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**RE: Final Report – Grant # 2004-DD-BX-1123**  
**(Urban Institute Project Number 07626-000-00)**

Dear Ms. Bright:

The Urban Institute is pleased to submit the attached final report for grant number 2004-DD-BX-1123, "Evaluation of the Ridge House Residential Program."

Should you have questions of a technical nature, please direct them to Janeen Buck-Willison at (202) 261-5746. Questions of a contractual nature should be directed to the undersigned.

Sincerely,



Don Spencer

# **EVALUATION OF THE RIDGE HOUSE RESIDENTIAL PROGRAM: FINAL REPORT**

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Caterina Gouvis Roman, Ph.D.  
Ashley Wolff  
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Although we appreciate the contribution of those noted above, and any others inadvertently omitted, the authors acknowledge their responsibility for any errors within this report.

Some of the research, analysis and findings discussed in this final report first appeared in the journal Research on Social Work Practice (2006) in the article "Assessing Intermediate Outcomes of a Faith-Based Residential Prisoner Reentry Program" by Caterina G. Roman, Ashley Wolff, Vanessa Correa, and Janeen Buck. The article appears in Volume 10, issue 5, pages 1-17.

## Abstract

The Ridge House program is a spiritually-based, short-term transitional housing program that provides substance abuse treatment and employability training to parolees in need of support and services as they transition from state prison to the Reno (NV) community. In 2004 the Urban Institute (UI) began an intensive four-year Evaluation of the Ridge House Residential Program with funding from the National Institute of Justice (NIJ) under #2004-DD-BX-1123. The primary goal of the research was to provide policymakers and program developers with empirical information about whether the Ridge House program effectively reduced recidivism. Understanding the spiritual dimension of the Ridge House program and how it contributed to or impeded the successful outcomes of program participants was a secondary but critical evaluation objective.

Impact analyses compared recidivism outcomes for Ridge House participants against a comparison group of parolees who were accepted into Ridge House but did not attend, primarily due to bed space limitations. Recidivism, defined as any re-arrest post-release into the study, was measured for a sample of 617 individuals (156 treatment cases and 461 comparison cases) using administrative data collected from the National Crime Information Center (NCIC) at the Federal Bureau of Investigation (FBI). Several hypotheses were tested including the likelihood that program participation would (1) lower the odds of any re-arrest; (2) lower the average number of re-arrests; and (3) prolong the time to re-arrest.

Multivariate regression analyses indicate that Ridge House program participation alone does not affect the incidence or prevalence of re-arrest, with the exception of the number of society arrests, once baseline characteristics are controlled for: specifically, Ridge House participants had statistically significant fewer arrests for society crimes than the comparison group. Findings from the survival analyses suggest that program participants had more months on the street before re-arrest, but the statistical significance was mostly driven by participants who had successfully completed the Ridge House program. Regression models using program completion as a variable found that Ridge House program completers had a lower probability of re-arrest and that completion was associated with a 16 percent decrease in the probability of re-arrest. Program completion was also linked with lower incidence of certain types of crimes, specifically property and person crimes.

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## Executive Summary

In 2004, the Urban Institute (UI) began an intensive four-year evaluation of the Ridge House Residential Program, a spiritually-based, short-term transitional housing program that provides abuse treatment and employability training to parolees in need of support and services as they transition from state prison to the Reno (NV) community. Ridge House sought to facilitate successful reentry through a holistic approach to service provision that addressed the physical, cognitive and spiritual needs of individual clients.

The National Institute of Justice (NIJ) commissioned the Ridge House evaluation at a time when interest in and support for faith-based programs was growing among policymakers despite the limited empirical evidence regarding the effectiveness of such programs. The goals of the research, therefore, were to provide policymakers and program developers with empirical evidence about whether the Ridge House program effectively reduced recidivism and relapse, and led to other positive reentry outcomes including stable housing and gainful legal employment. Understanding the spiritual dimension of the Ridge House program and how it contributed to or impeded the success of program participants was a secondary, but critical, evaluation objective.

The study's impact analysis compared recidivism outcomes for Ridge House participants against a comparison group of parolees who were accepted into Ridge House but did not attend, primarily due to bed space limitations. Recidivism, defined as any re-arrest post-release into the study, was measured for a sample of 617 individuals (156 treatment cases and 461 comparison cases) using administrative data collected from the National Crime Information Center (NCIC) at the Federal Bureau of Investigation (FBI). Examining the extent to which Ridge House program participation reduced recidivism was of primary interest. Several hypotheses specific to the program's effectiveness in reducing recidivism were tested including the likelihood that program participation would (1) lower the odds of any re-arrest; (2) lower the average number of re-arrests; and (3) prolong the time to re-arrest.

### **RIDGE HOUSE IMPACT ON RE-ARREST**

Findings from the Ridge House evaluation are limited. Multivariate regression analyses indicate that Ridge House program participation alone does not affect the incidence or prevalence of re-arrest, with the exception of the number of society arrests, once baseline characteristics are controlled for. Ridge House participants had statistically significant fewer arrests for society crimes than the comparison group. Further, findings from the survival analyses suggest that program participants had more months on the street before re-arrest, but the statistical significance was mostly driven by participants who had successfully completed the Ridge House program.

Similarly, regression models using program completion as a variable found that Ridge House program completers had a lower probability of re-arrest and that completion was associated with a 16 percent decrease in the probability of re-arrest. Program completion was also linked with lower incidence of certain types of crimes, specifically property and person crimes (again, these findings were statistically significant).

Lastly, the survival analysis indicates that program completion significantly delays arrest; participation only seems to shorten the onset of arrest. Subgroup analysis of treatment group



characteristics found that marital status was the only statistically significant attribute tied to program success. This analysis did find a direct relationship between the numbers of service needs met and program completion: the more unmet needs, the lower the likelihood of program completion.

Taken in their entirety, these findings are disappointing. However, the findings do underscore the importance of program completion for reentry success. Consistent with the extant research, program completion is positively tied to reductions in re-arrests generally, as well as for specific types of crimes (property and person offenses). In the case of the Ridge House program, program completion also appears to significantly prolong the time to re-arrest (when comparing completers to non-completers). The suggested link between program completion and social supports (married individuals are more likely to complete) and between program completion and program responsiveness to identified needs offer clues about who may be best positioned to benefit from a residential program like Ridge House, and how to enhance client engagement, retention and completion. These findings also underscore the importance of both strong support networks and appropriate needs matching to program success and reduced recidivism.

## LIMITATIONS

There are three key limitations that should be considered in interpreting these results.

First, although the study's original design sought to examine a number of program outcomes (relapse, employment, and housing stability) and dimensions (client satisfaction, motivation, readiness for change, self-efficacy and spirituality) only one outcome – recidivism – could be measured due to project time, resource and data constraints. Caution should be exercised in drawing any definitive conclusions about the overall functioning of the Ridge House program based on analysis of a single outcome.

Second, the recidivism analysis relies solely on arrest records drawn from NCIC. This is a significant limitation as individuals are not always arrested for crimes committed. The absence of self-reported criminal activity measures post-release hampers an accurate estimate of the actual prevalence and incidence of criminal involvement. Furthermore, the lack of conviction and re-incarceration data is especially problematic for the survival analysis, which presumes that individuals are “on the street” and thus that periods free of re-arrests are attributable to changes in individual offending and not a lack of opportunity to commit new offenses. Without defined “in” and “out” dates for potential subsequent periods of incarceration, the analysis cannot control for opportunity. It is possible, for example, that in a given time period, a respondent does not commit a crime resulting in arrest because the individual is in prison, and thus unable to commit crimes. Project researchers did make provisions to collect conviction and incarceration data from the relevant state agencies, however, resource and time constraints at the state-level precluded additional data collection and analysis. Likewise, the study's data collection strategy included collection of detailed, self-report data from treatment and comparison group cases at 12-months post-release that would have supported more rigorous recidivism analyses; the implementation challenges and resource constraints noted in Chapter 3 of this report rendered the continued collection of self-reported data infeasible.

Third, the study's small sample size, particularly for the treatment group analysis (N=156; subgroup analysis Ns of 104 and 52) generally precludes the generalizability of these findings. These small numbers may also contribute to the mix of statistically significant findings and those that approach but do not reach statistical significance at conventional levels.

Nonetheless, the consistency of the results across model specifications lends support to key findings, namely that Ridge House program completion is linked to lower rates of recidivism (re-arrest). This is consistent with the extant research, and therefore not surprising. Findings from the subgroup analysis of program completers, however, suggest that some individuals may benefit more from participation in programs like Ridge House than others and thus, offer guidance to practitioners and program developers.

## 1.0 Introduction

Prisoner reentry is one of today's most pressing policy issues. Nearly 700,000 prisoners are released from federal, state, and local prisons annually (Sabol et al. 2009) and face numerous obstacles to successful reentry (Petersilia 2006; Lattimore and Visser 2009; Urban Institute 2008). Typically, returning prisoners are poorly educated and lack viable employment options, stable housing, and the support networks necessary to make a successful transition from prison to the community (Holl et al. 2009; McDonald et al. 2008; Petersilia 2004; Solomon et al. 2001; Travis et al. 2001; Visser, et al. 2003). Many also have severe health problems and are at high-risk for relapsing into drug and alcohol abuse (Mears et al. 2003). These and other factors contribute to high recidivism rates. A Bureau of Justice Statistics national study of nearly 300,000 released prisoners found, for example, that within 3 years of prisoners being released, 67.5 percent were re-arrested and 51.8 percent were re-incarcerated (Langan and Levin 2002). The extant research indicates that successful attempts to reduce recidivism depend largely on whether a released prisoner's multiple needs — including housing, drug treatment, mental health services, employment training, job opportunities, and family and parent counseling — are addressed (Morley et al. 1998; Gaes et al. 1999; Cullen and Gendreau 2000; Mears et al. 2003).

The Ridge House program addresses the pressing reentry-related needs of returning parolees and in so doing, seeks to reduce recidivism and improve reintegration. The program is a spiritually-based, short-term transitional housing program that provides substance abuse treatment and employability training to parolees in need of support and services as they transition from state prison to the Reno (NV) community. Ridge House seeks to promote successful reentry through the provision of services and a holistic approach that addresses the individual's spiritual, physical and cognitive needs. In 2004 the Urban Institute (UI) began an intensive four-year *Evaluation of the Ridge House Residential Program* with funding<sup>1</sup> from the National Institute of Justice (NIJ). NIJ commissioned the Ridge House evaluation at a time when interest in and support for faith-based programs was growing among policymakers despite the limited empirical evidence regarding the effectiveness of such programs. The goals of the research, therefore, were to provide policymakers and program developers with empirical information about whether the Ridge House program effectively reduces recidivism and relapse, and leads to other positive reentry outcomes, including stable housing and gainful legal employment. Understanding the spiritual dimension of the Ridge House program and how it contributed to or impeded the successful outcomes of program participants was a secondary but critical evaluation objective.

This report presents findings from the Ridge House evaluation. First, we briefly review the context that inspired the study, focusing on the issue of reentry and what has been learned from the growing body of reentry research and the large number of federally-funded reentry research demonstrations conducted during the last decade. Chapter 2 examines the Ridge House residential program including its origins and evolution, guiding philosophy, program structure and services, target population and eligibility requirements. Chapter 3 reviews the study's research design, data collection and methods, and discusses the evaluation challenges encountered. The remainder of the report examines the study's analytic approach and findings (Chapter 4) and concludes with a summary discussion of the study's findings, limitations and lessons learned (Chapter 5).

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<sup>1</sup> This research was funded under NIJ grant #2004-DD-BX-1123.

## PRISONER REENTRY

Access to stable housing, employment, substance abuse and mental health treatment are basic but arguably essential ingredients for improving prisoner reentry. Considerable research suggests that drug treatment programs can contribute to substantial reductions in criminality, drug use, and drug-related problems (Gaes et al. 1999; Cullen and Gendreau 2000). Empirical evidence also indicates that employment can reduce the likelihood of recidivism (Rossman et al. 1999). This research suggests the need for employability training and other skill-building services that can facilitate gainful, legal employment for ex-prisoners. More broadly, research also indicates that successful attempts to reduce recidivism depend largely on whether a released prisoner's multiple needs — including housing, drug treatment, mental health services, employment training and opportunities for employment, and family and parent counseling — are addressed (Morley et al. 1998; Cullen and Gendreau 2000; Mears et al. 2003). These findings were further supported by Seiter and Kadela's (2003) review of reentry programs. Applying the Maryland Scale of Scientific Method to assess evidence of effectiveness, Seiter and Kadela identified more than a dozen reentry<sup>2</sup> programs that positively impacted recidivism, including vocational training programs, substance abuse treatment, halfway houses, and education.

More recent reentry research further substantiates these findings and underscores the continuing difficulties returning prisoners face upon release. Despite research which suggests that prisoners believe having a job lined up at release is critical to successful reentry (Visher et al. 2003) and findings that support the positive impact employment has on re-offending (Rossman and Roman 2003; Bernstein and Houston 2000), few correctional facilities provide employment-related training in prison and few exit with viable employment options (Urban Institute 2008). Holl et al.'s (2009) evaluation of the Prisoner Reentry Initiative (PRI) further supports previous findings that access to employment opportunities, health care and social services are crucial to the successful reentry of returning prisoners. The PRI used resources in faith-based and community organizations to provide returning prisoners with training for stable jobs and housing upon their release; the evaluation showed that individuals who had access to PRI programs had lower rates of recidivism one year after release when compared to the national average. The evaluation also supported prior findings that substance abuse continues to be a significant obstacle to the successful reentry of returning prisoners (Holl et al. 2009). Similar scenarios emerge in the research around housing, substance abuse and reentry.

Although much of the early reentry research focused on identifying the obstacles to successful reentry, documenting the experiences of prisoners transitioning from prison to the community, and evaluating the effectiveness of criminal justice interventions designed to reduce re-offending and promote offender success (Travis 2005), the focus of the research has expanded. For example, research indicates that continuity of care is a crucial component of reentry success, regardless of the program type, and that interventions should start in the incarceration facility and continue into the community to yield an impact on reducing recidivism (Gaes et al. 1999). Likewise, collaboration is crucial to ensure proper program implementation (Hammett, Roberts and Kennedy 2001). Today, it is widely accepted that reentry is not a discrete program but a process that begins at entry into a correctional facility with the specific aim of readying individuals for their eventual release and

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<sup>2</sup> Seiter and Kadela's definition of reentry programs included in-prison programs that focus on reentry, as well as community-based programs that conduct in-reach and provide services that extend post-release to insure continuity of service (2003:368).

successful transition to the community (Travis and Visser 2005). It is a new way of doing business that requires “system-wide ownership” and a collaborative criminal justice and community partnership that provides “all members of the partnership [with] a voice at each of the following decision points in the re-entry process: program eligibility, institutional treatment plans, structured prerelease planning, structured re-entry, and community reintegration strategies” (Byrne, Taxman and Young 2002: 6, 7). In turn, the extant research has identified a body of “best practices” that, if successfully implemented through proper program design, can lead to successful reentry for ex-offenders.

The federal government has devoted considerable resources to the issue of prisoner reentry (Petersilia 2004) including fiscal support for several large-scale initiatives that emulate a systems approach and incorporate best practices. Numerous federal-level reentry initiatives for adult and youth prisoners also emphasize partnerships with the faith community. The dual emphasis on prisoner reentry and faith-based initiatives under the previous United States Presidential administration increased the presence and role of various faith communities in reentry efforts. Examples include President Bush’s Prisoner Reentry Initiative (PRI), the Serious and Violent Offender Reentry Initiative (SVORI), Ready4Work, and the Department of Justice’s Anti-Gang Initiative. These initiatives often included partnerships with small, independent faith-based or spiritually-based programs like Ridge House. As has been broadly discussed in the research literature, there is relatively little research on the effectiveness of faith-based programs; research has been stymied in part by ambiguity regarding the key characteristics of faith-based programs and how those characteristics may be linked to outcomes (Buck Willison et al. 2010; Mears et al. 2006; Noyes 2009; Roman et al. 2004). This gap likely prompted the interest of NIJ in evaluating the spiritually-based Ridge House residential program for parolees.

## **REENTRY RESEARCH**

Despite the vast quantity of programs and principles that the field has implemented, there are still a number of unanswered questions about “what works” in reentry. Moreover, it is important to distinguish between principles and programs in assessing the “best practices” in reentry; programs that work in certain places may influence best practices, but those practices could be poorly implemented in another place, indicating that the practice in fact does not work (Petersilia 2004; Travis and Visser 2005). Researchers may deem certain programs “effective,” but most studies emphasize that the implementation of their key elements is crucial to making them successful in other places (Seiter and Kadela 2003).

Findings from the decade’s large multi-site prisoner reentry initiatives such as PRI, SVORI, and Ready4Work suggest that pre-release and post-release services should be coordinated and comprehensive to help improve reintegration and reduce recidivism. The Ready4Work initiative, a collaborative involving both the Departments of Justice and Labor and the Annie E. Casey and Ford Foundations, fostered comprehensive reentry approaches in 17 communities – specifically, the provision of case management, job training and placement, mentoring and education services to returning adult and juvenile prisoner (Farley and McClanahan 2007).. Concluded in 2006, the evaluation results suggest that Ready4Work positively affected both recidivism and employment stability for adult offenders: 63 percent of individuals placed in jobs were employed for at least 90 consecutive days after placement, and roughly 98 percent of Ready4Work participants were still in

the community 6-months post-release (just 2.5 percent were re-incarcerated during that time).<sup>3</sup> Roughly 6.9 percent of program participants had been re-incarcerated at 12-months post-release, a figure far below the national average.<sup>4</sup> These results must be interpreted with caution, however, because Ready4Work program databases, for the most part, only captured data on those participants who returned to program services numerous times during the first month and remained long enough to go through an official intake process. The clients who were tracked were most likely the most motivated to succeed. In addition, a comparison group was not utilized for the evaluation.

Results from the national evaluation of SVORI were mixed. Although findings suggest SVORI sites significantly increased access to and receipt of services and programming to adult SVORI participants (particularly pre-release) and positively, though not statistically significantly, affected intermediate substance use outcomes, re-offending was largely unaffected for male participants. There was no significant impact on re-offending for male participants. In contrast, female SVORI clients were significantly less likely to be re-arrested, although evaluators report women in the sample were more likely to be re-incarcerated (Lattimore and Visher 2009). Lattimore and Visher offer a number of plausible explanations for these findings, including insufficient service delivery post-release.

Findings from McDonald et al.'s (2008) evaluation of Fortune Society, a "one-stop shop" reentry program in New York City, also yielded mixed results. The Fortune Society is not a national multi-site program, but we discuss the results here because the evaluation researchers encountered obstacles similar to those in our evaluation of Ridge House. The study used a quasi-experimental design to compare recidivism outcomes for Fortune clients released from prison to the outcomes of individuals released from New York State prisons who returned to New York City, in addition to examining the outcomes of Fortune clients released from jail to the outcomes of New York City jail releasees who were not admitted to Fortune Society.<sup>5</sup> Program completion rates for Fortune Society participants were low; half of participants attended less than nine sessions, and only 25 percent of program participants attended 36 or more sessions (McDonald et al 2008:25). The program also had a limited impact on recidivism outcomes. Fortune clients who had been released from jail had a three-year reconviction rate of 12-15 percent while those who were released from state prison had a reconviction rate of 55-57 percent; both of these rates were higher than the reconviction rates for jail and prison releasees in the comparison group (McDonald et al. 2008).

While Fortune Society had a negative effect on recidivism outcomes, the program improved housing outcomes for jail releasees. Fortune clients who had been released from jail were more likely to avoid homelessness for three years post-release (McDonald et al. 2008). However, the evaluators did not find a similar effect for Fortune clients who were released from state prison; the researchers hypothesize that this was due to the fact that state prisoners have access to housing services through their parole supervision, and therefore Fortune Society had less of an impact on their housing outcomes (McDonald et al. 2008).

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<sup>3</sup> As accessed online 6/2009 [http://georgewbush-whitehouse.archives.gov/government/fbci/pdf/improving\\_prisoner\\_reentry.pdf](http://georgewbush-whitehouse.archives.gov/government/fbci/pdf/improving_prisoner_reentry.pdf)

<sup>4</sup> Ibid

<sup>5</sup> Fortune Society has an open door policy that allows the admission of any individual who has been incarcerated in the past ten years prior to applying for the program.

## **Transitional Jobs**

Readying clients for employment and linking them to jobs was a central emphasis of the Ridge House program; clients had to maintain a job to remain in the program. The extant research suggests that transitional employment programs have a positive effect on reentry outcomes. Generally, transitional employment programs are programs that pay subsidies to employers who hire their clients; the subsidies last anywhere from 90 days to six-months on the job. Many of these programs have undergone rigorous evaluations that incorporate experimental design and random assignment methods to determine their effect on recidivism<sup>6</sup>. In their two-year impact evaluation of the Center for Employment Opportunities (CEO) Prisoner Reentry Program, an unsubsidized transitional jobs program, Redcross et al. (2009) found that CEO participants (who were randomly assigned to participate in the program) were less likely to be re-arrested, re-convicted and re-incarcerated than individuals in the control group. The evaluation also found that 70 percent of program participants were able to find employment; however, their average length of employment was only eight weeks (Redcross et al. 2009).

In their evaluation of ComALERT, a prisoner reentry program that offers subsidized transitional employment to parolees in Brooklyn, NY, Jacobs and Western (2007) found that ComALERT clients were 15 percent less likely than members of a comparison group to be re-arrested two years after their from release from prison, and those ComALERT clients who completed the program were more than 30 percent less likely to be arrested during the evaluation period (Jacobs and Western 2007).

Despite these positive findings, other rigorous evaluations have shown that some subsidized transitional job programs do not improve recidivism outcomes. An evaluation of the Specialized Training and Employment Project, a program run out of the Wisconsin Department of Corrections, found no significant difference in the recidivism rates of the experimental and control group one year post-release (Van Stelle, Moberg, and Lindbury 1995). In evaluating the National Supported Work Demonstration Project, Piliavin and Gartner (1981) found that three years after enrolling in the program, program participants had similar recidivism and employment outcomes when compared to individuals in the control group.

Looking at a different set of outcomes, Bloom et al.'s 2009 evaluation of the Transitional Work Corporation (TWC) program, also a subsidized transitional employment program, found that TWC participants received less welfare assistance and had statistically significantly higher earnings, although the latter finding did not hold after one year of the evaluation. However, the same evaluation showed no statistically significant differences between participants in another transitional employment program – the Success Through Employment Preparation (STEP) program (unsubsidized) – and members of that control group (Bloom et al. 2009).

## **Therapeutic Models**

Prisoner reentry programs, like Ridge House, that provide substance abuse treatment to ex-offenders using a therapeutic model have also been shown to be effective in reducing recidivism.

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<sup>6</sup> Findings from both studies of both subsidized (ComALERT, National Supported Work Project, and Transitional Work Corp.) and unsubsidized (Center for Employment Opportunities and Success Through Employment Preparation) programs are reviewed here.

In their evaluation of Phoenix House, a residential substance abuse treatment program, DeLeon et al. (1982) assessed the difference in outcomes between individuals who dropped out of the program and individuals who successfully completed the program. Five years after receiving treatment in Phoenix House, 75 percent of program completers had desisted from crime and drug use, and 93 percent had improved recidivism and treatment outcomes compared to their pre-Phoenix House status (DeLeon et al. 1982).

