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A Study of Substance-Free Transitional Housing and Community Corrections in Washington County, Oregon



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ABSTRACT

The Washington County (Oregon) Community Corrections Department (WCCC) received federal funding to provide offenders with substance-free transitional housing through the use of Oxford Houses and other substance-free transitional housing programs. The current study investigates self-sufficiency, community adjustment, substance use, and criminal recidivism outcomes for substance abusing offenders served through WCCC to document the value-added of providing substance-free transitional housing services. The study addresses the value added of Oxford House and other transitional housing services to the combination of services offenders receive, and documents the relative costs and benefits of substance-free transitional housing services.

Individuals were eligible for the study if they entered Oxford Houses, entered some other form of substance-free transitional housing, or could benefit from, but did not enter, any form of substance-free transitional housing. A total of 356 supervisees were eligible for the study; 301 (85%) agreed to participate in baseline interviews, and 238 (80%) participated in 12-month follow-up interviews. The study included both interview data collection and administrative records data collection.

Results indicate that there is some value-added for transitional housing: longer lengths of stay in any transitional housing (Oxford House and other forms of substance-free transitional housing), over and above the other services participants received, resulted in less substance use at follow-up and in decreases in stress over time. Furthermore, WCCC's investment in Oxford Houses was the most cost-effective at less than \$2,500 per bed as a one-time expenditure, compared to between \$4,200 and \$5,700 per bed per year for more traditional transitional housing options. Results also indicate that participants had overall improvements in self-sufficiency, regardless of transitional housing receipt.

Oxford Houses and other transitional housing programs should be part of the constellation of services available to offenders, and Oxford Houses, in particular, are a cost-effective means of offering needed substance-free housing. Given the link between length of stay and substance use reduction, corrections departments should employ strategies to encourage offenders not only to enter, but to stay in, substance-free transitional housing services.

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EXECUTIVE SUMMARY

Study Purpose

There is a well documented link between substance abuse and criminal behavior. Furthermore, there is evidence that treating substance abuse leads to a reduction in criminal behavior. The Washington County (Oregon) Community Corrections Department (WCCC) recognized that a sizeable number of its offenders struggle with substance abuse issues, and that these offenders need multi-faceted support for their recovery. WCCC received federal funding to provide offenders with substance-free transitional housing through the use of Oxford Houses and other substance-free transitional housing programs. Oxford Houses offer a self-directed community setting where residents are primarily under the supervision of their peers rather than professional staff. WCCC aimed to pair supervision with substance-free housing to enhance offenders' abilities to commit to substance-free and crime-free lives. WCCC offers a service-rich environment to its supervisees, with access to substance-free transitional housing as just one of many available supports.

The current study investigates the value-added of providing substance-free transitional housing to offenders within this service-rich environment. Specifically, the study investigates self-sufficiency, community adjustment, substance use, and criminal recidivism outcomes for substance abusing offenders served through WCCC to document the value-added of providing substance-free transitional housing services. Specifically, the study addresses the following research questions:

1. What is the value added of Oxford House and other transitional housing services to the combination of services offenders receive? Does participating in substance-free transitional housing services lead to



measurable improvements in self-sufficiency and decreases in substance use and criminal offending?

2. What are the relative costs and benefits of substance-free transitional housing services to the taxpayer?

Methodology

The study sample included offenders residing in Oxford Houses, offenders entering some other form of substance-free transitional housing, and offenders who could benefit from, but did not enter, any form of substance-free transitional housing. A total of 356 WCCC supervisees who began supervision during the sample building period were eligible for the study.

The majority of participants were male, Caucasian and single, and a majority of the participants were unemployed at baseline and had a high school degree or less. Study participants on average had extensive previous involvement with the criminal justice system,

with an average of 14 prior arrests. The most commonly used substance was Methamphetamine, though most participants also reported abusing alcohol and cannabis.

The study included both interview data collection and administrative records data collection. Interviews were conducted with study participants shortly after the start of their supervision and at 6- and 12-month follow-ups. The research team employed a comprehensive recruitment and tracking strategy that resulted in 301 eligible participants (85%) agreeing to participate in baseline interviews, and 238 (80%) participating in 12-month follow-up interviews. The interviews were primarily closed-ended, structured interviews that gathered information about living situations, demographics, health, substance use, self-sufficiency indicators (including employment and income information), and psychosocial indicators (including social support and stress).

In addition to interview data collection, the study relied upon administrative records, which provided such information as criminal justice history and recidivism, substance abuse treatment entries, and usage of WCCC services. Data were collected for the 12-month period following the start of supervision. In addition, a document review and stakeholder interviews provided budgetary and other information necessary to document the costs associated with providing WCCC services, the cost to the taxpayer of adding substance-free transitional housing services, and outcome costs.

Results

RESEARCH QUESTION 1: WHAT IS THE VALUE ADDED OF OXFORD HOUSE AND OTHER TRANSITIONAL HOUSING TO THE COMBINATION OF SERVICES OFFENDERS RECEIVE?

Answer in Brief: Longer lengths of time spent in substance-free transitional housing, over

and above the other services received, results in less substance use at follow-up and decreased stress.

Analyses examined what combination of WCCC services were related to outcomes and specifically, whether the length of time spent in Oxford House and other transitional housing, over and above the other services received, were related to outcomes. While length of time spent in Oxford House alone did not predict outcomes, length of time spent in all transitional housing combined (Oxford House plus other transitional housing) was related to less substance use at follow-up and reduced stress. In other words, over and above all the other services offenders received, participants with longer lengths of stay in any transitional housing reported less substance use and stress.

In addition to investigating whether length of stay in substance-free transitional housing over and above other services was related to outcomes, the study investigated between-group differences to determine whether those offenders who resided in Oxford Houses or in other transitional housing programs (regardless of length of stay and other services received) had different outcomes from those who did not reside in transitional housing. Overall, all participants served by WCCC during the study period improved their self-sufficiency, regardless of transitional housing receipt. While approximately 40% of the participants were employed at baseline, by follow-up more than half were employed. In addition, participants in the Oxford House group showed significant decreases in stress over time, while the other two study groups showed significant increases in stress over time.

Due to a lower than expected case flow that resulted in an extended study recruitment period (see study limitations, below), the study data collection window allowed for just 12 months of data collection. Most participants were under WCCC supervision for most, if not all, of that period, and not surprisingly,

the criminal justice recidivism rate across the study sample was low, and there were no significant relationships between transitional housing and recidivism. Longer follow-up periods are necessary in order to accurately determine the influence of such services on long-term criminal justice outcomes.

RESEARCH QUESTION 2: WHAT ARE THE RELATIVE COSTS AND BENEFITS OF SUBSTANCE-FREE TRANSITIONAL HOUSING SERVICES TO THE TAXPAYER?

Answer in Brief: Oxford Houses are a cheaper alternative to other transitional housing and may result in long-term cost savings, though the current study window was too short to measure these savings.

The WCCC's federal grant for the expansion of transitional housing provided support for several transitional housing services, including an Outreach Coordinator to expand the number of Oxford Houses in the community. The investment in this component of the grant was most cost-effective with a one-time expenditure of \$2,176 per bed, compared to between \$4,200 and \$5,700 per bed annually for more traditional transitional housing options. This study did find a decrease in drug use for supervisees residing in Oxford House and other transitional housing models, and while assigning costs associated with decreased substance use were beyond the scope of this project, previous research has linked decreased substance use to societal cost savings (e.g., Office of National Drug Control Policy, 2001).

The current study did not find any outcome cost savings in terms of reduced criminal justice expenses, as the study follow-up period was not long enough to adequately measure recidivism. The existing literature suggests, however, that Oxford House participation is related to reduced criminal justice involvement (Jason et al., 2007a). Given that in Washington County the costs associated with an arrest are nearly \$230, the costs associated

with a jail booking are \$194, and the costs associated with a day in jail are \$76, similar findings in Washington County could result in substantial cost savings over time.

Conclusions

SUBSTANCE-FREE TRANSITIONAL HOUSING IS RELATED TO POSITIVE OUTCOMES

This study adds to the existing research on Oxford Houses by investigating the value added of Oxford Houses and other transitional housing programs to a service rich community corrections environment. Results from this study indicate that living in Oxford House or another type of substance-free transitional housing does lead to improvements over and above the influence of the other services received. Firstly, and most significantly, analyses reveal that length of stay in substance-free transitional housing (Oxford House and other forms of transitional housing) is related to changes in substance use: the longer the length of stay in transitional housing, the less the likelihood of substance use at follow-up. This finding suggests that dosage does matter, and corroborates research by Jason and his colleagues (Jason, et al., 2007a; Jason et al., 2006) that indicate that individuals who remain in Oxford Houses for 6 months or more have more favorable outcomes than individuals who have shorter stays.

Secondly, participants who lived in Oxford Houses showed significant decreases in stress over time, while other study participants actually showed increases in stress over time. Further research should investigate the reasons for this link.

OXFORD HOUSE IS A COST-EFFECTIVE ALTERNATIVE TO OTHER SUBSTANCE-FREE TRANSITIONAL HOUSING

WCCC used a federal grant to expand the availability of substance-free transitional housing in the county. Grant funds were used

to pay for beds at existing substance-free transitional housing programs, and also were used to fund an Outreach Coordinator position to increase the number of Oxford Houses. Over the course of the grant, 68 additional Oxford House beds were added to the community. The grant investment in this initiative resulted in the lowest cost-per-bed: the cost per bed for Oxford Houses was a one-time expenditure of less than \$2,500 compared to between \$4,200 and \$5,700 per bed annually for the other substance-free transitional housing programs.

OFFENDERS UNDER WCCC SUPERVISION MADE POSITIVE CHANGES

Results from this study suggest that there were positive changes for all offenders receiving supervision, regardless of transitional housing utilization. Offenders demonstrated significant increases in employment between baseline and follow-up. In addition, all offenders showed significant improvement on several other indicators of self-sufficiency, such as the percent reporting that they had bank accounts, places to cook, drivers' licenses, and access to automobiles when needed.

IMPLICATIONS FOR POLICY AND PRACTICE

Oxford House Should Be Used As a Cost-Effective Use of Public Funds

Substance-free transitional housing was related to two positive outcomes: decreased substance use and reductions in stress associated with longer stays in transitional housing. Given these findings, it may be advantageous to invest public funds in substance-free transitional housing programs, and in particular, in Oxford House, which is a cheaper alternative to traditional substance-free transitional housing.

Programs Should Identify Strategies for Encouraging Longer Lengths of Stay in Substance-Free Transitional Housing

Results from this study indicate that longer lengths of stay in transitional housing predict greater reductions in substance use. Corrections departments, therefore, should investigate strategies for supporting offenders in their transitional housing. While making a referral to a transitional housing program (whether Oxford House or another program) and/or providing a subsidy to cover an initial month's rent are important strategies for encouraging *enrollment* in transitional housing programs, corrections departments should also consider strategies for offering longer-term support to encourage offenders to *remain* in transitional housing.

