

Final Progress Report for Research Projects Funded by Health Research Grants

Instructions: Please complete all of the items as instructed. Do not delete instructions. Do not leave any items blank; responses must be provided for all items. If your response to an item is “None”, please specify “None” as your response. “Not applicable” is not an acceptable response for any of the items. There is no limit to the length of your response to any question. Responses should be single-spaced, no smaller than 12-point type. The report **must be completed using MS Word**. Submitted reports must be Word documents; they should not be converted to pdf format. Questions? Contact Health Research Program staff at 717-783-2548.

1. **Grantee Institution:** Treatment Research Institute
2. **Reporting Period (start and end date of grant award period):** 01/01/2012-12/31/2013
3. **Grant Contact Person (First Name, M.I., Last Name, Degrees):** Rosalyn L. Weinstein, MCAT
4. **Grant Contact Person’s Telephone Number:** 215-399-0980
5. **Grant SAP Number:** 4100057685
6. **Project Number and Title of Research Project:** Community-based Recovery: A Feasibility Study of Recovery Homes and Residents
7. **Start and End Date of Research Project:** 01/01/2012-12/31/2013
8. **Name of Principal Investigator for the Research Project:** Amy A. Mericle, PhD
9. **Research Project Expenses.**

9(A) Please provide the total amount of health research grant funds spent on this project for the entire duration of the grant, including indirect costs and any interest earned that was spent:

\$156,182

9(B) Provide the last names (include first initial if multiple individuals with the same last name are listed) of **all** persons who worked on this research project and were supported with health research funds. Include position titles (Principal Investigator, Graduate Assistant, Post-doctoral Fellow, etc.), percent of effort on project and total health research funds expended for the position. For multiple year projects, if percent of effort varied from year to year, report in the % of Effort column the effort by year 1, 2, 3, etc. of the project (x% Yr 1; z% Yr 2-3).

Last Name, First Name	Position Title	% of Effort on Project	Cost
Mericle	Principal Investigator	2% Yr 1; 16% Yr 2	\$14,175
Cacciola	Co-Investigator	2% Yr 1; 5% Yr 2	\$11,685
Miles	Research Assistant	67% Yr 1; 33% Yr 2	\$32,420

9(C) Provide the names of **all** persons who worked on this research project, but who *were not* supported with health research funds. Include position titles (Research Assistant, Administrative Assistant, etc.) and percent of effort on project. For multiple year projects, if percent of effort varied from year to year, report in the % of Effort column the effort by year 1, 2, 3, etc. of the project (x% Yr 1; z% Yr 2-3).

Last Name, First Name	Position Title	% of Effort on Project
None		

9(D) Provide a list of **all** scientific equipment purchased as part of this research grant, a short description of the value (benefit) derived by the institution from this equipment, and the cost of the equipment.

Type of Scientific Equipment	Value Derived	Cost
None		

10. Co-funding of Research Project during Health Research Grant Award Period. Did this research project receive funding from any other source during the project period when it was supported by the health research grant?

Yes _____ No X _____

If yes, please indicate the source and amount of other funds:

11. Leveraging of Additional Funds

11(A) As a result of the health research funds provided for this research project, were you able to apply for and/or obtain funding from other sources to continue or expand the research?

Yes _____ No X _____

If yes, please list the applications submitted (column A), the funding agency (National Institutes of Health—NIH, or other source in column B), the month and year when the application was submitted (column C), and the amount of funds requested (column D). If you have received a notice that the grant will be funded, please indicate the amount of funds to be awarded (column E). If the grant was not funded, insert “not funded” in column E.

Do not include funding from your own institution or from CURE (tobacco settlement funds). Do not include grants submitted prior to the start date of the grant as shown in Question 2. If you list grants submitted within 1-6 months of the start date of this grant, add a statement below the table indicating how the data/results from this project were used to secure that grant.

A. Title of research project on grant application	B. Funding agency (check those that apply)	C. Month and Year Submitted	D. Amount of funds requested:	E. Amount of funds to be awarded:
	<input type="checkbox"/> NIH <input type="checkbox"/> Other federal (specify: _____) <input type="checkbox"/> Nonfederal source (specify: _____)		\$	\$
	<input type="checkbox"/> NIH <input type="checkbox"/> Other federal (specify: _____) <input type="checkbox"/> Nonfederal source (specify: _____)		\$	\$
	<input type="checkbox"/> NIH <input type="checkbox"/> Other federal (specify: _____)		\$	\$

	<input type="checkbox"/> Nonfederal source (specify: _____)			
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11(B) Are you planning to apply for additional funding in the future to continue or expand the research?

Yes X No _____

If yes, please describe your plans:

A number of further research projects are planned to expand this work. Dr. Mericle is currently developing a federal grant application to study recovery residences for gay/bisexual men and is also exploring the possibility of conducting a randomized trial of recovery residences and community-based recovery centers in Philadelphia.

12. Future of Research Project. What are the future plans for this research project?

Although Dr. Mericle and her team have presented preliminary findings from this project locally and nationally and have developed three manuscripts from this project, additional manuscripts are also in development. Dr. Mericle is developing a manuscript presenting findings from the qualitative portion of the site contact interview as well as a manuscript presenting findings from baseline and follow-up interviews with the recovery home residents. Jennifer Miles is developing a manuscript summarizing qualitative findings from resident and alumni focus groups.

13. New Investigator Training and Development. Did students participate in project supported internships or graduate or post-graduate training for at least one semester or one summer?

Yes _____ No X

If yes, how many students? Please specify in the tables below:

	Undergraduate	Masters	Pre-doc	Post-doc
Male				
Female				
Unknown				
Total				

	Undergraduate	Masters	Pre-doc	Post-doc
Hispanic				
Non-Hispanic				

Unknown				
Total				

	Undergraduate	Masters	Pre-doc	Post-doc
White				
Black				
Asian				
Other				
Unknown				
Total				

14. Recruitment of Out-of-State Researchers. Did you bring researchers into Pennsylvania to carry out this research project?

Yes _____ No X _____

If yes, please list the name and degree of each researcher and his/her previous affiliation:

15. Impact on Research Capacity and Quality. Did the health research project enhance the quality and/or capacity of research at your institution?

Yes X _____ No _____

If yes, describe how improvements in infrastructure, the addition of new investigators, and other resources have led to more and better research.

As a result of this project and Dr. Mericle’s efforts, the Treatment Research Institute is now one of only a handful of institutions that have conducted research in the topic of recovery residences. Along with other recovery residence researchers, Dr. Mericle co-authored a primer on recovery residences published by the National Alliance for Recovery Residences (NARR-formerly the National Association of Recovery Residences) and a policy statement encouraging additional research on recovery residences that was adopted by the Society of Community Research and Action (Division 27 of the American Psychological Association) and published in the *American Journal of Community Psychology*.

Additionally, Jennifer Miles, Research Assistant on the project, is currently pursuing a doctoral degree in Social Policy at Brandeis University's Heller School for Social Policy and Management where she received a prestigious alcohol-related health services research fellowship funded by the National Institute on Alcohol Abuse and Alcoholism. She and Dr. Mericle continue to collaborate to disseminate additional papers from their work on this study.

16. Collaboration, business and community involvement.

16(A) Did the health research funds lead to collaboration with research partners outside of your institution (e.g., entire university, entire hospital system)?

Yes X No _____

If yes, please describe the collaborations:

Since undertaking this project, Dr. Mericle has become a member of the NARR Research as well as the Data and Metrics Committees and was a guest at the NARR 2013 annual board retreat. She is also on the Data Committee of the Philadelphia Association of Recovery Residences (PARR) and conducted a training for Philadelphia recovery home operators on the importance of data collection. She continues to collaborate with other recovery residences researchers, namely Doug Polcin, Ed.D, who studies Sober Living Houses in California.

Dr. Mericle’s work on this study also led to collaboration with researchers at the Public Health Management Corporation in Philadelphia, who submitted a federal grant application to study the effectiveness of an intervention to reduce substance abuse and HIV/AIDS risk behavior among substance using women delivered in a community-based recovery center.

Dr. Mericle’s study was conducted with the support of the Office of Addiction Services (OAS) in Philadelphia. She has met with representatives from OAS throughout the course of the study to update them on progress and solicit feedback on preliminary findings from the study.

16(B) Did the research project result in commercial development of any research products?

Yes _____ No X _____

If yes, please describe commercial development activities that resulted from the research project:

16(C) Did the research lead to new involvement with the community?

Yes X No _____

If yes, please describe involvement with community groups that resulted from the research project:

Dr. Mericle and members of her team have attended monthly meetings of PARR and presented preliminary findings from this study to recovery home operators who attend

these meetings. As mentioned above, Dr. Mericle has presented on the importance of data collection to recovery home operators in Philadelphia and to recovery residence operators attending the NARR 2013 annual board retreat. Dr. Mericle and her team are also involved with the larger recovery community in Philadelphia and nationally. An article about their study was published in the 12-Step Gazette, in a local recovery magazine and featured on the Join Together website hosted by the Partnership for a Drug Free America (<https://www.drugfree.org/join-together/community-related/commentary-research-on-recovery-residences-is-critical>). In addition to being a resource for recovery home operators and individuals in the recovery community, Dr. Mericle has also served as a resource for the general public. In October 2013, Dr. Mericle provided testimony at a hearing on recovery housing held by the Pennsylvania House Human Services Committee in which she presented work from this study.

17. Progress in Achieving Research Goals, Objectives and Aims.

List the project goals, objectives and specific aims (as contained in the grant agreement). Summarize the progress made in achieving these goals, objectives and aims for the period that the project was funded (i.e., from project start date through end date). Indicate whether or not each goal/objective/aim was achieved; if something was not achieved, note the reasons why. Describe the methods used. If changes were made to the research goals/objectives/aims, methods, design or timeline since the original grant application was submitted, please describe the changes. Provide detailed results of the project. Include evidence of the data that was generated and analyzed, and provide tables, graphs, and figures of the data. List published abstracts, poster presentations and scientific meeting presentations at the end of the summary of progress; peer-reviewed publications should be listed under item 20.

This response should be a DETAILED report of the methods and findings. It is not sufficient to state that the work was completed. Insufficient information may result in an unfavorable performance review, which may jeopardize future funding. If research findings are pending publication you must still include enough detail for the expert peer reviewers to evaluate the progress during the course of the project.

Health research grants funded under the Tobacco Settlement Act will be evaluated via a performance review by an expert panel of researchers and clinicians who will assess project work using this Final Progress Report, all project Annual Reports and the project's strategic plan. After the final performance review of each project is complete, approximately 12-16 months after the end of the grant, this Final Progress Report, as well as the Final Performance Review Report containing the comments of the expert review panel, and the grantee's written response to the Final Performance Review Report, will be posted on the CURE Web site.

There is no limit to the length of your response. Responses must be single-spaced below, no smaller than 12-point type. If you cut and paste text from a publication, be sure symbols print properly, e.g., the Greek symbol for alpha (α) and beta (β) should not print as boxes (□) and include the appropriate citation(s). DO NOT DELETE THESE INSTRUCTIONS.

Specific Aims:

This project sought to:

- (1) assess the feasibility of recruiting recovery home operators and recruiting and tracking residents in Philadelphia;
- (2) evaluate the appropriateness and acceptability of instruments used to assess recovery homes and recovery home residents;
- (3) gather basic descriptive data on a sample of recovery homes and residents that could be used to generate specific hypotheses about different types of recovery homes and how they may increase recovery capital among residents.

Methods and Results:

To address the specific aims, we proposed collecting mixed-methods data on a stratified random sample of 25 recovery homes, baseline data on approximately 120 residents from 12 different homes, and 3-month follow-up data from 25 residents who participated in baseline data collection. To augment our understanding of how recovery residences may help facilitate long-term recovery, we also proposed collecting mixed-methods data from former residents in recovery homes that held regular meetings for their alumni. Findings from each aspect of this project are summarized below.

