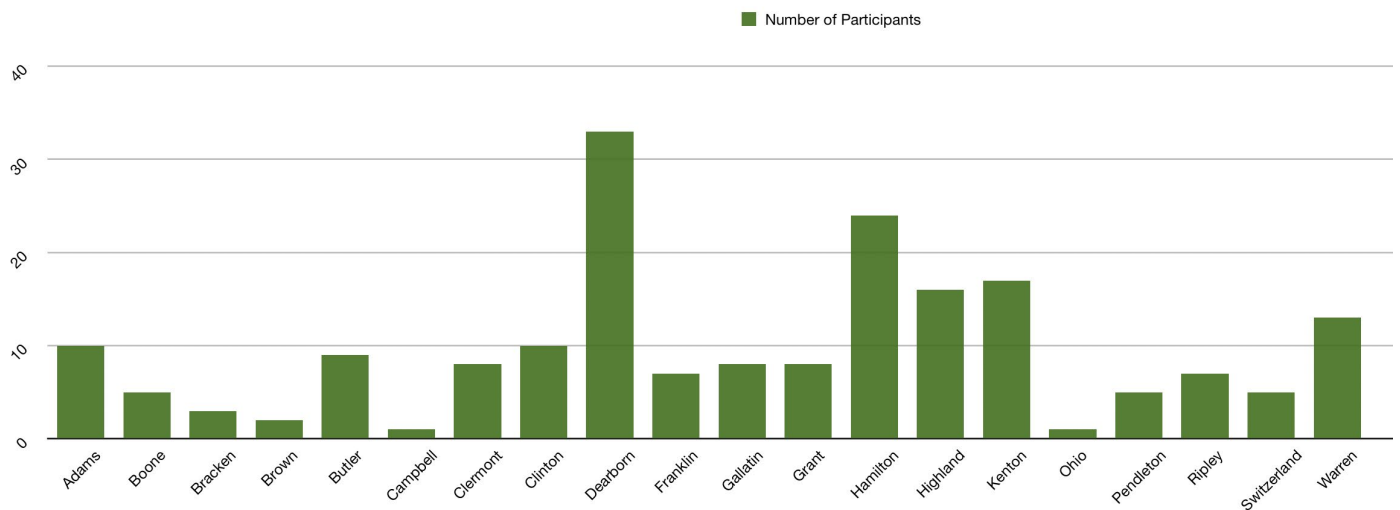
State	County	Population size 18+ (2018 estimates)	Recovery Houses	Known Beds	Estimated State Drug use prevalence as percent of population: age 18+	Estimated number of people 18+ using substances based on state prevalence data	Estimated number of adults with SUD over 18 who receive treatment for SUD in a given year	Number of people in recovery would seek admission to a recovery house if available, estimated at 50%.	Bed Gap between available beds and needed beds if 50% in recovery seek recovery housing.	Number of people in recovery would seek admission to a recovery house if available, estimated at 30%.	Bed Gap between available beds and needed beds if 30% in recovery seek recovery housing.
<b>Kentucky</b>					9.26%						
	Boone	97,334	3	118		9,013	685	343	-225	206	-88
	Bracken	6,311	0	0		584	44	22	-22	13	-13
	Campbell	73,776	3	27		6,832	519	260	-233	156	-129
	Gallatin	6,695	0	0		620	47	24	-24	14	-14
	Grant	18,464	0	0		1,710	130	65	-65	39	-39
	Kenton	126,531	29	311		11,717	890	445	-134	267	44
	Pendleton	11260	0	0		1043	79	40	-40	24	-24
<b>Totals</b>		340,371	35	456		31,518	2,395	1,198	-742	719	-263
<b>Indiana</b>					11.64%						
	Dearborn	38506	4	22		4482	341	170	-148	102	-80
	Franklin	17505	0	0		2038	155	77	-77	46	-46
	Ohio	4733	0	0		551	42	21	-21	13	-13
	Ripley	16688	0	0		1942	148	74	-74	44	-44
	Switzerland	8072	0	0		940	71	36	-36	21	-21
<b>Totals</b>		85504	4	22		9953	756	378	-356	227	-205
<b>Ohio</b>					10.42%			0	0	0	0
	Adams	21126	1			2201	167	84	-84	50	-50
	Brown	33618	1	6		3503	266	133	-127	80	-74
	Butler	285451	10	153		29744	2261	1130	-977	678	-525
	Clermont	153834	5	47		16030	1218	609	-562	365	-318
	Clinton	31916	3	8		3326	253	126	-118	76	-68
	Hamilton	621077	40	521		64716	4918	2459	-1,938	1476	-955
	Highland	32656	1	16		3403	259	129	-113	78	-62
	Warren	166428	3	30		17342	1318	659	-629	395	-365
<b>Totals</b>		1346106	64	781		140264	10660	5330	-4,549	3198	-2,417
<b>Region Totals</b>		<b>1,771,981</b>	<b>103</b>	<b>1259</b>	<b>10.44%</b>	<b>181735</b>	<b>13812</b>	<b>6906</b>	<b>-5,647</b>	<b>4144</b>	<b>-2,885</b>

2018 population estimates from [www.census.gov](http://www.census.gov).  
 Estimated state prevalence from [www.samhsa.gov](http://www.samhsa.gov). <https://www.samhsa.gov/data/report/2016-2017-nsduh-state-prevalence-estimates>.  
 7.6% estimate of adults with SUD who receive treatment in any given year from Lipari and Van Horn, 2017.

## Mixed Methods Analysis

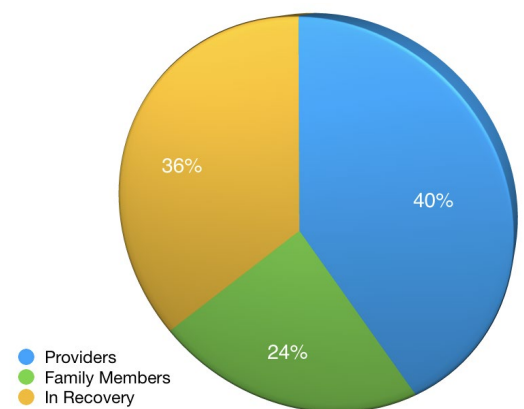
In total, 194 individuals participated in the 40 focus groups. We had at least one focus group in every county, with the exception of a single combined focus group for Ohio and Switzerland counties in Indiana, see Figure 6. Aside from one outlier focus group with 21 participants (Dearborn County, Indiana), our median focus group size was four, ranging from one- 12. Participants' mean age was 44.3, (range 20 to 81).

