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Correctional Placement of Addicted Offenders vs. Clinical Recommendations for Substance Abuse Treatment

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CORRECTIONAL PLACEMENT OF ADDICTED OFFENDERS VS. CLINICAL RECOMMENDATIONS FOR SUBSTANCE ABUSE TREATMENT

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Increasing attention in the criminal justice system has been on the large portion of offenders that have alcohol and drug-related problems or addictions. Despite collaboration between the criminal justice system and treatment service providers, there are differences in organization, objectives, and approaches to assessment. A mismatch may result between the criminal justice referral placements, based largely on the limited contractual referral options. This mismatch is an issue because undertreating individuals can be clinically harmful and overtreatment can be a waste of resources.

In order to determine the extent and nature of the potential mismatches, this study conducted a content analysis of treatment records from a residential community corrections program in Western Pennsylvania (N=153). Raters reviewed intake material in patient records to determine the appropriate treatment recommendation based on patient placement criteria. This "level of care" recommendation was compared to the actual placement referral made by the criminal justice system.

Two hypotheses were examined : 1) a large percentage of offenders are referred to levels of care that are not clinically appropriate and 2) a substantial portion of offenders is referred to lower levels of treatment than is clinically appropriate and thus are undertreated. VAR by VAR were cross-tabulated to determine the extent and nature of

the mismatch. Logistic regressions were computed to explore the possible influences of referral source and co-occurring diagnosis on the mismatch. Demographics of the offenders were also entered into the equation as control variables.

This study demonstrated that offenders referred from the criminal justice system were mismatched with clinical recommendations 64% of the time and lead to the undertreatment of offenders. The group of greatest concern was offenders who were referred for work-release but clinically recommended for inpatient. Referral source and existing co-occurring psychiatric conditions were not significant predictors of mismatch as expected. Significant implications exist for the substance abuse treatment of addicted offenders, use of public resources, and criminal justice policy. For instance, a primary recommendation is made for an expansion to a wider range of treatment service options, varying in intensity, to be offered to offenders with substance abuse problems.

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TABLE OF CONTENTS

LIST OF TABLES

Table Page

CHAPTER 1

THE PROBLEM

Statement of the Problem

The criminal justice system has increased its attention on the large portion of offenders in the criminal justice system that has alcohol and drug-related problems or addictions. There are efforts as part of the "war on drugs" that have packed the nation's prison with hundreds of thousands of nonviolent drug offenders, draining resources from state and local budgets while the drug problem persists (Marks, 2000). The state prison population in the United States increased by more than 300% from 1980-2003 (Harrison & Beck, 2004). Some states have seen even greater increases. For example, Pennsylvania has experienced a 400% increase during the same time period (Pennsylvania Department of Corrections, 2008). A report released by the U.S. Department of Justice indicated that the correctional population reached a new high in the United States with almost 6.9 million offenders under correctional control at the end of 2003 (Glaze & Palla, 2004).

Offenders have multiple problems, including drug and alcohol abuse, criminal behavior, mental disorders, medical conditions, and difficulty finding and keeping employment and housing. More than 80% of state prison inmates have indications of serious drug or alcohol involvement (Belenko & Peugh, 2005). A variety of innovations have been developed to respond to this problem including referring addicted offenders to drug and alcohol treatment as part of the conditions of parole and probation when released from prison or while on community supervision. In many jurisdictions a major catalyst in the move toward offender rehabilitation has been economic pressure of overcapacity that has accompanied dramatic increases of prison populations (Birgden,

2002). Community corrections have established a collaboration with service providers for offenders to be placed into drug and alcohol treatment facilities. There is increased recognition that an offender's movement from prison to the community is most effectively accomplished as a step-down process in a structured, supportive environment (Federal Bureau of Prisons, 2000; Simpson et al., 1999). Substance abuse treatment, both in prison and in the community, has been shown to reduce both substance use and criminal behavior among offender populations (Zanis et al., 2003).

Criminal Justice System and Community Corrections

The collaboration between the criminal justice system and addiction treatment providers usually works through a representative of the criminal justice system, a probation or parole office, referring an offender for drug and alcohol treatment based on an unstructured review of the case and what is generally referred to as "clinical judgment." A treatment facility generally has been contracted to offer certain levels of treatment or prescribed programs for the referrals, such as in-patient treatment or work-release supervision for a set period. This approach has done much to increase the treatment for addicted offenders and also relieve some of the burden (i.e. bed overcapacity, operation costs) in the criminal justice system, but it has also uncovered conflicts between the criminal justice system and treatment facilities.

As a consequence of two very dissimilar approaches to assessment and placement there is a high likelihood of a mismatch between the criminal justice referral placement and what would be the prescribed clinical recommended placement or "level of care" provided by the treatment facility. This likely mismatch appears to be related to some major differences in assessment, organization, and objectives. In terms of assessment,

the criminal justice staff tends to base their referral and placement on a review of criminal case records and brief observations of offenders. Often assessments consist of a review of the offender's history by a corrections staff person following a form interview protocol (Kubiak et al., 2005). A glaring weakness of community-based substance abuse programs for offenders is that there is no underlying theoretical basis for the selection of program participation (Gendreau et al., 1994). Often the offender has been arrested and incarcerated or is under community supervision for a drug and alcohol-related crime that identifies him or her as eligible for drug and alcohol treatment.

The benefit of risk or problem severity assessment tools to assist in the identification of offender treatment need has been undervalued in the criminal justice system (Knight et al., 2006). According to Knight et al. (2006), a highly subjective assessment process has emerged based on criminal justice staff experience and "gut feeling" in making a determination of treatment needs for offenders. Furthermore, current assessment tools commonly used in correctional settings have limitations for identifying multiple clinical, supervision, and social service needs for the offender population (Belenko, 2006).

In terms of organization, the criminal justice system in some states, such as Pennsylvania, contract for only two major options of services (e.g. inpatient or work-release) that fit within the criminal justice system concept of community corrections and the required containment and supervision that needs to be established. The criminal justice system is a complicated system dedicated first to security, control, and punishment (Rybolt, 1995). There are further organizational challenges for facilitating a collaboration of referral to treatment services from the criminal justice system that could

lead to a mismatch of services. First, parole officers often have high case loads that limit their abilities to assess for and manage service delivery (Belenko, 2006; Lurigio, 2001). Second, parole supervision models have a tendency to emphasize public safety and monitoring, while having a low tolerance for violations of parole conditions (Belenko, 2006). Third, line staff currently hired in the criminal justice system do not have the background or qualifications necessary to conduct "clinical" assessments of offender risks, particularly for special categories (e.g. mental health, substance abuse, sex offender) and multiple problem offenders (Byrne & Pattavina, 2006).

Offenders referred to substance abuse treatment with a primary substance dependence diagnosis as well as a secondary co-occurring mental health diagnosis usually require more intensive treatment services than offenders who are referred with one primary diagnosis of substance dependence. Consequently the offenders may be mismatched regarding treatment. There are a growing number of incarcerated offenders who have co-occurring disorders (e.g., mental health diagnosis, medical condition). Published estimates document that more than half the individuals with substance use disorders also have mental disorders (Volkow, 2003). Medical problems appear to be common among prisoners in state and federal institutions (Hiller et al., 2005). For example, Fazel et al. (2001) found that older prisoners had significantly more health problems than both younger prisoners, and those of similar ages in the general community. Many offenders do not receive appropriate assessment or diagnosis of existing biomedical conditions and may not be referred to appropriate treatment services. Substance abuse treatment programs are often not equipped to address the mental health or medical needs of patients suffering from co-occurring disorders and may need to be

stabilized in a primary mental health or medical setting before being referred for alcohol and drug treatment (Ax et al., 2007).

The rationale for these limited service options may be the overall objectives of the criminal justice system. While many jurisdictions have recently invested significant resources to develop and implement an offender rehabilitation approach in corrections, the government's investments have often been accompanied by an explicit expectation that the efficacy of the rehabilitation approach must be shown by reducing the number of prison beds occupied (Ogloff & Davis, 2004). The driving force in community corrections is to receive released offenders from incarceration and re-integrate them into the community by first providing temporary housing and employment placement, while maintaining the care, custody, and control of each offender. It can be argued that in Pennsylvania, for example, since the operating bed capacity has been over 110% (PA DOC, 2008) for the past year, a priority would be to increase the number of referrals into community corrections.

Drug and Alcohol Treatment Facilities

Conversely, drug and alcohol treatment facilities generally follow a more structured system of assessment, a greater range of treatment options, and a more fundamental objective for recovery. Assessment is the first step in determining what interventions or services are needed (Wexler & Fletcher, 2007). Licensed drug and alcohol treatment facilities are required to utilize a clinical assessment that contains placement criteria from the American Society for Addictive Medicine (ASAM) which is a standardized and nationally recognized criteria for assessing and placing individuals into drug and alcohol treatment services. ASAM is the most prominent set of guidelines

for matching patients to the most appropriate levels of care (ASAM, 1991, 1996). Some states, such as Pennsylvania, have developed their own placement criteria (PCPC-Pennsylvania Client Placement Criteria). Placement criteria are a clinician's guide to facilitate justified decisions about levels of service. Developed initially in response to managed care organizations, placement criteria require clinical justification for levels of care and health insurance company benefits from a reduction in overall costs for services. ASAM was designed to help clinicians and payers use and fund levels of care in a rational and individualized manner (Mee-Lee, 2005). A highly-structured and detailed systematic approach is taken by drug and alcohol-trained evaluators who complete a multidimensional assessment then refer to a criteria manual and checklist to arrive at a clinical recommendation. The process of assessment should identify key substance-use dimensions that determine the intensity and duration of treatment required (Weekes et al., 1999). Literature from the criminal justice field also suggests the need for proper and structured assessment when placing individuals into treatment. Offender assessments are not only common activities but also the results from these evaluations are important to correctional staff, offenders, and the community (Bonta, 2002). The assessment process yields important information that, if used to guide decisions regarding supervision and placement, can increase the effectiveness of a correctional program (Gendreau et al., 2002).

Treatment facilities often structure themselves to offer a range of levels of treatment services to meet the changing needs of addicted persons. These levels of care can include: evaluation, detoxification, inpatient rehabilitation, various levels of outpatient treatment, halfway house, and aftercare groups. With the overall objective of

assisting individuals in establishing and maintaining recovery from addictions, treatment facilities strive to offer levels of care that are appropriate to an individual's need. Evaluation research suggests that this approach of assessment and matched treatment tends to improve outcomes as well as efficiency of treatment, especially when using ASAM criteria (Kosanke, et al., 2002; Magura et al., 2003, 2005). Matching patient's clinical needs with level of care is most desired, undertreatment is harmful, and overtreatment is a waste of resources (Magura et al., 2003). There is increasing evidence within the criminal justice field as well that structured assessment and matched interventions, including various treatments and supervision levels, can improve outcomes and efficiency. Research has shown that offenders who are mismatched have a greater chance to recidivate. Offenders classified as low risk who receive an intensive level of treatment or *overtreatment* have more than double the rate of recidivism than the low risk offenders who received a minimal and appropriate level of treatment (Andrews & Bonta, 2003).

Offenders under the community supervision of a parole agent may likely require more intensive treatment services based on clinical needs, thus having more appropriate referral placements than offenders being referred from incarceration. Offenders under community supervision are often violating the conditions of parole by using drugs and alcohol prior to their referral and are experiencing disruptions (e.g. employment, family, and health problems) of their daily life. These offenders will more often than not meet ASAM and PCPC criteria for more intense levels of care (e.g. detoxification, inpatient residential, partial hospitalization) due to experiencing acute crisis with an associated intensification of symptoms of addiction (Pennsylvania Department of Health, 1999). On

the other hand, offenders referred directly from incarceration have often had periods of abstinence from using drugs and may not always require the highest treatment intensity.

Assessment Instruments and Placement Criteria

There are various assessment instruments and placement criteria that are used with individuals in both the criminal justice and addiction treatment fields. Instruments utilized in the criminal justice field are usually intended to measure offender risk level and predict recidivism. Offenders should be placed into services that are matched with their risk level. Assessments completed in the addiction treatment field are used to clinically assess the appropriate level of substance abuse treatment service based on criteria in order to match services with the need of the patient. The *Risk-Need-Responsivity* (RNR) theory provides a conceptual framework by specifying how an offender's criminogenic characteristics should drive the selection and implementation of correctional services. The risk principle states that the intensity of the programming and supervision should be matched to the risk level of the offender (Lowencamp & Latessa, 2004). However, numerous scholars have observed that in correctional practice, assessment information may be collected but seldom used. For example, Boothby and Clements (2000) found that existing assessment tools have not been widely adopted; the vast majority of clinicians in correctional facilities ignore risk assessment tools in assessing and treating inmates. It appears likely that the failure to refer or place offenders in appropriate substance abuse treatment based on a structured, standardized, and more comprehensive assessment would contribute to less successful outcomes including relapse back into addiction and an increase of criminal recidivism.

Studies have shown a substantial increase in relapse back into addiction as well as recidivism back into criminal behavior for individuals who were referred and placed into levels of care that did not match their needs. An Ohio study found that intensive residential programs were associated with an increase in recidivism rates of low to moderate-risk offenders, supporting the RNR theory (Lowenkamp & Latessa, 2005).

Summary

The most immediate issue that emerges, however, is the degree to which the current approach in community corrections results in a mismatch between criminal justice placement and drug and alcohol recommended level of care. Criminal justice policy, public resources, and the overall welfare of the addicted offender are at stake. In terms of criminal justice policy, stakeholders in community corrections and treatment for offenders can benefit from research that indicates a need for proper assessment and referral procedures. Providing appropriate assessment for offenders and matching their needs with various levels of service will allow for a more efficient use of public resources for community corrections. Lastly, addicted offenders can benefit from a change in policy and procedures if they are appropriately matched with services. Offenders will have a greater chance at recovery from addiction and a crime-free lifestyle if they are placed into services that match their needs. For these reasons, further investigation is warranted to explore whether a mismatch exists and what is the extent and nature of the mismatch.

Research Questions

The following research questions are proposed:

1. Is there a mismatch between the placement of offenders from the criminal justice system and clinical drug and alcohol placement recommendations?

2. If a mismatch exists, what is the extent and nature of the mismatch? Is there any congruency between the criminal justice referral and the clinical recommendation?
3. Does the referral source (i.e., department of corrections, parole) and diagnoses (i.e. secondary co-occurring diagnosis) influence the mismatch?

CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

Researchers estimate that 95% of released state inmates with drug abuse histories return to drug use (Martin et al., 1999), 68% are rearrested, 47% are reconvicted, and 25% are sentenced to prison for a new crime (Langan & Levin, 2002). This chapter will discuss a review of the literature from the criminal justice and addiction treatment fields in relation to assessment and placement of addicted offenders in drug and alcohol treatment.

The first section of this chapter will focus on the addiction treatment field. A discussion of patient placement criteria and the assessment process, managed care, and research on matching patients' level of care with their clinical needs will be presented. The second section of this chapter will focus on the criminal justice system field literature that discusses risk assessment, the risk principle, and research on matching offenders' risk level with programming. The third section of this chapter will focus on the criminal justice literature that discusses a need for standardized assessment and placement matching protocols for offenders, specifically patient placement criteria and other structured assessments used in the addiction treatment field. The fourth section of this chapter will focus on offenders with co-occurring disorders, including mental health and medical conditions and how offenders that have co-occurring disorders are at risk for being mismatched when referred into services. The fifth section of this chapter will focus on goal-conflict and organizational theory of the criminal justice system. These two paradigms will provide a framework to explain the structure, organization, and priorities

of the criminal justice system and how they differ from addiction treatment providers, thus creating a potential mismatch when offenders are referred to treatment.

Previous Research

Limited research exists on patient treatment matching. Studies from the addiction treatment field which have investigated the feasibility of patient matching and the validity of patient placement criteria (See Kosanke et al., 2002 & Magura et al., 2003, 2005) utilized assessment interviews of subjects. One study from the criminal justice field estimating the treatment needs of offenders by using patient placement criteria (See Belenko & Peugh, 2005) sampled national survey data. Another criminal justice field study involved a quasi-experimental design that examined the effects of correctional programs on offender recidivism (Lowencamp & Latessa, 2005). Meta-analyses have been used extensively in the criminal justice field to study matching intervention levels of offenders to their risk levels (See Andrews and Dowden, 1999; Andrews et al., 1990b; Lowencamp & Latessa, 2006).

Addiction Treatment Field and Patient Treatment Matching

In the addiction treatment field, the concept of patient matching stems from the idea that no treatment is effective for all clients, but that all treatment is effective for some clients (Gastfriend & McLellen, 1997). The challenge is determining what clients will do better in what treatment settings or levels of care. The Cleveland Criteria was one of the earliest disseminated matching schemas developed in the late 1980's (Gastfriend & McLellen, 1997). The Cleveland Criteria was developed through a multi-agency consensus process to provide a multi-disciplinary approach to patient assessment and placement into treatment services. Managed care emerged in the addiction treatment field

in the late 1980's and drastically cut the amount of service days insurance companies would pay for inpatient treatment services. Additional levels of care needed to be developed and offered to patients since the widely-used and funded 28-day inpatient model was being challenged. The increasing influence of managed care has greatly stimulated patient-treatment matching considerations (Morey, 1996). In particular, managed care providers introduced utilization reviews that base treatment decisions on the patient's abilities to meet certain criteria. This was brought about by changes in professional standards required by insurance companies and state licensing bodies.

ASAM Patient Placement Criteria

The National Association of Addiction Treatment Providers (NAATP) and the American Society for Addictive Medicine (ASAM), worked together to develop the first ASAM Patient Placement Criteria (PPC) (Hoffmann et al., 1991). The use of standardized patient matching criteria to match addiction patients to the level of care most suited to their needs is intended to improve the effectiveness and cost-effectiveness of treatment, partly in response to managed care (Gastfriend et al., 2000). ASAM was designed to help clinicians and payers use and fund levels of care in a rational and individualized manner (Mee-Lee, 2005). ASAM criteria recommends different levels of treatment based on the factors in dimensions (See Appendix E) of: acute intoxication and withdrawal potential, biomedical conditions and complications, emotional and behavioral conditions, treatment acceptance or resistance, relapse potential, and recovery environment. Symptoms of substance dependence are identified by a clinician in determining appropriate level of care.

Mee-Lee (2001), a major contributor to the ASAM criteria, says that clinicians must justify what they state when presenting clinical impressions. This prompts the health professional, especially the drug and alcohol specialist, to state in more behavioral, measurable terms why he/she is presenting a specific clinical determination. No longer can a drug and alcohol specialist say a person is in *denial* or solely depend on their clinical observation of the client. These clinical impressions have to be backed up by behavioral measurable symptoms.

The initial version of the Patient Placement Criteria by ASAM can be credited with slowing, and in some cases, preventing deterioration in the addiction care delivery system (Hays, 2006). ASAM Criteria has been or are being adopted with some variation by numerous states for publicly funded substance abuse treatment services, such as Connecticut, Iowa, Illinois, Massachusetts, Montana, Pennsylvania, Washington, Minnesota, and Oregon (Gardner & Mee-Lee, 1995; McGee & Mee-Lee, 1997; & Heatherton, 2000). In 1993, the Pennsylvania Bureau of Drug and Alcohol Programs (BDAP) began developing criteria based on the ASAM criteria specifically for Pennsylvania. The result was Pennsylvania Client Placement Criteria (PCPC). This is a set of guidelines designed to provide clinicians with a basis for determining the most appropriate care for clients with drug and alcohol problems and have been modified to fit the specific needs and circumstances of the state of Pennsylvania (Pennsylvania Department of Health, 1999). The six dimensions are the same as ASAM criteria and several levels of treatment service were created to give clinicians numerous options for placement.

Assessment Instruments

The assessment instruments used in the addiction treatment field vary but generally contain similar structures. While most assessments for referral and placement contain the six dimensions of ASAM PPC, a number of other measures could be included. For example, the assessment can include the Diagnostic and Statistic Manual for Mental Disorders Volume Four-Text Revised (DSM-IV-TR) criteria for substance abuse and dependence and the CAGE questionnaire for alcohol dependence (See Appendix E). The DSM-IV-TR (American Psychiatric Association, 2000) diagnosis of substance dependence measures an underlying construct that is relatively consistent across groups of substances. An individual must meet three of the seven conditions to be considered substance dependent. The inter-rater reliability estimates from the DSM-IV-TR were excellent for opioid dependence and good for alcohol and cocaine dependence (Pierucci-Lagha et. al., 2007).

The CAGE Questionnaire (Ewing, 1984) is a four-question alcohol severity test that is utilized as a screening test. The CAGE questionnaire has consistently proved to be the superior instrument for detecting alcohol abuse and alcohol dependence (Enoch & Goldman, 2002).

A comprehensive clinical assessment is vital to the placement process, and must be conducted by a qualified professional prior to applying the placement criteria for level of care determination (PA Department of Health, 1999). Once assessment information is gathered, it can be related to the six dimensions specified in the ASAM criteria. This is often referred to as dimensional scoring. Information obtained from the assessment is

interpreted according to dimensional severity using a matrix in order to determine the most appropriate level of care.

Though it is a viable standardization for communicating symptoms of clients in the addiction treatment field, some managed care companies do not follow ASAM criteria when determining admission placement, continued stay and or discharge authorization (Mechanic, 1997). Nonetheless, ASAM criteria have shown to have a convergence with managed care and deference in practice (Gondolf et al., 1996). Gondolf and his colleagues conducted an exploratory study to determine the extent of disagreement between ASAM criteria and insurance-based (Managed Care Organization-MCO) criteria and the extent of ASAM recommendations that became the actual treatment by reviewing admissions to three private treatment programs. Results of the study indicated that ASAM and MCO recommendations were the same for 85% of the cases. Additionally, 93% of ASAM-derived placement recommendations were accepted by patients and became the actual treatment in three private substance abuse treatment programs in Pennsylvania (Gondolf et al., 1996).

Patient Matching Studies

The research literature on the effectiveness of matching patients to levels of care is quite limited (Gregoire, 2000). Some studies have indicated that inpatient and outpatient treatment have equivalent outcomes (Annis, 1986; McKay & McLellen, 1992). Other research has found that patients with a greater severity of substance abuse, co-occurring psychiatric conditions, and less social support systems benefit more from inpatient than outpatient treatment (McLellen et al., 1983, Miller & Hester, 1986).

Alterman et al. (1994) studied cocaine users who qualified for partial hospitalization treatment[1], using ASAM PPC criteria. Patients were randomly assigned to either inpatient rehabilitation or partial hospitalization. After a seven-month follow up, patients in both levels of care showed about equal improvement. Partial hospitalization costs were nearly 60% less than inpatient rehabilitation, suggesting appropriate matching can be cost-effective and that overtreatment, though a waste of resources, is not harmful to patients.

Another study involving cocaine addicts utilizing ASAM PPC was conducted by McKay et al. (1997). Results at a 3-month follow-up indicated that patients who met criteria for inpatient rehabilitation (i.e., those correctly matched to treatment) showed consistently better short-term outcomes than those patients that received partial hospitalization (i.e. mismatched to a lower level of care or undertreated). Additionally, patients in the study that met criteria for partial hospitalization had equivalent outcomes whether they were correctly matched or overtreated as inpatients. This supports the ASAM criteria placement recommendation for cocaine users. Individuals that qualify for partial hospitalization should be placed there because a higher level of care (e.g. mismatched to inpatient) does not provide increased benefit.

In a study of the use of ASAM standardized placement criteria to match patients with substance abuse problems to the appropriate level of care, Kosanke et al. (2002) examined the feasibility of implementing treatment recommendations based on ASAM PPC in an urban addiction treatment program that offered a continuum of levels of care.

[1] Partial Hospitalization is defined as outpatient substance abuse treatment services consisting of regularly scheduled treatment sessions at least 3 days per week, with a minimum of 10 hours per week (Pennsylvania Department of Health, 1999).

Overall, 88% of the applicants entered treatment; similar to the 93% rate reported for the study of private treatment programs in Pennsylvania (Gondolf et al., 1996).

In addition, the rate of matching between ASAM-recommended and actual levels of care was 72%. This fairly high rate of congruence may be due to the availability of the recommended placements in the study (Kosanke et al., 2002). This is contrary to the findings of a study of publicly-funded treatment in Massachusetts (Plough et al., 1996), in which patients consistently requested lower levels of care than counselors recommended using the ASAM criteria. On the other hand, it is similar to the findings in a Kansas public treatment system study, where patient motivation for treatment positively influenced residential placements (Gregoire, 2000). The differences in treatment placement in the mentioned studies might be attributed to other factors including the settings of each study, including patient motivation and availability of treatment services.

Moreover, only 28% of the patients were mismatched, 59% were presumptively overtreated and 41% were undertreated (Kosanke et al., 2002). Reasons for overtreatment were availability of coverage, referral sources' treatment philosophy, social pressures, and mandated treatment. The reasons for undertreatment included work schedule conflicts, patient reluctance, insurance coverage, and interference with family or personal responsibilities. Lastly, despite a continuum of care being available at the research treatment program location, results of the study indicate that multiple barriers need to be overcome to enable the full implementation of ASAM criteria in real world settings (Kosanke et al., 2002).

Further research on the Kosanke et al. (2002) cohort indicates the importance of a systematic assessment procedure for matching appropriate treatment referral with clinical

need. Magura et al. (2003) assessed the cohort of patients admitted to various levels of care as defined by ASAM PPC in the urban treatment program three months after intake. The study examined the predictive validity of the ASAM PPC for matching alcoholism patients to different levels of care. An interview was conducted on patients using the Structured Clinical Interview (SCID) for DSM-IV (First et al., 1997) that was an extension of the regular intake process. More alcohol use days were associated with patients who were undertreated in outpatient placement (e.g. recommended for intensive outpatient) after three months of intake (Magura et al., 2003). Overtreatment of inpatient treatment confers no additional advantage to patients, but neither does such overtreatment appear to harm them (Magura et al., 2003). These findings are similar to Alterman et al. (1994) & McKay et al. (1997). This research shows evidence that ASAM Criteria showed promise for reducing both detrimental undertreatment and cost-ineffective overtreatment.

A follow-up study was conducted by Magura et al. (2005) on the same cohort (Magura et al., 2003) using ASAM PPC. After one year, similar results were found that indicated that there was no detriment to providing a more intense mode of treatment what is adequate for the patient (Magura et al., 2005). Drinking frequency was substantially lower between the baseline and the two follow-ups at three months and one year. The study suggests that matching to level of care is optimal, undertreatment is clinically harmful, and overtreatment is a waste of resources.

In another study, Project MATCH, a large multi-site clinical trial, tested the matching hypothesis that alcoholism treatment outcomes can be improved by matching subgroups of patients to treatments (Project Match Research Group, 1998c). Results of

Project MATCH suggest that matching, at least with the therapies employed in the study, is not the most essential component of treatment (Project Match Research Group, 1998c).

The Criminal Justice System and The Risk Principle

A review of the criminal justice system literature uncovers strong evidence for the need to assess an offenders' risk[2] level prior to placing them into a program. A number of studies have been conducted that give considerable attention to the risk principle and its impact on offender assessment and rehabilitation. Historically, community corrections staffs have preferred to work with low-risk offenders because they were much easier to manage than high-risk offenders (Bonta, 2000; Wormith & Olver, 2002) and yet the literature will show how proper assessment is essential for all offenders regardless of the risk level. Matching offenders with appropriate services has been consistently found to be effective case management practice (Andrews et al., 1990b; Fulton et al., 1994).

The Psychology of Criminal Conduct (PCC) was developed by Andrews and Bonta in the 1980s and it has been refined over time (Andrews and Bonta, 2003). It is a theory concerned with individual differences in criminal behavior. It is a useful guide for both assessing risk of recidivism[3] and planning rehabilitation (Ogloff & Davis, 2004). Effective treatment is distinguished from ineffective treatment through what are known as the Principles of Effective Intervention (Gendreau et al., 1996). These principles entail many elements of intervention and treatment programming. Classification is the first step to effective correctional treatment. Appropriate treatment service is dependent upon assessments that address risk, need, and responsivity (Andrews, 1994).

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[2] Risk refers to the likelihood of an offender engaging in subsequent criminal behavior. Low-risk offenders would be considered *less* likely to engage in subsequent criminal behavior and high-risk offenders would be considered *more* likely to engage in subsequent criminal behavior.

[3] Recidivism refers to an offenders' return back into active criminal behavior.

The risk principle is the first domain of the risk-needs-responsivity (RNR) model and consists of two propositions: prediction and matching. In order for offenders to be classified and appropriately referred to interventions (e.g. programming), it is necessary to assess and predict each offenders' level of risk for re-offending. Classification is essential for matching offenders to appropriate treatments that promote success while on supervision (Fulton et al., 1994). The intensity of the intervention (e.g. programming) must then be matched to this level of risk. Static or historical markers (e.g. criminal history, age at first offense) and dynamic or changeable risk factors (e.g. substance abuse, mental health, employment) need to be identified as they are related to recidivism (Ogloff & Davis, 2004).