Recovery Home Residences: Site Contact Recruitment and Data Collection

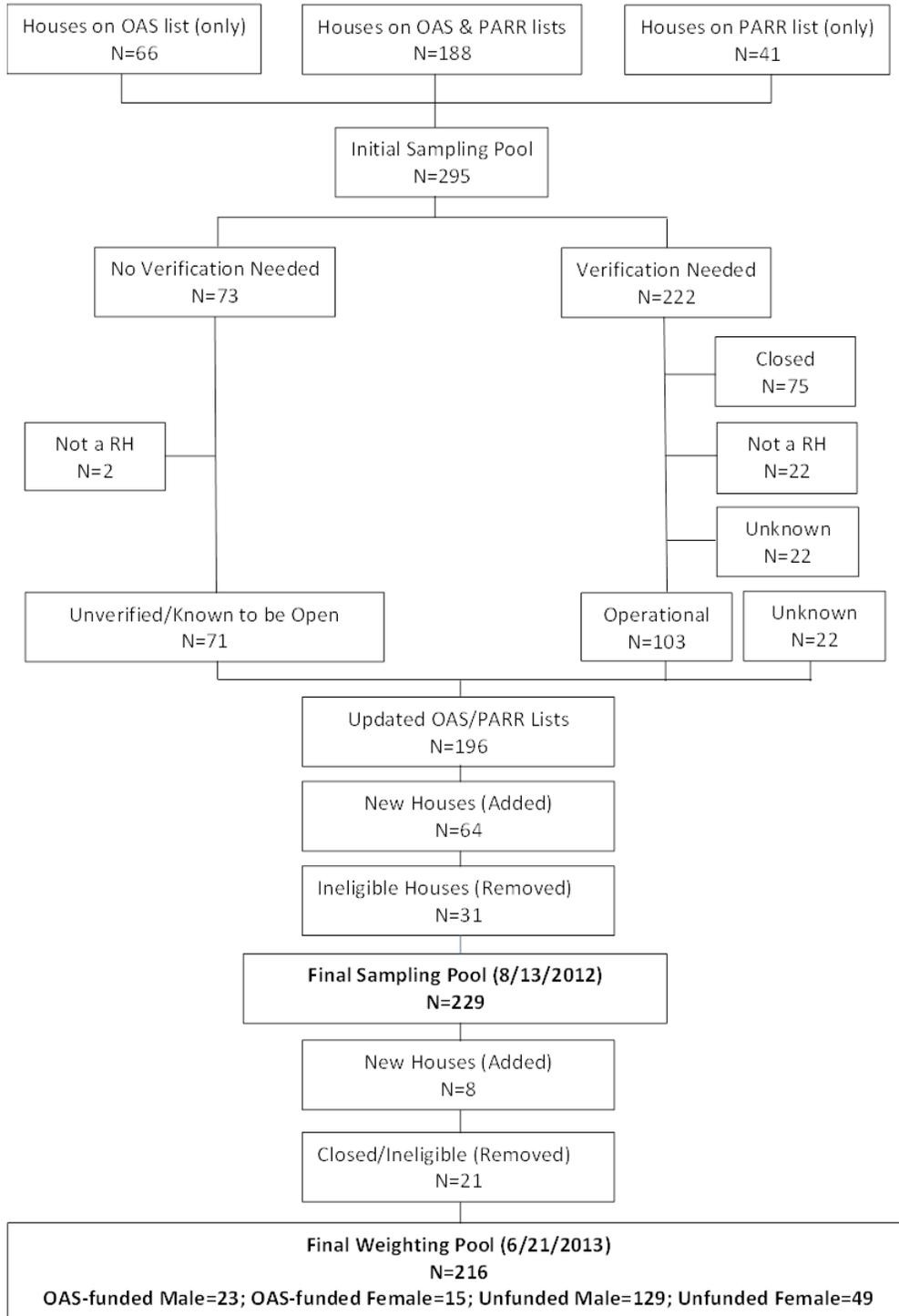
In order to ensure that our sample of 25 recovery homes was representative of all recovery homes in Philadelphia, we randomly sampled homes to participate. However, because there are generally fewer OAS-funded homes and homes serving females, we stratified our sampling to ensure representation of these types of homes so that our final sample would consist of 7 OAS-funded homes (4 serving males and 3 serving females) and 18 unfunded homes (12 serving males and 6 serving females).

Our sampling frame was developed from two primary sources: a list provided to us by OAS of homes currently abiding by OAS standards and a list of homes from the Philadelphia Association of Recovery Residences (PARR) of unfunded homes based on the work conducted in the resource mapping project. As Figure 1 displays, together these lists contained some amount of information on 295 homes. Although the lists contained some basic information on these homes (e.g., a name of the home or parent organization, number of homes in the organization, a contact person, and address for the organization), information regarding specific homes within the organization was often missing and calls were placed to these organizations (N=222) to determine this information. Through this verification process, we learned that many of the homes on the lists had closed (n=75) or were no longer operating as a recovery home (n=22). The status of 22 homes could not be verified despite repeated calls and visits. These homes (n=22), plus the homes that were verified to be operational (103) or did not require a verification call in order to assign to a sample strata (71), left us with 196 homes.

Fortunately, through the verification process and through active outreach (i.e., attending monthly PARR meetings) we learned of an additional 64 homes. Homes were considered eligible for the study if they had a total capacity of 3 or more residents and housed residents in a communal environment (i.e., residents were not housed in individual apartments). Homes were considered ineligible if they provided services that would qualify them to be considered supported housing (e.g., assisted living and halfway houses) or a homeless shelter because these are distinctly different types of care. Homes were also excluded if they served as a community-

based alternative to incarceration for individuals adjudicated to the home. After removing homes that did not meet eligibility criteria, our final sampling pool contained 229 homes (26 OAS-funded male homes, 15 OAS-funded female homes, 133 unfunded male homes, 54 unfunded female homes, and 1 home of unknown funding source/gender).

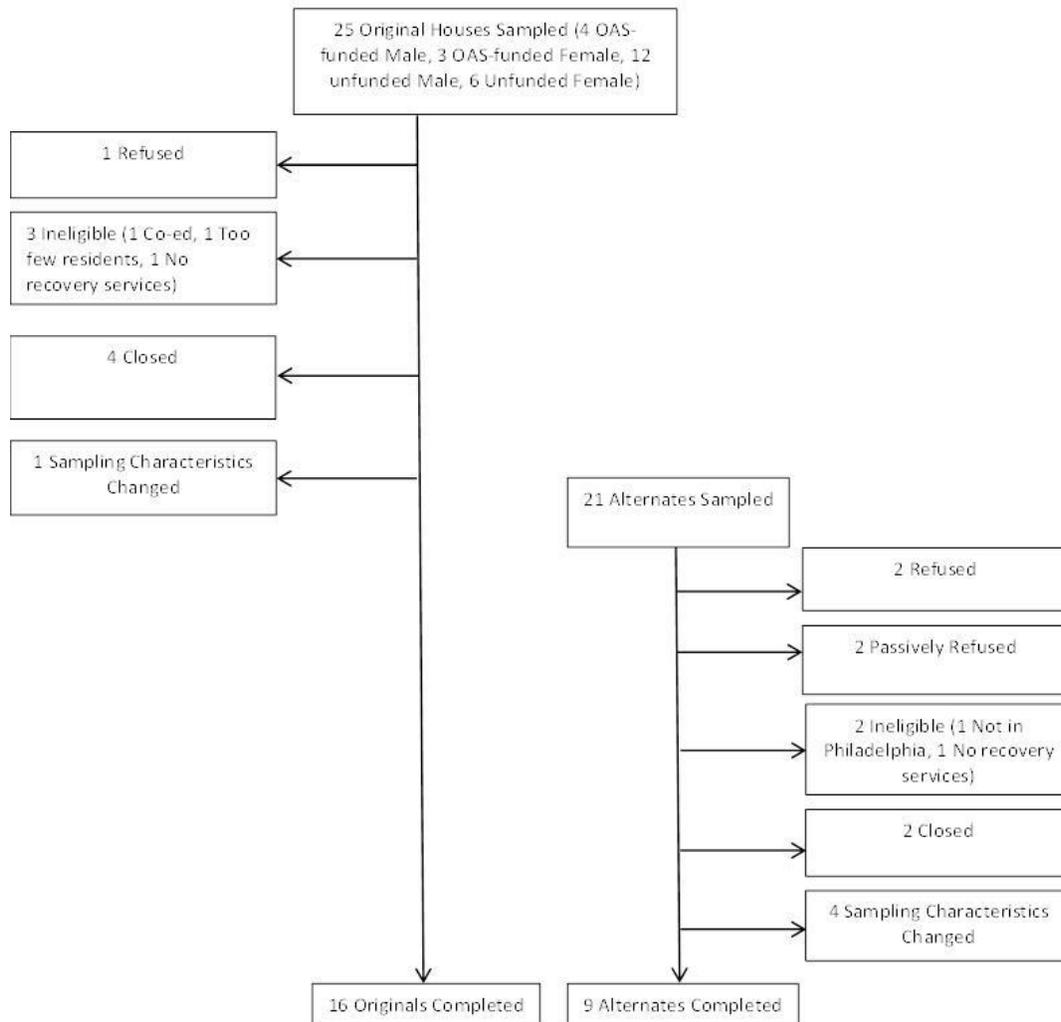
Figure 1. Sampling Frame and Sampling Weight Derivation



Abbreviations: OAS=Office of Addiction Services; PARR= Philadelphia Association of Recovery Residences; RH=Recovery Home

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 two weeks after the letter 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 (defined as the owner, operator, or manager) were invited to complete an interview (1-2 hours in length, for which they could earn \$50) about organizational characteristics of the home, the services provided, and the residents served as well as information about their position, background, and treatment philosophy. 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.

Figure 2. Site Contact Recruitment



NOTE: Site contacts from all sampled OAS-funded homes were recruited. Alternates needed to be sampled in order to fill privately-funded strata.

As Figure 2 displays, 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 (11% refusal rate). However, 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.

We developed our instrumentation for our site contact interviews from available measures used to examine substance abuse treatment programs nationally and to study other types of recovery residences (e.g., Oxford Houses, Sober Living Houses in California). Information pertaining to organizational characteristics and oversight, 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), which was developed by researchers at the Treatment Research Institute to characterize substance abuse treatment programs participating in the national Drug Evaluation Network System. Although recovery homes are not licensed treatment providers, we included this instrument because it assesses services that programs could offer or refer clients to and might inform the literature on the ways in which recovery residences may differ from substance abuse treatment programs by measuring them on similar dimensions. 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. This instrument was developed by researchers at DePaul University to assess characteristics of the interior and exterior environments of Oxford Houses as well as house policies and requirements.

In addition to measures developed to assess Oxford Houses, we also included measures used to study Sober Living Houses in California. Sober Living Houses are generally based on the principles of 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. The Social Model Philosophy Scale (SMPS) 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 ($\alpha = .92$), 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, and we used a cut-point of 75% is used to determine whether homes operated as Social Model programs.

Frequencies and summary statistics were run to describe characteristics of the homes sampled. Differences were tested between OAS-funded and unfunded homes and between 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. The sampling weights reflect the inverse probability of being sampled and counts of houses in each strata were corrected throughout the recruitment and

data collection process to account for new houses opened/discovered and to remove houses that had closed or become ineligible (see Figure 1). All analyses were conducted in Stata version 11 which computes standard errors using Taylor-series linearization and produces Rao-Scott corrected Pearson likelihood ratio statistics and design-adjusted Wald chi-square tests. Due to our small sample size and the exploratory nature of our analyses, we did not correct the significance level of our tests to account for the number of tests run (e.g., Bonferroni or Sidak corrections) and noted all findings with test-statistics of $p < 0.1$.

Site contact interviews were conducted between August 2012 and March 2013. 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.

