ADHERENCE TO THE SOCIAL MODEL APPROACH IN PHILADELPHIA RECOVERY HOMES* 

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ABSTRACT

For many struggling with alcohol and drug addiction, the ability to get and stay clean is often jeopardized by untenable housing or unsupportive living environments. Recovery residences are designed to provide safe and supportive housing to help individuals initiate and sustain recovery. Despite promising research on Oxford Houses™ and Sober Living Houses in California, there are still significant gaps in the research on recovery residences and confusion in the treatment community over what constitutes a recovery residence. This article briefly reviews different types of recovery residences.

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residences in the United States based on levels and standards developed by the National Alliance for Recovery Residences (NARR), and explores how recovery homes in Philadelphia may be similar to or different from Sober Living Houses in California based on adherence to the Social Model approach to recovery.

**Keywords:** substance abuse, addiction, recovery, recovery residences recovery homes, sober living houses, social model of recovery

Substance abuse is a pervasive problem with well-documented consequences. Surveillance data from the 2010 National Household Survey on Drug Use and Health (NSDUH) estimate that 22.1 million persons in the United States (8.7% of the population aged 12 or older) met criteria for substance dependence or abuse in the past year, and only a small fraction (11.2%) of those who needed treatment actually received it (SAMHSA, 2011). For many struggling with addiction, the ability to get and stay clean is often jeopardized by untenable housing or unsupportive living environments (Dennis, Foss, & Scott, 2007; Scott, Foss, & Dennis, 2005; Shah, Galai, Celentano, Vlahov, & Strathdee, 2006; VanDeMark, 2007; Xie, McHugo, Fox, & Drake, 2005). Safe and supportive housing is integral to recovery from addiction. Indeed, work conducted with individuals at various stages of the treatment process have found that accessing suitable housing is identified as a key priority throughout (Laudet & White, 2010). Moreover, for those contemplating becoming clean, unfavorable living situations may even present insurmountable barriers to doing so (MacMaster, 2005).

Peer-based (peer-driven) support services are emerging to address these needs. One promising mechanism is the recovery residence. Recovery residences are sober (meaning that residents are expected to abstain from alcohol and illegal drug use), safe, and healthy living environments that promote recovery from alcohol and drug abuse and associated problems (Jason, Mericle, Polcin, & White, 2013; National Alliance for Recovery Residences [NARR], 2012). At a minimum, recovery residences offer mutual aid (peer-to-peer recovery support) with some providing professionally delivered clinical services to promote abstinence-based, long-term recovery. Recognizing that different types of residences could meet this definition and the need to develop guidelines for these residences, in 2011 NARR developed standards for different levels of recovery residences along a continuum based on governance and staffing as well as the physical structure of the house and the type and nature of services delivered (see Appendix).
In this framework, Level I residences are characterized as “peer-run.” These houses are typically single-family residences (usually with 6-10 residents) and democratically run by the residents themselves (i.e., there are no paid staff members). Support for recovery in these houses is provided through mutual-aid, but residents are welcome (but not obligated) to engage in self-help meetings or treatment services. An example of this type of recovery residence is the Oxford House™ model, in which houses are characterized as democratically run, self-supporting, and drug-free (Jason, Aase, Mueller, & Ferrari, 2009; Jason & Ferrari, 2010).

Level II residences are characterized as “monitored.” These residences often have a house manager or senior resident who is compensated in some way (as an employee or through waiver of rent) for their overseeing of the family of peers in the household. In addition to mutual aid, these houses often have rules to provide residents with structure and often encourage residents to become involved with self-help or formal treatment services. These houses are often single family residences but this type of model could be implemented in other dwelling types (such as apartments or dorms). An example of this type of residence is the California Sober Living House model which is differentiated from the Oxford House model in that California Sober Living Houses encourage residents to be involved in mutual-aid societies (e.g., Alcoholics Anonymous; AA) or other services, have house managers who assume more responsibility for management of the facility, and vary more widely in size (Polcin, 2009; Polcin & Henderson, 2008; Polcin, Korcha, Bond, & Galloway, 2010a). However, it should be noted that not all recovery residences in California or even all residences that go by the name of Sober Living Houses would be considered Level II houses (see Kaskutas, Keller, & Witbrodt, 1999; Polcin & Wittman, 2014). Again, this designation is based on governance and staffing as well as the on the residence’s involvement in informal and formal treatment services.

