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Chemical dependency treatment: An examination of following continuing care recommendations

Briar Lee Faulkner

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CHEMICAL DEPENDENCY TREATMENT: AN EXAMINATION OF FOLLOWING CONTINUING CARE RECOMMENDATIONS

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Criminal Justice

by
Briar Lee Faulkner
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ABSTRACT

This study examined an additional program service involving scheduled telephone contacts as an intervention to encourage follow-through of continuing care after short-term residential treatment. Contacts were made eleven months after discharge with emphasis placed on the importance of the first year of recovery. The study specifically examined if continuing care participation, twelve-step meeting attendance, and sponsor communication were related to sobriety and gender. Significant relationships were found between continuous sobriety and the variables continuing care participation, twelve-step meeting attendance, and sponsor communication. No relationships were found related to gender and continuous sobriety. Findings show support for the program as an intervention to improve participation in continuing care for patients in a residential inpatient setting.
ACKNOWLEDGMENTS

Thank you to my family. My Mum provided endless support throughout this project and always seemed to know just what to say. A special thank you to John Conahan for his patience, guidance and encouragement.

With sincere thanks to John Schwarzlose for his mentorship and direction. Without his support, I could not have taken on this project. His leadership and vision have made the FCC program possible.

Thank you to the dedicated FCC counselors: Cheryl, Ed, Pat, and Gary. A very special acknowledgment to Malcolm. He made the very first calls to alumni and promoted the importance of the program. With gratitude to Dr. West for his belief in and support of the program. With thanks to Wendy for her assistance. Recognition is also due to the alumni who found the strength to seek treatment for their addiction and have helped others find the way to recovery.

Finally, thank you to my committee. They have stuck by me over the evolution of this project and provided me with the necessary redirection. Thank you to Dr. Parsons for telling me to end the literature review section and Dr. Schram for ongoing recommendations.
To Mum
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CHAPTER ONE
INTRODUCTION

One of the major problems in the criminal justice field is the number of criminals incarcerated in prisons for drug and alcohol related offenses. The Office of the National Drug Control Policy (ONDCP) reported one third of state prisoners and one in five federal prisoners said they had committed their current offense while under the influence of drugs (ONDCP, 1999, p.5). In 1997, according to a one-day census of individuals in treatment for drug and alcohol abuse, there were 56,677 individuals in correctional settings and services and 507,683 in free standing substance abuse treatment (ONDCP, 1999, p.129). The National Drug Control Strategy calls for correctional and treatment professionals to work together and asserts information sharing is crucial to the development of partnerships. The importance of sharing information between correctional and treatment professionals is to learn from intervention successes and failures for addicted populations.

Research describing specific approaches and findings in various settings are needed to further our understanding
as to what types of treatment are most beneficial and which groups appear to make the most significant gains. A very promising development for the alcohol and drug field is the Clinical Trials Network (CTN) coordinated by the National Institute of Drug Abuse (NIDA). This network allows testing of science-based therapies in treatment facilities across the nation. Joint research efforts, such as the NIDA study, will facilitate an understanding of the effectiveness of various treatment interventions in multiple settings utilizing sound research practices and shared definitions. Currently, the method of patient follow up used by the facility in this study is working with NIDA to assist with the development of protocol for the CTN.

Treatment for Drug and Alcohol Addiction

There is treatment available for drug and alcohol abuse. Treatment can be delivered more effectively, and at a substantially lower cost than housing drug and alcohol abusers in overcrowded state and federal prisons.

Since drug and alcohol abusers are likely to engage in criminal activity because of the addiction, there is a tendency to think of prison as an appropriate treatment
environment. Locking someone up for criminal activity related to alcohol or drug addiction will not be effective without structured treatment or intervention for the addiction (Leach & Norris, 1976). Without intervention, the inmate will most likely return to drug and alcohol use upon release thereby resulting in future criminal activity (Edwards et al., 1977; Goodwin et al., 1971; Leshner, 1997, 2001).

This study examines the impact of providing support to patients by telephone after short-term residential drug and/or alcohol treatment. A similar intervention may be useful to follow offenders after release that receives drug and alcohol treatment and education while incarcerated. A crucial component of recovery from alcohol and drug treatment is following a plan for continuing care. Specifically, what the person does to promote ongoing recovery when returning to the home setting. The calls are an intervention to encourage patients to follow through with continuing care recommendations.

The 1999 National Drug Control Strategy focuses primarily on illicit drug use. The National Drug Control Strategy expresses support of treatment for drug use: "Providing treatment for America's chronic drug users is
both compassionate public policy and a sound investment” (McCaffery, 1999, p. 5). The reference to illicit and licit drugs in the drug strategy has negatively influenced the progress of research in the treatment of chemical dependency. Governmental focus tends to be on illicit and specific types of drugs, which is also reflective in available federal research grants. The public is falsely misled into believing drug addicts are different from alcoholics, contributing to the stereotyping of addicts.

Part of the problem is convincing the public with effective treatment, individuals incarcerated for crimes related to drug and alcohol use can be rehabilitated. After completing treatment, we hope individuals will have "a significant decrease in drug use and long periods of abstinence, with only occasional relapses” (Leshner, 1997, p.46).

Chemical Dependency as a Brain Disease

Jellinek (1960) acknowledged the contribution of the Yale Summer School program in recognizing the disease concept of alcoholism (p.9). Researchers have credited his work for promoting the view of alcoholism as a disease

Today, controversy still exists as to whether chemical dependency is a disease. One of the boundaries of this study is that chemical dependency is recognized as a brain disease. The American Medical Association (AMA) supports this definition. The term chemical dependency is used to encompass dependencies on alcohol or other drugs unless otherwise indicated. Therefore, treatment for such dependencies is referred to as chemical dependency treatment.