Substance-Free Transitional Housing Should Be Part of a Constellation of Services

WCCC supervisees have access to a variety of services during their period of supervision. Many participants in this study utilized the Community Corrections Center (offering residential and programmatic services) and received a variety of ancillary services from WCCC, including employment readiness training and job search assistance, assistance with transportation, linkages to health, mental health, and substance abuse services, and assistance with accessing health insurance and other financial supports. As a result of this package of services, study participants, regardless of transitional housing receipt, exhibited increases in self-sufficiency and other indicators of well-being. While transitional housing receipt did contribute to positive outcomes over and above these other services, it is crucial that transitional housing services are situated within a larger package of services necessary to support offenders in their recovery.

LIMITATIONS OF THE STUDY

The current study faced several challenges including the fluid nature of transitional housing utilization among study participants, and a lower than anticipated case-flow which resulted in a reduced sample size and a shortened data collection window. The implications of each of these challenges are discussed below.

First, the fluid nature of substance-free transitional housing receipt posed difficulties for defining the study groups for between-group analyses. The original study design called for an intent-to-treat model, but individuals who were referred to Oxford House (or to another transitional housing service) did not necessarily enroll, and individuals who were not referred did enroll in these programs. As a result, the study design was modified to an as-treated model, with a 30-day criteria; that is, offenders who stayed in Oxford House for at least 30 days were considered part of the Oxford House group, and those that stayed in another form of transitional housing for at least 30 days were considered part of the Other Transitional Housing group. Even these group designations had their drawbacks, however. Some individuals spent at least 30 days in *both* Oxford House and another form of transitional housing; other offenders cycled in and out of one or more Oxford Houses (or other transitional housing) over time, so their inclusion in the Oxford House (or Other Transitional Housing) group did not indicate a continuous stay in any one program.

This variation in transitional housing utilization made it difficult to detect between-group differences. For this reason, between group analyses were conducted as secondary analyses: the primary analyses conducted for this study utilized a dosage model to determine

the relationship between length of stay in transitional housing and outcomes. As such, these analyses did not rely upon a three group design.

Second, while the study included every eligible offender during the sample-building period, the case flow of eligible participants through WCCC was lower than anticipated, and therefore the sample-building period was extended in order to secure more study participants. While the sample included every new supervisee who enrolled in Oxford House or another substance-free transitional housing program as well as those who were eligible for, but did not enroll, in such programs during the sample building period, this still resulted in a relatively small sample, as the final analysis sample consisted of the subset of individuals who participated in the 12-month interview. The sample size limited the study's ability to detect statistically significant relationships and between-group differences. Larger samples (which would have been possible only through an extended study period) would have provided more power to identify additional outcomes associated with substance-free transitional housing receipt.

The extended sample-building period had implications for data collection. In order to both have a uniform data collection "window" for study participants and in order to conclude data collection with ample time remaining for data processing and analysis, it was possible to collect just 12 months of data on each study participant. This data collection window was too short to capture long-term outcomes, particularly criminal justice recidivism. Few study participants were arrested during the study window, but with a longer follow-up period, it may be possible to investigate whether participants who resided in substance-free transitional housing had lower recidivism rates than others.

INTRODUCTION

Study Purpose

There is a well researched link between substance abuse and criminal behavior. The combined impact of criminal activity and substance abuse is well documented. Research indicates that approximately 68% of new arrestees test positive on a urine screen for one or more illicit drugs (National Institute of Justice, 1996). Summary statistics gathered in 1996 from the Department of Justice suggest that nationally 36% of adult offenders were under the influence of alcohol *at the time of their offense* (Greenfeld, 1998). In a meta-analysis of 30 studies researching the drug use and crime connection, Bennett (2008) found that the odds of committing crimes were up to three to four times more likely for individuals using drugs.

Furthermore, there is evidence that treating substance abuse leads to a reduction in criminal behavior. Young, Fluellen, and Belenko (2004) found that offenders mandated to structured substance abuse treatment programs recidivated half as much as offenders not participating in such programs. The National Treatment Improvement Evaluation Study (NTIES, 1997) found significant declines in criminal activity between the 12 months before and the 12 months after receipt of substance abuse treatment. Finigan (1996) also found significant reduction in arrests for offenders who completed treatment compared with a group of offenders eligible for treatment, but who did not receive it.

The Washington County (Oregon) Community Corrections Department received federal earmark funding to provide offenders with substance-free transitional housing through the use of Oxford Houses and other substance-free transitional housing services. The grant, which provided \$993,500, was designed to add an additional 12-15 Oxford



Houses and to support other transitional housing in Washington County over a 3-year period, beginning in 2004. Washington County Community Corrections (WCCC) recognized that a sizeable number of offenders struggle with substance abuse issues, and that these offenders need multi-faceted support for their recovery. WCCC aimed to pair supervision with substance-free housing to enhance offenders' abilities to commit to substance-free and crime-free lives. WCCC offers a service-rich environment to its supervisees, with access to substance-free transitional housing as just one of many available supports.

The current study investigates the value-added of providing substance-free transitional housing to offenders within this service-rich environment. The study investigates self-sufficiency, community adjustment, substance use, and criminal recidivism outcomes for substance abusing offenders served through WCCC to document the value-added of providing substance-free transitional housing services. Specifically, the study addresses the following research questions:

1. What is the value added of Oxford House and other transitional housing services to the combination of services offenders receive? Does participating in substance-

free transitional housing services lead to measurable improvements in self-sufficiency and decreases in substance use and criminal offending?

2. What are the relative costs and benefits of substance-free transitional housing services to the taxpayer?

Using self-report interview data and administrative records, the current study builds upon existing research on the efficacy of substance-free transitional housing.

Substance-Free Transitional Housing Research Summary

Travis, Solomon, and Waul (2001) estimate that about 600,000 individuals, roughly 1,600 a day, are released from prisons to return to their communities, often after having spent considerable time behind bars and with very little preparation for making a positive adjustment to community life. As a result, fully two-thirds of released prisoners are expected to be re-arrested for a felony or a serious misdemeanor. These high recidivism rates produce great costs to the criminal justice system.

It has been estimated that 74% of offenders re-entering the community have substance abuse problems (Mumola, 1999). While there is general agreement that in-prison drug treatment can be effective in reducing criminal re-offense, a number of studies have also suggested that this is most effective when combined with post release community treatment and aftercare (Travis et al., 2001). Pellesier, Jones, and Cadigan (2007), Butzin, Martin, and Inciardi (2005) and Knight, Simpson, and Hiller (1999) also found that recidivism rates decrease when in-prison treatment is combined with aftercare. While drug treatment in prison has some effect on the offender's drug use after incarceration (see, for example, Inciardi, Lockwood & Hooper, 1994; Welsh 2007; and Welsh, 2003), adding treatment services, including

therapeutic communities, following prison release produces the most positive outcomes.

One of the most difficult issues facing re-entering offenders is finding transitional substance-free housing and supportive living environments. Offenders are often excluded from the housing market by landlords concerned about their past. Family members are also often concerned with their own social environment and less willing to take a risk on a returning offender. This often results in the return of the offender to living situations where drug abuse is common.

Different models of transitional housing have emerged in response to the needs of offenders returning to their communities. Therapeutic communities designed to treat substance abuse have existed for over 40 years. These communities provide a substance-free residential setting using a model of treatment stages that reflect increasing personal and social responsibility of the client. Treatment staff, in addition to the peer group, are the key agents of change. Data from a recent National Institute on Drug Abuse report indicate significant reductions in substance use attributable to these substance-free residential environments (National Institute on Drug Abuse, 2002). McMurrin (2007) found that this community-level approach combined with cognitive-behavioral therapies is the most successful approach for the drug offender population.

Transitional housing environments may reduce subsequent criminal activity and incarceration (Hartmann, Wolk, Johnston, & Colyer, 1997; Messina, Wish, & Nemes, 2001). Data suggest that stays as brief as 6 months may be effective (National Institute on Drug Abuse, 2002). Inciardi, Martin, and Butzin (2004) examined effects of transitional programming on offender outcomes after incarceration. Their research found that transitional programs were helpful at addressing many factors that play a role in relapse and recidivism, including the social, psychologi-

cal and legal issues that presented challenges to many offenders.

Oxford Houses were founded in 1975 to provide an innovative substance-free residential environment for recovering alcoholics. Oxford Houses offer a self-directed community setting, where residents are primarily under the supervision of their peers rather than professional staff and in which there is no set length of stay (although typically participants remain for more than 6 months, and sometimes more than a year). Oxford Houses are not treatment per se, but rather an adjunct to treatment. Like Alcoholics Anonymous, members receive abstinence support from their peers. Furthermore, residents jointly set house expectations, regularly elect house leaders, and in all ways are responsible for maintaining house finances and rules. Such social support combined with joint responsibility creates an environment that can foster feelings of abstinence self-efficacy (Jason, et.al, 2007b).

Jason and his colleagues (2007a; 2007b) explored Oxford House's effects on outcomes such as employment, recidivism, and substance use over a 24-month period. Residents who lived in an Oxford House for at least 6 months had less substance abuse than those who stayed less than 6 months or individuals who did not reside in Oxford Houses. Importantly, the researchers also found higher rates of employment, higher income, and less criminal justice activity among Oxford House residents. The research conducted by Jason and his colleagues has focused on Oxford Houses as a stand-alone intervention, often as a post-substance abuse treatment program; the current study investigates Oxford Houses as one component of a service-rich community corrections environment.

Although there has been limited research on what types of transitional housing may be most cost-effective for drug offenders, Jason (2006) estimates the savings that would result from utilizing Oxford Houses in lieu of

incarceration. Jason estimates that more than \$8,100 would be saved annually per person in the form of reduced criminal justice activity (resulting in less jail utilization) and increased productivity and employment earnings. The member-run model of Oxford House does not require the expense of paid employees, as residents hold each other accountable and maintain order without the help of professionals (D'Arlach et al., 2006).

Washington County Community Corrections Services

Washington County Community Corrections (WCCC) serves offenders in Washington County, Oregon, located to the west of the city of Portland. The county is one of the state's fastest growing counties, and is comprised of a mix of suburban and rural communities. During 2007, WCCC provided supervision to a total of 6,556 offenders; approximately three-quarters of supervisees are on probation rather than parole. The offender population is predominantly Caucasian (76%), with a sizeable and growing (nearly 20%) Hispanic population (Washington County Community Corrections, 2007).

WCCC provides a variety of services for supervisees, including residential services through the Community Corrections Center. The center has 215 beds for both male and female offenders. Offenders can be sentenced directly to the center or may serve out a portion of their sentence in jail and the remainder in the center. Parolees and probationers also can be sent to the Community Corrections Center as a sanction for violations. In addition, the center reserves 9% of the beds for indigent clients to provide short-term housing while alternative housing is secured. The center offers a variety of services, including substance abuse evaluations and treatment, mental health evaluation and treatment, employment counseling, and a variety of life-skills programs. Case managers

work with each resident to design an individualized treatment plan. In addition, the center operates a 90-day intensive residential substance abuse treatment program. Just over 1,900 offenders utilized the center in 2006, with 85% completing their program (Washington County Community Corrections, 2007).