Level III residences are characterized as “supervised.” Within these residences, there are often multiple paid staff members and an organizational hierarchy among staff members. In addition to mutual aid, there are often different types of services delivered within Level III residences (e.g., recovery coaching, recovery wellness planning, recovery support groups, life skills training) and linkage to formal treatment providers. In some states, these residences would need to seek a license to provide these services and be subject to oversight by the appropriate state-level regulatory agency. In general, these are hybrid social model programs that have added additional services and trained staff (see description of Social Model Recovery Homes in Borkman, Kaskutas, Room, Bryan, & Barrows, 1998). These residences may also directly link with treatment providers. This linkage model is often referred to as the “Florida model” because of the prevalence of this bundling of these services in the state of Florida. Residents attend day treatment services at a licensed facility while
living in a recovery residence, often a Level II. However, homes with this linkage and commensurate increases in staffing and services can rise to a Level III residence.

Level IV residences are characterized as “service providers.” Their governance and administration is similar to that of Level III residences but often staff in Level IV residences will be degreed and certified or otherwise credentialed. The defining feature of a Level IV residence is that, in addition to mutual aid and other services, clinical services and programming are provided within the residence. An example of this level of care is a Therapeutic Community (TC) (De Leon, 2000). Although peers and mutual aid are integral components of the TC model, TCs have licensed staff and provide structured clinical services to residents (psychotherapy groups and often individual counseling as well) (National Institute on Drug Abuse [NIDA], 2002). The setting for these residences may be larger (such as a ranch, shelter, or unit of larger institution) but could also be a “group home” in which residential treatment is offered in a more home-like setting.

The introduction of the NARR typology has greatly advanced the understanding of different types of recovery residences and helped link recovery residences that primarily offer mutual aid and peer support to the formal substance abuse continuum of care. However, it has also raised questions about where different types of residences might fit within these levels and how best to make this determination. As alluded to above, Sober Living Houses in California are often held up as an example of a Level II residence, but not all sober housing in California is the same. For example, Polcin and Wittman (2014) in this issue delineate four different models of sober recovery in California (e.g., social model detox settings, alcohol recovery homes, free-standing sober homes, and neighborhood recovery centers). Despite their differences, however, all of these recovery settings are strongly rooted in the Social Model of recovery, an experiential, peer-oriented process of rehabilitation based on the traditions of AA that emphasizes democratic group processes with shared or rotated leadership and minimal hierarchy (Borkman et al., 1998). The aim of this article is to examine adherence to the Social Model among a stratified random sample of recovery residences in Philadelphia, thereby exploring how recovery homes in Philadelphia may be similar to or different from sober housing in California.

METHODS

The data for this study are part of a larger study funded by the Pennsylvania Department of Health to gather basic descriptive data on a sample of recovery homes and residents to generate specific hypotheses about different types of recovery houses and how they may increase recovery capital among residents (see Mericle, Miles, & Cacciola, under review, for additional background).
Participants

In Philadelphia, recovery residences are referred to as “recovery homes.” Recovery homes are intended to be safe, sober, and supportive living arrangements often used in conjunction with outpatient treatment, self-help, and other community-based services. In contrast to halfway houses, group homes, and other types of residential care, which are licensed by the Department of Drug and Alcohol Programs to provide treatment, there is no formal licensing of recovery homes (Johnson, Marin, Sheahan, Way, & White, 2009). The only requirement for such homes is a boarding house or rooming house license granted through the Philadelphia License and Inspections office. In order for recovery homes to receive funding from the Office of Addiction Services (OAS) (through carve-outs from federal block grant funds or from funds available through the SAMHSA’s Access to Recovery (ATR) initiative), homes must verify licensing compliance as well as proof of ownership of the property, general liability insurance, proof of utility bills, and proof of 501c3 or non-profit designation.

In our study, we gathered information about sampled recovery homes from individuals identified as “site contacts,” defined as the owner, director, or manager of the home or someone identified by one of these individuals as being knowledgeable about the organizational characteristics of the house, the services provided, and the residents served. As Table 1 displays, the majority of respondents (52%) were either the owner or director of the home; the majority were also male (52%) and African American (56%), and respondents ranged in age from 27 to 65. Although the majority were high school educated, 44% had some level of post-secondary education, and 52% had some sort of professional licensure or certification (only 24% being in addiction or substance abuse). On average, respondents had been in the substance abuse field for 8 years and in their current position for 4 years.