Table 1. Site Contact Characteristics

	n	%
Position		
Owner	3	12.0
Program Director/CEO/Executive Director	10	40.0
Administrative Assistant/Coordinator/Case manager	8	32.0
House Manager/Assistant House Manager	4	16.0
Female	12	48.0
Race/Ethnicity		
Caucasian/White	10	40.0
African American/Black	14	56.0
Hispanic	1	4.0
Age (M, SD) ^a	46.4	10.9
College Educated (some college classes or higher degree) ^b	11	44.0
Licensure/Certification		
CAC or other Substance abuse certificate	6	24.0
LCSW/Psychology or other counseling	0	0.0
Other ^c	7	28.0
None	12	48.0
Years in Current Job (M, SD)	4.3	3.3
Years in Substance Abuse Field (M, SD)	7.8	6.5
^a Missing age on one respondent.		
^b Of the 14 respondents without a college degree, half had some sort of professional certification.		
^c Other licensure/certification included, medical billing, other human services (n=3), HVAC, residential construction, and brokering		

Table 2. Recovery Home Organizational and Operational Characteristics

	All Homes (N=25)		OAS-Funded						Unfunded						Test of Funding <i>p</i>	Test of Gender <i>p</i>
			Total (N=7)		Male (N=4)		Female (N=3)		Total (N=18)		Male (N=12)		Female (N=6)			
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE		
Organization Status, Structure, & Oversight																
Private, Non-Profit	62.6	10.2	100.0	0.0	100.0	0.0	100.0	0.0	54.6	12.4	50.0	15.1	66.7	21.1	---	0.451
Independent/Non-affiliated with Another Entity	97.3	2.7	84.9	15.1	75.0	25.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---
One of a Group of Recovery Homes	77.5	9.1	100.0	0.0	100.0	0.0	100.0	0.0	72.7	11.1	75.0	13.1	66.7	21.1	---	0.825
Any Accreditation (JCAHO, CARF, State/BDAP)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---
Operational Characteristics																
Total Capacity (M, SD)	16.8	2.3	18.3	4.6	20.5	7.5	15.0	2.1	16.5	2.6	16.2	3.0	17.5	5.1	0.738	0.985
Planned Length of Stay ^a (Weeks; M, SE)	58.1	13.9	31.2	15.0	30.7	20.7	32.0	20.0	66.6	17.6	56.0	12.5	84.0	41.9	0.157	0.534
Typical Length of Stay (Weeks; M, SE)	41.1	6.3	28.0	7.0	28.0	8.5	28.0	12.2	43.9	7.6	40.3	9.5	53.3	11.2	0.138	0.471
Current Waitlist	31.6	9.1	58.6	20.1	75.0	25.0	33.3	33.3	25.8	10.2	16.7	11.2	50.0	22.4	0.169	0.336
>2 Paid Staff Members (Full-time)	55.3	10.8	58.6	20.1	75.0	25.0	33.3	33.3	54.6	12.4	50.0	15.1	66.7	21.1	0.869	0.824
Residence Characteristics																
Private Baths	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---
Single Rooms	46.3	10.4	71.7	20.1	75.0	25.0	66.7	33.3	40.8	11.9	50.0	15.1	16.7	16.7	0.251	0.250
TV Room/Common Area	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---
Family-Style Meals Provided	74.9	9.5	84.9	15.1	75.0	25.0	100.0	0.0	72.7	11.1	75.0	13.1	66.7	21.1	0.574	0.979
Non-smoking Areas	95.0	5.0	100.0	0.0	100.0	0.0	100.0	0.0	94.0	6.0	91.7	8.3	100.0	0.0	---	---
Handicap Accessible	8.8	6.3	0.0	0.0	0.0	0.0	0.0	0.0	10.6	7.6	8.3	8.3	16.7	16.7	---	0.682
Resident Expectations																
Mandated Substance Abuse Treatment	63.7	10.1	84.9	15.1	75.0	25.0	100.0	0.0	59.2	11.9	50.0	15.1	83.3	16.7	0.301	0.176
Mandated AA/NA Participation	79.0	8.5	58.6	20.1	75.0	25.0	33.3	33.3	83.3	9.3	83.3	11.2	83.3	16.7	0.249	0.563
Regular (At least weekly) House Meetings	77.5	9.1	100.0	0.0	100.0	0.0	100.0	0.0	72.7	11.1	75.0	13.1	66.7	21.1	---	0.825
Assigned House Chores	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---
Food Preparation Responsibilities	95.0	5.0	100.0	0.0	100.0	0.0	100.0	0.0	94.0	6.0	91.7	8.3	100.0	0.0	---	---
Curfew	95.0	5.0	100.0	0.0	100.0	0.0	100.0	0.0	94.0	6.0	91.7	8.3	100.0	0.0	---	---
Residents Cannot Stay Out Overnight	5.0	3.5	28.3	20.1	25.0	25.0	33.3	33.3	0.0	0.0	0.0	0.0	0.0	0.0	---	0.615
Guests Cannot Stay in Resident Rooms Overnight	95.0	5.0	100.0	0.0	100.0	0.0	100.0	0.0	94.0	6.0	91.7	8.3	100.0	0.0	---	---
Substance Use Prohibited Outside of the House	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---
Payment																
Total Monthly Fees (M, SE)	340.4	18.6	306.6	40.9	308.5	60.4	303.7	46.3	347.6	20.8	351.7	24.9	336.8	37.5	0.381	0.680
Accepts Payment in Food Stamps	48.5	10.7	69.7	17.5	50.0	28.9	100.0	0.0	44.0	12.4	41.7	14.9	50.0	22.4	0.279	0.410
Client Retains DPA Card	90.1	6.7	100.0	0.0	100.0	0.0	100.0	0.0	87.9	8.1	83.3	11.2	100.0	0.0	---	---
Sources of Revenue (% of Total Budget; M, SE)																
State/Municipal/Grant Funding	13.6	4.0	55.4	15.3	60.0	21.2	48.3	20.9	4.6	3.6	1.7	1.7	12.5	12.5	0.004	0.368
Self-pay	61.6	7.0	31.4	16.3	31.3	22.9	31.7	21.7	68.1	7.7	72.1	9.2	57.5	13.9	0.055	0.332
Charitable Contributions	10.9	5.4	1.5	1.5	2.5	2.5	0.0	0.0	12.9	6.5	12.1	7.8	15.0	11.5	0.103	0.939
Write-off/unable to collect ^b	13.9	5.0	11.7	8.4	6.3	4.7	20.0	20.0	14.4	5.8	14.2	7.6	15.0	6.7	0.793	0.740
Note: N's indicate the actual number of homes of each type in the sample but estimates are weighted to reflect the population of recovery homes in Philadelphia during the study period (see Figure 1).																
^a Of houses (N=14) that have a planned length of stay.																
^b This includes having the parent organization absorb costs of running the house.																
--- cannot be computed.																

Table 2 provides estimates of the prevalence of various organizational and operational characteristics of recovery homes in Philadelphia by funding source and gender served (within funding source) based on data provided by participating site contacts. Bullets summarizing key findings from this table are listed below:

- *Organizational Status, Structure, and Oversight.* All of the homes in Philadelphia are privately run (there are no homes run by federal, state, or local entities) and the majority reported operating as non-profit rather than for-profit organizations. Nearly all (97%) operated independently as opposed to being part of a larger organization such as a hospital, university, criminal justice facility, or religious organization. However, most (78%) reported being one of several homes operated by a larger parent organization. State-licensed treatment providers were excluded from this study and no homes were reported to be accredited by common substance abuse treatment oversight bodies such as JCAHO or CARF. None of these characteristics were found to vary by funding source or by gender of residents served.
- *Operational Characteristics.* On average, homes had a capacity of 17 slots. While some homes were reported not to have a planned length of stay, those that did had an average planned length of stay of 58 weeks (more than a year). On average, the typical length of stay was reported to be shorter (41 weeks). Approximately 32% of homes currently had a waitlist and the majority (55%) reported having more than two full-time staff members. None of the operational characteristics examined varied significantly by funding source or by gender of residents served.
- *Residence Characteristics.* In terms of amenities, no homes had private bathrooms but nearly half (46%) reported having some single rooms. All had a TV room or common lounge area for residents and nearly all (95%) had designated non-smoking areas. The majority (75%) offered family-style meals and very few (9%) were handicap accessible. None of these residence characteristics varied significantly by funding source or by gender of residents served.
- *Resident Expectations.* An estimated 64% of the homes mandated that residents participate in substance abuse treatment and 79% mandated that residents attend AA/NA meetings. The majority (78%) of homes held house meetings at least once a week. All assigned house chores and nearly all (95%) expected residents to be involved in food preparation. All houses prohibited use of substances both inside and *outside* of the house, and nearly all (95%) had a curfew and prohibited residents from having guests in the home overnight. Overall, a much smaller percent (5%) of homes prohibited residents from staying out overnight; 28% of OAS-funded homes prohibited this but none of the unfunded homes did (although all homes had rules for residents about this). No other resident expectations varied significantly by funding source or by gender of residents served.
- *Payment/Fees.* Site contacts were asked to report on how much it cost residents to stay at the home—how much of this was collected in cash and in food stamps and whether it was collected on a weekly or monthly basis. The cash and food stamp amounts were summed and, if payment was collected on a weekly basis, it was multiplied by four in order to get a monthly equivalent. On average, homes collected \$340.40/month from residents. Almost half (49%) of the homes reported collecting some portion of the fees in food stamps. Site contacts were also asked whether residents who received benefits from the Department of Welfare were able to retain their benefits cards, and residents in nearly all (90%) houses were able to do so. No differences were found by funding source or gender of residents served.

- *Sources of Revenue.* The largest source of revenue for recovery homes was the residents themselves; across all homes, self-pay was reported to be, on average, 62% of all revenue. However, sources of revenue varied significantly between OAS-funded and unfunded homes. Not surprising, OAS-funded homes reported a larger portion of their revenue coming from state/municipal/grant funding (B=50.7, p=0.004) and a smaller portion of their revenue coming from self-pay sources (B=-36.7, p=0.055). On average, homes reported writing-off or being unable to collect 14% of their revenue.

Table 3 provides estimates of the prevalence of various resident and service delivery characteristics of recovery homes in Philadelphia by funding source and gender served (within funding source) based on data provided by participating site contacts. Key findings from this table are bulleted below.

- *Types of Residents Accepted.* None of the homes accepted individuals under 18 years of age. All homes reported accepting residents on psychiatric medication, those involved in the criminal justice system, and individuals who were HIV+ or identified as lesbian/gay/bisexual/transgender/intersex. The majority of homes also reported accepting residents who were currently homeless or living on the streets (73%), employed full-time (81%), not currently in substance abuse treatment (66%), methadone maintained (55%), and non-English speaking (60%). The only differences that appeared among different type of homes pertained to the acceptance of clients who were employed full-time; homes that served males were more likely than homes serving females to accept clients who were employed full-time (OR=2.3, p=0.026). Only 36% of homes required any amount of sobriety for admission. And despite the general inclusiveness of residents accepted into the homes, the majority (76%) reported having exclusionary criteria and not accepting residents with a history of certain criminal offenses (e.g., arson, violence, sex offenses), active warrants, or severe medical or mental health service needs.
- *Program Type, Orientation.* Site contacts were asked to report on the extent to which their program was based on 12-step principles and how they would describe their programming. The majority (71%) identified their residence as a recovery home, with a smaller percent identifying as a social model/Sober Living House (SLH; 15%) or as a “transitional house” (14%) which was described as being something in between a recovery home and a SLH. None of the homes identified as an Oxford House (OH). The vast majority of homes (89%) reported being quite a bit or very much 12-step oriented. No differences were found in these characteristics by funding source or by gender of residents served.