Wexler et al. (1992) evaluated Stay'n Out, a New York State Department of Corrections therapeutic community treatment program that accepts male and female parolees, to assess the program's impact on recidivism outcomes. The male participants in the program had more serious criminal histories and had spent more time in prison compared to the female participants; however, the evaluation showed that both men and women who participated in Stay'n Out had better recidivism outcomes than those in the comparison group (Wexler et al. 1992). Male participants had a re-arrest rate of 26.9 percent (versus 40.9 percent in the comparison group) and a parole completion rate of 58.1 percent (versus 60.6 percent in the comparison group) (Wexler et al. 1992). Female participants had a re-arrest rate of 17.8 percent (versus 23.7 percent in the comparison group) and a parole completion rate of 77.2 percent (versus 52.9 percent in the comparison group) (Wexler et al. 1992).

Work-release programs that incorporate therapeutic treatment models have also been shown to be successful in improving reentry outcomes. An evaluation of the Delaware correctional system's work-release program indicated that it had a positive effect on recidivism and substance abuse treatment outcomes. Researchers followed 690 individuals over five years, and found that program completers were significantly more likely to remain free of arrest and substance abuse over the five year follow up period when compared to individuals in the comparison group (Inciardi et al. 2004). Individuals who dropped out of the program were also more likely to desist from drug use, but were not less likely to be arrested (Inciardi et al. 2004).

Another key finding related to reentry and drug treatment that emerged from the Delaware studies was that drug-involved offenders who were treated both in prison and after release were more likely to be drug-free and arrest-free than a comparison group of offenders who did not receive treatment. Program clients also did better than those treated only in prison, suggesting that the "aftercare" treatment produced a "booster" effect (Martin et al. 1999).

### **Program Engagement and Retention<sup>7</sup>**

The research literature clearly identifies program retention as one of the best predictors of a client's long-term success (Anglin and Hser 1990; Hubbard et al. 1989; Simpson et al. 1997; Young and Belenko 2002) although specific predictors of retention vary across the literature and according to the treatment modality. As noted by Roman et al (2006:201), depending on the type of treatment and definition of dropout used by the program, attrition typically ranges from 25 percent to 75 percent (e.g., De Leon, Hawke, Jainchill, and Melnick 2000; Lang and Belenko 2000). Like substance abuse programs, reentry programs struggle to engage and retain clients: a 1999 review of offender rehabilitation programs by Gaes and colleagues found the dropout rate for at least one community-based cognitive behavioral program was 31 percent.

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<sup>7</sup> A similar discussion appears in the authors' 2006 article in the *Journal Research in Social Work Practice* which presented immediate outcomes of the Ridge House program based on a preliminary analysis of self-report data.



With respect to the range of factors that predict retention, Roman et al (2006: 201) provide a concise summary of the extant research:

For those clients in outpatient or community-based treatment, older age (Knight and Hiller 1997; Magura, et al. 1998; Mateyoke-Scriver et al. 2004), having less severe drug histories (Mateyoke-Scriver et al. 2004; Veach et al. 2000), having no criminal justice involvement (Magura et al. 1998), and employment (Mateyoke-Scriver et al. 2004; Young and Belenko 2002; Veach et al. 2000) are factors that have been shown to increase program retention. Specific to employment, length of time at longest job held, having a full-time job (Mateyoke-Scriver et al. 2004; Young and Belenko 2002), and being employed during treatment (Veach et al. 2000) have been found to increase retention.

Similar to clients enrolled in outpatient programs, predictors of retention in residential programs include age (i.e., being older), having less severe drug use problems (Mateyoke-Scriver et al. 2004; Mertens and Weisner 2000; Rowan-Szal, et al. 2000), and having a high school diploma (Bell et al. 1994; Mateyoke-Scriver et al 2004). Additional indicators of retention in residential treatment include being female (Vaughn et al. 2002) and having higher education levels (Rowan-Szal et al. 2000; Mateyoke-Scriver et al. 2004). Positive family support has also been shown to be a strong predictor of retention in residential treatment programs (Knight et al. 1999; Simpson 2001a; Westreich et al. 1997).

Within the last decade, researchers have suggested that individuals' motivation, in particular their readiness for treatment, is an important predictor of retention and completion (Condelli 1994; DeLeon et al. 1997; Joe et al. 1998; Pelissier 2004; Rowan-Szal et al 2000). Readiness for treatment was found to be more important than the extent of drug use, and socio-demographic and other variables in predicting retention across all treatment settings represented in the Drug Abuse Treatment Outcome Study (DATOS) (Joe et al. 1998). Unfortunately, most evaluations of reentry programs that do not utilize a random assignment design are unable to control for motivation or readiness for treatment. As discussed later in this report, the evaluation methodology for the Ridge House evaluation collected self-report data on motivation and readiness, however, these data could not be included in the impact analysis because the final sample for whom re-arrest data were collected was not the same sample for which motivation data were collected.

### **Faith-Based Organizations and Reentry**

Faith-based organizations have served under-privileged communities since the origins of penitentiaries in Europe and America in the 1700s. Despite this record, few faith-based efforts, including those targeting reentry, have been evaluated to assess their effectiveness (Leventhal and Mears 2002). The inattention is surprising. Faith-based organizations provide diverse services, including emergency assistance and shelter, food and clothing, substance abuse treatment, and referrals for treatment and employment (Kramer et al. 2002; Roman and Moore 2003). In recent years, reentry programs and courts have emerged and formed partnerships with faith-based, community organizations to create comprehensive services that promote community restoration and health while serving the goal of prisoner integration (Rossman et al. 1999).

Faith-based organizations bring strengths to the task of prisoner reentry that government agencies, by virtue of their structure and mission, may lack. Often these organizations already are serving the

needs of prisoners' family members. Because of their unique role in many communities, these organizations frequently are well-positioned to provide services or to mobilize existing community resources (Ammerman 1997; Pattillo-McCoy 1998; Williams 1999). To date, however, few studies have empirically evaluated the effectiveness of faith-based organizations (Leventhal and Mears 2002), and even fewer have examined the effectiveness of faith-based attempts to improve prisoner reentry (Johnson and Larson 2003). Although existing criminological work provides some evidence about links between religiosity, faith, and spirituality, on the one hand, and crime, on the other (e.g., Evans et al. 1995), little of it involves program or policy evaluation. It thus provides assistance in developing theoretical rationales for how faith-based efforts might be effective in reducing recidivism among released prisoners, but relatively little help in determining if existing faith-based programs are effective (see Roman et al. 2004 for more discussion of this topic).

Some studies have found that religious programs may reduce recidivism (Clear 2002). Johnson et al. (1997), for example, examined whether inmates who participated in programs sponsored by Prison Fellowship (PF) in New York prisons fared better than a matched group of inmates who did not participate in PF programs, and found that the PF participants had significantly lower re-arrest rates. Such findings are provocative, not least because, as Johnson et al. (1997) emphasize, religious programs are highly prevalent in U.S. prisons.

Unfortunately, such studies are rare and typically do not use rigorous designs to eliminate the possibility that inmates less prone to recidivate may be more likely to participate in religious programs (Johnson and Larson 2003). This type of motivation may be both personal and religious/spiritual. These studies also frequently do not differentiate between whether faith-based programs are effective because of the faith activities or because they are run by faith-based organizations. There is, therefore, a need for research to establish whether faith-based programs are effective in reducing recidivism, what it is about the programs that make them effective, and whether they can be implemented in diverse settings (Clear 2002).

The Urban Institute's evaluation of the Ridge House program sought to address these critical shortcomings in the research on faith-based programs and to add to the then-limited research on effective reentry interventions. Central to attaining these objectives was a solid understanding of the Ridge House program and its services. The next chapter describes the Ridge House program, including its core elements and mission. A detailed discussion of the study's methodology, data collection and analytic approach follows in Chapter 3.

## 2.0 Ridge House Program

This section describes the core elements of the Ridge House program: its structure and guiding philosophy; policies and procedures including eligibility, assessment, program guidelines, and exit criteria; and primary services. This description applies to the Ridge House program as operated during the four-year evaluation period; the program has undergone significant changes<sup>8</sup> since the conclusion of data collection.

### ORIGINS AND EVOLUTION

Ridge House is a faith-based halfway house offering substance abuse treatment and employability training to Reno parolees in need of support and services as they transition from state prison to the community. The program is designed to reduce recidivism and relapse through the provision of treatment, employment and life-skills services. Established in 1982 as an extension of the interdenominational prison-based Christian KAIROS ministry, the program has grown from one facility to six (including Nevada's first halfway house for formerly incarcerated females), and expanded to include a transitional housing unit, with the financial assistance of the City of Reno and the federal Bureau of Justice Assistance. In 2007, the program operated six facilities that had a combined capacity of 27 beds: 21 for males and six for females.

The program's roots trace back to a group of concerned individuals – members of the KAIROS prison ministry – who volunteered in the correctional facilities outside Carson City. Members initially invited released ex-offenders into their homes to provide assistance and support during the transition process. This arrangement was not ideal, as the needs of these individuals outweighed the assistance that KAIROS members could provide. KAIROS members determined that renting a house for the ex-offenders was in the best interest of all. While this house provided shelter, it lacked structure, prompting KAIROS members together with the program's participants developed house rules and programming guidelines. During the evaluation period, the Ridge House program consisted of six single-family homes located in residential neighborhoods with capacity ranging from six to eight beds in each of the houses, for a total of 38 beds. This family-like setting is one of the cornerstones of the program, and is one of the distinguishing features of Ridge House. Four of the houses are for men and two are for women. Ridge House also provides outpatient counseling, which is open to former residents of Ridge House, as well as other recovering addicts in the Reno area. Ridge House staff describe the program as a continuum of care which encompasses residential treatment, transitional housing, outpatient services, and housing vouchers.

The program accepts most formerly incarcerated individuals with the exception of high-level sex or serious violent offenders (though it does not exclude murderers). Parolees apply to Ridge House shortly before their scheduled release date. Prison-based caseworkers provide inmates with Ridge

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<sup>8</sup> According to the program's current Executive Director (personal correspondence conducted 1/22/2010), Ridge House has returned to its original vision and mission: operating as a faith-based reentry program. Tangible changes include (1) an emphasis on case management and employment readiness; (2) smaller client-to-counselor ratios in the residential program; (3) longer residential stays (clients may now participate up to 5 months instead of just 90 days); (4) addition of a spirituality group as a core program element; and (5) required minimum parole supervision period of 7 to 9 months for all clients. The program also closed one of its two women's houses; the remaining women's house accommodates 6 clients. Three of the program's four homes for men are operational and the fourth is expected to re-open shortly. Each men's facility serves up to seven clients.

House applications, assist them with the application process, and coordinate with program staff. An estimated 90 percent of individuals served by Ridge House come from one of four state prisons located in the Carson City area; only a small percentage of participants are channeled to the program from the KARIOS prison ministry. Ridge House accepts applicants on a first come, first served basis. Few individuals are unilaterally excluded by the program.<sup>9</sup> The average length of stay for most Ridge House clients is three months.

Services and programming are highly structured and use evidence-based models. For example, the program's substance abuse treatment component employs evidenced-based 12-step models. Faith, however, does infuse much of the program's orientation. Spiritual growth is fostered indirectly through the general ethos of the program, and clients are provided with opportunities to explore their own spiritual growth. However, such activities are strictly voluntary. In addition to substance abuse and other counseling, Ridge House also offers clients a diverse range of services (e.g., parenting, career development, financial management, health and substance abuse education, and mental health evaluations) designed to foster healthy functioning and positive social skills. Clients are also referred to services outside of Ridge House as needed.

## **GUIDING PHILOSOPHY**

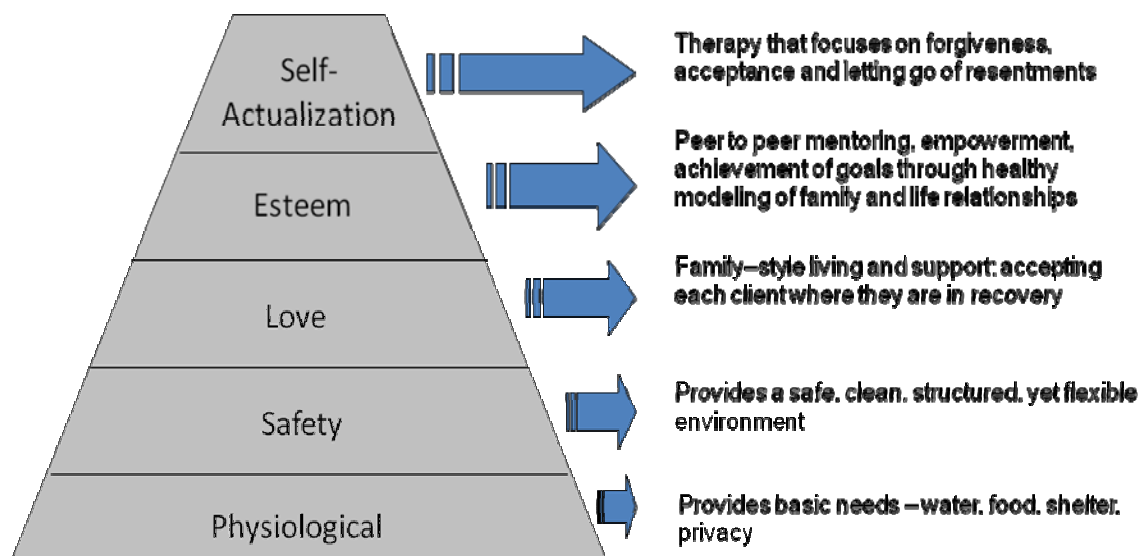
The Ridge House residential program is guided by the belief that men and women who have been convicted of a crime and are seeking to change their behaviors and re-enter the society at large should be given the support that is needed to accomplish these goals. This support is provided in a family-style environment within each individual house, as well as through the ongoing support of Ridge House staff. In addition, Ridge House also stresses the need for their clients to be held accountable for their past actions.

The executive director and program staff refer to Abraham Maslow's "Hierarchy of Needs" (Maslow 1943) in describing Ridge House's key components. The hierarchy is built on the needs of individuals; an individual's more complex needs (such as self-esteem and problem-solving) towards the top of the hierarchy can only be treated once the individual's basic needs (such as food, water, and sleep) are satisfied. The staff articulates that the personal growth the clients achieve while in Ridge House creates upward movement toward self-actualization, which, in turn, leads to decreased recidivism and relapse. Figure 1 illustrates the program's conceptual framework.

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<sup>9</sup> Note: offense and treatment readiness are key factors for admission to the program, however staff members will generally consider individuals, even those convicted of murder, on a case by case basis. Tier III sex offenders are the exception: individuals falling into this category are generally excluded from the program.

**Figure 1 The Ridge House Conceptual Framework as Described by Staff**



The Ridge House program views individuals as being the whole of four parts: spirit, body, mind and soul, and aims to treat and support all four elements. The end goal is for the client to be able to take care of himself or herself, as well as continue the healing process throughout his or her life.

Ridge House is different from other residential treatment providers for various reasons. First, the houses are designed to serve no more than eight clients in a family-style, neighborhood setting. Further, this family-style environment couples treatment along with a “real living” scenario. The limited number of clients in each home is designed to facilitate individualized treatment, and strong peer-to-peer support.

In sum, the 90-day Ridge House program is designed to reduce recidivism and relapse through the provision of treatment, employment and life-skills services. Program staff view these outcomes as end goals for the clients, and stress the importance of increasing self-esteem and self-efficacy in the short-term, prior to being able to achieve end goals.

## **ADMINISTRATIVE STRUCTURE AND STAFFING**

The Ridge House program is a 501(c)(3) and as such is overseen by an Executive Board of Directors. The Board addresses a variety of operational issues including changes in personnel and programming, and fiscal management of the organization. This all-volunteer Board is composed of local community residents, and meets monthly. It is important to note that when Ridge House was first established, all Board members were also members of the KAIROS ministry. Today, Board membership is more diverse, and comprised primarily of local residents who have an area of

expertise (such as attorneys, engineers and building maintenance) that assist the program with a variety of practical issues. This reflects the more recent emphasis on a clinical-based approach and less of an emphasis on spirituality. Despite this shift, the program maintains continuous contact with the KAIROS ministry and its members.

The executive director of Ridge House oversees the day-to-day operations of the program. During the evaluation period, the program had three Executive Directors. Unlike the first two, the last director was a clinician and not a spiritual leader. The Executive Director reports directly to the Board of Directors.

At the time UI was collecting evaluation data, program staff consisted of a Clinical Director, in-house counselors, house managers, outpatient managers, and administrative support staff. The Clinical Director manages the therapeutic component of the Ridge House program for both residential and outpatient clients. As such, the Clinical Director provides direct supervision of both in-house and outpatient program counselors, as well as the house managers. The current Clinical Director developed both the clinical assessment used when clients first enter Ridge House, and the curriculum for program's outpatient support groups. In 2006, the Clinical Director developed job descriptions and responsibility profiles for all staff.

Ridge House's in-house counselors provide one-on-one counseling to residential clients, as well as facilitate group meetings. Outpatient counselors also provide both one-on-one and group counseling. Counselors must either be certified in addiction counseling, or enrolled in a college-level counseling program. Ridge House employs two levels of counselors: Certified Alcohol and Drug Counselor (CADC), which requires a Bachelor's degree, and a Licensed Alcohol and Drug Counselor (LADC), which requires a Master's degree. Drug and alcohol counselors can only provide counseling regarding a client's substance abuse and dependency. Marriage and Family therapists provide individual sessions for clients' partners or families, have services for those with dual disorders, and provide mental health evaluations or any other forms of therapy that are out of the scope of practice for a drug and alcohol counselor.

The House Managers are responsible for the day-to-day operations of the five residential treatment houses. This includes purchasing food and supplies for their respective houses, ensuring that clients are following house rules, and conducting drug tests.

## **RIDGE HOUSE PROGRAM LOGIC MODEL**

One of the study's initial objectives was to clarify the logic underlying the goals of the Ridge House program. Project researchers conducted semi-structured interviews with program staff to document and clarify program operations, including the centrality of specific activities and services to intended outcomes, and to identify environmental and client-level factors likely to affect program success. These discussions formed the basis for development of the Ridge House program logic model provided in Figure 2.

**Figure 2: The Ridge House Logic Model**

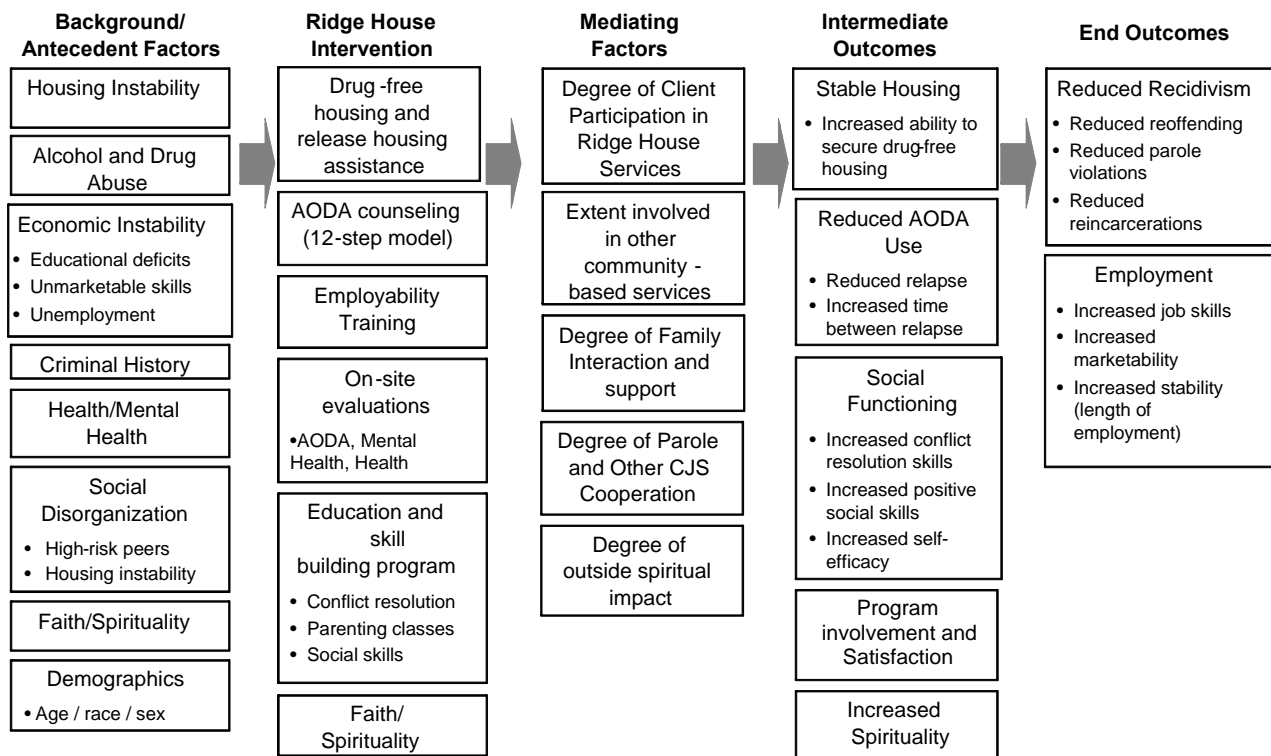


Figure 2 illustrates the Ridge House program’s conceptual approach. Chronology and causality generally flow from left to right. Antecedent factors, shown to the far left of the diagram, identify dimensions along which program and comparison group clients may vary and may influence the effectiveness of the program. For example, among program clients, those with extensive drug abuse histories may fare poorly in the program when compared to those with minimal histories of drug abuse. Consistent with many reentry programs, Ridge House staff described clients as having a myriad of diverse needs upon release from prison including extensive drug histories, lack of supportive, healthy relationships, unemployment, and housing instability.

The Ridge House program works to help addicted individuals involved in the criminal justice system become productive members of society by facilitating a total transformation of the individual. Activities and services central to client transformation are listed in the column labeled “Ridge House Intervention.” Program staff identified these activities and services comprising the essence of the Ridge House program. Together, these elements advance the program’s overarching goals of transitioning clients from the highly structured punitive environment experienced in prison into a supportive, positive and highly structured environment in which clients learn to take responsibility for their actions, set boundaries, and make healthy choices. In the logic model, activities and services are presented in descending order of centrality to the program. For example, the placement of drug-free housing and release housing assistance and 12-step counseling at the top of the column reflects the priority of client sobriety. Staff members view sobriety as the foundation for both program success and achieving long-term reintegration. Ridge House, therefore, requires clients to abstain from drug and alcohol use and to participate in relapse prevention and recovery

counseling and 12-step programming. Although listed last, the element Faith/Spirituality is central to the program and reinforced through the use of the 12-step substance abuse treatment model. Staff described the 12-step treatment model as facilitating a spiritual-centeredness approach that forces individuals to dig into their inner self and promotes readiness for change.

Program staff also identified a number of mediating factors with the potential to shape the degree and direction of the program's influence on clients. The specific effect of mediating factors may vary. In some instances the effect may be direct (e.g., clients who have supportive families have better outcomes), indirect or intervening (e.g., clients who have supportive families may be more likely to participate in program activities and thus may be more likely to have better outcomes), or interactive (e.g., the effect of program activities may be twice as strong among clients who have supportive families as compared with those who do not have supportive families).