The WCCC offers a variety of services in addition to the Community Corrections Center to individuals on parole and probation. Supervision is provided by specialty teams to best meet the needs of offenders; these teams include mental health, chemical dependency, women, sex offender, domestic violence, and Hispanic. Officers in each team are specially trained to address the unique issues and needs of that population. In addition, WCCC offers a variety of special services:

- An adult drug court;
- Employment services, to assist with job seeking and resumes;
- Subsidy assistance, to provide funds to help offenders with basic needs;
- Cognitive services, to help offenders alter criminogenic thinking patterns;
- Transitional services, to assist with the transition from jail or prison to the community;
- Victim's services;
- Mental health services through a contract with a psychiatrist and psychiatric nurse;
- Substance abuse services including education, urinalysis testing, mentors, outpatient and inpatient treatment, and access to clean and sober housing; and
- Clean and sober housing through referrals to substance-free transitional housing.

In 2003, WCCC received federal funding to expand the availability of Oxford Houses and other substance-free transitional housing in

the county. The department recognized that offenders' criminal history and inconsistent employment combined with the community's lack of affordable housing result in a large demand for substance-free transitional housing. The available community resources for substance-free transitional housing were not great enough to meet this need. Program services under the grant began in 2004. The federal grant was used to support four different agencies providing substance-free transitional housing services to WCCC clients.

Central City Concern (and originally Ecumenical Ministries of Oregon) received grant funds to fund an Outreach Coordinator responsible for establishing new Oxford Houses in the county. Over the course of the grant, nine Oxford Houses were added in the county, bringing the total number of Oxford Houses to 21. In addition to supporting Oxford Houses, grant funds were used to support other substance-free transitional housing in the county. CODA, Inc. received grant funding to support comprehensive transitional housing services for men, LifeWorks Northwest received funding to provide transitional housing for women along with a Recovery Mentor, and Clean and Sober Living, Inc. received funding to provide transitional housing for men. In addition, grant funds were used to provide subsidies to WCCC supervisees who needed assistance paying rent for transitional housing. Generally, these subsidies were used to cover the cost of the first month (or several months) of rent, until supervisees secured employment and could pay rent themselves.

WCCC's program was selected, through an evaluability assessment process, as one of three sites for a National Institute of Justice-funded evaluation to investigate the effectiveness of substance-free transitional housing services.

About This Report

This report details the findings of the study of substance-free transitional housing services provided to Washington County Community Corrections clients. WCCC offers a service-rich environment to its supervisees, with access to substance-free transitional housing as just one of many available supports. The current study investigates the value-added of providing substance-free transitional housing

to offenders within this service-rich environment. The next section of the report describes the study methodology, including a summary of the sample selection process; the interview component, administrative records, and cost component; and the data analysis strategy. The following section of the report details the study findings. The final section of the report provides a discussion of the study limitations and the implications of the study findings for policy and practice.

METHODOLOGY

The current study examines the value added of substance-free transitional housing to the mix of services provided to substance-abusing offenders, and also investigates the impact of Oxford House programs as compared to (a) other substance-free transitional housing and (b) no substance-free transitional housing. Both self-report interview data as well as administrative records data were used. Individuals were enrolled in the study during a 2-year sample building period, and data were collected on each study participant for the 12-month period following enrollment (the “study window”). The remainder of this section details the sample selection procedures, the interview component, the administrative records component, the cost study component, and the analysis strategy.

Sample Selection

Individuals eligible for the study if:

1. They entered Oxford Houses;
2. They entered some other form of substance-free transitional housing; or
3. They could benefit from, but did not enter, any form of substance-free transitional housing.

Washington County Community Corrections clients who began supervision and met one of the above criteria during the sample building period were eligible for the study.¹ Offenders were ineligible for the study if they did not have substance use issues or if they had issues that would exclude them from transitional housing services (e.g., anger management issues or sex offenses).

¹ For a minority of study participants, supervision start date preceded study entry by months or even years. These individuals were enrolled in the study because they had a new arrest or charge tied to a new supervision sentence.



WCCC parole and probation officers played a critical role in the study sample selection process. During the 2-year sample building period, officers gave each client who met the eligibility criteria a study recruitment flyer and also completed a study recruitment form on each client. NPC staff received these forms electronically as well as in hard copy on a weekly basis. The forms included the client name and contact information.

Each month, a member of the research team cross-checked the completed recruitment forms with the probation intake binder, WCCC’s master list of all new supervisees. The researcher would flag any names that appeared in the binder for whom a study recruitment form was not received. The research team would then contact the officers for these individuals to determine whether the officers had neglected to complete study recruitment forms or whether the clients were not eligible for the study (e.g., a sexual offender or someone with no substance abuse history). In this manner, the research team could verify that the study sample included every individual who was eligible for the study. Over the study period, 356 individuals were entered into the study sample.

Interview Component

The study design included baseline, 6-month and 12-month interviews with study participants. Baseline interviews were conducted within 90 days of study referral. Below we summarize the recruitment and retention process, followed by a description of the interview instrument.

INTERVIEW RECRUITMENT AND RETENTION

Immediately upon receiving referral forms from the WCCC officers, and using an initial call script, research staff initiated phone contact with eligible participants to discuss the study and invite them to schedule their first interview. Interview participants were promised a Target gift certificate for each completed interview: a \$15 certificate for the first interview, a \$20 certificate for the 6-month interview, and a \$30 certificate for the 12-month interview.

The research team used a comprehensive locating and tracking strategy to ensure that interviewers could find study participants throughout the study period. To this end, participants were asked to complete a locator form at the baseline interview. This form al-

lowed participants to consent to having the research staff contact parole/probation officers, treatment providers, and other professionals in order to obtain updated contact information for the participant. In addition, the form asked participants for contact information for friends or family members. Research staff, at 3-month intervals, contacted the interview participants to verify their phone number and address; if a participant was no longer at the most recent known phone or address, the research team contacted individuals and agencies listed on the locator form in order to obtain updated contact information for the participant. Research staff was proactive when working with participants to schedule interviews by making multiple attempts at contacting participants through phone calls, mail, and visits to participants' residences. WCCC officers were an integral part of the study recruitment and tracking process: when members of the research team were having difficulty locating a client, WCCC officers provided any updated information they had about the client's location and situation. This multi-pronged approach to participant tracking resulted in high recruitment and retention rates, as displayed in Table 1.

Table 1. Interview Recruitment and Retention Rates

	Sample Size	Recruitment Rate	Retention Rate
Baseline Interview	301	85%	NA
6-month Interview	237	NA	79%
12-month Interview	238	NA	80%

INTERVIEW INSTRUMENT

The interviews were primarily closed-ended, structured interviews consisting of several sections:

- **Demographic and background information:** The interview captured a variety of basic information about participants, including gender, race/ethnicity, age, and marital status.
- **Employment & life skills information:** This section included questions about educational attainment, employment status, public assistance receipt, and basic life skills (such as having a driver's license or a bank account).
- **Physical health information:** This section included questions about hospital admissions and chronic medical problems.
- **Alcohol and drug use:** To measure study participants' substance use, the interview included the ASI Lite, a widely used measure of addiction severity, the reliability and validity of which has been established for a variety of populations. This measure is one of the Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Treatment's core measures. Participants were asked at baseline about their lifetime and 30-day use, and at follow-up on their 30-day use, of alcohol, alcohol to the point of intoxication, heroin, methadone, other opiates/analgesics, barbiturates, sedatives, cocaine, methamphetamine, other amphetamines, cannabis, hallucinogens, inhalants, and polysubstance use.
- **Mental health information:** The Psychiatric Subscale of the ASI Lite was used to measure mental health status. This scale measured inpatient and outpatient treatment utilization, lifetime history of psychiatric problems, and whether the participant experienced psychiatric problems for the past 30 days including serious depression, anxiety, hallucinations, trouble controlling violent behavior and thoughts of suicide.
- **Readiness to change:** This section of the interview, adapted from the University of Rhode Island Change Assessment (URICA) (DiClemente & Hughes, 1990), was a 10-item scale that measured participants' readiness to change their substance use behavior.
- **Social support:** This section was comprised of a shortened version of the Interpersonal Support Evaluation List (Cohen, Mermelstein, Karmarck & Hoberman, 1985), comprising 10 items from this standardized measure of social support.
- **Social support for recovery:** This section included a 4-item scale developed by NPC to determine the degree to which participants had social support for their abstinence and recovery and process.
- **Environmental risk:** This section included a 6-item scale developed by NPC to measure the risks present in participants' neighborhoods, including the prevalence of drug selling, the availability of jobs, and the safety of the neighborhood.
- **Environmental support:** This section of the interview was comprised of the Perceived Sense of Community Scale (Bishop, Chertok, & Jason, 1997), a 30-item scale that measures participants' experiences in substance-free transitional housing.
- **Service utilization:** This section of the interview, developed by NPC, included questions about the types of services that participants may have needed and received, such as help with housing, transportation, job searching, medical services, or treatment services.
- **Contact with WCCC:** This section, also developed by NPC, included several items to measure participants' perceptions of their supervision experience.

- Perceived stress: Overall stress levels were measured using the Perceived Stress Scale, a 5-item standardized tool (Cohen, Karmarck, & Mermelstein, 1983).
- Perceptions of control: To measure participants' feelings of control over their lives, this 6-item section of the interview included modified questions from the Family Empowerment Scale (Koren, DeChillo, & Friesen, 1992).
- Housing tracking: In order to document each participants' entry into, and length of stay in, substance-free transitional housing, the interview used a calendaring approach to document each living situation experienced by each participant, including move-in and move-out dates.

While the majority of the interview consisted of standardized and other closed-ended questions, each interview ended with some open-ended questions to allow participants to share additional information with the research team.

INTERVIEW QUALITY ASSURANCE

The research team took several steps to assure the highest quality interview data. First, all study interviewers completed a thorough training that included the study purpose and design, the interview instrument, recruitment and tracking procedures, human subjects and confidentiality protections, and safety protocols. Interviewers were required to pass a certification exam prior to beginning field work; this exam included a mock recruitment call, a mock interview, and answering oral questions about study protocols. Next, a subset of interviews were recorded (with participant consent) and reviewed by the field data collection supervisor to assess interviewer performance. In addition, all completed interview forms were reviewed by data processing staff to check for missing or inconsistent responses. Finally, the field data collection supervisor conducted quality assurance phone calls on a random sample of

5% of completed interviews. These calls allowed NPC to verify that the interviewing experience was a pleasant one for the participants and allowed participants to share any feedback they had.

