

The author(s) shown below used Federal funds provided by the U.S. Department of Justice and prepared the following final report:

Document Title: Barrett Juvenile Correctional Center: Is it Effective? A Comparison of Youth Released From a Residential Substance Abuse Treatment Center to Youth at a Traditional Juvenile Correctional Center, Final Report

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Document No.: 196668

Date Received: October 03, 2002

Award Number: 99-RT-VX-K024

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FINAL REPORT

**Barrett Juvenile Correctional Center: Is it Effective? A Comparison of
Youth Released from a Residential Substance Abuse Treatment Center to
Youth at a Traditional Juvenile Correctional Center**

1999-RT-VX-K024

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August 2002

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National Criminal Justice Reference Service (NCJRS)
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Date: *8/23/02*

PR 7/9/02

revised

ACKNOWLEDGEMENTS

This report is the product of the cooperation of a large number of people whose participation in the research process, and generosity of their time is greatly appreciated. I would like to thank these persons for their willingness to work in the preparation of this report. Particularly, to Sharon Havens and Don Driscoll for their kindness and willingness to examine the program at Barrett; to all of the Barrett staff for allowing me to observe the treatment process; and to Tim Jost and his staff at the Department of Juvenile Justice.

I would like to express my gratitude to Amy Stichman for agreeing to conduct the CPAI, Patricia Reyes, Robyn Diehl, and Terri Giordano for their diligence in collecting the data. Also to Tammy Hynson and Sharon Dawson for keeping me straight on the fiscal end of things.

Without the efforts of all of you this endeavor would not have been so smooth. Thank you.

And finally, to the reviewers of an earlier draft, thank you for your feedback.

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EXECUTIVE SUMMARY

The Commonwealth of Virginia currently operates seven institutions. One facility is vastly different than the others in that it offers a substance use treatment program to all admitted youth. Barrett Juvenile Correctional Center began operating as a substance use treatment facility in 1993. From 1993 to 1997 the state provided counselors to implement the program, however, since 1997 a private treatment provider, the Gateway Foundation, has been contracted to administer treatment services.

The program offered at Barrett Juvenile Correctional Center is highly structured. It utilizes a therapeutic community approach to try and instill change into the offenders by having the youth be accountable for not only their behavior but the behavior of their peers as well. The treatment provided at the center is grounded in behavioral and social learning concepts and includes anger management, life skills development, substance education, relapse prevention, behavioral management issues, and individual and group counseling. Overall, the approach emphasized at Barrett seeks to help the youth recognize and learn from his negative attitudes and behaviors, rather than focusing only on the mere custody and care of the youth.

In general, the remaining institutions operated by the Commonwealth of Virginia seek to achieve public safety while meeting the disciplinary, medical, recreational, and treatment needs of the youth. The facilities do offer treatment in the areas of substance abuse, sex offender, individual and group therapy, skills counseling, and educational and vocational training to the youth. However, services are provided on an "as needed" basis. That is, not all youth receive treatment and the intensity, duration, and quantity varies by offenders. Additionally, the traditional institutions have implemented a quasi-military program (LEADER) that is designed to assist with behavioral change in the youth.

Due to the unique nature of Barrett Juvenile Correctional Center it is important to assess the impact, if any, it has on the outcome of youth released from the program. Therefore, the purpose of this research is to evaluate the impact of the program on recidivism. Specifically, this study has the following objectives:

- to assess the current state of the treatment being offered,
- to select an adequate comparison group, and
- to evaluate the effectiveness of treatment offered at Barrett Juvenile Correctional Center by examining the outcome of youth admitted to the Center compared to youth who were eligible for admittance to the Center but were detained at a traditional juvenile correctional center.

The outcomes of the youth are defined as:

- the likelihood and number of rearrests at the juvenile and adult level,

- the likelihood and number of reconvictions at the juvenile and adult level,
- the likelihood and number of substance use incidents obtained from the parole officer reports, and
- the likelihood and number of substance related charges received at the juvenile and adult level.

The Correctional Program Assessment Inventory (CPAI) was administered at Barrett Juvenile Correctional Center and Hanover Juvenile Correctional Center in order to assess the current state of treatment provided to the youth. In brief, the CPAI investigates how closely a program adheres to the principles of effective intervention that have been found to be associated with the outcome of offenders when released. The two institutions were selected to examine the program offered to the treatment group (Barrett Juvenile Correctional Center) and an "average" institution in the Commonwealth where many comparison youth are admitted (Hanover Juvenile Correctional Center).

The results of the CPAI reveal differences in the categorical scores between each of the institutions and the overall score as well. Specifically, the CPAI score for Barrett is "very satisfactory" and for Hanover "satisfactory, but needs improvement". Therefore, it is shown that there are differences between how closely the institutions adhere to the principles of effective intervention, indicating that Barrett follows them more closely. Given this it is anticipated that the outcome of the youth released from Barrett will be more positive than youth released from the other institutions.

In order to assess the outcome of the experimental youth it is essential to select an appropriate comparison group. This is accomplished through a matching procedure that occurred retrospectively. Specifically, when a youth was released from Barrett a similar youth was selected from those detained at the other medium security institutions. The variables that the youth were matched on include the age at admission, gender – all males, date of release, race of the offender, mandatory or recommended need for substance use treatment, and sentence length. This process yielded 412 experimental youth and 406 comparison youth who were released between July 1, 1998 and June 30, 2000.

Examination of the two groups reveals they are similar with regards to age, race, prior commitments, DSM IV assessments, and need for substance abuse treatment. However, the two groups do vary by dependency and sentence length with the average sentence length being longer for the comparison youth. With regards to any differences among the outcome of the youth, the results show that regardless of facility placement, most youth were rearrest and reconvicted and were not using a substance or charged on a substance related offense. Although examination of the number of reconvictions, substance use incidents, and substance related charges did reveal significant bi-variate differences between the groups. With the Barrett youth having fewer reconvictions than the comparison group but a higher number of reported substance use incidents and substance

related charges than the comparison youth. Furthermore, the multi-variate models that control for differences among the youth reveal that the significant differences are maintained for reconviction and substance use.

The analysis did not stop by examining difference between facility types, rather, it probed further into any differences among Barrett youth only. The program offered at Barrett is grounded in phases of release, so this variable was pursued. Specifically, it is assumed that youth who are released without completing all four treatment phases of release have not been exposed to the entire treatment regime offered at the Center, the outcomes should vary by treatment phase of release (i.e., phase four youth having more positive outcomes compared with phase three, two, or one; the outcome of phase three youth being more satisfactory than phase two or one) and between those who have completed the entire program (completers, phase four) to those who did not complete the program (non-completers, phase one, two, and three).

The results found no significant difference in the outcome of youth when examining phase of release but did uncover some variation when looking at completers versus non-completers. Specifically, it was established that those who complete the entire program are less likely to be reconvicted of an offense or charged with a substance related offense in relation to those who did not complete the entire program (non-completers). The differences established in the bi-variate models were *not* maintained in the multi-variate models.

Overall, the results of the CPAI indicate that it would not be unreasonable to expect a difference in the outcome of youth admitted to Barrett and traditional detention centers. This is due to the closer adherence to the principles of effective intervention by Barrett Juvenile Correctional Center. The results do reveal significant bi-variate relationships among most outcome measures examining variations in the number of incidents. In addition, when controlling for variations in individual characteristics it was still found that youth admitted to Barrett Juvenile Correctional Center had fewer reconvictions than those detained at traditional detention centers. However, the results did discover that Barrett youth had a higher number of substance use incidents reported by the parole officer and a higher number of substance related charges relative to the comparison youth. This finding is not in the expected direction but may be influenced by the parole officers closer monitoring of substance related issues for the experimental group based on their primary treatment need. But, in general, it must be noted that most youth, regardless of institutional placement, *were* involved with the criminal justice system at least one time upon release.

Furthermore, the results did not show a significant difference in the outcome of the Barrett youth only by phase of release. And the results uncovered a significant difference *only* among the bi-variate analysis between program completers and non-completers when considering reconviction and substance related charges. Based on the results of the CPAI and analysis it is recommended that the program offered at Barrett Juvenile Correctional Center may be improved if:

- standardized assessment instruments for risk, needs, and responsivity are administered to the youth and the results then utilized to match clients learning styles, risk levels, and so on to the appropriate treatment providers and dosage of treatment, and
- the system of phases toward release must adopt a policy of graduation to the next phase based on the youth's behavior rather than completion of the curriculum for each phase.

Additionally, the program structure appears to be sound (according to the CPAI) so the implementation process may need to be enhanced. Some points found in the CPAI and from earlier research conducted at Barrett (Gordon and Stichman, forthcoming) suggest areas that could strengthen the current implementation process.

- Providing additional resources to appropriately train all staff (treatment and custody) so they are proficient in the treatment protocol in order to enhance the quality of the therapeutic community.
- Eliminate all components of the LEADER program due to its conflicting goals with achieving a therapeutic community.
- Create an aftercare program in the community that mimics the institutional program in order to obtain any long-term effects.

Implementation of these recommendations should improve the overall quality of the program implementation process and youth accountability. In addition, it will provide future research at the facility more information to help clarify the appropriate target population for the program.

SECTION 1: A DESCRIPTION OF THE JUVENILE PROCESSING SYSTEM, BARRETT JUVENILE CORRECTIONAL CENTER AND TRADITIONAL JUVENILE CORRECTIONAL CENTERS IN THE COMMONWEALTH

There are three specific objectives to this research: (a) to assess the current state of the treatment being offered, (b) to select an adequate comparison group, and (c) to provide an assessment of the effectiveness of treatment provided at Barrett Juvenile Correctional Center by examining the outcome of youth admitted to the Center compared to youth who were eligible for admittance to the Center but were detained at a traditional juvenile correctional center.

The current state of the treatment being examined by conducting the Correctional Program Assessment Inventory (CPAI) at Barrett Juvenile Correctional Center and one traditional detention center (Hanover Juvenile Correctional Center). The CPAI was developed by Gendreau and Andrews (1994) to determine how well a program conforms to and implements the principles of effective correctional intervention. The principles of effective intervention consist of program components which have been found to have a positive impact on the outcome of treatment programs and include matters such as using behavioral or cognitive intervention strategies, targeting high-risk offenders, and emphasizing pro-social attitudes and behaviors (Andrews and Bonta 1994; Gendreau 1996).

The sufficiency of the comparison group will be examined by outlining the steps taken to retrospectively select the comparison group and by providing some demographic characteristics, criminal history characteristics, and standardized score information between the two groups. And the final objective is accomplished by investigative the rearrest, reconviction, substance use, and substance related charges received between the

two groups. Prior to delving into the findings for the three objectives it is important to explain the processing procedures that determine the facility where a youth is detained and a description of the program offered at Barrett Juvenile Correctional Center.

Correctional Processing System at the Reception and Diagnostic Center

Prior to institutional placement the youth enters the Reception and Diagnostic Center (RDC) located in Richmond, Virginia. The goal of RDC is to assess the youth's needs and determine (a) the most appropriate institutional placement, (b) the services to be provided, and (c) the youth's sentence length. This is accomplished by conducting a thorough assessment of the youth.

Specifically, staff members at RDC probe into each youth's criminal history, social history, educational history, psychological functioning, physical health, substance use history, and skills functioning. Most of the information is not gathered using standardized instruments, however there are two widely used instruments at RDC: the Substance Abuse Subtle Screening Inventory (SASSI) and DSM IV. The SASSI consists of 26 items that ask about the use of alcohol/drugs and related consequences and contains another 55 items that help discriminate individuals with a substance dependency problem to those without. Specifically, the SASSI scores the youth as substance dependent, abusive, or neither abusive nor dependent.

The American Psychological Association created the Diagnostic and Statistical Manual of Mental Disorders, which is in its fourth edition. The manual is used to classify psychological and mental health disorders. The DSM IV is comprised of seventeen major categories with five axes. The axes consist of clinical disorders; personality disorders and mental retardation; general medical conditions; psychosocial and

environmental problems; and global functioning. The data collected by RDC fall within axis one (clinical disorders) and axis two (personality disorders and mental retardation). Specifically, the youth are evaluated to see if they meet the criteria for the DSM-IV in the following areas: ADHA, mood disorders, substance abuse disorder, substance dependence disorder, mental retardation, dissociative disorder, oppositional defiant disorder, conduct disorder, anxiety disorder, psychotic disorder, personality disorder, and other.

The combination of all of the assessment information obtained enables the RDC staff to determine institutional placement and sentence length. The youth may be sentenced to one of seven institutions operated by the Department of Juvenile Justice. The criteria for each of the detention centers vary and are a function of the youth's age, offense severity level, sentence length, and the particular needs of the youth.

Barrett Juvenile Correctional Center

Barrett Juvenile Correctional Center, located in the metro-Richmond area, is a single-purpose residential substance abuse facility for committed male youth. The program began in late 1993 from federal funding from the United States Department of Health and Human Services Center for Substance Abuse Treatment. The Commonwealth took over the operation of the expenditures at the end of the federal funding. Around the same point in time, the Commonwealth began contracting the substance abuse treatment program out to a private treatment provider, the Gateway Foundation.

Barrett operates as a medium level secure facility and has an average daily capacity between 100 to 130 youth. The youth are considered for admission if they are

male, ages 11 to 18, have a Length of Stay from 6 to 18 months, and have a recommended or mandatory need for substance abuse treatment¹. The center does not permit the admission of youth with severe emotional problems; low intellectual functioning; committed for murder, rape, forcible sodomy, or arson of an occupied building; reached age 18 at the time of commitment; present a major psychiatric illness; or are in need of participation of specialized sex offender treatment programs offered at other correctional centers (Program Manual 1998, 1994). The majority of the exclusion criteria are because the facility does not have the ability to meet the needs of such youth.

Barrett Juvenile Correctional Center offers a highly structured program. A central component is the use of a therapeutic community approach. This approach fosters an environment of personal growth and responsibility as the emphasis is on changing the youths' negative attitudes and behaviors, rather than mere custody for a period of months or years. This process of change is guided by a system of phases toward release in which each phase has its own goals and objectives that are implemented within a specified curriculum. Movement to a higher phase is based on successful curriculum completion.

