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Recovery Housing in the United States and the Importance of Data Collection

A paper submitted in partial fulfillment of the
Requirements for the degree of
Master of Public Health in the
University of Kentucky College of Public Health

By

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Final Examination:

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I. Introduction

Characterization of Issue

Substance use disorder (SUD) has been a prevalent issue in both the clinical and public health sectors for some time. Substance use disorder can be defined as a disease that affects an individual's brain and behavior, causing them to develop an inability to control the use of legal or illegal drugs and substances (Mayo Clinic, 2021). Substances include but are not limited to alcohol, marijuana, opioids, and other controlled substances (Mayo Clinic, 2021). Substance misuse is a large topic of focus in public health because it not only deteriorates the quality of health in individuals and society, but also comes with large financial burdens, and also affects the educational and built social systems in the United States (Mclellan, 2017). In 2019, a study found that drug overdose deaths more than tripled in 2 decades at an alarming number of 70,000 deaths in one year (Peterson, Li, Xu, Mikosz, & Luo, 2021). This statistic in itself should be alarming. However, the burden of substance use disorder can be further exemplified in the burden it has had on the economy in the country as well. Substance use disorder has been estimated to cost a total of \$420 billion annually and an additional \$120 billion in associated healthcare and medical care costs (Mclellan, 2017).

The size and burden of this disease is alarming and very evident, and while there has been much time and effort dedicated towards creating effective and lasting treatment for substance use disorder, work is still needed in this area. According to the National Institute on Drug Abuse, a division of the National Institutes of Health, principles of effective treatment include addressing all of the patients' needs and not just the drug use, including an aspect of counseling or behavior therapy, addressing the possibility of other

mental disorders, and creating a safe and welcoming space that fosters effective treatment (National Institute on Drug Abuse (NIDA), 2019). In this same report, a list of successful methods in treating substance use disorder was also provided, and it included: behavioral counseling, medication, medical devices and applications to treat withdrawal symptoms, and evaluation and treatment for co-occurring mental health issues (NIDA, 2019). However, health care professionals and providers of substance misuse treatment in the United States are recognizing the limitations of acute and inpatient care models that are currently available to treat the disorder (Polcin, 2015). Long term services to sustain recovery over time are necessary. Residential recovery homes, also known as sober living houses, are substance free living environments that provide long-term support for individuals with addiction and substance use disorders (Polcin, 2015). Individuals suffering from this disease generally lack environments that support sustained recovery by providing a substance free environment.

The purpose of this analysis was to gather information on the types of data that are currently collected in recovery housing. Knowing this information is vital as information on the demographics of residents, house and bed availability, populations served, and the number of individuals receiving long-term care for substance use disorders in recovery residents can guide funding for the recovery ecosystem. More funding for recovery means more accessibility and addressing this disorder on a larger scale.

Background

Recovery houses employ a social model that focuses on peer support and resident empowerment as a method to effectively provide support for substance use disorder. In the United States, there is a variety of recovery homes that vary by structure, staffing, services offered and governance (Polcin, 2015). "Recovery houses" and "recovery residences" are umbrella terms that include Oxford Houses, sober living houses, and recovery homes (Mericle, Miles, & Way, 2015). While the day-to-day operations and logistic components of these houses vary, they are all similar in that they provide peer to peer recovery support and provide a safe environment that fosters healthy and effective recovery. Because recovery residences are largely privately owned and are generally funded by the residents themselves, they have been understudied (Mericle et al., 2015).

Recovery from substance use disorder is a very dynamic process that may include medication-assisted treatment options. Most inpatient treatment options are only short-term so, within the continuum of care, long-term recovery housing is needed to build recovery equity. There are many different types of recovery housing that allows for individuals to address this issue on different levels of their lives such as mental health, physical health, relationships, and overall improved quality of life. Because recovery housing has shown to address substance use disorders on multiple levels, the services provided are vital and necessary for effective recovery.

In recovery housing, there are two prominent organizations that organize and run recovery houses: National Alliance of Recovery Residences (NARR) and Oxford Houses.