Figure 6: Focus Group Participants by County



The majority of participants in the focus groups were female (67.4%). Only 1.5% (N=3) participants were people of color. While 20% of participants were either unemployed or retired, 69.6% were employed full time. The largest number participants reported that their involvement with SUD was as providers, followed by those in recovery or as people with SUD, with the fewest participants reporting that they were family members of people with SUD (see Figure 7). Of the 194 participants, 67 reported multiple types of involvement with SUD, with 22 participants reporting that they fit all three categories of involvement (see Figure 8). Note that approximately the same percentage of people were exclusively providers and exclusively people with SUD experience, with fairly even distribution of the other groups. Participants reported a mean of 18.9 years (s.d. 13.75 years) of involvement with SUD in some form. There was no significant

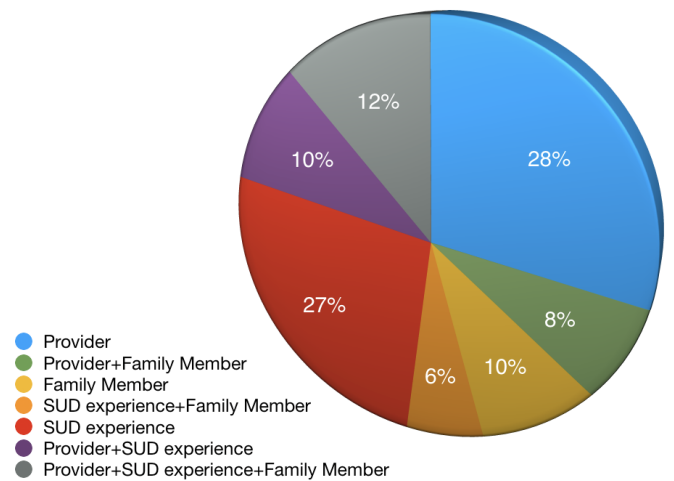
Figure 7: Categories of Participants



Source: Focus Group data collection

relationship between the type of involvement with SUD (provider, family member, person with SUD experience) and the length of time of involvement with SUD. There was, however, significant relationships between type of involvement with SUD and education; providers were significantly more likely ( $p = .000$ ) to have completed college or graduate school and people with SUD experience were significantly more likely ( $p = .001$ ) to have completed high school or the equivalent. The focus group participants represented a wide variety of individuals with very different backgrounds and roles. Represented in the focus groups included: health department employees, educators, housing managers, judicial system representatives, students, nurses, county officials, advocates, persons with a felony conviction, pastors, community organizers and leaders, local business owners, social workers, Quick Response Team leaders, care coordinators, counselors, parents, brothers, sisters and grandparents.

Figure 8: Overlapping Categories of Involvement



Source: Focus Group data collection

### Free Listing and Clustering: What is Recovery Housing?

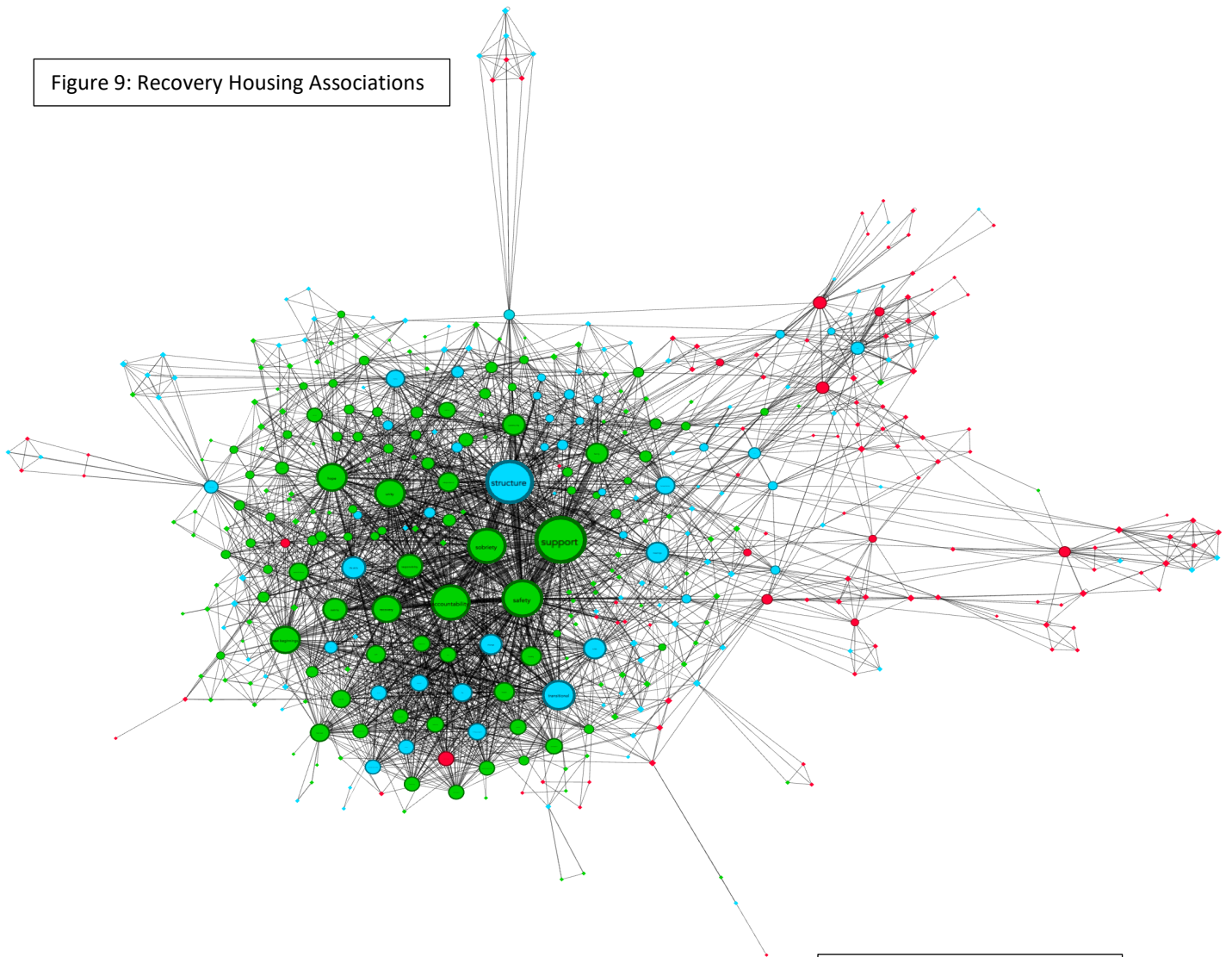
The free listing exercise resulted in 504 unique words and phrases participants associate with recovery housing. We merged 52 terms, which conveyed the same meaning -- such as “strong support” and “supportive”, “programs” and “programming”, and “restrictive” and “restricting”. The final list consisted of 452 words or phrases. The 10 most frequently listed words were: safety (N=60), support (N=54), sobriety (N=38), accountability (N=31), hope (N=30), structure (N=29), cost (N=17), family (N=17), community (N=16), and recovery (N=15). The high frequency with which these words, particularly the top six, were listed indicate a general agreement across focus groups of the core attributes of recovery housing: **recovery housing consists of safe, supportive, structured environments that encourage sobriety, accountability, and hope.** Note that all of these terms have positive or neutral connotations; however concerns about cost, with its negative connotations, is also strongly associated with recovery housing.

Beyond these core attributes, understandings of recovery housing are remarkably diverse, as illustrated by the 442 additional words that people associated with recovery housing. This diversity in understandings hints at the fluidity of the concept and the way it is used, and at widely diverse experiences people have had or stories they have heard about “recovery housing.” Indeed, the long list of associated terms suggests considerable uncertainty of what recovery housing is beyond its core attributes.