Intended intermediate and end-outcomes of the program are shown on the far right. The Intermediate Outcomes column identifies a core set of short-term effects resulting from program participation, and include both measures of service quality from the perspective of the client (e.g., timeliness, accessibility, convenience, usefulness), as well as anticipated changes in client behavior such as reductions in drug and alcohol use and improved social functioning and self-efficacy. Specifically, Ridge House staff articulated that program participation should increase housing stability, reduce alcohol and other drug use, increase social functioning and enhance spirituality. The staff also indicated that clients would have significant program involvement and high levels of satisfaction while they participated. These intermediate outcomes would lead to the desired end outcomes of reduced recidivism and high employment levels. Program operations and services are described in detail in the following section.

## **PROGRAM OPERATIONS AND SERVICES**

Ridge House clients have highly structured days. Residents usually wake up around 5 a.m., depending on the location and distance of their employer. They work from 8 a.m. until 4 p.m., and arrive back at their respective houses by 5 pm. Residents take turns preparing dinner for the entire house, as well as cleaning up once the meal is complete. All residents are required to return to their home by 6 p.m., where all housemates share dinner together.

After dinner, groups and meetings are held between 6:30 and 8:00 p.m. A calendar of these classes and group meetings for the month of May 2004 is attached as Appendix A; a brief description of the classes and services on the calendar is also provided. As noted in the calendar, a weekly house meeting for all members of a particular house is held on Tuesdays. Classes range from parenting to computer literacy and money management. The calendar also includes a recreation night, where residents participate in "dry" activities, which aid their recovery and keep them away from drugs or alcohol. Curfew on weekdays is at 10:00 p.m., while during the weekends it is 12:00 midnight.

While in the program, clients are expected to obtain and maintain gainful employment after the first 30 days in the program, as well as abide by specific house rules. Reflecting the emphasis on creating and maintaining a family style setting, Ridge House participants perform house chores, take dinner together each evening, and are expected to adhere to strict house rules and guidelines. Additionally, clients are expected to remain clean and sober, comply with random drug tests and follow an individualized treatment plan that includes treatment goals and homework assignments.



The use of drugs or alcohol is grounds for program dismissal, as are violations of house rules. As mentioned above, there is a significant emphasis on treatment. Clients must attend at least three 12-step meetings each week, as well as house therapy groups and individual counseling sessions with the house substance abuse counselor. Lastly, clients are referred to and are encouraged to attend services outside of the program as needed; these may include referrals to health care providers, anger management classes, and mental health counseling.

## **Faith and Spirituality**

Program staff unanimously asserted that faith and spirituality infused much of the program's orientation, although its clients were not required to affiliate with any particular religious or spiritual group. Rather, spiritual growth was fostered through the general ethos of the program. Therefore, while clients were provided with opportunities to explore their spirituality through the many relationships the Ridge House program maintained with Reno's faith-community or through the provision of "rational models" for agnostic clients (NIJ Evaluability Assessment 2003), clients were not forced or required to pursue these avenues. In turn, the program offered clients a diverse range of services designed to foster healthy functioning and positive social skills overall. Fostering a deepening personal spiritual commitment was viewed as complementary and consistent with the program's "secular" services.

### *Role of Faith and Spirituality in Ridge House*

Ridge House self-identified as a spiritually-based program, as opposed to faith-based or religious. In other words, program leaders indicated that their program wasn't religious, but simply was infused with spirituality. A growing literature argues that spirituality must be viewed and measured as a separate construct from religion (Roman et al. 2006). There is little consensus, however, among researchers, policymakers, or even program developers about what constitutes a faith- or spiritually-based program, particularly the key characteristics that readily distinguish them from their secular counterparts (Mears et al. 2006; Noyes 2009; Buck Willison et al. 2010). For example, researchers contend that faith or spirituality intersects with various dimensions of program operations, from mission and vision to staff beliefs and values to program activities, and that such programs exist on a continuum.

To better understand the centrality of spirituality in the Ridge House program, project researchers surveyed Ridge House staff during a routine site visit in August 2006. A brief, 18-item self-administered questionnaire was used to capture staff members' impressions about the spiritual dimensions of the Ridge House program, including how spirituality intersected with program activities; the survey also asked about the spiritual orientation of staff and their beliefs. The role of faith and spirituality in the Ridge House program was thought to manifest on two levels: the manner and extent to which faith and spirituality intersected programming and operations, and the dynamic of staff beliefs and values. A copy of the Ridge House staff survey is located in Appendix B.

Fifteen Ridge House staff members completed the survey. Thirteen were clinical or treatment staff who dealt with clients one-on-one during the day. The remainder of the sample consisted of house managers. Respondents, like the program's staff, were primarily female (8 of the 15 respondents were women) and ranged in age from 23 to 51 years of age. About two-thirds (N=9) of the staff surveyed had worked at Ridge House for a year or less, so they were relatively new to the program;

likewise, many (6 of the 15 surveyed) had worked in the reentry or substance abuse fields for year or less.

With respect to personal spirituality, the survey analysis suggests Ridge House staff had a clear faith orientation that manifested in their daily practices and habits. The majority reported that religion was either very important (11 of 15 staff) or somewhat important (3 of 15 staff) in their lives, and most (11 of 15) staff members had experienced some type of spiritual awakening or a conversion experience. In terms of religious practice, 4 staff members belonged to a church, synagogue, or mosque while about a quarter (4 of the 15 staff surveyed) reported reading religious writings or sacred texts daily. More than two-thirds (9 of the 14 responding to this item) said they prayed daily and half (7 of the 14 responding to this item) meditated daily. Finally, about two-thirds of staff members who completed the survey (10 of 15) also identified a religious preference: four identified as Protestant, two as Roman Catholic, one as Mormon, and three as nondenominational. The rest reported no religious preference. This is interesting to note given the emerging research on faith-based programs like Ridge House, which suggests that faith and spirituality intersect most prominently with the religious or faith beliefs and values of the program staff. However, how these elements may influence program operations or client outcomes remains unclear.

To measure how faith and spirituality intersect with program activities, staff answered questions about the importance of 11 activities – some secular, some distinctly spiritual – to the program. Analysis suggests staff identified a mix of secular and spiritual activities as central to the program. For example, almost all staff members (14 of 15) identified helping clients build or repair their own support networks with family and friends as very important to the program; this figure increased to 100 percent when combined with somewhat important. These results suggest that this was a clear priority for the program. Rounding out the three activities identified by respondents as very important were (1) building supportive relationships with clients (13 out of 15 identified as very important) and (2) encouraging clients' religious or spiritual development (12 out of 15 identified as very important). Conversely, staff identified the following factors as least important to the program: encouraging clients to have a religious conversion, using religious beliefs or principles to instruct or encourage clients, and directing clients to a religious institution or faith community.

Finally, the survey also asked staff if Ridge House was based on a principle that the clients were more likely to achieve positive outcomes if they experienced a spiritual or religious change. Interestingly, respondents were evenly split on the issue with one-third reporting that the Ridge House program was based on this principle, one-third indicating that it was not and one-third reporting they didn't know. On a scale of one to ten with 1 being totally spiritual and 10 being not all spiritual, close to half rated the program's spirituality between 1 and 4, while close to one-third of the sample rated the spiritual level of Ridge House as a five. The remaining portion rated the program between 6 and 10. Most (11 of the 15 staff surveyed) considered Ridge House to be a faith-based program.

Taken together, these results suggest Ridge House has a strong spiritual identity but that it manifests most prominently in staff beliefs and values, as opposed to program activities. This is consistent with the findings of other recent research (Buck Willison et al. 2010), and suggests that deepening personal spirituality may be fostered more readily through staff-client relationships that model spirituality than through formal programs activities.

## **PROGRAM ELIGIBILITY AND APPLICATION PROCESS**

Most inmates apply to the program six months prior to release. Interested inmates complete an application provided to the inmate by a facility case worker; many also hear about Ridge House through “word-of-mouth” in the institution. Most obtain information about Ridge House from institutional staff (case workers) and other inmates. Prior to an offender’s projected release date, interested offenders contact Ridge House and request an application. Prison-based caseworkers assist inmates with the application process, and coordinate with the program. Only a small percentage of participants come from the KAIROS prison ministry program. Once Ridge House receives the completed application, telephone interviews are conducted. In certain instances, face-to-face interviews are also conducted. Although not part of a formal process, program staff also screen applicants to ensure that potential participants admit to having a substance abuse problem. After the application is received and interviews are conducted, Ridge House either accepts or denies the application. Most inmates who apply are accepted; however, a bed must be available. Depending on bed space availability, Ridge House appraises inmates through a written letter that it will commit to providing the inmate a space in the program. The inmate must acknowledge receipt of this letter and then send in notices at 60 days and 30 days prior to release of a continued intent to enroll in the program.

The program accepted most types of convicted offenders, with the exception of sex offenders or extremely violent offenders. With regard to faith, the program was very inclusive; it accepts those individuals with a stated faith, regardless of religion or denomination, as well as those with no religious or spiritual preference.<sup>10</sup>

The prison system changed the language in parole agreements to allow Ridge House to go into the prisons and access the clients who applied to Ridge House in a more evaluative type of manner. This change, which occurred during the evaluation period, was instituted so that counselors (as it is only counselors who now go out to the prisons) could determine what level of care the client actually needs prior to their release from prison.

### **Exiting Ridge House**

A majority of the clients are mandated by their parole agreements to participate in Ridge House. Clients typically left Ridge House once staff determined that they were ready to do so, almost always after 90 days had passed. In certain instances, Ridge House clients left the program prior to 90 days, either of their own volition or at the request of program staff. The former generally constituted a violation of parole supervision terms, and resulted in a technical violation; the latter usually occurred because the client consistently violated a central house rule, such as abstaining from drugs and alcohol. Ridge House typically provided such clients with referrals to other social service organizations within the Reno area. It is also important to note that there were some instances where clients asked to be released early due to appropriate reasons, such as finding new, suitable housing arrangements or to move to take a job; in these instances, staff usually agreed to the early release date and considered the early release a successful program completion.

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<sup>10</sup> The Ridge House application does not ask prospective clients to list their faith.

## Ridge House Program Partners

An interesting facet of the Ridge House program is the organization's strong tie to the criminal justice system and to the broader community. The Nevada Division of Parole and Probation (NDPP), for example, has been one of the program's key partners. Until immediately prior to the start of UI's evaluation, the Reno field office had assigned a parole officer (PO) to monitor and supervise Ridge House clients; the PO's caseload was dedicated to Ridge House clients. Despite the lack of a dedicated PO, the Division's officers maintained a solid collaboration with the program's individual house managers and counselors. NDPP's Reno office contains four units, one specifically for parolees needing intensive supervision. Those parolees who are under intensive supervision typically served only a short period of time while incarcerated and have parole terms of between three to nine months. Many of these parolees go to one of three facilities in the area (the Ridge House is one of those facilities). In addition, most of these parolees also have drug histories.

Many clients of the Ridge House are required to stay at the facility as a condition of their parole or probation. Should supervised clients leave the Ridge House without prior permission, or fail routine drug and alcohol screenings, they may be subject to arrest and re-incarceration for parole violations.

In addition to a partnership with parole, Ridge House has developed partnerships with various social service organizations in the Reno area:

- 24-7 TLC provides housing and services to young men and women aged 18-24 who are aging out of services provided by the juvenile justice and foster care systems.<sup>11</sup> In addition to providing housing, the Rivendel program provides assistance in obtaining GED or vocational training services, budgeting and finance skills, as well as job placement and retention assistance.<sup>12</sup>

24-7 TLC established the Rivendel Independent Living Program after conducting research with the University of Chicago, Chapin Hall. Their research found a substantial gap in services for those youth who were aging out of the juvenile justice system, and attempting to improve their lives. As a result of this research, 24-7 was approached by the Nevada Youth Parole Bureau and Department of Child and Family Services to establish an independent living program for these youth.

In addition to accepting clients who are within the ages of 18-24 and in danger of becoming homeless, the program also accepts disabled young adults who need assistance transitioning into the community.<sup>13</sup> Clients are screened by the Director of Rivendel, and assessed for proper services and placement.

Funding is provided from a variety of sources, including private payments, local and state grants, as well as through contracts with the State of Nevada.

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<sup>11</sup> [www.24-7tlc.org/Main.htm](http://www.24-7tlc.org/Main.htm)

<sup>12</sup> [www.24-7tlc.org/Services.htm](http://www.24-7tlc.org/Services.htm)

<sup>13</sup> [www.24-7tlc.org/Eligibility.htm](http://www.24-7tlc.org/Eligibility.htm)

- *Bristlecone Family Resources* is a private, nonprofit organization that provides substance abuse and gambling addiction treatment. Located in Sparks, Nevada, Bristlecone offers a wide range of treatment and prevention services, such as detoxification, residential treatment, outpatient treatment, as well as community outreach and education services. Treatment planning is based on the National Institute of Drug Abuse’s “Principles of Effective Treatment”<sup>14</sup> and is centered on the needs of the individual client. Because many of their clients also have children, Bristlecone’s services are family-focused, with family members often receiving services alongside the client.
- *The Launching Pad* is a non-profit, sober living home located in Sparks, Nevada. It is specifically targeted towards women who have struggled with alcoholism and addiction, as well as women with gambling addictions, co-dependency issues and victims of domestic abuse. Based on the twelve (12) steps of Alcoholics Anonymous, the Launching Pad seeks to help women achieve independence while learning to live successful and productive lives. Clients attend 12-step meetings and are provided with counseling. In addition, the Launching Pad encourages prayer and meditation.

This transitional living facility also maintains house rules, enforces curfews and conducts randomized drug screenings. In addition, all clients are expected to find employment and complete regular household chores.

- *Sierra Recovery Center* provides individualized inpatient and outpatient treatment for chemical and gambling addiction.<sup>15</sup> Using a balanced, holistic approach to recovery, clients receive such services as counseling, education and life skills<sup>16</sup>. The Center is located in South Lake Tahoe, California, but is certified by the State for Nevada Bureau of Alcohol and Drug Abuse, in addition to the California Department of Alcohol and Drug Programs. Residential detoxification is also available.

The treatment program includes a family component, where members of the client’s immediate family can also receive counseling services. In addition, intervention services are also provided to the families. Additional services include short- and long-term transitional living, community education for schools, community groups and businesses, as well as outreach to the community.

- *Step One* is a 90 day transitional living program located in Reno, Nevada. The program provides a safe environment for men recovering from alcohol and drug addiction, focusing on the twelve (12) steps of recovery. Living in a house in a Reno neighborhood, clients receive employment assistance, food, and support from fellow recovering addicts. Clients typically stay for 90 days, although some individualized plans require that clients stay for longer than 90 days. Step One provides services for 14 to 18 men.

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<sup>14</sup> [www.nida.nih.gov](http://www.nida.nih.gov)

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

The program began in 1993, and was initially funded through rent charged to its clients. Since then the funding base has expanded to include federal and local sources. In addition, Step One joined in a collaborative group with the Ridge House and other local housing and treatment service providers, as a means of preventing the duplication of services.

Once clients complete this program, they go through Bureau of Alcohol and Drug Abuse (BADA) outpatient counseling. Clients are also referred to Ridge House for outpatient counseling.

- *Safe Harbor* is a privately funded halfway housing program located in Reno. Opened in 2004, Safe Harbor provides services to 20 to 25 clients, who can remain with the program for as long as the client needs in order to gain sobriety and successfully re-enter the community. All of the house managers and support staff are former addicts who have had at least one year of sobriety. Clients are required to attend AA/NA meetings, have a sponsor within the 12-step program, and be gainfully employed. In addition, Safe Harbor works with another provider in the Reno area, Project Care, to provide services such as assistance with financial statements and budgets, obtaining employment and day-to-day needs like obtaining a bus pass.

Clients are also randomly tested for drugs and alcohol. However, if a client has used these substances while they have been at Safe Harbor, the client is not automatically asked to leave the program. Safe Harbor staff work with the client's parole officer to devise a plan to assist the client.

Clients are referred to Safe Harbor from various sources, including other treatment centers, the Department of Corrections, and Parole and Probation. A small number of Ridge House clients who have been kicked out of the program are referred to Safe Harbor as well. They will not accept violent or sex offenders.

- *Phoenix House* is a non-profit halfway housing program located in Reno. It was opened in 2000 and is managed by the Vitality Center (The Vitality Center is residential substance abuse treatment facility located in Elko, Nevada<sup>17</sup>). The program consists of three facilities, with room to house up to ten clients, per house, at a time. Clients are asked to stay for ninety days, although some have stayed for years, while others have left and returned for additional services.

The treatment philosophy is that based on the 12-step model, as well as treating the "criminal" personality.

Many of the clients of the Phoenix House participated in a year long WINGS program prior to being released. WINGS, which stands for "Willing Inmates in Nevada Gaining Sobriety," is a drug treatment program which focuses on the dependency as well as the charge which led to the current incarceration. It is also run by the Vitality Center. Clients of the Phoenix House are also referred by treatment centers, Nevada Parole and Probation, as well as former Ridge House clients. The program does accept some sex offenders, as well as some

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<sup>17</sup> <http://www.vitalitycenter.org/new/del3/vcenter/default.asp>

violent offenders. These clients are carefully screened prior to entering the program, as most have been closely monitored as a result of their participation in the WINGS program.

Phoenix House staff report that there is a high completion rate among the clients. Part of this may be because staff members have had contact with the clients for up to one year prior to their release. Another reason may be that Phoenix House is viewed by the clients as an extension of the prison WINGS program; thus, the clients would have received treatment for an extended period of time.

The Phoenix House is no longer a provider in the Reno area. It closed during the summer of 2006.

- *Northern Nevada HOPES* is a non-profit corporation which provides a wide range of services to individuals in the Northern Nevada area who are HIV positive.<sup>18</sup> These services include medical and dental care, administering HIV tests, providing counseling and outpatient care, as well as housing and transportation services. HOPES receives local, state and federal funding, including funding from the Department of Housing and Urban Development and the Ryan White CARE Act.<sup>19</sup>

HOPES provides Ridge House clients with tuberculosis and HIV testing, as well as testing for various sexually transmitted diseases. If a client tests positive for any of these diseases, they are referred to HOPES for additional services. In addition, staff members also provide Ridge House clients with classes on these diseases. HOPES has a memorandum of understanding (MOU) with Ridge House to provide these services.

- *Frontier Recovery Network* provides peer-to-peer recovery support services to those individuals who are in recovery from alcohol or drug addiction. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), the conceptual framework behind peer-to-peer support networks is the following:
  - The role and importance of community-based support services in sustaining recovery;
  - The conception of recovery along a change continuum and the role of peer services in supporting lifestyle change along the continuum; and
  - The notion of social support.<sup>20</sup>

Frontier Recovery is administered by the University of Nevada at Reno's Center for Application of Substance Abuse Technology, and funded through the SAMSHA's Center for Substance Abuse Treatment.<sup>21</sup> Frontier Recovery was one of thirty programs in the United States funded in 2001 to develop recovery communities. The program, called the Recovery Community Support Program (RCSP), was built on the notion that individuals in recovery, their families and communities are resources that can support formalized drug treatment. In RCSP grant projects, peer-to-peer recovery support services are provided to

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<sup>18</sup> <http://www.nnhopes.org/home/aboutnorthernnevadahopes.html>

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> <http://rcsp.samhsa.gov>

help people initiate and/or sustain recovery from alcohol and drug use disorders. Some RCSP grant projects also offer support to family members of people needing, seeking, or in recovery. Activities at Frontier Recovery include clean and sober recreation activities, leadership training, peer-to-peer mentoring and education. Most of the participants in these activities have already been through treatment, and thus are using Frontier Network as a resource in sustaining that recovery.



## 3.0 Evaluation Design and Methods

This chapter presents the study's methods and discusses the multiple data sources used to measure the impact of the Ridge House program on participant recidivism. A detailed discussion of subject recruitment and sample construction is also provided. The study design was modified midway through the evaluation period when it became apparent that significantly smaller numbers of parolees were electing to return to the Reno area, thus prohibiting the study from attaining a comparison group of sufficient size. To conserve project resources, the decision was made in March 2007 to discontinue the cost-benefit and transferability analyses and to cease all survey data collection shortly thereafter. Descriptions of the study's methods, data collection and analytic approach are limited to those components which were retained and informed the findings presented in this report.

### EVALUATION DESIGN

Evaluation activities focused primarily on measuring the impact of the Ridge House program on participant recidivism. The study featured a quasi-experimental design that included process and impact analyses.<sup>22</sup> The impact evaluation relied on baseline interviews with treatment and comparison group cases, as well as program exit interviews with Ridge House participants and administrative data collected from the Federal Bureau Investigation's National Crime Information Center (NCIC). Semi-structured interviews with program staff and key partners informed the process analysis. The study's key components and their objectives are described below.

#### Process Evaluation

The objective of the process component was to document the logic and operations of the program, identify any significant changes made to the program model during the study period, examine factors that impeded or facilitated successful program operations, and determine whether key program outcomes were achieved.

The Ridge House program's general causal logic argued that recidivism results from a lack of housing and unstable living environment during the post-release transition; inability to find employment; and drug abuse, mental illness, and related problems. Project researchers worked with Ridge House staff to document the precise theoretical links between these factors, program activities, and intended outcomes and develop a logic model graphic that portrayed these linkages (please see Chapter 2 for the Ridge House logic model). Additionally, the research team worked to identify factors that hindered or enhanced program operations and document lessons learned that could benefit other jurisdictions interested in implementing a similar program or partnering with a faith- or spiritually-based program. A combination of qualitative and quantitative data, including

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<sup>22</sup> The Urban Institute's original proposal to NIJ featured a quasi-experimental design that included a process analysis, impact evaluation, and cost-benefit and transferability analyses. The proposal did not include an in-person interview at follow-up, but instead relied on administrative data (official arrest, supervision, and custody records) only to measure key outcomes. After the original proposal was received, NIJ asked the proposal authors to include in-person interviews with both the treatment and comparison groups at 12-months post-release in hope of being able to measure other outcomes besides recidivism, such as employment and residential stability. The viability of this modification to the study's original design required sufficient case flow such that sample recruitment and data collection could proceed expeditiously and within the time and resources allotted. Sufficient case flow did not occur and the 12-month interview was abandoned.

semi-structured interviews with Ridge House staff and key stakeholders at Reno Parole and Probation, and community-based program and faith partners, were collected to support this evaluation component.

## **Impact Evaluation**

The impact analysis was designed to assess the effect of Ridge House on offenders transitioning from prison to the community. Data collection and the study's technical approach were designed to answer two key questions: (1) is the program effective in reducing recidivism and (2) does it help returning prisoners develop the kind of skills necessary to obtain long-term housing, resist drug use, and secure gainful employment? To answer these and other key questions, the study relied on a combination of administrative records data and self-reported survey data from program participants and a comparison group of parolees who applied to and were accepted to Ridge House but did not receive services due to space limitations. Data sources and measures are discussed in subsequent sections of this chapter.<sup>23</sup>

## **DEFINING THE TREATMENT AND COMPARISON GROUPS**

An evaluability assessment<sup>24</sup> conducted prior to NIJ soliciting an evaluation of the impact of the Ridge House program on recidivism revealed that a large number of Nevada parolees were applying to be admitted to Ridge House, but less than one-third of applicants were actually admitted due to the relatively low number of beds. The large number of parolees on the “waiting list” provided an opportunity for a strong quasi-experimental design. Hence, the research study targeted newly-released Nevada Department of Corrections parolees returning to the Reno area who applied to the Ridge House program.