In 2011, NARR was founded with the goal to promote a new system of recovery for substance use disorders through credentialing recovery residences that implement evidence based recovery principles and making sure that these residences adhere to strict

standards (National Association of Recovery Residences (NARR), 2012). NARR currently has affiliates in 28 states with 6 more states to be affiliated in the near future. As of 2021, NARR supports over 25,000 individuals in recovery and sets standards for over 2,500 recovery residences. The NARR standard was developed around the different spectrums of recovery, thus distinguishing four different levels of residences that contains varying levels of support (Jason et al., 2020). Different levels of these recovery residences vary from democratically run by the residents of the house to licensed professionals having majority of the control (NARR, 2012). NARR is a national alliance that partners with state governments, thus making the regulation of recovery residences vary based on the state government, local government, and even the model of the house (NARR, 2012). Generally, states have the authority to regulate professional services and local governments regulate the health and safety standards of the residences (NARR, 2012). As mentioned before, there are four levels of recovery residences as set by NARR, based on the continuum of recovery from substance use disorder (NARR, 2012). The continuum of recovery, as shown in figure 1, shows that the intensity of the service can vary from low to high and the recovery process phase can vary from stabilization of immediate issues to long-term recovery (NARR, 2012).

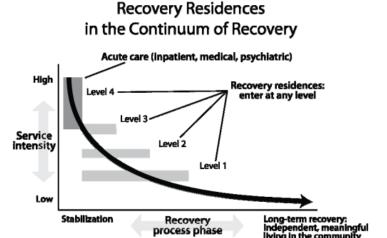


Figure 1: Continuum of Care in Recovery Housing (NARR, 2012).

Level 4 housing has high service intensity to stabilize the disorder (NARR 2012). As the intensity of the service decreases and the recovery process progresses, the level of the recovery residence also decreases (NARR, 2012). The least intense level of recovery housing as set forth by NARR, Level 1, fosters long-term recovery and allows individuals to reach independent living and make meaningful contributions to the community (NARR, 2012). At the most basic level, level 1 is a peer-run system of single-family residences in a democratically run system with little administration (NARR, 2012). Level 2 recovery housing can either consist of single-family residences or apartment style living with more structured services and involvement in treatment services (NARR, 2012). Level 3 recovery housing has strict policies and procedures for administration and residents (NARR, 2012). There is an emphasis on life skill development and the use of clinical wraparound services. Lastly, level 4 recovery housing is a step down from an inpatient care system and may be a more institutional environment (NARR, 2012). There is clinical supervision in this level of recovery housing.

Oxford Houses is another well-known system. In the simplest terms, Oxford Houses coincide most closely with Level 1 NARR residences (NARR, 2012). According to the Oxford House 2020 annual report, there were 950 houses specifically for women and 2,100 houses specifically for men and 49 different states had at least one oxford house (Oxford House, 2020). At the end of 2020, the organization stated that the Oxford House network consisted of more than 3,000 houses with almost 25,000 beds (Oxford House, 2020). Oxford houses are single-sex residences with the exception of minors that clients are responsible for (Oxford House, 2020). Oxford Houses are democratically run and self-supported substance free homes; members are required and expected to pay monthly rent, assist with chores around the residence, and abstain from alcohol and drug use (Oxford House, 2020). There are no professional staff for the members and there is no prescribed amount of time one must stay (Oxford House, 2020). The Oxford House method has been shown to be very effective and can be seen in studies such as the Jason et al., NIAAA study. In a study of 150 individuals who completed recovery at alcohol and drug abuse facilities in the Chicago metropolitan area, half were assigned to live in an Oxford house and the other half received community-based after care services (Jason & Ferrari, 2010). This study showed positive outcomes for those who were assigned to Oxford Houses; only 31.3% reported substance misuse at the 2 year follow up compared to the 65% of substance misuse of those who were assigned the usual care (Jason & Ferrari, 2010).

Thus far, this analysis has aimed to describe the burden of substance use disorder in the United States and describe an evidence-based method to address this disease through recovery residences. In the Jason et al. analysis, the benefits and positive

outcomes of these systems were described and was shown to be an effective method in addressing substance use disorder and preventing relapse (Jason & Ferrari, 2010). However, even though this has been proven to be an effective method, there is still much room for improvement for these recovery residences. This requires collecting data, analyzing the data, and then relaying the information collected to policy makers and those who can provide the appropriate funding to implement the necessary changes. According to Jason et al., basic information such as how many recovery residences exist, how many individuals those recovery residences serve, and other important information is not adequately collected, even in 2020 (Jason, Wiedbusch, Bobak, & Taullahu, 2020). These basic statistics and information should be regularly collected to provide information on the benefits and effectiveness of these recovery residences to lessen the burden of this disorder on the country. The remainder of this analysis will explore a data set that was created by collecting information from various recovery residences and the operators of these systems across the country. Analysis was performed on the type of data these entities collect and how that data may be associated with various other variables.