Administrative Records Component

In addition to interview data collection, the study relied upon administrative records, which provided such information as criminal justice history and recidivism, substance abuse treatment entries, and usage of WCCC services. Data were collected for the 12-month period following the participants' entry into the study (which coincided with supervision start date).

DATA SOURCES

The sources of administrative data for this study were the WCCC electronic database, the Law Enforcement Data System (LEDS), the Oregon Justice Information System (OJIN), and the Client Processing Monitoring System (CPMS).

- **WCCC Database:** The WCCC electronic database houses all information regarding supervisees' involvement with the department. The research team created a data extraction tool, and research staff accessed each study participant's electronic file and recorded the necessary data onto the data extraction tool. The data collected from this database included supervision start and end dates, number and type of conditions of supervision, number of office visits, number of technical violations, number and type of re-arrests, and number of jail days.
- **LEDS:** NPC made a data request to LEDS to gather criminal history data on study participants. This data was returned to NPC in paper form, and the research team extracted the information necessary to tally the total prior felony and misdemeanor arrests for study participants.

- **OJIN:** NPC has on-site access to OJIN, and this system was used as a cross-check for the recidivism (re-arrests and jail days) information gathered from the WCCC database.
- **CPMS:** NPC made a data request to CPMS to gather treatment admissions data on study participants; this data was returned to NPC in electronic form. The CPMS data was used to determine which study participants entered substance abuse treatment, and for those who entered, whether episodes were successfully completed.

ADMINISTRATIVE DATA QUALITY ASSURANCE

The research team took several steps to insure the integrity of the administrative data. First, the research team came to agreement on operational definitions for each variable on the data extraction tool. If data collectors were unsure of how to extract or code something on the data collection tool, the research team as a whole discussed the operational definition and the particular issue of confusion and came to agreement on how the data should be captured. In addition, as with the interview data, each completed administrative data collection tool was reviewed to check for missing information and for logical inconsistencies. Finally, once the data were processed and entered, NPC's data processing staff conducted regular data entry quality control checks and ongoing cleaning of the entered data.

Outcome Data Analysis Strategy

FINAL ANALYSIS SAMPLE SIZE

While a total of 356 individuals were originally enrolled in the study sample, the analyses conducted to answer the research questions utilized a subset of this total sample. This was a result of a reliance upon 12-month interview data. Much of the study data was generated through the participant inter-

views. As described above, 301 (85%) of the individuals referred to the study actually participated in baseline interviews, and of that group, 238 went on to complete a 12-month interview. It was through this 12-month interview that the research team gathered information on the self-sufficiency, positive community adjustment, and substance abuse outcomes of interest, and as importantly, it was at the 12-month interview that the research team gathered information about Oxford House and other substance-free transitional housing utilization in order to create length of stay variables (no administrative data source accurately and thoroughly captured study participants' entry and exit from housing, and therefore it was necessary to gather this information at the 12-month interview). Therefore, the final analysis sample consisted of the 238 individuals who completed 12-month interviews.

In addition to the length of stay analyses that examined the relationship between each study participant's length of stay in transitional housing and outcomes, the study also sought to investigate between group differences. While WCCC officers designated study participants into one of the three housing groups at intake based on their best knowledge, and the original study design planned to use these group designations in an intent-to-treat model, as the research team began data collection, it became clear that the "group designation" based on WCCC officer referral was not a useful designation. Many individuals who were not designated as "Oxford House" or "Other Transitional Housing" by the WCCC officers at intake *did* actually enroll in those programs, often for substantial periods of time. Similarly, many individuals who the WCCC officers referred to Oxford Houses or to another transitional housing never enrolled in those services. Thus, the original designation most often did *not* reflect the reality of an individual's housing receipt, nor, by definition, could it capture the details of how long individuals remained

in housing, nor how many times they changed housing.

Therefore, data from the 12-month interview was used to sort individuals into groups based on an “as treated” model: the research team designated someone as part of the Oxford House group only if she/he lived in an Oxford House for at least 30 days; similarly, an individual was assigned to the Other Transitional Housing group only if she/he lived in another transitional housing program for at least 30 days. The sample sizes for the between group analyses were 100 Oxford House participants, 86 Other Transitional Housing participants, and 52 No Transitional Housing participants.

However, this fluidity in transitional housing utilization made between-group analyses problematic. For this reason, between group analyses were conducted as secondary analyses: the primary analyses conducted for this study relied upon a dosage model utilizing the entire analysis sample to determine the relationship between length of stay in transitional housing and outcomes. As such, these analyses did not rely upon a three group design.

ANALYSIS TECHNIQUES

To explore the value added of transitional housing to the service rich environment that exists in Washington County, we applied Multivariate Ordinary Least Squares Regression for continuous outcomes and Logistic Regression for dichotomous outcomes. WCCC services were entered as the first step in the regressions, with length of stay in substance-free housing entered in the second step. To examine whether there were between-group differences in change over time, we applied repeated measures Generalized Linear Model (GLM).² Because this study was hindered by small sample sizes, which may influence the ability to detect effects,

² Also known as Repeated Measures MANOVA/MANCOVA

follow-up analysis was conducted using non-parametric statistics. This procedure did not uncover additional significant outcomes. All statistical analyses were conducted in SPSS v14.

Cost Study Component

In addition to gathering individual-level interview and administrative records data on study participants, the study included a cost component. The research team gathered budgetary and other information in order to document the costs associated with providing WCCC services, the cost to the taxpayer of adding substance-free transitional housing to the mix of services, and outcome costs associated with criminal justice recidivism and substance use. Our approach to cost analysis includes an investigation of “investment costs,” that is, the costs associated with providing a given service or program, as well as an investigation of “outcome costs,” or the costs (or savings) attributable to the outcomes associated with program participation. The cost analysis considers costs to the taxpayer only; investments made by private sources are not included in the analysis.

INVESTMENT COSTS

The investment costs for WCCC supervision services were gathered from the WCCC biennium plan, which reports all department expenditures and from interviews with WCCC administrators.

Information on investment costs associated with substance-free transitional housing was gathered both through a review of reports prepared by the WCCC on grant expenditures and activities and through interviews with representatives from substance-free transitional housing programs in Washington County and WCCC administrators. The investment costs of transitional housing represent the operational costs of housing (such as paying staff time or subsidizing rent payments); no capital expenses were incurred during the study period.

OUTCOME COSTS

The criminal justice transactions that were included in the cost study included the cost of an arrest, the cost of a jail booking, and the cost of a jail bed day. Information on the cost of an arrest was gathered from the three law enforcement agencies that make the bulk of the arrests in Washington County (Beaverton Police Department, Hillsboro Police Department, and the Washington County Sheriff), and the cost of jail bookings and jail days was compiled by the Washington County Sheriff. Other costs savings associated with potential substance abuse reduction, in-

cluding savings related to improved health and increased productivity, were beyond the scope of the current study.

COST EFFECTIVENESS ANALYSIS STRATEGY

It is possible to conduct a cost effectiveness analysis using information about program investment costs. The cost effectiveness of transitional housing (for Oxford Houses and for other transitional housing services) were calculated on a per-bed basis; that is, the total investment costs were divided by the number of beds supported to determine the per-bed housing cost.

RESULTS

In this chapter we present study sample characteristics, including demographics, criminal justice and substance use history, baseline health and psychosocial characteristics, baseline self-sufficiency characteristics, and service utilization, followed by the results for each of the study research questions.

Sample Characteristics

DEMOGRAPHIC CHARACTERISTICS

The sample demographics are presented in Table 2. Three quarters of the participants were men, and the majority of participants were Caucasian; the second largest racial/ethnic group was Hispanic. The majority of participants were single, high school graduates, unemployed, and exhibiting signs of poverty at the baseline interview. The average age was 33.

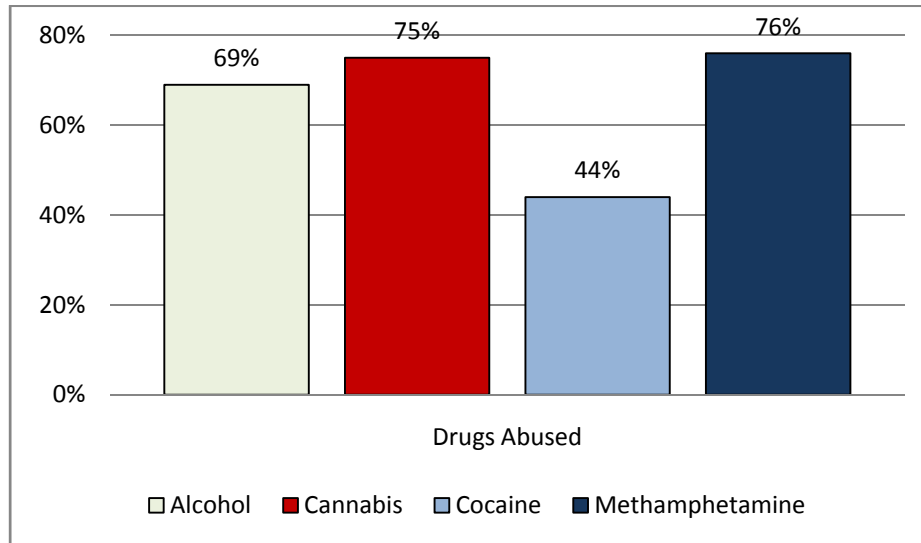
Table 2. Sample Demographics

N=238	
Characteristic:	% (n)
Gender	
Male	74% (175)
Female	26% (63)
Race/Ethnicity	
African American	2% (4)
Asian	2% (5)
Caucasian	81% (193)
Hispanic	8% (19)
Native American	4% (10)
Other	3% (7)
Marital Status	
Single	77% (183)
Married	6% (14)
Partnered	17% (41)
Education Level	
Less than high school	19% (44)
High school/GED	40% (95)
More than high school	42% (99)
Employment Status	
Employed	42% (99)
Unemployed	58% (139)

CRIMINAL JUSTICE AND SUBSTANCE USE HISTORY

Study participants had significant criminal histories, with an average of 14 prior arrests. As displayed in Figure 1, approximately three-quarters of the sample reported a lifetime history of abusing methamphetamines and cannabis, almost 70% reported abusing alcohol, and less than 50% reported abusing cocaine.

Figure 1. Drugs Abused in Lifetime



BASELINE HEALTH CHARACTERISTICS

Table 3 provides historical health and mental health characteristics (as reported in the baseline interview), including hospital utilization, chronic medical problems, and whether the participant ever experienced serious depression or serious anxiety. Overall, more than half the participants reported admission to a hospital, while one-quarter reported chronic health problems. Mental health concerns were reported by over a third of all participants, and specifically, anxiety was reported by almost half of the sample. In addition, almost three-quarters of participants indicated a history of receiving substance abuse treatment (inpatient or outpatient) in their lifetime.