Eligibility for the research sample generally mirrored those of the Ridge House program. The program's eligibility criteria were inclusive and fluid. At the outset of the evaluation period, program staff generally accepted anyone who showed sincere interest in participating in the program. Offenders with a sexual offender tier rating higher than one were the exception; these individuals were unilaterally excluded from Ridge House. Over time, and in conjunction with the program's shift to a more clinical orientation, eligibility criteria grew more defined and rigid.

Although project researchers deferred to the program staff's determination of program eligibility in identifying potential subjects for the sample, offenders were generally considered eligible for the research if they: (1) returned to Reno or a surrounding locale; (2) were 18 years or older; (3) were deemed to have a history of substance abuse; and (4) stayed in the program for a minimum of 14 days (i.e., minimum treatment threshold). Participants who left the program prior to day 14 were deemed ineligible for the study sample and excluded from analysis.<sup>25</sup> No provisions were made for

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<sup>23</sup> As will be noted in later sections of this chapter, the research team stopped collecting follow-up data (with NIJ's approval) when it was determined that tracking the sample for follow-up would not yield a solid response rate within the given budget. As a result, the study would no longer be able to examine the impact of Ridge House on housing status, drug use and employment.

<sup>24</sup> The Ridge House evaluability assessment is accessible online:<http://www.ncjrs.gov/pdffiles1/nij/ridgehouse.pdf>

<sup>25</sup> Roughly 5 percent (13 cases) of the treatment cases were determined to be ineligible for the research (length of stay < 14 days) after obtaining informed consent and baseline survey data, and were removed from the survey sample.

length of parole supervision, and most respondents returned to Reno with between three and six months of mandated supervision.

The comparison group was drawn from the pool of parolees who applied to the Ridge House program and were accepted but who could not be served upon release due to bed space limitations. Initial estimates provided in the NIJ evaluability assessment, and which UI confirmed with Ridge House program staff prior to the implementation of sample recruitment and data collection, indicated that between 600 and 700 inmates applied to Ridge House annually but that the program only served roughly 100-150 applicants annually due to limited bed space. These figures suggested an ample overflow from which to draw a comparison group. UI also worked with Nevada Division of Parole and Probation to verify the number of parolees returning to Reno upon release from state prison and further confirm case flow estimates.

## **DATA SOURCES**

The process evaluation of the Ridge House program drew on multiple sources. Research staff made annual site visits to conduct semi-structured interviews with Ridge House program and clinical staff, to meet with community partners including the officers in the Reno Nevada Parole and Probation office, and to observe program operations. Periodic telephone interviews were conducted between visits to stay abreast of any program changes or developments affecting the broader social service delivery landscape in Reno. In addition, program materials and documents were reviewed.

The impact evaluation similarly relied on multiple sources of information. Analyses presented in the next chapter relied on a combination of self-reported survey data collected during face-to-face interviews with treatment and comparison group members at baseline and at program exit (for treatment group members) and criminal justice records. Although 12-month follow-up data were initially collected for 92 clients, UI eventually dropped this component due to insufficient case flow and resource constraints; this component was not incorporated into analyses presented in this report.

### **The Baseline Survey**

The baseline survey focused on respondent behaviors and activities in the 12-months prior to entering prison, including involvement in crime, use of drugs, employment, peer and family relationships, and spiritual beliefs, as well as the respondent's experiences in prison and any services received there. Baseline items also measured the respondents' expectations about returning to life in the community. A modified version of the crime calendar developed by the RAND Corporation to survey prisoners (Chaiken and Chaiken 1982; Peterson et al. 1982) was used to facilitate respondent recall and yield a more precise measurement of criminal activity. The survey also incorporated measures from a variety of other instruments used in other reentry studies including the Opportunity to Succeed (OPTS) evaluation (Rossman et al. 1999) and Returning Home (Visher et al. 2003). Drug use, self-efficacy, and treatment readiness measures were incorporated from well-known instruments such as the Client Evaluation of Self at Intake: Pre-Treatment Survey of Clients developed by the Texas Christian University (TCU 2001).

On average, the baseline interview took between 45 and 60 minutes to administer, although time to complete varied according to the respondent's experiences and recollection. Respondents received

a \$25 cash incentive upon the completion of the baseline interview and the follow-up interview to thank them for their time and participation.<sup>26</sup>

### **The Program Exit Survey**

The program exit survey was administered to individuals in the treatment group that spent a minimum of 14 days<sup>27</sup> in the Ridge House program. The survey consisted of nine sections and took about 45 minutes to complete; respondents received a \$25 incentive upon completion, like they did with the baseline survey. Items measured client satisfaction with Ridge House programs and services, service utilization (intensity and duration) and the nature of the client's program involvement, and the client's spiritual beliefs and involvement in spiritual activities. As with development of the other two survey instruments, the program exit survey incorporated measures from a variety of other tested instruments.

### **Official Records Data**

Criminal justice records data from NCIC were collected on study participants. Examination of official records focused on two categories of variables: arrests and convictions. Arrest data were selected over conviction data because the former is more likely to be reported and recorded in criminal justice databases in a timely fashion (i.e., moving a case from adjudication to conviction can be a lengthy process); furthermore, conviction data is not routinely or consistently submitted to NCIC. Therefore, the study relied on arrest data to measure both prior criminal involvement (age at first arrest, number of priors) and recidivism (any arrest post-release and entry into the sample). As discussed in Chapter 5, the lack of reliable sentencing and conviction data limited the recidivism analysis to re-arrest.

## **DATA COLLECTION**

### **Recruitment and Informed Consent**

The UI evaluation team worked closely with Ridge House staff and members of the Reno office of the NDPP to develop procedures to identify, contact, and consent potential research participants upon return to the community. These procedures relied heavily on the cooperation of Reno-based Parole Officers (POs), Ridge House program staff, and the staff of other Reno-based residential treatment providers. Treatment and comparison group cases were identified based on weekly admission updates provided by Ridge House staff to the Urban Institute's project manager. Program staff kept the study's project manager abreast of new program admissions so field interviewers could be dispatched to approach the potential respondents about participation in the study, and administer informed consent and the baseline survey interview. Likewise, the study's project manager worked closely with the Reno field office of NDPP to track and verify the release and return of a potential comparison group case to the community. On the ground, this required considerable communication and coordination with NDPP Parole Officers (POs) to find out when a respondent was scheduled to report to the parole office so a local UI field interviewer could be

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<sup>26</sup> The 12-month follow up instrument paralleled the baseline survey in structure and content. It was designed to be administered 12 months after the respondent's return to the community and focused on events during the respondent's life in the community. Ninety-two (77T, 15C) follow-up survey interviews were completed before survey data collection ceased; this number represented roughly 20 percent of the sample eligible for the follow-up interview.

<sup>27</sup> Fourteen days was identified as the minimum threshold for treatment.

dispatched to meet with the respondent after his or her parole office visit to discuss the study, administer informed consent and conduct the baseline survey interview.

These procedures soon proved cumbersome. The study encountered increasing resistance from POs and other Reno-based treatment facilities to which potential comparison cases entered for services. Even with a signed Memorandum of Understanding, POs remained wary of releasing client contact information to the Urban Institute research team. Early in the evaluation period, the project added Consent to Contact procedures to the recruitment process. Ridge House agreed to include Urban Institute-specific Consent to Contact forms with each Ridge House application packet provided to area correctional facilities. The Consent to Contact form briefly described the study and its goals and objectives, and provided a 1-800 number for potential respondents to call and provide the UI research team with their name and contact information to facilitate contact upon release from prison. The Consent to Contact offered potential respondents an extra \$5 to the \$25 incentive paid upon completion of the baseline interview. Project researchers sent reminder postcards to all potential respondents who applied to and were accepted into Ridge House, and who completed the Consent to Contact form prior to release. This approach proved to be reasonably fruitful. Over time, the study also provided Consent to Contact forms to selected POs and to those treatment facilities that frequently served returning Reno parolees.

### **Sample Matriculation and Related Challenges**

UI anticipated recruiting approximately 514 cases (216 treatment, 298 comparison) over a 24-month period based on case flow estimates obtained from the NIJ evaluability assessment and during the initial design stage. In actuality, recruitment began in September 2004 and ended in March 2007 and yielded a baseline sample of 384 cases (276T, 108C). During the 30-month period, recruitment for both groups lagged behind initial estimates due primarily to low case flow. On average, just seven treatment cases and four comparison cases per month were identified as eligible for the sample each month. To obtain the sample size projected at the outset of the study, roughly 21 cases had to be recruited each month (nine treatment cases and 12 comparison cases). In short, case flow was roughly half of what partners initially estimated.

Like many small community-based programs, Ridge House had not systematically tracked the flow of application requests. As a result, program staff had to provide “best guesses” about the estimated flows (i.e., numbers of individuals who ask for applications and who eventually go to Ridge House or would serve as appropriate subjects for a comparison group). In the course of working with UI, the program’s tracking improved and staff began to develop an empirical foundation for estimating these flows. For much of the evaluation period, however, the true numbers remained unknown.

Several additional factors hampered sample recruitment, including:

- Inflated Estimates of Case Flow: About half the number of projected program referrals were received each year resulting in a much smaller pool of cases from which the study could recruit; in reality the number of cases initially reported as applying to the program were actually individuals requesting information about the program. Not all requests for information led to applications for program admittance.

- Underestimated Number of Denied Cases: Program staff estimated that less than 10 percent of all applicants were denied admission. In reality, approximately 45 percent of applicants were denied each year during the evaluation period. Cases were denied for a variety of reasons, the most common being “not motivated for treatment” and “does not admit to a drug problem.”
- Higher than Estimated Client Attrition: The number of clients that leave Ridge House during the first two weeks of programming turned out to be much higher than anticipated. Almost 20 percent of cases identified for the treatment group left Ridge House within the first two weeks after admission. The impact of this on the study sample was two-fold. First, a larger portion of the treatment sample was rendered ineligible for the study; cases exposed to less than 14 days of treatment failed to meet the pre-determined threshold for treatment exposure (this was a key criterion for inclusion in the research sample). In many instances, cases “dropped out” of the program after consent and baseline interviews had been administered, resulting in the loss of data and waste of resources. Second, the rate of turnover effectively reduced the pool of potential comparison cases because those cases often end up going to Ridge House (i.e., are served). As discussed earlier, the quasi-experimental design was predicated on a natural comparison group that was created from the program’s first come, first served policy.
- Underestimated Share of Cases Paroling Outside Reno: About 30 percent of comparison cases paroled outside Reno – typically Las Vegas or over the state line to California. The project expanded data collection to Las Vegas in August 2005, but did not have the resources to reach cases that paroled outside Nevada.
- Opening of new seven-bed facility: Ridge House program capacity increased by an additional seven beds with the opening of a fifth Ridge House facility in June 2005. This meant the program could serve more of the accepted applicants, thus reducing the pool of potential comparison cases.
- Staff turnover. An additional but slightly different factor further hampered the evaluation: loss of critical staff within the Reno office of the Nevada Department of Parole (NDPP) during the study’s first six months. The individual assigned by NDPP as a liaison between the Ridge House program, the Nevada Department of Corrections, the Pre-release Division, Parole, and local residential programs, resigned from the position. The sum result was that the project received little cooperation from residential programs to which comparison group subjects were released and from parole officers. Such cooperation was critical to helping the team identify and recruit subjects, and had been expected based on the Memorandum of Understanding that had been signed by Corrections and Parole. As discussed earlier, the matriculation of individuals into the study began in September 2004. After three months of attempting to resolve these issues as they pertained to comparison group recruitment, the research team stepped back in December 2004 and initiated a trouble-shooting process that entailed conversations with relevant stakeholders, including the Ridge House administrative staff and administrators within the Parole division. These conversations led to the identification of two key liaisons at Parole and a process for ensuring the cooperation of parole officers (e.g., the Consent to Contact procedures described previously).

UI took aggressive steps to mitigate the impact of these factors on sample recruitment and matriculation. As mentioned earlier, UI added a “Consent to Contact” procedure early in the recruitment period both to facilitate greater cooperation from wary POs and treatment providers and to boost the project’s ability to connect and recruit potential comparison group cases. In addition, the study increased incentives<sup>28</sup> to respondents, expanded its Reno-based field interviewer staff four-fold, expanded sample matriculation to include individuals who chose to parole to Las Vegas, hired and trained Las Vegas-based field staff, and negotiated access to interview respondents who had returned to custody in local jail facilities (Washoe County and Clark County) and Nevada correctional centers. Furthermore, the study temporarily paused the recruitment of the treatment sample for several months in 2005 to focus exclusively on recruiting and interviewing all potential comparison group cases paroled to Reno. These actions boosted the sample size at implementation, but many of them were too resource intensive to be sustained by the project for any period of time. As a result, recruitment continued to lag.

Due to the exhaustion of study resources, recruitment for the study was terminated in March 2007. The final baseline sample (the sample of clients who had consented and with whom the research team had successfully conducted a baseline interview) consisted of 384 cases: 276 program clients and 108 comparison clients (a brief description of the sample’s baseline characteristics is provided in Appendix C). Baseline interviews were conducted shortly after the respondent returned to the community. Ridge House program staff closely tracked release dates and updated the research team frequently to ensure the timely completion of these interviews. Efforts to interview potential respondents ceased during periods in which individuals were not in compliance with parole reporting mandates and were officially declared to be absconders. Depending on their survey status, these individuals (i.e., those formally declared absconders and for whom bench warrants were issued) remained in the sample and were interviewed at a later date when feasible. Project researchers tracked the legal status of potential respondents who had not yet been consented and baseline interviewed for a set amount of time; individuals who remained as absconders after the designated time period, were declared ineligible for the research and tracking ceased so the project’s field interviews could devote their time and energy to tracking and interviewing more viable cases.

Program exit interviews were conducted with individuals in the treatment group upon program discharge – either successful or unsuccessful. Individuals who did not stay a minimum of 14 days in the Ridge House program were not interviewed. Reflecting the program’s 90-day duration, these interviews began in January 2005 or roughly three months after the first treatment cases in the sample entered Ridge House. A total of 204 program exit interviews were completed before data collection ceased in March 2007.<sup>29</sup>

In all, the study enrolled 74 percent of cases identified as eligible for the research sample: 90 percent of eligible treatment cases and slightly more than half (51.1 percent) of the eligible

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<sup>28</sup> Respondents who completed the Consent to Contact form as part of their Ridge House application received an additional \$5 upon completion of the baseline interview. A similar “bonus” was offered to respondents who contacted UI in response to letters inviting them to complete the 12-month follow up interview (again, this interview was later eliminated due to time and resource constraints, and limited case flow).

<sup>29</sup> A total of 92 (77T, 15C) 12-month post-release follow-up interviews were completed before data collection was halted. Follow up interviews began in September 2005 approximately 12-months after the first cases entered the sample, and concluded in March 2007 at the behest of the study’s sponsor.

comparison cases were recruited (consented and baseline interviewed). Furthermore, program exit interviews were completed with 74 percent of eligible cases. Because it had taken much longer than expected to enroll the baseline sample, UI had approached NIJ early into the follow-up period (August 2006) to suggest dropping the in-person follow-up interviews; UI presented NIJ with several options for preserving the analysis of additional outcomes. In March 2007, the decision to drop the follow-up interview and to revert to an impact evaluation based solely on administrative data was formalized. The response rate for the 12-month follow-up interview was just 38 percent when data collection was concluded.

Lastly, NCIC criminal history records were requested from the FBI roughly 18-months after the last case was recruited into the sample to allow for a minimum 12-month follow up period for all subjects in the sample and to ensure any new criminal justice contacts had been logged in the NCIC Interstate Identification Index (i.e., Triple I) database. UI researchers provided NCIC with a limited set of personal identifiers<sup>30</sup> (name, date of birth, sex) to use to extract criminal histories (rap sheets). Rap sheet data, including arrest, conviction and in some instances custody stays, were returned in two formats depending on the state that was reporting: electronic files in PDF format and paper rap sheets. The project received records in both formats. Criminal history records were matched to roughly 74 percent of the sample for whom these data were requested.

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<sup>30</sup> The Urban Institute's Institutional Review Board (IRB) prohibited researchers from submitting additional identifiers such as Social Security Number. Moreover, the project did not collect FBI Fingerprint Numbers for respondents, so the limited set of identifiers provided to the FBI greatly inhibited the agency's ability to identify respondents and provide data. The match-rate for NCIC data was just 74 percent overall and just 56 percent for treatment cases. Time constraints prohibited the study from submitting a second request to NCIC for data on the missing members of the sample.



## THE MODIFIED IMPACT EVALUATION DESIGN: EXPANDING THE COMPARISON GROUP

The expanded comparison group sample<sup>31</sup> consists of 375 cases<sup>32</sup> that were accepted by the Ridge House program but not originally approached to participate in the research for a specific set of reasons (i.e., paroled out of area, parole delayed for administrative reasons that resulted in minimal parole supervision, not locatable in the community, etc.). The only data collected on the cases in the expanded comparison group were official records data from NCIC. These additional cases and data were used to create a non-equivalent matching group.

### DATA ANALYSIS: OVERVIEW

Ultimately, a full complement of data (baseline, program exit and records data) was compiled for 56 percent (N=156) of the treatment sample, and roughly 80 percent (N=86) of the comparison group (baseline interview and records data). Only records data were collected for the 375 additional cases comprising the expanded comparison group.

Analyses to detect any selection bias were performed on the full sample of 617 cases (156 treatment cases, 86 comparison cases, and 375 expanded comparison cases). T-tests were conducted using a number of demographic variables (age, sex, race,) as well as age at first arrest and number of priors, but found no statistically significant differences. This suggested the three groups were sufficiently similar to proceed with analysis. T-Test statistics are presented in Table 1 in Chapter 4 and discussed there in more detail.

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<sup>31</sup> In August 2006, the research team approached NIJ about the potential implications of the short fall in cases appropriate for sample recruitment and presented a range of options that would preserve the impact analysis. In March 2007, NIJ selected the option to expand the comparison by constructing an additional non-equivalent comparison group using administrative records provided by Nevada criminal justice agencies (Corrections and Parole) and from the FBI's NCIC database. Under this scenario, UI would access official records data from the Nevada Division of Parole and Probation (P&P) and Department of Corrections (DOC) for parolees released to Reno during the study period and use stratification and propensity score procedures to construct a non-equivalent matching group. This approach would result in a larger comparison group at no additional (significant) cost and preserve the "impact" focus of the evaluation although intermediate outcomes, as well as some end outcomes would be lost. In turn, this option would allow for additional independent variables to be part of the regression equation (given the larger sample size). The success of this proposed approach, however, rested on the quality and availability of the records data used to construct the non-equivalent comparison group. To generate propensity scores, UI needed to match and select cases based on demographic characteristics, criminal history including age at first arrest, assessment information about substance abuse use and prior treatment, background information on education level and prior employment, and individual offender risk scores. The Offender Tracking Information System (OTIS) maintained by the Nevada Division of Parole and Probation captured most, if not all, of these data. Budget constraints, however, prohibited NDPP from providing the data and the expanded comparison could only be formed by re-visiting the list of Ridge House cases originally deemed ineligible for the research and requesting NCIC data on these cases as well as those in the survey sample.

<sup>32</sup> The 375 cases composing the expanded comparison group were predominantly male (76 percent), white (just 20 percent were African American) and in their late thirties (average was 36.7 years). On average, members of the expanded comparison group were 22 years of age when first arrested and had accumulated 12.8 prior arrests. Additional information about the characteristics of the expanded comparison group is provided in Chapter 4. Impact Analysis and Findings.

Impact analyses compared the recidivism (re-arrest) of Ridge House participants with the comparison group of parolees, but also examined differences between the treatment and comparison groups in re-arrest by type of offense. A separate set of explanatory analyses focused on the treatment group to determine if factors addressed by the Ridge House program were related to any observed program impacts on recidivism. Chapter 4 discusses our analytic approach in greater detail, and presents key findings.

## 4.0 Impact Analysis and Findings

This chapter presents the final analytic approach used to examine whether Ridge House program participants were less likely to recidivate compared to a matched sample of individuals who applied to but did not attend Ridge House. Multivariate analyses were performed using an expanded sample for which administrative data were available, and a subgroup analysis of the treatment group (N=156) was conducted to isolate program effects.<sup>33</sup> Findings are presented and limitations are discussed. All tables and figures can be found at the end of this chapter.

### SAMPLE DETAILS

The sample for the impact analysis is comprised of individuals who entered the Ridge House program and for whom there is baseline, program exit and records data (N = 156) and a group of comparison cases (N = 461) who did not participate in the program. Criminal history records were collected for all 461 individuals in the comparison group.

#### Treatment Group

Of the 156 treatment individuals included in our final analytical sample, not all individuals graduated from the Ridge House program. Based on self-reported program exit survey data, only 104 individuals completed the program while 52 individuals left earlier than their expected graduation date. On average, an individual who indicated that they had completed the program spent 100 days in Ridge House. In contrast, individuals who indicated that they left Ridge House early (not due to an early graduation) spent significantly ( $p < 0.001$ ) fewer days in the program than completers: 46 days. Although non-completers spent significantly fewer days in Ridge House than self-reported program completers, these individuals still received a substantial amount of Ridge House services and therefore were retained in the treatment group.

#### Comparison Group

Additionally, the comparison group is comprised of two subgroups. Originally, the comparison group only consisted of individuals who had consented to the research and completed a baseline interview, and for whom NCIC records were available (N=86). With just 86 individuals,<sup>34</sup> the original comparison group was too small to generate enough power to test for statistically significant differences in recidivism between the treatment and comparison groups. To generate a comparison group of adequate size, records data only were collected for an expanded group of individuals initially identified as eligible for the research but who were not approached to participate (many could not be located post-release, or paroled to other areas). The expanded comparison group consists of 375 individuals.

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<sup>33</sup> As a reminder, the study compiled a full complement of data (baseline, program exit and records data) for 56 percent of the treatment sample (N=156), and roughly 80 percent of the original comparison group (N=86; baseline data and official records). When we expanded the comparison group to include those for which we could obtain NCIC records, we had 375 additional comparison cases for a total of 461 comparison cases overall.

<sup>34</sup> The original comparison group consisted of 108 cases; however, NCIC records data were obtained for just 86 of those cases; thus, only those 86 original comparison group cases with records data were included in the impact analysis.

## Tests for Selection Bias

**Table 1** presents sample characteristics for the treatment group (N=156), original comparison group (N=86) and expanded comparison group (N=375). The treatment group (the third column; total N=156) can be compared to the comparison group (last column; total N=461) along each of the demographic and criminal history variables to generate an initial assessment of how well the two groups are balanced. In addition, the treatment subgroup that completed the program (N=104) can be compared to the treatment subgroup that did not successfully complete the program (N=52) to assess balance. Similarly, the original comparison and expanded comparison groups can be compared.

If the means of the treatment group are significantly different than the means of the comparison group, there is the potential for selection effects which can confound the interpretation of the impact of Ridge House and which would need to be corrected for in a multivariate framework. When looking at the treatment and original (non-expanded) comparison group, the treatment group looks different across three indicators: number of total prior arrests ( $p < 0.05$ ), number of prior property arrests ( $p < 0.05$ ), and number of prior traffic arrests ( $p < 0.01$ ). Additionally, between the treatment and expanded comparison group, the only variable which is statistically significant is prior traffic arrests ( $p < 0.05$ ).