II. Methods

The data for this study was collected from the "Needs of Recovery Housing Owners and Operators" assessment administered by the researchers at the University of Kentucky's Kentucky Injury Prevention and Research Center (KIPRC) and the Fletcher Group. The aim of this assessment was to collect information to assist in the identification of what features would be helpful in assisting recovery housing owners and operators manage their recovery residences through an online tool. Since this data set was

a secondary data source and the survey was already completed and administered, there was no involvement in survey or question development from the standpoint of this analysis.

Participants and Recruitment

The online survey was sent to 216 various operators and owners of recovery residences around the United States; however, there were only 17 respondents. The survey was designed to only take 10 minutes to complete with various types of questions including Yes/No questions, questions that required respondents check boxes if it applied, and fill in the black answers for qualitative type questions. Full survey details can be seen in Appendix A. The survey was administered through the secure web application for managing online surveys and database known as REDcap. Respondents were notified that their responses would be kept confidential, meaning their information would not appear on research documents and/or presentations and publications. All identifiable information was exempted from the data set used for analysis including name, clinical record number, and date of birth.

Data Collection and Analytic Procedures

As mentioned previously, recovery residence owners and operators were invited to participate in this online survey through REDcap. The survey was created to last no more than 10 minutes and involved them answering a variety of types of questions. The questions focused on collecting information such as number of recovery houses the respondent owns, manages, or works in, location of the residences, which populations are served, certifications and/or affiliations of the house, and most importantly, the type of data that is collected in the residences.

Due to the nature of the limited responses that were received from the survey, the resulting data set and information was limited. This limited our ability to perform statistical analysis on the data set to gain better understandings of the information.

Statistical analysis of the data set was completed in the statistical analysis program, R.

The measure of frequency of certain variables were calculated; these variables were analyzed to gain a better understanding of the recovery residency system and the individual completing the survey. The associated question asked on the survey and the variable name assigned to that question can be seen in the table below. Table 1, below, outlines the question that were asked to gain a better understanding of the recovery house and about data collection procedures in these entities.

Question on Survey	Associated Variable
How many recovery houses are	how_many_rh
in your organization? *	
What is your role? *	role
Which population(s) does your	population_1 through
recovery house(s) serve?	population_8
What affiliations or	affiliation_1 through
certifications are held by your	affiliation_8
house(s)? **	
Do you gather any data on your	data_yn
house(s) and/or residents? *	
Do you use the data you collect	data_report
for reporting purposes? **	
To which organization(s) do you	org_report_1 through
report information to? ***	org_report_8
How is data/information	how_info_collected_1 through
collected in your recovery	how_info_collected_8
residency?	

Table 1: Variables associated with questions on survey to gain a better understanding of the entities and data collection.

The measure of frequency for the type of data that is currently collected in the recovery residences and what type of information would be useful to collect in recovery houses were also determined. The associated question asked on the survey and the variable name assigned to that question can be seen in the table below. Table 2, below, outlines the questions that were asked for both the type of data that is currently collected (for the respondents who reported that they do collect data in their residency) and the type of data that would be useful to collect (for those respondents who reported that they do not currently collect data in their residency). Note that the variable (pending requests/waitlisted individuals) was only asked for those who currently obtain information on their residency.

Question on Survey	Associated Variable
Residents' progress in recovery	resident_progress_in_reco
program(s)	residents_progress2
Internal wraparound services	internal_wraparound_servic
provided to resident	internal_wraparound2
External wraparound services	external_wraparound_servic
provided to resident	externl_wraparound2
Participation in recovery	participation_in_recovery
programs	participation_recprog2
Participation in group meetings	participation_in_group_mee
	participation_in_meet2
Participation in other services	participation_in_other_ser
(such as mental health,	participation_in_serv2
counseling, etc.)	
Demographics (e.g. age, gender,	demographics_e_g_age_gende
ethnicity, employment status,	demog2
emergency contact, etc.)	
Medical information (e.g.	medical_information_on_e_g_ph
physical and mental health,	medical_info2
medications, doctors, dietary	
information, etc.)	
Resident legal information (e.g.	resident_legal_information
court orders, probation/parole,	resident_legal_inf3
conviction history, etc.)	
Resident financial information	resident_financial_informa
(e.g. fees/rent charges and	resident_finaicial_info2
payments)	

House bed/room availability (i.e. which rooms and beds are open at any given time)	house_bed_room_availabilit house_red_room_avail2
Pending requests/waitlisted individuals	pending_requests_waitliste