Table 3. Baseline Health Characteristics

Characteristic:	N=238 % (n)
Ever admitted into the hospital	63% (151)
History of chronic medical problems	25% (60)
History of serious depression	42% (101)
History of serious anxiety	48% (115)
Received substance use treatment in lifetime	71% (69)

BASELINE PSYCHOSOCIAL CHARACTERISTICS

Table 4 provides the baseline psychosocial characteristics. The majority of participants reported having a sense of control, social support, social support for recovery, and being ready for change. However, half of the sample reported perceived stress. Less than half of the groups reported living in risky environments at baseline, while half the participants reported having positive support in their living environments.

Table 4. Baseline Psychosocial Characteristics

Characteristic:	% (n)
% who have social support	N=238 80% (190)
% who have social support for recovery	N=238 94% (223)
% who are stressed	N=238 50% (120)
% who are ready to change	N=190 66% (156)
% who feel in control of their lives	N=238 74% (176)
% who live in a supportive environment	N=145 52% (75)
% who live in a risky environment	N=238 40% (96)

BASELINE SELF SUFFICIENCY CHARACTERISTICS

Table 5 lists baseline self sufficiency characteristics, which included whether participants had a bank account, a valid driver’s license, a car, or had a place to cook meals. While most participants reported having a place to cook, only 31% reported having a bank account, and just 21% had a valid driver’s license. Of those with a valid driver’s license, just under half reported having access to a car when needed.

Table 5. Baseline Self Sufficiency Characteristics

Characteristic:	% (n)
Have a bank account	N=238 31% (73)
Have a valid driver’s license	N=238 21% (49)
Have access to a car³	N=58 56% (27)
Have a place to cook	N=238 98% (233)

SERVICE UTILIZATION

This study collected information on service utilization from two sources: administrative data and interview self-report data. First we present information from the administrative data collection component followed by data from the interview. Data collected from administrative sources included receipt of WCCC supervision services, such as number of office visits, whereas interview data focused on housing data, ancillary services, and the participants’ experience with WCCC services.

WCCC Supervision Services

As illustrated in Table 6, average, participants spent a year in supervision, had 10 office visits, 7 conditions of their parole/probation to satisfy, and spent approximately one month in the Community Corrections Center. Few participants reported having a mentor. The majority of participants across housing groups entered treatment during the study window, and of those, approximately half completed their treatment episodes.

³ This question was asked only of those persons that responded “yes” to the question, “Do you have a valid driver’s license?”

Table 6. WCCC Supervision Services

Service:	N=238
Days on Supervision	
Mean	327
Standard Deviation	80
Number of Conditions of Parole/Probation	
Mean	7
Standard Deviation	4.5
Number of Office Visits	
Mean	10
Standard Deviation	6
Days Spent in the Community Corrections Center	
Mean	34
Standard Deviation	53
Substance Abuse Treatment	
Percent enrolling	66% (156)
Percent completing	51% (79)
Had a Mentor	
	N=116
Percent “yes”	37% (43)

Substance-Free Transitional Housing Utilization

Table 7 presents transitional housing utilization data. Participants who participated in Oxford Houses spent an average of 7 months in one or more Oxford Houses, and participants who entered other types of transitional housing spent an average of 6 months in those programs. During the 1-year study window, participants lived in an average of 3.5 different housing situations.

Table 7. Transitional Housing Utilization

Housing:	N=238
Oxford House	
% enrolled for at least 30 days	42% (100)
Mean number of total days	203
Standard Deviation	137
Other Transitional Housing	
% enrolled for at least 30 days	36% (86)
Mean number of total days	177
Standard Deviation	123
Number of housing episodes	
Mean number of episodes	3.5
Standard Deviation	2.3

Ancillary Services

Participants were asked on the interview whether they needed and received various types of services. Table 8 reports data from the follow-up interviews, including the percent of participants who reported needing a variety of services during the 12-month study window and the percent who reported receiving those services. With the sole exception of health insurance, the majority of participants received each of the services they needed. Particularly noteworthy to this study, over 90% of the participants who stated they needed substance abuse treatment received those services.

Table 8. Ancillary Service Utilization

Service:	N=238
Transportation	
Percent needed	63% (150)
Percent received	69% (103)
Health Insurance	
Percent needed	44% (105)
Percent received	9% (9)
Mental Health Treatment	
Percent needed	16% (39)
Percent received	56% (22)
Substance Abuse Treatment	
Percent needed	42% (100)
Percent received	94% (94)
Medical Treatment	
Percent needed	26% (61)
Percent received	66% (40)
Employment Assistance	
Percent needed	51% (122)
Percent received	46% (56)
Financial Assistance	
Percent needed	55% (130)
Percent received	69% (89)

The interviews also included questions to measure participants' feelings about their supervision experiences. The questions asked whether their parole/probation officers cared about what happened to the them, if the officers were knowledgeable about their situation, whether the officers explained what participants needed to do to complete their parole/probation, and if the officers helped the participants get what they needed. The clear majority of participants (over 80%) reported a very high level of satisfaction with their experience with WCCC supervision.

Research Question 1: What Is the Value Added of Oxford House and Other Transitional Housing to the Combination of Services Offenders Receive?

ANSWER IN BRIEF

LONGER LENGTHS OF TIME SPENT IN SUBSTANCE-FREE TRANSITIONAL HOUSING, OVER AND ABOVE THE OTHER SERVICES RECEIVED, RESULTS IN LESS SUBSTANCE USE AT FOLLOW-UP AND DECREASED STRESS.

Analyses examined what combination of WCCC services were related to outcomes and specifically, whether the length of time spent in Oxford Houses and other transitional housing, over and above the other services received, was related to outcomes. While length of time spent in Oxford House alone did not predict outcomes, length of time spent in all transitional housing combined (Oxford House plus other transitional housing) was related to less substance use at follow-up and reduced stress. In other words, over and above the other services that offenders received, participants with longer lengths of stay in any transitional housing reported more reductions in substance use and stress.

In addition to investigating whether length of stay in substance-free transitional housing over and above other services was related to outcomes, the study also conducted a secondary set of analyses that investigated between-group differences to determine whether those offenders who resided in Oxford Houses or in other transitional housing programs (regardless of length of stay and other services received) had different outcomes from those who did not reside in transitional housing. Overall, all participants served by WCCC during the study period improved their self-sufficiency, regardless of transitional housing receipt. In addition, participants in the Oxford House group showed significant decreases in stress over time, while the other two study groups showed significant increases in stress over time.

It was difficult to investigate whether transitional housing receipt influenced criminal justice recidivism, as due to the longer than expected study recruitment period, the study data collection window allowed for just 12 months of data collection. Most participants were under WCCC supervision for most, if not all, of that period, and not surprisingly, the recidivism rate across the study sample was low, resulting in no significant relationships between transitional housing and recidivism. Longer follow-up periods are necessary in order to accurately determine the influence of such services on long-term criminal justice outcomes.

DETAILED RESULTS

Value-added of Substance-Free Transitional Housing

Ordinary Least Squares Regression and Logistic Regression were used to model whether the total length of stay in substance-free transitional housing, over and above the other services offenders receive, predicted outcomes. The model controlled for participant gender and number of total arrests prior to the study window, and included the total

number of days in the Community Corrections Center, total number of office visits in parole/probation, total number of parole/probation conditions, and housing length of stay. First, we examined whether length of stay in Oxford Housing alone predicted outcomes, and found that this did not predict outcomes.

Following this approach we examined whether participating in any transitional housing (Oxford House or any other form of substance-free transitional housing), over and above the other services offenders received, predicted outcomes. We included the combined length of stay in any substance-free transitional housing (Oxford and any other transitional housing) and found that the combined length of stay in transitional housing predicted outcomes: the longer people stayed in substance-free transitional housing the **less likely they were to use alcohol or other drugs in the past 30 days at the 12-month follow-up** (R^2 Change = .04, $F(1, 227)=8.8$, $p<.01$),⁴ **and the less likely they were to report perceived stress** (R^2 Change = .03, $F(1, 228)=7.1$, $p<.01$). Length of stay in transitional housing was not related to social support, social support for recovery, readiness to change, living in a supportive environment, perceptions of control, or treatment completion.

It was difficult to examine long-term criminal justice outcomes, such as subsequent rearrests and jail time, due to the short (12-month) study window caused by the lower than expected case flow that resulted in an extended study recruitment period. Few study participants were arrested during the study window, and no significant relationship was found between transitional housing and recidivism. With a longer follow-up period, it may be possible to investigate the relationship between substance-free transitional housing and recidivism.

⁴ This outcome variable is a composite of all 30-day substance use variables.

A challenge to this analysis is uncovering a value-added for transitional housing services on top of the benefits of the service rich environment in Washington County. The array of services provided to participants accounted for a large portion of the variance in the regression models. This was particularly true for criminal justice outcomes, not surprisingly given that a focus of parole and probation is to influence criminal justice recidivism. Indeed, one variable in particular, the number of office visits, accounted for variance in the regression models for a number of the criminal justice outcomes. Moreover, participants who reported receiving ancillary services (such as assistance with job searches or transportation) were more likely to report improvement on self-sufficiency measures and psychosocial indicators of well-being, and reported substance use reduction. Thus, it is noteworthy that length of stay in substance-free transitional housing contributed to outcomes over and above the array of services received by WCCC offenders.

Between-group Differences in Outcomes

In addition to examining whether length of stay in substance-free transitional housing adds value to the mix of services received by offenders, the study conducted a secondary set of analyses that examined whether there were any between-group differences in outcomes. In other words, the study investigated whether offenders who resided in Oxford Houses or in other transitional housing programs, regardless of length of stay and regardless of the other services received, had different outcomes from those individuals who did not reside in substance-free transitional housing. (See Appendix A for descriptive characteristics of these three subgroups.)

The analyses reported below were hindered by several factors, including small sample sizes. As discussed on page 11, the study sample included every new supervisee who enrolled in Oxford House or another substance-free transitional housing program as

well as those who were eligible for, but did not enroll, in such programs during the study recruitment period, for a total of 356 individuals. However, 85% agreed to participate in the baseline interview, and of those, 80% participated in the 12-month interview, for a final sample of 238 participants on whom the study had a complete set of data. This sample size limited the study's ability to detect statistically significant relationships and between-group differences. Larger samples (which would have been possible only by further extending the sample building and data collection windows) would have provided more power to identify additional outcomes associated with substance-free transitional housing receipt.