Comparing the original comparison group to the expanded comparison group reveals that the expanded comparison has a slightly worse criminal history than the original comparison. The expanded comparison has more prior arrests ( $p < 0.05$ ), more prior property crimes ( $p < 0.10$ ), and more prior society crimes ( $p < 0.01$ ) on average than did the original comparison.

A potential problem with a heterogeneous comparison group is that individuals in the original comparison sample may differ systematically from individuals in the expanded comparison sample. To the extent that this difference may potentially be related to outcomes (re-arrest, time-to-re-arrest), the observed impact of the program may be biased. However, such differences can be controlled for in a multivariate framework since there is no reason to believe that observed differences reflect unobservable heterogeneity across the two populations. **Because individuals did not "select" to be in either our original comparison or expanded comparison samples, we do not believe that there are systemic, unobserved differences between the two groups.** Therefore, all variables which are significantly different between the two groups are included in the final outcome models. Furthermore, models are run with and without a dummy variable for the expanded comparison group to test for significant changes in results.

Finally, comparing individuals within the treatment group who completed Ridge House against those who did not complete the program reveals few statistically significant baseline characteristics. Besides the difference in the number of days spent in Ridge House, the completed treatment group differs from the uncompleted treatment group only in having fewer prior traffic offenses.

## Creating Anchor Dates

In order to capture a consistent date that sample members were released into the community, an anchor date was assigned to each observation in the sample. This date was then used to observe and count new arrests. For the treatment and original comparison group, accurate data on the date of release from prison were available. For the expanded comparison group, the release date had to

be estimated. A release date was generated using the date of the last contact with Ridge House, and adding 40 days. This estimation method was calculated based on the fact that the average individual in the original comparison and treatment groups was released approximately 40 days after their last contact with Ridge House. As discussed in Chapter 2, all members of our comparison group are individuals who applied to Ridge House, but did not attend (mostly due to the fact that a bed was not available at the time of their release date).

### **Observation Period**

Data on subsequent arrests, provided from NCIC records, were collected until August 2008. The last date in which there was an observed arrest (August 14, 2008) in the entire sample was the cut-off date for the survival analysis (described further in the Impact Analysis section). Although we controlled for the length of time observed,<sup>35</sup> we were unable to control for “street-time” because sentence length could not be observed.

In order to evaluate Ridge House’s effectiveness in reducing recidivism, we tested the following hypotheses:

- (1) Those who received treatment through the Ridge House Program (Treatment Group) will have lower odds of any re-arrest;
- (2) Those who received treatment through the Ridge House program (Treatment Group) will have a lower average number of re-arrests; and
- (3) Those who received treatment through the Ridge House program (Treatment Group) will have a longer time-to-re-arrest.

Additionally, we tested the hypotheses that those who completed the entire Ridge House program may have better recidivism rates than those who dropped out early, and then examined the indicator of whether an individual completed the program to assess the effect of treatment on the treated. These hypotheses are as follows:

- (4) Those who completed the Ridge House Program (Treatment Group - Completed) will have lower odds of any re-arrest;
- (5) Those who completed the Ridge House program (Treatment Group - Completed) will have a lower average number of re-arrests; and
- (6) Those who completed the Ridge House program (Treatment Group - Completed) will have a longer time-to-re-arrest.

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<sup>35</sup> Length of time observed post-release ranged from 18 months for the last case entering the sample to 47 months for the first case recruited for the sample, and averaged 28 months or 2.44 years.

We additionally tested whether Ridge House had any independent effect on the odds of recidivism or the number of arrests across the following crime types:

- (1) Person Crimes
- (2) Property Crimes
- (3) Society Crimes (gambling, nuisance crimes such as disorderly conduct and vagrancy, as well as trespassing, prostitution and drunkenness)
- (4) Drug Crimes (sales, possession, and drug equipment violations)

NCIC arrest data were coded and collapsed into person, property, society and drug crimes following the National Incident-Based Reporting System (NIBRS). Under NIBRS, drug crimes fall under Society Crimes. Given the emphasis of the Ridge House program, however, we felt it made sense to create a separate offense category for drug crimes such as possession and sales. A copy of the NIBRS offense structure is provided in Appendix D.

## BIVARIATE ANALYSIS

This section presents outcomes from the bi-variate analysis. This analysis does not control for individual characteristics.

**Table 2.1** describes the outcomes for the entire sample (N=617) and both treatment (N=156) and comparison groups (N=461). About 37 percent (N=228) of the entire sample was re-arrested during the follow-up period, which averaged about 2.44 years. Overall, individuals averaged 1.39 new arrests, the first of which occurred about 10.76 months for those who were ever re-arrested.

The bivariate comparison indicates that the **Ridge House group (treatment sample) had a statistically significant lower number of total re-arrests in the observation period**, averaging 1.39 new arrests compared with 1.89 in the comparison group ( $p<0.01$ ). Additionally, the treatment group had fewer re-arrest for society crimes ( $p<0.05$ ) and property crimes ( $p<0.10$ ) than the comparison group.

**Table 2.2** describes outcomes for the clients who completed Ridge House and the clients who did not successfully complete Ridge House. Those who completed the Ridge House program were much less likely to experience a new arrest, with 23 percent (N=23) re-arrested in the group who completed treatment compared to 44 percent (N=22) of those who dropped out. This difference is statistically significant at  $p<0.01$ . Across all crime types, those who completed treatment had a lower prevalence of re-arrest than those who did not complete, although this difference was only statistically significant for property crimes (18 percent of the group who completed was re-arrested for a property crime as compared with 35 percent of those who did not complete Ridge House).

Those who completed Ridge House also had a statistically significant lower number of total re-arrests in the observation period, averaging one new arrest compared to 1.67 in the group who did not complete Ridge House ( $p<0.01$ ). Additionally, those who completed Ridge House had fewer re-arrests for person crimes ( $p<0.10$ ) and property crimes ( $p<0.10$ ). More startlingly, those who completed Ridge House had a much longer time to re-arrest than did those who did not successfully complete Ridge House. While the successful completers averaged 770 days until re-arrest, the average individual in the unsuccessful group was arrested more than four months earlier, with an

average of 640 days until arrest ( $p < 0.05$ ). This bivariate comparison suggests that completion of the Ridge House program beneficially affects outcomes, above and beyond participation in the program. These findings are consistent with the broader research literature which has long noted the positive affect of program completion on key outcomes and long-term success (Anglin and Hser 1990; Hubbard et al. 1898; Simpson et al. 1997; Young and Belenko 2002).

## MULTIVARIATE ANALYSIS

Three different specifications of multivariate models were used to test the recidivism hypotheses. To test whether there was any difference in re-arrest prevalence – the proportion of the sample that experienced at least one new arrest – logistic regression models were used. To test whether there was any difference in re-arrest incidences – e.g. the number of new arrests – negative binomial regression models were used. Finally, to test whether there were any differences in how fast a recidivism event occurred – e.g. whether Ridge House kept participants from recidivating for longer than would be expected in a comparison sample – survival analysis was employed.

The following general model was used to test these hypotheses:

$$Y_i = \alpha + B_1 RH_i + B_2 Time_i + X\lambda + \varepsilon_i$$

Where  $Y_i$  is an indicator of recidivism,  $RH_i$  is a dummy variable indicating participation in Ridge House,  $Time_i$  is the number of years after release that an individual was observed, and  $X$  is a matrix of parolee-level demographic baseline characteristics. The control variables used in all models include:

- (1) Client characteristics (race, age, age at first arrest, gender);
- (2) Criminal history (total number of prior arrests, and number of person, property, society, and drug crimes); and
- (3) Time (years observed).

Four model specifications were used in each analysis: (a) one with only a treatment parameter, (b) one with both treatment and completion indicators, (c) one including all control variables, and (d) one including an additional dummy variable for the expanded comparison group.

The following section describes in detail the results of the empirical analysis of the effectiveness of the Ridge House program on recidivism. The first section describes the results of multivariate impact analysis and the second section gives a description of the survival analysis. The third details a subgroup analysis that explores what individual characteristics were associated with the largest beneficial impact from Ridge House. This analysis identifies the types of individuals likely to derive the greatest benefit from the Ridge House program, and therefore, offers guidance about who should be targeted for Ridge House services.

**Tables 3-5** present the results of multivariate hypotheses tests where the dependent variable was either a binary indicator of recidivism (1 if re-arrested; 0 if not) or a count variable for the number of re-arrests. A logistic regression model was specified for the re-arrest model, while a negative binomial model was specified in order to assess Ridge House's effect on the number of re-arrests. Each table has five panels, describing any re-arrest, re-arrest for a person crime, re-arrest for a

property crime, re-arrest for a society crime, and re-arrest for a drug crime. Within each panel, four models were specified, represented as four columns in the table. In the first column, the dependent variable is regressed only on the treatment indicator. In the second column, the dependent variable is regressed on both treatment and program completion indicators. In the third column, a vector of covariates is added. Finally, in the fourth column, an additional indicator is added for the expanded comparison group.

For prevalence outcomes, the marginal effects are reported. The marginal effect can be interpreted as the expected percent change in the dependent variable given an increase in the independent variable from 0 to 1. This effect is calculated at the mean of all other variables. Similarly, for the incidence outcomes, the marginal effect is produced and represents the unit change in number of arrests one would expect to see as a result of involvement with the Ridge House program.

### Arrest Prevalence

**Table 3** provides the results from the multivariate regression on arrest prevalence. The Ridge House parameter is only significant in two out of twenty models and only in the first model specification. When only the treatment parameter is included, Ridge House has a significant, negative effect on the prevalence of any re-arrest ( $p < 0.08$ ) and the prevalence of any drug arrest ( $p < 0.10$ ). However, in both models, when the completed treatment group indicator is added, the effect of the treatment parameter disappears.

While participation in Ridge House does not seem to affect the odds of re-arrest, once baseline characteristics are controlled for, completion of Ridge House does. In all three models in which the completion variable is included, the group that completed the program had a lower probability of arrest compared with the comparison group and the group that did not complete Ridge House. Using Model 3 (which includes all covariates), the analysis suggests that completion of the Ridge House program is associated with a 16 percent decrease in the probability of re-arrest. Similarly, completion of the Ridge House program has a significant and negative effect on the probability of being re-arrested for a property crime. The group that completed treatment had a 13 percent lower probability of re-arrest for property crimes (Model 11).

Adding covariates to the model to control for general baseline characteristics only marginally reduces the effect of completion. Moreover, the expanded comparison dummy was not significant in any model and had negligible effects on the treatment and completion parameters of interest.

Across four out of five outcome variables (re-arrest, person arrests, society arrests, and drug arrests), age is a significant and negative predictor of the probability of re-arrest. Gender (male) was significant in predicting property re-arrests, and is associated with a 9 percent increased probability of re-arrest. In addition, in four out of 10 models in which it is included, being Black has a significant and positive effect on the probability of re-arrest. Race (Black) is associated with increased probability of 5 percent for being arrested for a society crime and an increased probability of 9.6 percent for being arrested for a person crime. As expected, the length of time observed in the evaluation is positively correlated with the probability of re-arrest.



## Arrest Incidence

**Table 4** represents the results from the negative binomial regression on counts of re-arrest. Although the Ridge House treatment participation parameter did not seem to be correlated with a decreased probability of re-arrest, these models indicate that participation in the program itself may have a stronger effect on counts of re-arrest. Specifically, participation in Ridge House is associated with 0.12 fewer society re-arrests (Model 3). While inclusion of covariates did decrease the effect of the treatment parameter, the program still has a statistically significant effect of 5 percent.

Moreover, completion of Ridge House has a negative effect on counts of re-arrest for person crimes and property crimes. For example, completion of the Ridge House program is associated with 0.22 fewer property re-arrests ( $p < 0.01$ ) and with 0.05 fewer person re-arrests ( $p < 0.10$ ). Across all models, inclusion of the expanded comparison dummy variable does not significantly change results.

## Survival Analysis

The multivariate analyses described above suggest modest results for Ridge House participation and stronger results for Ridge House completion. Related to the issue of whether Ridge House reduced the incidence and prevalence of crime is the question of whether crime was temporally displaced. That is, did participation in Ridge House reduce the time until a new arrest? Temporally displacing crime potentially has positive effects above and beyond those from short-term reductions in offending. Since it is generally accepted that crime levels, on average, decline with age, displacing crime during periods where an individual is at higher risk of offending into a period where that risk is declining may have a long-term impact on reducing recidivism.

To test whether Ridge House kept participants from recidivating for longer than would have been expected without the program, a survival analysis was conducted. This approach asks the question “What are the odds that an arrest on each day subsequent to the day the participant entered the study?” Survival analysis then uses the known number of days until re-arrest and estimates the contribution of Ridge House to the length of time until re-arrest. This approach is useful in that it allows for an examination of the effect of individual characteristics, as well as treatment status, on the likelihood of recidivating over time. For this study, the cut-off date at which the research team ceased to observe arrests was August 14, 2008.

All survival models were specified using the Cox proposal hazards model (Cox 1972). This nonparametric model requires no assumptions about the distribution of the number of days until re-arrest. Each day, the odds of being re-arrested are defined as a hazard ratio. As individuals are re-arrested, they drop out of the subsequent analysis. The Cox model is specified as follows:

$$H[t, X] = ho(t) + exp(b1*TX + b2*X)$$

Where  $H(t)$  represents the resultant hazard function, given the values of the vector of covariates ( $X$ ) and the survival time ( $t$ ). The term  $ho(t)$  refers to the baseline hazard, which is the hazard for the individual when all independent variable values are equal to zero (Allison 1995). The survival function includes the same variables as in the outcome models. The survival analysis was run on

the following variables: any re-arrest, re-arrest for property crime, re-arrest for person crime, re-arrest for society crime, and re-arrest for drug crime.

Model specification was determined by a series of log-rank tests on possible covariates. The log-rank test of equality across strata is a non-parametric test that examines the prevalence of a predictor to the model. If a predictor had a p-value of 0.2 to 0.25 or less, it was included. This elimination scheme was used because if a predictor has a p-value greater than 0.25, it is unlikely it will contribute anything to the model. For continuous variables (i.e. age), chi-squared tests on the single continuous predictor were performed to determine whether or not that predictor should be included in the final model.

The analysis explored four specifications of the Cox Proportional Hazard model: (1) one including only the treatment parameter; (2) one including both treatment and completion parameters; (3) one with the relevant covariates; and (4) one including the expanded comparison dummy. The parameters reported in the tables that follow are hazard ratios. If the ratio is below 1, then the odds of re-arrest or reconviction for the treatment group are interpreted as being less than the odds for the comparison. For example, if the value is 0.75, then the treatment group has 75 percent as high odds as the comparison that they will be re-arrested on any given day. If the ratio is above 1, then the odds of re-arrest or reconviction for the treatment group are interpreted as higher than the odds for the comparison.

The term “hazard” refers to each individual’s odds of being re-arrested/reconvicted in a given time period (months) considering the same odds for everyone else who has not been re-arrested/reconvicted at that same point in time (the “survivors”). This model uses the surviving members’ hazard rates as well as the values of the covariates to calculate the likelihood of being re-arrested/reconvicted at each point in time.

The differences between treatment and comparison on months until re-arrest can be shown graphically. **Figure 3** below displays the survival curve for the treatment group and the comparison group. As Figure 3 shows, there is a significantly longer time to re-arrest for the treatment group than for the comparison group beginning at about two years from the date of release (the fact that the treatment group’s survivor function is above that of the comparison indicates that the treatment group has fewer failures at each point in time).

**Table 5** below describes the results of the survival model on months until re-arrest. In Model (1), where only the treatment parameter is included, it appears as though Ridge House participation decreases the odds of re-arrest in any given month. However, once completion is controlled for, it becomes apparent that the group that completed Ridge House has a significantly different re-arrest trajectory from the group that did not complete Ridge House. Completion of Ridge House significantly decreases the risk of re-arrest while only participating in Ridge House seems to increase the odds of re-arrest when measured against the comparison group. **Figure 4** shows the survival functions, controlling for covariates.

### **Treatment Subgroup Analysis**

To identify who is best served by the Ridge House program, we ran a series of sub-group analyses to answer the following questions:

- (1) What baseline characteristics are associated with better outcomes for the treatment group?
- (2) What treatment experiences are associated with better outcomes for the treatment group?
- (3) What specific program elements are associated with better outcomes for the treatment group?

**Table 6.1** presents treatment group characteristics across these baseline characteristics, treatment characteristics, and participation in treatment programs (self-reported). As described earlier, 69 percent of the treatment group was male, 20 percent was Black, and the average age of entry into the program was 37 years. Moreover, we investigated how marital status (13 percent married), the presence of children (69 percent had children), previous exposure to substance abuse treatment programs (60 percent had been enrolled in a substance abuse treatment program at some point), and self-reported religiosity/spirituality (measured as a four item scale) impacted outcomes.

Additionally, we examined how overall participation in Ridge House affected outcomes. First, we examined how the total number of services affected outcomes. Of the 22 possible services available, the average client reported participating in 14. We also created variables to capture the degree to which reported treatment needs were met or unmet. Across the 22 service category types, we asked individuals whether or not they had a need in this service category (e.g., do you need anger management counseling?). We then calculated every instance in which an individual indicated a need and participated in a Ridge House program (summarized as ‘Total Needs Met’). On average, individuals enrolled in Ridge House had 10 service areas in which they indicated a need and participated in a program that addressed that need. Similarly, we also calculated instances in which an individual indicated a need and did *not* participate in a program or service that addressed that need. Overall, participants reported an average of 1.9 needs that went unmet by Ridge House.

Lastly, we looked at participation in specific Ridge House programs. **Table 6.1** presents the percentages of individuals who indicated that they had participated in a given program. The top three programs (in terms of participation) were group counseling (93 percent participated); one-on-one counseling (92 percent participated) and drug screenings/urinalysis (92 percent participated). These top three services in which Ridge House clients participated correspond to the core elements of the program.

To test the effect of these characteristics on outcomes, we re-ran the multivariate models specified in the prior section for a subgroup composed only of individuals enrolled in Ridge House. Three model specifications were used to investigate each of the questions posed above. In the first model, we tested a vector of relevant covariates to identify attributes that were significantly related to better outcomes. While we were limited in the number of attributes we could include due to the sample size, we were able to include: completion status, days in Ridge House, gender, race, age, marital status, and the presence of children, an indicator of previous enrollment in a substance abuse program, and religiosity/spirituality. These variables were chosen both on the basis of theoretical relevance as well as empirical correlation with outcomes.

In the second model specification, overall characteristics of treatment participation were included. Whether the individual completed the program, the total number of needs that went unmet, and the year of program entry comprised the specified characteristics.

Finally, in the third model specification, we included indicators on a select number of programs: (1) counseling on addictions; (2) counseling on criminal thinking; (3) relationship skills training; (4) computer training; (5) spirituality services; and (6) relapse prevention planning. The small sample size again limited the number of variables we could include in the model. The variables specified were chosen both for their theoretical relevance and empirical correlation with outcomes. Although computer programming participation only applied to a few number of individuals, it was strongly correlated with re-arrests for person crimes and was therefore included in the final model.

**Table 6.2** represents the results from the multivariate regression on arrest prevalence. Similar to what we found before, the dominant characteristics associated with success were gender, race, and age. Given that an individual was enrolled in Ridge House, being male was associated with a 25 percent increase in the probability of *any re-arrest* ( $p < 0.01$ ) while being Black was associated with a 32 percent increase in the probability ( $p < 0.05$ ). As seen in previous models, age was a significant and negative predictor of recidivism, with each additional year of age associated with a 2 percent decrease in the probability of recidivating. Although religiosity/spirituality was non-significant, it had a negative coefficient in 20 out of 25 models, suggesting a negative correlation between spirituality and recidivism.

In terms of the effect of programmatic elements on *any re-arrest*, completion had the single strongest effect on the probability of re-arrest and was associated with a 32 percent decrease in the odds of recidivating. Findings for specific programs were mixed; no single program stood out as being positively or negatively associated with recidivism outcomes, which was most likely the result of the small sample size.

**Table 6.3** represents the results from the multivariate regression on arrest incidence. In terms of number of arrests, results were similar to the analysis on arrest prevalence. Being Black and male were positively associated with the number of re-arrests and older individuals were more likely to have fewer re-arrests overall. In addition, completion had a strong and negative impact on number of re-arrests. Completing the program was associated with 0.5 fewer re-arrests on average when compared with individuals who did not complete the program ( $p < 0.05$ ). Relationship skills training and spirituality services were actually positively correlated with number of re-arrests ( $p < 0.01$ ), although that relationship does not hold across other arrest incidence outcomes (number of person re-arrests, number of property re-arrests, etc).

### Exploring Program Completion

Given how important completion of Ridge House is to determining outcomes, we also looked at the characteristics most likely to predict program completion. Interestingly, the only characteristic significantly correlated with completion was marital status. Married individuals had a 22 percent higher probability of completing the program compared to those who were single or divorced. In turn, we found that every additional treatment need that went “unmet” decreased the probability of completion by 4 percent ( $p < 0.05$ ). Other covariates did not seem to be significantly correlated with completion status, as indicated in **Table 7**.

Consistent with the extant research, these analyses indicate that individuals who completed the Ridge House program were more likely to remain arrest-free during and after program participation than non-completers. Program participation was also linked to better recidivism outcomes.

Overall, program participants fared better with respect to re-arrest than members of the comparison group. While promising, these findings should be viewed with caution as the measure of program completion was based on the individual's self-report and could not be verified with program records. These and other limitations and considerations are discussed in Chapter 5; key findings from the analysis are also summarized and discussed within the broader context in which small community-based programs like Ridge House operate.