There is a significant body of research that supports addiction is a brain disease (Dupont, 1999; Leshner, 1997, 2001; McLellan et al., 2001). The concept of a switch being thrown can be used to illustrate how a person crosses over from drug user to drug addict (Leshner, 2001). Once the switch is thrown to the "on" position, seldom can a person go back to using drugs moderately (Leshner, 2001). Leshner (1997, 2001) states there are clear distinctions between an addicted person's brain and a non-addicted person's brain. O'Brien and McLellan (1996) also discussed the long-term effects of substances on the brain and report the need for longer treatment. Continuing effects on the
brain include cognitive and emotional impairment, as well as continued cravings for drugs that place the person at risk for relapsing (Leshner, 1997, 2001).

Telephone Contact as an Intervention

Ongoing telephone contact after discharge is one intervention that can be used to assist patients with known long-term effects of drug use on the brain. The effects will vary by individual, drug used, length of use, and amount used. Simply increasing the length of residential treatment is not a realistic response since the effects on an individual's brain activity will be difficult to measure. Furthermore, there is little support for longer treatment by managed care companies in this era of cost containment. There is a need for cost-effective interventions to continue monitoring and providing ongoing support to individuals after the initial treatment experience. McLellan and his colleagues (2000) suggest similar strategies used in the ongoing monitoring of other chronic diseases, such as diabetes, be applied to addiction.

The purpose of this study is to introduce an intervention that recognizes addiction as a brain disease.
and encourages continuing care participation after treatment. The intervention, named Focused Continuing Care (FCC), consists of scheduling regular telephone contacts with participants for eleven months after discharge. A longer treatment episode is achieved with the addition of another program component.

The reason the facility chose to offer the program for eleven months after treatment is to emphasize to participants and families that treatment does not end after the residential treatment experience. Rather, importance is placed on the first year of recovery by offering a program that continues to connect with participants throughout the first year of recovery.

The FCC counselor, the person who makes the calls, introduces patients to the program while in treatment. Patients are informed the purpose of the calls are to offer assistance in applying the tools learned in treatment to their day-to-day lives in the form of coaching. Questions related to daily living as well as follow-through with specific components of the continuing care plan are discussed.

Patients who follow through with continuing care have a better chance of sustaining longer periods of abstinence.
(Fiorentine, 1999; Hambly, 2001; Hoffman & Miller 1993). Unfortunately, there is also a tendency for individuals to think treatment is a cure for the disease of chemical dependency. Some may think they can continue to use alcohol or other addictive drugs in moderation. Others may believe more willpower is needed to deal with addiction. Therefore, the importance of follow-through with the continuing care recommendations are minimized or discounted. Maintaining telephone contacts with individuals after treatment can contribute to an understanding of how the person is progressing and assess response to education and redirection. Ongoing telephone contact can be adapted to various types of treatment modalities and provide a low cost intervention to extend the treatment experience while assisting the individual in returning to his/her daily living or next phase of treatment. The estimated cost of providing the program described in this study is $250 per person.

In an effort to explore if participants were more likely to remain engaged in continuing care as a result of the ongoing phone contacts, the following questions will be examined: Are those who participate in ongoing phone contacts more likely to remain continuously sober and have
fewer relapse episodes? Are sober participants more likely to attend weekly twelve-step meetings and communicate with a sponsor? Response differences between males and females are also explored.

It is specifically hypothesized that ongoing phone contacts with patients after discharge will contribute to higher rates of continuous sobriety and shorter relapse episodes, increased participation in twelve-step meetings, increased communications with a sponsor, and higher rates of participation in individual continuing care recommendations. The assumption is individuals who follow the continuing care plan are more likely to remain abstinent. Another hypothesis is individuals who relapse repeatedly are not following their continuing care plan.

Abstinence rates are examined for males and females who report involvement in continuing care recommendations, attend twelve-step meetings, and communicate with a sponsor. Specific hypotheses examine if there are higher rates of involvement in continuing care, attendance at twelve-step meetings, and communication with sponsors for those individuals who are self-reporting as continuously sober. Continuous sobriety, defined as no use of alcohol
or addictive drugs, is used as the indicator for this intervention to explore the hypotheses.

It is acknowledged there may be instances in which it is medically necessary for an individual to use addictive drugs, such as in the case of a medical procedure. To assess if utilizing medications for medical reasons jeopardized a person's abstinence, the FCC counselor asked probing questions. The expectation is that participants inform their physician that they are in recovery so the least addictive substance is used to meet their needs.

The intervention is considered effective if contact is maintained with participants who have relapsed. Relapse is part of the disease of chemical dependency. The aim of this intervention also provides a mechanism to redirect people immediately to the appropriate next step to reduce the length of the relapse.

The literature pertaining to interventions that assist individuals in continuing sobriety are examined. Interventions include participation in twelve-step meetings, communication with a sponsor, and follow-up with patients post discharge by treatment providers.

More than 50 years later, there are still more questions than answers regarding the treatment of chemical
dependency. We may never completely understand what makes chemical dependency treatment effective. Nevertheless, it is necessary to continuously examine how patients respond to various treatment interventions.

To examine the components of alcohol and drug treatment, definitional problems will be discussed. There are many terms used throughout the literature that require discussion.
CHAPTER TWO
PROBLEMS IN THE ADDICTION FIELD

Definitional Problems

One of the difficulties in assessing the research on drug and alcohol treatment programs is the lack of agreement on standardized definitions for treatment (Gillespie, 1967). As Howard W. Haggard (1945) stated, "The first step toward solution of the problem is definition- the demonstration of the problem in its totality and the factors in their integration" (p.xi).