The risk principle also includes the proposition of matching offenders to the appropriate intensity of services based on risk. That is, the more intensive services being reserved for higher risk offenders (Andrews et al., 1990a; Andrews and Bonta, 2003; Van Voorhis, 1997; Simourd & Hoge, 2000). Therefore, more intensive intervention should be provided to those offenders assessed with a high risk for re-offending. Empirical research has supported this aspect of the risk principle. For example, Bonta et al. (2000) found that while recidivism rates were not significantly different between two groups of treated offenders (32.4% for an intensive rehabilitation supervision program offenders and 31% for offenders supervised on routine probation), these results changed when the risk level of the offender was considered. Recidivism rates for high risk offenders supervised under the intensive rehabilitation supervision program and routine probation were vastly different (31.6% and 51.1% respectively), thus signifying a mismatch of offenders to services. Support for the risk principle was also found prior to the Bonta et

al. (2000) study. Andrews and Kiessling (1980) observed that providing inappropriate levels of services to offenders actually increased their likelihood of recidivism. Andrews and Kiessling (1980) found that 12% of low risk offenders who receive minimal services recidivated. This number increased to 17% when those low risk offenders were placed into intensive services. Conversely, high risk offenders placed into intensive services recidivated at a rate of 31%. This number increased to 58% when high risk offenders were placed in minimal intensity services.

Although higher risk offenders sorely need interventions, they are often the first to be excluded from programming (Gorgon and Nicholaichuk, 1996). Conversely, lower risk offenders have shown to produce better outcomes from a lesser level of service and intervention (Andrews and Bonta, 2003).

The needs principle is the second domain of the RNR model. This principle states that in order to reduce recidivism, treatment of the offender must focus on the criminogenic needs of the individual. These criminogenic needs are a subset of the dynamic (changeable) risk factors related to a risk of re-offending. Examples of criminogenic needs are: criminal associates, substance abuse, anti-social personality, and mental health disorders. These needs are modifiable characteristics, whereby a change in the risk factor equates with a change in the risk of re-offending (Simourd & Hoge, 2000). It is perhaps useful to view this principle as treatment needs in the correctional environment (Ogloff & Davis, 2004).

The third principle in the RNR model is responsivity. This principle considers internal (e.g., self-esteem, motivational level) and external (e.g., environmental support, program service content) factors that may affect an offenders' response to interventions.

The responsivity principle is concerned with providing interventions in a manner from which offenders will derive the most benefit (Andrews et al., 1990).

The RNR model provides a much needed focus to offender rehabilitation, emphasizing the factors that must be identified in a systematic assessment process (Bonta, 2002). Estimates have shown that adherence to the principles of risk, need, and responsivity has reduced recidivism by approximately 30% (Andrews et al., 1990b; Dowden & Andrews, 1999b).

Considerable research testing the importance of the risk principle has been conducted through the process of meta-analyses. For example, studies by Andrews et al. (1990), Lipsey & Wilson (1998), Dowden & Andrews (1999a, 1999b, and 2000), Wilson et al. (2001 and 2003), and Lowencamp et al. (2003) all indicate that interventions on offenders are most effective when delivered to samples with high-risk levels.

Andrews et al. (1990b) conducted a meta-analyses of 80 studies on correctional interventions. The programs were coded as “sanctions”, “inappropriate”, “unknown”, and “appropriate”. In order to be labeled appropriate, an intervention needed to focus on higher risk cases. Andrews et al. noted that appropriate programs were by far the most effective.

Andrews and Bonta (1998) used data from the Andrews et al. (1990b) study and additional studies to analyze the effects of program characteristics by examining the risk principle. They found that programs that focused on higher risk offenders were five times more effective in reducing recidivism than programs that focused on lower risk offenders. Risk was assessed by the percentage of offenders with a prior record.

It can be argued that the results of the meta-analyses studies indicate that the lower risk offenders that were placed in higher intensity interventions and had a higher rate of recidivism point to a mismatch of referral and placement. It is possible to suggest that a standardized assessment process was not implemented or utilized in referring and placing these lower risk offenders into proper interventions and programs that match their risk level.

Two additional studies from the criminal justice literature on the risk principle strongly suggest that offenders are being mismatched into services and supervision levels. In the first study, Lowencamp and Latessa (2005) analyzed data on over 7,000 offenders placed in one of 53 Ohio community-based residential programs as part of their parole or post-release control. Offenders who successfully completed residential programming were compared with a group of offenders under parole and post-release control who were not placed in residential programming. A risk score was tabulated using risk factors and reincarceration for any reason on offenders.

Results of the Lowencamp and Latessa study demonstrate that the effectiveness of residential treatment programs in Ohio differed as a function of offender risk. Almost 70% of the programs demonstrated effectiveness with moderate and high risk offenders (Lowencamp & Latessa, 2005). Reductions in recidivism increased with these two groups of offenders compared with low risk offenders. Residential programs were associated with an increase in the recidivism rates of low and moderate risk offenders relative to the recidivism of the comparison group. These increases were substantial. The risk principle can be best seen by observing the effects of intervention for low and high risk offenders in three of the programs. High risk offenders had over a 30% average reduction in

recidivism for these three programs. At the same time, these three programs had an average increase of 15% in recidivism for low risk offenders (Lowencamp & Latessa, 2005). Each program offered similar services and interventions to all offenders despite their risk level. Additionally, The Correction Program Assessment Inventory (CPAI) is an assessment tool that measures program integrity (Gendreau & Andrews, 1994). The initial version of the CPAI contained 65 items in six substantive areas of correctional programs. Unpublished data (Latessa, 2005) on 362 CPAI assessments completed across the North America indicates that only 7% of the programs assessed vary the intensity of programming by risk level. This strongly suggests that there is a substantial disconnect in what services are being provided for offenders and what offenders need services.

Further, Lowencamp and Latessa (2005) suggest that based on the results of the study, low risk offenders should be excluded from residential referral and placement. They believe correctional agencies should target mostly high risk offenders for residential placement. They urge programs to divert low risk offender placements into lower intensity interventions (e.g. placing offenders in work-release immediately).The researchers challenge the referral and acceptance policies and procedures of many states' department of corrections, local probation departments, and social service agencies that provide services to offenders (Lowencamp & Latessa, 2005). Lowencamp and Latessa (2005) "seriously question the policy of admitting low risk offenders into residential programs, not just in Ohio but across the country, at every jurisdictional level" (p. 283).

In the second study, using data from Lowencamp and Latessa (2005) as well as from another study conducted in Ohio involving program effectiveness (Lowencamp & Latessa, 2006), Lowencamp and Holsinger (2006) analyzed nearly 100 correctional

programs in Ohio. This study was an investigation on how adherence to the risk principle affects program effectiveness by reducing recidivism. The focus of the study was to investigate the varying length of stays and service by level of risk of each program to determine if offenders were matched into programs based on risk levels.

In addition, the results of the Lowencamp and Holsinger study show a consistent pattern. The correctional programs included in these analyses, whether residential or nonresidential, showed increases in recidivism rates unless offenders who were higher risk were targeted and provided more services for a longer period of time (Lowencamp & Holsinger, 2006). Results of this study indicate similar results from the Lowencamp & Latessa (2005) study in that attention must be focused on the high risk offender.

Finally, Lowencamp and Holsinger make recommendations based on their findings. First they recommend that correctional programs begin utilizing an objective and standardized assessment tool to identify appropriate offenders for highly structured programs. Without a structured or standardized assessment process, programs will likely target the wrong offenders, thus creating a mismatch of referral and placement. Second, length of programming and supervision needs to be clearly tied to levels of risk. Third, multiple services are required for offenders with high risk. Fourth, judges and post-sentencing agencies need to be utilizing a risk assessment method that can determine which offenders are high risk and low risk. Fifth, correctional agencies (e.g. those that are supervisory or control oriented and those that offer rehabilitative services) will benefit from internally incorporating the risk principle whenever possible.

Placing offenders who were lower risk with offenders who are higher risk provides an environment in which individuals who are lower risk can become

contaminated by the criminal thinking and behavior of the higher risk individuals. First, lower risk offenders learn antisocial behavior that is modeled for them, and form new peer associates, many of whom are more likely to support and reinforce criminal behavior. Second, placing offenders who are low risk in higher intensity programs can disrupt their prosocial networks. In other words, the same attributes that make them lower risk become interrupted, such as employment, school, friendships, family, and so forth (Lowencamp & Latessa, 2004).

Further review of the literature appearing in the criminal justice field suggests the need for improved and standardized assessments and treatment matching of offenders in relation to their drug and alcohol problems, specifically including the utilization of more structured assessments and patient placement criteria similar to the ones used in the addiction treatment field.

Research indicates the need for effective offender assessment. The importance of using validated and objective offender assessment tools cannot be overstated. The prehistory of risk assessment in criminal justice refers to the use of *gut feelings* to make decisions about the risk of the offender (Latessa, 2004). An interview or file review produces information about the offender and then a global prediction is made by a professional. The problems with this method are considerable and have been discussed by Wong (1997) and Kennedy (1998), who find that: predictions are subject to personal bias, predictions are often subjective and often unsubstantiated, decision rules are not observed, the process can lead to bias decisions, it is difficult to distinguish levels of risk, and information is overlooked or overemphasized.

Risk Assessment and the LSI-R

Assessment is not only the engine that drives effective interventions, but it is important for a number of other reasons (Latessa & Lowenkamp, 2005), including but not limited to: helping identify the offenders most at risk for offending; identifying who needs the most or least intervention; improving the utilization of resources; and improving the placement of offenders. One of the best examples of a classification instrument that combines risk level of need of the offender is the Level of Service Inventory-Revised (LSI-R), designed by Andrews and Bonta (1995). The LSI-R is based on social learning theory and has been tested and validated across North America. The LSI-R consists of 54 risk and need factors in 10 areas that are designed to inform correctional decisions of custody, supervision, and service provision (Andrews & Bonta, 1995). The ten areas are: criminal history, education and employment, financial, family and marital, accommodation, leisure/recreation, companions, alcohol/drug problem, educational/personal, and attitudes/orientation. A score is totaled and then placed in a low, moderate, or high risk category (Andrews & Bonta, 1995).

The LSI-R has been found to be one of the most valid instruments for predicting recidivism (Latessa, 2004). The LSI-R was shown to be a better predictor for both general recidivism and violent recidivism than the PCL-R (Gendreau et al., 2002). The PCL-R is the Psychopathy Checklist-Revised, and was developed by Hare (1996) and is widely used in the United States and Canada to classify and assess persons with psychopathology. The predictive validity of the LSI-R is well established (Andrews & Bonta, 2005; Gendreau et al., 1996; Gendreau, Groggin, & Smith 2002; Flores et al., 2006).

The LSI-R is an example of an *actuarial* assessment. Unlike an unstructured *clinical* judgment which is often completed in corrections, an *actuarial* assessment is a mechanical approach to assessment and attempts to minimize the amount of subjectivity that goes into the overall impressions and conclusions of the rater. The observations or factors that are recorded are driven by a statistical understanding of the relationship between the factor and behavior in question (Harris, 2006). Unlike the clinical assessments measuring substance abuse based on criteria for diagnosis and placement, the LSI-R is an actuarial assessment instrument classifying risk for predictors of recidivism. Despite its usefulness to the assessment of risk, the LSI-R is not utilized consistently throughout the criminal justice system (Knight et al., 2006). Though the LSI-R provides a risk score, it is an inadequate assessment of an offenders' substance dependence. Offenders referred to and placed into substance abuse treatment programs solely on a risk score will have a high likelihood of being placed into an inappropriate level of service.

Further Research on Improving Assessment

As Hammett et al. (2001) state, there is an "overarching need for correctional facilities to improve programs for discharge planning, community linkages, and continuity for all inmates" (p.392). In 2002, the National Institute on Drug Abuse (NIDA) launched the National Criminal Justice Drug Abuse Treatment Studies (CJ-DATS), a major research initiative that is currently being conducted. Researchers from nine research centers and a coordinating center and NIDA will work together with federal, state, and local criminal justice partners to develop and test integrated approaches to the treatment of offenders with drug use disorders (Wexler & Fletcher, 2007). One area of study is screening and referral. Two new screening instruments are being developed for

the study. One is called the Inmate Pre-Release Assessment (IPASS) and is being designed at the University of California at Los Angeles (UCLA). The second is referred to as the Co-Occurring Disorders Screening Instrument for Criminal Justice Populations (CJ-CODSI) (Wexler & Fletcher, 2007). Additionally, Performance Indicators for Corrections (PIC) is being studied by Texas Christian University (TCU). Various instruments to evaluate client motivation and treatment needs are being developed including the Client Assessment Inventory (CAI). An important goal of the CJ-DATS is to develop ways that drug abuse treatment can be better coordinated with criminal justice requirements or integrated into criminal justice settings (Wexler &Fletcher, 2007). This research initiative is evidence that the federal government recognizes that there is a need to develop a stronger collaboration between the criminal justice system and service providers when considering the needs and treatment of offenders with substance abuse and co-occurring disorders.

A recent research study appearing in the criminal justice system literature examines the drug treatment needs of offenders utilizing ASAM PPC. Belenko and Peugh (2005) used survey data on over 14,000 inmates from 275 state prisons to estimate their levels of drug treatment need. The framework of the study included utilizing ASAM PPC and other matching protocols, consequences of drug use, drug use severity, and other social and health consequences. The researchers analyzed the patterns of illegal drug use and the treatment utilization among inmates and estimated the percentage that are likely to need different types of correctional drug treatment services. Additional dimensions of drug abuse and its effects need to be assessed for and considered in making clinically appropriate estimates of treatment need (McLellan et al., 1997). The

researchers assumed that inmates with more consequences of drug use require greater treatment intensity.

Results of the Belenko and Peugh study indicated that an estimated one third of male and more than half of female state prison inmates need long term residential treatment. Although inmates in the most severe drug use categories were assumed to have received treatment while incarcerated, only about one-fifth received any clinical treatment services, indicating that offenders that need services are not receiving them. On the other hand, only half of male and one third of female inmates may need no treatment or only short-term interventions (Belenko & Peugh, 2005).

Finally, Belenko and Peugh make four recommendations based on their findings. First, correctional systems need to expand their range of treatment levels and modalities offered to inmates, including continuing care following release. Second, it is suggested that correctional agencies need to conduct more comprehensive, multi-domain clinical assessments with time frames (e.g. conducting more than one assessment to track progress over time) so that treatment can be delivered in more cost-effective methods. Experiences while incarcerated may exacerbate prior conditions, so there may be need to assess for the effects of incarceration and the inmate's ability to reenter society (Belenko, 2006). Recent data indicates that inmates receiving misconducts (e.g. violated prison rules) in prison one year prior to release have higher recidivism rates after release compared to inmates without infractions. In Pennsylvania, inmates who received one or more misconducts in prison one year prior to release had a higher rate of return to prison than inmates without infraction (44% vs. 33%; Flaherty, 2004). Third, Belenko and Peugh (2005) state: "Formal, standardized treatment placement criteria should be

developed, implemented, and evaluated in state correctional systems" (p. 278). Fourth, though funding and logistical issues would be considerable, increasing access to different levels of treatment could provide substantial long-term economical and social benefits from a reduction in recidivism, easier transition to the community, and reduced drug abuse (Belenko & Peugh, 1998; Knight, 1999, & Martin, 1999).

Another research study from the criminal justice field that examines matching protocol comes from New York. Melnick et al. (2001) studied two cohorts of inmates across nine therapeutic settings across the state. A therapeutic community is a group of inmates in prison that receive substance abuse programming. Therapeutic communities are generally located in a segregated section of the prison away from the general population. Client Matching Protocol (CMP), developed by Melnick and DeLeon at the Center for Therapeutic Community Research at National Development and Research Institutes, was used as the framework of the study. CMP is to guide client matching decisions for placing clients into outpatient and residential settings within therapeutic communities (Melnick et al., 2001).

Results of the Melnick et al. study indicate that positive treatment dispositions (e.g., treatment completion, longer retention in treatment) were significantly higher among the CMP-matched clients. The results of the Melnick et al. study support the use of objective, standardized criteria to match offenders to treatment services (Lowencamp & Latessa, 2005; Magura et al., 2005; Belenko & Peugh, 2005; Kubiak et al., 2005; Knight et al., 2006 & Belenko, 2006) and support the recommendation to keep offenders with high severity or risk in treatment longer (Belenko & Peugh, 2005; Latessa & Lowencamp, 2005).

Offenders and Co-Occurring Disorders

Further review of the literature on offender assessment and placement in relation to a possible mismatch of corrections referral and clinically recommended treatment leads to discussions of co-occurring disorders. The term co-occurring disorder (COD) refers to co-occurring substance use (e.g. abuse or dependence) and mental health disorder. Offenders who have more than one diagnosed condition are referred to as co-occurring. Persons with COD are often among the most disadvantaged members of our society and are likely to have additional medical, social, and legal problems (Shively, 2006). Biomedical conditions can further complicate an offender with COD. There are limited services in state prisons that deliver treatment targeted for COD. Also, offenders with biomedical conditions that require ongoing treatment in a medical setting (e.g., hospital, prison infirmary) may be unable to attend programming for COD. According to the risk principle, offenders with COD and other occurring disorders would be classified as higher risk. This would suggest that offenders with COD would need more intensity interventions or treatment for longer periods of time (Belenko & Peugh, 2005; Latessa & Lowencamp, 2005). Without adequate transition planning, inmates with COD will likely return to jail or prison; recidivism rates in some jurisdictions have reached 70% (Ventura et al., 1998). Increased collaboration must be achieved in this area. In response to this critical need, the Counsel of State Governments established the Criminal Justice/Mental Health Concensus Project in an effort to develop recommendations among stakeholders in the criminal justice and mental health systems to improve the response to people with mental illness who are involved with the criminal justice system (Thompson et al., 2003).

From the addiction treatment field perspective, offenders with COD would meet criteria under ASAM PPC for higher levels of care based on the multiple problems and severity of those problems they would be likely to be experiencing across the ASAM criteria dimensions. The criminal justice system by and large has allocated few resources for COD in community corrections. For example, in Pennsylvania, only one contracted provider offers 'dual-diagnosed' treatment to offenders with COD. It is reasonable to assume that all of the offenders with COD in the state are not referred to this facility for treatment services. Therefore, it could be understood that offenders with COD are likely undertreated, which has shown to be harmful (Magura et al., 2003, 2005). Offenders with COD are usually referred to community corrections programs without the utilization of proper assessment, thus creating a placement that may be inappropriate. Community corrections centers, whether they provide substance abuse treatment services, work-release, or both are often not equipped to deal with offenders that have multiple occurring conditions. This makes it challenging for service providers to accommodate correctional referrals. Therefore, for the same reasons discussed previously, it is reasonable to argue that offenders with COD are often mismatched when referred to and placed in treatment programs.

The implication of risk assessment for treatment services is great. The studies using evidence presented above should prompt policy makers to question certain policies for low risk offenders (Van Voorhis, 1997). Consideration of risk levels into correctional practice could benefit the field by identifying offenders who require more intensive supervision and interventions. Risk level could also assist with the allocation of intensive treatment resources (Andrews et al., 1990a). The risk assessment process is undergoing

major change in federal, state, and local community corrections agencies across the country. Line staff do not have the background and qualifications necessary to conduct clinical assessments of offender risk, particularly for special categories (e.g., mental health, substance abuse, sex offender) and multiple problem offenders (Byrne, 2006).

> *It is possible to envision a probation or parole agency where line staff are responsible for case planning and supervision, but other functions (assessment, treatment, and services) are subcontracted to agencies in the private sector* (Byrne, p.65).

Farabee's Correctional Control Model (2005) also recommends this concept:

> *Establish assessment and evaluation contracts with independent agencies* (Farabee, p. 67).

These statements and the results of the studies presented strengthen the argument that a mismatch can occur when offenders are referred to treatment services without proper assessment and placement based on the clinical needs and risk level of the offender.

Theoretical Framework

The Pennsylvania Department of Corrections (DOC) securely houses addicted offenders in state correctional institutions. *The mission of the Department of Corrections is to protect the public by confining persons committed to our custody in safe, secure facilities, and to provide inmates to acquire the skills and values necessary to become productive law-abiding citizens; while respecting the rights of crime victims (DOC, 2008).* The Pennsylvania Board of Probation and Parole (Parole) releases them from the institutions, and supervises them once they are paroled to a community corrections center or home. *The Pennsylvania Board of Probation and Parole is committed to protecting the safety of the public, addressing the needs of crime victims, improving county adult*

probation and parole services, and assisting in the fair administration of justice by ensuring the custody and control, and treatment of offenders under the jurisdiction of the board (PBPP, 2008). Gateway Rehabilitation Center (GRC) is a private, non-profit system of services treating addicted individuals. *GRC's mission is to enable people affected by or at risk of addictive diseases and other mental and emotional disorders to lead healthy and productive lives through prevention, education, treatment, and research (GRC, 2008).*

While the DOC and Parole represent the criminal justice field and GRC may be representative of a typical program in the addiction treatment community, it can be argued that these two entities (e.g., criminal justice and treatment fields) have different structures and objectives while operating under these separate mission statements. As stated previously, natural conflicts arise as a result. Two related theoretical paradigms, Goal Conflict and Organizational Theory, will be presented in this section to explain the mismatch that is being investigated in this study.

Goal Conflict in the Criminal Justice System

If criminal justice is to fulfill its function of crime control, then a transformation must occur which will create a rational, well-integrated system in which a common set of goals can be pursued through a compatible set of strategies and techniques (Wright, 1980). Criminal justice is characterized by conflicting goals, lack of integration, and overlapping jurisdictions which promote inequities of justice and create inefficiencies which result in higher costs of operation (Kellogg, 1976). Kellogg views the criminal justice system as a *non-system*:

> Official decisions affecting the criminal offender are made by a patchwork of separate jurisdictions, in a system of independent prosecutors, judges, prison

> administrators, and parole and probation officers. Respective policies vary arbitrarily from place to place, or even time to time within the same place. Sentencing decisions within the same jurisdiction, not to mention among different ones, vary widely with attitudes of individual judges. Decisions are based upon limited and inconsistent information, generally without adequate explanation to benefit other officials in the decision-making process. (Kellogg, 1976:50).

As will be discussed later, community corrections programs in Pennsylvania receive referral requests with no benefit of an assessment or placement instrument that is justifying the admission to a particular level of service. The DOC and Parole make the referral placement decisions independent of any clinical assessments and recommendations once the referral is admitted to the community corrections program.

This goal-conflict paradigm states that there are reasons why goal conflict is advantageous to the processes and functioning of the system and a few of those reasons can be applied to this study. First, conflict makes it possible to represent and protect different societal interests. Second, it also establishes a system of checks and balances (Wright, 1980).

There are differentiating objectives within the criminal justice system that treatment providers have to contend with. First, it can be argued that one of the main objectives of the DOC is releasing inmates from Pennsylvania state correctional institutions that are currently overcrowded. As stated previously, the state correctional institutions in Pennsylvania are operating at 110% capacity. The criminal justice system is a complicated system dedicated to security, control, and punishment (Rybolt, 1995). While many jurisdictions have recently invested significant resources to develop and implement an offender rehabilitation approach in corrections, the government's investments have often been accompanied by an explicit expectation that the efficacy of the rehabilitation approach must be shown by reducing the number of prison beds

occupied (Ogloff & Davis, 2004). It is clear that criminal justice incorporates a number of different goals, including crime prevention, public tranquility, justice, due process, efficiency, and accountability (Levine et al., 1980). Treatment providers establish a therapeutic environment that looks very different from the institutional setting. Wright argues that the conflict among components allow different interests (e.g. DOC, Parole, treatment providers) to be incorporated into the system.

Conflicting goals within the criminal justice system also promote a process of checks and balances (Wright, 1980). Wright asserts that fragmentation ensures that no single component of the system can dominate the other components and that various components can and do influence the operations of other elements. Components of the criminal justice system are characterized as being non-cooperative and even hostile toward one another (Wright, 1980). Hostility and dissention between the DOC and Paorle components have been observed in Pennsylvania community corrections. Often the community corrections center finds itself in the middle of both, attempting to be a good partner and loyal to both sides. Partnership and collaboration and the need for cooperation between agencies are discussed in the literature. There is considerable doubt about the ability of the various agencies involved with criminal justice to work together as a system (Cavadino & Dignan, 2002). A partnership model represents not only a range of different relationships between agencies but also a potential value system for those who are operating the formal arrangements, a value system based on notions of cooperation, negotiation, and equality (Gibbs, 1999).

Organizational Theory of the Criminal Justice System

Organizational theory is a means of conceptualizing how authority is distributed within an organization and how it is used to accomplish the agency's mission and goals (Carlson, 1999). Criminologist Donald Cressey has discussed that institutions tend to be more focused on security than on inmate rehabilitation. However, most prisons and jails attempt to achieve both custody and resocialization goals (Cressey, 1965). Wilson (1989) argues that the first priority of correctional facilities is to control and account for all inmates. These main objectives and structure of the criminal justice system are consistent with the previous discussion on goal-conflict theory. The DOC and Parole's main objective of custody and control is a requirement of operation for treatment providers which in most cases is contradictory to addiction treatment providers and is evident when looking at the mission statement of GRC.

The prevailing management structure in the U.S. correctional facilities is hierarchical, centralized, and paramilitary (Carlson, 1999). The bureaucracy of the correctional system is very controlling and inflexible, but efficient in the structure and control of hundreds of staff members and inmates. In most cases, treatment providers must be more flexible, collaborative, and compliant to licensing requirements when operating its programs.

Carlson sees more progressive correctional systems as ones that work effectively to meet the goals of the safety of the community as well as preparing offenders for re-entry into society. Systems where this is present have the courts, probation, corrections, and community agencies working together with offenders while passing them on from one stage of the correctional process to another in a manner that focuses on specific

goals. However, the mismatch presented in this study between correctional referral and the clinical recommendation can be summed up by how Carlson believes that most correctional systems operate:

> Agencies work together as disparate parts and typically are involved with prisoners from their isolated perspective-and then pass felons on with little continuity of care and no ownership in the success, or failure, of the overall process. This is the disorganization that affects many correctional systems and is the biggest weakness in the system of justice administration in the United States. (Carlson, 1999:31).

Summary of the Theoretical Framework

Goal-Conflict and Organizational Theory outlines the structure, organization, and objectives of the criminal justice system. The overall objectives of criminal justice systems (e.g., DOC, Parole) are to ensure public safety by having a security system of custody and control over all offenders under their supervision. In contrast, community treatment providers often are focused on providing education, intervention, and treatment to addicted offenders in order to successfully reintegrate them into society.

Because of these two differing entities, conflicts may arise when this collaboration between the two is established. One of these conflicts can be the potential mismatch between criminal justice referral and the clinical recommendation of offenders into addiction treatment which this study plans to investigate.

Summary of the Literature Review

It is evident, based on the literature from both the addiction treatment field and criminal justice field, that assessments are an essential factor in the referral & placement of addicted offenders. The addiction treatment field follows a very structured systematic clinical assessment and referral process based on specified criteria that determine appropriate levels of care for substance dependence. ASAM and other related criteria has

been widely accepted and adopted throughout the country and has shown promise in predicting appropriate placement and improved outcomes. Patient placement criteria and matching protocol provide clinicians a common language and justification in providing patient care. Matching studies, though few, have shown potential in predicting improved outcomes. However, the literature noted that effectively matching clients to services is challenging based on the various factors. Research has shown evidence that not providing enough treatment to patients can be harmful and that providing more services than needed wastes resources and provides no additional benefit to clients.

In contrast, the criminal justice system relies on unstructured clinical judgment or tools for risk assessment. The clinical judgments are unreliable in the appropriate referral and placement of offenders with substance abuse problems and possible COD. Risk assessments can be useful in predicting recidivism and evidence was presented on how offenders must be referred to services that match their risk level and need to have a greater chance at not re-offending. The risk principle makes a significant contribution to the criminal justice field by providing a conceptual framework on how offender classification and interventions should be provided. In contrast to the addiction treatment field, the criminal justice literature showed evidence that providing more treatment and interventions than are necessary, can do harm to offenders by increasing their rate of recidivism, sometimes dramatically. However, risk assessments are limited in scope and alone are not adequate enough to properly assess and diagnose for the existence of a substance dependence or COD. Further, the criminal justice system as a whole does not use all of the available risk and offender assessment instruments available, placement criteria or matching protocol, or the results and scores from these assessments to

determine referral and placement into substance abuse treatment services with any degree of consistency as the studies from the literature indicate. The criminal justice system faces many organizational challenges in providing adequate assessment, referral, and treatment for offenders.

Evidence from criminal justice literature further suggests that ASAM PPC and other matching protocol, as well as standardized assessments using the risk principle should be developed, implemented, and utilized in collaboration with treatment providers to improve on the costs, efficiency, and effectiveness of placement, referral, and treatment of offenders.

The theoretical framework of goal conflict and organizational theory of the criminal justice system explains the potential mismatch that can occur when offenders are referred to treatment facilities in the community. First, the criminal justice system has objectives of custody and control that differs from treatment providers' focus on assessment and treatment. Second, the criminal justice system structures itself with the primary objective of security and often is not equipped to properly assess offenders for placement in treatment services.

The literature and theoretical framework have provided sufficient evidence to support further investigation into a mismatch between correctional referral and clinical recommendations for substance abuse treatment.

Hypotheses

The following are the Hypotheses for this study:

H1: A substantial mismatch exists between the criminal justice referral and the clinical recommended treatment in the form of a large percentage of offenders being referred to levels of care that are not clinically appropriate,

H2: Offenders are more-often referred to lower levels of treatment than is clinically recommended and thus are undertreated according to treatment standards.

CHAPTER 3

RESEARCH METHODS

Research Design

The study was a content analysis of treatment intake assessment information and correctional referral records. Record reviews were conducted on discharged patient records available from the treatment facility. Records were reviewed by evaluators and assessed using ASAM PPC (ASAM 1991) and PCPC Admission Criteria (Pennsylvania Department of Health, 1999) to establish appropriate "clinical recommendations." The clinically recommended treatment "level of care" was compared to the actual placement level assigned by the criminal justice referral source. The focus of the study is the potential mismatch between the correctional referral and treatment recommendation. The study further explores for any influence from various background variables, referral source, and co-occurring diagnoses on the mismatch.