Procedures

Sampling

The amount of funding for the project allowed us to study only 25 recovery homes out of the roughly 300 recovery homes in Philadelphia at the time of the study. In order to ensure that our sample of 25 homes was representative of all recovery homes in Philadelphia, we opted to draw a random sample of homes from lists of known recovery residences in Philadelphia maintained by OAS and the Philadelphia Association of Recovery Residences (PARR). However, we were also interested in examining potential differences between OAS-funded and unfunded homes as well as potential differences between homes serving males and those serving females. Because there are generally fewer OAS-funded homes and homes serving females, we stratified our sampling (Blalock, 1979) to ensure representation of these types of homes so that our final sample would
consist of seven OAS-funded homes (four serving males and three serving females) and 18 unfunded homes (twelve serving males and six serving females).

Recruitment and Data Collection

Randomly sampled homes were sent a letter outlining the purpose of the study and notifying them that project staff would be contacting them about participation in the research study. Approximately 2 weeks after the letter to the home was sent, project staff began calling the homes to answer questions about the study,
confirm eligibility, and schedule a time to meet with someone who could serve as the site contact for the home. Site contacts were invited to complete an interview (1-2 hours in length) about organizational characteristics of the home, the services provided, and the residents served, as well as information about their position, background, and treatment philosophy for which they could earn $50. The site contact’s consent to participate in the project was obtained in person, and all human subjects procedures were approved by the Institutional Review Boards of the Treatment Research Institute and the City of Philadelphia Department of Health.

Of the 25 homes that were initially sampled, site contact interviews were completed for 16 of them. In order to enroll our target of 25 homes into the study, 21 alternate homes needed to be sampled to get the full complement of unfunded homes. Of the 46 homes sampled, six had closed, five were found to be ineligible, sampling characteristics had changed for five homes, and five homes were classified as refusals (89% participation rate). The five homes that were classified as refusals were part of just two different parent organizations. One parent organization actively refused (because participation in the study provided no perceived benefit), and the other failed to return calls about scheduling—this organization’s homes were considered “passive refusals.” Four of the five homes that were classified as refusals were unfunded homes that served females.

**Instruments and Measures**

We developed our instrumentation from available measures used to examine substance abuse treatment programs nationally and to study other types of recovery residences (e.g., Oxford Houses, California Sober Living Houses). Information pertaining to organizational characteristics and oversight, staffing and operational characteristics, sources of revenue, types of clients served, and services and programming offered were gathered with a modified version of the Addiction Treatment Inventory (ATI) (Carise, McLellan, & Gifford, 2000), which was developed by researchers at the Treatment Research Institute to characterize substance abuse treatment programs participating in the national Drug Evaluation Network System (DENS) (Carise, McLellan, Gifford, & Kleber, 1999). Information pertaining to residence characteristics (e.g., physical characteristics of the home and amenities) and resident expectations (e.g., rules and responsibilities) was gathered with items from the Oxford House Environmental Audit and House Processes Questionnaire developed by researchers at DePaul University (Ferrari, Groh, & Jason, 2009; Ferrari, Jason, Blake, Davis, & Olson, 2006; Ferrari, Jason, Davis, Olson, & Alvarez, 2004; Ferrari, Jason, Sasser, Davis, & Olson, 2006).

This information was used to categorize houses according to the NARR level system. Level I residences were operationally defined as homes that prohibited residents from using substances inside or outside of the home, were in some way structured (i.e., provided residents with a handbook of procedures and policies,
posted rules somewhere in the house, or had residents participate in weekly chores), held resident meetings to discuss matters or decide policies, and had no paid staff. Homes were categorized as Level II residences if they met Level I criteria and had paid staff (which included staff who were directly compensated and those who received a reduction or waiver of rent as compensation). Homes were categorized as Level III residences if they met criteria for Level II and also provided clinical services—defined as offering drug and alcohol individual or group counseling sessions or medical services (physical exams, medication prescriptions, blood work, or medical monitoring by a nurse or doctor) at the home. Although we did not anticipate seeing any Level IV residences in our sample because recovery homes in Philadelphia are not licensed treatment providers, we categorized Level IV residences as homes that met criteria for Level III and site contact for the home reported being credentialed (either a Licensed Clinical Social Worker or a Licensed Psychologist).