Table 3. Client and Service Delivery Characteristics

	All Homes (N=25)		OAS-Funded						Unfunded						Test of Funding	Test of Gender	
			Total (N=7)		Male (N=4)		Female (N=3)		Total (N=18)		Male (N=12)		Female (N=6)				
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	p	p	
Type of Clients Accepted																	
Adolescents (age <18)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---
Homeless/living on the Streets	73.4	9.0	69.7	17.5	50.0	28.9	100.0	0.0	74.2	10.2	83.3	11.2	50.0	22.4	0.826	0.407	
Employed Full-time	81.0	6.4	56.6	21.9	50.0	28.9	66.7	33.3	86.2	6.2	100.0	0.0	50.0	22.4	0.142	0.026	
NOT Currently in Substance Abuse Treatment	66.4	10.3	71.7	20.1	75.0	25.0	66.7	33.3	65.2	11.7	58.3	14.9	83.3	16.7	0.789	0.405	
Methadone Maintained	55.0	10.7	71.7	20.1	75.0	25.0	66.7	33.3	51.5	12.2	58.3	14.9	33.3	21.1	0.438	0.397	
Non-English Speaking	59.9	10.4	28.3	20.1	25.0	25.0	33.3	33.3	66.7	11.8	66.7	14.2	66.7	21.1	0.163	0.946	
On Psychiatric Medication	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---	
Involved in the Criminal Justice System	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---	
HIV+	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---	
Lesbian/Gay/Bi-sexual/Transgender/Intersex	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---	
Some Length of Sobriety Required for Admission	36.2	10.5	28.3	20.1	25.0	25.0	33.3	33.3	37.9	12.0	33.3	14.2	50.0	22.4	0.698	0.540	
Exclusionary Criteria^a	76.4	8.7	86.8	13.2	100.0	0.0	66.7	33.3	74.2	10.2	83.3	11.2	50.0	22.4	0.519	0.146	
Program Type (Self-Identified)^b															---	0.312	
Social Model/Sober Living House	14.9	7.8	0.0	0.0	0.0	0.0	0.0	0.0	18.1	9.5	25.0	13.1	0.0	0.0			
Recovery Home	71.3	9.6	100.0	0.0	100.0	0.0	100.0	0.0	65.2	11.7	58.3	14.9	83.3	16.7			
Transitional (Somewhere between the two)	13.7	7.7	0.0	0.0	0.0	0.0	0.0	0.0	16.7	9.3	16.7	11.2	16.7	16.7			
Quite a bit or Very Much 12-Step Oriented	88.9	6.7	86.8	13.2	100.0	0.0	66.7	33.3	89.4	7.6	91.7	8.3	83.3	16.7	0.864	0.396	
Services and Programming Provided^c																	
Intake Screening	97.3	2.7	84.9	15.1	75.0	25.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---	
New Resident Orientation	82.8	8.1	86.8	13.2	100.0	0.0	66.7	33.3	81.9	9.5	75.0	13.1	100.0	0.0	0.776	0.373	
Resident Handbook	31.3	9.3	56.6	21.9	50.0	28.9	66.7	33.3	25.8	10.2	16.7	11.2	50.0	22.4	0.218	0.156	
Rules Clearly Posted	46.5	10.8	58.6	20.1	75.0	25.0	33.3	33.3	44.0	12.4	41.7	14.9	50.0	22.4	0.550	0.979	
Substance Abuse Education Groups	53.8	10.9	71.7	20.1	75.0	25.0	66.7	33.3	50.0	12.5	50.0	15.1	50.0	22.4	0.411	0.996	
12-Step Groups	72.5	9.8	71.7	20.1	75.0	25.0	66.7	33.3	72.7	11.1	75.0	13.1	66.7	21.1	0.966	0.695	
Mentoring and Peer Support	81.3	8.7	100.0	0.0	100.0	0.0	100.0	0.0	77.3	10.5	75.0	13.1	83.3	16.7	---	0.650	
Drug Testing	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	---	---	
Alcohol Testing	56.1	10.5	28.3	20.1	25.0	25.0	33.3	33.3	62.1	12.0	66.7	14.2	50.0	22.4	0.215	0.539	
Individual Counseling	32.8	9.8	58.6	20.1	75.0	25.0	33.3	33.3	27.3	11.1	25.0	13.1	33.3	21.1	0.198	0.972	
Group Counseling	40.1	10.8	43.4	21.9	50.0	28.9	33.3	33.3	39.4	12.2	41.7	14.9	33.3	21.1	0.872	0.679	
Case management	36.6	9.9	58.6	20.1	75.0	25.0	33.3	33.3	31.9	11.3	25.0	13.1	50.0	22.4	0.271	0.544	
Discharge Planning	47.7	10.4	86.8	13.2	100.0	0.0	66.7	33.3	39.4	12.2	41.7	14.9	33.3	21.1	0.080	0.678	
Aftercare/Continuing Care	40.4	9.8	58.6	20.1	75.0	25.0	33.3	33.3	36.5	11.1	25.0	13.1	66.7	21.1	0.356	0.247	
Domestic Violence Education/Groups	11.4	5.4	43.4	21.9	50.0	28.9	33.3	33.3	4.6	4.6	0.0	0.0	16.7	16.7	0.057	0.310	
TB/Hepatitis Testing	27.2	9.2	41.5	20.1	25.0	25.0	66.7	33.3	24.2	10.3	33.3	14.2	0.0	0.0	0.433	0.272	
HIV Testing	51.2	10.6	84.9	15.1	75.0	25.0	100.0	0.0	44.0	12.4	41.7	14.9	50.0	22.4	0.140	0.504	
HIV/STD Education	62.6	10.2	100.0	0.0	100.0	0.0	100.0	0.0	54.6	12.4	50.0	15.1	66.7	21.1	---	0.451	
Transportation Assistance	76.0	9.2	69.7	17.5	50.0	28.9	100.0	0.0	77.3	10.5	75.0	13.1	83.3	16.7	0.706	0.438	
Assistance in Obtaining Benefits	64.0	10.3	58.6	20.1	75.0	25.0	33.3	33.3	65.2	11.7	58.3	14.9	83.3	16.7	0.774	0.604	
Employment Readiness Counseling	22.8	7.8	58.6	20.1	75.0	25.0	33.3	33.3	15.2	8.4	8.3	8.3	33.3	21.1	0.063	0.421	
Job Training/Referral	86.3	7.2	71.7	20.1	75.0	25.0	66.7	33.3	89.4	7.6	91.7	8.3	83.3	16.7	0.356	0.548	

Note: N's indicate the actual number of homes of each type in the sample but estimates are weighted to reflect the population of recovery homes in Philadelphia (N=216) during the study period.

^aExamples of exclusionary criteria included a history of certain criminal offenses (arson, violence, sex offenses), active warrants, and severe medical or mental health service

^bFunding source and gender tests run on recovery home versus not

^cServices provided refers to services provided onsite.

- Services Provided.* Although recovery homes are not licensed treatment providers many homes reported offering a range of services to their residents onsite at the home (as opposed to offering these services via referral to another program). Nearly all reported conducting an intake screening on new residents (97%) and new resident orientation (83%). Nearly one third (31%) provided new residents with a residents handbook and nearly half (47%) had rules for residents clearly posted. The majority offered 12-step groups (73%), substance abuse education groups (54%), mentoring and peer support (81%), and alcohol testing (56%). All homes reported offering drug testing. Approximately 33% reported offering individual counseling, 40% reported offering group counseling, 37% reported providing case management services, 48% reported providing discharge planning, and 40% reported providing aftercare or continuing care. Many also reported offering other sorts of ancillary services such as domestic violence education (11%), HIV/STD education (63%), and testing for HIV (51%) and TB/hepatitis (27%). Many also reported providing transportation assistance to residents (76%), assistance in obtaining benefits (64%), job training and referrals (86%), and employment readiness counseling (23%). When differences among different types of homes emerged, it was generally the case that OAS-funded homes were more likely to report providing a service than unfunded homes. For example, OAS-funded homes were more likely to report offering domestic violence education/groups (OR=2.8, p=0.057), discharge planning (OR=2.3, p=0.80), employment readiness counseling (OR=2.1, p=0.063).

Because we were interested in how recovery homes in Philadelphia compared to other types of recovery residences, namely Sober Living Houses in California, we also collected data on adherence to the Social Model of recovery. Scores on the Social Model Philosophy Scale were tallied and the cut-point of 75% of the total of 33 items (i.e., a raw score of 24.74 or greater) was used to identify whether a home operated in accordance to the principles of the Social Model of recovery. Percentage scores ranged from 52.4 to 85.5. As Table 4 illustrates, on average, homes scored 66.2 (SE=1.4), and approximately 11% (SE=6.8) scored high enough to be considered social model programs. Scores were lowest in the realm of governance. 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=0.011).

Table 4. Social Model Philosophy Scores by Domain

	All Homes		OAS-Funded						Unfunded						Test of Funding <i>p</i>	Test of Gender <i>p</i>
	(N=25)		Total (N=7)		Male (N=4)		Female (N=3)		Total (N=18)		Male (N=12)		Female (N=6)			
	M	SE	M	SE	M	SE	M	SE	M	SE	%	SE	%	SE		
Physical Environment	78.2	2.1	75.2	3.9	74.2	5.3	76.8	5.7	78.8	2.4	78.3	3.1	80.3	3.1	0.442	0.640
Staff Role	57.4	3.8	43.3	4.1	48.0	6.2	36.0	4.0	60.4	4.6	60.5	5.3	60.0	8.9	0.011	0.615
Authority Base	89.2	2.5	90.6	4.8	89.3	6.4	92.7	7.3	88.9	2.9	89.8	3.5	86.7	4.9	0.765	0.761
View of Dealing with Substance Abuse	89.3	1.9	94.1	2.9	96.4	3.6	90.5	4.8	88.3	2.2	89.3	2.7	85.7	3.7	0.125	0.368
Governance	10.2	3.0	11.1	5.9	15.6	9.4	4.2	4.2	10.1	3.4	8.3	3.9	14.6	6.8	0.879	0.676
Community Orientation	75.3	2.0	75.5	4.0	74.4	5.3	77.2	6.1	75.2	2.3	74.8	2.9	76.4	3.3	0.954	0.640
Total Score	66.2	1.4	65.4	2.0	67.8	3.4	61.8	0.5	66.3	1.7	66.3	1.5	66.4	4.5	0.744	0.763

This study represents the first to systematically and comprehensively study recovery homes in Philadelphia. Findings from data collected from recovery home site contacts indicate that studying recovery homes is indeed feasible. The overwhelming majority of the recovery home owners and operators we contacted throughout the course of the study were knowledgeable, helpful, and seemed to understand the potential value of research on recovery homes. Indeed, of all homes sampled for potential participation, only five homes were classified as refusals and they were part of just two different parent organizations. A far larger obstacle encountered in the course of the study was how frequently homes opened, closed, moved, changed the clientele served, or the nature of the programming offered. This may speak to inherent difficulties in operating a recovery home and to the financial and operational supports that need to be in place in order to sustain recovery residences. Indeed, our study was undertaken shortly after the state of Pennsylvania ended its general assistance program which many recipients used to cover housing expenses—often in recovery homes, and this may have been related to the number of closures observed. Research on the factors that promote and inhibit the operation of recovery homes is needed to address these issues. We are still in the process of analyzing qualitative data collected from our site contacts and anticipate that these data will help highlight some of these barriers.

Our findings also suggest that recovery homes provide a vital service, well beyond a roof over one's head, to individuals struggling to overcome addiction. Although recovery homes in Philadelphia are not licensed treatment providers, we found that these homes had rules and expectations for their residents, operated in a therapeutically-oriented manner, and offered a range of different services to their residents—all for what we believe is a reasonable monthly fee. Recovery homes in Philadelphia may also be different from other types of recovery residences. In this study, we found that the majority of recovery homes in Philadelphia had two or more full-time staff members, making them quite different from Oxford Houses, which describe themselves as being “self-run” by the residents themselves. We also found that only 11% of homes in Philadelphia would be classified as a true Social Model programs, implementing principles on which Sober Living Houses in California are based. Qualitative data from our site contact interviews may help identify reasons why individuals operate recovery homes and what they hope to accomplish with them that may help to explain these differences.