Content analysis was the chosen method of study due to the readily available use of existing agency patient records and because the clinical records contain various completed multidimensional evaluations and an abundance of referral and intake information. Adequate information was available to complete an assessment in order to determine a recommended treatment level according to ASAM criteria. This study differs from all of the aforementioned studies in that involved an in-depth analysis of patient clinical information by highly trained clinicians using standardized criteria (ASAM PPC) to determine placement into appropriate levels of treatment services as it compares to the criminal justice referral placement. This study was a content analyses of 153 discharged patient records from a community corrections program in Western Pennsylvania. These

records represent the total admissions to this program in 2005. GRC evaluators reviewed intake and assessment information in patient records and completed a clinical assessment. This assessment determined the clinical recommended treatment based on standardized patient placement criteria. This recommendation was compared to the actual referral placement of the criminal justice system. The goal of this study was to test two hypotheses: (1) a substantial mismatch exists between criminal justice referral and the clinical recommended treatment in the form of a large percentage of offenders are referred to levels of care that are not clinically appropriate, and (2) offenders are more-often referred to lower levels of treatment than is clinically recommended and thus are undertreated according to treatment standards.

To address Hypothesis 1, a bivariate analysis was conducted by computing cross-tabulations to inspect the percentage of agreement to determine the mismatch. For Hypothesis 2 that offenders are more-often referred to lower levels of treatment than is clinically recommended and thus are undertreated was addressed in a cross-tabulation generated for four by two categories using the McNemar and Kappa statistics to summarize the nature of the agreement and disagreement. To explore the possible influence of the criminal justice referral source of the department of corrections are more likely to have a mismatch than those offenders referred from parole, and co-occurring diagnosis on the mismatch, a logistic regression was computed using referral source and co-occurring diagnosis as predictors for mismatch. Demographics of the offenders were also entered into the equation as control variables. Offenders were considered "mismatched" if they were referred to and placed in higher or lower levels of care than what was clinically recommended.

Setting

The setting for this research project is Gateway Rehabilitation Center (GRC), a nationally recognized private treatment facility in Western Pennsylvania. Gateway opened in 1972 as one of the first residential alcohol treatment facilities of its kind in the United States. Gateway operates numerous other treatment locations throughout Western Pennsylvania and Ohio. Gateway began contracting with the Bureau of Community Corrections (BCC) to provide treatment services to offenders in 1995 at the Aliquippa, PA location. The community corrections program which operated within the Gateway Aliquippa facility was the specific program from which the clinical records were obtained and reviewed. The Aliquippa corrections program operated in 2005 with a total capacity of sixty beds. There were thirty-six male beds and twenty-four female beds. GRC operated from 1995-2006 and was a 60-bed residential corrections program that contracted with the BCC to provide treatment services to offenders. GRC needed more space for the corrections program and attempted for nearly three years to relocate the program in nearby communities. However, GRC closed the corrections program in 2006 due to unsuccessful attempts to relocate the program due to zoning issues and community opposition.

GRC is a useful and appropriate research site for this study because it is an established community corrections program and received offenders referred from the BCC for substance abuse treatment services for over ten years. GRC is representative of community corrections programs that are contracted by the BCC in Pennsylvania in two major areas of practice. First, GRC accepts referrals from the BCC in two primary ways (e.g. department of corrections, parole). Second, GRC places them into the contracted

levels of care (e.g. inpatient, work-release) that are assigned by the referral source. All state-operated and contracted community corrections programs in Pennsylvania accept referrals and place the offenders into levels of service the same way. The referral process for offenders with a state sentence is not typical from other criminal justice referrals in Pennsylvania. For example, offenders with criminal charges under the supervision of county authorities in Pennsylvania differ in that probation and parole officers refer offenders first to GRC for an assessment. An evaluator or clinician completes an assessment on the offender and then, based on ASAM PPC (American Society of Addiction Medicine–Patient Placement Criteria) and PCPC (Pennsylvania Client Placement Criteria), a level of care placement is recommended. ASAM is a standardized and nationally recognized criterion for assessing and placing individuals into drug and alcohol treatment services. PCPC, developed and based on ASAM, is criteria specifically designed by the Pennsylvania Department of Health (DOH).

The referral process for county-referred offenders in Pennsylvania differs from the BCC contract with GRC in two ways. First, a required PCPC-based assessment is completed to determine a clinical recommended treatment level. Second, the contracts which GRC has with various counties in Pennsylvania includes several different levels of care treatment options (e.g. detoxification, short and long-term inpatient, partial hospitalization, outpatient, halfway house), unlike the two levels of care (e.g. inpatient, work-release) GRC has with the BCC. The referral procedures GRC uses with the BCC are not typical of other states. For example, Colorado uses treatment matching protocol to place offenders into substance abuse treatment; Texas utilizes trained clinicians to complete assessments on offenders to determine treatment placement; and Delaware uses

a step-down process with offenders, varying the intensity level of treatment from incarceration.

GRC has some unique features in terms of the patients it accepts, the staff it employs, and its extensive experience and performance in the addiction treatment field that make it a particularly desirable research site for this study. First, GRC offers both inpatient and work-release services. The majority of contracted sites in Pennsylvania offer one level of service or the other. Second, GRC offers services for both males and females. The majority of contracted sites in Pennsylvania offer services for one gender or the other. Third, the GRC facility employs highly-trained and credentialed clinicians. With all of its beds licensed with the DOH, GRC is required to hire and train clinical staff that has obtained specialized and DOH-approved degrees. GRC as a licensed facility is required to complete standardized documentation (e.g. assessments, treatment plans, progress notes) and utilize criteria for placement and admission into levels of care (e.g. ASAM PPC, PCPC). Fourth, GRC has been in operation for over 35 years, and according to various treatment guide books, has been recognized as one of the top alcohol treatment facilities in the country.

Community Corrections Referral Process

The two primary types of referrals to the GRC program are those coming from the *department of corrections* and those coming from *parole*. The referral process (See Appendix E) for these two main types of referral sources to GRC differ in type and procedure.

Referral Types

The first type of referral GRC receives is offenders from the *department of corrections.* The *department of corrections* referral is an individual who is incarcerated in a Pennsylvania State Correctional Facility. This individual is generally a non-violent substance-dependent offender who has volunteered to be referred to a community corrections center. All incarcerated inmates in Pennsylvania are placed into a classification unit in order to be processed and identified for services. Only certain inmates are eligible for alcohol and drug services in the institution and placement into community corrections upon release. Inmates placed into the lowest classification level are usually non-violent offenders with drug and alcohol related crimes and problems with abuse or dependence. Counselors or parole agents working in the state prisons generally rely on unstructured clinical judgments to determine the referral placement into treatment services. This type of clinical judgment may involve a brief written evaluation that includes sections on an offender's criminal history, history of drug and alcohol use, and other background information. The evaluation may also not involve an interview of the offender, but merely a review of available background information and history of the offender. Historically, Pennsylvania has not had a standardized assessment process in place until the last few years. Pennsylvania has now begun to utilize the Texas Christian University (TSU) Drug Screen and Assessment Instrument and the LSI-R (Level of Service Inventory-Revised) to identify the need for alcohol and drug intervention as well as determine the risk level of the offender while incarcerated. This criminal justice assessment process has differed in certain ways from an assessment completed by GRC on offenders. First, the evaluation is conducted by a review of offender information,

unlike a structured interview that is involved at GRC. Second, the evaluation is not based on any placement or matching criteria, unlike the assessment at GRC that is based on ASAM PPC and PCPC. Third, the evaluation is completed by a counselor or parole agent who is not required to have any specialized training or credentials to complete evaluations, unlike the clinicians at GRC that need to have an approved degree in a health-related discipline by the DOH.

Parole is the second type of referral source of offenders to GRC. *Parole* referrals differ from the referrals from the *department of corrections* in that the offender comes from a parole agent who is supervising the offender in the community instead of being released from prison. The individual coming into the program as Parole is an offender who is living at an approved residence in the community and has violated the conditions of parole by recently using alcohol or drugs. Individuals are non-violent substance-dependent offenders who agree to enter a community corrections program. The parole agent often has access to the offenders' criminal justice history records, including alcohol and drug problems. The parole agent generally does not complete any type of written or clinical evaluation on the offender or administer a screening test for substance dependence. The parole agent relies more on drug test results and compliance of parole conditions to indicate the use of drugs or alcohol and the need for treatment services.

These two types of referrals (e.g. department of corrections, parole) represent two separate sources that differ in approach and what the offender has experienced prior to being referred to treatment. The department of corrections referral, while usually having experienced a period of abstinence from drugs and alcohol due to being incarcerated, often have not participated in many treatment interventions while in prison and at the

same time need to deal with multiple problems separate from their substance abuse, including medical conditions and mental illness. These offenders are placed into programs that are located closest to their home residence first, rather than into treatment programs that can address their clinical needs. The parole referrals usually have experienced recent drug and alcohol usage and other compounding problems directly associated with this use or abuse and are generally in need of immediate treatment interventions.

Referral Procedures

Referral procedures occur differently depending on the referral type. The Pennsylvania Parole Board receives a recommendation from the superintendent of the institution for each offender and then the referral to a community corrections regional office is made as a condition of the offenders release from prison. The parole board makes the referral to community corrections and also chooses to have the offender either participate in inpatient treatment or work-release services upon admission to a program based on the recommendations made by the superintendent. This recommendation is based on drug and alcohol history, institutional adjustment, and other clinical judgments of the counselor and parole agent working in the prison. No ASAM or PCPC are used in this referral process. Once the regional office receives the referral, a referral specialist assigns the offender to a community corrections center for review. The first condition used, before factoring in what treatment level is recommended, in determining this placement is the geographical location of the offenders' projected home residence. The department of corrections referral occurs by the GRC program director attending a weekly referral meeting to review cases for admission. The recommended placement

level is indicated on each referral packet before being distributed to the GRC program director.

The parole referral occurs by the GRC program director receiving a phone call from a parole agent requesting an admission of an offender. The parole agent indicates to the program director which of the two treatment options is being recommended for placement based on the current status of the resident in community supervision. For example, if the offender is currently using drugs and alcohol and experienced related problems, the agent may recommend a higher intensity level of treatment (e.g. inpatient).

Alcohol and Drug Treatment Screening & Intake

Intake procedures at GRC, corrections or otherwise, are the same regardless of the type of referral. All residents entering GRC must meet criteria for alcohol or drug abuse or dependence according to the DSM-IV-TR: Diagnostic and Statistical Manual of Mental Disorders-Text Revision (American Psychiatric Association, 2000). GRC is required by the DOH to assign a diagnosis to each offender entering a level of care since its facility is licensed, although the BCC does not use a diagnosis in its referral procedures with GRC. The DOH requires that all licensed treatment facilities in Pennsylvania assign a primary diagnosis to every individual entering any treatment level. The GRC program director reviews specific details of every case for factors that may not permit the program to accept the referral. These factors are: lack of a substance dependence diagnosis, a severe medical or psychiatric condition, poor institutional adjustment, multiple program failures, or criminal charges of murder, arson, or a sexual offense. Approximately 1-2% of referrals are rejected annually.

Intake procedures are the same for both types of referrals (e.g. department of corrections, parole) into the GRC program. First, all residents placed into inpatient or work-release services must sign a consent form for treatment and complete an intake evaluation. Consent for treatment is required when an individual enters a Department of Health licensed facility, and it gives GRC permission to administer treatment services to the substance-dependent offender. The initial intake is a comprehensive evaluation that each resident completes upon admission and then discusses in depth with an assigned clinician. Areas of the evaluation are based on ASAM and PCPC dimensions and assist the clinical staff in identifying areas that the offender needs to address while participating in the treatment program. This intake evaluation differs from the assessment mentioned previously in that it is not completed to determine a treatment level. As stated earlier, offenders are placed into treatment levels that are determined prior to their referral to the program.

Second, clinicians complete an evaluative summary, mental status exam, and generate a clinical needs list after meeting with the patient and reviewing the intake evaluation. A treatment plan or also referred to as a prescriptive program plan is developed by clinical staff on all residents regardless of the treatment level they are placed in. A treatment plan is a resident's guide to meet agreed-upon goals and objectives while in the program.

Third, additional evaluations are completed by program staff on each individual after admission. For example, an intake is completed by a staff nurse and is an interview-based assessment that focuses on areas of physical and mental health.

Fourth, the clinical staff that complete the intake evaluations and nursing intake are trained and receive *privileging* from GRC to complete these. Privileging is formalized training and credentialing of GRC staff to perform specific job duties. Each clinician (e.g. counselor, therapist) must first have a Bachelor's Degree in a health-related discipline that is approved by the DOH or hold a credential from the Pennsylvania Certification Board (PCB). These clinicians must attend training and perform competency testing on evaluations and treatment plans before being formally approved to complete them by an agency (GRC) executive committee. The nursing staff has similar required training on the nursing intake evaluation and also must pass competency tests prior to being approved to complete them. Nursing staff that complete the nursing intake must be Registered Nurses (*RN*'s). Only clinical, nursing, and clinical supervision staff has access to the patient clinical records.

Fifth, no standardized assessment and placement process or criteria are utilized by the BCC that determines what treatment level of care each offender is referred to and placed in. The referral source chooses the level of care and GRC places the offender into either inpatient or work-release.

Sample

The sample consisted of clinical records from discharged GRC patients for the calendar year 2005. The researcher was granted access to these patient records by GRC (See Appendix B). A report was generated that contained the patient identification numbers for all of the 2005 admissions into the GRC program. This list was given to the GRC Medical Records Director with a request to have these archived patient records

pulled from storage for review by the researcher. An initial review found that nearly 300 records (n=297) exist for the GRC program during the 12-month period in 2005.

Subjects from the 2005 calendar year may be considered representative of GRC clients because 2005 was a typical year in the GRC program. It was typical in the following ways: no new policies, referral procedures, contract terms, or funding changes occurred during this time frame. Further, program staff remained intact and the program environment remained constant. First, policies remained the same at GRC in 2005 than in years past. An annual review of policies was conducted by the program director, but no changes were made in any policies in areas of referral, placement, or delivery of inpatient or work-release services. Second, referral procedures remained the same for department of corrections and parole-referred residents. Parole agents requested parole referrals to the program director of GRC by telephoning and the department of corrections referrals were made to the program director of GRC by distributing referral packets in person at a weekly meeting. Third, the contract terms GRC had with the BCC remained the same. In 2005, contracts for both inpatient and work-release services at GRC were in the fourth year of a five-year term and no changes were made during the contracted term. Fourth, funding remained constant at GRC in 2005. The department of corrections and parole both continued to make referrals and remained the two primary referral sources to GRC. The BCC remained the primary funding source. Referrals from the department of corrections and parole are paid and covered under the contract that GRC has with the BCC. Contract terms do not change during the length of the contract and in 2005 GRC was in the same contract that it had signed with the BCC in 2002. Fifth, GRC experienced no program staff turnover. No new staff positions were created in 2005 and

the BCC Contract Facility Coordinator and the Parole Supervising Parole Agent that are assigned to GRC remained the same in 2005. Sixth, the program environment remained the same in 2005 at GRC. No new major physical plant changes were made to the second floor of the building in which the corrections program operated. GRC operated the same inpatient and work-release program for male and female offenders with a total of capacity of sixty beds in 2005.

Exclusion Criteria

Several exclusion criteria were applied to the potential subjects from the year 2005 in order to determine the actual number of unique cases. First, the offender data sheet contains duplicate records. For example, an offender can be listed as being admitted to inpatient treatment on one date and work-release services on a later date. The first admission date on duplicate records was retained because that is the date that the offender entered the program. The other duplicate entries were excluded.

Second, two primary referral sources dominate the distribution. For example, department of corrections and parole referrals together comprise 85% of the program referrals. The remaining 15% of referrals were excluded due to being an insufficient size for statistically significant analysis as a separate grouping. These remaining referrals come from various other referral sources including federal and county probation offices as well as self-paying offenders.

Third, missing demographic variables were identified. For example, if more than two variables were missing from the patient record, the record was excluded.

Fourth, incomplete patient clinical records were excluded if the clinical information (e.g. clinical evaluations, intake and referral information) existing in the

record was deemed insufficient by the evaluator to make an appropriate clinical recommendation to treatment.

After preliminary analyses following the exclusion criteria explained above, over half of the records were retained to produce a sample size of (N=153). Approximately 43% of the records were excluded, including 91 for duplication and 39 for referral source. No records were excluded for missing data. The total of 153 is representative of annual average admissions to the GRC corrections program. The distribution of gender consists of 48 females and 105 males. The distribution of referral source consists of 54 parole and 99 department of corrections. This sample should be adequate to assure sufficient statistical power in a four-level clinical recommendation vs. a two-level criminal justice referral option.

Power Analysis

A priori power analysis was conducted prior to the beginning of data collection to determine an appropriate sample size needed to achieve adequate statistical power (Cohen, 1988). A large effect size of 0.5 and 3 Degrees of Freedom (DF) were used to compute the analysis. (The 3 degress of freedom represent a 2 by four crosstabulation comparison for the first and second hypotheses.) The DF was established by the formula: (Rows-1)*(Columns-1). A 2 (Rows) X 4 (Columns) table was developed with the rows identified as the two types of placement recommendations (e.g. criminal justice referral, clinical recommended treatment) and the columns identified by the four levels of treatment options (e.g. Levels 1-4). The DF was computed as (2-1)*(4-1) or 1*3. The results of the power analysis indicated that a minimum total sample size of 69 was needed for the study (See Appendix H). Thus, the sample size of 153 appears adequate

and allows for a larger sample needed for the exploratory regression analysis with demographic and other variables.

Variables

The two main variables in the study are criminal justice referral placement and clinical recommendation. Criminal justice referral is the independent variable, and the clinical recommended treatment is the dependent variable in the analysis to assess "mismatch" in the two main hypotheses. The variables were identified in two ways. First, the independent variable of CJ referral is initially included on the offender data sheet available from the GRC database. The offender data sheet also includes the majority of the independent demographic variables (e.g. age, race, gender, education level, marital status, primary diagnosis) that were used in the exploratory analysis of factors influencing "mismatch." Second, the variable of clinical recommendation and the independent variables of secondary diagnosis and criminal charges were determined through a content analysis of the patient record conducted by trained evaluators (as discussed below). Variables were coded and placed into a research database prior to analysis.

To operationalize or measure the two main variables, the two types of referral placement options that are used by community corrections were used for the first variable, and nine different types of clinical recommendation options were grouped into four levels for the second variable. Referral placement were one of two levels of service: either inpatient or work-release. Clinical recommendations can be made to nine different levels of treatment including: detoxification, inpatient, partial hospitalization, halfway

house, morning or night outpatient, outpatient counseling or outpatient group, addiction education, drug, alcohol, & tobacco awareness, and other (e.g. aftercare groups).

To achieve greater statistical power in analysis for the first hypothesis, the nine different clinical recommended levels of treatment were collapsed into four treatment levels consistent with ASAM PPC Criteria and PCPC. This collapsed classification moves from the least intensive to the most intensive treatment service. For example, PCPC Level 1 includes outpatient and intensive outpatient treatment. Level 2 includes partial hospitalization and halfway house services. Level 3 includes medically monitored detoxification, short-term and long-term residential treatment. Level 4 includes medically managed detoxification and inpatient residential (PA DOH, 1999). Some minor modification to these levels were needed to be made in order to represent all available levels of treatment. For instance, ASAM and PCPC Level 4 include medically managed detoxification and inpatient rehabilitation. Since GRC does not offer either of those highly intensive levels of service, they were excluded. The clinical recommended levels of care for this study were grouped by the following types of services: Level 1 included addiction education, drug, alcohol, & tobacco awareness, and other (aftercare groups). Level 2 included morning or night outpatient, outpatient counseling or outpatient group. Level 3 included partial hospitalization and halfway house. Level 4 included detoxification and inpatient residential treatment (See Appendix E).

The independent variable of criminal justice referral and the dependent variable of clinical recommended treatment determined the "mismatch" outcome for the exploratory analysis of other influential factors. The mismatch was defined as any difference

between criminal justice referral and clinical recommended treatment (at the four level classification).

Offenders can only be placed into two contracted levels of service (e.g. inpatient and work-release). Inpatient is a defined level of service under ASAM criteria, PCPC, as well as the DOH. However, work-release services are not defined as a level of service by the BCC. The closest level of service based on ASAM and PCPC is *outpatient*. For purposes of this study, the two levels of service placed at GRC by the BCC can be classified as Level 1 (e.g. work-release) and Level 4 (e.g. inpatient).

Therefore, level of care matching can be defined in terms of the congruence between the referred placement level of care (e.g. Level 1 or Level 4) and the clinically recommended level of care (e.g. Levels 1-4). Offenders were considered "matched" if the referred placement level of care and the clinically recommended level of care are the same. Offenders were considered "mismatched" if they were referred to and placed in higher or lower levels of care than what was clinically recommended by the evaluator. Additionally, if an offender was placed into Level 4 inpatient but was recommended for Level 1 aftercare group, then the referral was considered "mismatched" into a higher level of care than was deemed clinically appropriate, thus showing a greater level of mismatch.

Furthermore, there were eight independent demographic controlling variables used as controls in the exploratory analysis. These variables are: age, race, gender, education level, marital status, primary substance dependence diagnosis, co-occurring biomedical or mental health secondary diagnosis, and current criminal charges. These

variables are primarily categorical bivariate in nature and the source of these variables are the GRC offender record and the GRC electronic computer database.

This crosstabulation was a two- by-two comparison in which the clinical recommendation is collapsed into inpatient or outpatient. The percentage of agreement and disagreement between the two variables and the statistical significance using Fisher's statistic of these results were inspected to determine the extent of the "mismatch".

Rating Procedures for Clinical Recommendations

Overview of Treatment Intake Records

The source of the clinical recommended treatment were based on ratings developed from a review of GRC offender records. All offender records at GRC, corrections or otherwise, regardless of the program or level of care, contain the same structure, documentation, forms, and information. All records at GRC contain the following sections: opening and closing documents, insurance, consents, evaluations, treatment plans, progress notes, labs, consults, miscellaneous, and appendix. For a more detailed description of the specific contents of each section of the record, see *GRC's Charting Manual Index* (Appendix F).

The two primary sections of the patient record that contain the majority of the documents to be reviewed by the evaluators are located in the *assessment* and *miscellaneous* sections. The assessment section contains the initial evaluation completed by the patient and reviewed by the clinician, the evaluative summary and mental status exam, and the intake completed by the nursing staff. The referral information is located in the miscellaneous section of the record and can offer additional information on drug and alcohol use, criminal charges, medical conditions, and mental health history. It should be

noted, for purposes of this study, that the evaluators had access to the entire patient record to search for information needed to complete the assessment as well as to identify and record missing variable data.

Evaluator Recruitment and Training

Recruitment of the evaluators involved a phone conversation and then a preparation meeting between the researcher, the GRC Evaluation Manager, and a small pool of GRC evaluator staff. The initial phone call was between the researcher and GRC Evaluation Manager to discuss the purpose of the study and the staffing needs required to complete the research. The researcher requested that the GRC Evaluation Manager identifies a group of evaluators to gather and review data from the offender records and complete an assessment to determine the appropriate clinical recommendation. The researcher plans to give a small incentive to each evaluator participating in the data collection, such as a gift card. The GRC Evaluation Manager then asked evaluators about their interest and willingness to participate in the research study. The researcher chose three primary evaluators for the study and two others served as back-up replacements.

The researchers convened a preparation meeting with the evaluators in order to discuss and briefly explain the research study. The researcher gave a brief description of the content analyses of clinical records and the specific procedures that it required. To minimize researcher bias, evaluators were not be given specific details about the proposed research questions, hypotheses, or comparison between CJ referral and clinical recommendations. Each evaluator was instructed to complete an assessment on each offender record and make a level of care placement based on PCPC. Since the evaluators complete this exact assessment in their daily position at GRC, the researcher did not need

to conduct much training on the completion of the assessments. The evaluators were instructed to place this clinical recommendation on the offender data sheet along with the secondary diagnosis and criminal charges listed in the record. Further, if any missing variable information (e.g. age, gender, race, education level, marital status, primary diagnosis) was evident on the offender data collection sheet, the evaluators were instructed to search for this information throughout the record and then document it on the offender data sheet if it is available. After the records were obtained from the medical records department, the researcher transported them to an outpatient satellite office in Greentree, Pennsylvania located approximately 20 miles from the Aliquippa site. The evaluators completed the assessments and data collection using an offender data collection sheet at the GRC Greentree location.

The researcher deployed the evaluators to complete the assessments based on a scheduled and agreed-upon timetable agreeable with the GRC Evaluation Manager. The evaluators in this study were required to have a Bachelor's Degree in a health-related discipline that is approved by the Pennsylvania Department of Health and attend training on the assessment as well as ASAM and PCPC. Evaluators, just as the GRC clinicians and nursing staff who complete evaluations, are approved to complete assessments. The evaluators must pass competency testing and become privileged by GRC to complete assessments. See a list of GRC Evaluator staff and their credentials (Appendix G).

The Ratings and its Purpose

There were two (2) primary evaluators. Both evaluators each separately completed approximately 76 assessments on the 2005 sample of closed, discharged patient clinical records. Despite having a standardized assessment form and admission

criteria to follow, there may be some level of subjectivity and discrepancies with each evaluator's clinical impression and interpretations of the data collected.

Establishing Inter-Rater Reliability

A third evaluator completed assessments with the two primary evaluators on the first ten cases on the sample of clinical records. This procedure helped achieve an acceptable level inter-evaluator reliability on the clinical treatment recommendations based on PCPC Placement Admission Criteria. Each of the three evaluators were instructed to complete assessments on the same ten patient records and given a brief explanation by the researcher on inter-evaluator reliability. The clinical recommendations of the three evaluators were compared for congruence. A Kappa Coefficient was computed to identify a substantial level of agreement level (Kappa$\geq$.8.) Kappa provides a measure of the degree to which evaluators agree on their ratings of a diagnostic test or other item (Cohen, 1960). That Kappa or coefficient of agreement is achieved using commands in SPSS that compare the ratings of one evaluator to another and calculate "agreement" based on the number of rating options. Acceptable levels of reliability are 75% agreement between coders or better and well-trained coders using well-constructed coding schemes should achieve better than 85% agreement (Allen-Meares, 1984). Several research studies appear in the literature that have incorporated raters making assessments separately (Mumby, et al., 2007; Lilford, et al. 2007; Vatnaland, et al, 2007; Forsberg, et al., 2007 & Allen, et al. 2007), and assessment being completed twice by different raters and back-up raters (Pierucci-Lagha, et al., 2007; Kaufmann, et al., 2007).

An assessment (See Appendix A) was completed on each clinical record by three evaluators in order to develop reliability. The results of the first ten cases were entered

into an SPSS database (See Appendix I). A Kappa test was generated in order to inspect the level of agreement between the evaluators. The output indicated a Kappa of .848, which indicates an acceptable level of agreement between the evaluators and thus established inter-rater reliability. This assessment is used throughout GRC, expect for offenders in corrections program, which is completed in order to determine the clinically recommended level of care. Further, the evaluators completed the exact same assessment that they utilize daily in their regular positions at GRC. However, the assessment is not used on offenders because the BCC contract with GRC does not require that a clinical recommendation for treatment be made on the offender. The assessment is based on the six dimensions of ASAM PPC and PCPC. Reliable diagnostic criteria and screening instruments are utilized in the assessment, including DSM-IV-TR *(Diagnostic and Statistical Manual of Mental Disorders, Volume Four-Text Revised)* Criteria for Substance Dependence and the CAGE questionnaire. The DSM-IV-TR (American Psychiatric Association, 2000) diagnosis of substance dependence measures an underlying construct that is relatively consistent across groups of substances. An individual must meet three of the nine conditions to be considered substance dependent (See Appendix A & Appendix E). Research has shown the validity of this diagnostic criteria and screening instrument. Studies have shown that the inter-rater reliability for the DSM-IV-TR diagnoses were excellent for opioid dependence and good for alcohol and cocaine dependence (Pierucci-Lagha et. al., 2007). The CAGE Questionnaire (Ewing, 1984) is a four-question alcohol severity test and has consistently proved to be the superior instrument for detecting alcohol abuse and alcohol dependence (Enoch & Goldman, 2002).

The evaluator also had an offender data collection sheet to refer to and place data in when completing the assessment. The offender data collection sheet was a spreadsheet created from the GRC database that included the entire patient records from 2005 included in the study. The data collection sheet was developed by the researcher and background information was included and appeared on the offender data sheet. This background information, including: age, race, gender, marital status, primary diagnosis, referral source, and education level automatically appeared on the offender data collection sheet when the report was generated. There were also columns for write-in data from the evaluators, including secondary diagnosis, criminal charge(s) and recommended treatment level.

Three evaluators completed the assessments by reviewing the intake and clinical information available in the GRC records. Once the clinical information was reviewed and information recorded on the assessment, the evaluator referred to the PCPC Placement Criteria for Admission (DOH, 1999). The criteria required the evaluator to review each dimensional specification and make a clinical determination referred to as dimensional scoring. The evaluator took the information from the assessment and interpreted it according to severity using the PCPC dimensions (DOH, 1999).