In addition to the listing task, participants clustered their words with others' words in the focus groups. They were given no direction on how to cluster the words, and simply asked to explain their reasoning for the clusters later. The clustering task demonstrates relationships between words. For example, if words like safety are clustered with structured, it implies something very different about recovery housing than if safety is clustered with financial need. In total, participants across the 40 focus groups created 5,851 paired words in their clusters.

These associations are illustrated in Figure 9. The size of the dots indicates the frequency with which that word was listed. The width of the lines connecting the dots as well as the proximity of the dots indicate the number of times those words were clustered together across the 40 focus groups. The closer the proximity and the wider the connecting line, the more frequently those words were paired. Words with few linkages were words that participants choose not to put into clusters. Words with positive valence or tone, such as safety, are colored green. Words with neutral valence, such as structure, are colored blue. Words with negative valence are

Figure 9: Recovery Housing Associations

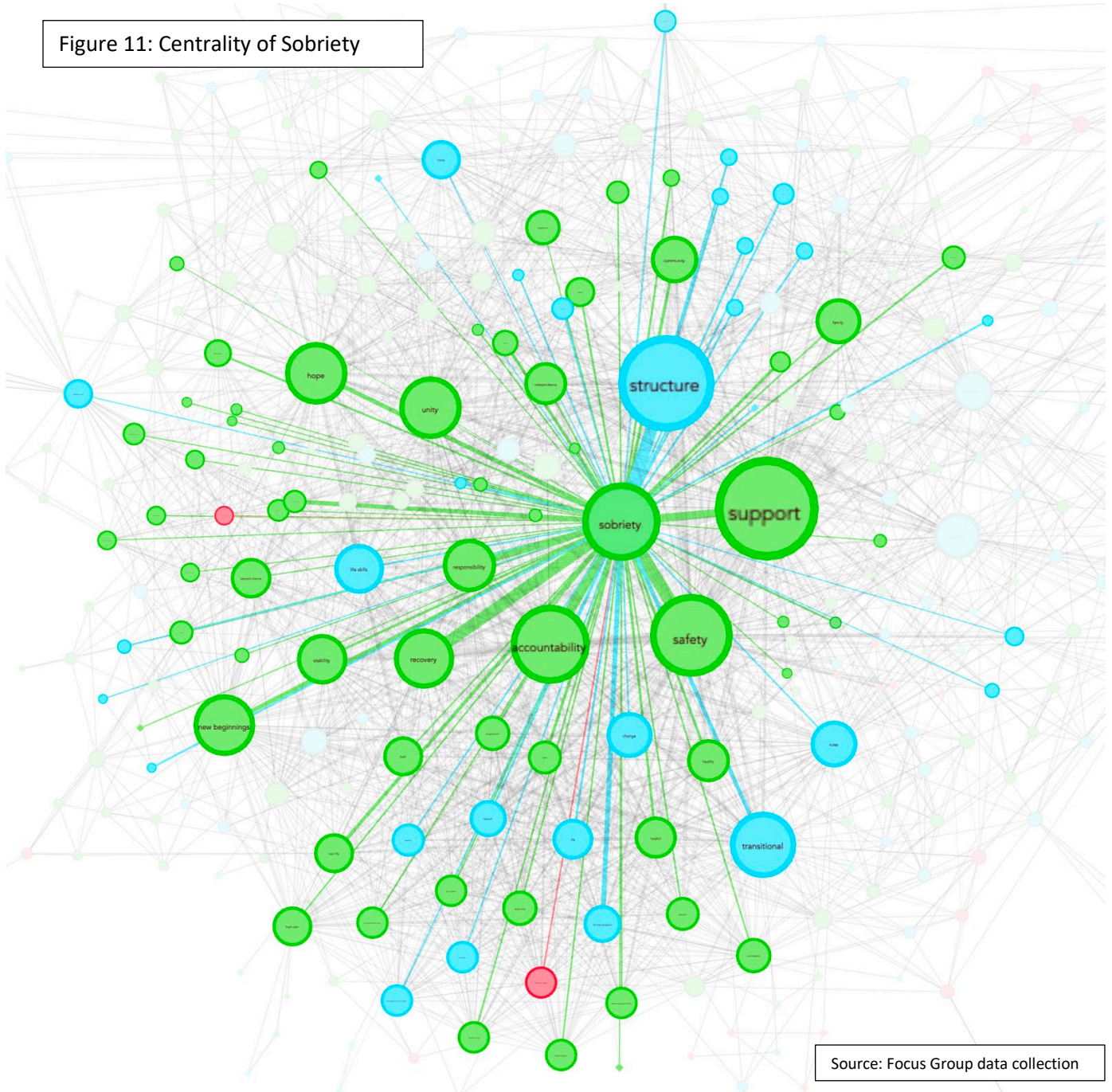


Source: Focus Group data collection



The Gephi program allows for selective isolation of connections. For example, if we selectively isolate sobriety, it confirms the impression from the whole image, that sobriety, while less frequently mentioned, is central to the concept of recovery housing, drawing together support, structure, safety accountability, responsibility, hope, unity, life skills, recovery, and new beginnings (Figure 11). Sobriety is conceptually threatened by its pairings to the words transitional and change, which could be taken to mean that sobriety affords a transition, or that sobriety itself is potentially transitory. Sobriety is also connected with two negative terms, financial need as well as fear of separation from family. Thus, sobriety implies a cost: financial, emotional, and social.

Figure 11: Centrality of Sobriety



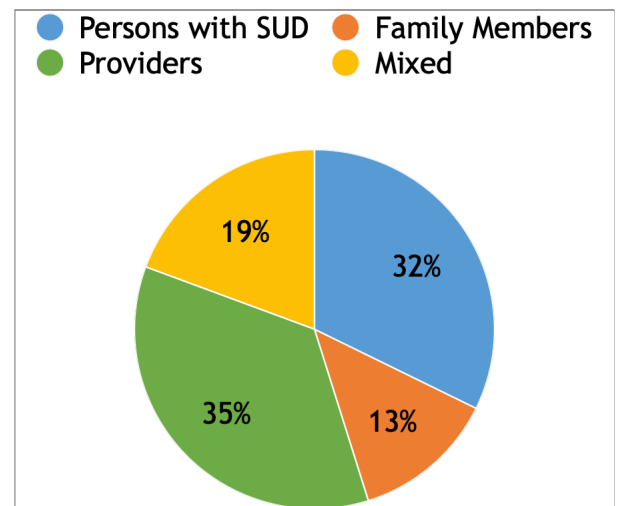


In addition to providing insight into the concept of recovery housing, the Gephi images visually hint at the complexity of and potential for uncertainty about recovery housing as a webbed and dynamic system with visible and invisible structures and processes that seem to push and pull people in largely positive ways but with threats all around the edges. This complexity and uncertainty also emerged in the conversations of the focus groups.

### Focus Groups: Qualitative Data to Understand the Landscape of Recovery Housing

The 40 focus groups resulted in over 36 hours of recordings, with the recordings beginning after the consent process and the initial description of the study. Once transcribed and using Dedoose software to analyze the data, three descriptor variables (type of participants, county, state) were applied to each of the 40 transcriptions. Then 91 codes were iteratively developed to capture salient themes and topics across the transcriptions. A total of 1,258 excerpts were extracted from the transcriptions to which 3,692 codes were applied. Given that our total number of participants in any given county was low, the summaries below are offered either by state or by type of focus group participants (provider, family member, or person with SUD experience). The majority of focus groups were of participants representing different types of providers, see Figure 12.