Table 2: Variables associated with questions asked on survey about type of data that is collected *Variable name listed on top is associated with the type of data that is CURRENTLY collected and the variable name on the bottom is associated with the data that was reported to be USEFUL to collect.*

As stated in the introduction, the goal of this analysis was to gain a better understanding on the type of data that is collected by recovery houses. The hypothesis that is being testing in this analysis is whether there is an association between the number of recovery houses in a certain system and the type of data that is collected or the type of data that would be useful to collect as reported by the respondent. This hypothesis was developed based on the findings of Polcin et al., which suggests that there are different data collection methods in different recovery residences (Policn et al., 2015). To do this, Pearson's chi-squared test was utilized to evaluate how likely the observed differences arose by chance or if there is really an association between the variables. The significance level was set to p<0.05 to determine whether the observation is statistically significant.

III. Results

Descriptive Statistics

Table 3, below, displays the frequency of the responses for the listed variables.

Table 3 shows that 56.24% of respondents reported more than 1 recovery residency in their system while the other 43.75% reported only 1 recovery residency in their system.

The most common type of population that is served among these recovery residency systems is shown to be adult males and followed by adult females. There were few recovery residences that served adult female and children and no recovery residences that only served adolescent male or females. This is probably because substance use disorders

generally do not progress into the full extent of the disorder until these individuals are adults. Apart from unaffiliated/uncertified and state-level certification being the most common affiliations/certifications the recovery residences hold, the option "other" was the most common. When a respondent chose other, they were given the option to write in what else they hold but there were only two responses: AODE (Alcohol and Other Drug Treatment Entity) and HUD (Housing and Urban Development Counseling Certification). It was surprising that a large portion of the respondents were unaffiliated/uncertified.

	n	%
How many recovery houses	Only one house = 7	43.75%
are in your organization? *	More than one house $= 9$	56.24%
What is your role? *	Owner/Executive = 8	50.00%
	Operator/Director = 4	25.00%
	House Manager = 1	6.25%
	Support Staff = 1	6.25%
	Peer Leader/Manager = 1	6.25%
	Other = 1	6.25%
Which population(s) does	Adult males = 11	63.70%
your recovery house(s)	Adult females = 8	47.06%
serve?	Adolescent males = 0	0.00%
	Adolescent females = 0	0.00%
	Adult females and children = 3	17.64%
	Adult males and children = 0	0.00%
	Adult males and females $= 2$	11.76%
	All of the above populations =	11.76%
	2	
What affiliations or	Oxford House = 0	0.00%
certifications are held by	NARR Level $1 = 0$	0.00%
your house(s)? **	NARR Level $2 = 3$	16.67%
	NARR Level $3 = 2$	11.11%
	NARR Level $4 = 0$	0.00%
	Unaffiliated/Uncertified = 4	22.22%
	State-level Certification = 4	22.22%
	Other = 5	27.78%

Table 3: Recovery Housing Organization Characteristics (n=17)

^{*}one observation was not included into analysis due them not being a recovery housing, but an organization that supports recovery housing

^{**}one observation had two categories of affiliation, resulting in 18 observations

Table 4 further explores the respondent data in regard to the data collection and associated methods of data collection. Of the respondents, over 60% reported that they collect data about the house and the residents in the entity; however, only 50% stated that they use the data for reporting purposes. This may suggest that data is being collected, but that data is not being put to use. A majority of the respondents who said they report their collected data reports the information to a State Agency or Organization that does not include NARR and a small percent reports to Homeless Management Information System or Board of Directors/Leaderships. This shows that states may be obtaining information on the success of residents in these housing systems and can be used to further drive policy and funding for recovery housing and residences.

	n	%
Do you gather any data on	Yes = 10	62.50%
your house(s) and/or	No = 6	37.50%
residents? *		
Do you use the data you	Yes = 5	50.00%
collect for reporting	No = 5	50.00%
purposes? **		
To which organization(s) do	State Agency or Organization	66.67%
you report information to?	(not including NARR) = 4	
***	National Agency or	0.00%
	Organization (not including	
	Oxford House) = 0	0.00%
	State NARR Affiliate = 0	
	Homeless Management	16.67%
	Information System (HMIS) =	16.67%
	1	
	Board of Directors/Leadership	0.00%
	= 1	0.00%
	Oxford House $= 0$	
	Other $= 0$	
How is data/information	Spreadsheet = 4	12.90%
collected in your recovery	Paper = 5	16.13%
residency?	Whiteboard = 1	3.23%
	Digital Form = 4	12.90%
	Text Message or Phone Call =	9.68%
	3	29.03%
	Data Entered by Staff = 9	6.45%
	Data Entered by Resident = 2	9.68%
	Other = 3	