Recovery Home Residents

In order to test the feasibility of studying recovery home residents and to understand who lives in recovery homes and how they may help residents, a stratified random subsample of 12 recovery homes whose site contact completed an interview were selected to have their residents participate in a focus group and complete a self-administered questionnaire at the end of it. A 13th house was later selected due to an audio recording malfunction that occurred in an OAS-funded house serving females. Unfortunately, even though we had just completed site contact interviews, we still found that homes had closed prior to being able to conduct the focus group at the home and had one operator who never got back to us about setting up the focus group that we considered a passive refusal, forcing us to sample alternate homes.

Focus groups were scheduled to take place during a regularly scheduled meeting time or at another time when all residents were likely to be on the premises. All resident focus groups were completed between November 2012 and May 2013. A flyer inviting residents to participate was posted to let residents know when the focus group was going to be held. Residents were considered eligible if they were 18 years of age or older and currently living in the home

(regardless of tenure). Residents were considered ineligible if they were court stipulated to reside at the house, on electronic monitoring by the criminal justice system, or exhibiting signs of cognitive impairment prohibiting them from providing informed consent. Of the 136 residents living in the homes at the time the focus groups were held, a total 104 residents participated in them, constituting a 76% participation rate. A total of 24 participants did not participate in the focus groups because they were not home at the time of the focus group, 6 were ineligible, and 2 signed in and were deemed eligible but did not ultimately participate in the focus group (representing a 1% refusal rate).

The focus group covered topics of help-seeking (how residents learned about and decided to live in the recovery home), service use, and their day-to-day experiences living in the home. We also asked residents what they thought was important for others who did not know about recovery homes to know about them. Focus groups generally lasted anywhere from 20-50 minutes. At the end of the focus group, residents completed a self-administered questionnaire that asked about their background, substance use history, and current treatment status and quality of life using the World Health Organization's (WHO) QOL-Bref.

Table 5 presents focus group participant sample characteristics. Because, in theory, residents who are living in the OAS-funded houses met certain need-based eligibility requirements and received certain services based on those needs, we examined differences between those sampled from OAS-funded and unfunded homes. As this table shows, the majority of the sample was female (59%; but houses serving females were oversampled by design), African American (54%), and age 40 or older (59%). Over a third of the sample (37%) had less than a high school education and only a little more than a quarter of the sample (26%) were currently working for pay. Approximately 24% were in some way involved in the criminal justice system and nearly 81% were receiving some sort of financial assistance such as VA benefits, unemployment compensation, disability, SNAP or TANF. Before coming to the recovery home almost 9% had been living in a shelter and 12% had been living on the streets. Another 37% had been living in some sort of residential treatment setting and 5% has been in a correctional setting. The vast majority (74%) of these adults had children and 20% had been living with their children prior to moving into the recovery home, meaning that they were now living away from their children. The majority of the residents (55%) had been living at the recovery residence for more than a month and 64% reported that they had been in recovery more than 6 months, suggesting that many came into the recovery home with some amount of sobriety achieved. The only significant difference between residents in OAS-funded versus unfunded homes was a greater percentage of residents in the unfunded homes (33% vs. 9%) reported working for pay.

Table 6 displays information about substance abuse history, treatment status, and quality of life. Approximately 32% reported using any substances in the 30 days prior to moving into the recovery home and 9% reported injecting drugs in the 30 days prior to moving in. The majority of the residents (64%) were currently in substance abuse treatment (over half in intensive outpatient treatment), and 54% were attending 5 or more AA/NA meetings a week. Residents in OAS-funded homes were more likely to be in treatment. Regarding quality of life, the majority reported that their overall quality of life was "good" or "very good" (78%) and that they were "satisfied" or "very satisfied" with their health (65%). However domain scores on the WHO QOL- Bref told a slightly different story. Scores on this measure range from 0-100. And although data on norms for this measure are limited, work that has been done generally puts average scores for the general population in the 70's. Scores in all domains for this sample were

below 70, with physical health having the lowest score ($M=56.2$, $SD=13.9$).

Table 5. Resident Focus Group Participant Characteristics (N=104)

	Full Sample (N=104)		Unfunded (N=70)		OAS-Funded (N=34)		p
	n	%	n	%	n	%	
Gender							0.653
Male	43	41.4	30	42.9	13	38.2	
Female*	61	58.7	40	57.1	21	61.8	
Race/Ethnicity							0.461
White	30	29.4	22	32.4	8	23.5	
Black	55	53.9	37	54.4	18	52.9	
Hispanic	14	13.7	7	10.3	7	20.6	
Other	3	2.9	2	2.9	1	2.9	
Age							0.819
20-29	17	16.7	10	14.7	7	20.6	
30-39	25	24.5	18	26.5	7	20.6	
40-49	40	39.2	25	36.8	15	44.1	
50-59	16	15.7	12	17.7	4	11.8	
60-69	4	3.9	3	4.4	1	2.9	
Highest Level of Education							0.758
Less than highschool	38	36.5	28	40.0	10	29.4	
Highschool/GED	31	29.8	20	28.6	11	32.4	
Post-highschool technical/vocational training	10	9.6	7	10.0	10	8.8	
Some college	21	20.2	12	17.1	9	6.5	
College degree	4	3.9	3	4.3	1	2.9	
Length of Time in Recovery							0.077
1-2 weeks	7	6.7	2	2.9	5	14.7	
3-4 weeks	4	3.9	2	2.9	2	5.9	
1-3 months	26	25.0	17	24.3	9	26.5	
4-6 months	18	17.3	11	15.7	7	20.6	
More than 6 months	49	47.1	38	54.3	11	32.4	
Length of Time in the Recovery Home							0.433
1-2 weeks	9	8.7	4	5.7	5	14.7	
3-4 weeks	12	11.5	8	11.4	4	11.8	
1-3 months	41	39.4	26	37.1	15	44.1	
4-6 months	16	15.4	12	17.1	4	11.8	
More than 6 months	26	25.0	20	28.6	6	17.7	
Prior Living Arrangements							0.152
Shelter	9	8.7	6	8.6	3	8.8	
Residential treatment/halfway house	38	36.5	27	38.6	11	32.4	
Own apartment/home	20	19.2	16	22.9	4	11.8	
In a friend/family member's home	20	19.2	11	15.7	9	26.5	
Jail/prison	5	4.8	1	1.4	4	11.8	
On the streets	12	11.5	9	12.9	3	8.8	
Have Children (N=103)	76	73.8	48	69.6	28	82.4	0.165
Number of Children (N=76; M, SD)	3	2.0	3	1.9	3	2.0	0.462
Living with Children (Prior to Resident Move in)	21	20.2	14	20.0	7	20.6	0.944
Current Working for Pay (N=102)	26	25.5	23	32.9	3	9.4	0.014
Receiving Financial Assistance (e.g., VA benefits, unemployment, SNAP, TANF)	84	80.8	56	80.0	28	82.4	0.775
Legal Status (N=103)							0.031
On probation/parole/supervision	24	23.3	21	17.1	12	36.4	
Not involved in the criminal justice system	79	76.7	58	82.9	21	63.6	

NOTE: Valid percentages are presented. Differences between residents in OAS- and unfunded houses were tested using Pearson Chi-square, Fisher's exact, and unpaired t-tests. These tests do not correct for the clustering of residents within homes.

* Female houses were oversampled.

Table 6. Focus Group Participant Substance Abuse, Treatment, and Quality of Life (N=104)

	Full Sample (N=104)		Unfunded (N=70)		OAS Funded (N=34)		p
	n	%	n	%	n	%	
Drug Use History (Use Ever)							
Alcohol	104	100.0	70	100.0	34	100.0	
Heroin/Methadone/Opiates/Analgesics	44	42.3	29	41.4	15	44.1	0.795
Barbiturates/Sedatives	38	36.5	24	34.3	14	41.2	0.494
Cocaine/Crack	76	73.1	49	70.0	27	79.4	0.310
Stimulants (Amphetamines, Methamphetamines, etc)	31	29.8	20	28.6	11	32.4	0.692
Cannabis	53	51.0	36	51.4	17	50.0	0.891
Hallucinogens	26	25.0	17	24.3	9	26.5	0.813
Inhalants	16	15.4	10	14.3	6	17.7	0.773
Multiple substances per day	43	41.4	32	45.7	11	32.4	0.194
Substance Use 30 Days Prior to Move In	33	31.7	22	31.4	11	32.4	0.924
Injection Drug Use History	26	25.0	16	22.9	10	29.4	0.469
Injection Drug Use 30 Days Prior to Move In	9	8.7	5	7.1	4	11.8	0.432
AA/NA Meeting Attendance							0.693
7 or more meetings a week	28	26.9	20	28.6	8	23.5	
5-6 meetings a week	28	26.9	19	27.1	9	26.5	
3-4 meetings a week	27	26.0	18.0	25.7	9	26.5	
1-2 meetings a week	14	13.5	10	14.3	4	11.8	
No meetings on a regular basis	7	6.7	3	4.3	4	11.8	
Currently in Treatment	66	63.5	38	54.3	28	82.4	0.005
Treatment Type (Of Those in Treatment; N=66)							0.975
Regular outpatient (OP)	24	36.4	13	34.2	11	39.3	
Intensive outpatient (IOP)	36	54.6	21	55.3	15	53.6	
Methadone maintenance	3	4.6	2	5.3	1	3.6	
Seeing a therapist/counselor	1	1.5	1	2.6	0	0.0	
Receiving some other treatment	2	3.0	1	2.6	1	3.6	
Treatment Tenure (Of Those in Treatment; N=66)							0.127
1-2 weeks	6	9.1	4	10.5	2	7.1	
3-4 weeks	11	16.7	7	18.4	4	14.3	
1-3 months	18	27.3	7	18.4	11	39.3	
4-6 months	10	15.2	4	10.5	6	21.4	
More than 6 months	21	31.8	16	42.1	5	17.9	
Overall Quality of Life							0.039
Very poor	2	1.9	2	2.9	0	0.0	
Poor	3	2.9	1	1.4	2	5.9	
Neither good nor poor	18	17.3	16	22.9	2	5.9	
Good	63	60.6	37	52.9	26	76.5	
Very Good	18	17.3	14	20.0	4	11.8	
Satisfaction with Health							0.251
Very Dissatisfied	2	1.9	1	1.4	1	2.9	
Dissatisfied	13	12.5	10	14.3	3	8.8	
Neither satisfied nor dissatisfied	21	20.2	17	24.3	4	11.8	
Satisfied	52	50.0	30	42.9	22	64.7	
Very Satisfied	16	15.4	12	17.1	4	11.8	
Quality of Life Domain Scores (0-100)							
Physical health (M, SD)	56.2	13.9	56.3	14.4	55.9	13.0	0.871
Psychological (M, SD)	65.0	17.9	64.3	18.9	66.5	15.8	0.546
Social relationships (N=103; M, SD)	62.5	24.9	61.7	24.6	64.2	25.6	0.634
Environment (M, SD)	64.9	18.9	64.3	20.0	66.3	16.7	0.611

NOTE: Valid percentages are presented. Differences between residents in OAS- and unfunded houses were tested using Pearson Chi-square, Fisher's exact, and unpaired t-tests. These tests do not correct for the clustering of residents within homes.

* Female houses were oversampled.

It is important to note that recovery homes serving females were oversampled, as were OAS-funded homes. However, few differences emerged between residents living in OAS-funded homes versus unfunded homes. The differences that did emerge (fewer residents in OAS-funded homes working and more being enrolled in treatment) are consistent with requirements for residents in OAS-funded homes to be attending intensive outpatient treatment and not working while they are attending treatment. That said, regardless of whether they qualified to live in an OAS-funded home, residents in all homes looked disadvantaged across a variety of dimensions (particularly with respect to education and employment) despite being in recovery and receiving substance abuse treatment. And although residents generally rated their overall quality of life and health-related quality of life positively, scores on the WHO QOL-Bref were generally lower than what has been reported as normative for the general population.