<b>Table 1. Sample Characteristics</b>						
Variable	Treatment			Comparison		
	<i>Completed</i> (n = 104)	<i>Uncompleted</i> (N = 52)	<i>Total</i> (n=156)	<i>Original</i> (n = 86)	<i>Expanded</i> (n = 375)	<i>Total</i> (n = 461)
<u><i>Demographics</i></u>						
Age	36.4	37	36.6	36.5	36.7	36.6
Age First Arrest	22.33	21.54	22.2	23.2	22.1	22.3
Gender (% Male)	0.66	0.75	0.69	0.72	0.76	0.75
Race (% Black)	0.18	0.24	0.2	0.19	0.2	0.2
<u><i>Criminal History</i></u>						
Number of Priors	9.92	11.58	10.5++	10.3**	12.8	11.83
Num priors ( <i>person crimes</i> )	1.33	1.6	1.4	1.3	1.4	1.4
Num priors ( <i>property crimes</i> )	3.28	4.13	3.6++	3.8*	4.9	4.7
Num priors ( <i>society crimes</i> )	1.05	0.85	0.98	0.63***	1.05	0.97
Num priors ( <i>drug crimes</i> )	1.97	1.98	1.97	1.78	2.22	2.14
Num priors ( <i>traffic crimes</i> )	0.54**	1	0.69+++	0.92	1.08	1.05
* Completed differs from uncompleted treatment group: *p<0.10, ** p<0.05 , *** p<0.01						
* Original differs from expanded comparison group: *p<0.10, ** p<0.05 , *** p<0.01						
+ Treatment differs from comparison: + p<0.10, ++ p<0.05, +++ p<0.01						

Outcome	Sample (n = 617)	Treatment (n = 156)	Comparison (n = 461)
Any Re-arrest	37%	33%	38%
Any Re-arrest- Person	11%	12%	10%
Any Re-arrest- Property	27%	25%	28%
Any Re-arrest- Society	11%	9%	12%
Any Re-arrest- Drug	23%	21%	24%
Number of Re-arrests	1.68	1.39**	1.82
Number of Re-arrests - Person	0.16	0.15	0.16
Number of Re-arrests - Property	0.43	0.35*	0.47
Number of Rearrests - Society	0.2	0.11**	0.25
Number of Rearrests - Drug	0.38	0.32	0.41
Days to Re- arrest	678.26	681.44	676.76
Number of Years Observed	2.44	2.32	2.49

\*p<0.10, \*\* p<0.05 , \*\*\* p<0.01

Outcome	Treatment (n = 156)	Complete (n=104)	Uncomplete (n=52)
Any Re-arrest	33%	23%***	44%
Any Re-arrest- Person	12%	7%	15%
Any Re-arrest- Property	25%	18%**	35%
Any Re-arrest- Society	9%	9%	8%
Any Re-arrest- Drug	21%	16%	19%
Number of Re-arrests	1.39	1**	1.67
Number of Re-arrests - Person	0.15	0.07*	0.19
Number of Re-arrests - Property	0.35	0.24*	0.62
Number of Rearrests - Society	0.11	0.1	0.08
Number of Rearrests - Drug	0.32	0.22	0.29
Days to Re- arrest	681.44	769.36**	640.37

\*p<0.10, \*\* p<0.05 , \*\*\* p<0.01

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Table 3. Prevalence of Rearrest

Independent Variable	Any Arrest							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	<b>-0.081*</b>	<b>0.043</b>	0.058	0.07	0.077	0.077	0.081	0.094
Completed Program			<b>-0.198***</b>	<b>0.063</b>	<b>-0.157**</b>	<b>0.07</b>	<b>-0.157**</b>	<b>0.069</b>
Gender					0.072	0.048	0.072	0.048
Race					0.093	0.056	0.092	0.056
Age					<b>-0.019***</b>	<b>0.004</b>	<b>-0.019***</b>	<b>0.004</b>
Age First Arrest					0.001	0.005	0.001	0.005
Number of Priors					0.007	0.011	0.007	0.011
Num priors (person)					0.019	0.019	0.019	0.018
Num priors (property)					0.018	0.014	0.018	0.013
Num priors (society)					0.021	0.02	0.021	0.02
Num priors (drug)					0.012	0.015	0.011	0.015
Num priors (traffic)					<b>0.036*</b>	<b>0.02</b>	<b>0.036*</b>	<b>0.02</b>
Years Observed					0.158	0.026	0.158	0.027
Expanded Comparison							0.004	0.063
R <sup>2</sup>	0.01		0.08		0.16		0.16	
N	617		617		617		617	
Independent Variable	Any Person Arrest							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	-0.006	0.027	0.046	0.044	0.03	0.034	0.09	0.069
Completed Program			<b>-0.065**</b>	<b>0.03</b>	-0.035	0.025	-0.034	0.024
Gender					0.021	0.021	0.019	0.02
Race					<b>0.096***</b>	<b>0.034</b>	<b>0.094***</b>	<b>0.034</b>
Age					<b>-0.004***</b>	<b>0.001</b>	<b>-0.004***</b>	<b>0.001</b>
Age First Arrest					0.001	0.002	0.001	0.002
Number of Priors					0.005	0.004	0.004	0.004
Num priors (person)					<b>0.015**</b>	<b>0.006</b>	<b>0.015**</b>	<b>0.006</b>
Num priors (property)					-0.004	0.005	-0.004	0.005
Num priors (society)					-0.003	0.008	-0.004	0.008
Num priors (drug)					-0.004	0.005	-0.004	0.005
Num priors (traffic)					-0.003	0.008	-0.003	0.008
Years Observed					<b>0.036***</b>	<b>0.011</b>	<b>0.033***</b>	<b>0.01</b>
Expanded Comparison							0.046	0.031
R <sup>2</sup>	0.01		0.08		0.16		0.17	
N	617		617		617		617	
Independent Variable	Any Property Arrest							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	-0.047	0.04	0.058	0.065	0.079	0.066	0.093	0.084
Completed Program			<b>-0.146***</b>	<b>0.055</b>	<b>-0.127**</b>	<b>0.056</b>	<b>-0.127**</b>	<b>0.056</b>
Gender					<b>0.093**</b>	<b>0.039</b>	<b>0.093**</b>	<b>0.039</b>
Race					-0.006	0.045	-0.007	0.045
Age					<b>-0.009*</b>	<b>0.003</b>	<b>-0.009**</b>	<b>0.003</b>
Age First Arrest					-0.001	0.004	-0.001	0.004
Number of Priors					0.008	0.008	0.008	0.008
Num priors (person)					-0.014	0.015	-0.014	0.015
Num priors (property)					0.01	0.011	0.01	0.011
Num priors (society)					0.016	0.016	0.015	0.016
Num priors (drug)					-0.015	0.012	-0.015	0.012
Num priors (traffic)					-0.008	0.017	-0.008	0.017
Years Observed					<b>0.074**</b>	<b>0.021</b>	<b>0.073**</b>	<b>0.021</b>
Expanded Comparison							<b>0.015</b>	<b>0.054</b>
R <sup>2</sup>	0.01		0.05		0.08		0.08	
N	617		617		617		617	
Independent Variable	Any Society Arrest							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	-0.036	0.027	0.046	0.044	-0.038	0.036	-0.026	0.047
Completed Program			<b>-0.065**</b>	<b>0.03</b>	0.032	0.064	0.032	0.063
Gender					0.008	0.026	0.008	0.026
Race					<b>0.055*</b>	<b>0.032</b>	<b>0.055*</b>	<b>0.032</b>
Age					-0.001	0.002	-0.001	0.002
Age First Arrest					-0.003	0.002	-0.003	0.002
Number of Priors					0.003	0.005	0.003	0.005
Num priors (person)					0.002	0.008	0.002	0.008
Num priors (property)					-0.005	0.006	-0.005	0.006
Num priors (society)					0.008	0.009	0.008	0.009
Num priors (drug)					0.003	0.006	0.003	0.006
Num priors (traffic)					0.004	0.009	0.004	0.009
Years Observed					<b>0.044***</b>	<b>0.012</b>	<b>0.043***</b>	<b>0.013</b>
Expanded Comparison							0.016	0.035
R <sup>2</sup>	0.01		0.06		0.09		0.09	
N	617		617		617		617	
Independent Variable	Any Drug Arrest							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	<b>-0.068*</b>	<b>0.036</b>	-0.048	0.059	-0.041	0.057	-0.024	0.071
Completed Program			-0.033	0.071	-0.015	0.071	-0.015	0.071
Gender					0.016	0.038	0.016	0.038
Race					0.062	0.045	0.062	0.045
Age					<b>-0.011*</b>	<b>0.003</b>	<b>-0.011*</b>	<b>0.003</b>
Age First Arrest					0.001	0.004	0.001	0.004
Number of Priors					0.007	0.008	0.007	0.008
Num priors (person)					0.003	0.013	0.003	0.013
Num priors (property)					-0.003	0.01	-0.003	0.01
Num priors (society)					0.009	0.015	0.008	0.015
Num priors (drug)					0.004	0.011	0.005	0.011
Num priors (traffic)					-0.004	0.015	-0.004	0.015
Years Observed					<b>0.05***</b>	<b>0.019</b>	<b>0.049***</b>	<b>0.019</b>
Expanded Comparison							0.021	0.049
R <sup>2</sup>	0.01		0.01		0.07		0.07	
N	617		617		617		617	

\*p<0.10, \*\* p<0.05, \*\*\* p<0.01



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**Table 4. Incidence of Rearrest**

Independent Variable	Number of Rearrests							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	<b>-0.598***</b>	0.191	-0.137	0.329	0.011	0.228	0.214	0.304
Completed Program			<b>-0.717**</b>	0.299	-0.339	0.233	-0.338	0.233
Gender					<b>0.411***</b>	0.139	<b>0.409***</b>	0.139
Race					<b>0.48**</b>	0.192	<b>0.475**</b>	0.191
Age					<b>-0.049***</b>	0.01	<b>-0.048***</b>	0.01
Age First Arrest					-0.011	0.015	-0.011	0.015
Number of Priors					<b>0.01**</b>	0.03	0.01	0.03
Num priors ( <i>person</i> )					0.099	0.048	0.101	0.048
Num priors ( <i>property</i> )					<b>0.044**</b>	0.037	0.043	0.037
Num priors ( <i>society</i> )					0.138	0.056	0.132	0.056
Num priors ( <i>drug</i> )					0.046	0.041	0.045	0.041
Num priors ( <i>traffic</i> )					0.027	0.059	0.031	0.059
Years Observed					<b>0.576***</b>	0.082	<b>0.563***</b>	0.083
Expanded Comparison							0.231	0.192
Log-Likelihood	-107		-107		-918		-918	
N	617		617		617		617	
Independent Variable	Number of Person Rearrests							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	-0.052	0.043	0.027	0.074	0.031	0.039	0.105	0.082
Completed Program			<b>-0.109**</b>	<b>0.049</b>	<b>-0.049*</b>	<b>0.028</b>	<b>-0.048*</b>	<b>0.027</b>
Gender					0.021	0.024	0.02	0.024
Race					<b>0.11***</b>	<b>0.041</b>	<b>0.104***</b>	<b>0.04</b>
Age					<b>-0.004**</b>	<b>0.002</b>	<b>-0.004**</b>	<b>0.002</b>
Age First Arrest					0.002	0.002	0.002	0.002
Number of Priors					0.006	0.004	0.006	0.004
Num priors ( <i>person</i> )					<b>0.016**</b>	<b>0.006</b>	<b>0.018**</b>	<b>0.006</b>
Num priors ( <i>property</i> )					-0.007	0.005	-0.007	0.005
Num priors ( <i>society</i> )					-0.007	0.008	-0.009	0.008
Num priors ( <i>drug</i> )					-0.008	0.006	-0.007	0.006
Num priors ( <i>traffic</i> )					0.003	0.008	0.004	0.008
Years Observed					<b>0.045***</b>	<b>0.012</b>	<b>0.04***</b>	<b>0.012</b>
Expanded Comparison							0.056	0.035
R <sup>2</sup>	-257		-258		-542		-542	
N	617		617		617		617	
Independent Variable	Number of Property Rearrests							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	-0.105	0.078	0.123	0.136	0.156	0.107	0.215	0.15
Completed Program			<b>-0.307***</b>	<b>0.088</b>	<b>-0.212***</b>	<b>0.071</b>	<b>-0.212***</b>	<b>0.071</b>
Gender					<b>0.103*</b>	<b>0.059</b>	<b>0.104*</b>	<b>0.059</b>
Race					-0.02	0.065	-0.021	0.065
Age					<b>-0.013***</b>	<b>0.004</b>	<b>-0.013***</b>	<b>0.004</b>
Age First Arrest					0.001	0.006	0.001	0.006
Number of Priors					0.004	0.012	0.004	0.012
Num priors ( <i>person</i> )					0.002	0.02	0.002	0.02
Num priors ( <i>property</i> )					<b>0.029**</b>	<b>0.015</b>	<b>0.029*</b>	<b>0.015</b>
Num priors ( <i>society</i> )					<b>0.038*</b>	<b>0.022</b>	<b>0.037*</b>	<b>0.022</b>
Num priors ( <i>drug</i> )					-0.016	0.018	-0.016	0.018
Num priors ( <i>traffic</i> )					-0.015	0.025	-0.015	0.025
Years Observed					<b>0.139***</b>	<b>0.033</b>	<b>0.136***</b>	<b>0.033</b>
Expanded Comparison							0.054	0.082
R <sup>2</sup>	-550		-539		-495		-495	
N	617		617		617		617	
Independent Variable	Number of Society Rearrests							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	<b>-0.158***</b>	<b>0.052</b>	<b>-0.177**</b>	<b>0.083</b>	<b>-0.117**</b>	<b>0.056</b>	<b>-0.101*</b>	<b>0.057</b>
Completed Program			0.046	0.171	0.079	0.144	0.079	0.143
Gender					0.036	0.043	0.033	0.044
Race					<b>0.165**</b>	<b>0.082</b>	<b>0.165*</b>	<b>0.082</b>
Age					0	0.002	-0.001	0.002
Age First Arrest					<b>-0.007*</b>	<b>0.004</b>	<b>-0.007*</b>	<b>0.004</b>
Number of Priors					-0.006	0.008	-0.006	0.008
Num priors ( <i>person</i> )					0.018	0.015	0.017	0.015
Num priors ( <i>property</i> )					0.009	0.01	0.008	0.01
Num priors ( <i>society</i> )					<b>0.03**</b>	<b>0.015</b>	<b>0.028**</b>	<b>0.015</b>
Num priors ( <i>drug</i> )					0.016	0.011	0.015	0.011
Num priors ( <i>traffic</i> )					0.006	0.017	0.006	0.017
Years Observed					<b>0.061**</b>	<b>0.025</b>	<b>0.059**</b>	<b>0.025</b>
Expanded Comparison							0.046	0.054
Log-Likelihood	-296		-296		-276		-276	
N	617		617		617		617	
Independent Variable	Number of Drug Rearrests							
	(1)		(2)		(3)		(4)	
	b	(se)	b	(se)	b	(se)	b	(se)
RH	-0.162	0.067	-0.112	0.110	-0.034	0.086	0.044	0.123
Completed Program			-0.087	0.131	-0.059	0.095	-0.059	0.095
Gender					0.066	0.053	0.066	0.053
Race					0.129*	0.075	0.125*	0.074
Age					-0.018***	0.004	-0.018***	0.004
Age First Arrest					0.005	0.006	0.005	0.006
Number of Priors					0.007	0.011	0.006	0.011
Num priors ( <i>person</i> )					0.01	0.018	0.011	0.018
Num priors ( <i>property</i> )					0	0.014	0	0.014
Num priors ( <i>society</i> )					0.032	0.021	0.03	0.021
Num priors ( <i>drug</i> )					0.019	0.016	0.019	0.015
Num priors ( <i>traffic</i> )					-0.013	0.023	-0.013	0.023
Years Observed					0.117***	0.029	0.112***	0.029
Expanded Comparison							0.089	0.075
Log-Likelihood	-473		-473		-437		-436	
N	617		617		617		617	

\*p<0.10, \*\*p<0.05, \*\*\*p<0.01

Independent Variable	(1)	(2)	(3)	(4)
RH	<b>0.73***</b> (0.04)	1.02 (0.07)	<b>1.54***</b> (0.11)	<b>1.75***</b> (0.17)
Complete		<b>0.60***</b> (0.05)	<b>0.45***</b> (0.04)	<b>0.45***</b> (0.04)
Gender			<b>1.6***</b> (0.09)	<b>1.6***</b> (0.09)
Race			<b>1.28***</b> (0.06)	<b>1.28***</b> (0.06)
Age			<b>0.92***</b> (0.003)	<b>0.92***</b> (0.003)
Age First Arrest			<b>1.00***</b> (0.005)	<b>1.00***</b> (0.005)
Num priors ( <i>person</i> )			<b>1.10***</b> (0.01)	<b>1.10***</b> (0.01)
Num priors ( <i>property</i> )			<b>1.06***</b> (0.003)	<b>1.06***</b> (0.003)
Num priors ( <i>society</i> )			<b>1.09***</b> (0.02)	<b>1.09***</b> (0.02)
Num priors ( <i>drug</i> )			<b>1.08***</b> (0.01)	<b>1.08***</b> (0.01)
Num priors ( <i>traffic</i> )			<b>1.25***</b> (0.02)	<b>1.25***</b> (0.02)
Expanded				<b>1.16**</b> (0.08)
Log-Likelihood	-8320	-8305	-7343	-7340
N	617	617	617	617

\*p<0.10, \*\* p<0.05, \*\*\* p<0.01

Variable	Mean	Std	Min	Max
<u>Baseline Characteristics</u>				
Gender (1 = Male)	69%	0.47	0	1
Race (1 = Black)	20%	0.40	0	1
Age	37	9.32	20	59
Married	13%	0.34	0	1
Has Children	69%	0.47	0	1
Previously Enrolled in SA Program	60%	0.49	0	1
Religiosity Scale	3.24	0.75	1	4
<u>Treatment Characteristics</u>				
Total Programs Participated In	13.93	4.78	0	21
Total Needs Unmet	1.91	2.45	0	13
Total Needs Met	9.96	5.66	0	20
<u>Treatment Programs</u>				
Abuse Counseling	28.8%	0.45	0	1
Anger Management	45.5%	0.50	0	1
Treatment Plan Development	87.8%	0.33	0	1
Weekly Recreational Groups	89.1%	0.31	0	1
Counseling on Socializing Without Substances	80.8%	0.40	0	1
Stress Reduction Counseling	61.5%	0.49	0	1
Personal Responsibility Counseling	67.3%	0.47	0	1
One-on-one counseling	92.3%	0.27	0	1
Counseling on Addictions	90.4%	0.30	0	1
Group Counseling	92.9%	0.26	0	1
Life skills training	80.8%	0.40	0	1
Counseling on Criminal Thinking	63.5%	0.48	0	1
Drug Screenings	91.7%	0.28	0	1
Relationship skills training	55.1%	0.50	0	1
Computer training	1.3%	0.11	0	1
Job skills training	57.1%	0.50	0	1
Financial planning	59.0%	0.49	0	1
Parenting Skills	13.5%	0.34	0	1
Spirituality Services	34.6%	0.48	0	1
Housing Services	44.2%	0.50	0	1
Homework assignments	88.5%	0.32	0	1
Relapse Prevention Planning	67.3%	0.47	0	1
*p<0.10, ** p<0.05 , *** p<0.01				

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Table 6.2 Subgroup Analysis on Treated: Arrest Prevalence (N=156)					
Independent Variable	Any Rearrest				
	(1)		(2)		(3)
	b	(se)	b	(se)	b (se)
<b>Baseline Characteristics</b>					
Gender	0.20***	0.07	0.18**	0.07	0.25*** 0.06
Race	0.26**	0.11	0.28**	0.11	0.32** 0.13
Age	-0.02***	0.00	-0.02***	0.00	-0.02*** 0.005
Married	0.02	0.11	0.08	0.13	0.13 0.15
Children	-0.06	0.09	-0.06	0.09	-0.09 0.09
Previous Substance Abuse Program	0.06	0.08	0.10	0.08	0.10 0.08
Religiosity Scale	-0.03	0.05	-0.04	0.05	-0.04 0.05
<b>Treatment Receipt Characteristics</b>					
Completed Program			-0.24**	0.09	-0.32*** 0.11
Total Needs Unmet			-0.02	0.02	-0.005 0.02
Year of Program Entry			-0.03	0.05	-0.04 0.05
<b>Treatment Programs</b>					
Counseling on Addictions					-0.22 0.18
Counseling on Criminal Thinking					-0.05 0.10
Relationship Skills Training					0.23*** 0.09
Computer Training					0.19 0.49
Spirituality Services					0.24** 0.10
Relapse Prevention Planning					-0.06 0.11
Pseudo R-squared	0.06		0.09		0.26
<b>Any Person Re-arrest</b>					
Independent Variable	(1)		(2)		(3)
	b	(se)	b	(se)	b (se)
<b>Baseline Characteristics</b>					
Gender	0.07*	0.04	0.06*	0.03	0.00 0.00
Race	0.11	0.08	0.07	0.07	0.00 0.00
Age	-0.004	0.002	-0.003	0.002	-0.002* -0.001
Married	-0.04	0.05	-0.04	0.05	0.00 0.00
Children	-0.004	0.04	0.04	0.04	0.00 0.00
Previous Substance Abuse Program	-0.06	0.03	-0.004	0.04	0.00 0.00
Religiosity Scale	-0.03*	0.05	-0.05*	0.02	-0.002* 0.001
<b>Treatment Receipt Characteristics</b>					
Completed Program			-0.05	0.05	-0.002 0.002
Total Needs Unmet			-0.01*	0.006	0.04* 0.02
Year of Program Entry			0.02	0.02	0.0 0.0
<b>Treatment Programs</b>					
Counseling on Addictions					-0.00 0.002
Counseling on Criminal Thinking					0.001 0.001
Relationship Skills Training					-0.001 0.001
Computer Training					0.29** 0.01
Spirituality Services					-0.07** 0.03
Relapse Prevention Planning					-0.03 0.02
Pseudo R-squared	0.16		0.18		0.37
<b>Any Property Arrest</b>					
Independent Variable	(1)		(2)		(3)
	b	(se)	b	(se)	b (se)
<b>Baseline Characteristics</b>					
Gender	0.05	0.07	0.03	0.07	0.04 0.07
Race	0.13	0.1	0.12	0.1	0.16 0.11
Age	-0.005	0.003	-0.005	0.003	-0.006 0.004
Married	0.03	0.11	0.06	0.12	0.06 0.12
Children	-0.03	0.08	-0.03	0.08	-0.05 0.08
Previous Substance Abuse Program	-0.001	0.07	-0.001	0.07	0.02 0.07
Religiosity Scale	-0.03	0.05	-0.03	0.05	-0.05 0.05
<b>Treatment Receipt Characteristics</b>					
Completed Program			-0.18*	0.08	-0.16* 0.1
Total Needs Unmet			-0.003	0.01	-0.007 0.02
Year of Program Entry			0.01	0.05	0.02 0.05
<b>Treatment Programs</b>					
Counseling on Addictions					0.09 0.09
Counseling on Criminal Thinking					-0.20** 0.09
Relationship Skills Training					0.08 0.08
Computer Training					0.25 0.42
Spirituality Services					0.12 0.09
Relapse Prevention Planning					-0.07 0.09
Pseudo R-squared	0.03		0.06		0.11
<b>Any Society Arrest</b>					
Independent Variable	(1)		(2)		(3)
	b	(se)	b	(se)	b (se)
<b>Baseline Characteristics</b>					
Gender	0.02	0.04	0.03	0.03	0.03 0.03
Race	0.08	0.07	0.10	0.07	0.10 0.07
Age	-0.001	0.002	-0.001	0.002	-0.001 0.002
Married	0.05	0.04	0.04	0.03	0.04 0.03
Children	0.04	0.04	0.04	0.04	0.04 0.04
Previous Substance Abuse Program	0.04	0.04	0.03	0.03	0.03 0.03
Religiosity Scale	0.06	0.04	0.05	0.03	0.05 0.03
<b>Treatment Receipt Characteristics</b>					
Completed Program			0.02	0.03	0.02 0.03
Total Needs Unmet			-0.02	0.02	-0.02 0.02
Year of Program Entry			0.004	0.02	0.004 0.02
<b>Treatment Programs</b>					
Counseling on Addictions					-0.27** 0.10
Counseling on Criminal Thinking					0.01 0.02
Relationship Skills Training					0.05 0.04
Computer Training					0.22 0.45
Spirituality Services					0.04 0.04
Relapse Prevention Planning					0.009 0.03
Pseudo R-squared	0.06		0.11		0.31
<b>Any Drug Arrest</b>					
Independent Variable	(1)		(2)		(3)
	b	(se)	b	(se)	b (se)
<b>Baseline Characteristics</b>					
Gender	-0.03	0.07	-0.04	0.07	-0.02 0.06
Race	0.22**	0.10	0.23**	0.10	0.20** 0.11
Age	-0.001	0.003	-0.001	0.003	0.003 0.003
Married	0.05	0.12	0.05	0.12	0.13 0.11
Children	-0.08	0.07	-0.08	0.07	-0.10 0.07
Previous Substance Abuse Program	0.13**	0.05	0.13**	0.06	0.11** 0.06
Religiosity Scale	-0.005	0.04	-0.007	0.04	-0.001 0.04
<b>Treatment Receipt Characteristics</b>					
Completed Program			-0.05	0.07	-0.05 0.07
Total Needs Unmet			0.0003	0.01	0.0003 0.01
Year of Program Entry			0.005	0.04	0.005 0.04
<b>Treatment Programs</b>					
Counseling on Addictions					-0.10 0.13
Counseling on Criminal Thinking					0.05 0.06
Relationship Skills Training					0.16** 0.07
Computer Training					-0.01 0.06
Spirituality Services					-0.10 0.09
Relapse Prevention Planning					-0.11 0.08
Pseudo R-squared	0.06		0.11		0.31