Initiated in 1943, the Yale Summer School of Alcohol Studies, attempted to provide such a definition to professionals in social education (Haggard, 1945). E.M. Jellinek (1945) oversaw the program and stated the purpose of the school was to further the scientific study of alcohol-related problems (p.1). He informed attendees they should expect to leave the four-week school with more questions than answers (Jellinek, 1945,p.12).

Jellinek (1945,1960) used Greek letters to classify four sub-groups of alcoholism in an effort to avoid unnecessary interpretations as well as to provide a common
understanding: alpha, beta, gamma, and delta. Sub-group characterizations are based upon symptoms, drinking behaviors and stage of illness. The identification of sub-groups led to an initial description of how patterns of use varied. According to Jellinek (1945), Gamma and delta types of alcoholism were the two types that met criteria for a disease. The term chemical dependency is utilized to denote a person’s addiction to drugs or alcohol.

Abuse Versus Dependence

There is a difference between individuals who abuse drugs and those who are dependent. The term chemical dependency will be defined and the differentiation between abuse and dependence will be discussed. Other common terms include: drug and alcohol dependency, drug and alcohol addiction, drug and alcohol problem, and substance abuse problem.

To provide a common language for illustrating the problems to be addressed, as well as to discuss findings from the literature, the definitions provided by the American Psychiatric Association (APA) in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (1994) for chemical dependency and abuse will be
utilized. The DSM-IV outlines criteria for each substance, noting the symptoms are similar to all classes of substances excluding caffeine.

Dependence is defined as a "cluster of three or more of the symptoms...occurring at any time in the same 12-month period (p.176)". The symptoms pertain to:

Tolerance (criterion 1); withdrawal (criterion 2a); using the substance to avoid withdrawal symptoms (criterion 2b); taking the substance in larger amounts or over a longer period than was originally intended (criterion 3); persistent desire to cut down or regulate substance often with failed attempts to modify use (criterion 4); spending a lot of time seeking out the substance (criterion 5); daily activities revolve around the use of the substance (criterion 6); and despite recognizing the impact of the substance use, continuing to use (criterion 7). (APA), 1994, pp. 179-180).

Abuse is referred to as a "maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to repeated use of substances" (APA, 1994,p.182). Abuse is differentiated from dependence primarily in that it does not include "tolerance, withdrawal, or a pattern of compulsive use and instead include only the harmful consequences of repeated use" (APA, 1994, p.182). Dependence is therefore more serious than abuse. Someone characterized as having the disease of chemical dependency indicates the person meets
criteria for dependence. The definitions of abuse and dependence are described only to offer clarification in review of the literature. One of the problems outlined by Leshner (1997, 2001) is the thinking that someone cannot be addicted to a substance unless physical signs of addiction are present. Different drugs produce different levels of physical dependence. Unfortunately, many insurance companies authorize payment for inpatient days based on the signs of physical dependence and the subsequent need for detoxification.

Cross Addiction

Cross addiction is a person becoming addicted to more than one substance or behavior. This is an important consideration in the treatment of chemical dependency. Individuals, for example, who use cocaine daily and alcohol weekly, may initially only identify cocaine use as a problem. Treatment with a program goal of moderation may measure success by the reduction in use of the substance(s). In the example above, if after treatment, the individual reduced the use to monthly, a positive outcome would be reflected.
Abstinence-based programs promote no use of mind or mood-altering substances. Therefore, a person’s continued use of alcohol and cocaine monthly would not reflect a positive outcome. The premise is individuals who attempt to control their use by using less, will eventually increase the amount used over time. Tolerance to the substance builds and a greater quantity is needed to achieve the same effects.

However, a person can still have a positive outcome if a relapse is experienced. The length and severity of the relapse before returning to no use are key indicators. Therefore, when reviewing the literature on patient outcomes, it is imperative to understand how success is defined. Research findings can be misleading if the program’s definition of success is not described. Additional research is needed to assess programs with abstinence and relapse prevention as treatment goals.

Problems Assessing Treatment Effectiveness

Treatment providers struggle with the most efficient way to extract information on program effectiveness. Information collected needs to be meaningful to the facility to plan strategically as well as to identify
opportunities for improvement. At the same time, a facility needs to have information available to present to outside agencies and the public that demonstrates program effectiveness. With expanding technology and information available on the Internet, individuals seeking treatment are more likely to shop around.

One of the difficulties in evaluating program effectiveness is that it depends upon which group’s definition of effectiveness is used. Treatment providers, insurance companies, accrediting bodies, and individuals seeking treatment, all have different methods for evaluating a program’s effectiveness. To add to the complication, different opinions exist within each group. To illustrate, consider treatment providers and the wide variety of programs available.

There is a multitude of variation among treatment programs as well as many factors that influence how effectiveness is measured. Some of these factors are criteria for admission, how meeting the criteria are measured, approach to treatment, levels of care, and the therapeutic goals of the program. The criteria for admission may be based on abuse or dependence, or for a specific drug type, such as alcohol or cocaine. The method
or tool used to determine if patients meet criteria for admission may be: bed availability; criterion outlined by the American Society of Addiction Medicine (ASAM); medical necessity as determined by an insurance company; or a policy unique to a facility. The approach to treatment may be behavior modification, relapse prevention or motivational enhancement therapy. There may be one or more levels of care such as detoxification, outpatient, and long-term residential or short-term residential. There may also be variation in the therapeutic goal such as abstinence, behavior modification, or controlled drinking.

Therefore, when evaluating the research, each of these differences can be problematic in understanding and comparing findings.

In Minnesota model programs, one agreed upon measure of effectiveness is the person's ability to understand that he or she has a disease. The addicted person must comprehend all mind and mood-altering substances have similar effects and abstinence is the desired goal.