In addition to measures developed to assess substance abuse treatment programs and Oxford Houses, we also included measures used in prior studies of Sober Living Houses in California (Polcin, 2006). One such measure was the Social Model Philosophy Scale (SMPS) (Kaskutas, Greenfield, Borkman, & Room, 1998), which was designed to measure the extent to which substance abuse treatment programs adhere to a Social Model approach across six program domains: physical environment, staff role, authority base, view of dealing with substance abuse problems, governance, and community orientation. The 33-item SMPS has been shown to have high internal reliability (α = .92), and test-retest analyses showed high consistency across time, administrators, and respondents. Items in this measure are summed according to criteria outlined in the scoring manual (Room & Kaskutas, 2008). Scores on the overall scale and the subscales range from 0-100. We used the established cut-point of 75 on the overall score to determine whether homes operated as Social Model programs (Kaskutas et al., 1998, 1999).

**Statistical Analyses**

Frequencies and summary statistics were run to describe characteristics of the homes sampled. Differences were tested among levels and between OAS-funded and unfunded homes and homes serving males and females using linear and logistic regression analyses. All estimates were weighted so that our findings could be generalized to the population of recovery homes in Philadelphia during the study period (roughly between August 2012 and June 2013). The sampling weights reflect the inverse probability of being sampled and counts of houses in each stratum were corrected throughout the recruitment and data collection process to account for new houses opened/discovered and to remove houses that had closed or became ineligible. All analyses were conducted in Stata version 11 (StataCorp, 2009) which computes standard errors using Taylor-series
linearization and produces Rao-Scott corrected Pearson likelihood ratio statistics and design-adjusted Wald chi-square tests.

**RESULTS**

Based on the algorithm used to create the NARR levels from information collected from the modified ATI and the Oxford House measures, approximately 57% of the homes in Philadelphia would be classified as Level II residences and 43% would be considered Level III residences from the services they reported offering to their residents. No residences sampled were categorized as a Level I or a Level IV. No differences were found among levels by gender or funding source. (See Table 2.)

Only a small percentage (11%) of homes met criteria to be considered a Social Model program. The average score for the homes was 66.2, well below the 75 cut-off to be considered a Social Model program (table available from the corresponding author). Average scores were highest in the Authority Base and View of Dealing with Substance Abuse subscales (89.2 and 89.3, respectively) and lowest on the Governance and Staff Role subscales (10.2 and 57.4, respectively). The only difference in scores found regarding funding source and gender pertained to the Staff Role scores. OAS-funded homes had significantly lower scores on this subscale than unfunded homes (43.3 vs. 60.5, \( p < 0.05 \)).

Table 3 displays Social Model Philosophy Scale scores by NARR Level. As this table shows, Level III residences on average had higher total scores than Level II residences (70.7 vs. 62.8; \( p < 0.01 \), respectively). However, both of these average scores are below the cut-point for Social Model program designation. No significant differences appeared between Levels on the subscale scores. However, scores on governance approached significance, with Level III residences having higher scores.

**DISCUSSION**

Although the exact number of recovery residences is currently unknown, there are many thousands of such residences operating in nearly every state across the nation (NARR, 2012). During this study we identified close to 300 in the city of Philadelphia alone. Research to-date on Oxford Houses (Jason, Davis, & Ferrari, 2007; Jason, Olson, Ferrari, & Lo Sasso, 2006) and Sober Living Houses in California (Polcin et al., 2010a; Polcin, Korcha, Bond, & Galloway, 2010b) suggest that recovery residences are a potentially important component of the substance abuse continuum of care. However, there are still important gaps in the scientific literature and considerable debate in the substance abuse treatment community over what constitutes a recovery residence. Using the NARR recovery residence standards and Levels as a framework, the aim of this article was to examine adherence to the Social Model among a stratified random sample of recovery residences.
Table 2. Recovery Home Levels and Social Model Adherence by Funding Source and Gender

<table>
<thead>
<tr>
<th>NARR Levels</th>
<th>All homes (N = 25)</th>
<th>OAS-funded (N = 7)</th>
<th>Male (N = 4)</th>
<th>Female (N = 3)</th>
<th>Unfunded (N = 18)</th>
<th>Male (N = 12)</th>
<th>Female (N = 6)</th>
<th>Test of funding</th>
<th>Test of gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%  SE</td>
<td>%  SE</td>
<td>%  SE</td>
<td>%  SE</td>
<td>%  SE</td>
<td>%  SE</td>
<td>%  SE</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>NARR Levels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level I</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level II</td>
<td>57.3 10.7</td>
<td>41.5 20.1</td>
<td>25.0 25.0</td>
<td>66.7 33.3</td>
<td>60.6 12.2</td>
<td>58.3 14.9</td>
<td>66.7 21.1</td>
<td>0.433</td>
<td>0.567</td>
</tr>
<tr>
<td>Level III</td>
<td>42.8 10.7</td>
<td>58.6 20.1</td>
<td>75.0 25.0</td>
<td>33.3 33.3</td>
<td>39.4 12.2</td>
<td>41.7 14.9</td>
<td>33.3 21.1</td>
<td>0.433</td>
<td>0.567</td>
</tr>
<tr>
<td>Level IV</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td>0.0 0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Model</td>
<td>11.4 6.8</td>
<td>15.1 15.1</td>
<td>25.0 25.0</td>
<td>0.0 0.0</td>
<td>10.6 7.6</td>
<td>8.3 8.3</td>
<td>16.7 16.7</td>
<td>0.779</td>
<td>0.898</td>
</tr>
</tbody>
</table>