\*p<0.10, \*\*p<0.05, \*\*\*p<0.01

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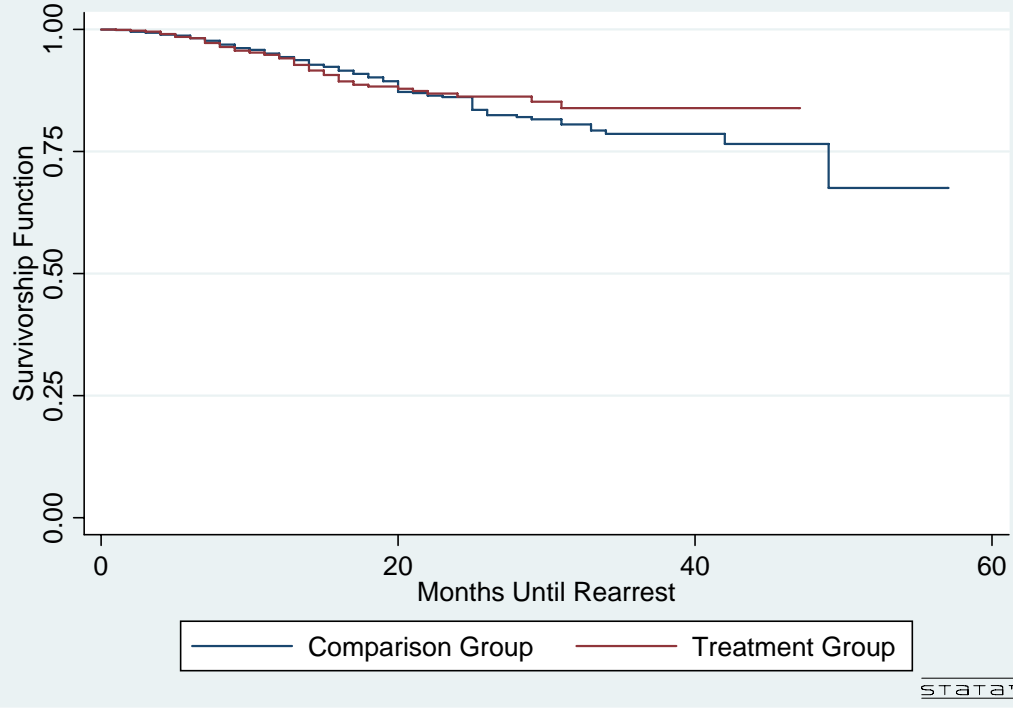
Table 6.3 Subgroup Analysis on Treated: Arrest Incidence (N=156)						
Independent Variable	Number of Rearrests					
	(1)		(2)		(3)	
	b	(se)	b	(se)	b	(se)
<b>Baseline Characteristics</b>						
Gender	0.60***	0.21	0.52***	0.21	0.55***	0.21
Race	0.90**	0.41	0.98**	0.41	0.78**	0.37
Age	-0.03**	0.01	-0.03**	0.01	-0.03**	0.01
Married	-0.11	0.32	-0.02	0.33	-0.04	0.31
Children	-0.18	0.26	-0.13	0.24	-0.22	0.23
Previous Substance Abuse Program	0.22	0.22	0.29	0.21	0.28	0.19
Religiosity Scale	-0.07	0.16	-0.11	0.15	-0.12	0.14
<b>Treatment Receipt Characteristics</b>						
Completed Program			-0.57**	0.27	-0.49**	0.27
Total Needs Unmet			-0.04	0.04	-0.02	0.04
Year of Program Entry			-0.15	0.15	-0.20	0.14
<b>Treatment Programs</b>						
Counseling on Addictions					-0.58	0.47
Counseling on Criminal Thinking					-0.16	0.24
Relationship Skills Training					0.45**	0.23
Computer Training					0.76	1.3
Spirituality Services					0.56**	0.27
Relapse Prevention Planning					-0.41	0.29
Pseudo R-squared	0.14		0.22		0.28	
<b>Number of Person Rearrests</b>						
Independent Variable	(1)		(2)		(3)	
	b	(se)	b	(se)	b	(se)
	<b>Baseline Characteristics</b>					
Gender	.010	0.77	.007	0.77	.007	0.77
Race	.015	0.58	.008	0.58	.008	0.58
Age	0	0.03	0	0.03	0	0.03
Married	-0.082**	0.03	-0.065**	0.03	-0.065**	0.03
Children	-0.006	0.53	-0.005	0.53	-0.005	0.53
Previous Substance Abuse Program	.002	0.31	.002	0.31	.002	0.31
Religiosity Scale	-0.006	1.3	-0.005	1.3	-0.005	0.15
<b>Treatment Receipt Characteristics</b>						
Completed Program			-0.008	0.99	-0.008	0.99
Total Needs Unmet			.001	0.33	.001	0.33
Year of Program Entry			.001	0.49	.001	0.49
<b>Treatment Programs</b>						
Counseling on Addictions					-0.11	0.77
Counseling on Criminal Thinking					0.58	0.72
Relationship Skills Training					-0.89	0.76
Computer Training					21.61	21.29
Spirituality Services					-16.57	-17.23
Relapse Prevention Planning					0.22	0.71
Pseudo R-squared	0.15		0.2		0.35	
<b>Number of Property Rearrests</b>						
Independent Variable	(1)		(2)		(3)	
	b	(se)	b	(se)	b	(se)
	<b>Baseline Characteristics</b>					
Gender	.066	.121	.005	.117	.020	.110
Race	.178	.187	.139	.161	.132	.153
Age	-0.008	.006	-0.007	.006	-0.009*	.006
Married	.165	.221	.228	.229	.206	.208
Children	-.223	.155	-.186	.135	-.186	.136
Previous Substance Abuse Program	.013	.114	.042	.099	.029	.093
Religiosity Scale	-0.016	.081	-.023	.071	-.029	.070
<b>Treatment Receipt Characteristics</b>						
Completed Program			-0.332**	.151	-0.260*	.153
Total Needs Unmet			-0.005	.020	-0.007	.020
Year of Program Entry			-0.035	.070	-0.050	.067
<b>Treatment Programs</b>						
Counseling on Addictions					.108	.125
Counseling on Criminal Thinking					-.155	.129
Relationship Skills Training					.017	.111
Computer Training					.616	.976
Spirituality Services					.123	.124
Relapse Prevention Planning					-.041	.130
Pseudo R-squared	0.03		0.06		0.08	
<b>Number of Society Rearrests</b>						
Independent Variable	(1)		(2)		(3)	
	b	(se)	b	(se)	b	(se)
	<b>Baseline Characteristics</b>					
Gender	.003	0.02	.005	0.02	.003	0.02
Race	.011*	0.007	.014**	0.007	.005	0.007
Age	0	0.03	0	0.03	0	0.03
Married	-0.073	0.03	-0.064	0.03	-0.028	0.03
Children	.005	0.02	.005	0.02	.003	0.02
Previous Substance Abuse Program	.004	0.05	.004	0.05	.002	0.05
Religiosity Scale	.006	0.25	.006	0.25	.003	0.25
<b>Treatment Receipt Characteristics</b>						
Completed Program			.002	0.03	-.001	0.03
Total Needs Unmet			-.002	0.04	-.001	0.04
Year of Program Entry			.001	0.001	0	0.001
<b>Treatment Programs</b>						
Counseling on Addictions					-0.037*	0.002
Counseling on Criminal Thinking					0.002	0.02
Relationship Skills Training					.008	0.04
Computer Training					.015	0.02
Spirituality Services					.005	0.09
Relapse Prevention Planning					.001	0.08
Pseudo R-squared	0.04		0.08		0.11	
<b>Number of Drug Rearrests</b>						
Independent Variable	(1)		(2)		(3)	
	b	(se)	b	(se)	b	(se)
	<b>Baseline Characteristics</b>					
Gender	.041	.087	.041	.087	.037	.078
Race	.328*	.198	.391*	.227	.207*	.140
Age	-0.003	.005	-0.003	.005	-0.002	.005
Married	.120	.170	.151	.190	.104	0.160
Children	-0.038	.101	-0.031	.098	-.053	0.082
Previous Substance Abuse Program	.123	.084	.138*	.083	.066	0.059
Religiosity Scale	.009	.059	-.005	.058	-.004	0.06
<b>Treatment Receipt Characteristics</b>						
Completed Program			-.124	.112	-.084	0.16
Total Needs Unmet			-.008	.018	-.004	0.02
Year of Program Entry			-.025	.063	-.024	0.07
<b>Treatment Programs</b>						
Counseling on Addictions					-.156	0.60
Counseling on Criminal Thinking					.015	0.40
Relationship Skills Training					.186**	0.04
Computer Training					-.157	0.93
Spirituality Services					.046	0.49
Relapse Prevention Planning					-.108	0.31
Pseudo R-squared	0.04		0.05		0.12	

\*p<0.10, \*\*p<0.05, \*\*\*p<0.01

	(1)	
	b	(se)
Gender	-0.10	0.09
Race	0.004	0.1
Age	-0.0002	0.005
Age of First Drug Use	0.002	0.01
Married	<b>0.22***</b>	0.09
Has Children	0.009	0.09
Pre-prison Family Support Scale	-0.03	0.06
Education Scale	-0.04	0.05
Previous Treatment Program	0.12	0.08
Religiosity Scale	-0.04	0.06
Treatment Readiness Scale	-0.03	0.10
Primary Offense- Drug	0.03	0.10
Treatment Needs Unmet**	<b>-0.04**</b>	0.02

\*p<0.10, \*\* p<0.05 , \*\*\* p<0.01

Figure 3



## 5.0 Conclusions and Considerations

The Ridge House program seeks to reduce recidivism and relapse, and enhance both housing stability and employment outcomes for men and women returning to the Reno community from state prison. Urban Institute (UI) researchers examined the extent to which the program reduced recidivism for participants compared to parolees who were accepted but did not attend the Ridge House program. Using official records data collected from the National Crime Information Center (NCIC) of the FBI, researchers assessed the impact of the program on likelihood of re-arrest post-release. This report concludes with a summary of key findings. Limitations of the analysis are discussed and findings are set within a broader context to aid interpretation.

### SUMMARY FINDINGS

Bi-variate analyses indicate that the Ridge House group had a statistically significant lower number of total re-arrests than the comparison group during the observation period: Ridge House participants averaged 1.39 new arrests as opposed to 1.89 for the comparison group ( $p < 0.01$ ). Further, in keeping with the extant research, clients who completed Ridge House were much less likely to experience a new arrest, with 23 percent of completers being re-arrested compared to 44 percent of those who dropped out of the program. This difference was statistically significant at  $p < 0.01$ . Ridge House program completers also had a statistically significant lower number of total re-arrests during the observation period, averaging one new arrest compared to 1.67 for the group that did not complete the program ( $p < 0.01$ ). Again, these findings are not surprising given the empirical evidence linking program completion and long-term success (see the discussion in Chapter 1 and Chapter 4).

Some of these findings hold under more rigorous multivariate models. However, the key hypotheses related to reductions in recidivism for the entire treatment group (using an intent-to treat model) were mostly unsubstantiated. Multivariate regression analyses indicate that program participation did not affect the incidence or prevalence of re-arrest, once baseline characteristics were controlled for, with the exception of the model examining the number of society arrests. Ridge House participants had statistically significant fewer arrests for society crimes than the comparison group. The results from the survival analyses found that program participants had more months on the street before re-arrest, but the significance was mostly driven by participants who had successfully completed Ridge House.

Similarly, the analyses of regression models using program completion as a variable found that program completers had a lower probability of re-arrest and that completion was associated with a 16 percent decrease in the probability of re-arrest. Program completion was also linked with lower incidence of certain types of crimes, specifically property and person crimes.

Lastly, the survival analysis indicates that program completion significantly delays arrest; participation only seems to shorten the onset of arrest. Subgroup analysis of treatment group characteristics found that marital status was the only statistically significant attribute tied to program success. This analysis did find a direct relationship between the numbers of service needs met and program completion: the more unmet needs, the lower the likelihood of program completion.



Taken in their entirety, these findings are disappointing. However, the findings do underscore the importance of program completion for reentry success. Consistent with the extant research, program completion is positively tied to reductions in re-arrests generally, as well as for specific types of crimes (property and person offenses). In the case of the Ridge House program, program completion also appears to significantly prolong the time to re-arrest (when comparing completers to non-completers). The suggested link between program completion and social supports (married individuals are more likely to complete) and between program completion and program responsiveness to identified needs offer clues about who may be best positioned to benefit from a residential program like Ridge House, and how to enhance client engagement, retention and completion.

Below we discuss the limitations of this evaluation, offer reasons for the discouraging findings, and then highlight lessons learned that are relevant for other researchers conducting single program reentry evaluations.

## **LIMITATIONS**

There are several important limitations that should be considered in interpreting these findings, particularly as they relate to the performance of the Ridge House program.

### **Outcomes Limited to Recidivism**

As discussed in earlier sections of this report, the study's original design sought to answer a variety of questions about the effectiveness of the Ridge House program and planned to control for motivation and readiness for treatment. Project researchers had also hoped to explore the dimension of spirituality as a mediating factor; baseline data were collected for over a dozen measures related to religiosity and spirituality. In the end, only one outcome – recidivism – could be examined, given the project's time and resource constraints, and the limited survey data collection that would support the examination of other outcomes such as the program's impact on employment, housing stability, drug use, and self-efficacy. Similarly, we could not analyze the myriad self-report measures of baseline parolee characteristics and other descriptive elements such as intensity of prison programming and treatment, motivation and readiness because we ended up having to use an "expanded comparison" group of individuals who did not participate in the baseline survey to obtain a comparison group of sufficient size.

Limiting the assessment of the relative success of a multi-faceted intervention like the Ridge House program to just one outcome dimension is less than ideal. The sub-group analysis of treatment outcomes suggests the program's ability to provide a range of need services is high, and that the number of needs met positively affects program completion and by extension, recidivism. Other key facets of the program experience, including the program's ability to affect other key outcomes, remain unexplored. Of particular interest are clients' levels of satisfaction and measures of their experiences in the Ridge House program; how these dimensions affect program completion, recidivism and other outcomes is unknown. Likewise, motivation is not controlled for in any of the current analyses because we were unable to utilize the self-report baseline data for both the original treatment and comparison groups. As a result, it is unclear how personal motivation may factor into program success (i.e., completion). For example, were Ridge House program completers more motivated for treatment or more ready for change than non-completers? The results suggest that, indeed, program completers had different characteristics that led to the statistically significant

differences between program participants who dropped out or were terminated, and those who successfully completed the program. Motivation on the part of the clients who successfully completed the program could be the factor that led to the significant differences found. Future evaluations of reentry programs should prioritize measuring motivation as a key factor in any type of outcome or impact evaluation.

### **Recidivism Analysis Limited to Arrest Records**

It is important to note that the recidivism analysis relies solely on arrest records drawn from NCIC data. There are critical considerations associated with this measure of criminal activity, generally, and with NCIC data specifically. Foremost, individuals are not always arrested for crimes committed. The absence of self-reported criminal activity measures ensures that the true degree of recidivism is under-estimated in this analysis.

Further, while NCIC “rap sheets” provide reliable arrest data, conviction and custody data vary according to the jurisdiction reporting. As such, there can be a great deal of variation in the information record in individual rap sheets. Because conviction data are not routinely and consistently captured in NCIC data, researchers limited analysis to arrest data only.

The lack of conviction and re-incarceration data is especially problematic for the survival analysis, which presumes that individuals are “on the street” and thus that periods free of re-arrests are attributable to changes in individual offending and not a lack of opportunity to commit new offenses. Without defined “in” and “out” dates for potential subsequent periods of incarceration, the analysis cannot control for opportunity. It is possible, for example, that in a given time period, a respondent does not commit a crime resulting in arrest because the individual is in prison, and thus unable to commit crimes. Project researchers did make provisions to collect conviction and incarceration data from the relevant state agencies; however, resource and time constraints at the state-level in Nevada precluded additional data collection and analysis. In short, Nevada agencies were not able to easily provide these data without any substantial research support from the grant funds; further, some state agencies were unwilling to provide comparable records data for the expanded comparison group, thus greatly limiting the utility of the data for analysis. After examining a sample of redacted data from state agency files, UI researchers concluded that the resource support needed to obtain these data would not yield a full set of usable data for the evaluation.

Likewise, the study’s data collection strategy included collection of detailed, self-report data from treatment and comparison group cases at 12-months post-release that would have supported more rigorous recidivism analyses; however, the implementation challenges and resource constraints noted in Chapter 3 made this data collection infeasible.

### **Small Sample Size**

The study’s small sample size, particularly for the treatment group analysis (N=156; subgroup analysis Ns of 104 and 52) generally precludes the generalizability of these findings. These small numbers may also contribute to the mix of statistically significant findings and those that approach but do not reach statistical significance at conventional levels. Nonetheless, the consistency of the results across model specifications lend support to the findings that Ridge House program participation and completion are linked to lower rates of recidivism (as measured by re-arrest).

## Identification Considerations

The potential for unobserved bias in the formulation of the sample groups, particularly the expanded comparison group, is a concern. Although we carefully matched the three sample groups, the potential remains for some unobserved factor to introduce bias. All available models, however, indicate a well-balanced sample.

## CONTEXTUAL CONSIDERATIONS

There are a number of factors that may explain the evaluation's disappointing impact findings. For example, the Ridge House program, like the evaluation, experienced a host of challenges and changes during the data collection period. These likely influenced program operations and its ability to achieve key outcomes, as well as affected client retention and satisfaction to some degree. Here, we briefly reflect on the breath and impact of these changes.

Perhaps most notable were changes in program leadership. The program's long standing Executive Director retired shortly before the evaluation commenced and the program's Clinical Director left midway through the study period. Although the individual who stepped in as Executive Director was a spiritual leader, early reforms took the program and organization in a decidedly formal, clinical direction. For example, Ridge House staff used a formal clinical assessment tool to conduct interviews with program applicants while they were still in prison.

The application process became more structured, and record-keeping also became more routine: applicants, program admissions and declinations, and program discharges were tracked and analyzed on a regular basis.<sup>36</sup> These changes in the application process and initial interview (while in prison) could have led to Ridge House accepting only the "most suitable" clients for the program. These changes certainly reduced the number of clients who became program clients (and simultaneously research sample clients), but oddly, those changes related to selecting more suitable clients did not necessarily signify that they were more likely to succeed. We believe that a key factor in the findings of the few differences between treatment and comparison clients is that the program actually selected clients who had a serious or somewhat serious substance abuse problem (and admitted it), and that these clients, because they were not provided residential substance abuse treatment or intensive treatment services, but only services synonymous with a 12-step program, were more likely to fail in the community unless they were highly motivated to change. The findings also suggest that those clients successfully completing Ridge House are the individuals who were highly motivated to change.

Another change that occurred when the evaluation began was related to parole supervision. When UI researchers made their first visit to Ridge House, the Nevada Division of Parole and Probation had just decided to allow multiple officers to supervise Ridge House clients; prior to this time, one officer supervised all Ridge House clients ensuring a continuity that benefited both the program and its clients. The practice of having one centralized caseload of program clients has been advanced as a best practice in reentry research (Morley, et al. 1998). Not only did this change likely influence program success, research staff had to coordinate with multiple parole officers to track respondents for research activities including initial contact for the baseline interview as well as the

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<sup>36</sup> The evaluation's regular need for accurate and up-to-date case flow information likely facilitated this emphasis to some degree.

12-month follow interview. The time and effort spent trying to coordinate and communicate with parole officers and program staff contributed to the large outlay of resources for follow-up interviews (a cost not originally included in the project budget because of the coordinated program-parole partnership that had initially been in place).

It is also important to note that during the data collection period the state of Nevada experienced severe budget cuts. These affected government operations as well as small community-based organizations like Ridge House. At least three community-based treatment providers like Ridge House closed their doors during the evaluation period. At one point midway through the data collection period, the Ridge House program itself was forced to cut all but essential staff within the organization's main office (six positions were cut, and three were retained including the Executive Director, Clinical Director, and the intake coordinator). Operationally, clients were placed into three houses to conserve resources. This change likely disrupted the fluidity of the recovery processes for some of the clients because daily routines were interrupted as clients moved into different houses and had to form new relationships. These changes in living arrangements may have made it more difficult to get to jobs or to community-based treatment providers (as the houses were in different geographic locations across the city).

At the same time, the Ridge House program experienced a number of internal changes. While not all of these changes would necessarily explain the evaluation findings, they do illustrate the changing nature of the program. For example, the composition of the organization's Board of Directors became more diverse when a number of community members with various professional areas of expertise were added to its ranks. As discussed earlier, the Board previously consisted primarily of individuals affiliated with the KAIROS ministry. Therefore, while many ministry members were likely also professionals in the community, the Ridge House Board of Directors in more recent years sought to involve individuals from a broader cross-section of the community, with an emphasis on their professional expertise as opposed to their spiritual orientation or faith affiliation.

Related to the program's shifting spiritual focus, it is interesting to note that preliminary analyses of baseline data for the treatment group found that individuals most likely to report having had a negative spiritual change in prison were more likely to drop out of Ridge House than clients who had a strong consistent spiritual or religious leaning while in prison (Roman et al. 2006). It is unclear when during their incarceration program non-completers had this negative spiritual experience – before or after applying to the Ridge House program – and whether they were initially attracted to Ridge House because they wanted a strong spiritual or religious program. It could be that these clients were disillusioned when they got to Ridge House or became disillusioned with the program because it didn't live up to expectations and thus, further reinforced the client's negative spiritual experience. UI researchers planned to explore this further but data and sample size limitations precluded additional analysis.

## **LESSONS LEARNED FOR REENTRY EVALUATION RESEARCH**

There are a number of lessons the research team learned from conducting the evaluation of the Ridge House program. Below, we highlight these issues and provide brief suggestions for researchers (and funders) to keep in mind as they develop and review evaluation plans and proposals.