Measures of effectiveness may be based upon varying degrees of the quality of care and program cost depending upon who is paying for the services. In the case of an insurance company paying for a person's treatment, the
company may determine program cost and follow-through with company protocols are the way to measures the effectiveness of a program. Therefore, program effectiveness is defined differently among various groups. For consistency purposes, the term patient will be used to denote a person who receives treatment or services for addiction.

**Accreditation and Program Effectiveness**

Programs that choose to be accredited with the Joint Commission on Accreditation of Hospital Organizations (JCAHO) share accreditation under the same body and follow the same standards. Typically, chemical dependency programs fall under the Behavioral Health Care Standards. The ORYX initiative is the Joint Commission's response to establishing measures to monitor facilities through continuous data collection (JCAHO, 1999). Behavioral Health Care organizations were required to select six measures by December 31, 2000 from a JCAHO approved Performance Measurement System.

The intent was to compare scores between facilities and more closely scrutinize lower scoring facilities. An example of a measure that may be selected is the number of patients who leave treatment against medical advice (AMA).
One of the problems with this measurement system is the difference among facilities and patient populations are not factored into the scoring. A program that treats primarily heroin addicts will have a higher AMA rate. However, the higher rate is not indicative of a less effective program but a more difficult population. To further illustrate the wide range of variation among treatment programs and resulting problems of assessing program effectiveness, treatment types, settings, and levels of care are explored.

Effectiveness and Program Components

A review of the literature reveals difficulty in understanding program components, as descriptions may be too general or absent. Program components and the variation in how and what treatment goals were implemented illustrates the extreme differences among programs that current research depicts as similar.

Studies may report findings based on patients entering treatment for substance abuse, dependence, or a combination. Patients with a diagnosis of substance abuse have a lower addiction severity level. Therefore, outcomes are generally going to be more positive for these individuals.
Treatment may focus on chemical dependency as the primary diagnosis or may also address co-occurring mood disorders such as major depression, or anxiety disorders such as obsessive-compulsive disorder. Facilities that treat chemical dependency, as well as other issues, are referred to as dual diagnoses programs. Therefore, it is useful to know the spectrum of services provided at a facility when reviewing findings from studies. Studies that do not provide information on the diagnosis and severity level of participants limit the comparability to other findings.

Another difficulty in assessing and comparing treatment programs are programs that only treat one type of addiction, such as alcohol, cocaine, or opiate. Studies of such programs may not address the patients' use of other drugs in data collection. Focusing on the use of one drug and not including use of other substances will often inflate the studies' findings in favor of the drug of focus. Additionally, it is important for treatment participants to understand the concept of cross addiction.
Effectiveness and Treatment Setting

Treatment setting is another factor to consider in reviewing the research. Types of settings include hospital-based programs or freestanding facilities. Hospital programs may provide services to a specific group of individuals such as Veterans hospitals or Kaiser hospitals. Programs run by the Salvation Army often provide treatment to an indigent population. Treatment settings may also be exclusive for men, women, or women and their children. The treatment setting is an important factor to consider the applicability of research findings to other populations. For example, findings from studies of populations in Veterans hospitals will not be generalizable to women's treatment programs.

Program and Funding Ownership

Current research often fails to denote if an organization is for profit or non-profit, public, or private facility. Additional research is needed in the assessment of private programs (McLellan et al., 1993; Sechrest and Robby, 1999). Such factors are important considerations for interpreting outcome data and assessing effectiveness of treatment.
For-profit, private facilities generally receive a large portion of payment for treatment by managed care companies. A public, non-profit agency may receive state funds, whereas a private, non-profit facility may have a higher portion of self-paying patients. Since research studies often omit such information, it is difficult to compare patient outcomes among programs. Sechrest and Robby (1999) examined effectiveness of private programs in corrections and discussed the problem of studies not indicating funding status.

Roman and Blum (1997) reported similar rates of administrative changes in hospital-based facilities and freestanding facilities, 31.4% and 30.6% respectively. Roman and Blum (1997) did not report on the facility’s source of funding or profit status. Change in administration would have a different impact on hospital-based programs compared to freestanding facilities. Addiction programs offered as part of a hospital’s service might not be a primary focus for new administration whereas a freestanding drug and alcohol program is the primary service. Monahan and Finney (1996) reported abstinent rates were higher in private programs. Additional research is needed that examines specific sources of funding and
ownership to further our understanding of patient outcomes. When indicated in the research, distinctions between public and private programs and profit versus not for profit programs are noted. The facility utilized for this research study is a private, not-for-profit facility.

**Effectiveness and Level of Care**

Level of care refers to the type of program offered, such as: outpatient, short-term residential treatment, long-term residential treatment, therapeutic communities, and medical detoxification. NIDA (1999) provides a comprehensive description of these categories. The focus of this study is on short-term residential programs. The National Institute of Drug Abuse (NIDA) describes such programs as providing intensive, but brief residential treatment based on a modified twelve-step approach (NIH, 1999,p.29-30). Short-term residential programs originally consisted of a three to six week hospital-based inpatient treatment phase followed by extended outpatient therapy and participation in a self-help group, such as Alcoholics Anonymous (AA) (NIH, 1999,p.29-30). NIDA acknowledges the length of stay may be shorter due to the influence of managed care decisions (NIH, 1999,p.29-30).
Treatment providers frequently offer more than one level of care. Detoxification for example, may be provided in a residential setting or as a separate treatment component. In the evaluation of patient outcomes, there would be variation between programs that only provide detoxification compared to others providing detoxification as a component of short-term residential treatment.