Figure 12: Focus Groups by Types of Participants



Source: Focus Group data collection

### Deductive Findings: Characteristics of ideal recovery houses

In each focus group, we followed the same protocol designed to gather data on what makes for a good recovery house, as well as whether the current resources available for recovery met local needs. Across the dataset, **structure was the most frequently mentioned characteristic of an ideal recovery house followed closely by training or employment opportunities.** In the focus groups, we asked participants at least twice for a list of ideal characteristics. When we analyzed the most frequently mentioned characteristics of an ideal recovery house by state, variety emerges, with people in Indiana most concerned about opportunities for training or employment, whereas these were mentioned less frequently for respondents from either Kentucky or Ohio (see Table 6). Notice that many of these words were also at the core of the figure illustrating the words participants associate with the concept of recovery housing, especially structure, sobriety, safety, community, and accountability.

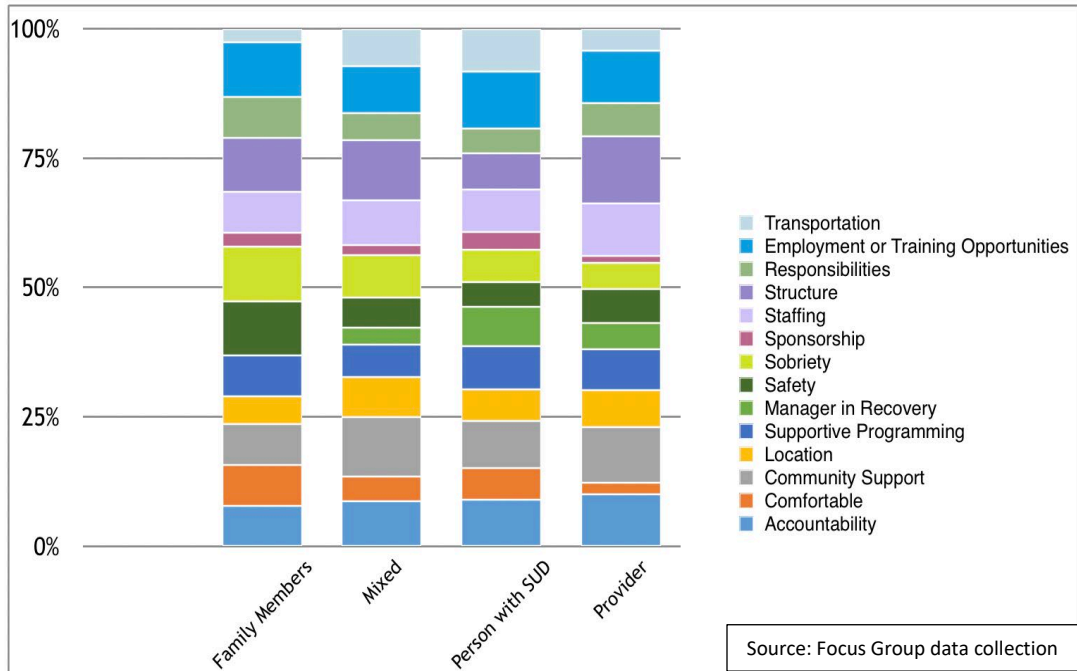
If, instead of looking at these characteristics by state, we look at them by type of participant, a different pattern emerges in which family members had relatively few suggestions to offer, whereas providers and people with SUD experience had a number of suggestions, although the relative importance of these suggestions differed. Overall, people with SUD experience most frequently mentioned training or employment opportunities, whereas providers most frequently mentioned structure. Providers more frequently mentioned staffing and community of support than people with SUD, who more frequently mentioned that an ideal recovery house would be close to transportation, facilitate sponsorship, and be comfortable “like a home”. In the mixed groups, it is not possible to tease apart frequency of mentioned themes by type of person, but worth noting that mixed groups also mentioned the same characteristics as the groups with single types of participants.

Table 6: Most Frequently Mentioned Ideal Characteristics by State.

Most frequently mentioned characteristics of an ideal recovery home	Indiana	Kentucky	Ohio
1	Training or employment opportunities	Structure	Community of Support
2	Community of Support	Staffing	Structure
3	Accountability	Sobriety	Accountability
4	Location	Accountability (tied for 4)	Staffing
5	Structure (tied for 5)	Meetings (tied for 4)	Location
6	Staffing (tied for 5)	Training or employment opportunities (tied for 4)	Safety (tied for 6)
7	Transportation (tied for 5)	Community of Support	Training or employment opportunities (tied for 6)
8	Sobriety (tied for 8)	Comfortable	Meetings
9	Safety (tied for 8)	Transportation	Manager also in Recovery (tied for 9)
10	Sponsor (tied for 8)	Responsibilities/Chores	Responsibilities/Chores (tied for 9)

Figure 13 illustrates the percentage for all of the characteristics listed in the Table 6 analyzed by type of focus group. While there is variation in the percentage of times a particular type of focus group listed an ideal characteristic, with the exception of “Manager in Recovery” which was not mentioned by any family member focus groups, all other ideal characteristics were mentioned by each type of group, suggesting

Figure 13: Ideal Characteristics by Focus Group Participant Type.



Source: Focus Group data collection

their divergent perspectives overlap in terms of ideal characteristics of a house. This may in part be due to the fact that 22% of the providers were also in recovery.

We additionally asked about peoples’ worries regarding recovery housing. The primary worry across all participants was that residents would be able to maintain sobriety. Resident safety and the safety of the immediate neighborhood, as well as the cleanliness of the house were mentioned as worries of family members and people with SUD. Additionally, a handful of people with lived experience mentioned worries including lack of food availability and need for appropriate mental health care. Both people with SUD experience and providers mentioned concerns about poorly run recovery houses. Providers also worried about funding, neighborhood stigma, staffing, and supervising boards.

*Deductive Findings: Needs and Gaps*

Each focus group was asked explicitly to comment on whether current resources were adequate to meet need in their opinion. With one exception, all members of every focus group answered with a resounding no. That exception was a provider from Kenton County who said that while more needed to be done, he had always been able to find a bed for someone who needed it and commented that “Northern Kentucky is way ahead of time when it comes to recovery.” This comment aligns with the epidemiological analysis suggesting that Kenton has, or is on the cusp of having, sufficient numbers of recovery housing beds. Even so, a few minutes after making this comment, this same participant agreed with another participant’s comment that if Kenton County were to open up 10 more recovery houses, those houses would be full within the month.

Respondents from every county and state commented that there is a gap in terms of funding for recovery efforts, including recovery housing, and that more recovery houses and beds were needed. In addition to noting needs in terms of quantity, respondents in all three states foregrounded the needs of families. People voiced both that resources are needed to accommodate families, particularly parents of both sexes who need recovery supports that will accommodate both them and their children. People also voiced a need for resources for the family members of people who are in recovery housing, to help them understand the transition their loved one is going through and to rebuild relationships that can support the loved one through the recovery process. These were the top two mentioned needs across all three states. The top five most frequently mentioned needs by state are indicated on Table 7.

Table 7: Most Frequently Mentioned needs by State.