Based on the information and PCPC, the evaluator then made a clinical recommendation. As previously mentioned, there are nine (9) different treatment options available at GRC, including: detoxification, inpatient, partial, halfway house, morning or night outpatient, outpatient counseling or outpatient group, addiction education, drug, alcohol, & tobacco awareness, and other (aftercare groups). For a more detailed explanation of each level of care, please see Appendix E. The evaluator also identified

and recorded the corresponding level of service (e.g. Levels 1-4) that their clinical recommended treatment fell within (See Appendix E) on the offender data sheet.

Human Subjects Issues

To protect patient confidentiality, records for the research subjects and the offender data sheets were secured in a locked file cabinet in a designated area of Gateway Greentree during the data collection phase. This file cabinet was accessible only to the evaluators and the researcher. This study followed federal confidentiality guidelines and applicable laws to protect patient privacy rights, including *42 CFR, Part 2, Confidentiality for Alcohol and Drug Abuse Patient Records.* Each clinical record was be identified only by a case number and contained no identifying information to protect the privacy and confidentiality of the patients.

An application for research at GRC was completed by the researcher. The researcher submitted this application initially to the GRC Director of Research. The study design and methodology were briefly explained in this application, as well as the informed consent and plan for the presentation of the results to GRC. The application was taken to the designated GRC executive committee by the GRC Director of Research where it was presented, reviewed, and approved. A letter from the Director of Research at GRC stating the approval for research was obtained by the researcher (Appendix B).

The researcher also submitted a research application to the Institutional Review Board for the Protection of Human Subjects at Indiana University of Pennsylvania (Appendix C). The researcher requested an expedited review from the IUP IRB, since this research study posed no more than minimal risks to subjects. The study was based on existing data, documents, or records. The IRB approved the research project.

Analysis

Four sets of statistical analyses were conducted to address the hypotheses**.** First, the demographic and behavior characteristics of the sample were described based on frequencies computed from the information available on the offender data collection sheet provided to the raters by the researcher. A brief review of the contents (e.g. required forms and documentation) of a GRC offender record and a review of a record list of demographic information that is contained in the GRC database indicates that the following information is available: primary referral source, the criminal justice referral placement, age, race, gender, marital status, education level, primary diagnosis, secondary diagnosis, and criminal charges. This information was used to not only help to describe the sample but also to compare the sample with samples in other studies. In this way the representativeness of the current sample and its generalizability can be assessed.

An SPSS database was created from the data collected by the raters including referred treatment level (e.g. inpatient, work-release), recommended treatment placement (e.g. , detoxification, inpatient, partial hospitalization, halfway house, morning or night outpatient, outpatient counseling or outpatient group, addiction education, drug, alcohol, & tobacco awareness, and aftercare groups), and background variables (e.g. sex, race, marital status, age, education level, primary and secondary diagnosis, referral source, and criminal charges). The information for each variable was given a numerical code when entered into the database.

To address Hypothesis 1 that a large percentage of offenders will be referred to levels of care which are not clinically appropriate, the independent variable of criminal justice referral and the dependent variable of clinical recommended treatment was be

crosstabulated to identify the percentage of mismatch. This crosstabulation was a two-by-two comparison in which the clinical recommendation is collapsed into inpatient or outpatient categories. The percentage of agreement and disagreement between the two variables and the statistical significance using Fisher's statistic of these results was inspected to determine the extent of the "mismatch".

For Hypothesis 2 that offenders are more-often referred to lower levels of treatment than is clinically recommended and thus are "undertreated" was addressed in a crosstabulation for four by two categories using Kappa statistics to summarize the nature of the agreement and disagreement. The four levels of care options collapsed from the 9-levels of clinical recommendation was inspected to determine if a mismatch exists and what is the extent and nature of the mismatch. The researcher will inspect the nature of mismatches for "undertreatment" as offenders that were referred to and placed into lower levels of treatment than were clinically recommended (e.g. Offenders referred to Level 2 outpatient, but were recommended to Level 4 inpatient).

Mismatch variables were created. The first variable of mismatch was for any mismatch in the study. This mismatch can be defined as any disagreement between the criminal justice referral and the GRC clinically recommended treatment level. The mismatch variable was coded 0 for match and 1 for mismatch. The second mismatch variable was for the mismatch of greatest concern, or the mismatch that indicated undertreatment (i.e. The criminal justice referral was for the lowest treatment intensity of work-release and the GRC clinical recommendation was for highest treatment intensity of inpatient). The variable was coded 0 for a mismatch and 1 for an undertreatment mismatch. The third mismatch variable was for overtreatment (i.e. The criminal justice

referral was for the highest treatment intensity and the GRC clinical recommendation was for lower treatment intensity). The variable was coded 0 for a mismatch and 1 for an overtreatment mismatch.

To explore the possible influence of other factors, primarily the criminal justice referral source and a co-occurring diagnosis (i.e. mental health, medical), a logistic regression was computed using background variables as controls to predict mismatch. Mismatch, as mentioned in the variable section, was determined as a disagreement between the two-by-two crosstabulation generated for Hypothesis 1. The background variables include demographics and behavioral factors, namely, gender, race, marital status, age, education level, and criminal charges. The background variables were entered in a block using a stepwise procedure to eliminate the insignificant variables and increase the power of equations. The referral source and diagnosis were directly entered separately to determine if either of these variables are significant predictors of outcome when controlling for the other variables. Significant odds ratios were identified to assess the presence and strength of the predictors. Binary logistic regression was used instead of linear regression because the outcome variables used in this study was categorical in nature. Demographic, behavioral, and referral source variables were entered as covariate categorical variables into three separate blocks in the regression equation for mismatch. Block 1 consisted of the demographic variables of: sex, age, race, marital status, and education level. Block 2 consisted of: chemical history diagnosis, medical condition, psychiatric condition, and criminal charges. Block 3 consisted of referral source. Some of the variables needed to be collapsed because of small distributions in some of the options, including race, marital status, and criminal charges. Equations using three different entry

methods were computed, including the Enter, Forward Stepwise, and Backward Stepwise in order to test for impact of sample size and colinearity—that is, to ensure a stable result. The Direct Enter method results will be reported later. The Stepwise methods were used to confirm the Enter method results.

Limitations

There are limitations to this research study in terms of design. First, there is a potential of incompleteness in the patient clinical record. Missing data as well as missing variables make it more challenging or impossible for the evaluator to complete an assessment thoroughly and make an appropriate level of care clinical placement recommendation. It is standard procedure at GRC that clinical records are reviewed regularly by clinical supervisors to ensure that all of the required documentation is being completed and filed on a consistent basis.

Second, the evaluators use guided clinical judgment in their assessments. These judgments can be viewed as subjective in nature despite using ASAM PPC and PCPC. A third evaluator performing assessments on the same records with the two primary evaluators at the beginning of the data collection process will ensure inter-rater reliability and minimize discrepancies between the evaluators. Reliability in content analysis depends on many factors, including the skill of the coders, the nature of the categories, the rules guiding the use of the categories, and the degree of clarity or ambiguity in the documents (Weber, 1985). The education and skill level of the evaluators in this study as well as the similarity of the structure and contents of the GRC patient records strengthen the reliability of the assessment and minimize the subjectivity. Further, as described in the previous section, the nine treatment options that the evaluators had to choose from

were classified into four separate levels of care. With this grouping of the clinical recommendation options, more congruence between the evaluators' impressions should result.

Third, GRC represents a single site design. There are over 50 community corrections centers in Pennsylvania, both contracted and state-operated. GRC is not typical of the community corrections field in Pennsylvania for the reasons stated earlier about its uniqueness in areas of services provided (e.g. inpatient & work-release), patients accepted (e.g. male & female), staff employed (e.g. highly trained and credentialed), and experience (e.g. 35 years in operation and nationally recognized).

Pennsylvania is not typical of other states regarding community corrections and drug and alcohol referral to treatment. For example, Colorado uses a screening and assessment approach applied to offenders in both prison and community settings. Offenders receive a thorough drug and alcohol assessment as well as a risk assessment. A treatment matching approach is utilized to define criteria for admission into each available level of treatment services (U.S. Department of Health and Human Services, 2005).

Additionally, Texas has substance abuse treatment programs offered to addicted parolees in their *Rehabilitation and Reentry Programs Division* (Texas Department of Criminal Justice, 2008). Offenders are assessed using the *Substance Abuse Risk Instrument*. The instrument determines three levels of service. Level 1 offenders receive substance abuse education programming, Level 2 offenders receive substance abuse supervision programming which includes assessment, group and individual counseling by

a parole division counselor. All counselors completing these assessments are Licensed Chemical Dependency Counselors (LCDC).

Finally, Delaware arguably has the most progressive substance abuse treatment system of services. In their *Bureau of Community Corrections Division* (The State of Delaware-Department of Correction, 2008), Delaware's internationally-acclaimed, 3-step substance abuse treatment program is proven to be successful in rehabilitating drug offenders. *This treatment program is called: KEY, Crest, Aftercare* (The State of Delaware-Department of Correction, 2008)**.** Treatment follows the offender from incarceration to work release and finally, to full-time status in the community. Delaware is the first state in the nation to fully implement such an aggressive offender substance abuse program.

CHAPTER 4

RESULTS

Introduction

This chapter presents results from the content analyses study that was conducted on 153 clinical records from an addiction treatment center from the 2005 calendar year. First, the characteristics of the sample will be presented. The offenders tended to be of relatively young age and single males who had problems with drug use, a co-occurring medical or psychiatric condition, and criminal robbery charges. Demographic and behavioral characteristics indicate an overall disadvantaged and problematic offender population. The sub-samples of DOC and parole referrals however differed significantly in five areas of offender characteristics: sex, race, chemical history diagnosis, existing psychiatric condition, and level of care referral. Sex was significant with DOC referrals in that nearly 80% (76.8%) were male. Parole referrals had more offenders that were of white race, cocaine dependent, and an existing co-occurring psychiatric condition. Level of care referral was significant with Parole referrals in that nearly 80% (75.9%) were placed into inpatient treatment. Second, the extent of the mismatch between the criminal justice referral and the GRC clinical recommendation for treatment will be discussed. Results indicated that nearly two-thirds (64.1%) of the total cases were mismatched. Third, the nature of the mismatch will be presented and will show how nearly all (89%, n=60) offenders in the sample that were referred to work-release were undertreated. This group, according to the clinical recommendation, would have benefited from higher levels of care including partial hospitalization, halfway house, or inpatient. Additionally, results indicate that nearly 30% (29.6%, n=29) of the 98 total mismatched cases can be

considered significantly mismatched in that the recommended level of care from GRC indicated that offenders were referred to levels of care that were either severely undertreated (i.e. Work-release or Minimum treatment intensity referred and Inpatient or Maximum treatment intensity recommended) or severely overtreated (i.e. Inpatient or Maximum treatment intensity referred and Work-release or Minimum treatment intensity recommended). Fourth, expected influences on the mismatch, specifically offender characteristics referral sources and co-occuring disorders, will be discussed. Most importantly, the referral source (i.e., DOC vs. Parole) and the presence of an existing co-occurring psychiatric condition both did not appear to influence the mismatches in the sample.

Sample Characteristics

The characteristics of the sample were tabulated using data from the clinical records and also compared for the two main criminal justice referral sources: directly from a correctional institution (DOC) or by a parole agent (Parole). Cross-tabulations were computed to compare the two sub-samples of DOC and Parole referrals for the following demographic characteristics: age, sex, race, marital status, and education level. Additional cross-tabulations were for the following behavioral indicators: chemical history diagnosis, existing co-occurring medical diagnosis, existing co-occurring psychiatric diagnosis, and criminal charges. A cross-tabulation for the treatment referred by the criminal justice sources (e.g. DOC and Parole) was made. Significant tests, including Chi-Square and Fisher's Exact Test were computed for the cross-tabulations of the demographics, behavioral indicators, and treatment referral options in order to

identify statistical significance of the differences between the two sub-samples ($p<.01$; $p<.05$).

The sample as a whole produced certain tendencies that deserve mention (see Table 1). For instance, the demographic characteristics showed that offenders in this sample were relatively young with a mean age of just over 38. Male offenders comprised over two-thirds (68.6%) of the sample. According to the clinical records, over half (52.3%) of the offenders tended to be white. Nearly 70% of the sample were single (i.e., not in a marriage relationship). Nearly half of the offenders (45.1%) had the equivalent of a high school education. In terms of the behavioral indicators, almost half (45.1%) of all offenders had a primary diagnosis of cocaine dependence. Over a third (38.6%) of offenders had a co-occurring medical condition listed on their record. Offenders with a psychiatric condition occurred in 30% (30.7%) of the cases. Robbery was the most common criminal charge listed (36.6% of the subjects). Almost two thirds (64.7%) of all the offenders referred to treatment were from the DOC.

A review of the characteristics of the referral sub-samples (e.g. DOC, Parole) indicates a substantial difference in terms of demographics. Offenders referred by the department of corrections tended to be older and more likely to be male and black than the Parole referrals. Nearly half of the DOC referrals (45.5%) had an age over 40. The Parole sub-sample, on the other hand, tended to be much younger. Almost two thirds (64.8%) of offenders referred by Parole were under the age of 40. Almost 80% (76.8%) of the DOC referrals were male. In contrast, a little over half (53.7%) of Parole offenders were male. The results for sex indicated that nearly 70% of the sample was male. Fisher's Exact Test, run for the 2 x 2 table, yielded an Exact Sig. (1-sided) result of .003. This

result shows $p \leq .01$ and indicates a highly significant association for sex (see Table 1). Offenders referred by the DOC tended to be black more than half the time (53.5%). Conversely, nearly two thirds (64.8%) of referrals from Parole were white, almost 20% more than DOC. The results for race indicated that the DOC and Parole referral types contrasted drastically in the percentage of white and African-American offenders. The Chi-Square Test results had a significance value of .047, which shows that $p \leq .05$ and indicates a significant association in relation to race (see Table 1).

Behaviorally, the DOC-referred offenders appeared to be more problematic in terms of alcohol dependence, medical conditions, and robbery charges. Nearly half (44.4%) of the DOC offenders had alcohol dependence as a primary diagnosis. These offenders also had a listed medical condition over 40% of the time. Robbery was the most common criminal charge for the DOC offenders, accounting for over 40% (41.4%) of the cases. The Parole-referred offenders appeared to be more problematic in terms of cocaine dependence, psychiatric conditions, and drug possession charges. Chemical history diagnosis, like race, also had results that were very different between DOC and Parole. For example, DOC referrals had a higher rate of alcohol dependence (44.4% vs. 33.3%). In contrast, Parole referrals had a significantly higher rate of cocaine dependence compared to the DOC referrals (59.3% vs. 37.4%). The Chi-Square Test results had a significance value of .048, which shows that $p \leq .05$ and indicates a significant association in relation to chemical history diagnosis (see Table 1). Existing psychiatric condition also showed a significant difference. Parole referrals were nearly twice as likely to have a co-occurring psychiatric condition listed as DOC referrals (42.6% vs. 24.2%). Fisher's Exact Test, run for the 2 x 2 table, yielded an Exact Sig. (1-sided) result of .016. This result

shows $p \leq .01$ and indicates a highly significant association for a co-occurring psychiatric condition (see Table 1).

The final characteristic that showed a significant association was treatment referral. Treatment referral was very different for Parole than DOC. Parole referred offenders to inpatient treatment over 75% (75.9%) of the time, 30% more often than the DOC (44.4%). Further, offenders were more than twice as likely to be referred to work-release by the DOC (55.6%) than Parole (24.1%). Fisher's Exact Test, run for the 2 x 2 table, yielded an Exact Sig. (1-sided) result of .000. This result shows $p \leq .01$ and indicates a highly significant association for treatment referral (see Table 1). This large percentage of imbalance for inpatient referrals may be explained by parole offenders having more drug dependence while using drugs more recently, current psychiatric problems, and more involvement with drugs evidenced by having current criminal drug charges.

TABLE 1

Offender Characteristics and Referral Source (in percentages)

Characteristics	Referral Source: DOC (n=99)	Parole (n=54)	Total (n=153)	
Demographic				
Age				
0-30	20.2	18.5	19.6	
31-35	19.2	33.3	24.2	
36-40	15.2	13.0	14.4	
41-50	30.3	29.6	30.1	
51-over	15.2	5.6	11.8	
Sex				**
Male	76.8	53.7	68.6	
Female	23.2	46.3	31.4	
Race				*
White	45.5	64.8	52.3	
African-American	53.5	33.3	46.4	
Asian	1.0	0	0.7	
Indian	0	1.9	0.7	
Marital Status				
Single	69.7	66.7	68.6	
Married	13.1	9.3	11.8	
Divorced	12.1	16.7	13.7	
Separated	5.1	7.4	5.9	
Education Level				
0-11 years	41.4	37.0	39.9	
12 years	45.5	44.4	45.1	
Over 12 years	13.1	18.5	15.0	
Behavioral Indicators				
Chemical History Diagnosis				*
Alcohol Dependence	44.4	33.3	40.5	
Cocaine Dependence	37.4	59.3	45.1	
Marijuana Dependence	2.0	0	1.3	
Opiate Dependence	16.2	7.4	13.1	
Existing Co-Occurring Medical Condition				
Yes	41.4	33.3	38.6	
No	58.6	66.7	69.3	
Existing Co-Occurring Psychiatric Condition				**
Yes	24.2	42.6	30.7	
No	75.8	57.4	69.3	
Criminal Charges				
PWID-Possession with intent to deliver	26.3	35.2	29.4	
Robbery/Theft	41.4	27.8	36.6	
Assault	17.2	16.7	17.0	
Receiving Stolen Property	3.0	3.7	3.3	
DUI-Driving Under the Influence	6.1	5.6	5.9	
Other	6.1	11.1	7.8	
Treatment Referral				
Level of Care				**
Work-Release	55.6	24.1	44.4	
Inpatient	44.4	75.9	55.6	

Note: DOC=Department of Corrections. * $p \leq .05$, ** $p \leq .01$.

The Extent of Mismatch

To address Hypothesis 1 that a substantial mismatch exists between the criminal justice referral and the clinically recommended treatment, a bivariate analysis was conducted by computing the following cross-tabulations: the GRC recommended level of care by the criminal justice referral for inpatient treatment or work-release. Nearly two thirds (64%, n=98) of the total 153 records were "mismatched", meaning that the GRC evaluators clinically recommended a treatment level that did not match the level of service designated by the criminal justice system (e.g. DOC and Parole). Of the work-release cases, 61 of 68 cases were mismatched. Offenders referred to inpatient were mismatched on 37 of the 85 records. See Table 2.

There was a difference in the match however for the inpatient and work-release referrals. Referrals to inpatient totaled 85. As shown earlier in Table 1, these 85 cases represented over 55% of the total referrals (N=153). Of these 85 referrals to inpatient treatment, offenders were matched in more than half (56.5%, n=48) of the cases. Referrals to work-release in the sample totaled 68 (or 44% of the total sample of 153). The work-release level of care includes three comparable treatment options: outpatient, outpatient group, and outpatient individual counseling. Of these 68 referrals to the work-release level of care, offenders were matched in about 10% of the cases (10.3%, n=7). There were 3 recommendations for outpatient treatment (4.4%) and 4 recommendations for outpatient counseling (5.9%). This translates into an overall match rate of only 36% (n=55).

Additional cross-tabulations were computed between the recoded GRC recommended treatment variable of minimum, moderate, and maximum intensity and the

DOC referral. Minimum treatment intensity included intensive outpatient, outpatient individual treatment, and outpatient group. Moderate treatment intensity included partial hospitalization and halfway house treatment. Maximum treatment intensity included inpatient rehabilitation and detoxification. Results indicated that 40% (39.7%, n=27) of the referred cases to work-release (n=68) were mismatched and recommended by GRC for the maximum treatment intensity. Another 50% (50%, n=34) of those work-release referred cases were mismatched and recommended for moderate treatment intensity. Slightly more than 10% (10.3%, n=7) of the work-release cases referred by the DOC were matched by the GRC recommendation for minimum treatment intensity. When the DOC referred cases to inpatient there was nearly a 60% (58.8%, n=50) match by the GRC recommendations for maximum treatment intensity. The majority of the mismatched cases for inpatient referral by the DOC were at the moderate intensity level. GRC recommended about 40% (38.8%, n=33) of DOC inpatient referrals for moderate treatment intensity. GRC recommended 2% (2.4%, n=2) of the DOC inpatient referrals for minimum treatment intensity.

As Table 2 illustrates, offenders referred to inpatient treatment were mismatched 43.5% (n=37). Being referred to inpatient and not being matched in a recommendation would mean that the offender was placed in a level of care that was greater than what was clinically recommended (i.e., "overtreated"). Of the 37 mismatched cases, 35 of them were recommended for lower levels of care. Partial hospitalization was recommended for 22 offenders (25.9%) and halfway house was recommended for 11 offenders (12.9%). Two additional recommendations for a lower level of care were made, one for outpatient treatment (1.2%) and one for outpatient group (1.2%). Two cases were exceptions in that

they were recommended for inpatient treatment, but required a higher level of care, detoxification (2.4%, n=2). As Table 2 further illustrates, offenders referred to work-release were mismatched nearly 90% of the time (89.7%, n=61). Approximately 40% (39.7%, n=27) were referred to the highest level of treatment, inpatient. Another 40% were referred to partial hospitalization (41.2%, n=28). Almost 10% additional cases (8.8%, n=66) were referred to halfway house treatment. Chi-Square showed a significant difference between the match for work-release versus inpatient referrals (X^2=.026; df=6; p<.05).

Results show nearly two-thirds of the total cases were mismatched (64%, n=98). As discusses earlier, results indicate a relative close match (e.g. High, Moderate) for inpatient treatment referrals (95.3%, n=81) and therefore it can be suggested that offenders were not substantially overtreated. Additionally, further investigation of the extent of the mismatch suggests approximately 30% (n=29) of the total mismatched records (n=98) were severely undertreated, evidenced by the recommendations for maximum treatment intensity (i.e., inpatient) that were referred to work-release (n=27). Despite only 30% of the mismatched cases being severely undertreated, this sub-group has emerged from the sample as the one of greatest concern. The substantial clinical implications of undertreating individuals, which will be discussed later, suggests that H1, which states a substantial mismatch exists between criminal justice referral and the GRC clinically recommended treatment is justified.

TABLE 2

Cross-tabulation of GRC Recommended Treatment by Criminal Justice Referral

	Criminal Justice Referral			
GRC Recommended Treatment	Work-Release n=68	Inpatient n=85	Total n=153	p-value
MINIMUM INTENSITY				
Outpatient Group	0 (0%)	**1 (1.2%)**	1 (0.7%)	
Outpatient 1:1 Counseling	4 (5.9%)	0 (0%)	4 (2.6%)	
Outpatient	3 (4.4%)	**1 (1.2%)**	4 (2.6%)	
MODERATE INTENSITY				
Halfway House	**6 (8.8%)**	**11 (12.9%)**	17 (11.1%)	
Partial Hospitalization	**28 (41.2%)**	**22 (25.9%)**	50 (32.7%)	
MAXIMUM INTENSITY				
Inpatient	**27 (39.7%)**	48 (56.5%)	75 (49.0%)	
Detoxification	0 (0%)	**2 (2.4%)**	2 (1.3%)	
				.026 *

Note: Mismatched cases are in bold. * p≤ .05.

The Nature of Mismatch

To address Hypothesis 2 that the criminal justice system tends to refer offenders to lower levels of treatment than is clinically recommended, the same cross-tabulations that were computed to identify the extent of the mismatch were used to examine the nature of the mismatch.

As is discussed above and illustrated in Table 2, offenders were referred to levels of service recommended by GRC as either more treatment than was clinically recommended (e.g. inpatient for work release referrals) or less treatment (e.g. outpatient for inpatient referrals) than was clinically recommended. Approximately 41% of offenders referred to inpatient treatment were clinically recommended by GRC for lower levels of treatment (35 of n=85) (e.g., overtreated). Approximately 90% of the offenders (61 of n=68) referred to work-release were clinically recommended by GRC for higher levels of treatment (e.g. undertreated). This latter group of offenders represents a major concern due to being referred to a level of treatment well below clinical recommendation.

To further examine the nature of the mismatched cases, the levels of care treatment options were collapsed into 3 sub-groups as was discussed earlier. See Table 3.

Nearly 60% (58.9%) of the offenders (50 of n=85) referred to inpatient treatment were matched by the GRC recommendation to maximum treatment intensity (e.g. Inpatient, Detoxification) The majority of the remaining overreferred inpatient referrals (38.8%) were recommended for moderate treatment intensity (e.g. partial hospitalization, halfway house). Only 2% of offenders were clinically recommended for the lowest level of treatment intensity, thus indicating a small proportion of offenders were recommended for the lowest intensity of treatment that were referred to the highest intensity.

Further examination of Table 3 indicates that offenders referred by the DOC to levels of care that were lower treatment intensity (e.g. Moderate, Minimum) than were clinically recommended by GRC. Only 11% of the cases referred to work-release by the criminal justice system were matched to the corresponding "minimum intensity" clinical recommendation of GRC. The remaining 89% of the cases referred to work-release were clinically recommended by GRC for moderate (e.g. Partial Hospitalization, Halfway House) or maximum treatment intensity (e.g. Inpatient, Detoxification). Almost 50% (49%) of those under referred offenders were recommended for moderate treatment intensity. The referrals of greatest concern, though are the 40% of work-release-referred offenders that were clinically recommended for the highest level of care (e.g. inpatient treatment), demonstrating further a severe undertreatment for this group.

In summary, almost 90% of work-release offenders were mismatched and thus received lower levels of treatment than were clinically recommended (i.e., undertreated). The mismatched inpatient referrals represent nearly 20% of the total sample (17.6%,

n=27) thus justifying H2 that the criminal justice system tends to refer offenders to lower levels of treatment than is clinically recommended.

TABLE 3

Recommended Treatment Intensity by Criminal Justice Referral

	Criminal Justice Referral			
GRC Recommended Treatment	Work-Release n=68	Inpatient n=85	Total n=153	p-value
Treatment Intensity				
Minimum	10.9%	**2.3%**		
Moderate	49.1%	38.8%		
Maximum	**40.0%**	58.9%		
				.018 *

Note: Low Intensity=Individual outpatient counseling, outpatient group counseling, and outpatient treatment. Moderate Intensity=Halfway House and Partial Hospitalization. High Intensity=Inpatient and Detoxification. Severely mismatched cases are in bold. *$p \leq .05$.

Additional Influences on Mismatch

Three-Way Cross Tabulation

Additional analyses were completed to explore for other influences on the mismatch. A 3-way cross-tabulation between GRC clinical recommendation (recoded for treatment intensity) and criminal justice referral (i.e., work release or inpatient), controlling for referral source (i.e., DOC or Parole) was first computed to investigate if referral source affected the nature of the mismatch. Significant Tests were computed including Chi-Square and Kendall's tau-b. Table 4 presents the possible influence of referral source. This analysis was of special interest given the differences in the demographic characteristics and behavioral indicators between the two referral sources. As discussed previously one referral source tended to have more problems that might

have been overlooked by the criminal justice staff making referrals. Almost 60% (56.5%, n=48) of DOC referrals to inpatient treatment were matched with the corresponding intensity of treatment in the GRC clinical recommendation, a substantially higher match rate than the entire sample (36%). Approximately 11% of DOC referrals to work-release were matched with the GRC clinical recommendations. As shown in Table 4, the majority of DOC referrals would have been matched in moderate and maximum treatment intensity levels, evidenced by the GRC clinical recommendation for those two treatment levels in nearly 90% of the cases (89.1%, n=61). GRC clinical recommendations for inpatient agreed in over half (54%) of Parole referrals to that highest level of treatment. Only 8% (n=1) of the Parole-referred cases were matched on the work-release level of treatment. As pointed out in Table 1, Parole referrals were much more likely to be referred to inpatient treatment than work-release (76% vs. 24%). The 12 Parole-referred cases to work-release that were undertreated (i.e. Recommended for Moderate and Maximum Treatment Intensity) only accounted for about 1% of the total sample and therefore is not significant.

Despite the similar pattern of referral-recommended matching, the referral placement was significant for the DOC referrals but not for Parole. The cross-tabulation for the DOC referrals was statistically significant at the $p \leq .05$ level ($X^2=6.998$; df=2; p=.030) but not significant for the Parole crosstabulation ($X^2=1.603$; df=2; p=.449). Additionally, DOC referrals had significant symmetric measures results with Kendall's tau-b value of .222 and the significance for the Kendall value of .017. Parole referrals were not significant in symmetric measures with results for Kendall's tau-b value of .166 and the significance for the Kendall value of .214.

In summary, the mismatch rates for the DOC and Parole were quite similar. For example, the mismatch rate for work-release referred cases recommended for maximum treatment intensity was 40% for the DOC and 38.5% for Parole (See Table 4). Additionally, the mismatch rate for inpatient referred cases recommended for moderate and minimum treatment intensity was 40.9% for the DOC and 41.5% for Parole. The overall mismatch rate for the DOC was 64.5% and 62% for Parole. It appears that referral source did not contribute substantially to the extent and nature of the mismatch despite differences in characteristics.

TABLE 4

Recommended Treatment Intensity by Criminal Justice Referral Controlling for Referral Source (in percentages)

Treatment Intensity Referral Source	Recommended	Criminal Justice Referral: Work-Release n=68	Criminal Justice Referral: Inpatient n= 85	p-value
DOC (n=99)				.030*
	Minimum	10.9	0	
	Moderate	49.1	40.9	
	Maximum	40.0	59.1	
Parole (n=54)				.449
	Minimum	7.7	4.9	
	Moderate	53.8	36.6	
	Maximum	38.5	58.5	

NOTE: Low Intensity=Individual outpatient counseling, outpatient group counseling, and outpatient treatment, a combination of both. Moderate Intensity=Halfway House and Partial Hospitalization. High Intensity=Inpatient and Detoxification. * p≤ .05.