Matching Patients to Services

The appropriate level of care to provide chemical dependency services is often debated. Generally, it is agreed there are groups of people who may do better in a specific level of care. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) emphasizes a shift in focus from how much treatment is needed to treat chemical dependency effectively, to determining which type of treatment is most effective for the individual (DHHS, 1992, p.5). Pacione and Jaskula (1994) also discussed the importance of focusing upon an individual’s need rather than promoting one level of care as more effective than another.

Project Match Research Group (1996) utilized randomized clinical trials to match patients to various
treatment interventions. Patients with the diagnoses, alcohol abuse or dependence, were included in the study. It is not known if programs or services took place in a private or public setting and the profit status is not known. Seventy-five percent of the patients were male. Psychiatric severity was the one factor found to impact abstinence rates. Those with greater psychiatric severity had lower abstinence rates and the authors' cautioned use of outpatient settings when such attributes exist.

Finney, Hahn, and Moos (1996) reviewed the literature comparing effectiveness of inpatient and outpatient treatment. Findings indicated outpatient treatment was more appropriate for individuals without severe medical or psychiatric problems and inpatient options were necessary for individuals with medical and/or psychiatric problems or live within environments that are not conducive to recovery.

McLellan et al. (1993) examined two inpatient and two outpatient programs consisting of a male population and reported overall findings. Among the programs, 59% of the patients were abstinent at six months, 82% were employed, and 8% required additional treatment. Ideally, findings broken down by program would provide insight on program
effectiveness by level of care. Inpatient or outpatient only programs would have difficulty in generalizing findings by McLellan et al. (1993).

Results are misconstrued when levels of care, such as detoxification and inpatient treatment, are combined and data analyses are not conducted separately. In the majority of studies, patients have self selected the level of care, which may be indicative of the patient’s need for more services (Monahan & Finney, 1996). Boggs (1967) refers to the problem as “non-specified evaluations of numerous content area pooled together into overall evaluations” (p.175). Therefore, studies applying random selection and control groups are needed to continue to examine the effect of various levels of care on patient outcomes. Specifically, what are the differences in outcomes for males and females? Since treatment needs differ for males and females, a review of outcomes by gender also has value.

McCusker (1996) and his colleagues examined differences in outcomes for patients who remained in a public therapeutic community for three months versus six months. Lower rates of drug use were indicated for patients who remained in treatment longer. Of the 444
patients studied, 68% were male. Patients were only admitted for treatment for drugs other than alcohol; it is unknown if patients were asked about alcohol use. In contrast, Toumbourou and Hamilton’s (1998) evaluation of a therapeutic community indicated progress made in treatment produced better outcomes compared to actual length of stay. Seventy-six percent of the sample was comprised of male patients.

Programs that provide the same level of care also vary in program components and intensity of services. A review of the existing literature reveals information regarding daily programming is limited or missing. The therapeutic community (TC) setting evaluated by Toumbourou and Hamilton (1998) was described as a drug-free program, no information pertaining to specific program components was provided. The program described by McCusker (1996) was also a TC and described as a drug-free program that incorporated relapse prevention education and delivered primarily through group sessions. It is unknown if the twelve-steps of alcoholics anonymous (AA) were also part of the program.

Christo and Franey (1995) reported on a study of eight facilities comprised of various levels of care and program types. Nineteen percent of patients were from twelve-step
based programs, patients were required to be six weeks abstinent for the baseline interview. For research to be valuable, studies need to be replicated and generalizable. Christo and Franey (1995) make both difficult with the limited patient group.
CHAPTER THREE

LITERATURE REVIEW

Alcoholics Anonymous

Alcoholics Anonymous (AA) began in the 1930’s. Two male alcoholics who had tried repeatedly to stop drinking with no success founded the program. Success was discovered through the power of one alcoholic talking to another. A fellowship evolved, and the only requirement for membership is a desire to stop drinking. The principles of the program are explained in the book Alcoholics Anonymous, also referred to as the Big Book.

There are twelve steps and twelve traditions followed by members. Although the steps reference God, the program is not religious. Members are encouraged to substitute God for whatever represents the higher power of their belief. The fellowship itself can be used as the higher power, as long as the person recognizes that there is a power greater than himself/herself.

Members are strongly encouraged to obtain a sponsor. Newcomers, meaning members new to the program, are encouraged to find a sponsor with a minimum of six months sobriety, preferably of the same sex. The role of the
sponsor is to guide the newcomer through the twelve steps utilizing the book of Alcoholics Anonymous. The sponsor assists the newcomer in establishing himself/herself in the twelve-step community. The member is oriented to various meetings within the community to form supportive bonds with other recovering members. Sponsors are available as a twenty-four hour resource and often encourage the new member to call frequently. All members of twelve-step programs are encouraged to have a sponsor, regardless if they are new to the program or have many years of recovery.

As newcomers become familiar with the program and maintain sobriety they will eventually begin to sponsor others. Although the fellowship was initially founded for alcoholics, the principles were embraced for other addictions. Derivatives of AA include, but are not limited to: Narcotics Anonymous (NA); Cocaine Anonymous (CA); Overeaters Anonymous (OA) and Gamblers Anonymous (GA). The term twelve-step program is used to denote participation in any twelve-step program based on the principles of AA for drugs or alcohol.

Tonigan et al. (1996) examined the Alcoholics Anonymous (AA) literature and found the majority of studies did not employ appropriate statistical analysis to detect
relationships between sobriety and AA attendance. Studies that do not follow sound research practices have led to criticism of treatment for chemical dependency as a whole. As part of the analyses of the intervention used in this study, the relationship between AA attendance and sobriety will be examined.