Most frequently mentioned gap/ need	Indiana	Kentucky	Ohio
1	Funding for recovery	Funding for recovery	Funding for recovery
2	More recovery housing/beds	More recovery housing/beds	More recovery housing/beds
3	Better transition options after incarceration	Resources for family recovery, both families in recovery together and family members of people with substance use	Resources for family recovery, both families in recovery together and family members of people with substance use
4	Resources for family recovery, both families in recovery together and family members of people with substance use	Improved community acceptance of recovery housing	Improved community acceptance of recovery housing
5	Improved community acceptance of recovery housing	Improved proximity to recovery resources	Better transition options after incarceration

### *Inductive Findings: Individual Passion and Courage within a Realm of Uncertainty*

The inductive findings are those that emerge unbidden in the data. These are themes and topics that emerge as part of an individual's narrative in response to a question or in fluid commentary within the conversations of the focus groups. While there is general agreement that recovery housing holds the promise of being able to facilitate recovery and reduce relapse rates, the overwhelming impression across the focus group data is that people are working to make the best decisions they can in a realm of uncertainty. We listened closely to the narratives of individuals, then coded comments using emergent themes to help provide a better overall picture of the perceptions of recovery housing by those working in or needing it. As such, these data help explain the epidemiological and other quantitative data reported in this document, and in the descriptions below, we illustrate common findings with representative quotations.

#### *People*

We coded 174 generously told stories or narratives of addiction, relapse, overdose, recovery, and recovery housing experiences, all of which were recounted with sensitivity, care, and compassion. Stories told about others – clients, family, friends -- did not blame individuals regardless of outcomes. If fingers were pointed at all, they were pointed at governmental bureaucracies or societal systems that encouraged practices perceived of as greed or were accessed by opaque processes. When telling their own stories, participants claimed ownership of their actions and were quick to point out all those who had helped them access recovery resources including recovery housing. Indeed, we heard repeatedly the names of individuals that we eventually learned were pivotal to the networks working in substance use and recovery in the Greater Cincinnati region. Most **participants underscored that if it weren't for the luck of meeting a particular pivotal person, they would not have found their pathway to a recovery house** which they credited with setting them firmly into recovery. The stories highlighted a weakness in a system that is largely hidden from public view. There are multiple dedicated individuals in the region who have the potential to be woven into an even more strongly intertwined network that is less opaque to the public. Such a network could potentially be a conduit for information as well as take some of the burden and risk off of a system of social networks that rely on a few key individuals and their connections.

#### *A Realm of Uncertainty*

Across 40 focus groups, 35 times we coded comments displaying uncertainty about definitions of recovery housing. There was considerable communicative slippage and confusion between the following terms: recovery housing, transitional housing, half-way houses, ¾ houses, sober living, recovery sober living, and supportive living. In addition, not infrequently residential treatment centers were also considered recovery housing by participants, because they reasoned, it is housing within which one recovers. Comments were common confusing recovery housing with a half-way house, or that created step-like processes between terms (“I put transitional living between treatment and recovery housing”) or that confuse “trap houses” potentially with both recovery housing and half-way housing. The NARR guidelines delineating the four levels of recovery housing was in part designed to help clarify such an array of names or types of housing. A portion of provider-participants were aware of these leveling guidelines,

even so, the conversations surrounding the different terms betrayed significant lack of clarity, not only in the terms themselves, but also whether the differences in terms reflected differences in the roles of institutions.

These differences in terminology matter, primarily because it is confusing for potential clients. Family members reported feeling alone, overwhelmed, and in need of clear guidance when looking for and making decisions about recovery housing, sometimes resorting to the internet to find resources. People seeking recovery on their own may have court-mandated limitations on their options; however, for those who may choose, they too seek guidance within their networks. The array of terms and the rarity of certification or accreditation of recovery houses means that family members and people seeking recovery reported often not knowing much about the residential organization until they arrive.

Indeed, the scarcity of available beds means that many people we spoke with, particularly those with limited financial means, felt like they had no choice at all in a house, nor did they often know where to turn if a house did not have availability or was perceived as unsafe. Some commented that so-called recovery houses may in fact not be organizations for recovery but instead considered as “trap” houses where drugs are sold and used. Other participants told of experiences going inside what they had heard was safe recovery housing in a nice and clean neighborhood only to find it to be filthy, disorganized and located in a dangerous environment. In our focus groups, there were a total of 28 stories of drug use in a ‘recovery house’ (not relapse but ongoing use). Such stories, if spread widely through communities, undermine the reputations of all recovery houses to provide an alternative route to recovery.

To further add to uncertainty, Not-In-My-Backyard (NIMBY) stigmatism against recovery housing establishments is a prevalent concern among participants in the study who commented on it 55 times. One consequence of NIMBY is that recovery houses need to minimize advertising, particularly if they are located in residential neighborhoods. This secrecy about houses and their locations and the lack of required certification or registration which would presumably close unsafe recovery houses together augment uncertainty for people seeking recovery and their family members.

### *Challenges of Rural Areas*

The unique needs of rural areas were underscored by participants in rural counties. Participants in rural counties across all three states emphasized that rural county government agencies were less financially well off than more urban ones, and yet were expected to be able to provide similar levels of services. Participants mentioned that services like recovery housing and its associated programming like Narcotics Anonymous or Alcoholics Anonymous meetings, are significantly more difficult to establish in rural areas because of limited resources (both funding and number of personnel), poorer public infrastructure for transportation but greater distances that need to be traversed, fewer employment opportunities for people in recovery, and heightened stigma against people with SUD experience with associated NIMBY attitudes. Across the rural counties, the picture participants painted was one of close-knit, small communities that have the potential to unify and solve problems.

Participants commented that denial that substance use was a local problem was common. If local people are not using substances, then people with SUD must be outsiders, or if someone local is using substances, it is because an outsider introduced them to it. Stigma against people with SUD experience seems fueled by a moral model of addiction and is coupled with fear of both outsiders and people with SUD. Some reported a community desire to help people with SUD, but without encouraging proximity of people with SUD because of fears of heightened crime or unsavory behavior. NIMBY and associated fears were commonly mentioned in focus groups in more urban counties, however the rootedness of rural communities and their limited budgets with their constrained employment opportunities and inadequate transportation options, give a different character to hesitancy to provide recovery housing, which would attract people from outside the community.

We gathered narratives of communities who are working to provide resources for people with SUD, to address stigma, and create processes for those seeking recovery while in the judicial system. These people are paving the way for future recovery housing opportunities, however in rural areas, even more so than in urban areas, if a recovery house is established, it will be under a microscope for any harm or insult to the community by any resident of the house. The stakes for recovery housing in rural areas, where it is universally needed according to our data, are very high.

### *Explaining the Complexities of Recovery Housing*

Recovery housing is a structure embedded within the larger framework of recovery, and it is affected by that larger framework. The tensions and struggles within the recovery house system can be explained by delving into the ways people conceptually and socially construct the realities of substance use and recovery. Anthropologists call these constructions cultural models, which come to inform the ways people interpret and act in the world. Cultural models are simultaneously individual guides to interpretation and action, and are widely legitimated and accepted within a society. In the cultural models discussed below, one, the disease model, is legitimated by scientific research, and the other, the compensatory model, is grounded in a deeply held, American moral ideology of self-responsibility. Thus, understanding these locally used cultural models can explain the tensions that emerged in the data. While all participants agreed that there needs to be more recovery housing, there were clear tensions on the form of recovery housing needed to take and how it should be funded. Those tensions are explained through the cultural models as they emerged in the focus groups, particularly in people's narratives of personal experience.