A 3-way cross-tabulation between GRC clinical recommendation (recoded for treatment intensity) and criminal justice referral (i.e., work release or inpatient), controlling for an existing co-occurring psychiatric condition (i.e., Yes or No) was also computed to investigate if an existing co-occurring psychiatric condition affected the nature of the mismatch. Significant Tests were computed including Chi-Square and Kendall's tau-b. Table 5 presents the possible influence of an existing co-occurring

psychiatric condition. This analysis, just as with referral source discussed earlier, was of special interest given the differences in the demographic characteristics and behavioral indicators between the two referral sources. As was discussed previously and shown on Table 1, Parole referrals had significantly more cases of offenders that had an existing co-occurring psychiatric condition than those referred by the DOC (42.6% vs. 24.2%). Almost 60% (55.6%, n=20) of offenders with an existing co-occurring psychiatric condition referred to inpatient treatment were matched with the corresponding maximum intensity of treatment in the GRC clinical recommendation, a substantially higher match rate than the entire sample (36%). Approximately 20% (18.2%, n=2) of offenders with an existing co-occurring psychiatric condition referred to work-release were matched with the GRC clinical recommendations. The other 9 cases recommended for work-release (i.e. Minimum Treatment Intensity) were recommended for higher treatment intensity levels (e.g. Moderate and Maximum). As shown in Table 5, the majority of offenders with existing co-occurring psychiatric conditions would have been matched in moderate and maximum treatment intensity levels, evidenced by the GRC clinical recommendation for those two treatment levels in 95% of the cases (95.8%, n=45). GRC clinical recommendations for inpatient agreed in over 60% (61.2%, n=30) of offenders without an existing co-occurring psychiatric condition referrals to that highest intensity of treatment. Only 7% (6.6%, n=7) of the referred cases of offenders without an existing co-occurring psychiatric condition were matched on the work-release level of treatment. As shown in Table 5, the majority of offenders without existing co-occurring psychiatric conditions would have been matched in moderate and maximum treatment intensity levels,

evidenced by the GRC clinical recommendation for those two treatment levels in 93% of the cases (93.4%, n=99).

Despite a similar pattern of referral-recommended matching, the referral placement was significant for the offenders with an existing co-occurring psychiatric condition but not offenders without one. The cross-tabulation for the offenders with an existing co-occurring psychiatric condition was statistically significant at the $p \leq .05$ level ($X^2=6.836$; df=2; p=.033) and approaching significance for the offenders without an existing co-occurring psychiatric condition ($X^2=5.540$; df=2; p=.063). Additionally, offenders with an existing co-occurring psychiatric condition did not have significant symmetric measures results with Kendall's tau-b value of .149 and the significance for the Kendall value of .348. Offenders without an existing co-occurring psychiatric condition showed significant symmetric measures with results for Kendall's tau-b value of .222 and the significance for the Kendall value of .015.

In summary, the mismatch rates for the offenders were quite similar for offenders with and without an existing co-occurring psychiatric condition. For example, inpatient referred cases had a mismatch rate was 44.4% for offenders with an existing co-occurring psychiatric condition recommended for maximum treatment intensity and 38.8% for offenders without an existing co-occurring psychiatric condition (See Table 5). Additionally, the mismatch rate for work-release referred cases recommended for moderate and maximum treatment intensity was 81.8% for offenders with a co-occurring psychiatric condition, but almost 10% higher (91.2%) for offenders without a co-occurring psychiatric condition. The overall mismatch rate for offenders with a co-occurring psychiatric condition was 59.5% and 66.9% for offenders without a psychiatric

condition. It appears, just as with referral source, offenders with an existing psychiatric condition did not contribute substantially to the extent and nature of the mismatch despite differences in characteristics.

TABLE 5

Recommended Treatment Intensity by Criminal Justice Referral Controlling for Co-Occuring Psychiatric Condition (in percentages)

Recommended Treatment Intensity Co-occurring Psychiatric Condition		Criminal Justice Referral: Work-Release n=68	Criminal Justice Referral: Inpatient n= 85	p-value
Yes (n=47)				.033*
	Minimum	18.2	0	
	Moderate	36.4	44.4	
	Maximum	45.5	55.6	
No (n=106)				.063
	Minimum	8.8	4.1	
	Moderate	52.6	34.7	
	Maximum	38.6	61.2	

NOTE: Low Intensity=Individual outpatient counseling, outpatient group counseling, and outpatient treatment, a combination of both. Moderate Intensity=Halfway House and Partial Hospitalization. High Intensity=Inpatient and Detoxification. * $p \leq .05$.

Multivariate Analyses

To explore the influence of other variables on the mismatch of the criminal justice referral to recommended levels of treatment, binary logistic regressions were computed using two different types of mismatch for the outcome variables. This procedure also further tested the possible influence of referral source and existing co-occurring psychiatric conditions on the mismatch by controlling for demographic and behavioral difference across the two referral sources and the co-occurring psychiatric condition. The first variable was for any mismatch (i.e. mismatch) between the criminal justice referral and clinical recommendation for an individual subject. The mismatch is defined as a disagreement between the level of care referred and the clinically recommended

treatment. The second variable was for the mismatch of greatest concern which resulted in severe undertreatment according to the clinical recommendation (i.e., the GRC recommendation was for the maximum treatment intensity and the criminal justice referral specified the minimum treatment intensity). The third variable was for the mismatch of overtreatment (i.e. the GRC recommendation was for moderate treatment intensity and the criminal justice referral specified the maximum treatment intensity) that also has clinical implications. Binary logistic regression was used and results from the Direct Enter method will be reported.

The results of Table 6 reveal that there are two variables that significantly predict "any mismatch." Only the demographic variables of sex and age emerged as significant predictors in the direct enter method. Despite only accounting for slightly more than 30% of the total sample (31.4%, n=48), females were two times more likely to be mismatched than males (B=.828; O.R.=2.39; p=.039). Age was also a significant predictor. Younger subjects had a much higher tendency to be mismatched than older subjects. For example, subjects aged 31-35 were nearly 90% less likely to be mismatched than those subjects under the age of 30 (B=-2.12; O.R.=.120; p=.013). Additionally, subjects aged 41-50 were 84% less likely to be mismatched than those subjects under the age of 30 (B=-1.85; O.R.= .161; p=.036). The overall equation was not significant in the Enter Method (X^2=26.35; df=19; p=.121) and explained less than 20% of the variance (R^2=.158). This indicates that the variation in the mismatch variable is minimally explained by the model. In summary, younger subjects and females were more likely to be mismatched. Interestingly, no other variables were significant predictors, such as a co-

occurring psychiatric condition, despite it showing a highly significant association when cross-tabulated with referral source as was presented and discussed earlier.

TABLE 6

Logistic Regression of Predictors of Any Mismatch

	Mismatch	
Predictor Variables	**(B)**	**O.R.**
Demographic		
Age		
0-30	------	-----
31-35	-2.12*	.120
36-40	-.925	.396
41-50	-1.85*	.161
51-over	-.928	.395
Sex		
Male	-----	-----
Female	.828*	2.39
Race		
White	-----	-----
African-American /Asian/Indian	-.432	.649
Marital Status		
Single	-----	-----
Married	-.067	.935
Divorced/Separated	-.035	.965
Education Level		
0-11 years	-----	-----
12 years	.164	1.18
Over 12 years	-.007	.993
Behavioral Indicators		
Chemical History Diagnosis		
Alcohol Dependence	-----	-----
Cocaine Dependence	-.2.60	.771
Marijuana Dependence	-.560	.571
Opiate Dependence	19.4	2.69
Existing Co-Occurring Medical Condition		
Yes	-----	-----
No	-5.38	.584
Existing Co-Occurring Psychiatric Condition		
Yes	-----	-----
No	-.483	.617
Criminal Charges		
PWID-Possession with intent to deliver	-----	-----
Robbery/Theft	-.217	.805
Assault	.408	1.50
Receiving Stolen Property/DUI/Other	1.23	3.41
Referral Source		
DOC	-----	-----
Parole	-.004	.996
Model chi square (DF)	26.35	(19)
Cox & Snell R Square	.158	
n	153	

Note: DOC=Department of Corrections. * p≤.05, ** p≤.01.

Table 7 illustrates results for the "undertreatment" and "overtreatment" mismatches. Only one variable was predictive of undertreatment mismatch. The demographic variable of sex emerged as a significant predictor. Again, as in any mismatch, younger subjects had a much higher tendency to be mismatched than older subjects and more categories of older subjects were stronger predictors of undertreatment mismatch. Subjects ages 31-35 were nearly 90% less likely to be mismatched than those subjects under the age of 30 (B=-1.974; O.R.=.139; p=.011). Subjects aged 36-40 were almost 90% less likely to be mismatched than those subjects under the age of 30 (B=-1.887; O.R.=.152; p= .008) . Finally, subjects aged 41-50 were approximately 90% less likely to be mismatched than those subjects under the age of 30 (B=-2.079; O.R.=.125; p=.018). The Model Chi-square was nearly significant in the Direct Enter Method (X^2=29.38; df=19, p=.060), but the equation only explained about 20% of the variance (R^2=.175). Age has emerged as a significant predictor of severely undertreated mismatched referrals.

Further results of Table 7 reveal similar results for the overtreatment mismatch. The demographic variable of a co-occurring medical condition emerged as a significant predictor of overtreated mismatch. Subjects whom did not have an existing co-occurring medical condition were 80% less likely to be overtreated than subjects whom had an existing co-occurring medical condition (B=-1.55; O.R.=.213; p=.023). The Model Chi-square was significant in the Direct Enter Method (X^2=30.81; df=19; p=.042), but the equation only explained approximately 20% of the variance (R^2=.182).

In summary, few significant predictors were identified in the logistic regressions for the three mismatch outcome variables. As discussed earlier, no other variables were

significant predictors, such as a co-occurring psychiatric condition, despite it showing a highly significant association when cross-tabulated with referral source.

TABLE 7

Logistic Regression of Predictors of Undertreatment and Overtreatment Mismatch

Predictor Variables	Undertreatment Mismatch (B)	Undertreatment Mismatch O.R.	Overtreatment Mismatch (B)	Overtreatment Mismatch O.R
Demographic				
Age				
0-30	------	-----	------	-----
31-35	-1.97*	.139	.499	1.65
36-40	-1.89**	.152	1.14	3.12
41-50	-2.08*	.125	.432	1.54
51-over	-1.06	.347	.801	2.23
Sex				
Male	-----	-----	-----	-----
Female	.870	2.39	-1.13	.322
Race				
White	-----	-----	-----	-----
African-American /Asian/ Indian	-.420	.657	-.045	.956
Marital Status				
Single	-----	-----	-----	-----
Married	-.607	.545	-.154	.858
Divorced/Separated	-.664	.515	.670	1.95
Education Level				
0-11 years	-----	-----	-----	-----
12 years	1.49	4.43	-1.24	.290
Over 12 years	.844	2.33	-.448	.639
Behavioral Indicators				
Chemical History Diagnosis				
Alcohol Dependence	-----	-----	-----	-----
Cocaine Dependence	.117	1.13	-.208	.812
Marijuana Dependence	-1.09	.336	-.077	.926
Opiate Dependence	-19.23	.000	-20.36	.000
Existing Co-Occurring Medical Condition				
Yes	-----	-----	-----	-----
No	.347	1.42	-1.55*	.213
Existing Co-Occurring Psychiatric Condition				
Yes	-----	-----	-----	-----
No	.132	1.14	-.212	.809
Criminal Charges				
PWID-Possession with intent to deliver	-----	-----	-----	-----
Robbery/Theft	-.460	.631	.072	1.08
Assault	-1.16	.313	.314	1.37
Receiving Stolen Property/DUI/Other	-.843	.430	.933	2.54
Referral Source				
DOC	-----	-----	-----	-----
Parole	-.004	.996	-.229	.796
Model chi square (DF)	26.35	(19)	30.81*	(19)
Cox & Snell R Square	.175		.182	
n	27		33	

Note: DOC=Department of Corrections. * p≤.05, ** p≤.01.

CHAPTER 5

DISCUSSION

Introduction

This chapter presents a discussion of the results from this study. The discussion will begin with a summary of the major findings of the study. Results showed mismatches in over 60% of the cases. The nature of the mismatch was identified as the undertreatment of work-release referrals and overtreatment of inpatient referrals. A discussion of the results will be presented by addressing the theoretical implications including factors contributing to the mismatches as well as the practical implications of the mismatches including suggested recommendations. Mismatches in this study appear to be a primary result of a lack of contracted referral options for treatment. The undertreatment of offenders has the potential to be clinically harmful and the overtreatment of offenders a waste of resources. It is recommended that additional levels of treatment intensity be available for offenders. Further consideration for the lack of standardized assessments and use of patient placement criteria will be discussed. A discussion of the limitations of the study will also be presented. Offender records from multiple years as well as other programs needs to be investigated. Lastly, a discussion on recommended future research will be presented. Further research is needed on the agency and state level to determine the extent and nature of mismatches of offender referral to treatment. Further research, including replicating similar methods of this study or conducting a new study using a quasi experimental design to investigate background characteristics and other contributing factors of mismatch, could provide informative data for GRC and the state of Pennsylvania to compare to other agencies and states in the

country on the referrals of offenders into treatment. Outcome data from identified mismatches in future studies would be useful in determining recommended adequate and appropriate treatment intensity levels for offenders.

Summary of Results

Results from this study have produced major findings in several areas. First, 64% of the total records in the sample were *mismatched.* This percentage represents nearly two-thirds of the sample and confirms Hypothesis 1 that a substantial mismatch exists between criminal justice referral and GRC clinical recommendations for treatment.

Second, the nature of the mismatch indicated that nearly 90% of the referrals to work-release were mismatched and *undertreated*. This result confirms Hypothesis 2 that the criminal justice system tends to refer offenders to lower levels of treatment than is clinically recommended. The area of greatest concern is the sub-sample of offenders referred to the lowest level of treatment intensity (e.g. work-release), where 40% of those subjects were clinically recommended for the highest treatment intensity (e.g. inpatient).

Third, further analyses which included binary logistic regressions indicated that referral type was not a strong predictor of mismatch. Further, no significant clinical predictor was identified for undertreatment, including an existing co-occurring psychiatric condition as speculated. There was some evidence of co-occurring medical conditions contributing to overtreatment.

It should be noted that despite shortcomings in assessment and referral procedures within the criminal justice system and the 64% overall mismatch rate on the entire sample, approximately 60% of referrals to inpatient were matched by the GRC clinical recommendation. It appears that inpatient was a clinically needed placement choice for

both referral sources, despite it being only one of two possible treatment intensity level options.

Theoretical Implications

Hypothesis 1, that a substantial mismatch exists between the criminal justice referral and the clinically recommended treatment, was supported by the data collected in this study and is the first major finding of the study to be discussed. Nearly two thirds of the records in the sample showed a *mismatch*, meaning the clinical recommendation by GRC did not match the referral placement by the DOC or Parole.

As discussed earlier in the introduction, the criminal justice system and treatment providers have major differences in assessment, organization, and objectives which have been speculated as likely contributors to a mismatch of services for offenders. Limited contractual referral options appear to be the primary factor in contributing to the mismatches in the study. There are only two contracted services (e.g. inpatient, work-release) in Pennsylvania between the Department of Corrections and treatment providers. The findings that nearly two-thirds of the records were mismatches indicate that these limited referral options appear to be inadequate and the major contributor to the mismatches in this study. Despite the lack of standardized assessment practices or the use of patient placement criteria within the criminal justice system, the results of the logistic regressions computed in this study do not indicate that the lack of assessment contributes to the identified mismatches in this study. Even if standardized assessments had been utilized by the two referral sources (e.g. DOC, Parole), the contracted options for treatment placement would have forced the referral of offenders into the two limited options for services (e.g. inpatient, work-release). Similarly, there is not clear evidence

that the overall objectives of the criminal justice system contributed to the mismatches in this study. Though there may be pressure to refer offenders from incarceration or community supervision to community corrections to ease the overcapacity in prisons and use placement for a temporary home residence, over half of the offenders were referred to the highest treatment intensity level (e.g. inpatient) in this study. This suggests that, when making the referral, the criminal justice system believed that those offenders needed the highest treatment intensity placement despite the absence of standardized assessments or use of placement criteria in determining referral. Therefore, if the objectives of the criminal justice system had greatly influenced the mismatches and referrals were being made primarily to empty the prisons quicker or control the prison population, then the majority of offenders would have likely been referred to the lowest treatment intensity level (e.g. work-release). Actually, the 64% overall mismatch rate was not as overwhelming as suspected given all of the likely considered causes for mismatch that included the limited two-treatment option, lack of standardized assessment, and the different objectives between the criminal justice system and GRC.

Hypothesis 2, that the criminal justice system tends to refer offenders to lower levels of treatment than is clinically recommended was the second major finding and was supported by the data collected. Specifically, 90% of offenders referred to the minimum level of treatment intensity (i.e. work-release) were clinically recommended by GRC for moderate (e.g. partial hospitalization, halfway house) and maximum levels of treatment intensity (e.g. inpatient). This extremely high mismatch rate for offenders referred to the lowest treatment intensity level is again supported primarily the lack of multiple treatment options. With only two options for referral at extreme ends (e.g. minimum,

maximum) of treatment intensity, offenders tended to be mismatched more often than not when constricted by these two options. What is also evident based on the GRC clinical recommendations is that the work-release option is not a clinically sufficient level of service for offenders. The work-release level of service was classified as being most comparable to outpatient treatment in the beginning of this study. Outpatient, as defined earlier by the Pennsylvania Department of Health criteria, is categorized into the lowest treatment intensity level in this study, which includes various forms of treatment frequencies (e.g. three days of group sessions per week, one group session per week, one individual session per week). It is not clear how lack of a standardized assessment process and the overall objectives within the criminal justice system impacted the nature of the mismatches in this study. As discussed earlier, results of the study failed to identify clinical predictors that would point to the lack of standardized assessments contributing to the mismatches, including co-occurring medical or psychiatric conditions. The mismatches of greatest concern (e.g. *undertreated* work-release recommended for inpatient) only account for about 20% of the total sample (n=29 of 153), which is surprisingly low given all of the barriers to a match. As stated earlier, if the overall objectives of the criminal justice system were a strong contributor to the mismatches in this study, then the findings would have indicated a higher percentage of *undertreatment* for the highest treatment intensity (e.g. inpatient). The overall 90% of undertreated offenders referred to work-release in this study was likely the result of the criminal justice system referral source determining that the offender did not need the maximum treatment intensity of inpatient. The only other option of referral for the offender to be placed into was work-release.

Practical Implications

The findings in this study have practical implications in the areas of: organization of the criminal justice system, objectives of the criminal justice system, and lack of standardized assessment and use of patient placement criteria within the criminal justice system when referring offenders to treatment services. These areas were identified earlier as likely contributors to the mismatch of offenders for treatment. As discussed earlier, the primary contributor to the mismatches in this study is the criminal justice system's policy of limited contracted treatment options for offenders. The discussion will focus in this area first. Despite not showing influence on the mismatches, the objectives of the criminal justice system and lack of standardized assessments warrant further consideration and discussion. Additional considerations will also be discussed for GRC and treatment providers as well as the Commonwealth of Pennsylvania.

The limited treatment referral options in Pennsylvania appear to be the primary influence on the mismatches identified in this study. Implications for policy changes on the state level to broaden the scope of treatment services will be discussed first. Clinical considerations will also be discussed. Procedure changes and challenges for new policies within the criminal justice system will also be considered.

Based on the three major findings of this study: that nearly two-thirds of offenders were *mismatched* into services, the majority of offenders referred to work-release were *undertreated* with the concern for percentage of offenders who were referred to work-release and recommended for inpatient, and the lack of influence from referral source, it is suggested that policy may need to be changed in terms of service contracts between the criminal justice system and treatment providers. The current contracts for community

corrections treatment providers in Pennsylvania appear insufficiently diversified to meet the clinical needs of addicted offenders. Referral sources (e.g. DOC, Parole) in Pennsylvania have only two options (i.e. work-release, inpatient) for placement of offenders needing treatment in Pennsylvania. Additional levels of care (e.g. outpatient, partial hospitalization, halfway house) would permit offenders to be placed into treatment intensity levels that may more effectively match their clinical needs and risk levels. Nearly 44% (n=67 of 153) of offenders in the sample were recommended for the moderate treatment intensity levels of care. Since nearly half of the offenders in this study were clinically recommended by GRC for these moderate intensity levels of care, the lack of contracted treatment options in Pennsylvania appears to be the most evident cause to the mismatches of offenders. The primary suggested recommendation from this study is to increase the types of treatment services offenders can receive by providers.

One of the major findings in the study, those offenders referred to work-release that were clinically recommended for inpatient, has important clinical considerations and are the group of greatest concern. As discussed earlier, the addiction treatment literature suggests that "undertreatment" is clinically harmful to individuals (Magura et. al., 2003, 2005) and has shown poorer outcomes. Subjects in the Magura studies placed into lower levels of care than were clinically recommended (i.e. undertreated) based on ASAM PPC showed significantly higher drinking frequency at follow-up than individuals who were placed into higher levels of care than were clinically recommended (i.e. *overtreated*). In this study of 153 offender records at GRC, 40% of offenders referred by the DOC to the minimum treatment intensity (i.e. work-release) were clinically recommended by GRC for the maximum treatment intensity (i.e. inpatient). As discussed earlier, other studies

have demonstrated poorer outcomes for individuals who were "undertreated" by entering a lower level of treatment intensity than was clinically recommended by using ASAM PPC (McKay et al., 1997; Alterman et al., 1994). The criminal justice literature also supports matching offenders with appropriate services (Andrews et al., 1990; Fulton et al., 1994, Lowencamp et al., 2003; Lowencamp & Latessa, 2005). Based on the percentage of mismatches in this study, especially those referred to work-release and were undertreated, it can be argued that offenders were not consistently matched with appropriate services and thus are at risk for poorer outcomes. Despite not having outcome data on the subjects in this study, it is concerning from a clinical perspective that offenders were mismatched based on recommendations of the treatment provider (e.g. GRC).

Numerous procedures would need to be revised in order to implement new contract terms for multiple levels of care. The treatment providers could offer a multi-dimensional drug and alcohol assessment to be completed prior to referral. This assessment would need to be completed by trained clinicians, just as they are done at Gateway and by other treatment providers. The clinician or evaluator would make a clinical determination, based on ASAM Criteria, PCPC, or other standardized criteria universally used within the Pennsylvania Bureau of Community Corrections. Offenders would be referred and placed into that level of care offered by the treatment provider and assumingly fewer offenders would be mismatched. It should be stressed here that offering more treatment options would by itself not be sufficient. Line staff does not have the background or qualifications necessary to conduct clinical assessments (Byrne, 2006). Trained clinical staff is needed within the criminal justice system, either as employees of

the DOC and Parole, or separate contracted clinicians. Assessment and evaluation contracts with independent agencies need to be established (Farabee, 2005). These clinicians must have specialized training and qualifications to complete various assessments while being familiar with numerous other criteria (i.e. placement, diagnostic).

Many challenges would be present for the criminal justice system to implement the suggested policy and procedure changes from this study. As discussed earlier, criminal justice systems focus on security and releasing offenders closest to their last known residence. Non-clinical staff often makes the determination about placement into treatment without the use of proper or adequate assessment tools or criteria. In the case of Pennsylvania, the DOC would have to drastically change their system to accommodate a change in referral and placement procedures for offenders being released into the community. First, they would need to either train their own staff or contract with treatment providers to work in the institutions and in regional parole offices in the community to complete assessments. Second, this would be a major expense initially and also need a fair amount of monitoring. Third, if contracted clinicians would be chosen as the option, the criminal justice system would need to use a careful selection process when hiring the clinicians. It would be possible for a clinician to be contracted that works for a contracted treatment providers with the state, which could be a conflict of interest. For example, a clinician who worked for a contracted treatment provider could also be working inside the state correctional institutions or regional parole offices as an evaluator. This evaluator may be tempted to make recommendations for certain levels of care based on what types of services are offered at the provider locations at which they

work. One way to address this would be for the evaluator from one region of the state to assess offenders being released and placed into a different region. Pennsylvania is divided into 3 regions: east, central, and west. Fourth, the criminal justice system (i.e. Pennsylvania Bureau of Community Corrections) would need to develop multiple fee schedules for these various levels of care that would be offered by treatment providers. This may be too fiscally complicated. There is a potential for multiple accounting errors with a system this large and detailed. Currently in Pennsylvania only two fee rates are needed for inpatient and work-release for the contracted service that was investigated in this study. Fifth, administrative reports are faxed in daily to the regional offices with an accurate count of all offenders in the inpatient and work-release programs. Multiple levels of care would increase the total number of reports and information contained in the reports which could lead to potential for count errors. The DOC needs to have an accurate account of all placed offenders by a certain time each morning and report it to the Secretary of Corrections, who in turn answers to the Governor of Pennsylvania. The current systems would appear to be more manageable for the state with nearly 2,000 offenders in community corrections placement in over 50 program locations. Sixth, the issue of an offender's residence needs to be addressed. As discussed earlier, offenders are either released from prison (i.e. DOC) or referred by their parole agent (i.e. Parole) when they enter treatment. The treatment location becomes their temporary home residence. It is easy to recognize how the treatment provider could be referred to as an alternative housing location. Offenders cannot be released from treatment provider locations until they find suitable housing in the community and their parole agent approves this "home plan". Because of this condition of parole for offenders, it complicates the idea of

multiple treatment levels, especially if the offender has to reside (i.e. sleep over) at the treatment location due to Department of Health regulations on how they define treatment levels.

Another major finding from the study suggests that referral type is not associated with the mismatch contrary to our expectation. Referral type (i.e. DOC, Parole) was not a significant predictor of various configurations of mismatch in the regression analysis. Findings from the study indicate markedly different referral patterns between DOC and Parole. Offenders were referred to work-release twice as often by DOC than Parole. Offenders were referred to inpatient 30% more often by Parole than DOC. These results are not surprising due to the difference in the setting from where offenders are referred. Offenders referred from the DOC have had some time incarcerated, were housed in a very structured and secured environment, and in general may clinically require less intensive treatment levels due to their length of time from their last drug or alcohol use. Offenders referred by Parole, on the other hand, were directly from the community, were living in a less structured and secure environment, and in general may require more intensive treatment levels due to their recent drug or alcohol use. It was assumed that the DOC may refer offenders to lower levels of treatment than was clinically recommended due to their lack of structured or standardized assessment process, thus mismatching at a higher rate than Parole. It was also assumed that Parole would mismatch offenders less, not necessarily by design with proper assessment and placement criteria, but by the easy availability of inpatient treatment and that the majority of offenders they were supervising were recently in active addiction and experiencing current consequences as a result of this drug use and criminal behavior. Interesting there was little difference in the

mismatch rates between DOC and Parole. Mismatches occurred just as often with Parole cases, even though it would be apparent that offenders coming from the community and experiencing more recent problems associated to their active use of drugs and alcohol. Similar to the other findings of the study, the primary contributor to a lack of differences in mismatches between referral sources seems to be a lack of treatment referral options, not lack of standardized assessment or varying objectives of the referral sources. Both the DOC and Parole have exactly the same two options for referral in Pennsylvania which appears not to be adequate based on the findings on the extent and nature of the mismatches.

There are also implications for the Commonwealth of Pennsylvania that warrant consideration and discussion. There are two departments within the Commonwealth (i.e. DOC, Department of Health) that appear to need to collaborate more. Findings (e.g. mismatches, undertreatment) from this study suggest that a disconnect exists between these two departments as evidenced by the mismatched referrals of offenders from the criminal justice system into substance abuse treatment. Offenders are potentially at risk for clinical harm based on these mismatches and funding for community corrections treatment contracts do not appear to be utilized efficiently. The Department of Corrections has the Bureau of Community Corrections that is responsible for housing inmates in state correctional facilities and then releasing and referring them into the community. The Department of Health has the Division of Program Licensure that regulates treatment providers like Gateway to ensure that services are provided within the licensing guidelines. Since the majority of offenders incarcerated have had alcohol and drug problems and it costs more to incarcerate an individual than place them in a

community corrections center, then the Pennsylvania Department of Corrections is strongly encouraged to suggest that their Bureau of Community Corrections evaluate necessary changes regarding an expansion in contracted treatment options with providers and an examination of how assessment of offenders and referral to treatment services are completed. Recidivism costs the state more money in incarceration, legal process, medical costs, and the overall safety of public welfare.

As suggested earlier, Organizational Theory of the Criminal Justice System can help explain the mismatch of offenders exposed in this study. This paradigm discusses the prevailing management structure in the U.S. correctional facilities as hierarchical, centralized, and paramilitary (Carlson, 1999). This type of organization has made it difficult for treatment providers in Pennsylvania to collaborate with the DOC on changes that may be needed to improve the referral, placement, and treatment process of offenders. For example, providers have suggested more treatment options (i.e. outpatient treatment) for several years now, but the contracts have remained the same with work-release and inpatient only. It may be further suggested that the criminal justice system's referral placement recommendations are influenced by financial reasons. The cost in Pennsylvania for an offender in a work-release program is nearly 25% less per day than an inpatient program. Therefore from the criminal justice perspective, more offenders could be released and referred to community corrections placement if work-release was chosen as the service option based on the lower cost of that placement per day. On the other hand, treatment providers like GRC strive to provide comprehensive treatment to individuals with addiction problems. GRC's main objective is to provide the best possible treatment for substance dependence, based on assessments that guide clinical placement

recommendations. Agencies also want to provide cost-effective treatment and would consider providing inpatient services to individuals that clinically need lower levels of care a waste of resources. Though funding and logistical issues would be considerable, increasing access to different levels of treatment could provide substantial long-term economical and social benefits from a reduction in recidivism, easier transition to the community, and reduced drug abuse (Belenko & Pugh, 1998; Knight, 1999; Martin, 1999).