Table 3. Social Model Philosophy Scale Scores by NARR Level

<table>
<thead>
<tr>
<th></th>
<th>All homes (N = 25)</th>
<th>Level II (N = 14)</th>
<th>Level III (N = 11)</th>
<th>Tests of Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M  SE</td>
<td>M  SE</td>
<td>M  SE</td>
<td>p</td>
</tr>
<tr>
<td>Physical environment</td>
<td>78.2 2.1</td>
<td>75.8 2.5</td>
<td>81.3 3.2</td>
<td>0.202</td>
</tr>
<tr>
<td>Staff role</td>
<td>57.4 3.8</td>
<td>54.2 6.2</td>
<td>61.6 3.1</td>
<td>0.315</td>
</tr>
<tr>
<td>Authority base</td>
<td>89.2 2.5</td>
<td>88.0 3.4</td>
<td>90.8 3.1</td>
<td>0.533</td>
</tr>
<tr>
<td>View of dealing with substance abuse</td>
<td>89.3 1.9</td>
<td>86.6 2.5</td>
<td>93.0 2.6</td>
<td>0.083</td>
</tr>
<tr>
<td>Governance</td>
<td>10.2 3.0</td>
<td>5.6 3.0</td>
<td>16.5 4.7</td>
<td>0.059</td>
</tr>
<tr>
<td>Community orientation</td>
<td>74.3 2.1</td>
<td>73.4 2.9</td>
<td>75.6 2.6</td>
<td>0.533</td>
</tr>
<tr>
<td><strong>Total Score</strong></td>
<td>66.2 1.4</td>
<td>62.8 1.3</td>
<td>70.7 1.9</td>
<td>0.002</td>
</tr>
</tbody>
</table>
residences in Philadelphia, thereby exploring how recovery homes in Philadelphia may be similar to or different from sober housing in California.

Using the algorithm based on the NARR standards and data gathered from a modified version of the ATI and measures used in Oxford House studies, the majority (57%) of recovery homes in Philadelphia would be classified as Level II residences. Although we anticipated not sampling any Level IV residences because licensed treatment providers were excluded from this study, we also did not sample any homes that would be classified as a Level I residence or that could not be classified as a recovery residence by NARR criteria. It is important to keep in mind that we could only study 25 homes, and if Level I residences are relatively rare (the Oxford House website lists five houses in Philadelphia), it is possible that they exist in Philadelphia but were simply not sampled. The same is true for homes that call themselves recovery homes but do not meet NARR criteria for being considered a recovery residence. Although it is possible that these exist, these homes are the exception rather than the rule.

Our algorithm also indicated that the rest of the homes in Philadelphia (43%) represent Level III residences. However, this determination was based on what site contacts told us about the substance abuse and medical services offered by or at the program. Nearly 32% reported offering individual counseling sessions, and 40% reported offering group counseling sessions. Unfortunately, the ATI does not probe who provides these services and was developed before the certification and training of peers to provide services like individual recovery coaching and other recovery-oriented group programming. Post-hoc analyses (available from the corresponding author) were conducted adding an additional criterion to the Level III category that included having a counselor or therapist on staff that could be providing the individual or group counseling services. With this additional criterion, only 19% of the recovery homes in Philadelphia would be classified as Level III residences and 81% would be considered Level II residences, and all differences previously observed between Level II and Level III homes regarding adherence to the Social Model were no longer present. More work is needed to classify the nature of “services” delivered in Philadelphia recovery homes to best delineate between Level II and Level III residences.