### *The Disease Model*

The disease model of SUD is the explicitly dominant cultural model in the United States, codified in the published medical literature and reinforced in public health messaging. The disease model of SUD situates substance use in the brain. In this model, SUD is a neurological disorder that is understood to have developed as a consequence of exposure to toxic chemicals. As a neurological disorder, SUD is subject to treatment in clinical settings and with clinical medicine, such as MAT. In this model, someone with SUD is conceived of as a patient,

and the patient's recovery depends on adherence to medical care and treatment. The disease model reduces the stigma of addiction as it is no longer conceptualized as a deficiency of will but instead makes solutions to addiction the sole purview of medicine (Barnett, Hall, Fry, Dilkes-Frayne, & Carter, 2018). The disease model of addiction tends to focus solely on the person diagnosed, papering over the social relationships and community harms that are often associated with regular, illegal substance use. The disease model also reinforces the notion of helplessness and lack of control: "While the conceptualization of substance abuse as a disease was originally intended to reduce stigma and provide users with better access to services..., it may encourage a 'sick role' that erodes personal power and diminishes control over lives and choices" (Lafave, Desportes, & McBride, 2009).

The disease model was volunteered by participants in the focus groups, particularly in conversations with providers. Participants regularly emphasized that "it's a brain disease." Indeed, multiple people likened SUD to diabetes to emphasize chronicity and the need for daily management and monitoring of behaviors. People in focus groups emphasized that thinking of SUD as a disease reduces stigma, encourages family members to talk openly and seek help for a loved one with SUD, and is useful for addressing concerns in communities.

#### *Disconnect between the Disease Model and Medical Structures*

The providers we spoke with reported that the disease model of SUD is routinely part of the medical narrative of SUD, but that the disease model was not necessarily supported by structural processes of medical centers. One participant reported that in local emergency departments, people with SUDs who walk in and ask for treatment are considered patients with a brain disease, which "has already been proven to [hinder] your decision making." Yet these patients are handed a list of phone numbers and told that they have to make their own calls to treatment centers and figure out their own way of getting there: **"So a lot of times the burden is overwhelmingly put on the patient.** I think it's ironic because considering other medical conditions, this is the only one where all the burden is put on the patient to figure out how to cure themselves and heal themselves.... Yeah, you're standing an emergency, you're saying you want treatment for addiction. And I have the number here and it would sound better if it was coming from me. We can't make that phone call. They have to make the call." In short, those same medical systems that acknowledge SUD as a brain disease that affects decision making require people with SUD to make decisions and have the agency to help themselves.

Likewise, if SUD were wholly a disease, it would not matter whether or not one wants or is ready for treatment. Yet "wanting" treatment or being "ready" for treatment is widely seen by participants as the crucial first step in recovery. They must be ready to help themselves. Indeed, only one person across all of the focus groups had not wanted or been ready for sobriety when he entered a recovery house; he had entered it only as an alternative to prison, but reported that the recovery house experience had "saved his life" and he was in long term recovery. Otherwise, across the focus groups people commonly commented that readiness was crucial in comments like: "you're not gonna get recovery, if you don't *want* recovery."

### *The Compensatory Model*

The disease model of substance use relieves people with SUD of blame, however in designating it a brain disease, it also disables the possibility of recovering outside of a medical system. The lived experiences participants reported in our study underscore that while the language of substance use as disease has currency in conversations, the non-scientific or everyday cultural model for recovery makes recovery the responsibility of the person with SUD. Health care providers in our study occasionally underscored the importance of MAT as a support in the recovery process, but even they noted that the person in recovery has to *want* to act and be accountable for their own recovery. Indeed, there is recent literature that suggests that compelled MAT therapy does not provide long-term benefits, whereas MAT as part of a voluntary recovery process does (Wegman et al. 2017). The data from our study and emerging data in the literature fit better with an alternative cultural model identified by Brickman and colleagues as a compensatory model of substance use in which “people are not blamed for their problems but are still held responsible for solving these problems” (Brickman & et al, 1982, 371). In this model, like in the disease model, the person is not blamed for initiating substance use (the larger socio-economic or family environment is held accountable) but unlike the disease model, the compensatory model views the person as “responsible for his or her own fate” (Brickman & et al, 1982, 372).

In reviewing our data, while both the disease model and the compensatory model were part of the narratives people offered, a compensatory model of self-responsibility was more strongly associated with recovery success narratives than a disease model.

### **Personal Experiences: Onset of Use, Readiness for Recovery & Selectively using both the Disease and the Compensatory Models**

In our study, the onset of substance use for the vast majority of people fit one of two patterns: experimental use in early to mid-adolescence that progressed into SUD, or post-surgical or injury onset after prescription drug use.

For those who began using in early to mid-adolescence, most described initial use as experimental, but it quickly led to something they felt compelled to do. Others reported struggling with depression and anxiety in adolescence, using substances was a means of escaping psychological pain; as one person put it, “It took me out of myself.” When SUD was present in someone with mental health issues, the term used was “dual diagnosis”, signaling a reliance on a diagnosis-providing disease model to explain the extra layers of complexity involved in recovery for those with both SUD and clinical depression. For some whose use began in early to mid-adolescence, a disease model was also useful to describe one’s lack of skill development: “I started using at 14 years old, so I’m a 14-year-old developed brain inside of an adult woman’s body, so I didn’t know how to be an adult or mother or anything because my brain’s kinda development was stopped when I started using, so I didn’t know how to just be an adult.” This use of a disease model which allows for a halting of neurological development was used to in part explain why recovery can take such a long time: in order to



function as an adult, some people in recovery need to be taught adulthood basics like washing clothes, grocery shopping and managing a budget. Yet, even these participants also spoke about needing to be “ready” before they could learn such skills.

For others, post-surgical or injury-related pain led to their substance use. Prescribed opioids made ongoing pain manageable, and over time, led to physical addiction. For example, one participant reported that after a back injury “I was over prescribed, my back hurt ya’know, I had all kinds of back issues...I wasn’t prone to using drugs ever and my life was going how I wanted it to go...but then I fell [was] over-prescribed pills and ended up marrying someone in that same situation...so I’ve been involved with it for about 20 years give or take.” These people described their addiction as a “physical” due to use of over-prescribed opioids, an explanation drawing on a disease model.

Regardless of how substance use was initiated, according to providers and people with SUDs alike, getting to the point of being able to start recovery, happens only once someone has reached “rock bottom,” which is described as a personal low point. What constitutes “rock bottom” differs for each person, but it often means that that person has “burned every bridge you have” and recovery is someone’s last desperate hope at that moment. For example, the same participant noted above who had initiated use because of over-prescribing continued on to say “maybe I didn’t have to sleep on the street, but my bottom was different, everyone’s bottom is different. So I am very passionate because if I can do it, I know that anybody can do it” underscoring the perceived importance of individual responsibility to overcome addiction.