Brown (1963) examined AA affiliation for offenders released from prison. Of the 40 patients, 25 appeared to benefit from involvement with AA. Sixty-five percent of the patients had not returned to prison five years later. AA was introduced to inmates before discharge. Inmates had a sponsor before release who would meet the patient on the day of release and immediately engage the person in AA. If the person would be traveling, phone numbers of AA contacts would be provided and arrangements were made for other AA members to meet the individual. Brown's (1963) findings illustrate the importance of emphasizing and establishing support systems for patients to access after discharge during treatment.

Minnesota Model Treatment Programs

The broad problem addressed in this study pertains to evaluating patients' progress after treatment. Since there
is a wide variety of options available for the treatment of drug and alcohol dependencies, it is necessary to limit the scope of this study to a specific model. The focus of this study is on short-term residential programs that utilize a Minnesota-based model.

Minnesota model type programs utilize an interdisciplinary approach to treatment, incorporate the principles of Alcoholics Anonymous (AA), and consider abstinence to be the goal of treatment while recognizing addiction is a chronic relapsing disease. Education on addiction is provided as well as an examination of a person's spiritual, emotional, and physical well-being.

As Spicer (1993) discusses, there are no restrictions as to who can use the label Minnesota model for a program description. Another problem is the number of terms that have been created as derivatives of the Minnesota model, such as: classic or traditional model, twelve-step model, 28-day, AA or abstinence-based model. The multitude of terms used to describe similar models highlights the need for standardized definitions.

Since multiple components comprise a Minnesota model, it is difficult to determine what combination contributes to enhanced program effectiveness. To gain an
understanding of the most effective program components, studies should provide sufficient information about the program.

Although the Minnesota model has been in existence since the late 1940's, little scientific evidence exists pertaining to its effectiveness. Initially, alcoholism was not recognized as something that could be effectively treated. With the creation of Alcoholics Anonymous (AA) and the development of the Minnesota Model, professionals were finally seeing improvement in individuals who were thought to be hopeless cases (Spicer, 1993). It appeared something was finally working for alcoholics. Bill Wilson (1945), one of the co-founders of AA, described AA as the "power of one alcoholic helping another". Wilson (1945) reported, "Not more than 5 out of 100 alcoholics who wanted to stop drinking had ever been able to before AA". The same principles applied to addicts were also found to be effective.

Spicer (1993) describes the Minnesota model as a merging of skills of various professionals. Clergy, physicians, social workers, psychologists, and recovering counselors work together to provide psychological, medical, and spiritual patient (Spicer, 1993, p.35). The model is
also described as a holistic approach. The Yale Summer School also contributed to the recognition of the benefits of an interdisciplinary approach to chemical dependency treatment (Spicer, 1993).

The basic goals of most Minnesota model programs are to promote abstinence from all mind altering chemicals and assist the person in unlearning self-destructive patterns of behavior (Spicer, 1993,p.45). Spiritual development is considered an important piece of the treatment and patients are encouraged to meditate and identify a higher power. One criticism is the spirituality component is perceived as an attachment to religion and identifying God as the Higher Power. Spicer (1993) acknowledges the difficulty in explaining this component scientifically.

Based on an ongoing National Treatment Center Study report, out of approximately 450 facilities, 90% of older treatment programs and 81% of newer treatment programs were based on a twelve-step model (Robert & Blum, 1999). With many programs utilizing similar models, it is important of have a thorough understanding of the components offered.

The primary goal of Minnesota model treatment programs is for patients to remain sober. That is, to remain free
of any mind or mood altering substances. Relapse is considered part of the disease of chemical dependency and it is not uncommon. Since chemical dependency is a disease prone to relapse it is not realistic to measure effectiveness of a program as to whether a person experiences a relapse or not (NIDA, 1999, p. 5). However, the desirable outcome would be for the relapse to be brief with a return to abstinence.

Programs need to provide education to patients while they are in treatment to assist them in formulating a relapse prevention plan. Vaillant (1988) emphasized the goal of treatment should be to prevent relapse. There was a strong association between abstinence and AA attendance in his 12-year study (Vaillant, 1988). Anything a facility can build into its treatment program to reduce relapse rates will contribute to the effectiveness of a program. A further challenge is determining which interventions are more effective for which group, such as women and men, or older and younger adults. The true test of effectiveness is really on how the patient does after leaving treatment. The extent by which programs deliver services to assist patients in maintaining their abstinence afterwards can then be considered a measure of effectiveness.
The discharge criteria as described by Spicer (1993), is based on staff’s determination as to when the patient was ready for the next stage of growth. Herein lies one of the major patients of criticism of the model. How does staff know when the patient is in fact ready for the next stage?

Monahan and Finney (1996) reported higher abstinence rates from programs that included behavioral elements and those that had abstinence as a goal of treatment. Hoffman and Miller (1995) reported at one year, abstinence rates were 60-65% for patients contacted. If patients not contacted were included, rates would be 45-60%. Data were based on 49 inpatient programs and 33 outpatient programs with 8080 patients who met criteria for inpatient (n=6508) or outpatient (n=1572) treatment.

Patton (1979) examined sustained abstinence of patients who completed and did not complete treatment in a Minnesota-based model. The findings indicated those that completed treatment were more likely to sustain abstinence. At six months, 63% of those who completed the program were abstinent compared to 33% of non-completers. At twelve months, the numbers were 61% and 38%, at 18 months, 62% and 46% respectively.
Although AA is a strong component of many successful Minnesota model based treatment programs, there is general agreement that limited research pertaining to the effectiveness of AA exists (Galaif & Sussman, 1995; Khantzian & Mack, 1994; Montgomery et al., 1995). When effectiveness of AA is questioned, Miller and Kurtz (1994), caution interpretation of literature that alludes to economic, political, social, legal, or moral focus to which AA affirms the fellowship takes no stand on such issues.