In addition to sample size constraints, defining the study groups themselves had its complications, as described on page 12. Parole/probation officers made an initial group determination via their referrals to Oxford House and other transitional housing, and then offenders themselves self-selected by enrolling (or not enrolling) in transitional housing. Furthermore, some individuals spent time in *both* Oxford House and another form of transitional housing, and some offenders cycled in and out of one or more Oxford Houses (or other transitional housing) over time, so their inclusion in the Oxford House (or Other Transitional Housing) group

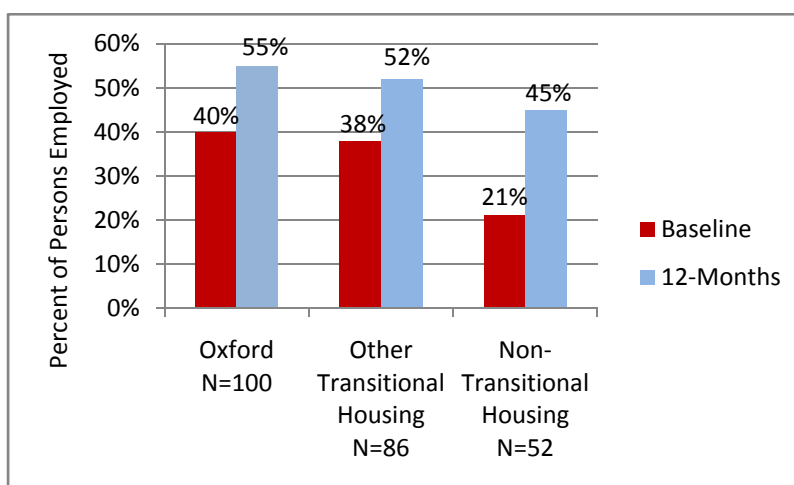
did not indicate a continuous stay in any one program. Thus, the task of looking for between-group differences is complicated by the fluidity of the groups themselves.

Due to the challenges associated with defining the three groups, the analyses reported below should be regarded as exploratory in nature.

Self-Sufficiency. To investigate between-group differences in self sufficiency outcomes, we measured employment, receipt of public funds, and several other self-sufficiency indicators, including having a driver's license, an automobile, a bank account, and a place to cook meals.

Figure 2 displays the percent of persons employed (either full- or part-time) at baseline and at follow-up in each housing group. As illustrated, all groups had significant increases in employment. However, the Oxford House and Other Transitional Housing groups were no more likely to increase their employment than the No Transitional Housing group. While less than half of the participants in any group were employed at baseline, at follow-up more than half of the Oxford House and Other Transitional Housing groups were employed and almost half of the No Transitional Housing group was employed.

Figure 2. Increased Employment Over Time

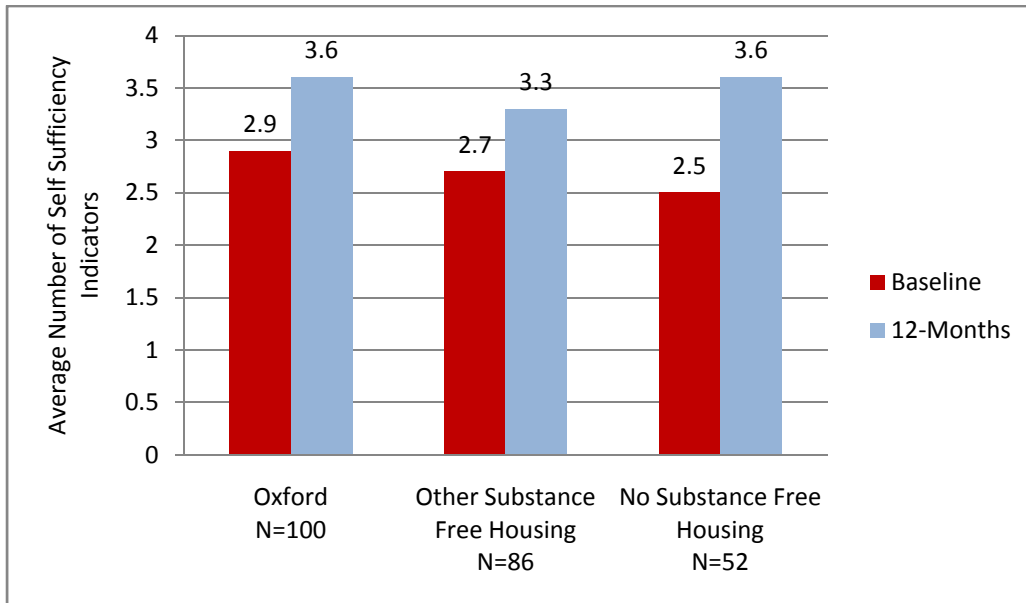


A poverty status indicator was calculated to measure the following sources of income: TANF; state or county general welfare/public aid or food stamps; Supplemental Security Income (SSI); Social Security Disability Income (SSDI); VA or other armed services pension or disability benefits; or unemployment compensation. Scores could range from 0 to 7 with a higher score indicating receipt of more of these benefits. Although not statistically significant, overall, participants reduced the number of benefits from these

sources, but again, these reductions did not vary by housing group.

As an overall indicator of self-sufficiency, we calculated a composite measure that included whether the participant had a drivers license, an automobile, a bank account, and a place to cook. As illustrated in Figure 3, all three groups reported significant increases in self-sufficiency over time; however, as with employment and poverty status, these improvements did not vary by housing group.

Figure 3. Increased Self-Sufficiency Over Time



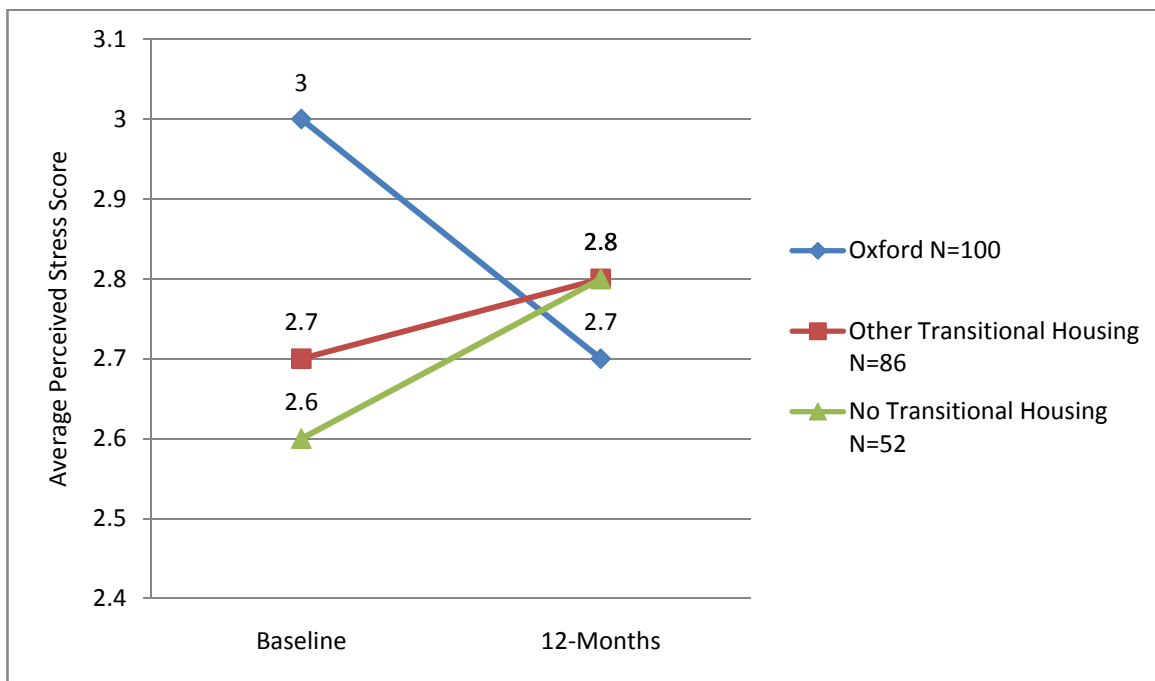
Health and mental health. Physical health status was measured by hospital and emergency room utilization and the number of days participants reported suffering from health problems. Participants reported minimal hospitalization or health problems in the 30 days prior to the baseline or follow-up interviews, and there were no between-group differences. This study also examined change over time in mental health concerns between baseline and follow-up; there were no changes over time in this domain.

Psychosocial indicators of well-being. The interview included several psychosocial measures designed to explore the extent to which participants improved their ability to manage stress, increased their level of social support, and improved their sense of community. Two psychosocial measures changed for all participants: social support and environmental risk. Environmental risk indicators examine risks present in participants' neighborhoods. Both the Oxford House and Non Transitional Housing groups increased their

levels of social support, which is a positive change; however, all three groups equally reported their environmental risk increased from baseline to the 12-month follow-up. However, it is worth noting that environmental risk scores changed from an average of 2.9 to an average of 3.1; which is not a practically significant change. There were no changes on several other indicators of well-being, including social support for recovery, readiness for change, environmental support, and feelings of control.

Perceived Stress was the only psychosocial outcome that differed across housing type: the Oxford Housing group reported **reducing their perceived stress** more than the other two housing groups, who actually reported increased perceived stress ($F(2, 233)=3.17; p<.05$) (see Figure 4). This finding corroborates the value-added analysis that indicated a relationship between substance-free transitional housing and decreased levels of stress.

Figure 4. Change in Stress Over Time



Substance use and criminal justice outcomes. While the value-added analysis reported above provided evidence that length of stay in transitional housing is related to decreased substance abuse over time, over and above the other services offenders receive, this study found no significant between-group differences in substance use over time. This is likely due to the sample size: sub-sample sizes for between-group analyses were quite small (100 individuals in the Oxford House group, 86 in the Other Transitional Housing group, and 52 in the No Transitional Housing group), which did not provide enough statistical power to detect between-group differences.

Similarly, it was not possible to thoroughly investigate criminal justice outcomes. Table 9 describes the 12-month criminal justice outcomes for the study participants. The

study documented technical violations; new drug-related, misdemeanor, and felony arrests; convictions; and jail days.

As evidenced by the data, little incidence of criminal justice involvement during the study window was found and there were no statistically significant differences across housing group on any of the criminal justice indicators. A challenge to uncovering criminal justice recidivism in this study was the short study window (one year post jail release) caused by the extended recruitment period, and that participants were on parole/probation during the study window (on average participants were under supervision for one year). Given that the study sample was comprised of substance-abusing offenders, it is noteworthy that less than 12% percent had subsequent drug-related arrests during the study window.

Table 9. Criminal Justice Outcomes

	Oxford House N=100 % (n)	Other Transitional Housing N=86 % (n)	No Transitional Housing N=52 % (n)
Drug-related arrests for new charges	11% (11)	8% (7)	10% (5)
Felony arrests for new charges	13% (13)	8% (7)	21% (11)
Misdemeanor arrests for new charges	15% (15)	16% (14)	19% (10)
Convictions for new charges	17% (17)	16% (14)	21% (11)
Jail Time			
Percent in jail	25% (25)	23% (20)	31% (16)
Mean number of days for those sent to jail	40	24	16
Standard Deviation	74	38	28
Technical Violations	50% (50)	61% (52)	54% (28)

Differential effects based on offender characteristics. The study participants were a largely homogenous group, and as a result it was not possible to examine the effect of a number of characteristics (such as race) on outcomes. However, analyses were run to investigate the effect of gender, prior criminality, education level, and employment status on a wide range of outcomes. These offender characteristics were largely unrelated to outcomes.