That readiness -- the moment someone asks for help -- is perceived by providers as being potentially fleeting. Repeatedly in focus groups providers underscored the urgency of having beds and treatment options available the moment someone asks for help. One reported that a man had heard about a recovery house, and walked 16 miles overnight to arrive at 8 in the morning “hoping upon hope that he could somehow get in there.” There were no beds, so he drove the man somewhere else to get him in: “they’re at their bottom; they’re desperate and we can’t tell them we can get them right in anywhere.” Others reported that if they have to call around to find a bed, or drive hours to get to a place, or go through an interview process where the person with SUD will be judged on “fit”, those delays can cause a person to “just lose interest.” People in recovery recounted past experiences of changing their minds, because, as they had long suspected, there is no place for them and they were not welcome in society; so they “go back out and use.” A disease model would suggest that someone could be forced into recovery even if someone were to lose interest, but our data from providers and people with SUD alike suggest that a person must be willing before initiating the first steps of recovery.

Family members reported different experiences: the bewilderment and panic of what to do to enable a loved one’s treatment and recovery. For family members, urgency is ever-present: they plead and threaten trying to get their loved one to want to give up substances. Family members we spoke with tried not to enable, and yet felt their own sense of desperation, no longer knowing the person their loved one had become, “that wasn’t our daughter anymore.” Family members search online, make calls, and lay out hundreds and thousands of dollars to

pay bail, and for lawyers, and to get a loved one into yet another treatment center. As one person put it, “We drive all the way to frickin’ [name of town] and brought our daughter to a recovery place there, just tryin’ to like find some help, that’s 5 ½ hours’ drive one way and it didn’t work. You’re desperate, like, you keep trying. Will this place help? Will this place help? So, any of the good feelings and the not-fear that I had are gone now, now I just worry again, waiting for every time the phone rings.”

Family members, providers, and people with SUDs all reported a common cycle of substance use-treatment-relapse. It was not uncommon for people with SUDs to report multiple cycles of treatment and relapse. Periods in treatment, going through detoxification, were typically described as easy: “It’s easy to be in rehab, in an inpatient [facility], it’s easy because all you’re doing is focusing on you. You are sheltered from the outside world...so you walk outside of that door once you’re completed and it’s like somebody just, the dam got busted [and] now all this water’s rushing towards you. That’s how it feels, and you’re like I’m gonna drown with all this I can’t, I can’t! You just go, I can’t, and you just go back to [using].” These cycles of readiness-treatment-relapse-using-readiness-treatment-relapse-using etcetera, are costly not only financially but also in terms of hope – people with SUDs reported feelings of hopelessness, thinking that someday they were just going to die of an overdose because treatment clearly did not work for them. For them, “their normal is addiction.”

#### *Personal Experience with Recovery Housing*

Into this sea of cascading experiences, participants described **recovery housing as a safe and secure environment with like-minded people to support and hold one accountable for doing the “daily work of recovery.”** The “work” of recovery is conceived of as necessarily “selfish” – the person in recovery needs to be able to focus on him or herself without distraction, and recovery housing provides that space to focus on the recovery work. Many recovery houses described having an initial period of intense learning about the process of recovery prior to the resident beginning allowed to look for employment. For this reason, many houses limit access to cell phones, the internet, or family visits – to protect the person in recovery during the initial adjustment period in a house. Indeed, the entire first year of recovery was repeatedly described as a time in which someone is intensely fragile; a time when every moment is “literally a matter of life and death” and one must constantly focus on “doing the hard work of recovery.”

A crucial component to the daily work of recovery was reported to be activities that remind one regularly that one is in recovery. Going to daily Narcotics Anonymous or Alcoholics Anonymous meetings was described as an essential part of the daily routine of recovery houses. Indeed, these meetings were described as an anchor for people in long-term recovery that they continue to participate in multiple times a week. The need for meetings at least multiple times a week was noted as a problem in rural areas, where a community might only have one meeting a week, which is not perceived as enough to support someone through recovery. In addition, a handful of participants reported that alternatives to meetings worked better for them, reporting activities like regular involvement in a church or spiritual center or regular community outreach.

People who had lived in recovery houses reported those houses needed to feel like home, not like an institution. They noted a significant benefit of having a house manager or “house mom” who was also in recovery, someone who had “walked the walk” and guide without judgement: “If you are in a situation like myself, you don’t get in that situation overnight. You're not gonna get out of that situation just cause you're in some type of structured program that somebody that's never done drugs organized and sanctioned and put together. It's like when people are down in the hole that's so far down they need a shovel just to get enough dirt out of their face to see up out of the hole to the light of day, that's a hard place to climb out of. If I start to climb and I'm making progress and I get more dirt thrown on me [by judgment of someone who has never used] I fall all the way back down.”

People in recovery and providers alike underscored the importance of structure in a house with rules and processes that hold everyone accountable. But in our focus groups, there was voiced disagreement about the ideal response to an incident of relapse. In over half of our focus groups, people noted that “relapse is a part of recovery.” Some participants preferred to make a distinction between a “slip”, which was defined as someone who used and then admitted it remorsefully, and a “relapse”, which was defined as hiding substance use which would result in eviction from the house. Others noted that any substance use put the recovery of others in a house at risk, and the person who used would need to leave the house and remain sober for at minimum for a few weeks before deemed safe to readmit. Providers reported worries about potential evictions, because there was not a safe place to send someone evicted, who would go to homeless shelters or friends’ couches, which would likely trigger full relapse and send the person in recovery “back to square one.”

Participants in long term recovery in our study and who had been in recovery houses reported benefitting from staying connected with the house even after moving out. The social networks people develop in recovery houses were reported to be highly significant in enabling people to make the transition to living on their own. The shortest length of stay of participants in our study was four months. Most stayed six months or more before feeling like they were ready” to move out.

For everyone we spoke with, recovery is conceived of as a journey that never ends. One is always “in recovery” and never “recovered.” This too breaks with a disease model, in which, even with chronic diseases, one can go into remission. There is no remission for people in recovery. There is not a day, for some not a moment, when they do not have to willfully ignore “the demon whispering in my ear” even after five or 10 or 20 years of maintaining sobriety. People in recovery are constantly “working their recovery.” Sustained sobriety is possible, and the people we spoke with underscored that well-run recovery houses in which a person could stay for at least six months and preferably a year, could help establish healthy patterns of thought and behavior that they can, with continuing community support, sustain after leaving.

Other than a few comments about substance use as a disease, and the voiced desires of family members who hope to enable recovery by getting a loved one into treatment, our data

suggests that most people in Greater Cincinnati primarily envision recovery with a compensatory cultural model in which the person with SUD is responsible for making choices to ask for help, work on recovery, and stay on the journey of recovery daily for the rest of their lives. Within such a compensatory model of recovery, structures such as recovery housing are seen as protecting people during the most fragile months of recovery so that they can do the work of recovery without distractions and stressors, emerging as a vital support option for people with SUD.