The treatment process is not solely focused on the substance abuse dependency of the youth. A variety of behavioral and social learning concepts are applied to each phase and group session in an attempt to alter the youths' attitudes and behaviors. These techniques include anger management, a behavior management system, relapse prevention, life skills development, stress management, substance abuse education, family involvement, and individual and group counseling sessions. The Center takes a

¹ A designation for mandatory substance abuse treatment is made when the youth's committing offense is directly related to his use of alcohol or other drugs; a designation for recommended substance abuse treatment is made when the youth's substance use

holistic approach to the treatment of the youth in order to determine the triggers of substance abuse and its relationship with delinquent behavior. Thus, the Center recognizes the interrelationship of all aspects of the youth's life in producing a delinquent lifestyle and offers a multi-modal treatment approach.

Both a qualitative and quantitative analysis of how closely the center adheres to the principles of effective intervention was conducted (Gordon 1999; Stichman 1998). The results uncover that the program satisfactorily implements many of the necessary items that have been shown to make a positive impact on the outcome of the youth. Therefore, the program appears to operate in accordance with the growing literature that outlines effective program structure.

Traditional Juvenile Correctional Centers

The Commonwealth of Virginia operates six institutions other than Barrett, one is a maximum security institution (Culpepper), another is for special needs individuals (Oak Ridge), and the remaining are classified as medium security with most being located in the metro-Richmond area. Youth who are eligible for Barrett but are not admitted, would be eligible to enter one of the remaining medium security institutions. In general youth who meet the Barrett criteria but were not admitted were generally not given access because of bed space or additional needs that were better served at another institution.

In general, the goal of these traditional institutions is to achieve public safety while meeting the disciplinary, medical, recreational, and treatment needs of the youth. The facilities do offer treatment in the areas of substance abuse, sex offender education,

affects his ability to function in the community, but cannot be directly tied to his committing offense. (Program Manual 1998, 1994)

individual and group therapy, skills counseling, and educational and vocational training to the youth. However, services are provided on an "as needed" basis. That is, not all youth receive treatment and the intensity, duration, and quantity varies by offenders. Additionally, the institutions do not use a therapeutic community approach to attempt to achieve change. The traditional institutions implement the LEADER program² which is designed to improve structure, safety, and discipline throughout the facilities by using a military-model (i.e. bootcamp like structure) within the daily activities. The LEADER program stresses leadership, education, achievement, discipline, empowerment, and responsibility. The structure in the program also addresses behavioral management issues.

To summarize, it should be clear that there are two main differences between Barrett Juvenile Correctional Center and the remaining institutions in the Commonwealth. One is the fact that Barrett offers the same basic style of treatment to all youth and employs a therapeutic community approach. And, the other is that the traditional institutions rely on a quasi-military model or similar model to instill discipline and change of the offenders. Thus, the structural and programmatic differences of the facilities suggest the potential for differences to occur with regards to the outcome of the offender.

Related Literature

Although therapeutic communities have been in existence with offender therapy since the early 1900's (Pan, Scapitti, Inciardi, and Wood 1993) the level of implementation and understanding varies. In general, a therapeutic community involves

² Barrett has not fully implemented all of the components of the LEADER program.

the treatment experience occurring around the clock. That is, this total treatment environment relies on the mutual responsibility of all residents (staff and offenders) to adhere to the program's goals, objectives, and regulations through shared reinforcement within the daily regimen.

Researchers have provided principles to assist in developing and monitoring therapeutic environments (Wexler and Lipton 1993). Wexler and Lipton stress that for a therapeutic community to be effective then a variety of principles must be applied at three levels: the state, the institution, and the individual. The state level principles surround the issue of continual support from all involved agencies and state representatives. The endorsement of the governor and a special committee to oversee its function combined with public influence and program evaluations will enable a program to stay on target to achieve its original goals and objectives.

The institutions responsibilities are diverse. They include, but are not limited to, assessing and matching the clients individualized treatment needs; establishing rules, regulations, behavioral contracts, and a system of rewards and sanctions; creating a protective environment isolated from the general population; providing role models; encouraging open communication, flexibility, and integrity; and making treatment available for 9 to 12 months and planning a solid re-entry program into the community which continues the basic structure of the institutional program. And the individual level principles involve assisting the offender identify areas of need; providing inspiration to continue; offering incentives to motivate positive behaviors; challenging what the offender has learned; and making sure the transition into the community is satisfactory. The importance of implementing the principles is to achieve a therapeutic community

which, as prior research indicates, produces change among offenders (Brook and Whitehead 1980; DeLeon 1985, 1984; Holland 1982; Wexler, Falkin, and Lipton 1988, 1990).

Such models have only been successfully integrated into institutional settings during the past decade (Wexler, Melnick, Lowe, & Peters 1999). The application to the institutional setting currently remains appropriate because it provides an avenue to offer a highly structured program and supportive environment to challenge the inmates current ways of thinking. Additionally, this setting can address issues related to recovery and relapse prevention. As mentioned, the results of the TC environment among substance users have been favorable, however, a criticism that exists is the lack of long-term success due to the absence of aftercare (Martin, Butzin, Saum, & Inciardi 1999).

However, some programs do extend the institutional programming into the community after release. In general, the community efforts upon release from a period of confinement can be classified as aftercare, work-release, or a combination of both (Martin et al. 1999; Wexler et al. 1999; Knight, Simpson, and Hiller 1999; Wexler, DeLeon, Thomas, Kressler, & Peters 1999; Nielsen & Scarpitti 1997). Studies that have examined the impact of such efforts reveal that in-prison programming combined with an aftercare component has the strongest impact on reducing recidivism.

The majority of the available research focuses on adults and it has been recognized that therapeutic communities for juveniles must be modified (Dembo, Williams, and Schmeidler 1993). This is due to the variation in drug use and history combined with the youths needs (i.e., education). At any rate, research indicates that

therapeutic communities operating with juveniles who have a substance issue are effective (DeLeon and Ziengenfuss 1986).

SECTION 2: AN ASSESSMENT OF THE CURRENT STATE OF THE PROGRAM OFFERED AT BARRETT AND A TRADITIONAL DETENTION AS EXAMINED BY THE CORRECTIONAL PROGRAM ASSESSMENT INVENTORY

The Correctional Program Assessment Inventory (CPAI) (Gendreau and Andrews 1989) provides a quantitative method for determining the extent to which a program adheres to the principles of effective intervention. In general, the principles consist of various conditions that are correlated with successful correctional programs. These principles encompass the notion that sound programs should (a) be theoretically grounded, (b) properly assess clients, (c) use behavioral incentives, (d) select appropriate clients, (e) be concerned with issues related to the risk, needs, and responsivity of the client, and (f) have well trained and competent staff (Gendreau 1996).

Specifically, the CPAI has six primary areas, which include, program implementation and the program director; client pre-service assessment; characteristics of the program; characteristics and practices of the staff; prior evaluation and outcome studies; and miscellaneous items such as ethical guidelines and levels of community support. The information needed to assess a program is obtained (a) through a series of face-to-face interviews with several staff members (i.e., program director, staff members) and (b) the examination of case files, program manuals, and assessment tools. The information ascertained is then used to dichotomously score sixty-five items that assess whether or not these principles were present. The score is then summarized for each of the six areas and scored according to the number of criteria present versus number of criteria applicable to the program. The scores from all six areas are totaled and an overall assessment score is provided. The assessment score is translated into "very

satisfactory” (70% or above), “satisfactory” (60% - 69%), “satisfactory, but needs improvement” (50% - 59%), and “unsatisfactory” (below 50%).

The CPAI was conducted by an outside consultant at Barrett Juvenile Correctional Center and Hanover Juvenile Correctional Center (Stichman 2000, 2001). Hanover Juvenile Correctional Center was selected to represent an “average” juvenile institution. Hanover has roughly the same number of youth and is located within 5 miles of Barrett Juvenile Correctional Center. Therefore, selection of Hanover eliminates any issues related to differences in staff variations that may occur if comparing two institutions located in different areas and variations in any larger community factors (i.e., participation and support by local groups).

The CPAI was conducted at Barrett during the summer of 2000 and at Hanover in the Fall of 2001. The delay for the implementation of the CPAI at Hanover was due to the approval process required with the Department of Juvenile Justice. And it must be noted that during this delay the superintendent at Barrett Juvenile Correctional Center was transferred to Hanover Juvenile Correctional Center. The results of the CPAI reports are summarized below.

Barrett Juvenile Correctional Center

The overall rating of Barrett is very satisfactory, with all but one of the individually assessed sections (program characteristics) receiving a score less than very satisfactory. The first area examined is the program implementation (Stichman 2000). This section points to the following assets: (a) the qualifications of the superintendent, (b) the ability of the program to meet the needs of the community, (c) the acceptance of the

program by the larger community, and (d) the programs use of theoretically grounded models in order to achieve client change. It was suggested that program implementation can be enhanced if the superintendent provides direct service to the client rather than simple daily contact.

Barrett received a score of very satisfactory with regards to the client pre-service assessment. This is primarily due to the fact that the clients are thoroughly assessed in a multitude of areas at the Reception and Diagnostic Center (RDC) prior to admission to an institution. However, the assessments regarding risk, needs, and responsivity are still limited and do not involve sufficient standardized assessments. The integration of standardized instruments would enhance the programs ability to provide appropriate levels and doses of service to the client. Furthermore, matching the learning styles of the offenders to the styles of the treatment provider may also improve the quality of service.

As indicated earlier, the area of program characteristics received a score of satisfactory but needs improvement. This section of the CPAI is concerned with the program's ability to target and treat criminogenic behaviors. The program's strengths in this area include (a) the program's ability to target such behaviors, (b) the use of the therapeutic community, (c) the flexibility of the program to allow for client input, and (d) the input the treatment staff has on the discharge plans for the offender.

However, the program characteristics are comprised from several factors. First, the facility has implemented several portions of the LEADER program (a quasi-military program) within its daily structure. Such a program does not suit well with the treatment philosophy espoused at Barrett. Second, there is no variation in the intensity or duration of services offered based on the clients risk level. Nor is there any use of responsivity in

the sense of matching the client characteristics to the treatment being offered. Furthermore, the use of the LEADER program has compromised the treatment programs ability to maintain a satisfactory balance between the rewards and punishments offered. And finally, the program does not accommodate for the occurrence of "booster sessions" in order to try and maintain prosocial behaviors.

The fourth section of the CPAI focuses on the characteristics of the program staff. It has been found that the majority of the counseling staff has a bachelor degree (80%) with ten percent having an advanced degree. In addition, the majority of the staff have worked with the program over the past several years. One issue of concern regarding staff characteristics is that few of the staff had any experience with another treatment program prior to their being hired at Barrett Juvenile Correctional Center. Furthermore, there is a lack of adequate training for all staff hired.

The final two areas of the CPAI (evaluation and other) reveal that Barrett has implemented quality assurance protocol, gathers client satisfaction through an exit-survey, and utilizes an ethics manual to maintain the confidentiality of the client. Thus, the report reflects that the Barrett program is implementing a significant portion of the principles of effective intervention.

Hanover Juvenile Correctional Center

The overall score for Hanover Juvenile Correctional Center is satisfactory, but needs improvement. The areas of client pre-service assessment and "other" received a score of very satisfactory, while program implementation and staff characteristics were

scored as satisfactory, and the remaining categories (program characteristics and evaluation) were classified as unsatisfactory (Stichman 2001).

The area of program implementation outlines that the superintendent has an appropriate educational and work experience background to select and supervise individuals responsible for the smooth running of the facility. It stressed that the implementation of a program requires the support both within the agencies framework and the greater community and it appears there is support for the program at both levels. The evaluator examples the fact that there is the existence of a sex offender advisory committee at the Department of Juvenile Justice who assist in determining such items as, the appropriate number of beds made available for sex offenders. However, the program implementation may be improved if the superintendent provides direct care to the clients and the appropriate treatment literature is consulted more often and, more importantly, integrated into the treatment protocol.

The area of client pre-service assessment received a score of very satisfactory. Again all clients who are convicted of an offense and sentenced to an institution are first admitted to the Reception and Diagnostic Center where they are thoroughly assessed in a variety of areas. Such an assessment determines the appropriate institutional placement and the areas in which the offender needs treatment. However there is no evidence that the information gathered by RDC staff members is used to determine the most appropriate type of treatment.

The program characteristics section outlines that Hanover provides a variety of treatment groups (i.e., anger management, substance use, sex offender) that appear to be based on cognitive behavioral theory. In addition, the LEADER program has been

modified at Hanover to maintain structure and discipline but eliminate the confrontational style associated with the original LEADER program. The staff use rewards (i.e., privileges, praise) and punishments (i.e., demotion, program restrictions, verbal prompts) to gain compliance and it appears that staff are using rewards and punishments at the same rate. So it is suggested that the staff increase the use of rewards over punishments to be at a more acceptable level (4:1 or higher).

The characteristics of a program should vary the level of service according to the offender's level of risk, however, it does not appear that this is the case. Nor does the CPAI report reflect that Hanover Juvenile Correctional Center is matching client characteristics to treatment style. Thus, all youth who participate in a treatment group are receiving the same information and the literature shows that treatment is most effective if provided at appropriate intensity and for a sufficient duration (Van Voorhis, Braswell, and Lester 1997). And, at this point, treatment progress is more concerned with the youth's sentence length rather than his ability to meet and utilize the skills obtained in treatment.

The fourth area evaluated, staff characteristic, received a satisfactory rating. The report indicates that all program staff surveyed has at least a bachelor degree and seventy-five percent of the staff have prior experience in another program. The staff characteristics which need improvement include the area of clinical supervision and enhancement of the integration of the treatment staff and institutional staff in order to provide a more cohesive program to the youth.

Hanover received an unsatisfactory score in the area of evaluation. This is because there has been no standardized way to assess the client's satisfactory with the

experience, progress upon release, or an outside evaluation of the programs implementation or outcome. And the final are of "other" reflects that Hanover maintains confidentiality by following the ethical manual. Therefore, the treatment at Hanover reflects partial implementation of issues related to the principles of effective intervention.