Residents who participated in the focus group and met eligibility requirements (those who could provide three ways to be contacted during the next three months and planned to be living in Philadelphia at the time of the follow-up interview) were randomly sampled to participate in a 3-month follow-up interview. One alternate was sampled from each focus group in the event that we were not able to reach the sampled participant for the follow-up interview. Although we originally planned to follow-up with just 25 residents, because we conducted an extra focus groups session (due to the aforementioned audio-recording malfunction), we followed up with 27. As of 8/5/2013, all 27 follow-up interviews had been completed, and only five of these interviews were with “alternates”, meaning that we were successfully able to complete follow-up interviews with 81% of those individuals who were originally sampled.

The follow-up interview was administered by a research interviewer and was much more extensive than the baseline self-administered questionnaire. In addition to recollecting data on quality of life, the follow-up interview also collected data using a variety of common measures used in studies of substance abusing and substance abuse treatment populations (e.g., the ASI, TSR, RAB, SOCRATES, etc.). This interview lasted anywhere from 45 minutes to an hour and was typically done at the participant’s current residence. As Table 7 shows, the majority of residents at the 3-month follow-up interview were still living in the recovery home from which they were sampled. Approximately 30% were living with others in a private residence (their own or someone else’s home or apartment), and 15% were living in a different recovery home or structured living situation. Unfortunately, we did not start asking residents who were no longer at their recovery home why they left until after data collection had started. Among the 4 respondents from which we did collect this information, only one reported leaving due to a negative experience (not getting along with others in the recovery home); the others left because the home closed (n=1) or because they received financial assistance to live independently on their own (n=2).

Table 7 also shows many positive indicators of recovery status based on information collected in the ASI. Rates of substance abuse in the past 30 days were low (7%), treatment rates were high (93%), and employment rates were higher than at baseline (44%). Also notable is that none of the respondents who participated in the follow-up interview reported being detained/incarcerated or engaging in illegal activities for profit in the past 30 days. A third of the sample (33%) reported serious anxiety at follow-up, and 37% reported serious depression in the past 30 days that was not related to alcohol or drugs. Given what is known about high rates of co-occurring mental disorders among individuals with substance abuse disorders, these rates are not unexpected. However, it interesting to know whether these respondents (over 90% of whom

are in substance abuse treatment) are also receiving treatment to address these mental health problems.

Table 7. Recovery Home Resident Outcomes

	Full Sample (N=27)		Unfunded (N=18)		OAS-Funded (N=9)		p
	n	%	n	%	n	%	
Current Living Arrangements ¹							1.000
In the same recovery home	15	55.6	10	55.6	5	55.6	
Living with others (private home/apartment)	8	29.6	5	27.8	3	33.3	
Structured living situation (recovery home, other group home)	4	14.8	3	16.7	1	11.1	
Reason For Leaving (Among those No Longer at their Recovery Home; N=12)	1						0.632
Did not get along with other residents	1	8.3	1	12.5	0	0.0	
Home closed	1	8.3	0	0.0	1	25.0	
Received supportive housing assistance	2	16.7	2	25.0	0	0.0	
Missing ³	8	66.7	5	62.5	3	75.0	
Employed in the Past 30 Days	12	44.4	8	44.4	4	44.4	1.000
Any Substance Use in Past 30 Days	2	7.4	1	5.6	1	11.1	1.000
Received Substance Abuse Treatment (Outpatient) in the Past 30 Days	25	92.6	17	94.4	8	88.9	0.603
Currently on Parole/Probation	4	14.8	1	5.6	3	33.3	0.093
Presently awaiting charges, trial, or sentence	0	0.0	0	0.0	0	0.0	---
Detained or incarcerated in Past 30 Days	0	0.0	0	0.0	0	0.0	---
Engaged in Illegal Activities for Profit in Past 30 Days	0	0.0	0	0.0	0	0.0	---
Currently Living With Someone with an Alcohol Problem	1	3.7	0	0.0	1	11.1	0.333
Currently Living With Someone who Uses Drugs	0	0.0	0	0.0	0	0.0	---
Emotional Problems in Past 30 Days (Not Related to Alc/Drugs)							
Serious depression	10	37.0	8	44.4	2	22.2	0.406
Serious anxiety	9	33.3	6	33.3	3	33.3	1.000
Hallucinations	1	3.7	1	5.6	0	0.0	1.000
Trouble understanding/concentration	5	18.5	3	16.7	2	22.2	1.000
Other Problems							
Trouble controlling violent behavior	3	11.1	2	11.1	1	11.1	1.000
Suicidal thoughts ²	1	3.7	1	5.6	0	0.0	1.000

NOTE: Female houses were oversampled. Valid percentages are presented. Differences between residents in OAS- and unfunded houses were tested using Pearson Chi-square and Fisher's exact tests. These tests do not correct for the clustering of residents within homes.

¹No one reported living in a homeless shelter, on the streets, or in an institutional setting.

²No one reported suicide attempts in the past 30 days.

³This question was not part of the original assessment and added to the study after these residents had been interviewed.

Because we administered the WHO QOL-Bref at baseline and follow-up, we could look at changes in these scores across the two interviews. Table 8 displays the mean scores at baseline and follow-up for all domains for the full sample and separately for residents sampled from OAS-funded and unfunded homes. This table also displays results from a linear mixed effects model testing the effect of interview time frame (baseline vs. follow-up) on domain scores while controlling for OAS funding status. As this table shows, there were no statistically significant differences in scores on any of the domains from baseline to follow-up.

Table 8. Changes in QOL from Baseline to Follow-up

	Full Sample (N=27)				Unfunded (N=18)				OAS-Funded (N=9)				<i>p</i>
	Baseline		Follow-up		Baseline		Follow-up		Baseline		Follow-up		
	M	SE	M	SE	M	SE	M	SE	M	SE	M	SE	
Quality of Life Domain Scores (0-100)													
Physical health (M, SD)	54.2	2.1	54.0	2.2	54.9	3.0	53.9	2.9	52.8	1.8	54.3	3.0	0.950
Psychological (M, SD)	68.5	2.5	63.8	2.1	67.0	3.5	62.2	2.9	71.6	2.6	66.9	2.1	0.130
Social relationships (N=103; M, SD)	61.0	4.1	62.2	3.0	61.7	5.6	61.1	3.8	59.7	5.8	64.6	5.0	0.813
Environment (M, SD)	64.9	3.2	64.7	2.9	62.8	4.3	63.0	4.0	68.9	4.2	68.2	2.8	0.978

NOTE: Means and standard errors are unadjusted. Linear mixed effects models tested the effect of interview time frame (baseline vs. follow-up) and controlled for OAS funding. Models do not correct for potential clustering of residents within homes.

In sum, data from residents attending the focus groups in Philadelphia recovery homes describe a highly disadvantaged and vulnerable population who, in addition to addiction, are struggling with low educational attainment, high unemployment, and unstable living arrangements, despite achieving some amount of sobriety and receiving both formal treatment and peer-based services. Although a variety of indicators collected at the 3-month follow-up interview look encouraging, such as low rates of substance use and involvement in the criminal justice system, high rates of treatment engagement, and more encouraging rates of employment, quality of life domain scores remained unchanged. This could be because the 3-month follow-up window is insufficient to capture how living in a recovery residence may affect quality of life, or it could be because much more than what is being offered to clients in a recovery home is needed to appreciably change the quality of one’s life. More work is needed to address these questions. We are still in the process of analyzing the resident focus group data and have only begun to look at the data collected from residents at follow-up. We anticipate that this work will help address what residents living in recovery homes need, what help they receive, and what else may be needed to support long-term recovery.

Recovery Home Alumni

Because our follow-up window was relatively short (3-months) and potentially too short to assess recovery home outcomes fairly, we added a component to the study to collect information from alumni of recovery homes. In the process of collecting data from site contacts, we learned of two recovery homes that regularly held meetings for their alumni, and we used these meetings to conduct focus groups with alumni and to collect data (via a self-administered questionnaire) from the alumni who attended. Although we are still in the process of analyzing the data from the alumni focus group, Table 9 presents characteristics of the alumni focus group participants. A total of 22 alumni participated in the focus groups and 20 of them filled out self-administered questionnaires. The majority of the alumni were female and half were White. Like the residents, the majority (55%) were 40 or older. Unlike respondents in the resident sample, more alumni had college degrees and many fewer had less than a high school degree. Approximately 42% reported living in their recovery home for more than a year and 40% reported being in recovery for more than 5 years. The majority (65%) of respondents was employed, and only 5% reported being currently involved in the criminal justice system. Although only 12% reported currently attending treatment, the majority (65%) was regularly attending AA/NA meetings and actively involved in the recovery community as a sponsor or in some other way.

Table 9. Alumni Focus Group Sample Characteristics

	n	%
Female	13	65.0
Race/Ethnicity		
White	10	50.0
Black	8	40.0
Hispanic	2	10.0
Other	0	0.0
Age		
20-29	2	10.0
30-39	7	35.0
40-49	7	35.0
50-59	3	15.0
60-69	1	5.0
Highest Level of Education		
Less than highschool	3	15.0
Highschool/GED	8	40.0
Post-highschool technical/vocational training	2	10.0
Some college	3	15.0
College degree	4	20.0
Length of Time in Recovery		
3 month-1 year	3	15.0
1-5 years	9	45.0
More than 5 years	8	40.0
Length of Time in the Recovery Home (N=19)		
Less than one month	1	5.3
1-3 months	2	10.5
4-6 months	5	26.3
7-12 months	3	15.8
More than a year	8	42.1
Current Living Arrangements		
Alone	5	25.0
With others	13	65.0
In a recovery house	2	10.0
Current Employment		
Working for pay full-time	7	35.0
Working for pay part-time	5	25.0
Working for pay in multiple ways	1	5.0
Not working for pay	7	35.0
Legal Status (N=103)		
On probation/parole/supervision	1	5.0
Not involved in the criminal justice system	19	95.0
AA/NA Meeting Attendance		
7 or more meetings a week	1	5.0
5-6 meetings a week	2	10.0
3-4 meetings a week	3	15.0
1-2 meetings a week	7	35.0
No meetings on a regular basis	7	35.0
Currently in Treatment (N=17)	2	11.8
Participating in a Recovery Center (N=17)	1	5.9
Sponsoring Someone in Recovery (N=17)	9	52.9
Other Involvement in the Recovery Community** (N=17)	11	64.7
NOTE: Valid percentages are presented.		
*22 Alumni participated in the focus groups but 2 left prior to completing their self-administered questionnaire. recovery home or other organization		

As we did with the current residents in the recovery homes, we also administered the WHO QOL-Bref to alumni. As Table 10 displays, all domain scores for alumni were higher than for current residents and much closer to general population norms, perhaps indicating that more time is needed for the gains derived from these home to be evident.

Table 10. WHO QOL-Bref Domain Scores for Alumni Participants (N=20)

	M	SD
Quality of Life Domain Scores (0-100)		
Physical health	69.3	22.7
Psychological	79.4	7.9
Social relationships	70.4	18.3
Environment	76.4	9.9

Findings from this study demonstrate the feasibility of conducting research on Philadelphia recovery homes and recovery home residents. Data from recovery home operators suggest that recovery homes provide a vital service to individuals struggling to overcome addiction. Although recovery homes in Philadelphia are not licensed treatment providers, we found that these homes had rules and expectations for their residents, operated in a therapeutically-oriented manner, and offered a range of different services to their residents—all for a reasonable monthly fee. Recovery homes in Philadelphia may also be different from other types of recovery residences across the country. Data from recovery home residents highlight the vulnerability of this population and that many in this population are struggling with variety of problems that complicate their recovery from substance abuse (many related to poverty such as low educational attainment and unemployment). At the 3-month follow-up mark, typical outcome indicators looked favorable, as evidenced by low rates of substance use and involvement in the criminal justice system, high rates of treatment engagement, and more encouraging rates of employment. At the 3-month mark, however, quality of life domain scores remained unchanged. Fortunately, data collected from recovery home alumni were more encouraging in this regard and reflected important shifts upward in quality of life scores. More work on data collected from this study is planned (see 20. Articles Submitted to Peer-Reviewed Publications), including grant applications to further this line of research (see 11(B). Leveraging of Additional Funds).