Table 4: Table 4: Data Collection in Recovery Houses (n=17)

Pearson's Chi-Squared Analysis

Table 5, below, explores the type of information that is currently collected in the recovery homes that responded that data is collected; the last column, the p-values for the Pearson's chi-squared test to test the association between the number of houses in the recovery residency system and the type of information is also provided. No variables of type of data collected were shown to have a statistically significant association to the whether there were only 1 or more than 1 recovery house in a system; however, there variables were very close to having a statistically significant association: residents progress in recovery program, demographics, and resident financial information. As shown in table 5, many of the variables had a p-value of 1. This indicates that the sample means, and values of both groups are identical; this is not a common occurrence in data analysis, but due to the nature of the sample size being smaller than what is ideal and the data being discrete, this outcome is possible.

	n	%	p-value
Residents' progress in	Yes = 10	100.00%	0.05578
recovery program(s)	No = 0	0.00%	
Internal wraparound	Yes = 9	90.00%	1
services provided to	No = 1	10.00%	
resident			
External wraparound	Yes = 8	80.00%	1
services provided to	No = 2	20.00%	
resident			
Participation in recovery	Yes = 9	90.00%	1
programs	No = 1	10.00%	
Participation in group	Yes = 7	77.78%	1
meetings*	No = 2	22.22%	
Participation in other	Yes = 7	77.78%	1
services (such as mental	No = 2	22.22%	
health, counseling, etc.)*			

^{*}one observation was not included into analysis due them not being a recovery housing, but an organization that supports recovery housing

^{**}observations that do not collect data were not included in this analysis

^{***}one observation that does report data reports to two entities

Demographics (e.g. age,	Yes = 10	100.00%	0.05778
gender, ethnicity,	No = 0	0.00%	
employment status,			
emergency contact, etc.)			
Medical information (e.g.	Yes = 6	75.00%	1
physical and mental	No = 2	25.00%	
health, medications,			
doctors, dietary			
information, etc.)**			
Resident legal information	Yes = 8	88.89%	1
(e.g. court orders,	No = 1	11.11%	
probation/parole,			
conviction history, etc.)*			
Resident financial	Yes = 10	100.00%	0.05778
information (e.g. fees/rent	No = 0	0.00%	
charges and payments)			
House bed/room	Yes = 9	90.00%	1
availability (i.e. which	No = 1	10.00%	
rooms and beds are open			
at any given time)			
Pending	Yes = 8	88.89%	1
requests/waitlisted	No = 1	11.11%	
individuals			

Table 5: Type of information currently collected in recovery residency and the association between the number of houses in the system.

Table 6 is very similar to table 5, however, this time the data displayed is about types of data collection that would be useful, and this includes the responses of those respondents who reported that they do not currently collect data in their entities.

Similarly, to table 5, the last column provides the p-values for the Pearson's chi-squared test and the association between the variables of data that would be useful to collect and the number of houses in the recovery residency system. There was no association between type of data that is collected and if there was only one house or more than one house in a system as every p-value was greater than 0.05.

	n	%	p-value
Residents' progress in	Yes = 4	100%	0.3173
recovery program(s)	No = 0	0.00%	
Internal wraparound	Yes = 3	75.00%	1
services provided to	No = 1	25.00%	
resident			

	Т		Τ
External wraparound	Yes = 4	100%	1
services provided to	No = 0	0.00%	
resident			
Participation in recovery	Yes = 4	100%	0.3173
programs	No = 0	0.00%	
Participation in group	Yes = 4	100%	0.3173
meetings	No = 0	0.00%	
Participation in other	Yes = 4	100%	0.3173
services (such as mental	No = 0	0.00%	
health, counseling, etc.)			
Demographics (e.g. age,	Yes = 3	75.00%	1
gender, ethnicity,	No = 1	25.00%	
employment status,			
emergency contact, etc.)			
Medical information (e.g.	Yes = 3	75.00%	1
physical and mental	No = 1	25.00%	
health, medications,			
doctors, dietary			
information, etc.)			
Resident legal	Yes = 3	75.00%	0.505
information (e.g. court	No = 1	25.00%	
orders, probation/parole,			
conviction history, etc.)			
Resident financial	Yes = 3	75.00%	0.505
information (e.g. fees/rent	No = 1	25.00%	
charges and payments)			
House bed/room	Yes = 4	100%	0.3173
availability (i.e. which	No = 0	0.00%	
rooms and beds are open			
at any given time)			
		•	

Table 6: Type of information that would be useful to collect and the association between the number of houses in the system.