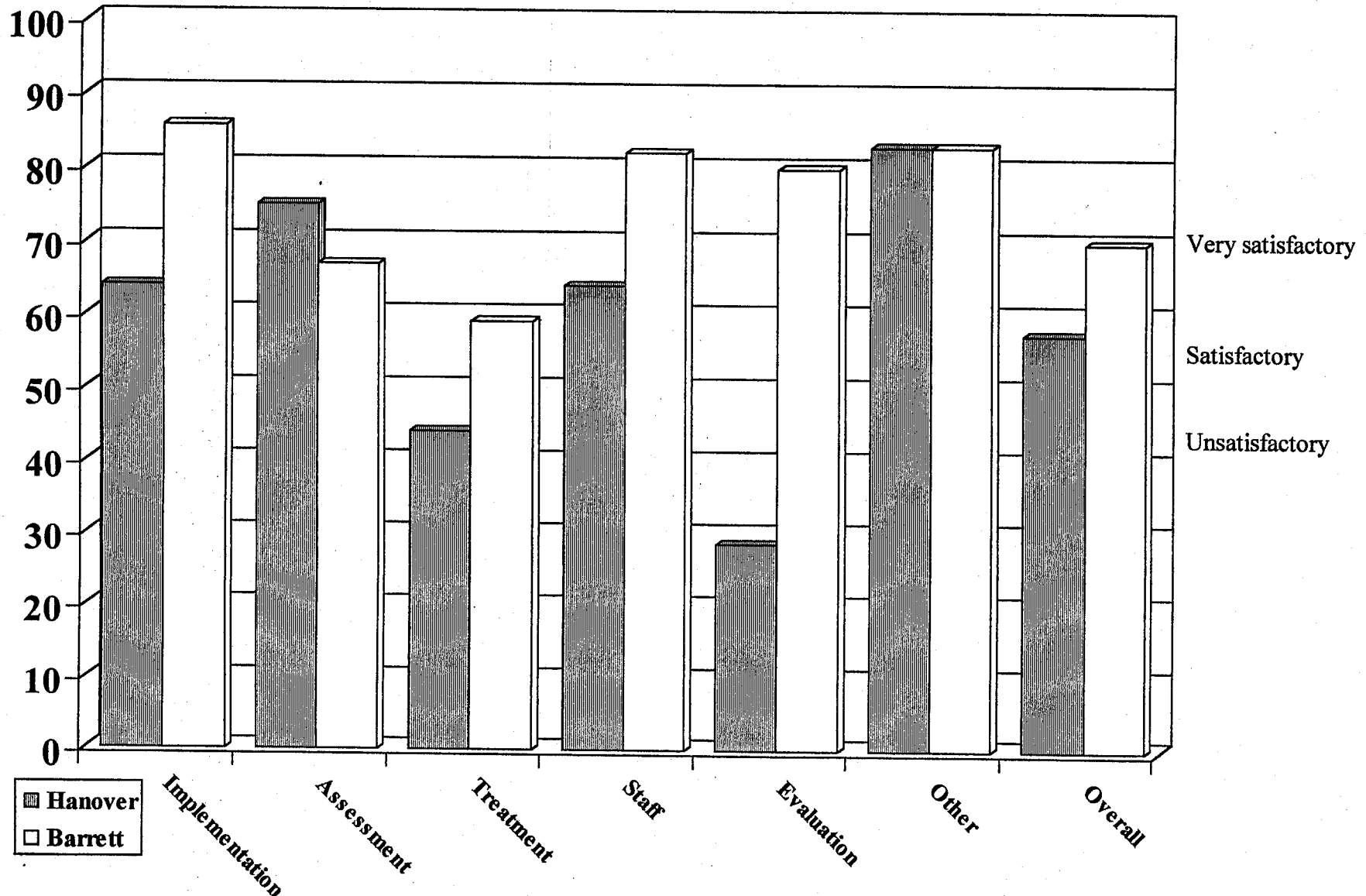
A Comparison of the CPAI at Barrett and Hanover

Figures 1 and 2 provide a pictorial look at how the institutions compare with each other and to normative data. As indicated earlier, Barrett's overall score was very satisfactory and Hanover's was satisfactory, but needs improvement. The variation in the overall scores is understood when examining the differences in the score for each assessed category (see Figure 1). In all but one category (assessment), Barrett scored equal to or higher than the program at Hanover.

Figure 2 reveals the categorical scores for Barrett and Hanover as compared to normative data. The normative data are provided by "researchers at the University of Cincinnati (who) have assessed over 240 programs nationwide using the CPAI" (Stichman 2001: 2). Both Barrett and Hanover fair well in comparison to the normative data in most categories. To illustrate, Hanover is assessed at a higher percentage than the normative data in the categories of assessment, treatment, staffing, and other. And Barrett scores higher than the normative data in *all* of the categories.

More important, both institutions have an overall higher percentage and score in comparison with the normative data. The CPAI report indicates that "approximately 8 percent of the programs assessed have been classified as 'very satisfactory', 23 percent

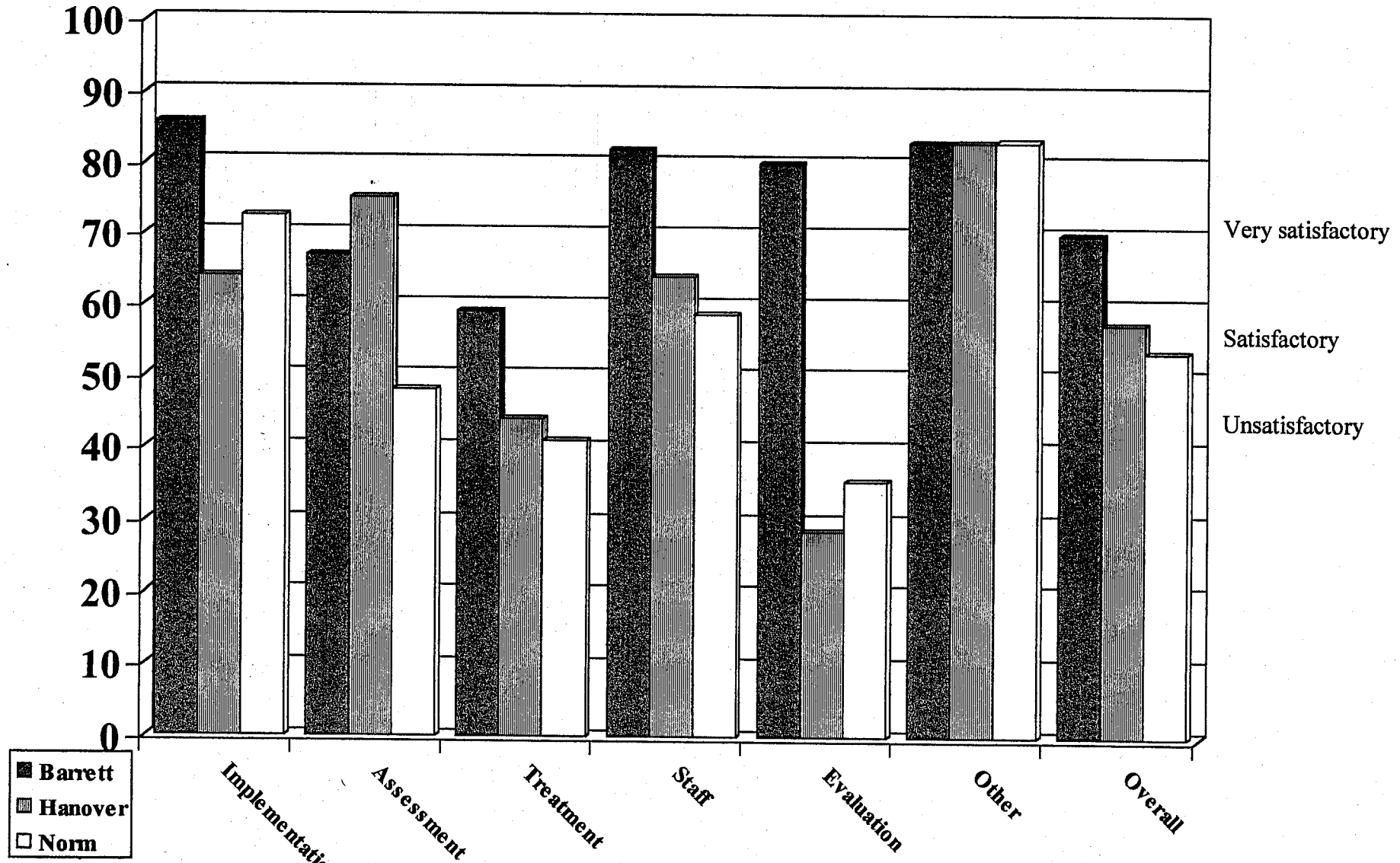
Figure 1: Correctional Program Assessment Inventory:
Hanover Juvenile Correctional Center with Barrett Juvenile Correctional
Center



Range: Very Satisfactory (70%+); Satisfactory (60%-69%), Satisfactory but needs improvement (50%-59%), Unsatisfactory (below 50%)

The CPAI scores for Barrett are based on their reassessment in 2000.

Figure 2: Correctional Program Assessment Inventory:
Comparison of Barrett Juvenile Correctional Center and Hanover
Correctional Center with Normative Data



Range: Very Satisfactory (70%+); Satisfactory (60%-69%), Satisfactory but needs improvement (50%-59%), Unsatisfactory (below 50%)

The average scores are based on 240 CPAI results across a wide range of programs. The CPAI scores for Barrett are based on their reassessment in 2000.

'satisfactory', 38 percent 'satisfactory but needs improvement', and 31 percent as 'unsatisfactory'" (Stichman 2001: 2). Thus, the program offered at Barrett is in an elite category with regards to their ability to adhere to the principles of effective intervention. As such, the literature suggests that such a program should have a favorable impact with regards to the outcome of the offender, prior to the examination of the outcome of youth selected for this study it is important to discuss the sample selection process.

SECTION 3: THE ADEQUACY OF THE COMPARISON GROUP

The second objective is the selection of an adequate comparison group. A random selection process was not feasible due to the juvenile classification process in Virginia, so a matching procedure was implemented. The goal of matching is to select "unserved target(s) as controls who resemble the treated targets as much as possible in relevant ways" (Rossi and Freeman 1989: 258). Furthermore, the literature demonstrates that solid matching procedures are a satisfactory way to select a comparison group (Lipsey 1992).

The matching procedures used for this study attempts to mimic the selection criteria of Barrett as much as possible. Recall that the Center receives committed male offenders who have a mandatory or recommended need for substance use treatment and a Length of Stay (sentence length) of no less than six months. Additional items that are essential to match the youth include, the offender's race, age at admission, and date of release. Thus, the following variables are a list of items in which a comparison youth was selected: age at admission, date of release, race of the offender, mandatory or recommended need for substance use treatment, and Length of Stay.

So, the sample consists of all youth released from Barrett Juvenile Correctional Center from July 1, 1998 to June 30, 2000 and a matched sample of youth who met the eligibility criteria but were detained at one of the other medium security institutions in the Commonwealth. This process yielded 412 Barrett youth and 406 comparison youth.

Table 1 reveals the characteristics of the sample on a variety of demographic, criminal history, and assessment variables. Specifically the table shows some similarities and differences between the two groups. Most of the youth are 16 years of

Table 1: Demographic, Criminal History, and Assessment Information for the Two Groups

Variable	Barrett Youth	Comparison Youth
Age at Admission		
13 – 14	34 (8%)	50 (12%)
15 – 16	203 (49%)	191 (47%)
17 and older	175 (43%)	145 (36%)
Mean	16.6	16.4
Race		
White	206 (50%)	163 (40%)
Non-White	206 (50%)	243 (60%)
Number of Prior Commitments		
None	295 (72%)	349 (85%)
1 – 2	111 (26%)	56 (14%)
3 or more	5 (1%)	2 (1%)
Missing	1 (1%)	0 (0%)
Length of Current Commitment		
0 – 6 months	18 (4%)	58 (14%)
7 – 12 months	286 (69%)	168 (41%)
13 – 18 months	82 (21%)	99 (24%)
19 months or more	26 (6%)	81 (20%)
Mean	11.7 months	13.5 months
Substance Treatment		
Mandatory	259 (63%)	169 (42%)
Recommended	57 (14%)	169 (42%)
Missing	96 (23%)	68 (16%)
SASSI		
Neither	57 (14%)	88 (22%)
Abusive	45 (11%)	87 (21%)
Dependent	207 (50%)	156 (38%)
Missing	103 (25%)	75 (18%)
Full Scale IQ Score		
Mean	83.08	75.74
Range	63 – 126	46 – 133

Table 1 continued: Demographic, Criminal History, and Assessment Information for the Two Groups

Variable	Barrett Youth	Comparison Youth
DSM IV Categories		
0 – 2	128 (31%)	109 (27%)
3 – 5	99 (24%)	109 (27%)
6 or more	5 (1%)	3 (1%)
Missing	179 (43%)	185 (45%)
Mean	2.5	2.5

age and the race of the youth is fairly evenly dispersed between the categories of white and non-white. Specifically, among the Barrett youth, half of the youth are white and the other half non-white and for the comparison group 40 percent of the sample is white and 60 percent is non-white. Additionally, this is the first commitment to an institution for the majority of youth (72% and 85%). However, a significant difference ($t = 4.02$) does exist for the average sentence length between the two groups with the mean number of months being 11.7 for Barrett youth and 13.5 for the comparison youth. The longer sentence length may suggest that the comparison youth's committing offense may have been more serious than the Barrett youth or the comparison youth's behavior while incarcerated warranted a longer time-frame.

Two widely available substance use assessment measures are examined between the groups. First, the mandatory or recommended need for substance use treatment as determined by the staff at RDC reveals that among the Barrett youth 63 percent had a mandatory need, 14 percent a recommended need, and 23 percent of the data were missing. Whereas, the comparison youth data reveal 42 percent received a mandatory need, 42 percent a recommended need, and 16 percent of the data were missing.

Although a higher percentage of the Barrett youth received a mandatory need for substance treatment the admission criteria at Barrett states that either category is fine.

Given this, the comparison youth are acceptable with regards to this category.

Furthermore, the results of the SASSI indicate that regardless of facility placement, most of the youth in the sample have been classified as dependent on a substance, however the variations between the groups is statistically significant.