Maxwell (1962) pointed out for many, the program of AA appears to have been effective, but the how and why are not clear. He further reports there is disagreement in the field in terms of what professionals know and what they think they know about AA. Leshner (1997) cautions the use of a singular approach to treatment, which can be a risk for those who have had a positive experience with one method. The addiction treatment field is called into question when segments of treatment fail to apply the knowledge gained by research. Fiorentine (1999) suggests future research on twelve-step programs needs to focus on larger samples, follow-up periods should be for at least one year and objective assessments of alcohol and drug use are preferred over self report.
Gender Based Research

Reed (1987) refers to the focus on specific drugs rather than individual characteristics as the special population approach. He states this is the way researchers, treatment providers, and policy makers have dealt with differences among patients seeking treatment. Everyone other than white middle class males is placed in a separate category, which contributes to the lack of sensitivity to other populations (Reed, 1997, p. 153).

Gains made in the treatment for drugs other than alcohol were founded in the initial studies on alcoholism. However, the defined standards and components of effective treatment were initially formed based on the patient profiles of those who were treated, typically, middle-aged, white males (Reed, 1987). Therefore, additional research is needed to determine the effectiveness of treatment according to the demographics of the population served. Specifically, the area of gender requires additional research.

Findings in the current literature reveal the majority of research patients have been male and that more information is needed at all levels pertaining to female responses to chemical dependency treatment services.
Research to date is primarily based on outcome data of male patients. In Vannicelli’s (1984b) review of the substance abuse literature, out of a combined number of 64,654 patients, only 7.8% were women. Vannicelli (1984a) reported few studies examine factors related to positive outcomes for women.

When women began seeking treatment, they were integrated into existing programs for men. Little attention was given to the possibility that women’s needs were unique. If a facility promotes gender specific treatment then it would be important to show how men and women benefit from services offered.

Treatment needs of women were examined by Wallen (1992) in two private, non-profit inpatient treatment facilities. Data collected at intake were obtained from 181 men and 48 women. Significant differences in socio-demographic characteristics, chemical use histories, physical and sexual abuse histories, parental relationships, anger, and emotional distress were examined. Wallen (1992) reported women were more likely to be unemployed, report a history of sexual abuse, and experience difficulties as a result of childhood; men were more likely to report feelings of suicidal ideation while
women were more likely to report prior attempts. No significant differences were reported in terms of treatment completion. Differences highlighted by Wallen’s (1992) study support the different needs of men and women in treatment.

The literature identifies the unique treatment needs of women including reasons why women seek treatment. Since women are under-represented in the literature, it is important to consider a program’s approach to appealing to women. Copeland’s study (1997) examined reasons given by female patients who chose not to seek formal treatment for their addiction. Reasons given included: limited knowledge pertaining to treatment services available, feelings of having unique problems, concerns related to childcare, cost and length of treatment, social stigma, perceptions of twelve-step meetings, religious tone of programs, numerous rules and perceived confrontational methods used.

Rubin et al. (1996) report designing programs with gender differences in mind may improve outcomes. Harrison and Belille (1987) examined adult women in the Comprehensive Assessment and Treatment Outcome Research (CATOR) data for women under 30 years and over 30 years of age. Findings supported the need to consider women’s
treatment needs, recognize the heterogeneity of women, and address the needs of various age groups.

There are a number of studies that have examined the unique treatment needs of women (Burman 1994; Harrison & Bellile, 1987; Kelly et al., 1995; Kreek, 1992; Lex, 1992; Nelson-Zlupko et al., 1995; Reed, 1987; Turner, 1992). Burman (1994) discusses concerns related to the application of the disease concept to women due to the emphasis on sickness. Since women are more likely to seek treatment for depression and anxiety because of their chemical dependency, the sick role is further emphasized when medical professionals respond by prescribing medications. Women are more likely to seek help from a physician or in a mental health setting as opposed to a drug or alcohol treatment program (Reed, 1987). It appears Burman (1994) recognized the usefulness of the disease concept but emphasized the need for women to also experience empowerment in their treatment experience. Little research has been conducted regarding the effectiveness of the Minnesota model based programs in terms of examining outcomes by gender.
Continuing Care Components and Findings at Follow-up

One misconception of treatment for drug and alcohol addiction is that treatment is a cure. We do not expect a person will be cured of diabetes by receiving treatment. Rather, an individual is given education on required behavior changes, such as diet and exercise. The person’s success is largely determined by how closely he or she follows the plan of care outlined by the physician. Similarly, individuals treated for drug and alcohol addiction must follow a plan of care for continued success in recovery.

A plan of care, also referred to as aftercare, continuing care or a continuing care plan, outlines recommendations by the treatment professionals for individuals to follow after treatment. For consistency, the term continuing care plan is used. At a minimum, individuals that participate in Minnesota model based treatment are encouraged to participate in twelve-step meetings and communicate with a sponsor.

When individuals choose not to follow through with the continuing care plan, it is one of the first indicators the person is not applying the education learned while in
treatment. Success in recovery from addiction is enhanced by the degree of follow-through with continuing care plan components. It does not mean the treatment received was not effective. Interestingly, there is higher degree of accountability placed on chemical dependency treatment programs for patient success compared to other areas of healthcare. If a person with diabetes did not follow-through with recommendations, the treatment provided is not criticized. There is a need for additional empirical research utilizing appropriate methodologies. It is important results are reported utilizing sound statistical analysis. There is limited research that meets both criteria.

Continuing care planning is an important part of the Minnesota Model (Spicer, 1993, p. 45). Although there are varying opinions as to what constitutes continuing care, generally it refers to the continued participation in some kind of activity to sustain and build upon the gains made during treatment.

In assessing the effectiveness of a program, the service provided at the time of treatment, as well as the follow-up provided to the patient after treatment, should be considered. For example, how does the treatment center
respond to participants who call the day after discharge and reports they have relapsed? Does this mean the treatment provided was not effective?