In summary, the findings of the study indicated that offenders were mismatched with treatment services (64% of sample) as expected. Further, there is great concern for the undertreatment of the group of offenders referred to work-release and clinically recommended for inpatient. It can be suggested that more matches occurred in this study because offenders in the sample tended to need higher levels of treatment intensity and that work-release was not a sufficient option from a clinical perspective. This is illustrated by the GRC clinical recommendation for inpatient being matched with the criminal justice referral 50% more often than the recommendation for work-release.

Further Considerations

Though the results from the study do not indicate influence of mismatches from the overall objectives of the criminal justice system, further consideration should be given to this area. Multiple levels of service may not be satisfying the primary needs of the DOC and Parole. As discussed earlier, release from custody, temporary housing placement and costs are likely three main objectives for the criminal justice system to place offenders into community-based treatment and work-release centers, though this is not substantiated. Though no evidence exists, substance abuse treatment may be ranked

lower than the above-listed areas for the criminal justice system or the DOC and Parole in Pennsylvania. The criminal justice system's overall objectives may contribute to the current limited available referral options (i.e. inpatient, work-release) in Pennsylvania. This could indirectly contribute to the mismatches of offenders into treatment services, though that was not substantiated by the findings of this study. As discussed earlier, the criminal justice system is dedicated first to security, control, and punishment (Rybolt, 1995). The population in Pennsylvania State Correctional Institutions is over capacity (110%). The DOC utilizes community corrections for re-entry into the community and expects offenders to become employed and find a permanent place to live. Offenders are placed in programs based on the hometown they originate from in relation to a nearby treatment facility. In fact, the treatment programs' mailing address is considered the offender's temporary residence upon referral to the program by both the DOC and Parole. The principles of Goal-Conflict Theory, as discussed earlier, can explain the overall objectives of the criminal justice system. Goal-Conflict Theory explains the criminal justice system as a place where decisions are based upon limited and inconsistent information, generally without adequate explanation to benefit other officials in the decision-making process. (Kellogg, 1976). It can be suggested that the primary goal of the DOC is to release inmates into the community. It would be unrealistic and irrational to expect the criminal justice system to drastically change their mission or overall goals and objectives. However, over 80% of offenders who are incarcerated have a history of substance abuse problems and since the majority of those offenders will be released eventually into the community, the criminal justice system is suggested to review their objectives of substance abuse treatment and goals of release and referral of offenders into

the community. This re-entry of offenders occurs through various contracted community corrections treatment centers like GRC. However, the process by which they are released and referred appears to be in conflict with the primary goal of the treatment centers, which is to provide cost-effective treatment services to individuals based on an assessment and patient placement criteria. Additionally, the criminal justice field literature relies on the risk principle as the standard in placing offenders in rehabilitation services appropriately and currently Pennsylvania does not utilize this principle in referral and placement decisions though it has acknowledged its importance. Future research studies, which will be discussed later, need to incorporate the objectives of the criminal justice system to substantiate its contribution of offender mismatch.

Further consideration should also be given to the lack of standardized assessments and placement criteria used by the criminal justice system in referring offenders to treatment services. Assessment is the first step in determining what interventions or services are needed (Wexler & Fletcher, 2007), but in Pennsylvania, the DOC does not utilize standardized assessments or criteria in determining the referral and placement of offenders into substance abuse treatment. As discussed earlier, the LSI-R is administered inconsistently and results are often not used to determine placement into services nor are they made available to treatment providers once the offender is referred. Additionally, the TCU Drug Screen and Assessment Inventory is widely used on offenders in Pennsylvania, but it is unclear how the results determine placement and referral into community corrections. The results of the TCU are also not consistently made available to treatment providers upon referral. The benefit of risk or problem severity assessment tools to assist in the identification of offender treatment need has been undervalued in the

criminal justice system (Knight et al., 2006). A highly subjective assessment process has emerged based on criminal justice staff experience and "gut feeling" in making a determination of treatment needs for offenders (Knight et al. 2006). Additionally, current assessment tools commonly used in correctional settings have limitations for identifying multiple clinical, supervision, and social service needs for the offender population (Belenko, 2006). Treatment providers, like GRC, use a structured assessment based on placement criteria (i.e. ASAM PPC, PCPC). ASAM is the most prominent set of guidelines for matching patients to the most appropriate levels of care (ASAM, 1991, 1996). The assessment process yields important information that, if used to guide decisions regarding supervision and placement, can increase the effectiveness of a correctional program (Gendreau et al., 2002). As discussed earlier, there is no evidence that a lack of assessment by the criminal justice system contributed to the mismatches in this study. However, further substantiation through research needs to explore the influence that standardized assessments and placement criteria can have on offender outcomes.

Additionally, clinical assessments, similar to those used by GRC, need to be completed by correctional systems, while also using standardized treatment placement criteria (Belenko & Pugh, 2005) and the risk principle in the clinical determination. Trained clinicians completing assessments while being guided by the placement criteria could be beneficial to the assessment process, even though there is no evidence in this study that the mismatches were a result of shortcomings in assessment. Existing assessment tools have not been widely adopted; the vast majority of clinicians in correctional facilities ignore risk assessment tools in assessing and treating inmates

(Boothby & Clements, 2000). The establishment of various treatment intensity levels is strongly recommended and will be discussed in further detail later. Literature suggests that only high-risk offenders should be targeted for high intensity treatment and low-risk offenders referred directly into work-release. Studies conducted in Ohio suggest that only low risk offenders should be excluded from residential referral and placement (Lowencamp & Latessa, 2005). Treatment providers are encouraged to meet with the criminal justice system to collaborate on ways to better deliver treatment to offenders, however often criminal justice systems do not collaborate well with outside providers and have been described as a "non-system" where decisions are based upon limited and inconsistent information (Kellogg, 1976).

As discussed in detail earlier, the risk principle examines an offender's risk, need, and response to treatment interventions. The effectiveness of the risk principle in placing higher risk offenders into intensive rehabilitation has been demonstrated repeatedly (Andrews & Kiessling, 1980; Andres et al., 1990b; Andrews & Bonta, 1998; Bonta et al., 2000; Lowencamp et al., 2003; Lowencamp & Latessa, 2005). An Ohio study urged programs to divert low risk offender placements into lower intensity interventions and questioned the policy of admitting low risk offenders into residential programs (Lowencamp & Latessa, 2005). As mentioned earlier, in one study recidivism rates were 20% higher for low-risk offenders who were placed into intensive rehabilitation (Bonta et al., 2000).

The mismatches for inpatient overtreatment are also a finding from this study with clinical interest that deserves mention and can be related to the aforementioned study. Approximately 40% of offenders who were referred to the maximum treatment intensity

(i.e. inpatient) were clinically recommended by GRC for moderate and minimum treatment intensity levels (e.g. partial hospitalization, halfway house, outpatient). Nearly all of the 40% (38%) of mismatches for inpatient (i.e. maximum treatment intensity) was for partial hospitalization and halfway house (i.e. moderate treatment intensity) and are not markedly different in terms of intensity (i.e. maximum vs. moderate). Studies from the addiction treatment literature state that overtreatment of inpatient has no additional advantage to patients. Overtreatment does not appear to harm patients (Magura et al., 2003) and may waste resources (Magura et al., 2005). Conversely, as discussed earlier, the criminal justice literature states that placing low-risk offenders into high intensity treatment (i.e. overtreatment) may contribute to an increase in recidivism rates (Lowencamp & Holsinger, 2006). Offenders classified as low risk who receive an intensive level of treatment (i.e. overtreatment) have more than double the rate of recidivism than the low risk offenders who received a minimal and appropriate level of treatment (Andrews & Bonta, 2003). It is not possible to determine the risk levels of the subjects in this study due to a substance abuse placement assessment being completed. A risk assessment, like the LSI-R would need to be administered to reach a clearer conclusion on "risk". However, since substance abuse problems are included in the assessment and overall score on the LSI-R in determining risk level, it could be implied, that offenders recommended by GRC into moderate treatment intensity in this study clinically have less of a risk of recidivism and relapse than those recommended for maximum treatment intensity. This implication needs to be substantiated through additional research. It is not clear whether referral mismatch matters much in terms of outcomes. Other factors (i.e. criminal behavior, co-occurring disorders, employment,

family) may be stronger outcome predictors than a treatment match. Future research could provide insight into whether matching offender's clinical needs and risk levels with contracted services or offering various treatment intensity levels improves outcomes (i.e. lower recidivism) or if other variables are stronger predictors.

On the other hand, it can be argued that the criminal justice system uses community corrections as another form of supervision. Community corrections can be considered a form of incarceration that is defined as less restrictive than prison, but more restrictive than living in the community under parole supervision. One could contend that inpatient placement within community corrections is a safe alternative and appropriate intermediate intervention for supervision that provides more structure and confinement than the work-release option. Nonetheless, the tendency of the criminal justice system to maintain referral patterns to inpatient while erring on the side of more intensity versus less is in direct conflict with GRC and other agencies practice to provide cost-effective treatment services.

Finally, there are there are implications for addiction treatment providers that also deserve further discussion. Providers who contract with the DOC in Pennsylvania, like GRC, need to examine their role in contracting with the DOC and operating community corrections programs. As a treatment provider of the DOC, GRC and other agencies need to determine if they are following their mission and primary objectives as organizations. By providing offenders with limited treatment options and permitting offenders to be placed into treatment intensity levels that may be clinically inappropriate, providers are faced with ethical and professional responsibility concerns. As a licensed treatment provider, GRC is required follow certain licensing guidelines as well as adhere to patient

placement criteria such as ASAM and PCPC. The DOC does not require or use ASAM or PCPC which is in direct conflict with GRC's general practices. Further, GRC is permitting offenders to be referred to levels of treatment intensity that may not be appropriate, clinically harmful, and not cost-effective. Further, as addiction treatment professionals, many staff working at GRC and other agencies hold professional credentials, certifications, and degree qualifications required by the Department of Health. These staff must also complete a certain amount of training hours each year within specific topic areas. The DOC has access to trained evaluators, assessment tools, and placement processes with treatment providers such as GRC, but these staff and processes are not being accessed and utilized properly. Based on the results of this study that show offenders being mismatched into treatment services and potentially being at risk for poorer outcomes, GRC needs to review its treatment mission in relation to its corrections division and discuss the related issues surrounding ethics and professional responsibility of the organization.

Summary of Recommendations

The substantial clinical implications of mismatching have been discussed in this study and throughout the research literature, which support one of the initial speculations about the influence of the limited treatment options on offender mismatches for treatment. Policy changes are recommended for Pennsylvania to increase the options for offender treatment services provided by agencies. Additional considerations were also presented including: using standardized assessments and patient placement criteria with trained clinical staff, fostering collaboration between treatment providers and the criminal justice system to examine the objectives of community corrections, and conducting future

research to determine how extensive mismatches are across agencies and the state as well as determining additional contributors to the mismatch.

Qualifications

Current findings of this study indicating the extent and nature of mismatch of referred offenders to treatment may be compromised by limitations and warrant replication in future research.

The first area of limitation is that the study is based on a single site. One program location of GRC (i.e. Aliquippa) was used for the study which is a threat to the study's external validity. Though it could be argued that this study is representative of GRC corrections programs, it would be difficult to generalize that the mismatches in this study were representative of programs across Pennsylvania. There are two other GRC corrections programs and over 50 total community corrections programs throughout Pennsylvania that contracts with the DOC which have similar characteristics to that of the Aliquippa program. However, certain background characteristics may differ from program to program that may affect those results (i.e. gender, criminal charges), including what influences mismatches. Moreover, Pennsylvania's community corrections referral process is not typical of other states in the country and the findings may not represent community corrections in general. However, the findings of this study at Gateway are consistent with those from offender research conducted in Ohio and other studies about the concerns for matching intervention intensity with offender risk level (Lowencamp et al, 2003, Lowencamp & Latessa, 2005). Additionally, Gateway has been recognized nationally as one of the best treatment centers in the country for a number of

years and therefore can be considered as a worthy example for a research site in the state of Pennsylvania.

Second, the sample of the calendar year 2005 and a sample of 153 total records may be limited in scope. A sample of records being examined from one year may not be sufficient to establish the referral patterns of GRC, the criminal justice system in Pennsylvania, or in general. Research from other studies involving matching offenders with interventions consisted of multiple years and larger sample sizes (Magura et al., 2003, 2005; Lowencamp et al., 2003; Lowencamp & Latesssa, 2005). Nevertheless, GRC has operated community corrections programs for nearly fifteen years and has a good reputation within the state of Pennsylvania and with the American Correctional Association as being a preferred and effective treatment provider for offenders.

Third, the findings in this study do not include offender outcomes. Outcome data can provide additional insight into the effect that a mismatch has had on an offender. The literature clearly suggests that poorer outcomes (i.e. more drinking days, higher recidivism) occur when patients are undertreated (Magura et. al., 2003) or when offenders are not matched with their risk level (Lowencamp & Latessa, 2003). In can be suggested, based on the findings from this study that mismatched offenders, those who were both referred to work-release and clinical recommended for inpatient (i.e. undertreated) and referred to inpatient and clinically recommended for partial hospitalization and halfway house (i.e. overtreated), may be at higher risk for poor treatment outcomes based on the research that appears in the literature. However, this remains to be documented for this research site and circumstance. Additionally, as stated

previously, GRC has a good reputation as a treatment provider both in Pennsylvania and nationally which may override these expectations of poorer outcomes.

Future Research

Additional research is needed to examine the referral and placement of offenders with substance abuse problems. First, offender records from multiple community corrections programs need to be studied utilizing similar patient placement criteria. Results from these studies will permit comparisons throughout the state as well as asserting more generalizations about offender mismatches. Gateway has two other programs similar to Aliquippa that can have nearly identical characteristics, with the exception of only treating male patients. As stated earlier, Pennsylvania has multiple programs treating offenders referred by the criminal justice system that have comparable characteristics. Gateway could benefit from such research to investigate whether mismatching offenders is consistent throughout their corrections division. The DOC could benefit from additional research to become more familiar with the clinical needs of offenders and how to utilize funding for treatment more efficiently. The DOC may then consider creating contracts with treatment providers in the state that would address these clinical needs, thus matching offenders with treatment options instead of attempting to fit all referred offenders into only two limited treatment options. Additional research would also provide insight for both GRC and treatment providers as well as the DOC into how to better utilize their resources collaboratively. GRC would likely want to offer treatment programming that was targeting offenders appropriately and the DOC could benefit from referring offenders into treatment that was appropriate to their needs. This may reduce

recidivism and permit more offenders to receive cost-effective treatment, while decreasing the overpopulated state correctional facilities.

Second, samples from multiple years need to be researched. Community corrections have been in existence in Pennsylvania since 1972 and GRC has been treating offenders under a contract with the DOC since 1995, so there is a multitude of data that has not been examined and reported on. Further, a statewide study referred to as the Corrections Program Assessment Inventory (CPAI) conducted by Dr. Latessa measuring program effectiveness of selected community corrections programs was completed in 2006, but the results have not been summarized and no policy changes or actions have been taken by the Pennsylvania Bureau of Community Corrections. The CPAI evaluates many areas of a community corrections program including assessment, referral, and adherence to the risk principle. Recommendations on the findings would likely improve the shortcomings of assessment and referral discussed in this study. Treatment providers contracted with the DOC could benefit from standardized guidelines to improve their services. The DOC could implement policies to improve the referral process and the outcomes of treatment for offenders by adopting recommendations made by Dr. Latessa.

Third, it is strongly recommended that outcome data be included in future research. For the past several years, the American Correctional Association has recommended to accredited community corrections programs measuring outcomes on the offenders that participate in their program. GRC and other agencies in Pennsylvania have not collected and evaluated such outcome data. Specific to this study, offender outcome data (i.e. recidivism rates) would help evaluate whether or not offenders who were mismatched (i.e. undertreated, overtreated) had poorer outcomes compared to those

offenders who were clinically matched into treatment intensity. Future research would need to include outcome data on the 153 offenders from this study. The Pennsylvania Parole Board has access to data that could be used in outcome studies with the sample subjects of this study or from other programs using data from subjects who reside in the state. Treatment providers like GRC, as well as the DOC could utilize this available data and utilize the local resource of Parole to investigate outcomes.

Fourth, it is suggested that further research explore demographic variables similar to those in this study as well as behavioral indicators of co-occurring medical and psychiatric conditions due to their prevalence with the offender population. It is also recommended to test the interaction effects between variables, such as females and co-occurring psychiatric conditions. Findings from future research could assist in the development of new policy and programming for these special populations (i.e. females, younger offenders, medical conditions). It is suggested that co-occurring psychiatric conditions also be examined due to high proportion of offenders that have a co-occurring disorder in addition to their substance abuse problems, despite it not showing as a significant predictor of mismatch in this study.

Fifth, it is suggested that in future research projects that a risk assessment and adherence to the risk principle be implemented into the evaluation of offenders along with a comprehensive assessment for substance abuse. As suggested in the literature (Belenko & Pugh, 2005) and discussed earlier, both of these types of assessments (i.e. risk, substance abuse) are recommended to best determine the placement of offenders into treatment services.

Varying research designs for multiple program sites could be implemented in future research. First, replicating the content analyses design of this study could establish a foundation for the extent and nature of mismatches of offenders. Assessments could be conducted on offender records from any contracted site that offers both inpatient and work-release services to offenders. A clinical recommendation would be compared to the actual referred placement. Multiple programs and multiple years could be studied. Further, outcome data including recidivism rates could be obtained to determine if the extent and nature of the mismatches influence outcomes. This type of research could be conducted at GRC due to the availability of offender records from multiple program locations (e.g. Aliquippa, Braddock, Erie) and multiple years of services contracted with the DOC. Additionally, outcome data on recidivism could be collected to determine if mismatched offenders had poorer outcomes than those matched by clinical recommendation. Challenges for this type of research with other contracted agencies in Pennsylvania would include: availability of offender records, cooperation and the willingness to participate of agencies, and differences in offender characteristics that could influence the results (i.e. violent offenders). This method of research appears to be the most feasible and realistic.

Second, since lack of assessment and use of patient placement criteria was speculated as a potential influence of mismatches in this study and has been discussed as a future consideration, future research testing for the influence of assessment on mismatches is recommended. Testing for the influences of assessment on mismatches would be useful but require a different research method. Using a quasi-experimental design could make this type of investigation possible. This type of design would enable

an investigation to the extent and nature of mismatches comparison between offenders who are referred to treatment without the use of an assessment, as was the case in this study, and offenders who receive an assessment prior to referral. Using this type of research would be necessary due to the inability to create a true control group with which to compare the experimental groups within one community corrections treatment program. The sample from this study, offenders referred without assessments to programs with two placement options, could be compared to a group of offenders who are given an assessment prior to referral to a number of different program options. These programs could include many different formats: offenders referred with a prior assessment into two levels of treatment service, offenders referred without a prior assessment into multiple levels of treatment service, offenders referred with a prior assessment into multiple levels of treatment service, and offenders referred with prior assessments into multiple levels of service utilizing Evidenced Based Practices. Mismatch trends would likely emerge in a study of this design and other influences of mismatch may be substantiated or identified. However, this type of design would not be feasible in Pennsylvania under community corrections' current structure. As discussed in this study, referrals are made by the criminal justice system to providers without the use of an assessment. Completing assessments on certain offenders and placing offenders in certain programs would not be realistic for the DOC. Further, additional treatment options would have to be contracted for with providers in the state as was suggested in this study. Additionally, providers may not have all of the same treatment services offered at their locations which would constitute different fee schedules and create a system that was not fair financially to all providers.

Third, more extensive research could be conducted to test the influence of assessment and mismatch. A true experimental design, such as a Randomized Clinical Trial could test the influence of assessment on mismatches between several different groups of offenders placed into programs. Offenders in Pennsylvania would be randomly assigned to one of many different programs listed previously. This type of study would have the ability to control for all options, including what offenders would receive an ASAM assessment and which ones would be placed into programs with only two treatment options. This type of research would provide advantages over the other types discussed previously. First, the offenders in the study would be randomly assigned to the programs, not matched like previous research studies require as well as it being the standardized practice of referral in Pennsylvania. Second, the clinical trial would likely be longitudinal and be able to study changes in the state correctional system over time unlike the snapshot that this study and others like it provide. Third, this type of study would allow researchers to begin inferring causality between demographic variables and behavioral indicators. Additionally, treatment options, assessment, and objectives of the criminal justice system could all be controlled for to determine their influence on mismatch as well as the influence on outcomes. Challenges for this type of study would be numerous and a few will be mentioned. In addition to the challenges mentioned in the previous research design, the DOC would first have to completely change the way they release and refer offenders into the community. Offenders are geographically matched with programs closest to their hometown, thus randomization of referral would make it difficult for re-entry in the current system. For example, an offender from the Philadelphia area could be placed into a program in Erie. This would be not feasible for

parole to manage and supervise. Second, the DOC would also have add to their contracted levels of service as was suggested earlier. The DOC has had two levels of treatment options for nearly twenty-five years now and though it has discussed other levels of care, has not yet changed to contracted options for providers. Third, the DOC or providers may not want to be involved in a research project that involves an experiment where offenders may be placed into four or five different program options. Agencies may view this as an ethical consideration and may decide not to participate, thus the amount of contracted sites may decrease in the state. This will in turn decrease the bed capacity in the community and not permit as many offenders to be released from overcrowded state prisons. The DOC may not want to participate in such a study due to the legal issues of giving offenders one type of service over another.

Conclusion

In conclusion, this study has provided a foundation for future research by establishing that offenders tend to be mismatched into treatment services when referred by the criminal justice system. The primary contributor to the mismatch in this study appears to be the lack of contracted treatment options and work-release appears to be clinically insufficient as a treatment option. Further consideration needs to be given to the lack of standardized assessments and use of patient placement criteria to guide referral. Future research needs to be conducted to substantiate the extent and nature of the mismatch as well as begin to explore further for influences of assessment and the mismatch. This study supports previous research (Lowencamp & Latessa, 2005) that seriously challenges the referral and acceptance policies and procedures of many states' department of corrections, local probation departments, and social service agencies.

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APPENDICES

Appendix A

GATEWAY REHABILITATION CENTER
INITIAL PSYCHOSOCIAL EVALUATION
LEVEL OF CARE PLACEMENT CRITERIA

_____
Patient Name

_____
Patient Number

PLACEMENT RECOMMENDATIONS:

_____Detoxification/3A
_____Inpatient/3B
_____Partial/2A
_____Halfway House/2B
_____M/NIOP/1B
_____OPC/OPG/1A
_____Addiction Education/Adult
_____Drug, Alc, Tobacco Awareness/Adoles.
_____Other_____

__GRC __GGB __GT__MV__AV__BF__GAM__GS__NH __MH __PH__SQH__GH Other_____

ACT 106 ELIGIBLE: Y / N (Federal, state, or self employed plans are not eligible)

DIAGNOSTIC IMPRESSIONS:

AXIS I (Primary Diagnosis)_____

AXIS II (Personality/MR Disorders)_____

AXIS III (Physical Disorders)_____

AXIS IV (Psychosocial Stressors)_____

AXIS V (Adaptive Functioning) Current GAF_____ Highest Past Year_____

PRESENTING PROBLEM: _____

_____

_____

ALCOHOL/DRUG HISTORY:

Substance	Frequency	Amount	Method	First Use	Last Use

_____Increased Tolerance _____Decreased Tolerance _____History of Blackouts

_____ _____
Clinician Signature Date

_____ _____
*Reviewed by Physician (if applicable) Date

*For all patients who are publicly funded the physician must review the Initial Psychosocial Evaluation, PCPC, and Initial Treatment Plan.

The following diagnostic aids are purely optional and are to be used at the discretion of the assessment counselor.

CAGE QUESTIONNAIRE
(2 or more affirmatives indicate probable dependence)

1. Have you ever felt that you ought to **C**ut down on your drinking/using? _____

2. Have people **A**nnoyed you by criticizing your drinking/using? _____

3. Have you ever felt bad or **G**uilty about your drinking?_____

4. Have you ever had a drink/used first thing in the morning (**E**ye opener) to steady nerves or to get rid of a hangover?_____

SUBSTANCE ABUSE SUBTLE SCREENING INVENTORY (S.A.S.S.I.)

_____High Probability of having a Substance Dependence Disorder

_____Low Probability of having a Substance Dependence Disorder

DSM IV CRITERIA (REQUIRED)

ABUSE

1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home.

2. Recurrent substance use in situations in which it is physically hazardous.

3. Recurrent substance-related legal problems.

4. Continued substance use despite persistent/recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.

DEPENDENCE

1. Tolerance: (a) need for markedly increased amounts to achieve intoxication or desired effect.(b) diminished effect with continued use of same amount of the substance.
2. Withdrawal: (a) characteristic withdrawal syndrome for specific substance.
   b) same or closely related substance taken to relieve or avoid withdrawal symptoms
3. Substance taken in larger amounts or longer period of time than was intended.
4. Persistent desire or unsuccessful efforts to cut down or control substance use.
5. Great deal of time spent in activities necessary to use, procure, recover from the effects of the substance.

6. Important social, occupational, or recreational activities are given up or reduced because of substance use.
7. Substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by use of the substance.

8. DSM IV Criteria Met: Dependence ___of 7 (minimum of 3 necessary for dx)

Abuse ___of 4 (one or more sufficient for dx)

_____

DIMENSION 1: INTOXICATION AND WITHDRAWAL Level of Severity H M L

Current Intoxication? Y___ N___ Substance/Amount_____

Current Evidence and/or History of:

Tremors C__ H__ Seizures C__ H__ Nausea/Vomiting C__ H__

Diarrhea C__ H__ DT's C__ H__ Cramps C__ H__

Sweats/Chills C__ H__ Hallucinations C__ H__ Rapid Heartbeat C__ H__

Depression C__ H__ Agitation C__ H__ Sleep Disturbance C__ H__

Vitals: P_____ BP_____ T_____ R_____ Appetite Dist C__ H__

Comments on Dimension 1:_____

_____

_____

_____

_____

DIMENSION 2: BIO-MEDICAL CONDITIONS Level of Severity H M L

Current Medical Conditions/Medications

High Blood Pressure _____ Meds_____

Asthma _____ Meds_____

Hepatitis _____ Meds_____

Heart Disease _____ Meds_____

Liver Disease _____ Meds_____

Diabetes _____ Meds_____

Weight Changes _____ Meds_____

Physical Limits _____ Meds_____

Seizure Disorder _____ Meds_____

Currently Pregnant _____Comments_____

Other _____Comments_____

Recent Accidents/Injuries Related to Chemical Use_____

_____

_____

Allergies (Medications, Food, Environmental)_____

_____

Comments on Dimension 2:_____

_____

_____

_____

_____

_____

_____

DIMENSION 3: EMOTIONAL/BEHAVIORAL CONDITIONS____ Level of Severity H M L

Psychiatric Diagnosis:_____ Dx by:_____

Current:

Meds	Dose	Meds	Dose
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Prescribed by:

Psychiatric Treatment History:_____

Facility/Provider	Type	Dates	Length/Frequency

1._____

2._____

3._____

4._____

Current and/or History of:

Violent Behavior C__ H__ Concentration/Memory C__ H__
Anxiety C__ H__ Hallucinations C__ H__
Paranoia C__ H__ ADD/ADHD C__ H__
Depression C__ H__ Extreme Mood Swings C__ H__
Suicidal Ideation C__ H__ Homicidal C__ H__
Attempts at Suicide C__ H__ Self Mutilation C__ H__

Comments(Addiction Related):_____

_____

_____

_____

Cognitive/Learning limits Highest Ed. Level Completed:_____

_____

Family Psychiatric History:_____

Family Addiction History:_____

High Risk Behavior:_____

Significant Losses/Impending:_____

_____

_____

Mental Status: (Circle all that apply)

Appearance

- Weight: Average weight Over weight Underweight
- Grooming: Regular Well-groomed Neglected Bizarre
- Posture: Regular Tense Rigid Stooped Slumped Other_____
- Motor activity: Not-remarked Slowed Repetitive Restless Agitated

Sensory

- Attention: Regular Unaware Inattentive Distractible Confused
- Orientation: x5 Time Person Place Situation Object

Relating

- Eye Contact: Regular Fleeing Avoided None
- Facial Expressions: Responsive Constricted Tense Anxious Sad
- Attitude Towards Rater: Cooperative Passive Resistant Sarcastic Guarded Manipulative Other_____
- Speech: Excessive Minimal Pressured Slowed Normal Other_____

Affect and Mood

- Affect: Appropriate Labile Restricted Blunted Flat
- Mood: Depressed Irritable Within Normal Range Other_____

Executive Function

- Judgment: Regular Fair Poor
- Insight: Regular Fair Poor

Social Functioning

- Coping abilities: Regular Resilient Exhausted Overwhelmed Other_____

Comments on Dimension 3(Including Mental Status Exam):_____

_____

_____

_____

DIMENSION 4: TREATMENT ACCEPTANCE/RESISTANCE___ Level of Severity H M L

Acknowledges Problem Y_____ N_____
Evidences Minimization Y_____ N_____
Treatment Compliant Y_____ N_____

Primary Motivation:

External_____

_____

Internal_____

_____

Comments on Dimension 4:_____

_____

_____

_____

DIMENSION 5: RELAPSE POTENTIAL_____ Level of Severity H M L

D&A Treatment History:_____
Facility/Provider Type Dates Length/Frequency Results_____

1._____

2._____

3._____

4._____

AA/NA Attendance:_____

Sponsor/Homegroup:_____

Aware of Triggers: Y_____ N_____

Significant Preoccupation/Cravings: Y_____ N_____

Morning Drinking: Y_____ N_____

Difficulty Postponing Immediate Gratification: Y_____ N_____

Periods of Abstinence (Comment):_____

_____

_____

_____

Comments on Dimension 5:_____

_____

_____

_____

DIMENSION 6: RECOVERY ENVIRONMENT_____ Level of Severity H M L

Current Living Situation (Include marital status/dependents/high-risk neighborhood):_____

_____

_____

_____

Support System:_____

_____

_____

_____

Employment Status and Related Issues (Is the patient still employed? If no, proof of insurance may be necessary):_____

_____

_____

Legal Involvement (current and history):

Has the patient been accused or convicted of a crime against a minor? Y / N

Is the patient on Megan's List? Y / N

_____

_____

_____

Financial Considerations Logistical Considerations:_____

_____

Potential for/or Existing Physical, Emotional, Sexual Abuse:_____

_____

Comments on Dimension 6:_____

_____

_____

_____

_____

COLLATERAL CALL (1):_____Pt refused Y or N_____

DATE_____

TIME_____

Name of person called:_____

Relationship to Patient:_____

Phone Number:_____

Purpose of Call:_____

_____

_____

Significant Outcome:_____

_____

_____

_____

_____

_____

COLLATERAL CALL (2):_____Pt refused Y or N_____

DATE_____

TIME_____

Name of person called:_____

Relationship to Patient:_____

Phone Number:_____

Purpose of Call:_____

_____

_____

Significant Outcome:_____

_____

_____

_____

_____

_____

Admission Approval (only when required)

Individual Who Approved Admission_____ Date_____

Appendix B

Gateway Rehabilitation Center
Approval for Research Letter

March 21, 2008

Richard Foster
GRC – Corrections Division
311 Rouser Road
Moon Township, Pennsylvania 15108

Dear Mr. Foster:

Your research application for your dissertation study entitled "Correctional Placement of Addicted Offenders vs. Clinical Recommendations for Substance Abuse Treatment" has been reviewed and given initial approval. Gateway Rehab Center (GRC) will be happy to serve as your source of data collection pending approval from Indiana University of Pennsylvania's Institutional Review Board.