- Not surprisingly, we recommend that researchers conduct a thorough evaluability assessment before the evaluation plan is finalized. We recognize that conducting an evaluability assessment is not always possible, but it is of utmost importance. It is critical for evaluators to have a clear and accurate understanding of how clients flow into a program and the obstacles that may slow program flow. If possible, ask program leaders for permission to examine program data to gain a solid understanding not only of the characteristics of the clients who are admitted to or selected for the program, but also the characteristics of those individuals who are denied. It is also important to talk to corrections and community corrections agencies to obtain an understanding of inmate release processes and supervision processes, as these dynamics also impact program admission rates.
- In addition to understanding how clients *enter* the program, it is equally important to examine when, how and why clients discharge from the program, both those who do so successfully (graduate) and those who do not (drop out). This is critical for estimating program flow and sample size. Doing so is no guarantee that sample recruitment will proceed smoothly: UI researchers worked with Ridge House program and DPP staff during the initial months of the evaluation to verify the estimates provided in the NIJ-sponsored evaluability study and spent time on-site reviewing records. Despite these efforts, case flow was still an issue. This and other experiences conducting evaluations of crime prevention and intervention programs seem to suggest that program leaders are more forthright about their entry processes than they are about client dropout and terminations. Nevertheless, talking to program leaders about reasons for and rates of termination and drop out is essential before evaluation plans are finalized. In turn, researchers must constantly monitor case flow throughout the sample recruitment period to detect any drop off and then, if needed, implement mid-course corrections. For the Ridge House evaluation, UI researchers produced monthly reports which tracked program applications, acceptances, rejections and the reason for rejection, and admissions, as well as the projected release dates and actual release dates of all Ridge House program applicants. These reports informed several of the action steps taken to boost sample recruitment and retention including the implementation of pre-release Consent to Contact procedures, additional incentives and the expansion of sample recruitment to Las Vegas, Nevada.
- Although an evaluability assessment of Ridge House was done before NIJ issued the evaluation solicitation, it was done by a different organization than UI. At the time, and presumably today, NIJ protocols generally prohibit the organization that performed the evaluability assessment from bidding on the evaluation because that would give the evaluability assessment organization an unfair advantage in the proposal process. Practically, however, this policy requires the bidding organization (for the full evaluation) to rely mostly on the short document written by another agency to inform the evaluation plan; this is not an ideal configuration. As such, it is critical that the bidding organization talk to program and government agency staff over the phone, or in person, if time and resources permit, to verify information (an approach UI took during development of the Ridge House proposal). Given the policy barring organizations bidding on the evaluation to be the same organization that conducted the evaluability assessment, it is advisable to develop evaluation proposals that include a first and separate task of visiting the program and revising the research design before data collection commences. This suggestion does not overcome later problems with evaluation

budgets when true data collection costs end up to be higher than the original (and funded) budget.

- Evaluators need to anticipate and plan for turnover of high-level agency and organization administrators. Negotiating data-sharing agreements with key data providing agencies can ensure access to critical data during a change in leadership. Keeping community partners informed of research activities and the potential benefits for their agencies is also critical to maintaining support for the study.
- Programs that use live data systems to verify eligibility and monitor program flow typically also have the capacity to facilitate evaluation and evaluation planning. Many jurisdictions around the country are moving toward integrated data databases that cross multiple systems (e.g., mental health, corrections, homeless services) to facilitate information exchange and data-driven decision-making. These data systems make it easier to assess client needs and direct clients to resources, resulting in a more efficient and potentially cost-effective system of service provision for high-risk clients. This type of live data system facilitates evaluation if client “eligibility” characteristics can be readily assessed through analysis of the data. For instance, a city jail that cross-matches data to capture and count clients with a current diagnosis of mental illness and chronic homelessness could make information about program flow available to a program or evaluation that targets chronically homeless jail releases with mental illness. Programs that have eligibility criteria that are not assessed or are difficult to assess in prison or jail make it that much more difficult for researchers to estimate possible study samples (and more specifically, comparison group size).
- Researchers should always anticipate slower-than-expected enrollment and examine how it will impact resources. Continually seek to leverage and expand evaluation funding. Adding months to enrollment timeline has significant costs. As noted earlier, UI researchers closely tracked case flow and generated monthly reports to inform recruitment efforts and data collection in the field. In doing so, the study’s researchers were able not only to anticipate and address case flow lags, but also monitor the cost-impact to the evaluation budget. These activities allowed project researchers to inform NIJ of potential issues before they reached a crisis point and to present several viable options for sustaining the evaluation at varying levels of effort and return.
- Keep options open for expanding how clients are deemed eligible (i.e., pathway to eligibility, not client characteristics) and enrolled in the program. Low case flow and changes in program procedures may necessitate revisiting research eligibility criteria. In the case of Ridge House, we expanded eligibility for the comparison group to inmates who were paroling to Las Vegas, Nevada, a city 450 miles from Reno. Mid-course changes such as this are not always feasible and often place a strain on the original budget. The unsavory alternative, however, is a smaller sample or a longer enrollment period.
- When relying on arrest data from NCIC, anticipate that a rap sheet will not be found for all research subjects. In our study, we lost 26 percent of subjects for the final impact evaluation because NCIC data were not available. The possible loss of subjects because of missing official record data should be factored into an evaluation timeline and power calculations.

## **CONCLUSION**

In summary, findings from the Ridge House impact analysis are disappointing. Program leaders and community advocates in Nevada had hoped that the innovative nature of the residential program would yield significant successes. While it is true that clients who completed the program did significantly better than clients in the comparison group with respect to post-release re-arrest, a high level of motivation to succeed may account for these findings.

The extent to which current findings would differ with a more robust sample or with the additional data sources noted above is unclear, but is a noteworthy consideration for future research efforts. As such, the reader should be cautious in reaching any definitive conclusions about the success of the Ridge House program or in making any generalizations about spiritually-based residential programs, like Ridge House, based on these data.

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## **Appendix A: Ridge House Class Schedule and Calendar**

## May 2004 Schedule of Groups/Classes

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			Nutrition inspections	Nutrition inspections (cont'd.)		1
2	3 <b>Dual Disorder Group</b> @ Cambridge	4 <b>House meeting</b> @ all locations (6:30-8:00pm)	5 <b>Dual Disorder Group</b> @ Vine	6	7 Recreation night for all houses	8
9	10 <b>Career Enhancement &amp; Conflict Resolution</b> @ Cambridge	11 <b>House meeting</b> @ all locations (6:30-8:00pm)	12 <b>Dual Disorder Group</b> @ Vine	13 <b>Career Enhancement &amp; Conflict Resolution</b> @ Cambridge <b>HIV/TB/STD Testing</b> @ Keystone	14 Recreation night for all houses	15
16	17 <b>Dual Disorder Group</b> @ Cambridge	18 <b>House meeting</b> @ all locations (6:30-8:00pm)	19 <b>Dual Disorder Group</b> @ Vine	20 <b>Parenting</b> @ Cambridge	21 Recreation night for all houses	22
23	24 <b>Dual Disorder Group</b> @ Cambridge	25 <b>House meeting</b> @ all locations (6:30-8:00pm)	26 <b>Dual Disorder Group</b> @ Vine	27 <b>Parenting</b> @ Cambridge	28 Recreation night for all houses	29
30	31 Memorial Day holiday					

<b>NAME &amp; FACILITATOR OF CLASS</b>	<b>DESCRIPTION OF CLASS</b>	<b>LOCATION &amp; SCHEDULE</b> (All classes 6:30-8:00pm unless otherwise noted)
<p><b>Women's Issues</b> (Leigh Church)</p>	<ul style="list-style-type: none"> <li>▪ Self-esteem building</li> <li>▪ Unhealthy/healthy relationships</li> <li>▪ Tools to change self-defeating behavior</li> <li>▪ Awareness &amp; expression of feelings</li> </ul>	<p>Women's only – Monday evenings (Six-week cycle per quarter)</p>
<p><b>Parenting</b> (Jackie Reilly)</p>	<ul style="list-style-type: none"> <li>▪ Learning to parent yourself</li> <li>▪ Setting boundaries</li> <li>▪ Building strong families</li> <li>▪ Parenting styles</li> <li>▪ Communication skills</li> <li>▪ Impact of incarceration on children &amp; others</li> <li>▪ Stages of child guidance</li> <li>▪ Appropriate Expectations</li> </ul>	<p>Women's only – Monday evenings (Six-week cycle per quarter)</p>
<p><b>Career Enhancement/Conflict Resolution</b> (John McCann)</p>	<ul style="list-style-type: none"> <li>▪ Critical thinking</li> <li>▪ Goal setting</li> <li>▪ Communication</li> <li>▪ Resume writing</li> <li>▪ Interviewing skills</li> <li>▪ Applications</li> <li>▪ Conflict resolution</li> <li>▪ Self-esteem building</li> </ul>	<p>Men's II – Monday/Thursday evenings (Six-week cycle) Women's – Thursday evenings (Four-week cycle)</p>
<p><b>Computer Literacy</b> (Barbara Robinson)</p>	<ul style="list-style-type: none"> <li>▪ Intro to computers</li> <li>▪ Assess needs</li> <li>▪ Navigating, using the mouse</li> <li>▪ Windows 98</li> <li>▪ Internet</li> <li>▪ MS Word, Excel, Access</li> <li>▪ Corel Word Perfect 7</li> <li>▪ Resume writing</li> <li>▪ Greetings 2000</li> <li>▪ Graphics application</li> <li>▪ Correspondence</li> </ul>	<p>Men's II – Monday evening Women's – Wednesday evening</p>
<p><b>House Meeting</b> (House Counselors)</p>	<ul style="list-style-type: none"> <li>▪ House business</li> <li>▪ House issues</li> </ul>	<p>All locations – Tuesday evening (mandatory)</p>



<p><b>Recreation Night</b> (House Managers)</p>	<ul style="list-style-type: none"> <li>▪ Learn inexpensive ways to have fun w/o being under the influence of a mind-altering substance</li> </ul>	<p>Men's I &amp; II – Wednesday evening Women's – Friday evening</p>
<p><b>Money Management</b> (TBA)</p>	<ul style="list-style-type: none"> <li>▪ Budgeting your money</li> <li>▪ Opening a savings account</li> </ul>	<p>UNSPECIFIED</p>
<p><b>HIV/AIDS/TB/STDs Education</b> (TBA)</p>	<ul style="list-style-type: none"> <li>▪ Education</li> <li>▪ Prevention</li> <li>▪ Testing</li> </ul>	<p>UNSPECIFIED</p>
<p><b>Nutrition</b> (TBA)</p>	<ul style="list-style-type: none"> <li>▪ Health &amp; hygiene</li> <li>▪ Menu planning</li> <li>▪ Shopping on a low budget</li> <li>▪ Food pyramid</li> </ul>	<p>UNSPECIFIED</p>
<p><b>Skills for Successful Living</b> (Tom Lavin, MFT/LADC)</p>	<ul style="list-style-type: none"> <li>▪ Individual/family counseling</li> <li>▪ Mental health evaluations</li> <li>▪ Dual Disorder group</li> </ul>	<p>UNSPECIFIED</p>

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## **Appendix B: Ridge House Staff Survey**



1. Today's Date: \_\_\_\_\_

2. Year of Birth: \_\_\_\_\_

3. Gender:       Male                       Female

4. Position:       House               House       Outpatient       Other  
                                 Manager                      Counselor

5. When did you start your current position (year): \_\_\_\_\_

6. Altogether, how many years have you worked in positions like your current position: \_\_\_\_\_

7. What is your religious preference: Protestant, Roman Catholic, Jewish, or some other religion?

- Protestant [SPECIFY] \_\_\_\_\_
- Roman Catholic
- Jewish
- Mormon (Church of Jesus Christ of Latter Day Saints)
- Orthodox Church (Greek, Russian, etc.)
- Muslim/Islamic
- Other Religion [SPECIFY] \_\_\_\_\_
- No Preference
- Don't Know/Not Sure

8. Currently, how important is religion or spirituality in your life?

- Very important
- Somewhat important
- Not that important
- Not at all important

9. Do you currently belong to a church, synagogue, mosque, or other religious or spiritual community organization?

- Yes
- No

10. Would you say you have ever had a conversion experience or a "spiritual awakening"?

- Yes
- No

11. How often do you ...	Not at All	Daily Wee	kly	Monthly	Rarely
a. Read religious writing, sacred text, or other religious literature? .....	N	D	W	M	R
b. Pray? .....	N	D	W	M	R
c. Meditate?.....	N	D	W	M	R

**12. On a scale from 1 to 7, where “1” is “very conservative” and “7” is “very liberal,” where would you place yourself in terms of your religious views?**

Very Conservative Very Liberal  
 1.....2.....3.....4.....5.....6.....7

**13. Using the same scale, how would you define your political views, where “1” is “very conservative” and “7” is “very liberal.”**

Very Conservative Very Liberal  
 1.....2.....3.....4.....5.....6.....7

**14. Please rate how important the following activities are at the Ridge House.**

	Very Important	Somewhat Important	Not Too Important	Not Important	Not Allowed/ Policy Prohibits
a. Provide clients with religious or spiritual materials .....	VI	SI	NT	NI	NA
b. Meet clients’ material needs .....	VI	SI	NT	NI	NA
c. Pray with clients.....	VI	SI	NT	NI	NA
d. Direct clients to a church, mosque, synagogue, or spiritual group .....	VI	SI	NT	NI	NA
e. Encourage religious or spiritual development of clients .....	VI	SI	NT	NI	NA
f. Pray with groups of clients (other than meals) .....	VI	SI	NT	NI	NA
g. Build supportive relationships with clients.	VI	SI	NT	NI	NA
h. Use religious beliefs or principles to instruct or encourage clients .....	VI	SI	NT	NI	NA
i. Demonstrate God’s love to clients.....	VI	SI	NT	NI	NA
j. Help clients build or repair support networks with family and friends.....	VI	SI	NT	NI	NA
k. Encourage clients to have a religious conversion.....	VI	SI	NT	NI	NA



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## **Appendix C: Ridge House Evaluation Baseline Survey Sample**

## **RIDGE HOUSE EVALUATION BASELINE SURVEY SAMPLE**

The survey sample consisted of parolees released from Nevada state correctional facilities between September 2004 and February 2007. A total of 384 (276T, 108C) individuals consented to the research and completed baseline survey interviews. The treatment group consisted of 276 individuals who applied to and entered the Ridge House program; the 108 individuals who formed the surveyed comparison group had applied to and were accepted into the Ridge House program but did not enter the Ridge House program at release either due to lack of bed space, or because they chose to enter a different residential facility or to parole outside of Reno.

Table 1 provides descriptive statistics for the demographic characteristics of the survey sample:

### **Age and Gender**

At baseline, the average age of the 384 respondents in the sample was 36 years old; ages ranged from 19 to 63 years. Overall, the sample was predominately male (71 percent) although the comparison group contained a larger proportion of men (77 percent) than the treatment group (i.e., roughly 78 percent of women in the sample were in the treatment group). This gender discrepancy likely reflects the structure and capacity of Ridge House and the larger Nevada criminal justice system. Roughly 63 percent of the sample was Caucasian, while 19 percent of the sample identified as Black and 7 percent as Latino; Native Americans accounted for roughly 4 percent of the sample and Asians composed just 2 percent.

### **Marital Status**

The comparison group (18 percent) was slightly more likely to report being married or living as married at baseline than the treatment group (14 percent). Overall, however, nearly the same percentage of participants in the treatment (47 percent) and control group (49 percent) were never married. The treatment group contained a substantially higher percentage of divorcees (29 percent) than the comparison group (21 percent).

### **Education**

Consistent with the extant reentry research, the Ridge House sample had relatively low levels of formal education. As Table 1 indicates, approximately half the sample (51 percent) reported an 11<sup>th</sup> grade education or less, while 20 percent reported completing high school. Sixteen percent reported some college. Just roughly four percent reported earning a college degree. The comparison group was more educated than the treatment group. A little over one-third of the comparison group reported at least an 11<sup>th</sup> grade education, while one-quarter graduated high school and 11 percent completed their Graduate Equivalency Diploma<sup>1</sup> (GED), compared to roughly 29 percent (11<sup>th</sup> grade

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<sup>1</sup> The acronym GED refers to both the General Education Development (GED) test, which is taken by individuals who did not complete high school to certify their high-school level academic proficiency in five subjects, and the Graduate Equivalence Diploma, which is awarded upon successful completion of the General Education Development exam.

education), 11 percent (graduated high school) and 6 percent (GED) of the treatment group, respectively.

### **Employment**

Half the sample (50.7 percent, or 194 of the 382 that answered the question) reported being employed full-time in the year before this most recent incarceration (i.e., the custody stay preceding their entry to Ridge House or return to the community), while 30 percent were unemployed. The treatment group was more likely to report being unemployed (74 percent) in the year prior to incarceration than the comparison group (25 percent). Although both groups reported steady full time employment in the year prior to incarceration, the comparison group was slightly more likely to report stable employment. Roughly 49 percent of the treatment group held a full-time job, while 55 percent of the comparison group held a full-time job. A similar percentage of both groups held part-time jobs prior to incarceration (6 percent for treatment and comparison).

### **Substance Abuse**

The vast majority of respondents in the treatment and comparison groups reported having used alcohol and illegal drugs in the past. For respondents in both groups, the minimum age for first drug use was 14 years old and the minimum age for any hard drug use was 18 years old. 20 percent of the treatment group and 14 percent of the comparison reported that their most recent offense was drug-related. Just over half of both groups (57 percent of the treatment group and 55 percent of the comparison group) reported having been in a treatment program for substance abuse before applying to Ridge House. In addition, 12 percent of the treatment group reported using drugs in prison, compared to 8.5 percent of the comparison group.

### **Program Application**

Nearly all applicants were accepted into the Ridge House program while only a fraction ultimately participated (treatment group only) due to bed and space limitations. Though men outnumbered women by a factor of 11 in the Nevada prison system in 2005, roughly a third of the beds in Ridge House are reserved for women. It was, therefore, expected that women would account for a higher proportion of the treatment group than the comparison group.

### **Criminal Involvement**

The distributions for the conviction type most recently received by members of the treatment and comparison group were roughly the same. Among treatment group subjects, 16 percent, 13 percent and 9 percent, and among comparison group subjects, 14 percent, 14 percent, and 11 percent, were most recently convicted for drug possession, burglary, and theft, respectively.

### **Spirituality**

The religious preferences of the treatment and comparison groups were similar at baseline. Approximately 22 percent of the treatment group and 19 percent of the comparison group were Protestant. Roman Catholics accounted for 13 percent and 15



percent of the treatment and comparison groups respectively. Roughly 25 percent of the treatment group and 31 percent of the comparison group self-identified as non-denominational Christian. Over 21 percent of the treatment group and 18 percent of the control group indicated no religious preference. An additional 4 percent of treatment participants and 6 percent of comparison subjects self-identified as atheist or agnostic.

Furthermore, roughly the same proportion (31 percent) of the treatment and comparison group strongly agreed that prison gave them a greater sense of the existence of a higher power and about 35 percent of the treatment group and 28 percent of the comparison group also agreed that their experience in prison provided them with a greater sense of a higher power. Among the treatment group, 26 percent disagreed and 8 percent strongly disagreed. Approximately 22 percent and 18 percent of the comparison group disagreed and strongly disagreed, respectively.

Moreover, 34 percent of the treatment group and 28 percent of the comparison group agreed that belief in a higher power can change an individual's life. Roughly 66 percent of the treatment group and 69 percent of the comparison group strongly agreed with that statement. No one in the treatment group, and only 3 percent of the comparison group disagreed.<sup>2</sup>

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<sup>2</sup> For this question, 35 percent of cases from the treatment group and 41 percent of cases from the comparison group were missing.

**Table 1: Descriptive Statistics for Baseline Survey Sample**

	<u>Treatment (Pct.)</u>	<u>Comparison (Pct.)</u>
<b>Age</b>		
18 to 24	12.7	13.9
25 to 29	20.7	18.5
30 to 34	15.2	13.9
35 to 39	16.3	18.5
40 to 44	14.9	7.4
45 to 49	9.8	15.7
50+	10.5	12.0
<b>Gender</b>		
Female	31.5	23.1
Male	68.5	76.9
<b>Race</b>		
Asian	1.1	2.8
African American	19.6	18.5
Chicano/Latino	7.2	5.6
Indian/Native American	3.6	4.6
White	62.7	62.0
Bi-Racial	4.7	5.6
Other	0.7	0.0
<b>Marital Status</b>		
Single/Never Married	46.9	49.1
Married	13.8	17.9
Divorced	28.7	20.8
Other	10.5	12.3
<b>Education</b>		
6th Grade or Less	0.7	0.9
7th to 9th Grade	13.4	6.5
10th to 11th Grade	40.9	33.3
High School Graduate	15.9	25.0
G.E.D.	8.3	11.1
Some College	15.9	18.5
College Graduate	4.0	3.7
Post Graduate	0.4	0.0
Missing/Don't Know	0.4	0.9
<b>Employment</b>		
Unemployed	27.1	30.9
Irregularly	11.2	14.2
Part-Time	6.5	5.8
Full-Time	55.1	49.1

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## **Appendix D: NIBRS Offense Structure**

## NIBRS Crime Classifications (plus Traffic Violations)

MAIN CATEGORY	SUB-CATEGORY	OFFENSE TYPE	CODE	
<b>Person</b>	Assault Offenses	Aggravated Assault	13A	
		Simple Assault	13B	
		Intimidation	13C	
	Homicide Offenses	Murder & Non-Negligent Manslaughter	09A	
		Negligent Manslaughter	09B	
	Kidnapping/Abduction		100	
	Sex Offenses, Forcible	Forcible Rape	11A	
		Forcible Sodomy	11B	
		Sexual Assault with an Object	11C	
		Forcible Fondling	11D	
	Sex Offenses, Nonforcible	Incest	36A	
		Statutory Rape	36B	
	<b>Society</b>	<b>Drug/Narcotic Offenses</b>	<b>Drug/Narcotic Violations</b>	<b>35A</b>
		<b>Drug Equipment Violations</b>	<b>35B</b>	
Gambling Offenses		Betting/Wagering	39A	
		Operating/Promoting/Assisting Gambling	39B	
		Gambling Equipment Violations	39C	
		Sports Tampering	39D	
		Prostitution Offenses	Prostitution	40A
		Assisting/Promoting Prostitution	40B	
Pornography/Obscene Material			370	
Peeping Tom			90H	
Weapons Law Violations			520	
Curfew/Loitering/Vagrancy			90B	
Disorderly Conduct			90C	
Driving Under the Influence			90D	
Drunkenness			90E	
Family Offenses, Non-violent			90F	
Liquor Law Violations			90G	
Trespassing			90J	
<b>Property</b>		Arson		200
		Bad Checks		90A
	Bribery		510	
	Burglary/Breaking and Entering		220	
	Counterfeiting/Forgery		250	
	Destruction/Damage/Vandalism of Property		290	
	Embezzlement		270	
	Extortion/Blackmail		210	
	Fraud Offenses	False Pretenses/Swindle/Confidence Game	26A	
		Credit Card/ATM Fraud	26B	
		Impersonation	26C	
		Welfare Fraud	26D	
		Wire Fraud	26E	
		Larceny/Theft Offenses	Pocket Picking	23A
			Purse Snatching	23B
			Shoplifting	23C
	Theft from Building		23D	
	Theft from Coin-Operated Machines		23E	
	Theft from Motor Vehicle		23F	
	Theft of Motor Vehicle Parts/Accessories		23G	
	All Other Larceny		23H	
Motor Vehicle Theft		240		
Robbery		120		
Stolen Property Offenses		280		
<b>Traffic</b>	Traffic Violations (except DUI/DWI, hit & run, vehicular homicide per NIBRS guidelines)		TRF	
<b>Other</b>	All Other Offenses (includes conspiracy, solicitation, facilitation, false statements/reports, eavesdropping)		90Z	
<b>Not A Crime</b>	Justifiable Homicide		09C	
	Runaway		90I	
	All Other Non-Offenses		NOT	