Two additional variables are presented in Table 1, the full scale IQ score and the number of categories the youth received a "yes" for on the DSM IV. The data reveal similar mean IQ scores among the two groups (83.02 versus 75.74) with the Barrett youth reporting a range from 63 to 126 and the comparison youth's range is from 46 to 133. The slight differences between IQ scores are not statistically significant. And finally, the table reveals that the average number of categories in which a youth was assessed as possessing any of the 12 categories of the DSM IV examined at RDC is 2.5 for both groups.

In sum, the data reveal that the comparison group meet the admission criteria at Barrett in that all of the youth are male, have a mandatory or recommended need for substance use treatment, and a sentence length of no less than six months. Additionally, the youth are similar with regards to their age, race, IQ scores, and DSM IV responses. It must be noted, however, that there is a difference in the SASSI score actual time served. Most youth regardless of their institutional placement served between 7 and 12 months, however the comparison youth have a higher average number of months than the experimental youth.

SECTION 4: THE EFFECTIVENESS OF BARRETT JUVENILE CORRECTIONAL CENTER

This section will discuss the results to the impact. Again the sample of youth used to examine any difference in outcome consists of all youth released from Barrett Juvenile Correctional Center from July 1, 1998 to June 30, 2000. This allows for no less than a one-year follow-up period on all youth examined.

Data were collected on the youth from a variety of sources, including treatment files (Barrett youth only), the Reception and Diagnostic Center, the Virginia Department of Juvenile Justice, the Virginia State Police, and the youth's parole officer. The treatment staff at Barrett were to submit information on the youth's treatment progress at the point of discharge. This information included the phase of release, SASSI scores, whether or not the youth had a mandatory or recommended need for substance use treatment, and the scores from the University of Rhode Island Change Assessment Instrument. Additionally, the researcher followed-up by examining the case files for any youth who had been released but a report was not submitted to the Department of Juvenile Justice's Central office.

As indicated above, the Barrett youth were to receive an additional assessment instrument at the point of admission: the University of Rhode Island Change Assessment Instrument (URICA). The purpose of this instrument is to determine a person's readiness to change. The instrument targets the assessment of addictive behaviors such as smoking, drug use, and weight management issues (El-Bassel, Schilling, Ivanoff, Chen, Hanson, and Bidassie 1998). However, its application to an institutionalized juvenile population has not been documented in the literature. Given this, the reliability of such an instrument was examined (Gordon and Reyes 2000). The results of the study did not

yield the four distinct categories of change that the instrument is to produce. Nor did it uncover one pure stage of change, rather, the only factor produced was a combination of items related to two stages of change. Therefore, it was concluded that the URICA is not appropriate for this particular population. It was the hope of the current study to examine the Barrett youth only to identify any variations in outcome based on a youth's readiness of change, however, due to the results of the study, the URICA scores will not be considered in the analysis to determine the effectiveness of the Center.

The Reception and Diagnostic Center provided demographic, criminal history, and assessment information for all youth. Specifically, this information includes, age at commitment (in years), race of the offender (0=white, 1=non-white), number of prior institutional commitments, SASSI score (0=neither abusive or dependent, 1 = abusive, 2 = dependent), IQ score, DSM IV information (yes or no for each of the 12 categories examined), and mandatory or recommended need for substance use treatment (1 = recommended, 2 = mandatory).

The Reception and Diagnostic Center also utilized an instrument called the Problem Oriented Severity Index (POSIT). The POSIT assesses the youth in a variety of areas to determine if further assessment is required (given a "red flag"). The usefulness of the POSIT was examined to determine if it should be included in the current study (Gordon and Diehl 2001). Specifically, the purpose of the Gordon and Diehl (2001) study was to identify the better measure of substance use (POSIT v. SASSI) and mental health (POSIT v. DSM IV). The results revealed the usefulness of the POSIT is limited because (a) the majority of youth who received the POSIT were red flagged for further assessment in both areas examined and (b) among those youth who did *not* receive a red

flag but additional assessments were conducted a different finding was produced: the youth did have a substance use or mental health issue. Therefore, the POSIT score is not included in the analysis.

The Virginia Department of Juvenile Justice provided information concerning the actual time served (sentence length in months) and recidivism at the juvenile level. Specifically, the recidivism data includes rearrest (the number of, and likelihood [0=no, 1=yes]); reconviction (the number of, and likelihood [0=no, 1=yes]); and the substance related charges (the number of, and likelihood of [0=non-substance related, 1=substance related]) after release from the respective institution. Recidivism information (rearrest and reconviction) was also provided by the Virginia State Police in order to include a look at adult recidivism data. And one other data source provided rearrest and reconviction data, the parole officer assigned to each youth. It must be noted that prior to entering the rearrest and reconviction data, the time of the offense/hearing was considered in order to protect against entering an event twice.

The final data collection source is the parole officer of each youth. Specifically, the parole officers were sent data collection instruments at 3, 6, and 12 months after an experimental or comparison youth were released from the institution. And a reminder letter was mailed to the parole officer two weeks after the initial mailing of the data collection instrument. In addition to the recidivism data, the parole officers were also asked to assess the substance use of the youth and the youth's parole conditions. The data collection instrument asked the parole officer whether or not they felt the youth was using a substance (yes or no) and to identify where they ascertained the information (i.e., urinalysis, self-report, parent). Furthermore, the data collection instrument asked the

parole officer to gauge the youth's progress toward achieving conditions of parole. The parole officer was to indicate whether a youth was satisfactorily meeting parole conditions, unsatisfactorily meeting parole conditions, or that a particular item was not required for the following items: curfew, counseling services, educational programs, employment, and electronic monitoring.

All of this information is used to assess the following research hypothesis:

- The likelihood of and number of rearrest(s) and reconviction(s) will be lower for youth released from Barrett than those released from a traditional detention center.
- The likelihood of youth using a substance (as defined by the parole officer reports) and the number of times a parole officer reports use will be lower for youth released from Barrett than those released from a traditional detention center.
- The likelihood of and number of youth who are charged with a substance related offense will be lower for youth released from Barrett than those released from a traditional detention center.
- The likelihood of and number of rearrest(s) and reconviction(s) will be lower for youth released from Barrett who have completed all treatment phases (Phase 4) than those released without completion of the entire program (Phase 1, 2, 3).
- The likelihood of youth using a substance (as defined by the parole officer reports) and the number of times a parole officer reports use will be lower for youth released from Barrett who have completed all treatment phases (Phase 4) than those released without completion of the entire program (Phase 1, 2, 3).
- The likelihood of and number of youth who are charged with a substance related offense will be lower for youth released from Barrett who have completed all

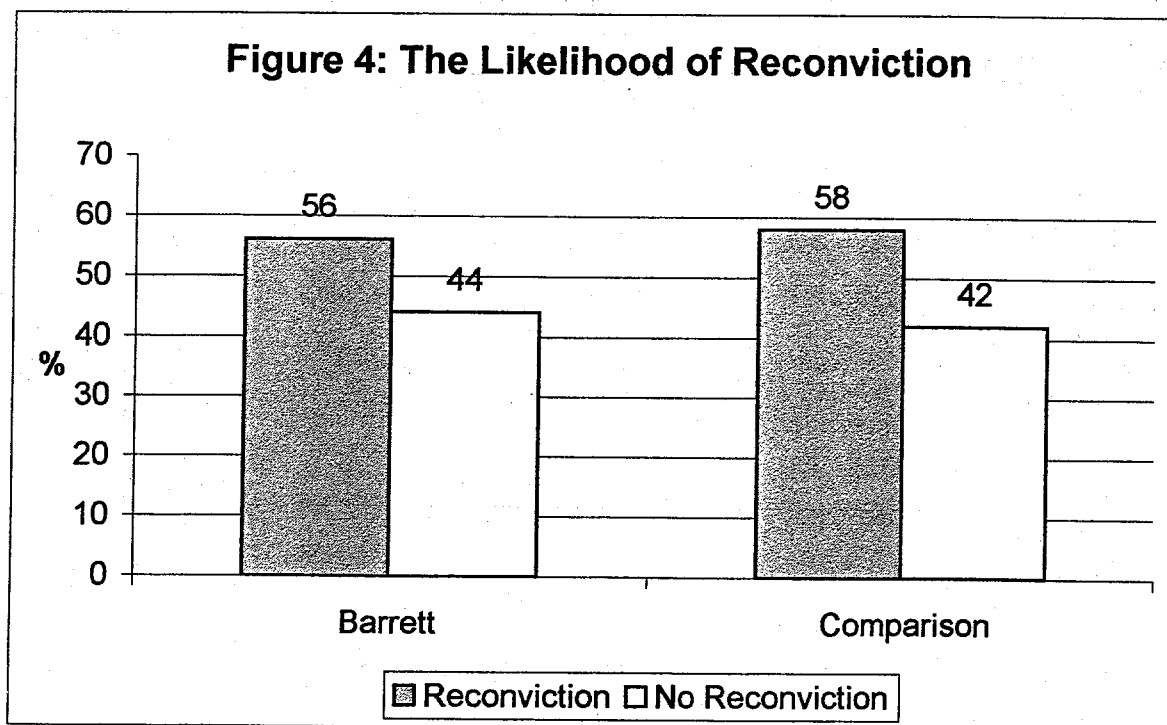
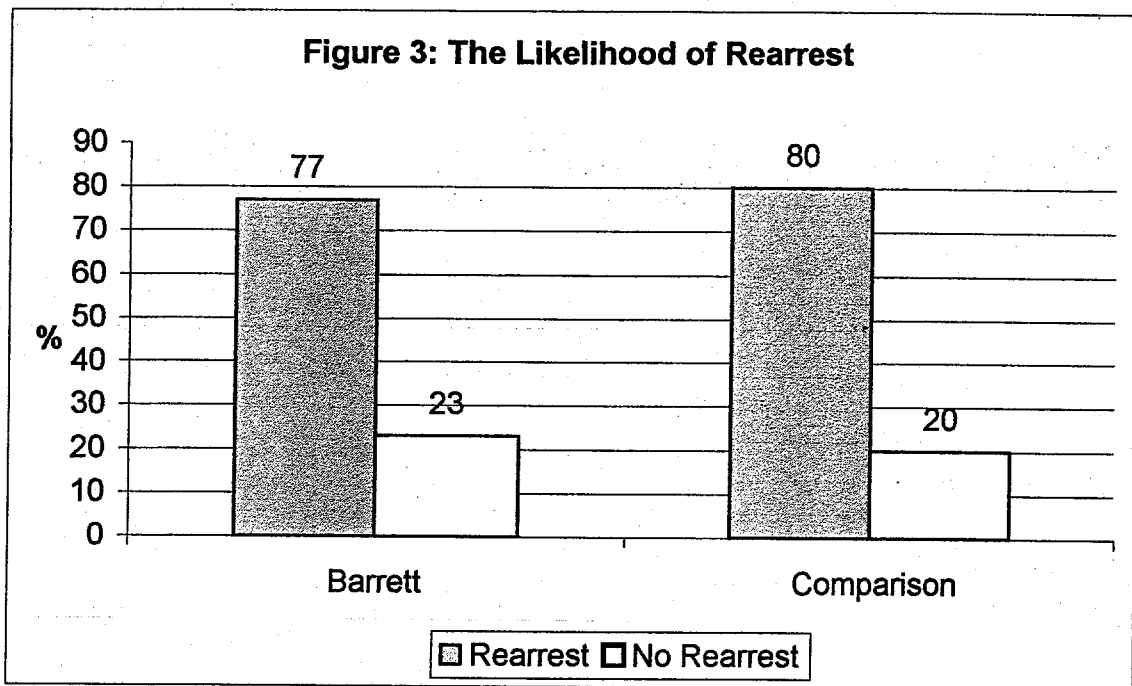
treatment phases (Phase 4) than those released without completion of the entire program (Phase 1, 2, 3).