Summary of progress made on Aim 1:

The objectives of Aim 1 of were fully achieved. Our study demonstrated the feasibility of recruiting and collecting data from recovery home operators (see pages 8-12) and recovery home residents (see pages 19-26). Of the 46 homes sampled, only five homes were classified as refusals (11% refusal rate) and represented just two parent organizations. Of the 136 residents living in the homes at the time the focus groups were held, a total of 104 residents participated in them, constituting a 76% participation rate. A total of 24 participants did not participate in the focus groups because they were not home at the time of the focus group, 6 were ineligible, and 2 signed in and were deemed eligible but did not ultimately participate in the focus group (representing a 1% refusal rate). We were also able to successfully re-contact residents who were randomly sampled to participate in a 3-month follow-up interview. We completed follow-up interviews with 81% of the 27 individuals who were originally sampled and were able to reach

“alternates” to complete the full complement of 27 follow-up interviews. Whenever obstacles were encountered (e.g., homes closing, opening, changing the population served), we fully documented the nature and extent of these obstacles to facilitate future studies of recovery homes and recovery home residents.

Summary of progress made on Aim 2:

The objectives of Aim 2 were also fully achieved; the instrumentation used in this study was sufficient to collect data from recovery home operators and residents (see pages 12-26). Project staff was trained to employ cognitive interviewing techniques in order to ensure that data collection instruments borrowed from other studies and/or adapted for this study were appropriate to use with Philadelphia recovery home operators and residents. However, it was generally rare that participants had questions or difficulties with any of the instrumentation employed and also rare that we needed to make modifications to the instruments in the course of the study to address any difficulties. Minor changes were made to our modified version of the Addiction Treatment Inventory after roll-out to better capture staffing patterns due to the fact that staff in recovery residences often performed a variety of different functions irrespective of their title. For example, the house manager often functioned in the role of a recovery coach, case manager, and intake specialist even though no one was on staff with those titles.

Summary of progress made on Aim 3:

The objectives of Aim 3 were also fully achieved. We were able to gather descriptive data on recovery home operators and residents (see page 13-26). Findings from this study have been presented at scientific conferences and are in the process of being published in scientific journals. Other scientific manuscripts are under-development, and Dr. Mericle plans to apply for additional federal grants to further the study of recovery residences as a critical yet understudied and undervalued component of the substance abuse continuum of care.

18. Extent of Clinical Activities Initiated and Completed. Items 18(A) and 18(B) should be completed for all research projects. If the project was restricted to secondary analysis of clinical data or data analysis of clinical research, then responses to 18(A) and 18(B) should be “No.”

18(A) Did you initiate a study that involved the testing of treatment, prevention or diagnostic procedures on human subjects?

Yes
 No

18(B) Did you complete a study that involved the testing of treatment, prevention or diagnostic procedures on human subjects?

Yes
 No

If “Yes” to either 18(A) or 18(B), items 18(C) – (F) must also be completed. (Do NOT complete 18(C-F) if 18(A) and 18(B) are both “No.”)

18(C) How many hospital and health care professionals were involved in the research project?

 0 Number of hospital and health care professionals involved in the research project

18(D) How many subjects were included in the study compared to targeted goals?

 181 Number of subjects originally targeted to be included in the study
 151 Number of subjects enrolled in the study

Note: Studies that fall dramatically short on recruitment are encouraged to provide the details of their recruitment efforts in Item 17, Progress in Achieving Research Goals, Objectives and Aims. For example, the number of eligible subjects approached, the number that refused to participate and the reasons for refusal. Without this information it is difficult to discern whether eligibility criteria were too restrictive or the study simply did not appeal to subjects.

18(E) How many subjects were enrolled in the study by gender, ethnicity and race?

Gender:

 63 Males
 86 Females
 2 Unknown

Ethnicity:

 17 Latinos or Hispanics
 129 Not Latinos or Hispanics
 5 Unknown

Race:

 1 American Indian or Alaska Native
 1 Asian
 83 Blacks or African American
 0 Native Hawaiian or Other Pacific Islander
 53 White
 2 Other, specify: More than 1 race
 11 Unknown

18(F) Where was the research study conducted? (List the county where the research study was conducted. If the treatment, prevention and diagnostic tests were offered in more than one county, list all of the counties where the research study was conducted.)

Philadelphia County

19. Human Embryonic Stem Cell Research. Item 19(A) should be completed for all research projects. If the research project involved human embryonic stem cells, items 19(B) and 19(C) must also be completed.

19(A) Did this project involve, in any capacity, human embryonic stem cells?

Yes
 No

19(B) Were these stem cell lines NIH-approved lines that were derived outside of Pennsylvania?

Yes
 No

19(C) Please describe how this project involved human embryonic stem cells:

20. Articles Submitted to Peer-Reviewed Publications.

20(A) Identify all publications that resulted from the research performed during the funding period and that have been submitted to peer-reviewed publications. Do not list journal abstracts or presentations at professional meetings; abstract and meeting presentations should be listed at the end of item 17. **Include only those publications that acknowledge the Pennsylvania Department of Health as a funding source** (as required in the grant agreement). List the title of the journal article, the authors, the name of the peer-reviewed publication, the month and year when it was submitted, and the status of publication (submitted for publication, accepted for publication or published.). Submit an electronic copy of each publication or paper submitted for publication, listed in the table, in a PDF version 5.0.5 (or greater) format, 1,200 dpi. Filenames for each publication should include the number of the research project, the last name of the PI, and an abbreviated title of the publication. For example, if you submit two publications for Smith (PI for Project 01), one publication for Zhang (PI for Project 03), and one publication for Bates (PI for Project 04), the filenames would be:

- Project 01 – Smith – Three cases of isolated
- Project 01 – Smith – Investigation of NEB1 deletions
- Project 03 – Zhang – Molecular profiling of aromatase
- Project 04 – Bates – Neonatal intensive care

If the publication is not available electronically, provide 5 paper copies of the publication.

Note: The grant agreement requires that recipients acknowledge the Pennsylvania Department of Health funding in all publications. Please ensure that all publications listed acknowledge the Department of Health funding. If a publication does not acknowledge the funding from the Commonwealth, do not list the publication.

Title of Journal Article:	Authors:	Name of Peer-reviewed Publication:	Month and Year Submitted:	Publication Status (check appropriate box below):
1. Adherence to the Social Model Approach in Philadelphia Recovery Homes	Mericle, AA Miles, J Cacciola, JS Howell, J	International Journal of Self-Help and Self-Care	10/2013	<input type="checkbox"/> Submitted <input checked="" type="checkbox"/> Accepted <input type="checkbox"/> Published
2. A critical component of the substance abuse continuum of care: Recovery homes in Philadelphia.	Mericle, AA Miles, J Cacciola, J	Journal of Community Psychology	12/2013	<input checked="" type="checkbox"/> Submitted <input type="checkbox"/> Accepted <input type="checkbox"/> Published

20(B) Based on this project, are you planning to submit articles to peer-reviewed publications in the future?

Yes X No _____

If yes, please describe your plans:

At present three additional manuscripts are being planned. The titles, author (or lead author), and target journal (if known) are listed below:

- 1) Mericle, AA, Miles, J, Way, F.; What it takes: Recovery residences and the struggle to provide safe and supportive housing for individuals overcoming addiction; *Psychoactive Drugs*.
- 2) Miles et al.; Learning to live life on life's terms: Residents' experiences in Philadelphia recovery homes.
- 3) Mericle et al.; Characteristics and outcomes of residents in Philadelphia recovery homes.

21. Changes in Outcome, Impact and Effectiveness Attributable to the Research Project.

Describe the outcome, impact, and effectiveness of the research project by summarizing its impact on the incidence of disease, death from disease, stage of disease at time of diagnosis, or other relevant measures of outcome, impact or effectiveness of the research project. If there were no changes, insert "None"; do not use "Not applicable." Responses must be

single-spaced below, and no smaller than 12-point type. DO NOT DELETE THESE INSTRUCTIONS. There is no limit to the length of your response.

This research study did not test the efficacy or effectiveness of clinical intervention. Rather it was an addiction health services research study that sought to (1) assess the feasibility of recruiting recovery home directors and recruiting and tracking residents in Philadelphia; (2) evaluate the appropriateness and acceptability of instruments used to assess recovery homes and recovery home residents; (3) gather basic descriptive data on a sample of recovery homes and residents that can be used to generate specific hypotheses about different types of recovery houses and how they may increase recovery capital among residents for a subsequent federally-funded grant application.

Findings from this study demonstrate the feasibility of conducting research on recovery homes and recovery home residents. Data from recovery home residents highlight the vulnerability of this population and data from recovery home operators highlight the need for greater support for this type of community-based service. Dr. Mericle’s collaboration with key stakeholders (other recovery residence researchers, the City of Philadelphia, as well as local and national recovery residence organizations) and advocacy for recovery residences has helped raise awareness about the importance of safe and supportive housing for Pennsylvanians struggling to overcome addiction and about what recovery home operators in Philadelphia are doing to address these needs.

22. Major Discoveries, New Drugs, and New Approaches for Prevention Diagnosis and Treatment. Describe major discoveries, new drugs, and new approaches for prevention, diagnosis and treatment that are attributable to the completed research project. If there were no major discoveries, drugs or approaches, insert “None”; do not use “Not applicable.” Responses must be single-spaced below, and no smaller than 12-point type. DO NOT DELETE THESE INSTRUCTIONS. There is no limit to the length of your response.

As mentioned earlier, the research on recovery residences has helped raise awareness about the importance of safe and supportive housing for Pennsylvanians struggling to overcome addiction and about what recovery home operators in Philadelphia are doing to address these needs. Dr. Mericle and her team have already developed three manuscripts and another three are currently under development. Additionally, Dr. Mericle plans to apply for additional federal grants to further the study of recovery residences as a critical yet understudied and undervalued component of the substance abuse continuum of care.

23. Inventions, Patents and Commercial Development Opportunities.

23(A) Were any inventions, which may be patentable or otherwise protectable under Title 35 of the United States Code, conceived or first actually reduced to practice in the performance of work under this health research grant? Yes _____ No X

If “Yes” to 23(A), complete items a – g below for each invention. (Do NOT complete items

a - g if 23(A) is "No.")

a. Title of Invention:

b. Name of Inventor(s):

c. Technical Description of Invention (describe nature, purpose, operation and physical, chemical, biological or electrical characteristics of the invention):

d. Was a patent filed for the invention conceived or first actually reduced to practice in the performance of work under this health research grant?

Yes_____ No____

If yes, indicate date patent was filed:

e. Was a patent issued for the invention conceived or first actually reduced to practice in the performance of work under this health research grant?

Yes_____ No____

If yes, indicate number of patent, title and date issued:

Patent number:

Title of patent:

Date issued:

f. Were any licenses granted for the patent obtained as a result of work performed under this health research grant? Yes_____ No____

If yes, how many licenses were granted?_____

g. Were any commercial development activities taken to develop the invention into a commercial product or service for manufacture or sale? Yes___ No____

If yes, describe the commercial development activities:

23(B) Based on the results of this project, are you planning to file for any licenses or patents, or undertake any commercial development opportunities in the future?