The conceptual blurring that occurs as people describe substance use as a brain disease (disease model) from which one can only recover through the work of self-responsibility (compensatory model) makes sense given that human experience is essentially an integrated bio-psycho-sociocultural process. Whether examined through the lens of evolutionary medicine (e.g. Hoke & McDade 2015; Lende 2007 ), human development (e.g. Evans & Kim 2013; Panter-Brick & Leckman 2013), or the field of medical anthropology (e.g. Konner 1991; Nichter 2016; Panter-Brick 2014), bodies are encultured and sociocultural worlds are written on bodies and evidenced through health outcomes (Hay 2001; Carr 2006, 2011; Singer 2012; Lende & Downey 2012; Worthman & Costello 2009). Substance use and recovery are no exception (e.g. Lende 2005, 2012). Thus the ways in which participants mixed these conflicting cultural models as they discussed substance use and its recovery actually fits with the scientifically more accurate bio-psycho-cultural understanding of the reality of substance use and its recovery.

## Summary

As of mid-February 2020, the current landscape of recovery housing consists of 103 known recovery houses with 1,259 beds. This information and the other details in the attached appendices on each of the recovery houses is a first step towards organizing and making accessible the sea of information needed to make recommendations and decisions about recovery housing. This project simultaneously sought to understand the social, ideological, epidemiological, and human-centered landscape within which these recovery houses operate. Towards this end, we have identified the core associations of the concept of recovery housing, associations also reflected in the ideal characteristics of recovery houses, underscoring the validity of that core.

Our epidemiological analysis suggests a shortfall in availability of recovery housing beds. In addition to quantity, attention needs to be paid to the populations served by recovery housing. For those counties with recovery housing, most tend to have fewer beds available for women. Only 10 houses across the 20 counties reported being open to accommodating both mothers and their children. We found no house that reported being open to accommodating fathers with their children although there were houses that served males that would allow children to spend the night on occasion but not live at the facility. These findings align with the qualitative analysis of needs for additional beds and resources to support communities simultaneously overwhelmed by and in denial about substance use. Finally, the complex mesh of understandings of what recovery housing is, beyond the core of the concept, hints at the uncertainty surrounding the processes and institutions of recovery. This is an uncertainty that

is likely compounded by the fact that the majority of known recovery houses in Greater Cincinnati are not certified or registered.

Overall the findings from both the epidemiological analysis and the focus groups underscore the need for more, high quality recovery housing. Providers in our focus groups repeatedly estimated that as many as 50% of people that go through treatment may benefit from recovery housing, underscoring that without recovery housing, people who are newly sober may be released to contexts likely to trigger relapse. The overall finding was that well-run recovery houses are an excellent and critical option for people struggling to rebuild themselves and their lives without being tethered to substances. We trust that our resource guide of currently available houses will enhance the visibility of recovery housing options in Greater Cincinnati and thereby ease some of the difficulties in finding recovery housing.

### Specific recommendations based on our findings:

1. More recovery houses are required to meet demand.
2. New recovery houses need to be located in safe residential areas, with access to transportation, supportive services like Narcotics Anonymous meetings, and employment opportunities.
3. Certification processes with regular monitoring to ensure well-managed, clean, and safe houses would enhance confidence in the quality of a recovery house.
4. Processes that would better enable people seeking recovery to estimate potential “fit” in a house prior to arrival would help prevent stress and bewilderment during the often-urgent search for recovery housing.
5. Studies are needed that compare the recovery outcomes of different types of financial models for recovery houses.
6. Anti-stigma campaigns to eliminate NIMBY are needed, particularly in rural areas.
7. Education campaigns are needed to develop consistent and coherent language about recovery housing and its attributes, as well as pathways with examples of how and when one might seek different levels of housing might be useful to address uncertainty.
8. Greater Cincinnati has a wealth of committed individuals who seek to improve recovery options for people with SUD, many of whom are not connected to broader networks. This presents an opportunity for expanding the reach of trustworthy information, as well as widening the web of interconnected people and resources in Greater Cincinnati who could together create a stronger net to catch people as they struggle with SUD and find recovery house options that fit their needs.

### Conclusion

For three years in a row life expectancy in the United States declined between 2014-2017 (Woolf & Schoemaker, 2019). While the most recent estimates for 2018 suggest that the decline has stabilized with a .08% increase in total life expectancy (Reinberg, 2020), the so-called “deaths of despair” (mid-life mortalities due to fatal drug overdoses, alcohol-related

conditions, and suicide) remain a pressing national concern (Case & Deaton, 2017; Stein, Gennuso, Ugboaja, & Remington, 2017). The 2018 SUPPORT for Patients and Communities Act has released resources to help address the immediate behavioral health needs of communities, however ultimately addressing despair requires moving beyond crisis management. Instead, as a society, we need to systematically rethink ways long-term well-being can be restored for those in despair and fostered to prevent such despair for the rest of us (Davis, 2019). Recovery housing is one path for restoring well-being for those in despair. This is the first known mixed-methods study to assess the current state of and needs for recovery housing in a given region. In addition to building a database of known recovery housing, this mixed methods project also found evidence that the local landscape of recovery housing is surrounded by uncertainty. This uncertainty reaches into the heart of understanding what recovery housing is and what kinds of establishments, resources and shifts in communities are needed to light the shadows of uncertainty surrounding recovery housing.

### Limitations

Our study was limited by a number of factors. As others have documented, this is a population that is difficult to recruit, and these difficulties in recruitment affected our overall numbers, as well as our ability to get a representative sample from each county and each stakeholder group of interest. In addition, in some of the more rural counties we were only able to recruit enough people for one focus group, and we had a combined single focus group for Ohio and Switzerland counties. Because we worked with community leaders to help us recruit, we often did not know how many people would attend a particular focus group. The community leaders were wonderful partners in the recruitment process, however at one of the earlier focus groups, in Dearborn County, we did not adequately explain that more than 8-10 people in a focus group is unwieldy and we ended up with 21 in the room. This resulted in interesting comments; however, we were not able to fully complete the questions during that focus group, and its size was an outlier in the study. Among stakeholders we spoke with in the focus groups, we were able to recruit fewer family members than other groups. An assumption underlying the design of the study was that providers and consumers of recovery housing (people with experience using substances and their family members) would be different individuals, in fact, 73 of the participants fit two or more of these categories, and 22 fit into all three categories. In addition to the challenges faced by recovery housing noted in the literature of tensions around MAT, location, and social stigma, there are also legal barriers faced by recovery houses, including zoning laws and delays among local governments to provide permits for recovery houses. These challenges motivate some recovery house operators to want to minimize or hide their presence in local communities, and operate solely by word of mouth. Differences in terminology (e.g. recovery housing, sober living, supportive living, transitional living) may have compounded challenges in communicating with some organizations, particularly those who are trying to hide their presence, who may offer long-term residential recovery services for people with SUD but do not associate it with our request to participate in a study on recovery housing.

## Research Team

The research team from Miami University consisted of Cameron Hay-Rollins, PI, Abbe Lackmeyer, Project Manager, and four Miami University undergraduates, Maggie McCutcheon, Brooke (Nik) Sawade, Isabel Morin, and Michelle Afful. The project was designed and executed in collaborative partnership with Sonya Carrico, Lisa Myers, and Michelle Lydenberg of Interact for Health. Miami University's Suzanne Kunkel and Paul Flaspohler consulted during the initial design of the project. In addition, 20 undergraduates in a global health seminar developed fact sheets summarizing available evidence on each of the 20 counties which informed the findings.

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