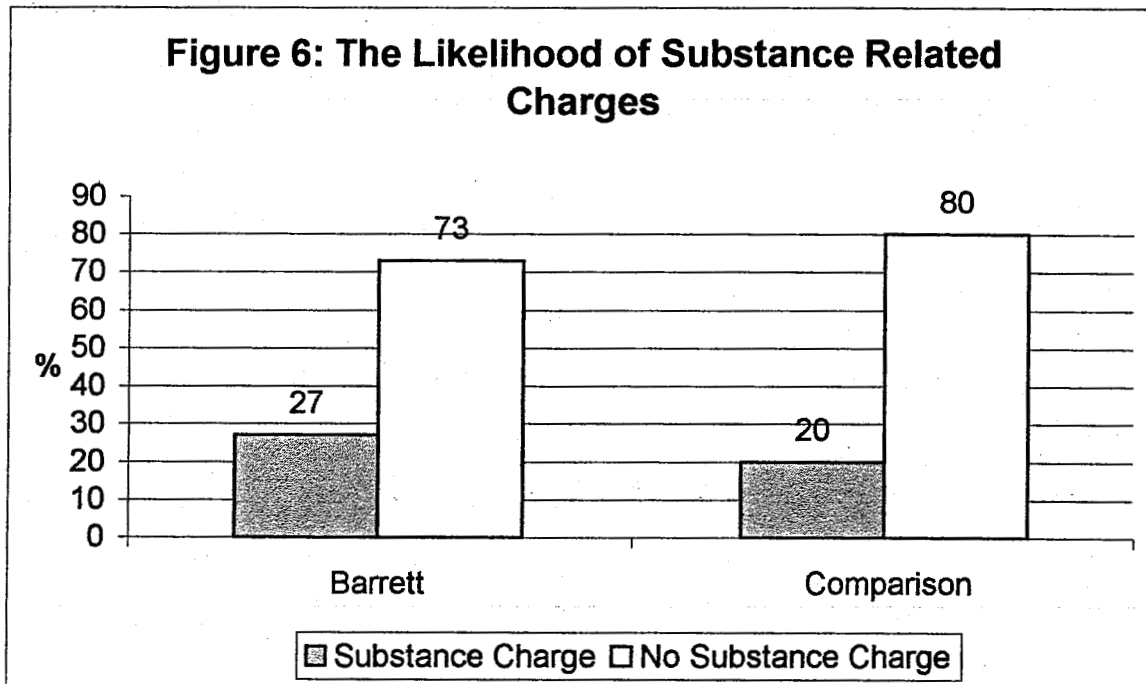
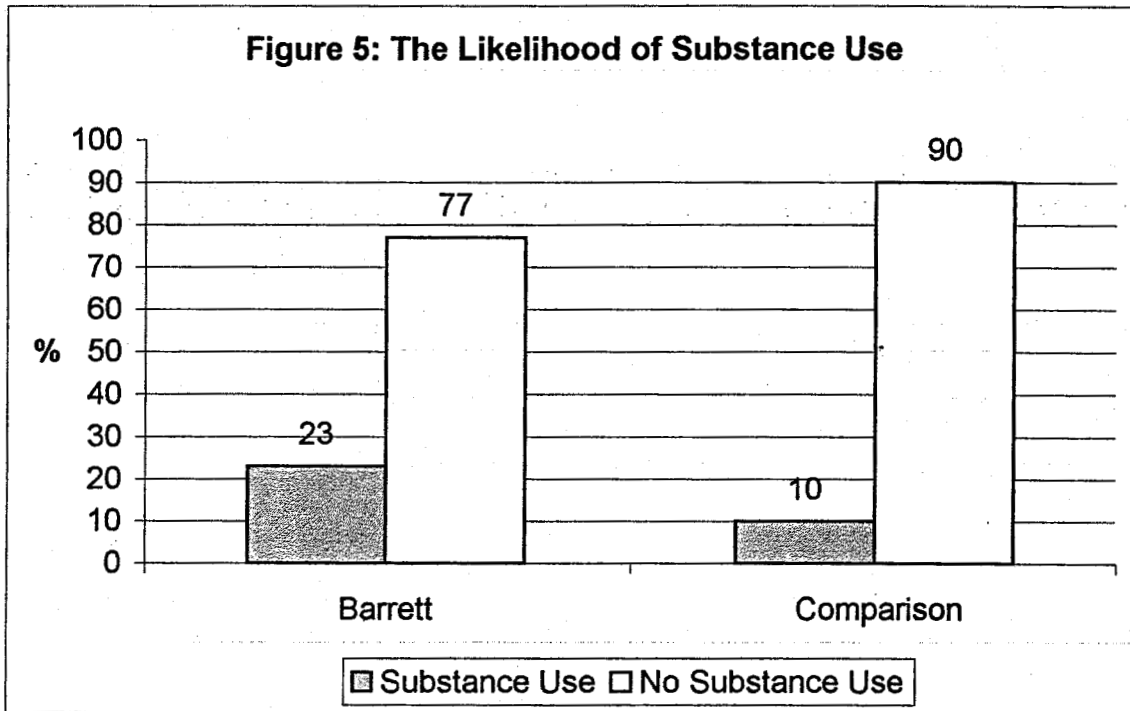
The hypothesis will be examined both through bi-variate and multi-variate methods. The following variables will be controlled for in the multi-variate models: prior commitments, sentence length, age, race, SASSI score, IQ score, and the total number of DSM IV categories applicable to the youth. It must be noted that that SASSI score was selected over the subjective granting of a mandatory or recommended need for substance abuse treatment since it is a standardized instrument found to be reliable with this population. Additionally, the inclusion of both scores is not performed because of the strong correlation between the variables.

A Look at the Effectiveness Overall: Barrett Youth versus Comparison Youth

Figures 3 thru 6 examine the percentage of youth who did or did not recidivate or show signs of substance use by the experimental and comparison group. In general, most youth regardless of facility placement were likely to be rearrested or reconvicted upon release. Specifically, Figure 3 reveals that 77 percent of the Barrett youth and 80 percent of the comparison youth were rearrested. However, the average number of rearrests is slightly higher among the comparison youth (mean = 3.6, sd = 5.0) compared with the Barrett youth (mean = 3.2, sd = 3.8), these differences are not statistically significant at the .05 level ($t = 1.25$).

Furthermore, Figure 4 displays that 56 percent of the Barrett youth and 58 percent of the comparison youth were reconvicted of at least one new offense upon release. Nevertheless, there is a statistically significant difference in the mean number of





reconvictions ($t = 2.0$) revealing that the comparison youth (mean = 1.68, $sd = 2.45$) were reconvicted more often than the experimental youth (mean = 1.63, $sd = 2.23$).

An examination of the use of a substance as reported by the parole officer and substance related charges (Figures 5 and 6) shows that the majority of the youth were not likely to use a substance or receive a substance related charge regardless of whether or not they received treatment at Barrett Juvenile Correctional Center. However, there is a significant ($t = 6.2$) variation in substance use, indicating that Barrett youth are more likely to use a substance as reported by the parole officer (mean = .34, $sd = .69$) compared to those detained at a traditional detention center (mean = .10, $sd = .34$).

Additionally, the average number of substance related charges a youth received during the follow-up period does vary by facility placement. Specifically, the average number of substance related charges received at the juvenile or adult level is .39 ($sd = .77$) for the Barrett youth and .28 ($sd = .67$) for the comparison youth. The means are significantly different at the .05 level ($t = 2.18$), indicating that the Barrett youth are more likely to receive a higher number of substance related charges than the comparison youth upon release.

Table 2 and 3 examine these relationships further to identify if the statistically significant differences remain while controlling for demographic characteristics, criminal characteristics, and standardized scores. As indicated, in Table 2, the number of rearrest, reconviction, and substance use is statistically significant. The relationships indicate that Barrett youth are less likely to be rearrested or reconvicted on any type of charge than the comparison youth (treatment variable), however, the Barrett youth are more likely to be viewed as using a substance than the comparison youth. Additionally, younger youth are

Table 2: OLS Models Predicting Rearrest, Reconviction, Substance Use, and Substance Related Charges for Barrett Youth and Comparison Youth (Treatment)

Variable	Rearrest (.056)	Reconviction (.037)	Substance Use (.045)	Substance Charges (.029)
Treatment	-.102*	-.121*	.128*	.020
Number of Priors	.056	.146*	.068	-.013
Sentence Length	.043	.012	-.055	.023
Age	.206*	.042	.035	-.132*
Race	.071	.002	-.072	.092
SASSI Score	.033	.083	.055	-.042
IQ Score	-.004	-.019	-.014	.053
DSM IV	.045	.046	.047	-.018

*Significant at the .05 level.

Table 3: Logit Models Predicting Rearrest, Reconviction, Substance Use, and Substance Related Charges for Barrett Youth and Comparison Youth (Treatment)

Variable	Rearrest (.029)	Reconviction (.046)	Substance Use (.046)	Substance Charges (.023)
Treatment	-.039	-.429*	.705*	.179
Number of Priors	.343	.528*	.496*	-.026
Sentence Length	.012	.002	-.036	.013
Age	-.281*	.048	.092	-.163
Race	.395	.189	-.529	-.573*
SASSI Score	-.047	.161	.231	-.073
IQ Score	.000	-.002	-.002	.003
DSM IV	.122	.219*	.044	.084

*Significant at the .05 level.

more likely to be charged for a substance related offense and their likelihood of arrest is higher than older youth.

Table 3 indicates that there is a significant difference in the outcome of youth (reconviction and substance use) by facility placement. The relationships are in the same direction as indicated in Table 2, that is, Barrett youth are less likely to be reconvicted but more likely to engage in a substance as reported by their parole officer. Additionally, the results show that youth who were previously committed have a higher likelihood of recommitment and substance use. The results also show that non-white youth have a lower likelihood of substance related charges than white youth and those who are assessed with a higher number of DSM IV areas are more likely to be reconvicted.

Overall, the bi-variate relationships for reconviction and substance use were maintained in the multi-variate analysis. And the bi-variate relationship revealing that Barrett youth had a higher number of substance related charges was not found when controlling for additional influences

Examination of variations between the two groups parole conditions indicates that regardless of facility most youth satisfactorily completed the requirements of counseling, curfew, employment, and education (see Figures 7 – 11). To illustrate, Figure 8 shows that 43 percent of the comparison youth and 50 percent of the Barrett youth satisfactorily completed the counseling requirement. It must be noted that the majority of youth were not required to be monitored electronically (Figure 11).

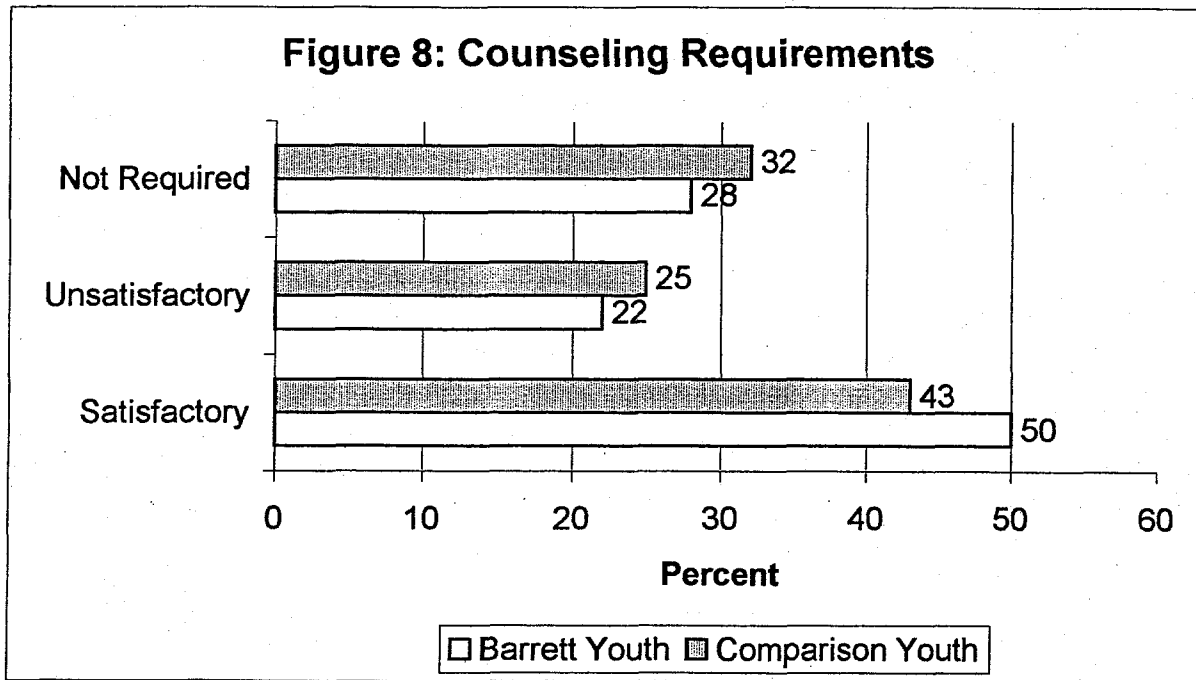
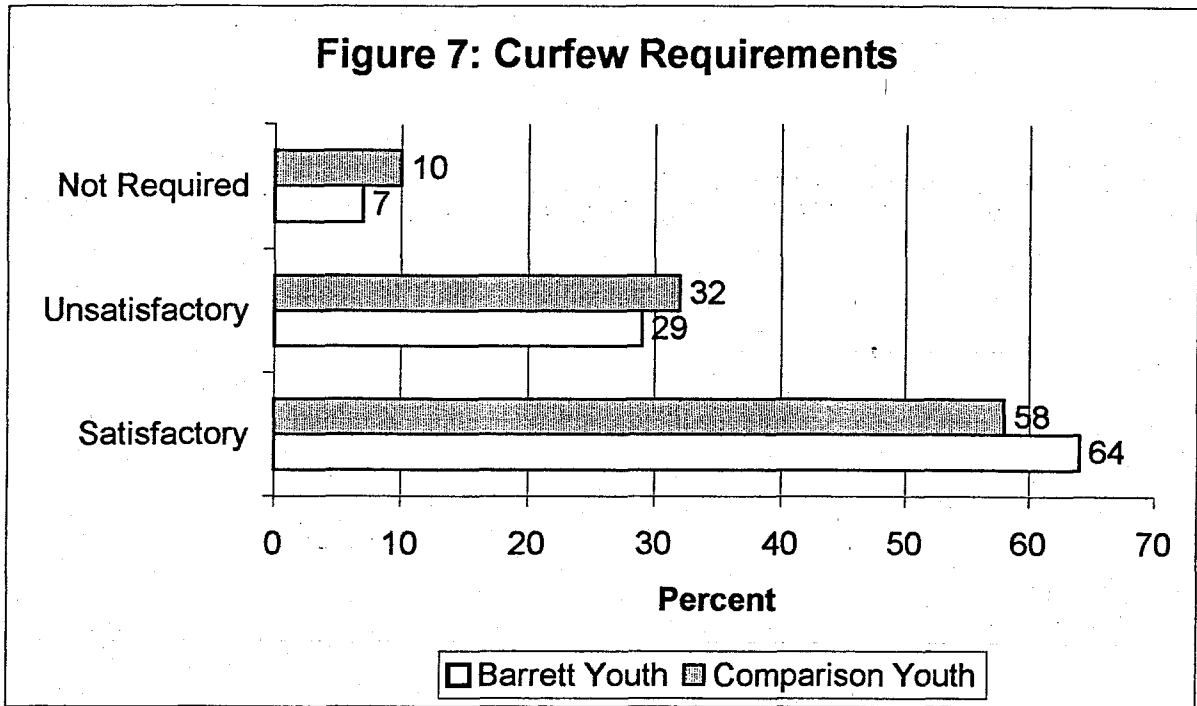