In both table 5 and table 6, resident progress in recovery system/program were either already collected or deemed useful to collect in all of the houses that responded to the survey. Response rates were similar for each of the variables when assessing frequency of yes/no for both the respondents that already collect data and for those who do not. For example, 90% of respondents said they currently collect information on internal wraparound services provided to residents and 75% respondents responded that it would be useful to collect that information; both overwhelmingly see the importance of

collecting information on this variable. This trend proceeds similarly for all variables, and there are no red flags as to the information that is collected/should be collected.

IV. Discussion

This is a preliminary investigation of the data collected through the Needs of Recovery Housing Owners and Operators survey. While the objectives of this analysis were limited in finding if associations between if there is one or more house in a recovery system and the types of data that is collected or deemed useful to collect, much other information about the data set was collected. This analysis provided further insight into descriptive statistics of recovery housing systems in the United States. This information can be useful in the overarching goal of creating the online database system that supports recovery housing operations in the future. A database such as the one mentioned can be useful for both recovery housing operators in managing their systems and houses if they have more than one but also current and/or potential residents in seeking care in residential recovery settings.

Recovery houses are the largest residential recovery-specific and community-based support for those individuals in the continuum of care for their substance use disorder. These types of environments have been proven to foster the most effective elements of recovery in the continuum of care and have been shown to be linked to lesser rates of relapse. Creating a system, or online database, where owners and operators of recovery housing systems can and enter availability of houses and a system that allows individuals to see this availability would provide a great deal of help to those seeking

treatment to receive it. The data and information collected in this data set will allow that database to be created in the most effective way possible.

Limitations

One major limitation of this analysis was that the subset of respondents was rather small, resulting in a limited amount of information to analyze. With a sample population of 17 respondents, estimates and calculated values may not prove to be as useful. Since many of the p-values were calculated to be 1, it means that the data is too similar among the two groups and an association (if there is one) cannot be determined.

As mentioned previously, due to the limited response rate, findings and survey responses may not be held to as high a standard as other research conducted. Improving the response rate can be possible through several different methods. For example, a collaboration with a national organization to administer the survey could be one possible method to increase response rate. Having the name of a large and well-known organization may draw more attention. In addition, another method that could be taken is to administer the survey at national or state level meetings. At these events, there will be many owners, operators, and those associated with recovery residency and they may be willing to complete the survey. This will also assist in obtaining a wider variety of respondents creating a holistic respondent group and diverse sample.

Future research and surveys administered should aim to collect information from a greater subset of the population; this will allow statistical analysis to be as accurate as possible and provide more solid information on association between certain variables.

Information such as individuals who return to the recovery residency due to relapse, days an individua resides in the residency, and number of individuals in the specific house are

some further examples of information that can be collected and be potentially useful when creating this online database.

V. Conclusion

In summary, substance use disorders have a large burden on the health of this nation. In 2018, an estimated 165 million individuals aged 12 years or older were past month substance users (Lipari & Park-Lee, 2019). Most inpatient treatment options have high rates of relapse and only treat the disease at one point in the continuum of care. The Needs of Recovery Housing Owners and Operators survey was administered with the goal of collecting information on recovery houses across the United States to assist and guide the development of an online tool that would allow operators to enter data about bed/room availability and provide information to individuals who are seeking care and support at these entities. While the sample population of the survey was small resulting in a limited amount of information to be analyzed, important analysis was still completed and data on the type of data that is currently collected in these systems or data that is deemed to be important to collect in these systems was found. In addition, basic statistics on number of houses in each system, types of population served, and organizations that information is reported to was also collected. While there was no association found between the number of houses in a system and the type of data that is collected, further analysis can be completed to provide information in developing this online tool.