Sober Living Houses in California have often been described in terms that would place them in a category somewhere above an Oxford House because they typically have a house manager and somewhere below a Level III residence because they generally do not provide treatment services. Given that the majority of homes in Philadelphia would also be considered Level II residences, this begs the question of how similar California Sober Living Houses are to Philadelphia recovery homes. Because our study collected data with measures used to study Sober Living Houses and other Social Model programs, we can address this question. Using the Social Model Philosophy scale’s total score of 75 as a cutoff point for true Social Model programs, only 11% of the recovery homes in Philadelphia could be characterized as such. In preliminary analyses of Social
Model Philosophy data on nine houses in California, all nine had scores above 85, more than indicating adherence to the Social Model (Polcin, 2006). Although there has been evidence to suggest a decline in adherence to the Social Model even among self-identified Social Model programs due to increasing needs to professionalize, funding requirements, and other regulations (Kaskutas et al., 1999), these low scores could also suggest true differences between recovery homes in Philadelphia and Sober Living Houses in California.

Analysis of subscale scores reveal particularly low scores in the realm of governance. As described in the manual (Room & Kaskutas, 2008), Social Model programs foster resident participation in the development and enforcement of rules and program policies. Questions in this section query resident participation in rule making and enforcement as well as whether the home has a residence council. Strikingly, none of the homes sampled reported having a resident council and only 20% reported that there were rules made by residents that residents enforce. An even smaller faction of homes reported that residents could jointly, with staff, have the power to end a resident’s stay (19%) or have the authority to punish residents (15%). Scores in the realm of staff role were also lower than other subscale scores, providing more evidence to suggest that staff play a much more dominant role in the governance of the Philadelphia recovery homes than they might in residences that adhere more closely to the Social Model. Interestingly, authority base subscale scores were some of the highest which suggests that even though staff may take a more active role, staff are largely “peers”—indeed, 79% the homes reported that 100% of the staff were in recovery and 59% reported that alumni were on staff.

Our study represents the only study to our knowledge to systematically operationalize the NARR standards to estimate the population prevalence of different types of recovery residences in a large urban area. It is also the only study to our knowledge to assess recovery residences outside of California with the Social Model Philosophy Scale to facilitate comparisons between California Sober Living Houses and other recovery residences outside of California. Despite the contributions of this study to the understanding of recovery homes in Philadelphia and recovery residences more generally, it is important to highlight limitations of this research. The primary limitation of this research is that we only collected data on 25 homes, which likely limited our ability to detect differences between OAS-funded and unfunded homes and homes serving males as opposed to females, and larger-scale studies are needed. Additionally, although we used the best and most recent lists of recovery homes in Philadelphia and conducted work to verify these lists, it is possible that not all homes in Philadelphia were included in our sampling frame (particularly ones operating without appropriate zoning or who might otherwise not want to draw attention to themselves) which may call into question the representativeness of our findings.

A further limitation of our study arises from our reliance on self-reported data from site contacts regarding the characteristics of their homes and the nature and
quality of services provided. In order to check for potential bias, we did have project staff complete ratings of the attractiveness of the grounds and the overall upkeep and maintenance of the home, which were the same questions posed to the site contacts. Analysis of the correspondence between the site contact and project staff ratings revealed no significant differences between site contacts and project staff, suggesting that site contacts were not attempting to overstate the general condition of their homes. However, we did not obtain records of services provided or observe the delivery of services to verify that different types of services were indeed being delivered, nor did we obtain information about who was delivering said services. Certainly more research is needed—particularly studies that might better elucidate differences between homes in other parts of the country and how these homes may help foster and sustain long term recovery among those who reside within them. Our work suggests that these endeavors are both feasible and worthy.

Appendix follows
### APPENDIX

| Source | National Alliance for Recovery Residences (formerly the National Association of Recovery Residences). |
| Note   | P & P = policies and procedures. |

<table>
<thead>
<tr>
<th>RECOVERY RESIDENCE LEVELS OF SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEVEL I</strong> Peer-Run</td>
</tr>
<tr>
<td>ADMINISTRATION</td>
</tr>
<tr>
<td>Democratically run</td>
</tr>
<tr>
<td>Manual or P &amp; P</td>
</tr>
<tr>
<td>SERVICES</td>
</tr>
<tr>
<td>Drug Screening</td>
</tr>
<tr>
<td>House meetings</td>
</tr>
<tr>
<td>Self help meetings encouraged</td>
</tr>
<tr>
<td>RESIDENCE</td>
</tr>
<tr>
<td>Generally single family residences</td>
</tr>
<tr>
<td>Possibly apartments or other dwelling types</td>
</tr>
<tr>
<td>STAFF</td>
</tr>
<tr>
<td>No paid positions within the residence</td>
</tr>
<tr>
<td>Perhaps an overseeing officer</td>
</tr>
</tbody>
</table>
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