Figure 9: Educational Requirements

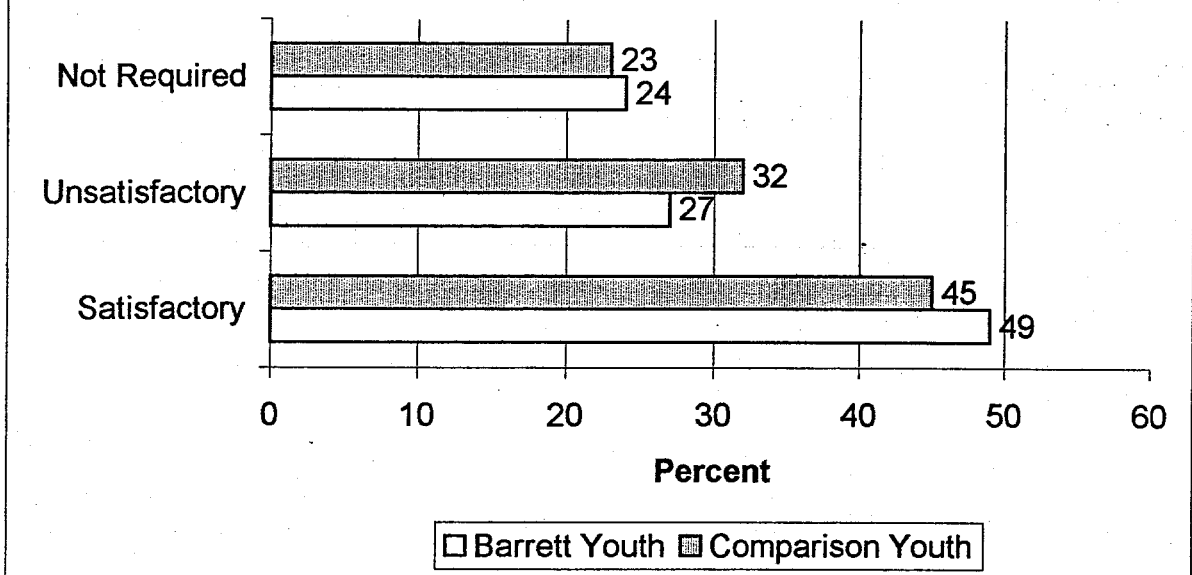
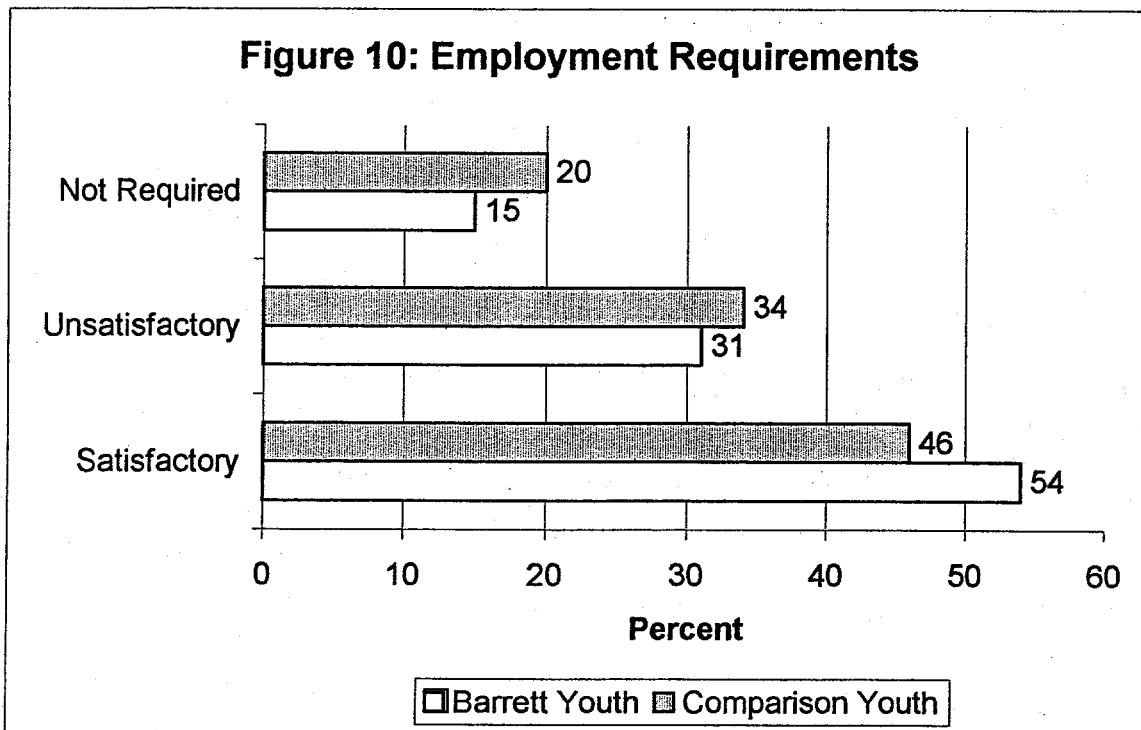
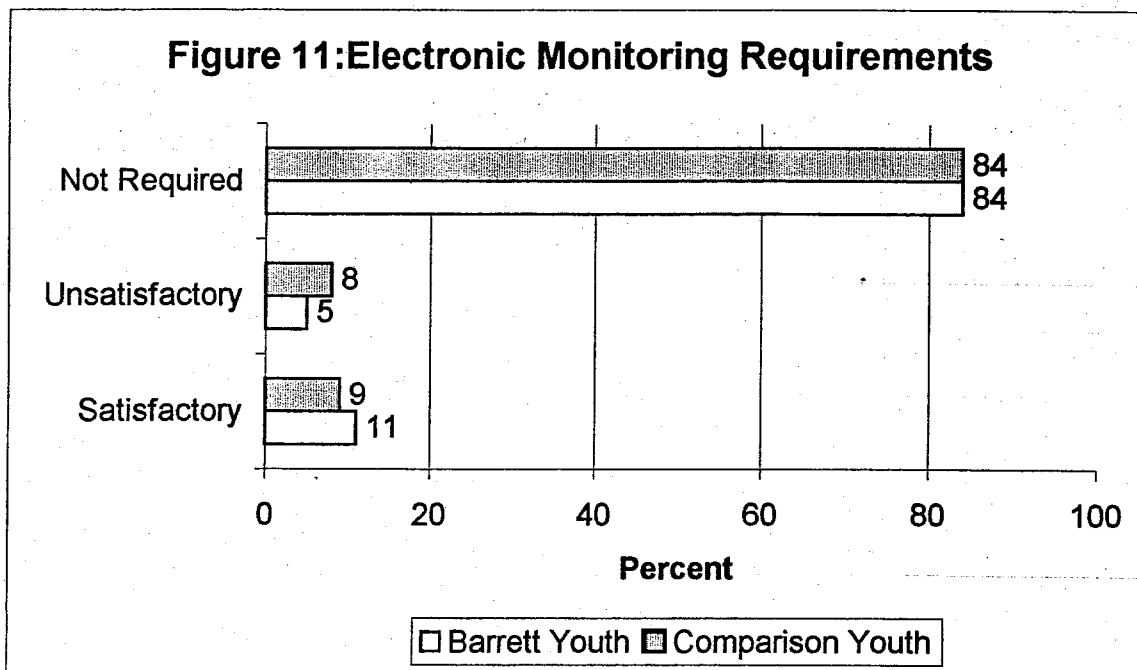


Figure 10: Employment Requirements



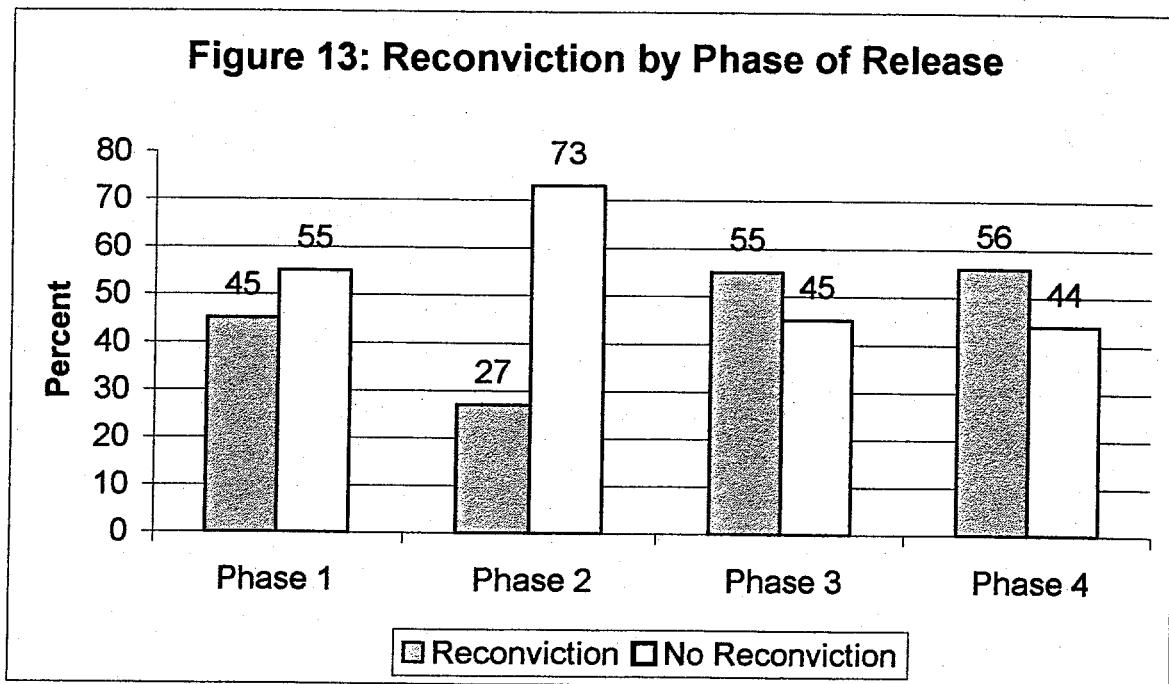
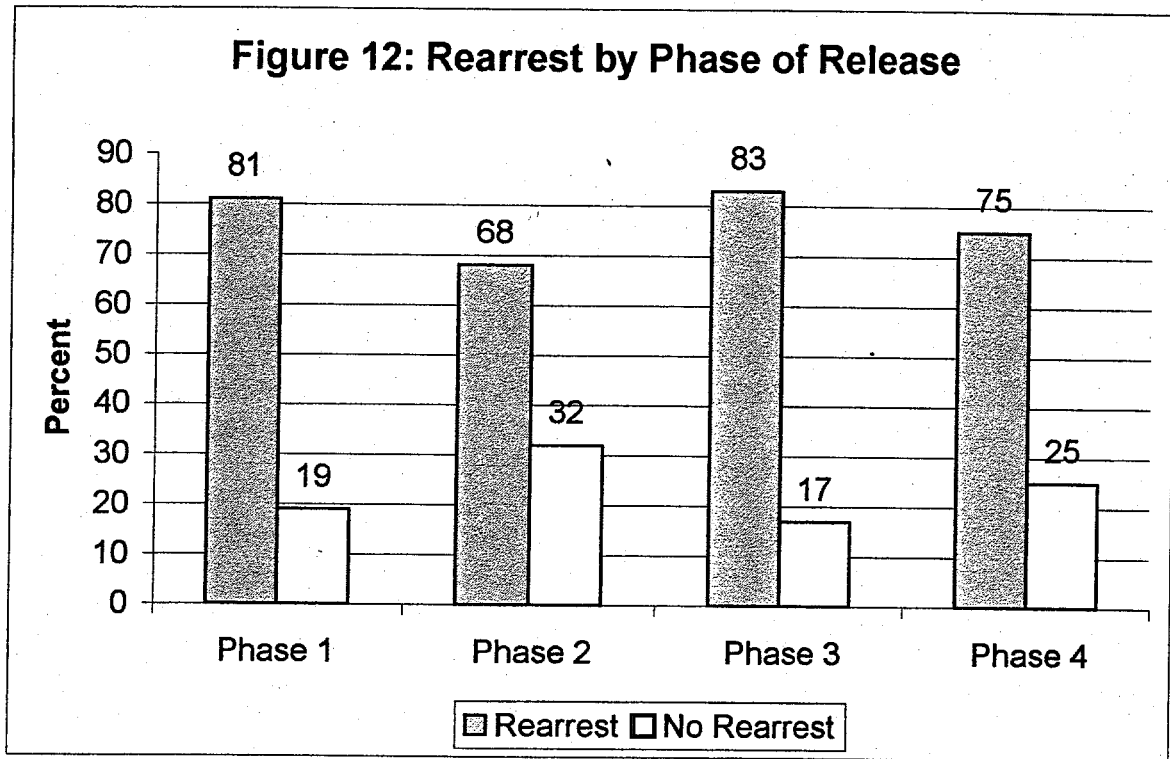