Please contact me once the IRB has approved your study. GRC will request a copy of your approval letter and we will sign a research agreement listing the specific data (i.e., variables) that you will be collecting for the study. We will also review GRC's research policy for final report submission and publication of the data.

Please do not hesitate to contact me at (412) 604-8900 ext. 1104 if I may be of further assistance.

Sincerely,

Cara Renzelli, PhD

Director of Research and Evaluation
Chairperson, GRC Research Review Committee

Appendix C

Log Number _____

Indiana University of Pennsylvania Institutional Review Board
for the Protection of Human Subjects

Human Subjects Review Protocol

1. Principal Investigator

Name Richard A. Foster Department Ph.D. ALS-Private Sector
Position/Rank Student E-Mail Address: raf@gatewayrehab.org
Address 315 East Hazelcroft Ave.
New Castle, PA
16105

Phone where you can be reached during the day 412-215-4589
Date of Submission 6/13/2008

2. Co-Investigator (e.g. thesis/dissertation committee chair; use a second sheet for any additional names):

Name Dr. Robert Ackerman Department Sociology, MARTI
Position/Rank Dissertation Committee Chair Office Phone 724-357-4455
Address E-Mail Address ackerrman.iup.edu

3. Project Title Correctional Placement of Addicted Offenders vs. Clinical Recommendations for Substance Abuse Treatment

4. Check one: Thesis ___ Dissertation X Faculty Research ___

Student Research ___ Staff Research ___

Dates during which project will be conducted: From July 2008 To May 2009

5. A. Project Funding Source: Check as many as apply:

___ External Grant: Agency name:
___IUP Grant
X Non-funded research
___ Other

B. If grant funded, application deadline or date of transmittal
N/A
(Please submit one copy of grant proposal as soon as it is available).

6. Consider each of the following separately and place an X next to each to indicate that the information is complete. PLEASE NUMBER ALL PAGES!!!

_X_ A. PURPOSE, RESEARCH VARIABLES, AND POPULATION

Purpose of the study-State concisely and realistically what the study is intended to accomplish.

The purpose of this study is to investigate a potential mismatch between the referral and placement of offenders into substance abuse treatment and the clinically recommended level of care. This study expects to demonstrate that treatment referred from the criminal justice system are substantially mismatched with clinical recommendations derived from treatment intakes and lead to

the under-treatment of offenders. This mismatch is likely to greater when referred from the department of corrections and when the offender has a co-occurring diagnosis.

Background-Briefly state the background of the study, including some relevant references and identify the main questions the current study is intended to address.

More than 80% of state prison inmates have indications of serious drug or alcohol involvement (Belenko & Peugh, 2005). A variety of innovations have been developed to respond to this problem including probation and parole referring addicted offenders to drug and alcohol treatment as part of the conditions of parole when released from prison or while on community supervision.).Community corrections have established a collaboration with service providers for offenders to be placed into drug and alcohol treatment facilities. There is increased recognition that an offender's movement from prison to the community is most effectively accomplished as a step-down process in a structured, supportive environment (Federal Bureau of Prisons, 2000; Simpson et al., 1999). Substance abuse treatment has been shown to reduce both substance use and criminal behavior among offender populations throughout different stages in the criminal process (Zanis et al., 2003).

As a consequence of two very dissimilar approaches to assessment and placement there is a high likelihood of a mismatch between the criminal justice referral placement and what would be the prescribed clinical recommended placement or "level of care" of the treatment facility. According to Knight et al. (2006), a highly subjective assessment process has emerged based on criminal justice staff experience and "gut feeling" in making a determination of treatment need for offenders. Furthermore, current assessment tools commonly used in correctional settings have limitations for identifying multiple clinical, supervision, and social service needs for the offender population (Belenko, 2006). Conversely, drug and alcohol treatment facilities generally follow a more structured system of assessment, a greater range of treatment options, and a more fundamental objective of recovery. Assessment is the first step in determining what interventions or services are needed (Wexler & Fletcher, 2007). A highly-structured and detailed systematic approach is taken by drug and alcohol-trained evaluators who complete a multidimensional assessment then refer to a criteria manual and checklist to arrive at a clinical recommendation.

Licensed drug and alcohol treatment facilities are required to utilize a clinical assessment that contains placement criteria from the American Society for Addictive Medicine (ASAM) which is a standardized and nationally recognized criteria for assessing and placing individuals into drug and alcohol treatment services. ASAM is the most prominent set of guidelines for matching patients to the most appropriate levels of care (ASAM, 1991, 1996). The process of assessment should identify key substance-use dimensions that determine the intensity and duration of treatment required (Weekes et al., 1999).

Studies have shown a substantial increase in relapse back into addiction as well as recidivism back into criminal behavior for individuals who were referred and placed into levels of care that did not match their needs. Evaluation research suggests that this approach of assessment and matched treatment tends to improve outcomes as well as efficiency of treatment, especially when using ASAM criteria (Kosanke, et al., 2002; Magura et al., 2003, 2005). Matching patient's clinical need with level of care is optimal, undertreatment is harmful, and overtreatment is a waste of resources (Magura et al., 2003). There is increasing evidence within the criminal justice field as well that structured assessment and matched interventions, including various treatments and supervision levels, can improve outcomes and efficiency. Research has shown that offenders who are mismatched have a greater chance to recidivate. Offenders classified as low risk who receive an intensive level of treatment or *overtreatment* have more than double the rate of recidivism than the low risk offenders who received a minimal and appropriate level of treatment (Andrews & Bonta, 2003).

It appears likely that the failure to refer or place offenders in appropriate substance abuse treatment based on a structured, standardized, and more comprehensive assessment would contribute to less successful outcomes including recovery from addiction and reduction of criminal recidivism.

The following research questions are proposed:

1. Is there a mismatch between the placement of offenders from the criminal justice system and clinical drug and alcohol placement recommendations?
2. If a mismatch exists, what is the extent and nature of the mismatch? Is there any congruency between the criminal justice referral and the clinical recommendation?
3. Does the referral source (i.e., department of corrections, parole) and diagnoses (i.e. secondary co-occurring diagnosis) influence the mismatch?

Characteristics of the Subject Population-The following information should be provided:

a. Age Range-What is the age range and why was it chosen?

The sample will consist of records of adult individuals with ages 18 and over. The program being investigated was an adult program.

b. Sex-What is the sex of the subjects? If there is a restriction, provide the rationale.

The sample will consist of records of both male and female subjects.

c. Number-What is the estimated number of subjects?

The estimated number of records to be reviewed will be between 150-167.

d. Inclusion Criteria-What are the specific inclusion criteria?

Records were chosen from an adult community corrections program that provides substance abuse treatment to addicted offenders being referred to treatment by the criminal justice system. Any male or female offender admitted to GRC in 2005 that was referred by the department of corrections or parole was included in the study.

e. Exclusion Criteria-What are the specific exclusion criteria? Clear rationale should be provided for the exclusion of any particular population group, unless the title of the study reflects the restricted population range.

Several exclusion criteria will be applied to the potential subjects from the year 2005 in order to determine the actual number of unique cases. First, the offender data sheet contains duplicate records. For example, an offender can be listed as being admitted to inpatient treatment on one date and work-release services on a later date. The first admission date on duplicate records will be retained because that is the date that the offender entered the program. The other duplicate entries will be excluded.

Second, two primary referral sources dominate the distribution. For example, department of corrections and parole referrals together comprise 85% of the program referrals. The remaining 15% of referrals will be excluded due to being an insufficient size for statistically significant analysis as a separate grouping. These remaining referrals come from various other referral sources including federal and county probation offices as well as self-paying offenders.

Third, missing demographic variables will need to be identified. For example, if more than one variable is missing from the offender data sheet or record, the record will need to be excluded. Fourth, incomplete patient clinical records will be excluded if the clinical information (e.g. clinical evaluations, intake and referral information) existing in the record is deemed insufficient by the evaluator to make an appropriate clinical recommendation to treatment.

After preliminary analyses following the exclusion criteria explained above, over half of the records will be retained to produce a sample size of (N=153). Approximately 43% of the records will be excluded, including 91 for duplication and 39 for referral source. No records were excluded for missing data. The total of 153 is representative of annual average admissions to the GRC corrections program. The distribution of gender consists of 54 females and 113 males. The distribution of referral source consists of 59 parole and 108 department of corrections. This sample should be adequate to assure sufficient statistical power in a four-level clinical recommendation vs. a two-level criminal justice referral option.

f. Vulnerable Subjects-If vulnerable subjects will be included (children, pregnant women, fetuses, prisoners, mentally disabled persons), provide justification of the need to use these subjects in research.

The sample includes what could be considered "vulnerable subjects" since the study subjects are men and women referred to addiction treatment from a corrections program. There are two vulnerable subjects: offenders from the criminal justice system (e.g. prisoners) and individuals suffering from addiction, which could be considered a "sensitive topic." There is some potential harm in the identity of these subjects being exposed through this research study. The offender roster with preliminary data of the sample identifies each potential subject by an assigned case number only and are available to the researchers in this anonymous form. The patient records, however, do have subjects' names on the documents. Protections will be made to safeguard the identity of the clinical patient records. First, the rosters and records will all be stored in a locked cabinet at the research site and be only accessible to only to evaluators conducting the assessments and the researcher. Second, after reviewing the clinical records, the evaluators will write their clinical recommendation on a data sheet that will identify the subjects by a case number without names or other identifiers. Third, the evaluators will complete their assessment following the established procedures at GRC as they do in their capacity as a staff evaluator at that facility. Each evaluator is regulated confidentiality laws and privacy guidelines for handling clinical records. As the laws and guidelines require, no identifying patient information will be discussed or shared among the evaluators during this study. Fourth, the data that is gathered from the roster and records in this research project will be anonymous, and the final database of information will contain no links back to any patient record or contain any identifying information. Fifth, GRC maintains compliance with state licensing guidelines and federal confidentiality laws in the handling, reviewing, and storage of patient records. The researcher and evaluators in research project, record access, and data collection will confirm to these guidelines and laws.

X B. METHODS AND PROCEDURES

Method of Subject Selection-Describe the study's method(s) of identification and recruitment of prospective subjects. Provide a copy of any planned advertisements.

Sample

The sample will consist of clinical records from discharged GRC patients for the calendar year of 2005. The researcher has been granted access to these patient records by GRC. A report will be generated that will contain the patient identification numbers for all of the 2005 admissions into the GRC program. This list will be given to the GRC Medical Records Director with a request to have these archived patient records pulled from storage for review by the researcher. An initial review found that nearly 300 records (n=297) exist for the GRC program during the 12-month period in 2005.

Subjects from the 2005 calendar year may be considered representative of GRC clients because 2005 was a typical year in the GRC program. It was typical in the following ways: no new policies, referral procedures, contract terms, or funding changes occurred during this time frame. Further, program staff remained intact and the program environment remained constant.

First, policies remained the same at GRC in 2005 than in years past. An annual review of policies was conducted by the program director, but no changes were made in any policies in areas of referral, placement, or delivery of inpatient or work-release services. Second, referral procedures remained the same for department of corrections and parole-referred residents. Parole agents requested parole referrals to the program director of GRC by telephoning and the department of corrections referrals were made to the program director of GRC by distributing referral packets in person at a weekly meeting. Third, the contract terms GRC had with the BCC remained the same. In 2005, contracts for both inpatient and work-release services at GRC were in the fourth year of a five-year term and no changes are made during the contracted term. Fourth, funding remained constant at GRC in 2005. The department of corrections and parole both continued to make referrals and remained the two primary referral sources to GRC. The BCC remained the primary funding source. Referrals from the department of corrections and parole are paid and covered under the contract that GRC has with the BCC. Contract terms do not change during the length of the contract and in 2005 GRC was in the same contract that it had signed with the BCC in 2002. Fifth, GRC experienced no program staff turnover. No new staff positions were created in 2005 and the BCC Contract Facility Coordinator and the Parole Supervising Parole Agent that are assigned to GRC remained the same in 2005. Sixth, the program environment remained the same in 2005 at GRC. No new major physical plant changes were made to the second floor of the building in which the corrections program operated. GRC operated the same inpatient and work-release program for male and female offenders with a total of capacity of sixty beds in 2005.

> Study Site-State the location(s) where the study will be conducted. Include letters of approval to conduct the study from all non-IUP sites.

The setting for this research project is Gateway Rehabilitation Center (GRC), a nationally recognized private treatment facility in Western Pennsylvania. Gateway opened in 1972 as one of the first residential alcohol treatment facilities of its kind in the United States. Gateway operates numerous other treatment locations throughout Western Pennsylvania and Ohio. Gateway began contracting with the Bureau of Community Corrections (BCC) to provide treatment services to offenders in 1995 at the Aliquippa, PA location. The community corrections program that operated within the Aliquippa facility will be the specific program from which the clinical records will be obtained.

The Aliquippa corrections program operated in 2005 with a total capacity of sixty beds. There were thirty-six male beds and twenty-four female beds. GRC operated from 1995-2006 and was a 60-bed residential corrections program that contracted with the BCC to provide treatment services to offenders. GRC needed more space for the corrections program and attempted for nearly three years to relocate the program in nearby communities. However, GRC closed the corrections program in 2006 due to unsuccessful attempts to relocate the program due to zoning issues and community opposition.

An application for research at GRC was completed by the researcher. The researcher submitted this application initially to the GRC Director of Research. The study design and methodology were briefly explained in this application, as well as the informed consent and plan for the presentation of the results to GRC. The application was taken to the designated GRC executive committee by the GRC Director of Research where it was presented, reviewed, and approved. A letter from the Director of Research at GRC stating the approval for research was obtained by the researcher and a copy is listed below. An original is attached at the end of this application.

Gateway Rehabilitation Center
Approval for Research Letter

March 21, 2008

Richard Foster
GRC – Corrections Division
311 Rouser Road
Moon Township, Pennsylvania 15108

Dear Mr. Foster:

Your research application for your dissertation study entitled "Correctional Placement of Addicted Offenders vs. Clinical Recommendations for Substance Abuse Treatment" has been reviewed and given initial approval. Gateway Rehab Center (GRC) will be happy to serve as your source of data collection pending approval from Indiana University of Pennsylvania's Institutional Review Board.

Please contact me once the IRB has approved your study. GRC will request a copy of your approval letter and we will sign a research agreement listing the specific data (i.e., variables) that you will be collecting for the study. We will also review GRC's research policy for final report submission and publication of the data.

Please do not hesitate to contact me at (412) 604-8900 ext. 1104 if I may be of further assistance.

Sincerely,

Cara Renzelli, PhD

Director of Research and Evaluation
Chairperson, GRC Research Review Committee

Methods and Procedures Applied to Human Subjects-Describe in detail the study design and all procedures (sequentially) to be applied to subjects. Attach copies of any instruments to be used, such as surveys, rating scales, or questionnaires.

Research Design

The study will be a content analysis of treatment intake assessment information and correctional referral records. Record reviews will be conducted on discharged patient records available from the treatment facility. Records will be reviewed by evaluators and assessed using ASAM PPC (ASAM 1991) and PCPC Admission Criteria (Pennsylvania Department of Health, 1999) to establish appropriate "clinical recommendations." The clinically recommended treatment "level of care" will be compared to the actual placement level assigned by the criminal justice referral source. The focus of the study is the potential mismatch between the correctional referral and treatment recommendation. The study will further explore for influence from various background variables, referral source, and co-occurring diagnoses on the mismatch.

Content analysis is the chosen method of study due to the readily available use of existing agency patient records and because the clinical records contain various completed multidimensional evaluations as well as an abundance of referral and intake information. Adequate information will be available to complete an assessment in order to determine a recommended treatment level accordant to ASAM criteria. This study will involve an in-depth analysis of patient clinical information by highly trained clinicians using standardized criteria (ASAM PPC) to determine placement into appropriate levels of treatment services as it compares to the criminal justice referral placement. This study will be a content analyses of 153 discharged patient records from a community

corrections program in Western Pennsylvania. These records represent the total admissions to this program in 2005. GRC Evaluators will review intake and assessment information in patient records and complete a clinical assessment. This assessment will determine the clinical recommended treatment based on standardized patient placement criteria. This recommendation will be compared to the actual referral placement of

the criminal justice system. The goal of this study is to test two hypotheses: (1) a substantial mismatch exists between the criminal justice referral and the clinical recommended treatment in the form of a large percentage of offenders being are referred to levels of care that are not clinically appropriate, and (2) offenders are more-often referred to lower levels of treatment than is clinically recommended and thus are undertreated according to treatment standards.

To address Hypothesis 1, a bivariate analysis will be conducted by computing cross-tabulations to inspect the percentage of agreement to determine the mismatch. For Hypothesis 2 that offenders are more-often referred to lower levels of treatment than is clinically recommended and thus are undertreated" will be addressed in a cross-tabulation will be generated for four by two categories using the McNemar and Kappa statistics to summarize the nature of the agreement and disagreement. To explore the possible influence of the criminal justice referral source of the department of corrections are more likely to have a mismatch than those offenders referred from parole, and co-occurring diagnosis on the mismatch, a logistic regression will be computed using referral source and co-occurring diagnosis as predictors for mismatch. Demographics of the offenders will also be entered into the equation as control variables. Offenders will be considered "mismatched" if they were referred to and placed in higher or lower levels of care than what was clinically recommended.

Variables

The two main variables in the study are criminal justice referral placement and clinical recommendation. Criminal justice referral is the independent variable, and the clinical recommended treatment is the dependent variable in the analysis to assess "mismatch" in the two main hypotheses. The variables will be identified in two ways. First, the independent variable of CJ referral is initially included on the offender data sheet available from the GRC database. The offender data sheet also includes the majority of the independent demographic variables (e.g. age, race, gender, education level, marital status, primary diagnosis) that will be used in the exploratory analysis of factors influencing "mismatch." Second, the variable of clinical recommendation and the independent variables of secondary diagnosis and criminal charges will be determined through a content analysis of the patient record conducted by trained evaluators (as discussed below). Variables will be coded and placed into a research database prior for analysis.

To operationalize or measure the two main variables, the two types of referral placement options that are used by community corrections will be used for the first variable, and nine different types of clinical recommendation options will be grouped into four levels for the second variable. Referral placement is to one of two levels of service: either inpatient or work-release. Clinical recommendations can be made to nine different levels of treatment including: detoxification, inpatient, partial hospitalization, halfway house, morning or night outpatient, outpatient counseling or outpatient group, addiction education, drug, alcohol, & tobacco awareness, and other (e.g. aftercare groups).

To achieve greater statistical power in analysis for the first hypothesis, the nine different clinical recommended levels of treatment will be collapsed into four treatment levels consistent with ASAM PPC Criteria and PCPC. This collapsed classification moves from the least intensive to the most intensive treatment service. For example, PCPC Level 1 includes outpatient and intensive outpatient treatment. Level 2 includes partial hospitalization and halfway house services. Level 3 includes medically monitored detoxification, short-term and long-term residential treatment. Level 4 includes medically managed detoxification and inpatient residential (PA DOH, 1999). Some minor modification to these levels will need to be made in order to represent all available levels of treatment. For instance, ASAM and PCPC Level 4 include medically managed detoxification and inpatient rehabilitation. Since GRC does not offer either of those highly intensive levels of service, they will be excluded. The clinical recommended levels of care for this study will be grouped by the following types of services: Level 1 will include addiction education, drug, alcohol, & tobacco awareness, and other (aftercare groups). Level 2 will include morning or night outpatient, outpatient counseling or outpatient group. Level 3 will include partial hospitalization and halfway house.

Level 4 will include detoxification and inpatient residential treatment.

The independent variable of criminal justice referral and the dependent variable of clinical recommended treatment will determine the "mismatch' outcome for the exploratory analysis of other influential factors. The mismatch will be defined as any difference between criminal justice referral and clinical recommended treatment (at the four level classification).

Offenders can only be placed into two contracted levels of service (e.g. inpatient and work-release). Inpatient is a defined level of service under ASAM criteria, PCPC, as well as the DOH. However, work-release services are not defined as a level of service by the BCC. The closest level of service based on ASAM and PCPC is *outpatient*. For purposes of this study, the two levels of service placed at GRC by the BCC can be classified as Level 1 (e.g. work-release) and Level 4 (e.g. inpatient).

Therefore, level of care matching can be defined in terms of the congruence between the referred placement level of care (e.g. Level 1 or Level 4) and the clinically recommended level of care (e.g. Levels 1-4). Offenders will be considered "matched" if the referred placement level of care and the clinically recommended level of care are the same. Offenders will be considered "mismatched" if they were referred to and placed in higher or lower levels of care than what was clinically recommended by the evaluator. Additionally, if an offender was placed into Level 4 inpatient but was recommended for Level 1 aftercare group, then the referral would be considered "mismatched" into a higher level of care than was deemed clinically appropriate, thus showing a greater level of mismatch.

Furthermore, there will be eight independent demographic controlling variables used as controls in the exploratory analysis. These variables are: age, race, gender, education level, marital status, primary substance dependence diagnosis, co-occurring biomedical or mental health secondary diagnosis, and current criminal charges. These variables are primarily categorical bivariate in nature and the source of these variables are the GRC offender record and the GRC electronic computer database.

This crosstabulation will be a two- by-two comparison in which the clinical recommendation is collapsed into inpatient or outpatient The percentage of agreement

and disagreement between the two variables and the statistical significance using Fisher's statistic of these results will be inspected to determine the extent of the "mismatch".

Rating Procedures for Clinical Recommendation

Overview of Treatment Intake Records

The source of the clinical recommended treatment will be based on ratings developed from a review of GRC offender records. All offender records at GRC, corrections or otherwise, regardless of the program or level of care, contain the same structure, documentation, forms, and information. All records at GRC contain the following sections: opening & closing documents, insurance, consents, evaluations, treatment plans, progress notes, labs, consults, miscellaneous, and appendix. For a more detailed description of the specific contents of each section of the record, see *GRC's Recording Manual Index*.

The two primary sections of the patient record that contain the majority of the documents to be reviewed by the evaluators are located in the *assessment* and *miscellaneous* sections. The assessment section contains the initial evaluation completed by the patient and reviewed by the clinician, the evaluative summary and mental status exam, and the intake completed by the nursing staff. The referral information is located in the miscellaneous section of the record and can offer additional information on drug and alcohol use, criminal charges, medical conditions, and mental health history. It should be noted, for purposes of this study, that the evaluators will have access to the entire patient

record to search for information needed to complete the assessment as well as to identify and record missing variable data.

An assessment will be completed on each clinical record by three evaluators in order to develop reliability. This assessment is used throughout GRC, expect for offenders in corrections program, which is completed in order to determine the clinically recommended level of care. Further, the evaluators will be completing the exact same assessment that they utilize daily in their regular positions at GRC. However, the assessment is not used on offenders because the BCC contract with GRC does not require that a clinical recommendation for treatment be made on the offender. The assessment is based on the six dimensions of ASAM PPC and PCPC. Reliable diagnostic criteria and screening instruments are utilized in the assessment, including DSM-IV-TR *(Diagnostic and Statistical Manual of Mental Disorders, Volume Four-Text Revised)* Criteria for Substance Dependence and the CAGE questionnaire. The DSM-IV-TR (American Psychiatric Association, 2000) diagnosis of substance dependence measures an underlying construct that is relatively consistent across groups of substances. An individual must meet three of the nine conditions to be considered substance dependent.

Research has shown the validity of this diagnostic criteria and screening instrument. Studies have shown that the inter-rater reliability for the DSM-IV-TR diagnoses were excellent for opioid dependence and good for alcohol and cocaine dependence (Pierucci-Lagha et. al., 2007). The CAGE Questionnaire (Ewing, 1984) is a four-question alcohol severity test and has consistently proved to be the superior instrument for detecting alcohol abuse and alcohol dependence (Enoch & Goldman, 2002).

The evaluator will also have offender data sheet to refer to and place data in when completing the assessment. The offender data sheet will be a spreadsheet created from a *Crystal Report entitled: "Admission Report Aliquippa-2005"* from the GRC database that will include the entire patient records from 2005 included in the study. The *Admission Report Aliquippa-2005* will be developed by the researcher and background information will be included and appear on the offender data sheet. This background information, including: age, race, gender, marital status, primary diagnosis, referral source, and education level will automatically appear on the offender data sheet when the report is generated. There will also be columns for write-in data from the evaluators, including secondary diagnosis, criminal charge(s) and recommended treatment level.

Three evaluators will complete the assessments by reviewing the intake and clinical information available in the GRC records. Once the clinical information is reviewed and information recorded on the assessment, the evaluator refers to the PCPC Placement Criteria for Admission (DOH, 1999). The criteria require the evaluator to review each dimensional specification and make a clinical determination referred to as dimensional scoring. The evaluator will take the information from the assessment and interpret it according to severity using the PCPC dimensions (DOH, 1999).

Based on the information and PCPC, the evaluator will then make a clinical recommendation. As previously mentioned, there are nine (9) different treatment options available at GRC, including: detoxification, inpatient, partial, halfway house, morning or night outpatient, outpatient counseling or outpatient group, addiction education, drug, alcohol, & tobacco awareness, and other (aftercare groups). The evaluator will also identify and record the corresponding level of service (e.g. Levels 1-4) that their clinical recommended treatment falls within on the offender data sheet.

The researcher will deploy the evaluators to complete the assessments based on a scheduled and agreed-upon timetable. The evaluators in this study are employed at GRC as Evaluation Therapists. The evaluators are required to have a Bachelor's Degree in a health-related discipline that is required by and needs approval from the Pennsylvania Department of Health-Bureau of Drug and Alcohol Programs. The evaluators will be completing the same exact assessment form for this study that they complete in their daily duties as an Evaluator for GRC. The evaluators must also pass

competency testing on the assessment form as well as ASAM PPC and PCPC and become privileged by GRC to complete assessments. Privileging is a competency process developed by GRC to ensure that clinicians are adequately trained and qualified to complete assessments. The following GRC Evaluation staff will serve as the evaluators for this study: Rob Karcher, Amanda Dodd, and Megan McPherson. All three evaluators have Master's Degrees in a health-related discipline and have passed GRC's privileging process.

Listed below are the evaluators' credentials:

Rob Karcher	MSW
Amanda Dodd	M.A., CCDP
Megan McPherson	MSCP, NCC, LPC

X C. RISKS/BENEFITS

Potential Risks-Identify the potential risks of the study. Specify the types and levels of risk.

This research project is a content analyses of closed, existing patient records. Since no human subjects exist, the potential risks are minimal to none.

Protection Against Risks-For all studies involving greater than minimal risk, specify the procedures for preventing or minimizing any potential risks.

This research project is a content analyses of closed, existing patient records. Since no human subjects exist, the potential risks are minimal to none.

Potential Benefits-Describe any potential non-monetary benefits of the study, both for subjects and for society in general.