Yes_____ No___X_____

If yes, please describe your plans:

24. Key Investigator Qualifications. Briefly describe the education, research interests and experience and professional commitments of the Principal Investigator and all other key investigators. In place of narrative you may insert the NIH biosketch form here; however, please limit each biosketch to 1-2 pages. *For Nonformula grants only – include information for only those key investigators whose biosketches were not included in the original grant application.*

BIOGRAPHICAL SKETCH

NAME Amy A. Mericle, PhD	POSITION TITLE Research Scientist
eRA COMMONS USER NAME (credential, e.g., agency login) AMERICLE	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
University of Michigan, MI	B.A.	04/93	Psychology/Sociology
University of Michigan, MI	M.S.W.	12/94	Interpersonal Practice
University of Chicago, IL	Ph.D.	12/02	Soc Service Administration
University of California, San Francisco, CA	Postdoctoral	06/07	Drug Abuse Research

Positions and Employment

1996-1998 Research Assistant, Northwestern University Psycho-legal Studies Program
 1997-1998 Clinical Evaluator, Chicago Street Counseling Center, Elgin, IL
 1998-2001 Data Supervisor, Northwestern University Psycho-legal Studies Program
 1999-2000 Teaching Assistant, University of Chicago
 2001-2006 Research Consultant, Northwestern University Psycho-Legal Studies Program
 2001-2002 Project Coordinator, University of Chicago
 2001-2002 Survey Consultant, American Bar Association
 2001-2002 Statistics Tutor; Teaching Assistant; Writing Tutor, University of Chicago
 2002-2003 Project Director; Consulting Data Analyst, University of Chicago
 2003-2004 Consulting Data Analyst, Measurement Research Associates, Chicago, IL
 2004-2007 Postdoctoral Fellow, University of California, San Francisco
 2005-2007 Data Analyst, University of CA, San Francisco Health Survey Research Unit
 2006-2007 Consulting Data Analyst, Huskey Associates, Chicago, IL
 2007-2013 Research Scientist, Treatment Research Institute, Philadelphia, PA
 2013- Research Scientist, Alcohol Research Group, Emeryville, CA

Selected Honors & Awards

1990 William J. Branstrom Freshman Prize, University of Michigan
 1990-1994 Undergraduate Class Honors, University of Michigan
 1992 & 1993 Eita Krom Undergraduate Sociology Paper Contest Winner (1st & 2nd Place)
 2006 & 2007 NIDA Travel Award, CPDD Annual Conference

Professional Memberships

1994-1995 National Association of Social Workers
 2001- Institute for Objective Membership
 2006- College for Problems of Drug Dependence
 2006- American Public Health Association

Selected Publications:

1. Teplin, L. A., Mericle, A. A., McClelland, G. M., & Abram, K. A. (2003). HIV/AIDS risk behaviors in Juvenile Detainees: Implications for public health policy. *American Journal of Public Health*, 93, 906-912. PMID: PMC1447866.

2. Teplin, L. A., Elkington, K. S., McClelland, G. M., Abram, K. M., Mericle, A. A., & Washburn, J. J. (2005). Major Mental Disorders, Substance Use Disorders, Comorbidity, and HIV-AIDS Risk Behaviors in Juvenile Detainees. *Psychiatric Services*, 56, 823-828. PMID: PMC1557408.
3. Mericle, A. A., Alvidrez, J., & Havassy, B. E. (2007). Mental Health Provider Perspectives on Co-occurring Substance Use Among Severely Mentally Ill Clients. *Journal of Psychoactive Drugs*, 39(2), 173-181.
4. Mericle, A. A., & Havassy, B. E. (2008). Characteristics of recent violence among entrants to acute mental health and substance abuse services. *Social Psychiatry and Psychiatric Epidemiology*, 43(5), 392-402. NIHMSID538143
5. Elkington, K. S., Teplin, L. A., Mericle, A. A., Welty, L. J., Romero, E. G., & Abram, K. M. (2008). HIV/sexually transmitted infection risk behaviors in delinquent youth with psychiatric disorders: A longitudinal study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47(8), 901-911. PMID: PMC2754224.
6. Lee, H. S., Mericle, A. A., Ayalon, L., Areán, P. A. (2009). Harm reduction among at-risk elderly drinkers: A site-specific analysis from the multi-site Primary Care Research in Substance Abuse and Mental Health for Elderly (PRISM-E) study. *International Journal of Geriatric Psychiatry*, 24(1), 54-60. PMID Pending.
7. Havassy, B. E., Alvidrez, J., & Mericle, A. (2009). Disparities in the use of mental health and substance abuse services by persons with co-occurring disorders. *Psychiatric Services*, 60(2), 217-223. NIHMSID538152
8. Belenko, S., Dugosh, K., Lynch, K., Mericle, A. A., Pich, M., & Foreman, R. F. (2009). Online drug use information messages to adolescents: An exploratory analysis of drug-related website viewing. *Journal of Health Communication*, 14(7), 612-630.
9. Mericle, A. A., Casaletto, K., Knoblach, D., Brooks, A. C., & Carise, D. (2010). Barriers to implementing individualized substance abuse treatment: Qualitative findings from the CASPAR replication studies. *Journal of Drug Issues*, 40(4), 819-840. PMID: PMC3738209
10. Mericle, A. A., Belenko, S., & Festinger, D. S. (2011). Detection, advice, and referral to services (DARTS) procedures among clients with public defenders. *Substance use & Misuse*, 46(14), 1734-1744.
11. Mericle, A.A., Ta, V.M., Holck, P., Arria, A.M. (2012). Prevalence, patterns, and correlates of co-occurring substance use and mental disorders in the US: Variations by race/ethnicity. *Comprehensive Psychiatry*. 53(6), 657-665. PMID: PMC3327759.
12. Arria, A.M., Mericle, A., Meyers, K., & Winters, K.C. (2012). Parental substance use impairment, parenting and substance use disorder risk. *Journal of Substance Abuse Treatment*, 43(1), 114-122. PMID: PMC3289725.
13. Mericle, A. A., Martin, C., Carise, D., & Love, M. (2012). Identifying need for mental health services in substance abuse clients. *Journal of Dual Diagnosis*, 8(3), 218-228.
14. Arria, A. M., Mericle, A. A., Rallo, D., Moe, J., O'Connor, G, & White, B. (2013). Integration of parenting skills education in drug treatment programs. *Journal of Addiction Medicine*, 7(1), 1-7. PMID: PMC3562421
15. Havassy, B. E. & Mericle, A. A. (2013). Recent violence among persons with co-occurring mental and substance use disorders. *Journal of Dual Diagnosis*, 9(3), 222-227. NIHMSID481226

BIOGRAPHICAL SKETCH

NAME John S. Cacciola, Ph.D.	POSITION TITLE Senior Scientist
eRA COMMONS USER NAME (credential, e.g., agency login) JCACCIOLA	Director, Center on the Continuum of Care

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
Vassar College, Poughkeepsie, NY	A.B.	05/74	Psychology
Temple University, Philadelphia, PA	M.A.	05/83	Psychology
Temple University, Philadelphia, PA	Ph.D.	05/89	Psychology

Positions and Honors

- 1978-1980 Research Associate, Addiction Prevention and Treatment Foundation, New Haven, CT
- 1981-1986 Research Specialist, Department of Psychiatry, Philadelphia VA Medical Center, Philadelphia, PA
- 1982-1986 Project Coordinator, Department of Psychology, University of Pennsylvania, Philadelphia, PA
- 1986-1987 Intern in Psychology, Department of Psychiatry, Thomas Jefferson University, Philadelphia, PA
- 1987-1989 Instructor, Department of Psychiatry, University of Pennsylvania School of Medicine
- 1989-1995 Research Assistant Professor of Psychology in Psychiatry, University of Pennsylvania School of Medicine
- 1990-present Asst. Director, Division of Assessment and Treatment, PENN/VA Center for Studies of Addiction
- 1990-1992 Investigator, MacArthur Foundation DSM-IV Data Reanalysis Project
- 1991-1994 Advisor to DSM-IV Substance Use Disorders Work Group
- 1994-present Senior Scientist, Treatment Research Institute, Philadelphia, PA
- 1995-2011 Senior Scientist/Scientific Director, DeltaMetrics, Philadelphia, PA
- 1995-2003 Research Psychologist, Department of Psychiatry, Philadelphia VA Medical Center
- 2000-2011 Associate Professor of Psychology in Psychiatry, University of Pennsylvania School of Medicine
- 2008-present Director, Center on the Continuum of Care, Treatment Research Institute, Philadelphia, PA
- 2011-present Professor of Psychology in Psychiatry, Perelman School of Medicine, University of Pennsylvania

Licensed Psychologist, Pennsylvania - Certificate # PS-005109-L (Inactive)

Selected peer-reviewed publications (out of >100)

1. Rikoon, S.H., Cacciola, J.S., Carise, D., Alterman, A.I., & McLellan, A.T. (2006). Predicting DSM-IV dependence diagnoses from ASI composite scores. *Journal of Substance Abuse Treatment*, 31, 17-24.

2. Cacciola, J.S., Alterman, I., McLellan, A. T., Lin, Yi-Ting., Lynch, K. G. (2007). Initial evidence for the reliability and validity of a “Lite” version of the Addiction Severity Index. *Drug and Alcohol Dependence*, 87, 297-302.
3. Cacciola, J.S., Pecoraro, A., Alterman, A.I. (2008). Development of ASI psychiatric severity cut-off Scores to identify co-occurring psychiatric disorders. *International Journal of Mental Health and Addiction*, 6, 77-92.
4. Cacciola, J.S., Alterman, I., Lynch, K. G., Martin, J.M., Beauchamp, M.L., McLellan, A.T. (2008). Reliability and validity studies of the revised Treatment Services Review (TSR-6). *Drug and Alcohol Dependence*, 92, 37-47.
5. Cacciola, J.S.; Camilleri, A.C.; Carise, D., McKay, J.R.; Wilson, C., Schwarzlose, J.T., McLellan, A.T.; Rikoon, S.H. (2008). Extending residential care through telephone counseling: Initial results from the Betty Ford center focused continuing care protocol. *Addictive Behaviors*, 33(9), 1208-1216. PMID: PMC2736045.
6. Cacciola, J.S., Koppenhaver, J.M., Alterman, A.I., McKay, J.R. (2009). Posttraumatic stress disorder and other psychopathology in substance abusing patients. *Drug and Alcohol Dependence*, 101(1-2), 27-33. PMID: PMC3068017
7. Cacciola, J.S.; Dugosh, K.L.; Camilleri, A.C. (2009). Treatment history: Relationship to treatment outcomes. *Substance Use & Misuse*, 44(3), 305-321.
8. Alterman, A.I., Cacciola, J.S., Dugosh, K.L., Ivey, M.A., Coviello, D.M. (2010). Measurement of mental health in substance use disorder outpatients. *Journal of Substance Abuse Treatment*, 39(4), 408-14. PMID: PMC2967608
9. Ruetsch, C., Cacciola, J., Tkacz, J. (2010). A national study of a telephone support service for patients receiving office-based buprenorphine medication-assisted treatment: Study feasibility and sample description. *Journal of Substance Abuse Treatment*, 39(4), 307-317.
10. Cacciola, J.S., Alterman, A.I., Habing, B., McLellan, A.T., (2011). Recent status scores for version 6 of the Addiction Severity Index (ASI-6). *Addiction*. 106(9):1588-602. PMID: PMC3602995
11. Camilleri, A.C., Cacciola, J.S., Jenson, M.R. (2012). Comparison of two ASI-based standardized patient placement approaches. *Journal of Addictive Diseases*. 31(2), 118-129.
12. Cacciola, J.S., Alterman, A.I., DePhilippis, D., Drapkin, M.L., Valadez, C., Fala, N.C., Oslin, D., McKay, J.R. (2013). Development and Initial Evaluation of the Brief Addiction Monitor (BAM). *Journal of Substance Abuse Treatment*. 44(3). 256-263. PMID: PMC3602977
13. Denis, C.M., Cacciola, J.S., Alterman, A.I., (2013). Addiction severity index summary scores: comparison of the Recent Status Scores of the ASI-6 and the Composite Scores of the ASI-5. *Journal of Substance Abuse Treatment*. Epub ahead of print 7/22/13. NIHMSID: NIHMS508879
14. Mericle, A.A., Arria, A.M., Meyers, K., Cacciola, J., Winters, K.C., & Kirby, K.C. (In press). National trends in adolescent substance use disorders and treatment availability: 2003-2010. *Journal of Child and Adolescent Substance Abuse*. NIHMSID: NIHMS510674
15. Cacciola, J.S., Meyers, K., Bates, S.E., Rosenwasser, B., Arria, A.M., McLellan, A.T. (In press). Assessing adolescent substance abuse programs with updated quality indicators: The development of a consumer guide for adolescent treatment. *Journal of Child and Adolescent Substance Abuse*. NIHMSID: NIHMS442781