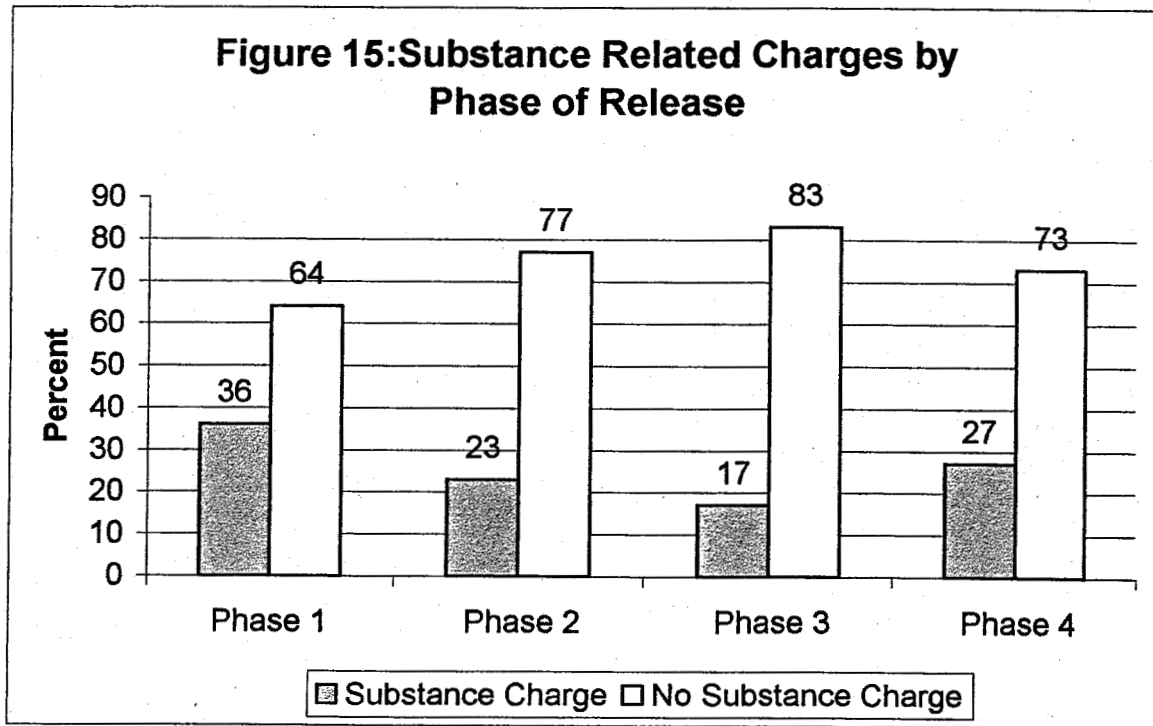
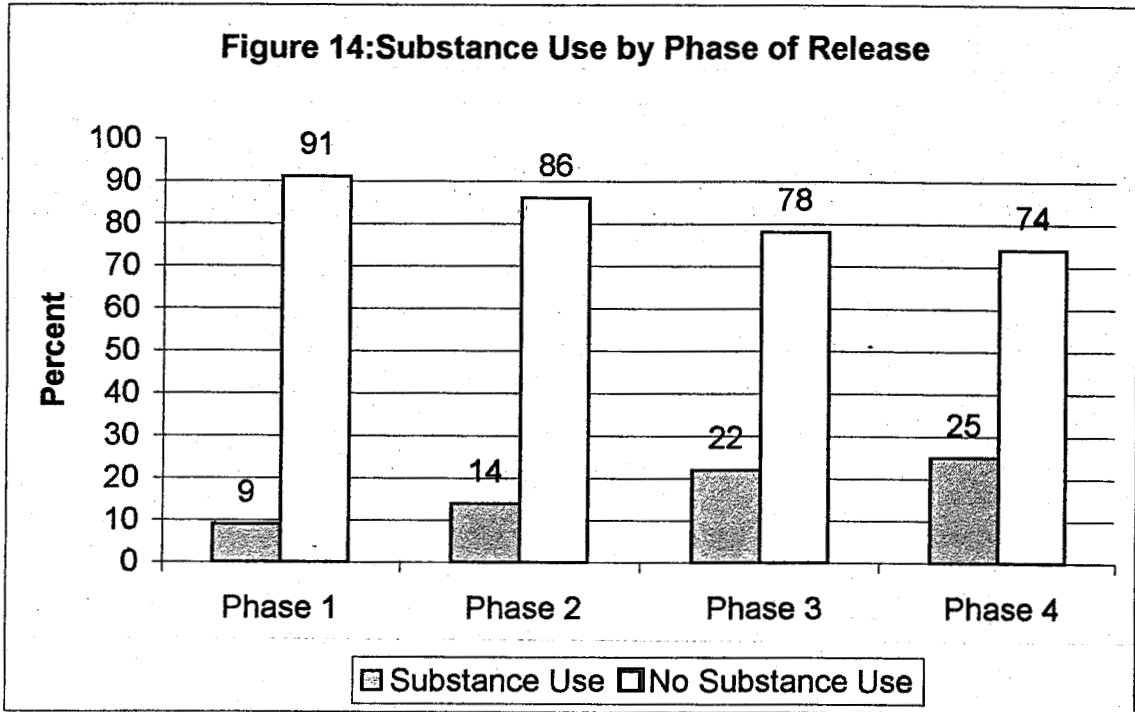
In sum, although most offenders regardless of facility placement were rearrest and reconvicted and were not using a substance or charged on a substance related offense; the number of reconvictions, substance use incidents, and substance related charges are significantly different among the bi-variate models. Again, indicating that the comparison youth are more likely to have a higher number of reconvictions than the Barrett youth and the Barrett youth are more likely to be viewed as using a substance by the parole officer reports and have a higher number of substance related charges than the comparison youth. The bi-variate relationships for reconviction and substance use were maintained in the multi-variate analysis. And the bi-variate relationship revealing that Barrett youth had a higher number of substance related charges was not found when controlling for additional influences. Additionally, most offenders complied to the requirements of parole in spite of facility placement.

A Look at the Effectiveness of Barrett Youth Only

The Barrett youth are considered in order to investigate any measurable difference in outcome based on a quantifiable program characteristic. As indicated earlier the treatment offered at Barrett is grounded in a graduated system of phases to release. Each goal has its own goals and objectives. Given this, youth who are discharged without completing all four treatment phases of release have not been exposed to the entire treatment regime offered at the Center, so it makes logical sense that the outcomes should vary by treatment phase of release (i.e., phase four youth having more positive outcomes compared with phase three, two, or one; the outcome of phase three youth being more satisfactory than phase two or one) and between those who have completed the entire program (completers, phase four) to those who did not complete the program (non-completers, phase one, two, and three). The expectation is that those who have received all four-treatment phases of release will have less involvement in criminal activity or substance use.

Figures 12 – 15 show the percentage of youth who were rearrested, reconvicted, suspected of substance use, and charged with a substance offense by the phase of release. Figure 12 shows the majority of youth are rearrested regardless of phase of release. That is, 81 percent versus 19 percent of phase one youth, 68 percent versus 32 percent of phase two youth, 83 percent versus 17 percent of phase three youth, and 75 percent versus 25 percent of phase four youth were rearrested. There is some disparity among the mean number of rearrest by the phase of release (phase one = 2.27, phase 2 = 2.27, phase three = 3.17, and phase four = 3.10), however the differences between the groups is not statistically significant.





A general look at Figure 13 shows that phase four youth are not reconvicted less than the other phases. Further the results reflect phase one, three, and four youth having a fairly even split among the likelihood of being reconvicted and not being reconvicted (i.e., 45 percent reconvicted versus 55 percent not reconvicted of phase one youth). And again there are some differences in the mean number of reconvictions (phase one = 1.09, phase 2 = 0.50, phase three = 1.50, and phase four = 1.61), although the differences are not significant.

Figure 14 and 15 indicate that the majority of youth, in spite of treatment phase, did not use a substance according to parole officer reports nor were they charged with a substance related offense during the follow-up period. Likewise, a substance related charge was not issued for the Barrett youth based on phase of release (see Figure 13). Since no significant bi-variate relationships were revealed between the outcome variables and phase of release, a multi-variate analysis was not conducted.

Beyond treatment phase of release the next analysis examines program completers (phase four youth only) to those who did not complete the entire program offered (phase one, two, and three youth). A youth may not complete all phases of treatment if his sentence expires or he is transferred to another institution. So such an analysis is a proxy for looking at program drop-outs. It is a proxy because the youth have no control over participation; once at Barrett the program is a required part of their sentence. Figures 16 – 19 show the percentage of rearrest, reconviction, reported substance use, and substance related charges among completers and non-completers. Figure 16 reveals the majority of offenders were rearrested of an offense during the follow-up period (79% non-completers and 75% completers) with an average number of rearrests

Figure 16: Rearrest by Program Completion

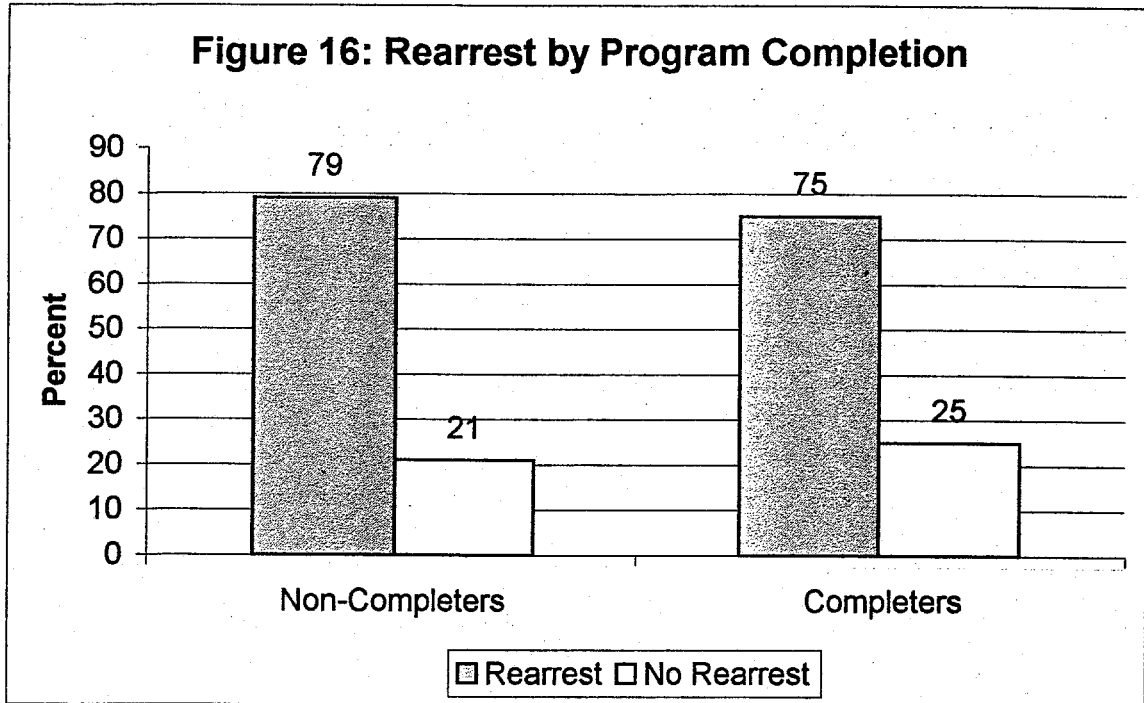
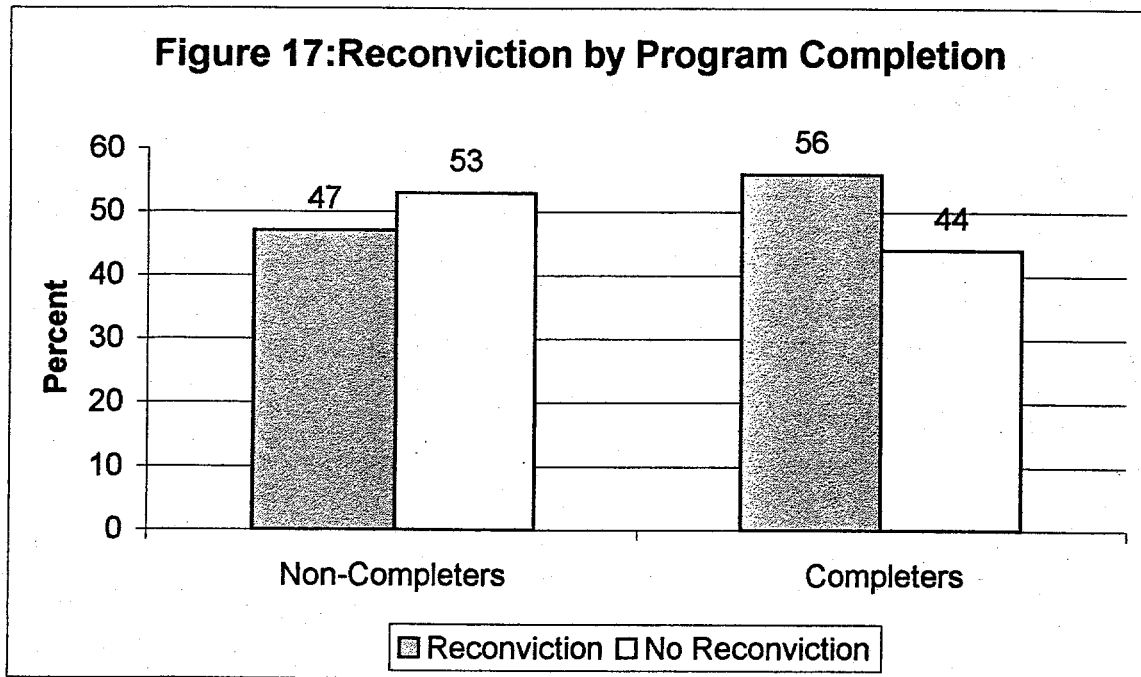
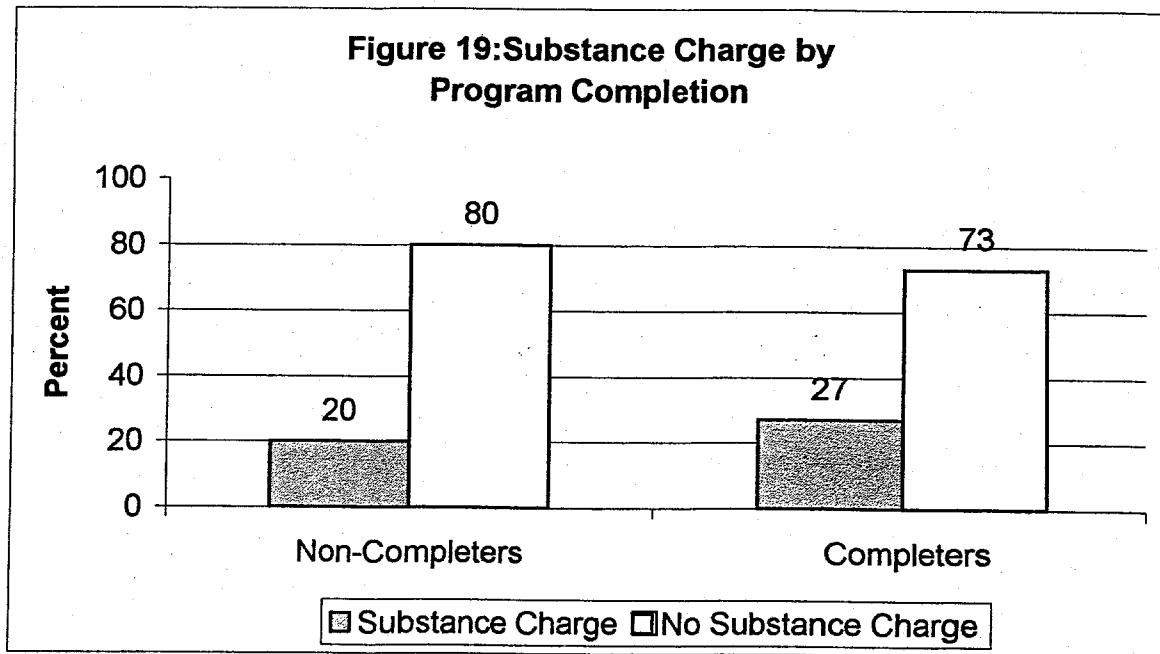
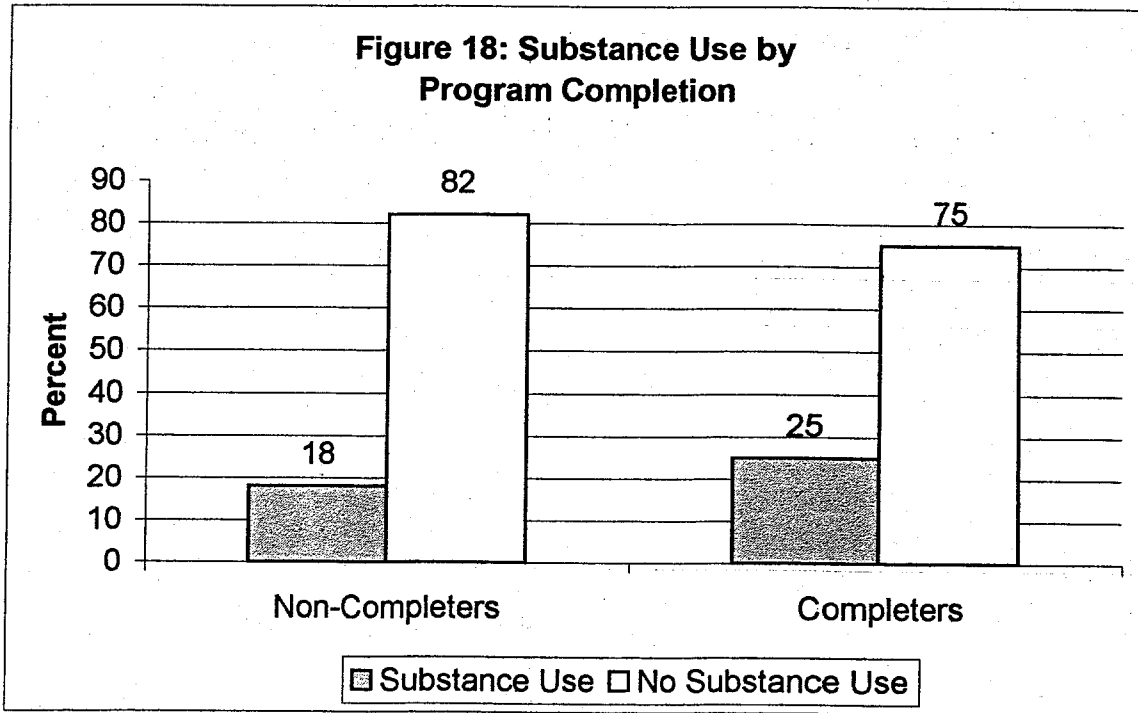