Research Question 2: What Are the Relative Costs and Benefits of Substance-Free Transitional Housing Services to the Taxpayer?

ANSWER IN BRIEF

OXFORD HOUSES ARE A CHEAPER ALTERNATIVE TO OTHER TRANSITIONAL HOUSING AND MAY RESULT IN LONG-TERM COST SAVINGS, THOUGH THE CURRENT STUDY WINDOW WAS TOO SHORT TO MEASURE THESE SAVINGS.

WCCC's federal grant to expand the availability of transitional housing provided support for several transitional housing services, including an Outreach Coordinator to expand the number of Oxford Houses in the community. The investment in this component of the grant was most cost-effective with a one-time cost of less than \$2,500 per bed, compared to

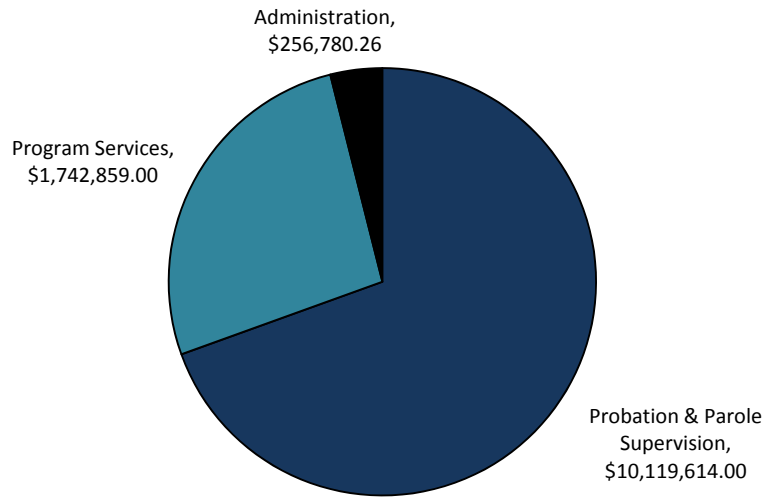
between \$4,200 and \$5,700 per bed annually for more traditional transitional housing options. This study did find a decrease in substance use for supervisees residing in Oxford House and other transitional housing models, and while assigning costs associated with decreased substance use were beyond the scope of this project, it is likely that this decreased use would result in longer-term increases in productivity and decreases in health care utilization. The current study did not find any outcome cost-savings in terms of reduced criminal justice expenses, as the study follow-up period was not long enough to adequately measure recidivism. The literature suggests, however, that adding Oxford Houses and other transitional housing models to the mix of services received by supervisees does result in decreased recidivism.

DETAILED RESULTS

WCCC Investments in Services

WCCC provides a number of services for supervisees. Figure 5 displays the department's supervision expenditures for 2006-2007 for the 1,948 high and medium risk offenders served (the population from which the study participants were drawn). Costs included parole/probation supervision, program services (such as drug court, treatment, and other specialized services), and administration. A total of \$6,553,466 was spent on these offenders, resulting in a per-offender supervision cost of \$3,365.

Figure 5. Washington County Community Corrections Supervision Expenditures for High & Medium Risk Offenders, 2006-2007



Study data indicated that there were no differences in service receipt (such as frequency of office visits with WCCC officers or length of time spent on parole or probation) between those participants who resided in Oxford Houses, those who resided in other substance-free transitional housing, and those who did not reside in substance-free transitional housing. Therefore, WCCC’s average services investment cost did not differ between the three groups.

Cost to the Taxpayer for Substance-Free Transitional Housing

In 2003, WCCC received the federal grant totaling \$993,500 to expand the availability of substance-free transitional housing. Grant services were provided between January 2004 and December 2007. Table 10 displays the transitional housing services funded by the grant. As illustrated in the table, grant funds were used to cover the cost of transitional housing beds at several facilities, and also were used to fund an Outreach Coordinator position who worked to establish addi-

tional Oxford Houses in the community, resulting in an additional 68 Oxford House beds. Oxford Houses, because they are peer-run, have been described as a low-cost alternative to more traditional substance-free transitional housing models. Traditional substance-free transitional housing often includes paid staff and other programming expenses that are not part of the Oxford House model. Once established, the expenses associated with Oxford Houses are simply the rent and upkeep of the house itself, and these expenses are paid by the residents themselves.

Not surprisingly, therefore, the investment in Oxford Houses resulted in the lowest cost-per-bed: the cost per bed for Oxford Houses was \$2,176. This was a one-time expense; once these beds were created, they theoretically will be available in perpetuity for future individuals. In contrast, the remaining grant funds were used to support beds at existing transitional housing programs for an annual cost of between \$4,200 and \$5,700.

Table 10. Transitional Housing Services Funded By Federal Grant

Service	Funding	Capacity	Cost per Bed
Ecumenical Ministries of Oregon/Central City Concern			
Outreach Coordinator to establish new Oxford Houses	\$147,996	68 beds	\$2,176 (one time expenditure)
Clean and Sober Living, Inc.			
Transitional Housing	\$50,958	4 beds	\$4,247 per year
CODA, Inc.			
Transitional Housing	\$274,416	16 beds	\$5,717 per year
LifeWorks Northwest			
Transitional Housing	\$132,000	8 beds	\$5,500 per year

In addition to supporting the transitional housing beds listed in Table 10, a portion of the grant funds each year were used to provide subsidies to assist WCCC supervisees in paying their first month's rent. A total of \$148,000 was spent for this purpose. A total of \$171,688 also was used to fund a Recovery Mentor position.

During the years under study, aside from the federal grant, the expenses associated with substance-free transitional housing in Washington County were not paid by the taxpayer. Private funds, whether in the form of rent paid by individual residents (whether Oxford House residents or residents of other transitional housing options), or in the form of grants and donations (e.g., from churches affiliated with particular substance-free transitional housing), covered the costs associated with these programs. However, the federal grant allowed WCCC to expand the transitional housing beds available to supervisees and assist supervisees in covering their initial rent payments.

Outcome Costs and Savings

Reductions in substance use have been linked to a variety of societal cost savings, including those associated with reduced crime, reduced

hospitalizations and other medical expenses, and increases in employment and productivity (e.g., Gerstein, Johnson, & Larison, 1997; Office of National Drug Control Policy, 2001). In a summary of research findings, the National Institute on Drug Abuse reports that individuals who receive drug treatment are more likely to be employed after treatment than before, and that employed individuals have higher earnings after than before treatment (National Institute on Drug Abuse, 1999). However, the current study data revealed no significant increases in employment or reductions in hospitalizations or criminal justice recidivism attributable to Oxford Houses or other substance-free transitional housing, and therefore there were no associated cost savings. It is worth noting, however, particularly in terms of criminal justice recidivism, as discussed above, this finding is likely an artifact of the short (12-month) data collection window. Some longitudinal research does, indeed, point to decreased criminal justice involvement for Oxford House participants (Jason et al., 2007a). Jason and his colleagues found that after 18 months, virtually none of the study participants who had resided in Oxford House (1.5%) were currently awaiting charges,

while 11.5% of the control group were awaiting charges, and at 24 months, none of the Oxford House group compared to 5.6% of the control group were currently awaiting charges. Given that in Washington County the costs associated with an arrest are nearly \$230, the costs associated with a jail booking are \$194, and the costs associated with a day in jail are \$76, similar findings in Washington County could result in substantial cost savings over time. It is important to point out that some of these potential avoided costs are

actually “opportunity resources” available for use in other contexts. For example, if substance abuse treatment reduces the number of times that an offender is subsequently incarcerated, an opportunity resource will be available to the sheriff in terms of a jail bed that can now be filled by another offender. However, this means that the sheriff will see no change in annual jail bed occupancy rates and that overall budget expenditures will remain the same.

DISCUSSION

Summary of Findings

SUBSTANCE-FREE TRANSITIONAL HOUSING IS RELATED TO POSITIVE OUTCOMES

This study adds to the existing research on Oxford Houses by investigating the value added of Oxford Houses and other transitional housing programs to a service rich community corrections environment. Results from this study indicate that living in Oxford House and types of substance-free transitional housing does lead to improvements over and above the influence of the other services received.

Firstly, and most significantly, analyses reveal that length of stay in substance-free transitional housing (Oxford House and other forms of transitional housing) is related to changes in substance use: the longer the length of stay in transitional housing, the less the likelihood of substance use at follow-up. This finding suggests that dosage does matter, and corroborates research by Jason and his colleagues (Jason et al., 2007a; Jason et al., 2006) that indicate that individuals who remain in Oxford Houses for 6 months or more have more favorable outcomes than individuals who have shorter stays. Further studies could investigate the mechanisms behind this finding to determine whether decreased substance use is due to the surveillance provided by living in transitional housing, or do to some other therapeutic benefit of transitional housing.

Secondly, participants who lived in Oxford Houses showed significant decreases in stress over time, while participants in the Other Transitional Housing and No Transitional Housing groups actually showed increases in stress over time. This intriguing finding merits replication and further investigation; an in-depth, qualitative study of the



experiences of Oxford House residents could illuminate the reasons for this relationship.

OXFORD HOUSE IS A COST-EFFECTIVE ALTERNATIVE TO OTHER SUBSTANCE-FREE TRANSITIONAL HOUSING

WCCC used a federal grant to expand the availability of substance-free transitional housing in the county. Grant funds were used to pay for beds at existing substance-free transitional housing programs, and also were used to fund an Outreach Coordinator position to increase the number of Oxford Houses. Over the course of the grant, 68 additional Oxford House beds were added to the community. The grant investment in this initiative resulted in the lowest cost-per-bed: the cost per bed for Oxford Houses was a one-time expenditure of \$2,176 compared to between \$4,200 and \$5,700 per bed per year for the other substance-free transitional housing programs.

OFFENDERS UNDER WCCC SUPERVISION MADE POSITIVE CHANGES

Results from this study suggest that there were positive changes for all offenders receiving supervision, regardless of transitional housing utilization. Offenders demonstrated significant increases in employment between baseline and follow-up; indeed, while less

than 40% of the sample was employed at baseline, at follow-up more than half of the participants were employed. In addition, all offenders showed significant improvement on several other indicators of self-sufficiency, such as the percent reporting that they had bank accounts, places to cook, drivers' licenses, and access to automobiles when needed. And while not reaching statistical significance, there was a trend for all offenders to have less reliance on public sources of income (e.g., TANF) at follow-up than at baseline, a logical consequence of increased employment.

Limitations of the Study

The current study faced several challenges, including a lower than expected case flow and the necessary longer sample building period that resulted in a small sample and a short data collection window, and the fluid nature of transitional housing utilization among study participants. The implications of each of these challenges are discussed below.