References

- Jason, L. A., & Ferrari, J. R. (2010). Oxford House Recovery Homes: Characteristics and Effectiveness. *Psychological Services*, 7(2), 92–102. https://doi.org/10.1037/a0017932
- Jason, L. A., Wiedbusch, E., Bobak, T. J., & Taullahu, D. (2020). Estimating the Number of Substance Use Disorder Recovery Homes in the United States. *Alcoholism Treatment Quarterly*, 38(4), 506–514. https://doi.org/10.1080/07347324.2020.1760756
- Lipari, R. N., & Park-Lee, E. (2019). Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health. Retrieved from https://www.samhsa.gov/data/
- Mayo Clinic. (2021). Drug Addiction (Substance Use Disorder). Retrieved April 13, 2021, from https://www.mayoclinic.org/diseases-conditions/drug-addiction/symptoms-causes/syc-20365112?p=1
- McIellan, A. T. (2017). SUBSTANCE MISUSE AND SUBSTANCE USE DISORDERS: WHY DO THEY MATTER IN HEALTHCARE? TRANSACTIONS OF THE AMERICAN CLINICAL AND CLIMATOLOGICAL ASSOCIATION (Vol. 128).
- Mericle, A. A., Miles, J., & Way, F. (2015). Recovery Residences and Providing Safe and Supportive Housing for Individuals Overcoming Addiction. *Journal of Drug Issues*, 45(4), 368–384. https://doi.org/10.1177/0022042615602924
- National Association of Recovery Residences (NARR). (2012). A Primer on Recovery Residences: Frequently Asked Questions. Atlanta, GA. Retrieved from www.narronline.com
- National Institute on Drug Abuse (NIDA). (2019). *Treatment Approaches for Drug Addiction*. Retrieved from www.findtreatment.samhsa.gov
- Oxford House. (2020). *Oxford House, Inc. Annual Report FY 2020*. Silver Spring. Retrieved from www.oxfordhouse.org
- Peterson, C., Li, M., Xu, L., Mikosz, C. A., & Luo, F. (2021). Assessment of Annual Cost of Substance Use Disorder in US Hospitals. *JAMA Network Open*, 4(3), 210242. https://doi.org/10.1001/jamanetworkopen.2021.0242
- Polcin, D. (2015). How should we study residential recovery homes? *Therapeutic Communities*, 36(3), 163–172. https://doi.org/10.1108/TC-07-2014-0027

Appendix

Appendix A: Needs of Recovery Housing Owners and Operators Survey Question and Response Options

Question on Survey	Response Options
Do you own, operate, manage,	Yes
support, or otherwise work in a	No
recovery home or sober living	
facility?	
Since you don't own, operate,	*write in answer*
manage, or work in a recovery house	
or sober living home, how are you	
associated with either a recovery	
house or sober living home?	
How many recovery houses do you	1
own, manage, or work in?	Multiple
How many recovery houses or sober	*write in answer*
living homes do you own, operate, or	
work in?	
In which state is/are your house(s)	Alabama
located? (can choose more than one)	Alaska
, ,	Arizona
	Arkansas
	California
	Colorado
	Connecticut
	Delaware
	Florida
	Georgia
	Hawaii
	Idaho
	Illinois
	Indiana
	Iowa
	Kansas
	Kentucky
	Louisiana
	Maine
	Maryland
	Massachusetts
	Michigan
	Minnesota
	Mississippi
	Missouri

	Montana
	Nebraska
	Nevada
	New Hampshire
	New Jersey
	New Mexico
	New York
	North Carolina
	North Dakota
	Ohio
	Oklahoma
	Oregon
	Pennsylvania
	Rhode Island
	South Carolina
	South Dakota
	Tennessee
	Texas
	Utah
	Vermont
	Virginia
	Washington
	West Virginia
	Wisconsin
	Wyoming
In which zip code(s) is/are your	*write in answer*
house(s) located?	
Which population(s) does your	Adult males
recovery house(s) serve? (can choose	Adult females
more than one)	Adolescent males
,	Adolescent females
	Adult females and children
	Adult males and children
	Adult males and adult females
	All of the above populations
What is your role? (choose the option	Owner/Executive
that BEST describes your position)	Operator/Director
, , , , , , , , , , , , , , , , , , ,	House Manager
	Support Staff
	Peer Leader/Manager
	Other
Other role:	*write in answer*
Please indicate any affiliation or	Oxford house
certifications held by your house(s)	NARR Level 1
(check all that apply)	NARR Level 1
(check an mat appry)	NARR Level 2
	NAIN LEVEL 2