Significant implications exist for the substance abuse treatment of addicted offenders, use of public resources, and criminal justice policy. Several changes must be made in the referral of offenders into substance abuse treatment. First, offenders need to be assessed by trained personnel for substance abuse treatment using standardized and multi-dimensional evaluations. This will provide clinically appropriate treatment services for addicted offenders.

Second, placement criteria and matching protocol should be used to refer and place offenders into specific treatment levels of care to utilize resources effectively and match substance abuse treatment for offenders with their clinical needs. Third, a wide range of treatment service options, varying in intensity, need to be offered to offenders with substance abuse problems to provide treatment service options for more offenders.

Compensation for Participation-Describe any monetary or other forms of compensation which will be provided to subjects, and any conditions which must be fulfilled to receive compensation.

This study involves the content analyses of existing patient records. No subjects are involved, thus there are no compensation issues for participation.

Alternatives to Participation-Describe any alternatives to participation in the study which might be advantageous to the subject. If the subjects are to receive academic credit for research participation, describe the alternatives available to earn equivalent academic credit.

This study involves the content analyses of existing patient records. No subjects are involved, thus there are no alternative issues for participation.

Information Withheld-Identify the nature of any information to be purposely withheld from subjects, and provide justification for the non-disclosure.

This study involves the content analyses of existing patient records. No subjects are involved, thus there are no issues for withholding information.

Debriefing-Describe the procedure for post-study debriefing of subjects.

This study involves the content analyses of existing patient records. No subjects are involved, thus there are no issues for debriefing.

X D. CONFIDENTIALITY

Describe explicitly how confidentiality of data will be maintained. If any information with subject identifiers will be released, specify the recipients. Include a statement that all data will be retained for at least three years in compliance with federal regulations.

To protect patient confidentiality, records for the research subjects and the offender data sheets will be secured in a locked file cabinet in a designated area of Gateway Greentree during the data collection phase. This file cabinet will be accessible only to the evaluators and the researcher. This study will follow federal confidentiality guidelines and applicable laws to protect patient privacy rights, including *42 CFR, Part 2, Confidentiality for Alcohol and Drug Abuse Patient Records.* Each clinical record will be identified only by a case number and will contain no identifying information to protect the privacy and confidentiality of the patients.
All data from the research study will be retained for at least three years in compliance with federal regulations.

Additionally, the researcher will also safeguard HIPAA (Health Insurance Portability and Accountability Act of 1996) in this study.

- The HIPAA regulations are national standards to facilitate the electronic exchange of health information and to protect the privacy of patient identifying health information ("Privacy Standards").
- The Privacy Standards protect any individually identifiable health information that is transmitted by or maintained in any form or media (including electronic form, paper form or oral). This is referred to as Protected Health Information (PHI).

Listed below are actions the researcher will take in this research study to maintain compliance of HIPAA during the data collection phase.

Reasonable Safeguards Storage of Records

•Store clinical records and offender data spreadsheet in locked file cabinets or locked area at the GRC satellite office where the research will take place. Only the previously-mentioned GRC evaluation staff or the researcher may remove the files from the locked storage to complete the assessments for

•the research study and record the clinical recommendation on the offender data spreadsheet.
•Use a sign-out log to track when each record is removed by the GRC evaluation staff or the researcher from the locked storage cabinet.
•Evaluators will complete the assessments on the GRC clinical records in their offices that will be in close proximity to the locked storage closet at the GRC satellite office.

X E. COPY OF CONSENT FORM

See attached Essentials of Informed Consent and Informed Consent Form. Please note that an informed consent form addresses five critical points: 1) subject participation in the study is voluntary (provide a description of the procedure to be used if choosing not to participate); 2) a statement of the subject's right to withdraw at any time and a clear description of the procedures for withdrawal from the study without penalty; 3) subjects are informed of the level of risk (from 'no known risk' through the level appropriate to the study) and the means of protecting the subjects from known risks or minimizing the risk; 4) confidentiality is ensured; and 5) the means by which confidentiality is to be ensured is elucidated. While it is not mandatory that an Informed Consent Form is identical to the example, the five points listed above are critical elements of any form an investigator may develop. It is important to include sufficient specific information regarding the purpose and nature of your study to ensure that subjects are fully informed. A copy of the Informed Consent Form should be given to each subject who participates in the study. Please note: the IRB will not accept "blanket waivers" of the right to privacy. Subjects (or their legal agents must sign a consent form for each research study.)

Mailed surveys ordinarily receive expedited reviews and do not need consent forms except when one of the following conditions prevail: 1) the person's name or other identifier is known to the researcher; or 2) the content of the survey puts the respondent at risk for emotional, physical, or other types of distress. If an informed consent form is not required, the researcher should use a cover letter to potential subjects which addresses all the elements of informed consent previously described. Please include a copy of this cover letter with your protocol.

This study involves the content analyses of existing patient records, thus no human subjects are involved and no consent form is required.

7. Protected Populations and Sensitive Subjects: If any Human Subjects from the following list would be involved in the proposed activity, place an X next to the category.

___minors ___fetuses ___pregnant women
___test subjects for new drugs or clinical devices ___abortuses ___incarcerated ___illegal behavior ___mentally disabled
___educationally or economically disadvantaged persons

This study involves the content analyses of existing patient records. No subjects are involved, thus there are no issues for protected populations and sensitive subjects.

8. Nature of Risk. In your judgment, does your research involve more than minimal risk? "Minimal risk" means that the risk of harm anticipated in the proposed research is not more likely than those risks encountered in daily life, or during routine physical or psychological examinations/tests.

____Yes __X__No

9. In your judgment, does your research fall under one of the six exempt categories? (List of Exempt Categories attached.) If you believe it does, indicate the number of the category under which you are claiming an exemption. No

10. Does your project fall under one of the categories eligible for expedited review? Yes (List of Expedited Review Categories attached.) If you believe it does, indicate the number of the category under which you are claiming expedited review.

#3. The study of existing data, documents, records, pathological specimens, or diagnostic specimens. A content analyses of existing patient records will be conducted. No human subjects will be present for the study. No identifying information will be gathered or documented during the data collection.

11. Additions to or changes in procedures involving human subjects as well as any problems connected with the use of human subjects once the project has begun must be brought to the attention of the IRB.

I agree to provide whatever surveillance is necessary to ensure that the rights and welfare of the human subjects are properly protected. I understand that I cannot initiate any contact with human subjects before I have received approval/or complied with all contingencies made in connection with the approval. I understand that as the principal investigator I am ultimately responsible for the welfare and protection of human subjects and will carry out the project as approved.

_____ _6/13/2008___
Signature of Principal Investigator/Program Director Date

The researcher is affiliated with GRC in that he is employed as a regional director. The researcher is the Director of GRC's Corrections Division. Listed below is a current bio of the researcher to give more details on his affiliation with the researcher site, GRC.

Richard Foster has worked at Gateway Rehabilitation Center since 1991. He is currently the Director for Gateway's Corrections Division. His previous positions at Gateway include: Intern, Counselor, Therapist, Aftercare Group Facilitator, OPC/OPG Therapist, Clinical Case Manager, Senior Therapist, Therapy Manager, &

Program Director. He has worked in all levels of care with adults, adolescents, and gender-specific populations in numerous Gateway locations, including: Aliquippa, Beaver Co. Jail, Braddock, Eleanor Roosevelt & Sheffield Towers Transitional Housing, Erie, Erie Co. Prison, Greentree, North Hills, and Westmoreland Hospital.

He is a consultant and clinician who makes numerous public speaking appearances and conducts trainings on addiction, community corrections, motivational interviewing, anger management, clinical supervision, and other recovery related topics. These include: workshops, class room instruction, conferences, lectures, and radio shows. He has been employed as an Adjunct Instructor by Robert Morris University and presents regularly for the Pennsylvania Certification Board (PCB).

Richard Foster is currently a candidate for the degree: *Doctorate of Philosophy (Ph.D.) in Administration and Leadership Studies-Private Sector (Dissertation Phase)* at Indiana University of Pennsylvania (Dr. Robert J. Ackerman-Committee Chair). He earned a *Master of Arts (M.A., 1992)* in Human Services with a specialization in Drug and Alcohol Abuse Studies and a *Bachelor of Arts-(B.A.,1990)* in Clinical Sociology from Indiana University of Pennsylvania.

He currently holds the following Pennsylvania Certification Board (PCB) credentials: Certified Addictions Counselor Diplomate (CAC Diplomate-1995) & Certified Clinical Supervisor (CCS-1999).

Richard Foster is a Board of Director for the Pennsylvania Certification Board (PCB).

He is also a Board Member for The Community Corrections Association of Pennsylvania (CCAP) and is Chairperson for the 2009 CCAP Conference.

Mr. Foster is a member of the following organizations: The American Correctional Association (ACA), The International Community Corrections Association (ICCA), and The Pennsylvania Association on Probation, Parole, and Corrections (PAPPC).

12. Approval by Faculty Sponsor (REQUIRED FOR ALL STUDENTS):

I affirm the accuracy of this application, and I accept the responsibility for the conduct of this research and supervision of human subjects as required by law. THE PROPOSED PROJECT HAS BEEN APPROVED BY THE THESIS/DISSERTATION COMMITTEE.

_____ 6/13/2008

Signature Date

Appendix D

RESEARCH TOPIC APPROVAL FORM

Banner ID# **_@00136257**

Name **Richard A. Foster** SS# **167-54-4331**

Address **315 East Hazelcroft Ave. New Castle, PA 16105**

Phone Number **412-215-4589** E-Mail **raf@gatewayrehab.org**

When this form has been returned to the Assistant Dean for Research in the Graduate School (113 Stright Hall), the Assistant Dean will notify the student that the research proposal has been approved. **The student should not begin the research activity until that notice has been received.**

PLEASE NOTE: IF CHANGES OCCUR, EITHER IN COMMITTEE MEMBERSHIP OR TOPIC, A NEW FORM MUST BE COMPLETED AND APPROVED.

SECTION I. (To be completed by the student)

_____ Thesis **X** Dissertation

Department: **Administration and Leadership Studies-Private Sector** Degree: **Ph.D.**

Title of Study **Correctional Placement of Addicted Offenders vs. Clinical Recommendations for Substance Abuse Treatment**

ATTACH TO THIS FORM A BRIEF 1-2 PAGE SUMMARY OF YOUR RESEARCH TOPIC, including the method of study you expect to use, materials and equipment you will need, and an estimated time frame to complete each step of the process.

Check which one of the approved style manuals you will be using:

_____ American Chemical Society, The ACS Style Guide, 2nd Edition
__**X**_____American Psychological Association, Publication Manual, Fifth Edition
_____ American Sociological Association, ASA Style Guide, Second Edition
_____ Council of Biology Editors, Inc., CBE Style Manual, Sixth Edition
_____ Modern Language Association, MLA Handbook…Research Papers, Fifth Edition
_____ Turabian, A Manual for...Theses, Dissertations

Signature of Student

_____

Date **6/13/2008** Anticipated Graduation Date **August 2008**

SECTION II. (To be completed by thesis/dissertation committee and pertinent university administrators)

Having affixed my signature below, I hereby approve the research proposal and agree to serve on the above student's thesis/ dissertation committee (3 to 5 faculty on the committee).

6/13/2008 **Dr. Robert Ackerman**
(Date) (Typed or printed name and signature of Committee Chairperson)

6/13/2008 **Dr. Edward Gondolf**
(Date) (Typed or printed name and signature of Committee Member)

6/13/2008 **Dr. Cara Renzelli**

(Date) (Typed or printed name and signature of Committee Member)

_____
(Date) (Typed or printed name and signature of Committee Member)

_____
(Date) (Typed or printed name and signature of Committee Member)

College Approvals: (To be completed by Graduate Coordinator) _____ Number of credits required by department for this thesis or dissertation. This number will be entered into the database and will determine when the chairperson can receive compensation for chairing the thesis or dissertation.

_____ Graduate Coordinator Date _____
(Department Chairperson may sign in the absence of Graduate Coordinator)

_____ *Date transmitted to College Dean's Office*

_____ As Dean of the College, I will serve on the above committee.

_____ As Dean of the College, I hereby appoint the following person to serve on the committee as my representative:
Name:
_____

_____ I choose neither to serve on the committee nor to appoint a representative.

_____ Dean of the College Date _____

Graduate School Approval:

Signature _____ Date _____
Assistant Dean for Research

IRB Review Required: _____ Yes _____ No

Date Protocol Received _____ Date of Approval _____

Animal Care Review Required: _____ Yes _____ No

Date Protocol Received _____ Date of Approval _____

Earliest date for Candidate's graduation:
_____

IUP School of Graduate Studies and Research
Research Topic Approval Form (RTAF)
Research Description Summary

Richard Foster-@00136257
Ph.D.-Administration and Leadership Studies, Human Services
6/13/2008

Title of Study: Correctional Placement of Addicted Offenders vs. Clinical Recommendations for Substance Abuse Treatment

Method of Study:

The study will be a content analyses of treatment intake assessment information and correctional referral records. Chart reviews will be conducted on discharged offender records. Records will be reviewed by evaluators employed at Gateway Rehabilitation Center and assessed using placement admission criteria to establish appropriate clinical recommendations.

Materials & Equipment Needed:

The research study will require records from Gateway Rehabilitation Center. Gateway Rehabilitation Center's Level of Care Assessment forms will be the assessment instrument used by the evaluators. An offender data sheet has been developed and the evaluators will be provided with it to record their clinical assessment on.

Equipment needed for the study will include a computer, used primarily by the researcher to generate the data sheet with the requested records for the sample. SPSS software will be needed to develop and generate a database in order to run various reports on the data gathered.

Estimated Time Frame to Complete Study (Once Approval is Granted):

- Request & obtain records from Gateway Rehabilitation Center-Director of Medical Records (2 weeks)
- Have records transported to Gateway Greentree (1 week)
- Distribute records to three chosen evaluators (1 week)
- Two primary evaluators complete approximately 150 assessments (75 each) and record their clinical recommendations (16 weeks)
- Researcher receives raw data from raters (1 week)
- Researcher codes data and creates a database (4 weeks)
- Researcher generates reports from SPSS (4 weeks)
- Researcher completes summary/findings-chapter 4 & analyses/discussion-chapter 5 (8 weeks)
- Research submits final draft and defends dissertation to committee (2 weeks)

Total estimated time needed: 40 weeks

Appendix E

Glossary: Definitions of Terms

ASAM→American Society of Addictive Medicine. The six dimensions of assessment (ASAM, 1991):

Dimension one refers to the need for detoxification. If a person has a been using substances to the extent of physical dependence or has a history of withdrawal symptoms associated to alcohol or other substances, is there a need for hospitalization or clinical intervention on an inpatient or outpatient basis to lessen the severity of physical withdrawal? This increases the likelihood of the patient remaining in treatment for rehabilitation and decreasing relapse or recidivism rate.

Dimension two refers to the involvement of health problems that coexist with mental illness. Exploration of physical problems that may impact a person's ability to be involved in treatment or impact the detoxification process need to be addressed prior to a person's being involved in care. Specifically, these problems are directly associated with the person's substance dependence and would be exacerbated if the person did not receive treatment at the appropriate environment (i.e., treatment facility or hospital setting).

Dimension three refers to the coexistence of mental health and drug abuse diagnosis. Understanding whether the person has concomitant mental health issues and their current mental functioning or status and potential need for stabilization prior to rehabilitation is investigated. A person needs to able to make sound and appropriate decisions. Mood instability, current thoughts or history of suicidal or homicidal thoughts, current struggles with anxiety or panic, features of paranoia, dysfunctional or lost memory, or levels of self abuse must be assessed to determine appropriate treatment. The extent of mental health symptomotology needs to be addressed concurrently with substance dependence and determined if an inpatient or outpatient setting is most appropriate.

Dimension four refers to treatment acceptance or resistance. Significant components are prior treatment, patient's identification of a problem associated with drinking or drug use, willingness to be involved in treatment (are they motivated by themselves or by someone/something outside them) and verbalizing desire to get well.

Dimension five refers to a person's relapse potential and their risk for relapse or recidivism back into continued usage of drugs or alcohol. Factors associated to this may be prior treatment, type of drug used, regulatory of usage, impulse control, obsession associated to the drug, and access.

Dimension six refers to the patient's environment. One reviews the patient's living arrangements to determine if it is supportive for his/her maintaining ongoing

abstinence. Some of the questions one might ask a patient are as follows: Are there drugs present? Are people supportive? Is there alcohol present? Is it safe to travel?

Inpatient treatment services require program residents to participate in a highly structured daily treatment program in a 24-hour and day in a residential setting. According to the Pennsylvania Department of Health (1999), required services and support systems for the *Inpatient* level of care include:

- 24-hour observation, monitoring, and treatment;
- emergency medical services available,
- specialized professional and medical consultation, and tests such as HIV and TB testing, and other laboratory work as needed;
- referral to Detoxification if clinically needed,
- biopsychosocial assessment,
- individualized treatment planning,
- individual therapy, group therapy, family therapy,
- access to occupation and vocational counseling,
- monitoring of medication if needed,
- physical exam,
- development of an aftercare plan,
- access to services for: GED preparation and testing, job readiness and placement,
- medical and dental care,
- general health education (esp. AIDS awareness and support),
- budgeting,
- housing assistance,
- income support, and
- recreational and social activities.

Work-release services are not a defined level of care of the Pennsylvania DOH. The work-release contract issued by the BCC can be defined by the DOH most closely by the requirements for their lowest level of care, *Outpatient.* According to the Pennsylvania Department of Health (1999), required services and support systems for the *Outpatient* level of care include:

- biopsychosocial assessment,
- specialized medical consultation, and tests such as physical examination, psychiatric evaluation, HIV and TB testing, and other laboratory work as needed,
- individualized treatment planning,
- psychotherapy, including individual, group, and family as needed; and
- aftercare planning.

CAGE QUESTIONNAIRE

(2 or more affirmatives indicate probable dependence)

1. Have you ever felt that you ought to **C**ut down on your drinking/using? _____
2. Have people **A**nnoyed you by criticizing your drinking/using? _____
3. Have you ever felt bad or **G**uilty about your drinking?_____
4. Have you ever had a drink/used first thing in the morning (**E**ye opener) to steady nerves or to get rid of a hangover?_____

DSM IV CRITERIA

ABUSE

1. Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home.
2. Recurrent substance use in situations in which it is physically hazardous.
3. Recurrent substance-related legal problems.
4. Continued substance use despite persistent/recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.

DEPENDENCE

1. Tolerance: (a) need for markedly increased amounts to achieve intoxication or desired effect.(b) diminished effect with continued use of same amount of the substance.
2. Withdrawal: (a) characteristic withdrawal syndrome for specific substance.
3. b) same or closely related substance taken to relieve or avoid withdrawal
4. symptoms
5. Substance taken in larger amounts or longer period of time than was intended.
6. Persistent desire or unsuccessful efforts to cut down or control substance use.
7. Great deal of time spent in activities necessary to use, procure, recover from the effects of the substance.
8. Important social, occupational, or recreational activities are given up or reduced because of substance use.
9. Substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by use of the substance.

DSM IV Criteria Met: Dependence ___of 7 (minimum of 3 necessary for do)
Abuse ___of 4 (one or more sufficient for dx)

Levels of Care-Defined

Once a person's symptoms have been identified, according to the ASAM PPC and PCPC, an appropriate level of care needs to be determined for the patient. Levels of care vary and are determined to be appropriate associated to patient's needs at the time of the evaluation. These levels are detoxification, inpatient rehabilitation, partial hospitalization, intensive outpatient, and outpatient counseling or individual/group therapy.

Detoxification is the term used to describe the process of weaning a person off of a particular type of drug safely and with medical intervention (ASAM, 1991). This can be done on three levels: inpatient hospitalization, inpatient freestanding rehabilitation or on an outpatient basis. Depending upon the type of drug that is used, the detoxification process can take anywhere from three to seven days. Some drugs require medical based detoxification due to the possibility of seizures or death of the patient. Benzodiazepines, barbiturates and alcohol are the three primaries. Many individuals addicted to narcotics are also admitted to detoxification because of the extreme physical discomfort associated to withdrawal from narcotics. Some withdrawal can be curbed on an outpatient basis with bupenorphine although those individuals licensed to administer bupenorphine are limited. There are thirty-eight physicians in the entire state of Pennsylvania licensed to perform detoxification with bupenorphine and there is a thirty patient limit on each practice (Williams, 2003). GRC did not have a contract with the BCC for detoxification, but medically-observed patients in need with the consultation of the 24-hour nursing staff at GRC.

Inpatient rehabilitation, which has been historically termed as the twenty-eight day inpatient model, is recommended for those individuals that are unable to maintain abstinence without some strong surrounding structure. The BCC contract with GRC calls for a total of forty-five days of inpatient programming. These are clients who have a difficult time maintaining sobriety for more than twenty-four hours. This can also be a hospital based program or freestanding rehabilitation facility (e.g. GRC).

Partial hospitalization is often three to five days a week, six hours per day, and for those patients who have a supportive environment to return to but still need close supervision or monitoring, and a strong daily structure to ensure their maintaining abstinence. Some would say this is the new level of care that is first tried as opposed to inpatient rehabilitation, which fifteen years ago was the desired or most often used approach (Etheridge et al., 1999). Again, this is for a person who is struggling with maintaining abstinence and may have a modest motivation to stay sober and has outside supports.

Intensive outpatient is usually three days per week, three hours per session, and is for a person with a higher level of motivation to maintain abstinence but continues to have a difficult time with doing so without multiple contacts per week. They may have some insights into the extent of their pathology as well as prior treatment experience but continue to have trouble giving up behaviors that support their addiction. Treatment may occur in the morning, afternoon, or evening hours.

Traditional outpatient counseling or individual therapy/group therapy is one time per week. This level of care is considered the least level of care and is more often geared towards individuals that have established a recovery process, an ability to maintain abstinence and wish to continue to do so. Although MCOs will argue that this should be tried initially, often patients struggling with substance dependence are unable to gain initial abstinence without assistance multiple times per week by a clinician or a counselor. The work-release contract that GRC has with the BCC can be characterized in this modality of care.

Halfway House services are a community-based residential treatment and rehabilitation facility that provides services for chemically dependent persons in a supportive, chemical-free environment (PA DOH, 1999).

Addiction Education is services that adults are referred to for education on alcohol and drug abuse and substance dependence.

Drug, Alcohol, and Tobacco Awareness are services that adolescents are referred to and will not be an option for the raters to choose because the corrections program at GRC only has adult participants.

Aftercare Groups are weekly support groups facilitated by a trained clinician that are offered to patients that complete a Gateway program.

Levels of Care & Types of Service Offered at GRC-(4 Collapsed Levels of Care)

Level 1 (Non-Treatment)
Addiction Education
Drug, Alcohol, & Tobacco Awareness
Other (Aftercare groups)

Level 2 (Minimum Treatment Intensity)
Morning or Night Outpatient
Outpatient Counseling
Outpatient Group

Level 3 (Moderate Treatment Intensity)
Partial Hospitalization
Halfway House

Level 4 (Maximum Treatment Intensity)
Detoxification
Inpatient Residential Treatment

Appendix F

Charting Manual

December 2003

Revised: July 2005

(All consents in this manual have been revised
August and September 2006)

HOW TO USE THIS MANUAL

Every patient admitted to Gateway is given a medical record or "record" and a medical record number. This occurs regardless of the level of care the patient enters, or the length of his or her stay. When the patient is currently in treatment, the record is considered to be "open". When the patient is discharged, the record is considered to be "closed". The patient is given the same medical record number if he or she is readmitted in the future.

The order of every record is the same. An open record in every level of care except Outpatient Counseling (OPC) is kept in a hard binder. The binder contains labeled, colored dividers, which organize the record into sections. When a record is closed, the dividers are removed and the BCCument is transferred to a folder, which displays the patient's medical record number along the side. OPC records are put immediately into a folder without dividers.

When a patient is admitted, his or her open record is also labeled on the outside with a sticker that is red or blue. The color of the sticker indicates the funding source of the patient. The blue sticker means that the patient has private insurance or funding. The red sticker indicates that the patient has public funding. These differentiations are made because Medical Assistance regulations require certain BCCumentation for patients funded by Medical Assistance, which the rest of our patients do not need. Therefore, while all records will contain BCCumentation that meets the standards of the Pennsylvania Department of Health, additional forms may be added to a "red" record.

Some differences may also occur between records of adolescents and adults, as these patients have different needs.

This record manual is organized in the same manner as an open record, except for the Discharge Summary and Discharge Plan, which are obviously not normally completed and added to a record until the patient has been discharged. The sections of this manual are divided into the same categories as an open record, which are found on the dividers. Forms that are required to be in every record are listed in regular print. *Forms that may not be in every record due to any of the differentiations explained above are listed in italics.*

Each section of the manual begins with a list of all forms that may be in that section. The list is followed by a set of instructions for each form. The instructions are followed by a set of the blank forms. Examples of completed forms will not be included so as to ensure individualization of records.

Additional forms that are used only by medical staff for patients in our Detox (Detoxification) and Inpatient programs are not included in this manual. Also, other forms that are program or site specific may be added to the Appendix.

RECORD ORDER

INDEX

Opening and Closing Documents

Face Sheet

Discharge Summary
*Discharge/Transfer Summary (#99)*****
Outpatient Record of Services Log (#2A)
Aliquippa Record of Services Log (#2B)
Discharge Plan (#100)
Continuing Care/Transfer Plan (#100T)
Patient Continuing Care Plan (#100A)
Discharge Resources (#100B)

Insurance:
Outpatient Managed Care Log (#218C)
ASAM Progress Notes (#507B-D, White, Yellow, Pink)
PCPC Summary Sheets
Adolescent Placement Criteria Summary Sheet

MCO Forms
MCO Letters

Consents:
Consents to Release (#200-218)
Consents for Treatment (#219 Series)
Notice of Privacy Practices Receipt and Acknowledgement of Notice (#222A)
Accounting of Disclosure Log (#218B)
Permission to Leave Premises (#223)

Assessment:
History and Physical Exam (#601)
Physical Health Screening (#601A, #601B)
Personal Medical History (#900A)
Initial Assessment (#901) or (#901A)
Youth and Young Adult Developmental History (#902)
Evaluative Summary (#903)
Mental Status Exam (#904)
Initial Psychosocial Evaluation Level of Care Placement Criteria (#905) (Evaluator)

Treatment Plans:

Education BCCumentation Record (#402)
Treatment Plans (#404, 404A, 404B)
Treatment Plan Review Sheet (#404C)

Progress Notes:
Progress Note (#506)
Daily Group Progress Note (#506A)
Inpatient Lecture Note (506B)
Collateral Call Log (#507)
Behavioral Contract (#508)
Safety Contract (508A)
Termination of Treatment (#509)

Labs:
Clinical Laboratory Reports

Consults:
Case Consultation (#510)

Miscellaneous:

Diagnosis Sheet (#400)

Patient Handbook Receipt (#306)
TB/HIV Information and Testing Referral Form (#310)

Appendix:
Approved Abbreviations
Tracking Sheets
Program Specific Forms

**** Italicized items are not in every record.

Source: Gateway Rehabilitation Center

Location: F:\Recording Manual 2005\INDEX

Appendix G

Evaluator	Credentials
Michelle Bradford	M.A.
Kim Haas	MSW, LSW
Laurel Heide	CAC, MSW, CCDP
Rob Karcher	**MSW**
Barry Krop	M.S. Ed.
Kim Lambright	M.S., CCDP
Megan McPherson	**MSCP, NCC, LPC**
Crysta Michaliszyn	MSW, LSW
Lesley Miller	M.A.
Liz Miller	MSW
Sandy Obringer	MSW, LCSW
Sheri Shuber	MSW, CCDP
Carissa Stajnrajh	MSW, LSW
Debbie Wagner	MSW, LSW
Kim Walker	M.A., CCDP
Amanda Dodd	**M.A., CCDP**
Carin Fraioli	MSW, LSW, CCDP

Source: Gateway Rehabilitation Center

Location in Database: F:\Share\Evaluation Services\GRC\Evaluator Credentials

Note: Names bolded above are the identified raters for this study that conducted the levels of care assessment to determine clinical treatment recommendations.

Appendix H

Power Analyses-
To determine minimum required sample size

[1] -- *Friday, May 9, 2008 -- 16:46:29*

χ^2 tests - Goodness-of-fit tests: Contingency tables

Analysis: A priori: Compute required sample size

Input:	Effect size w	= 0.5
	α err prob	= 0.05
	Power (1-β err prob)	= 0.95
	Df	= 3
Output:	Noncentrality parameter λ	= 17.250000
	Critical χ^2	= 7.814728
	Total sample size	= 69
	Actual power	= 0.950950

Appendix I

Kappa Coefficient-
To determine a substantial level of agreement level between the raters

	Rater1	Rater 2	Rater 3
Record 1	4.00	4.00	4.00
Record 2	3.00	3.00	3.00
Record 3	3.00	2.00	3.00
Record 4	2.00	2.00	2.00
Record 5	2.00	2.00	2.00
Record 6	4.00	4.00	4.00
Record 7	4.00	4.00	4.00
Record 8	4.00	4.00	4.00
Record 9	3.00	3.00	3.00
Record 10	3.00	3.00	3.00

Level 2 (Minimum Treatment Intensity)=2.0
Morning or Night Outpatient
Outpatient Counseling
Outpatient Group

Level 3 (Moderate Treatment Intensity)=3.0
Partial Hospitalization
Halfway House

Level 4 (Maximum Treatment Intensity)=4.0
Detoxification
Inpatient Residential Treatment

Symmetric Measures

		Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Measure of Agreement	**Kappa**	**.848**	.140	3.832	.000
N of Valid Cases		10			

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.