The fluid nature of transitional housing receipt: Defining the study groups had its complications. As discussed earlier, the original study design called for an intent-to-treat model. However, some individuals who were referred to Oxford House (or to another transitional housing program) did not enroll, and some individuals who were not referred did enroll in these programs. As a result, the study design was modified to an as-treated model: offenders who stayed in Oxford House for at least 30 days were considered part of the Oxford House group, and those that stayed in another form of transitional housing for at least 30 days were considered part of the Other Transitional Housing group. Even these group designations had their drawbacks, however, as some participants spent time in both Oxford House and another program, and other participants cycled in and out of multiple Oxford Houses or other programs. The fluid nature of housing utilization

likely hampered the study's ability to detect between-group differences. Further, the fact that group designation was based on self-selection introduces the possibility of systematic differences between groups. While analyses revealed few between group differences on a variety of characteristics, it is possible the groups differed on some unmeasured characteristics. It is because of these challenges to group assignments that the primary study analyses did not rely upon the three group design and instead relied upon dosage, or length of stay, analyses.

Lower than expected case flow: First, while the study included every eligible offender during the sample-building period, the case flow of eligible participants through WCCC was lower than anticipated, and therefore the sample-building period was extended in order to secure more study participants. While the sample included every new supervisee who enrolled in Oxford House or another substance-free transitional housing program as well as those who were eligible for, but did not enroll, in such programs during the study recruitment period, this still resulted in a relatively small sample. Furthermore, because the analyses relied upon data gathered from the 12-month interview, the final analysis sample was a subset of the eligible participants (238 of 356). This sample size limited the study's ability to detect statistically significant relationships and between-group differences. Larger samples (which would have been possible only with longer sample building and data collection windows) would have provided more power to identify additional outcomes associated with substance-free transitional housing receipt.

Limited follow-up period: Due to the extended sample building period, it was possible to collect just 12 months of data on each study participant. As discussed above, this data collection window was too short to capture long-term outcomes, particularly criminal justice recidivism. Few study participants were arrested during the study window, but

with a longer follow-up period, it may be possible to investigate whether participants who resided in substance-free transitional housing had lower recidivism rates than others.

Implications for Policy and Practice

OXFORD HOUSE SHOULD BE USED AS A COST-EFFECTIVE USE OF PUBLIC FUNDS

Substance-free transitional housing was related to two positive outcomes: decreased substance use and reductions in stress associated with longer stays in transitional housing. Given these findings, it may be advantageous to invest public funds in substance-free transitional housing programs, and in particular Oxford House, which is a cheaper alternative to traditional substance-free transitional housing.

PROGRAMS SHOULD IDENTIFY STRATEGIES FOR ENCOURAGING LONGER LENGTHS OF STAY IN SUBSTANCE-FREE TRANSITIONAL HOUSING

Results from this study indicate that longer lengths of stay in transitional housing predict less subsequent substance use. Corrections departments, therefore, should investigate strategies for supporting offenders in their transitional housing. While making a referral to a transitional housing program (whether

Oxford House or another program) and/or providing a subsidy to cover an initial month's rent are important strategies for encouraging *enrollment* in transitional housing programs, corrections departments should also consider strategies for offering longer-term support to encourage offenders to *remain* in transitional housing.

SUBSTANCE-FREE TRANSITIONAL HOUSING SHOULD BE PART OF A CONSTELLATION OF SERVICES

WCCC supervisees have access to a variety of services during their period of supervision. Many participants in this study, in addition to utilizing the Community Corrections Center, also received a variety of ancillary services from WCCC, including employment readiness training and job search assistance, assistance with transportation, linkages to health, mental health, and substance abuse services, and assistance with accessing health insurance and other financial supports. As a result of this package of services, study participants, regardless of transitional housing receipt, exhibited increases in self-sufficiency and other indicators of well-being. While transitional housing receipt did contribute to positive outcomes over and above these other services, it is crucial that transitional housing services are situated within a larger package of services necessary to support offenders in their recovery.

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APPENDIX A: BASELINE CHARACTERISTICS FOR THE HOUSING GROUP SAMPLES

Table A1. Sample Demographics for Housing Groups

	Oxford House	Other Transitional Housing	No Transitional Housing
	N=100	N=86	N=52
	% (n)	% (n)	% (n)
Gender*			
Male	75% (75)	65% (56)	85% (44)
Female	25% (25)	35% (30)	15% (8)
Race/Ethnicity			
African American	0% (0)	3.5% (3)	2% (1)
Asian	1% (1)	3.5% (3)	2% (1)
Caucasian	84% (84)	79% (68)	79% (41)
Hispanic	9% (9)	8% (7)	6% (3)
Native American	4% (4)	6% (5)	2% (1)
Other	2% (2)	0% (0)	10% (5)
Marital Status			
Single	78% (78)	78% (67)	73% (38)
Married	8% (8)	2% (3)	6% (3)
Partnered	14% (14)	20% (16)	21% (11)
Education Level			
Less than high school	17% (17)	14% (12)	29% (15)
High school/GED	43% (43)	42% (36)	31% (16)
More than high school	40% (40)	44% (38)	40% (21)
Employment Status			
Employed	40% (40)	44% (38)	40% (21)
Unemployed	60% (60)	56% (48)	60% (31)
Poverty Indicator			
Percent “yes”	72% (72)	87% (75)	85% (44)
Age			
Mean	32	33	35
Standard Deviation	9.7	8.8	9.6

*No Transitional Housing Group had significantly fewer women than the other two groups, $p < .05$.

Table A2. Criminal Justice and Substance Use History for Housing Groups

	Oxford House N=100	Other Transitional Housing N=86	No Transitional Housing N=52
Total Lifetime Arrests*			
Mean	16	13	11
Standard Deviation	11.5	10.3	8.5
Substance Use History			
Alcohol			
Percent used	69% (69)	70% (60)	65% (34)
Mean Years Used	7.5	7.8	9.7
Standard Deviation	8.1	8.6	10.2
Cannabis			
Percent used	69% (69)	77% (66)	83% (43)
Mean Years Used	7.3	8.6	11.2
Standard Deviation	7.6	9.3	9.1
Cocaine			
Percent used	41% (41)	42% (36)	52% (27)
Mean Years Used	2	2	2.5
Standard Deviation	4.3	4.5	3.8
Methamphetamine			
Percent used	73% (73)	80% (69)	75% (39)
Mean Years Used	6.1	6.3	6.0
Standard Deviation	6.4	6.9	6.4

*Oxford House participants had more prior arrests than the other two housing groups, $p < .05$.

Table A3. Baseline Health Characteristics for Housing Groups

	Oxford House N=100 % (n)	Other Transitional Housing N=86 % (n)	No Transitional Housing N=52 % (n)
Ever admitted into the hospital	66% (66)	65% (56)	56% (29)
History of chronic medical problems	30% (30)	24% (21)	17% (9)
History of serious depression	38% (38)	41% (35)	54% (28)
History of serious anxiety	33% (33)	63% (54)	54% (28)
Received substance use treatment in life-time	72% (72)	69% (59)	73% (38)

Table A4. Baseline Psychosocial Characteristics for Housing Groups

	Oxford House	Other Transitional Housing	No Transitional Housing
	% (n)	% (n)	% (n)
% who have social support	N=100 84% (84)	N=86 76% (65)	N=52 79% (41)
% who have social support for recovery	N=100 94% (94)	N=86 95% (82)	N=52 90% (47)
% who are stressed	N=100 61% (61)	N=86 44% (38)	N=52 40% (21)
% who are ready to change	N=81 79% (64)	N=69 86% (59)	N=40 83% (33)
% who feel in control of their lives	N=100 81% (81)	N=86 66% (57)	N=52 73% (38)
% who live in a supportive environment	N=72 49% (35)	N=73 55% (40)	NA ⁵ NA
% who live in a risky environment	N=100 43% (43)	N=86 37% (32)	N=52 40% (21)

⁵ This scale was not asked of the No Transitional Housing group.

Table A5. Baseline Self Sufficiency Characteristics for Housing Groups

	Oxford House	Other Transitional Housing	No Transitional Housing
	% (n)	% (n)	% (n)
Have a bank account	N=100 33% (33)	N=86 24% (21)	N=52 37% (19)
Have a valid driver's license	N=100 20% (20)	N=86 20% (17)	N=52 23% (12)
Have access to a car⁶	N=19 63% (12)	N=17 59% (10)	N=12 42% (5)
Have a place to cook	N=100 98% (98)	N=86 99% (85)	N=52 96% (50)

⁶ This question was asked only of those persons that responded “yes” to the question, “Do you have a valid driver’s license?”

Table A6. WCCC Supervision Services for Housing Groups

	Oxford House	Other Transitional Housing	No Transitional Housing
Days on Supervision	N=100	N=86	N=52
Mean	330	329	318
Standard Deviation	70	76	102
Number of Conditions of Parole/Probation	N=100	N=86	N=52
Mean	7	7	6
Standard Deviation	5	4	4
Number of Office Visits	N=100	N=86	N=52
Mean	10	10	10
Standard Deviation	6	6.5	6
Days Spent in Restitution Center	N=100	N=86	N=52
Mean	38	34	28
Standard Deviation	49	62	45
Had a Mentor	N=100	N=86	N=52
Percent “yes”	15% (15)	23% (20)	15% (8)
Entered Treatment	N=100	N=86	N=52
Percent “yes”	59% (59)	68% (59)	73% (38)
Treatment Completed in Window	N=59	N=59	N=38
Percent “yes”	51% (30)	54% (32)	45% (17)

Table A7. Transitional Housing Utilization for Housing Groups

	Oxford House	Other Transitional Housing	No Transitional Housing
Length of stay	N=100	N=86	N=52
Mean number of days	203	177	260
Standard Deviation	137	123	248
Number of housing episodes	N=100	N=86	N=51
Mean number of episodes	3.4	4.0	2.6
Standard Deviation	2.1	2.5	1.7

Table A8. Ancillary Service Utilization for Housing Groups

	Oxford House N=100	Other Transitional Housing N=86	No Transitional Housing N=52
Transportation			
Percent needed	61% (61)	70% (60)	56% (29)
Percent received	69% (42)	67% (40)	72% (21)
Health Insurance			
Percent needed	25% (25)	33% (28)	40% (21)
Percent received	8% (2)	7% (2)	24% (5)
Mental Health Treatment			
Percent needed	15% (15)	15% (13)	21% (11)
Percent received	60% (9)	54% (7)	55% (6)
Substance Abuse Treatment			
Percent needed	38% (38)	45% (39)	44% (23)
Percent received	92% (35)	92% (36)	100% (23)
Medical Treatment			
Percent needed	27% (27)	30% (26)	15% (8)
Percent received	70% (19)	54% (15)	75% (6)
Employment Assistance			
Percent needed	35% (35)	41% (35)	50% (26)
Percent received	60% (21)	57% (20)	57% (15)
Financial Assistance			
Percent needed	48% (48)	57% (49)	63% (33)
Percent received	75% (36)	63% (31)	67% (22)