	T
	NARR Level 3
	NARR Level 4
	Unaffiliated/Uncertified
	State-level Certification or certificate
	Other
Please list any other affiliations or	*write in answer*
certifications related to your house(s)	
Do you gather any data on your	Yes
house(s) and/or residents?	No
Do you use this data for reporting	Yes
purposes?	No
To which organization(s) do you	State Agency or Organization (not
report information on your house	NARR affiliate)
and/or residents (can choose more	National Agency or Organization (not
than one)	Oxford House)
<i>'</i>	State NARR Affiliate
	Homeless Management Information
	System (HMIS)
	Board of Directors/Leadership
	Oxford House
	Other
Please list any other organization to	*write in answer*
which you report data	write in answer
Among all your staff members duties,	*scale of 1 to 100*
what percentage of time is spent on	scale of 1 to 100
gathering data for reports?	
What kind of information do you	*write in answer*
collect?	write in answer
Would you be willing to input house-	Yes
related information into a user-friend	No
	NO
HIPPA-compliant web-based system? What are some of the problems that	*write in answer*
	write in answer
you have with gathering and inputting	
house-related information?	V
Would you be willing to input	Yes
resident-related information into a	No
user-friend HIPPA-compliant web-	
based system?	
What are some of the problems that	*write in answer*
you have with gathering and inputting	
resident-related information?	
What are some of the reasons why	*write in answer*
you don't currently collect	
information on your house and/or	
residents?	
What kind of information do you	Yes/No for each category

currently track or document? Residents' progress in recovery program(s) Internal wraparound services provided to resident External wraparound services provided to resident Participation in recovery programs Participation in group meetings Participation in other services (such as mental health, counseling, etc.) Demographics (e.g. age, gender, ethnicity, employment status, emergency contact, etc.) Medical information (e.g. physical and mental health, medications, doctors, dietary information, etc.) Resident legal information (e.g. court orders, probation/parole, conviction history, etc.) Resident financial information (e.g. fees/rent charges and payments) House bed/room availability (i.e. which rooms and beds are open at any given time) Pending requests/waitlisted individuals What kind of information do you Yes/No for each category currently track or document? Residents' progress in recovery program(s) Internal wraparound services provided to resident External wraparound services provided to resident Participation in recovery programs Participation in group meetings Participation in other services (such as mental health, counseling, etc.) Demographics (e.g. age, gender, ethnicity, employment status, emergency contact, etc.) Medical information (e.g. physical and mental health, medications, doctors, dietary information, etc.) Resident legal information (e.g. court orders, probation/parole, conviction history, etc.) Resident financial information (e.g.

f /	
fees/rent charges and payments) House bed/room availability (i.e. which	
rooms and beds are open at any given	
time)	
How is this information collected (can	Spreadsheet
choose more than one)	Paper
,	Whiteboard
	Digital form
	Text message or phone call
	Data entered by staff
	Data entered by resident
	Other
Describe other ways you collect	*write in answer*
information. Please also name any	
technology, websites, and/or software	
that you use.	
Do you currently use a data	Yes
management system recovery	No
planning and assessment tool?	
Which data management system do	REC-CAP (recovery planning and
you use (select all that apply)	assessment tool for tracking personal
	and organizational progress through
	recovery programs)
	KIPU (EMR System)
	Other
If other, please explain:	*write in answer*
Please rate the REC-CAP system (if	Very poor
you currently use)	Poor
	Average
Affordability	Good
Ease of Use	Excellent
Benefit to Residents	
Benefit to Staff	
Please rate the KIPU system (if you	Very poor
currently use)	Poor
	Average
Affordability	Good
Ease of Use	Excellent
Benefit to Residents	
Benefit to Staff	
Please rate the other system you use	Very poor
(if you currently use)	Poor
4.00 1.111	Average
Affordability	Good
Ease of Use	Excellent
Benefit to Residents	

Benefit to Staff	
How willing would you be to use a	1 (least willing) 2
HIPAA-compliant, user-friendly,	2
web-based house and resident	3
management system to capture the	4
following information? Select	5 (most willing)
willingness for each of the following:	
House details (policies, rules,	
programs, location, fees, application,	
info, live bed availability)	
Resident demographics	
Resident legal information	
Resident medical information	
Periodic resident assessments (quality	
of life, recovery capital, etc.)	
What features would you LIKE to see	*write in answer*
in an online recovery house	
management system?	

Biographical Sketch

Maanasa Manchikanti is a Master of Public Health student concentrating in Health Systems and Policy Analytics in the College of Public Health at the University of Kentucky. She completed her Bachelor of Public Health at the University of Kentucky in May of 2020 and is set to complete her MPH in May of 2021. Maanasa's research interests focus on substance use disorder, treatment options, and increasing access to vital care.