Figure 17: Reconviction by Program Completion





being 2.75 (sd = 3.37) for non-completers and 2.94 (sd = 3.51) for completers. Although among the completers 56 percent were reconvicted and 44 percent were not, compared with 47 percent of the non-completers being reconvicted and 53 percent not being reconvicted, the mean number of reconvictions does vary among completers and non-completers in the expected directions (see Figure 17). Specifically, the average number of reconvictions is lower for the completers (mean = 1.61, sd = 2.19) than the non-completers (mean = 2.06, sd = 1.22), this difference is statistically significant ($t = 2.25$).

In general, the pictorial look at substance use and substance related charges demonstrates that the majority of the offenders did not use a substance or were not charged for a substance related offense (see Figures 18 – 19). However, there is a statistically significant difference ($t = 6.0$) among the average number of substance related charges received with the non-completers having a higher average (mean = .84, sd = .46) than those who completed the entire program (mean = .38, sd = .77).

Further analysis reveals that the significant differences uncovered in the bi-variate analysis are not maintained in the multi-variate analysis (see Tables 4 – 5). That is, all multi-variate models reveal an insignificant difference regarding all outcome variables and whether or not a youth completed the program. Table 4 does reveal significant relationships among few variables. Specifically, the number of times a youth was rearrested is higher for older youth and those with more DSM IV areas of concern; those with shorter a sentence length have a higher likelihood of substance use incidents; and younger youth have a higher number of substance related charges than older youth.

Table 4: OLS Models Predicting Rearrest, Reconviction, Substance Use, and Substance Related Charges Among Barrett Youth Only Examining Program Completers with Non-Completers

Variable	Rearrest (.076)	Reconviction (.045)	Substance Use (.053)	Substance Charges (.064)
Number of Priors	-.109	-.004	.012	-.060
Sentence Length	.048	.094	-.138	.032
Age	.171*	-.001	-.054	-.178*
Race	.025	.051	-.138	.086
SASSI Score	-.082	.054	.010	-.100
IQ Score	.048	-.023	-.019	.089
DSM IV	.168*	.075	.094	.051
Completers	.052	.131	.070	-.044

Table 5: Logit Models Predicting Rearrest, Reconviction, Substance Use, and Substance Related Charges Among Barrett Youth Only Examining Program Completers with Non-Completers

Variable	Rearrest (.025)	Reconviction (.069)	Substance Use (.050)	Substance Charges (.036)
Number of Priors	-.070	.026	.323	-.150
Sentence Length	.038	.010	-.089	.022
Age	-.201	.018	-.187	-.208
Race	.441	.312	-.802	.232
SASSI Score	-.079	.095	-.042	-.235
IQ Score	.002	-.001	-.002	.004
DSM IV	.098	.351	.095	.153
Completers	-.292	.589	.370	-.122

To recap, the phase of treatment a youth receives while at Barrett Juvenile Correctional Center does not have a significant impact on the youth's progress when released from the institution. However, looking at those who did complete the program versus those who failed to complete the program, a significant bi-variate difference is uncovered among two of the outcome variables: reconviction and whether a youth was charged for a substance offense, however these relationships are not maintained in the multi-variate models.

Summary

The analysis examined two areas: (1) the effectiveness of Barrett youth to similar youth housed at a traditional detention center and (2) the impact of the program on the Barrett youth only. The results indicate that Barrett youth are less likely to be reconvicted of a new offense but more likely to use a substance upon release in relation to the comparison youth. And, the treatment phase of release does not influence the success or failure of the outcome of youth released from Barrett Juvenile Correctional Center. Furthermore, only bi-variate models which do not control for additional influences, reveal significant relationships between program completion status and reconviction or a substance related charge. Thus, overall, there are few significant multi-variate findings.

SECTION 5: SUMMARY AND CONCLUSIONS

The Commonwealth of Virginia has designated one institution as a single-purpose treatment center for substance using offenders. Barrett Juvenile Correctional Center is a medium security institution which has the same physical structure as the traditional institutions in Virginia. The difference between Barrett and the traditional institutions is the fact that all youth admitted to Barrett Juvenile Correctional Center, since 1993, have received an intensive treatment program that focuses not only on the substance abuse issue but also criminality in general.

The goal of Barrett is to reduce or eliminate future involvement with substance use and criminal behavior among male youth who have a mandatory or recommended need for substance use treatment and a sentence length of no less than six months. This is accomplished by providing *all* youth with a highly structured program that seeks to achieve change through the use of a therapeutic community, cognitive-behavioral techniques, peer accountability, and a system of treatment phases toward release. More important, the Center uses a therapeutic community approach to seek change. Whereas, in the traditional institutions treatment is provided in the areas of substance use, sex offender treatment, anger management, and skills counseling and only made available to those deemed "in need" of treatment. The treatment protocol available within the traditional institutions can vary both within and between institutions.

Due to the differences between the facilities it is important to investigate any differences in the outcomes of the youth. Specifically, this report has three primary objectives: (a) to assess the current state of treatment by evaluating the institutional experience through the use of the CPAI, (b) to identify similar youth to those admitted to

Barrett but who were detained at another institution, and (c) to evaluate the outcome of the youth based on the type of facility a youth was admitted to (treatment versus traditional).

The Correctional Program Assessment Inventory was implemented at Barrett Juvenile Correctional Center and Hanover Juvenile Correctional Center. The comparison institution was selected due to its ability to admit youth who met the selection criteria at Barrett but were not admitted due to bedspace availability, and based on the fact that its proximity, size, and structure are close to Barrett. The results of the CPAI do show variations among the institutions with Barrett needing some additional improvement in the area of program characteristics and Hanover must expand in the areas of program characteristics, staffing, evaluation, and program implementation. Overall the score received by Barrett is higher than that of Hanover's indicating that Barrett adheres more closely to the principles of effective intervention than Hanover.

Furthermore, the CPAI scores for both institutions are compared to normative data. The normative data consists of a sum score of over 200 CPAI's previously conducted. Both Barrett and Hanover overall scores are higher compared with the normative data. So, both institutions appear to be implementing the principles of effective intervention to a higher degree than found throughout the country. Adherence to the principles of effective intervention is theoretically linked to a more successful outcome, therefore, the differences between the outcomes of the youth admitted to the facilities must be examined.

It is important that an adequate comparison group be selected in order to identify the impact of the treatment program. Selection of the comparison group occurred

retrospectively for this study, in the sense that when a youth was released from Barrett Juvenile Correctional Center a similar youth was selected from those released from a traditional institution in Virginia. Specifically, the youth were matched on the following variables: gender – males only, age at admission, date of admission, race, date of release, mandatory or recommended need for substance use treatment, and a sentence length of no less than six months. The variables simulate both Barrett's admission criteria and variations among individuals.

This process yielded a sample size of 818 youth who were released from a facility between July 1, 1998 and June 30, 2000. In general, the youth released from Barrett were similar to those released from a traditional institution with regards to age, race, prior commitments, need for substance treatment, SASSI score, IQ score, and DSM IV assessment. The sample selection method did yield a difference between the youths sentence length, indicating that, on average, the comparison youth served a longer sentence than the experimental youth (11.7 months versus 13.5 months). Such a difference may indicate the comparison youth's committing offense or background may have been more serious or that the comparison youth's sentence length was extended due to behavioral issues while at the institution.

After the sample selection process was completed the data were gathered to investigate the outcome of the youth. The study operationalizes the outcome as the likelihood and number of rearrests, reconvictions, substance use incidents as reported by the parole officer, and substance use charges. The results reveal that the majority of youth were rearrested and reconvicted upon release from an institution, however, the number of reconvictions vary by facility. The direction of the significant bi-variate

relationship indicates that the comparison youth had a higher number of reconvictions than the Barrett youth. Furthermore, this significant relationship was maintained in the multi-variate models that controlled for variations among offender characteristics.

The analysis also found that most youth were not using a substance or charged with a substance related offense upon release regardless of facility placement. Nevertheless, the youth released from Barrett had a significantly higher number of substance related charges and reported incidents of substance use from parole officer reports during the follow-up period than the comparison youth, although this relationship was not maintained in the multi-variate models. These findings are in the opposite direction than expected. However, it may be that parole officers probe into substance issues more frequently and more in-depth with the Barrett youth since this may be their primary area of need as indicated by admission to such a facility. This result may also be due to the variation in the SASSI scores between the two groups. That is, the Barrett youth may be more dependent on a substance and in need of additional services than currently offered in the community.

In addition to examining the effectiveness by evaluating Barrett youth with comparison youth, the analysis considered Barrett youth only to identify any programmatic differences. The results show that the treatment phase of release (phase one, two, three, or four) did not significantly impact the outcome of the youth. The data were further examined to consider program completion (phase four youth only) and program non-completion (phase one, two, or three). This analysis uncovered significant bi-variate differences when looking at reconviction and substance related charges, however, the differences were not maintained in the multi-variate analysis.

In conclusion, the program offered at Barrett Juvenile Correctional Center is having a *limited* impact on the future criminality (reconviction) of the offenders compared with similar youth released from a traditional detention center. However, the expected differences among the Barrett youth only due to the amount of exposure to the program does not emerge. The findings in the study may have emerged for a variety of reasons: (1) the adaptation of the program, especially the therapeutic community, to the institutional setting, (2) the inability to maintain the program upon release from the community, and (3) confounding differences.

The CPAI has rated the Barrett program as very satisfactory because it addresses several essential components that have been shown to have a positive influence on the youth's outcome. However, the report points to a variety of issues that may have impeded on the smooth implementation of a sound program. For example, the report reflects that the staff members (treatment and custodial) are deficient in training regarding the treatment program. If the staff members are not adequately trained then the potential power a program has, as written, is compromised. Especially given the fact that the program operates under the guise of a therapeutic community. The lack of training decreases the ability of the therapeutic community to take place.

In fact, previous observational research conducted at Barrett reveals variations in the level of a therapeutic environment taking place by cottage (Gordon and Stichman, forthcoming). Specifically, the research indicates that when all staff, regardless of their position, worked together to administer treatment then the youth took on a more vital position in the treatment process. It was also in these cottages that there was an aura of mutual respect between youth and staff and among the youth themselves.

The literature regarding substance abuse outcomes of institutionalized offenders is demonstrating the need to continue the program efforts after the offender is released into the community (De Leon 1990 – 1991; Martin, Butzin, and Inciardi 1995; Wexler, Melnick, Lowe, and Peters 1999). Barrett Juvenile Correctional Center does not extend the program into the community or offer any sort of transition (i.e., halfway house) when reentering society. All youth are placed on parole and the requirements of parole will vary by youth and available services in the youth's locality. Given this, the impact that treatment may have had on the youth can be quickly diminished once the youth is placed in their original surroundings with limited, if any, support.

And finally, there are a variety of confounding factors that may have influenced the results. The SASSI scores reveal that the Barrett youth are more likely to be dependent on a substance than the comparison group, although the SASSI scores were not significantly related to the outcome, this suggests the two groups may be more different than desired. More important, there is no available information on the type of substance the youth is dependent upon and this can impact the ability of the therapeutic community and the outcome of the youth (Chermack and Blow 2002; Singh and Joe 1981). The LEADER program also has an adverse impact on the program offered at Barrett Juvenile Correctional Center. Although not all components of the militaristic model have been implemented at Barrett, the Center does utilize some forms of "corrective actions" within its structure. Such a model reduces the ability of a true therapeutic community to exist and research does not indicate any changes in the behaviors of the youth longitudinally (Gover, Styve, and MacKenzie 2002).

In general, the program's structure incorporates many of the key principles required to make a difference in the youth's outcome, thus some changes in the execution should enhance the outcome of the youth. Accordingly, additional resources are required to increase the implementation of the program, tailor the program for the youth, and provide sufficient training to all staff. It is also fundamental that an aftercare program be created to assist the youth in maintaining a drug-free and crime-free lifestyle; a community-based therapeutic environment is recommended. And finally, the implementation of any and all components of a militaristic model need to discontinue since they are counter to the goal of a therapeutic community as a primary means to achieve change.

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