Emphasis placed on the need for participation in continuing care and what comprises the recommendations are important factors to consider. Continuing care recommendations must be individualized. That is, progress in treatment, as well as other identified factors that may contribute to relapse, must be addressed. For example, if an underlying eating disorder is identified in a program that primarily treats chemical dependency, the severity must be assessed. If the eating disorder were determined not to be the primary diagnosis, additional treatment would be recommended in the plan for continuing care. If the eating disorder is determined to be the primary diagnosis, another level of care is recommended.

Continuing care may include recommendations for individual therapy, participation in gender-specific groups, or another level of treatment (such as outpatient or extended care). Continuing care is an important treatment component to assist individuals in maintaining sobriety. Therefore, efforts must be made to assist individuals in follow-through with such recommendations.
Clinical Implications

Since the disease of chemical dependency affects an individual in many areas of their life, a singular referral to AA will seldom be the only referral in a plan for continuing care. However, in a Minnesota-based treatment model, a recommendation to AA will likely be common to all program participants’ continuing care plans.

Boscarino (1980) found an individual’s impairment level, social economic status, and degree of involvement in the group influenced AA affiliation. Boscarino (1980) suggests an understanding by clinicians of patient groups less likely to affiliate with AA; appropriate interventions can then be made while the person is in treatment. Examples of interventions include: spending more time preparing individuals; identifying meetings close to the patient’s home and comprised of individuals with a similar background; and utilizing other AA participants as an escort to the meetings.

There is evidence for the importance of treatment providers emphasizing the need for patients to attend AA after treatment. Edwards et al. (1977) found 60% of patients who were advised by a physician to attend AA did
so, compared to 33% of patients who attended meetings that received no advice.

Gilbert (1997) was also interested in learning more about what could be done to engage patients in continuing care. His study examined the effect of clinicians taking more initiative in encouraging patients to attend continuing care versus placing the responsibility solely on the patient. Findings indicated the greater initiative taken by the clinician; the more likely patients followed through with continuing care. There were limitations of the study. Male veterans comprise the patient sample. Female clinicians contacted the veterans via phone or conducted home visits. Positive reports from the patients may have been influenced by the female interaction. The six-month period of the study is considered short in terms of having validity to assess the effect of an intervention.

Chappel (1993,1994) emphasizes the importance of home groups providing phone lists which are of particular use for males who generally have difficulty asking for help. Sheeren’s (1998) ten year follow-up study indicated phone lists distributed from home groups contributed to a reduction in relapse.
It is also helpful for clinicians to explain to patients that their calls for help assist others in working the twelfth step of AA (Chappel, 1993, 1994). The role of sponsorship is an important factor in examining the effectiveness of AA. Chappel (1993) reported sponsorship was common to 85% of AA members, which is important in teaching new members how to continue to work the steps. Being a sponsor was the most important predictor of maintaining sobriety (Chappel, 1994). Similarly, Sheeren (1998) reported fewer relapse episodes for individuals who had a sponsor.

Gailaif and Sussman (1995) examined various studies and presented characteristics of individuals not likely to benefit from AA. The studies from which demographics of AA participants were derived contained a variety of methodological concerns. The studies were primarily based on white, male patients. To say AA does not appear to be effective for minorities, such as women, is more reflective of the need for further research on the effectiveness of AA for women and other minorities. AA effectiveness cannot be measured for individuals who do not utilize it. More efforts are needed to determine what groups benefit from
which clinical interventions while in treatment to increase the likelihood of AA participation after treatment.

Khantzian and Mack (1994) present a clinical perspective on the features and dynamics of AA that could provide clinicians with information on types of clinical interventions. The authors describe AA as effective in its application of group principles, assisting individuals in identification of vulnerabilities and character defenses.

There are implications within the literature that AA is utilized as the only continuing care recommendation for inpatients after discharge to maintain sobriety. For example, Galaif and Sussman (1995) suggest women's groups as an alternative to AA since women may not benefit from AA due to over representation of men in AA. It seems the term "treatment matching" may have been misinterpreted to some extent. Instead of thinking in terms of all or nothing, treatment matching can also be thought of in terms of what combinations may be more effective for types of individuals. The JCAHO (1999) includes individualized treatment as one of its standards in the area of care provided. The intent of the standard is to emphasize the unique needs of the individual must be taken into consideration in treatment and discharge planning.
Another important consideration is how frequently individuals attend AA meetings during treatment. Galaif and Sussman (1995) report the majority of treatment programs incorporate weekly AA meetings. Newcomers to AA are directed to attend 90 meetings in 90 days (90/90). Many Minnesota model programs also encourage individuals to follow the 90/90 guidelines after treatment. Therefore, patients in twelve-step oriented programs should attend daily meetings if the expectation is to continue daily twelve-step meetings after treatment.

Abstinence Rates

Fiorentine (1999) found weekly or more frequent twelve-step attendance was associated with abstinence and was determined to be equally effective for both alcoholics and addicts. No significant differences in abstinence rates were reported for those that did not attend compared to those that attended less than weekly.

Fiorentine (1999) assessed the impact of additional treatment, alumni involvement, or other continuing care recommendations in assessing the impact of twelve-step attendance after treatment. Only 20% of the sample had participated in activities other than AA and twelve-step
participants had significantly reduced alcohol and drug use compared to non-participants. He found alumni activities and continuing care participation did not significantly influence abstinence rates. The sample, based on outpatient participants in a publicly funded Los Angeles program, was almost half female.

Finney et al. (1999) reported among a VA program sample, twelve-step attendance correlated with abstinence and sustaining gains made in treatment. The need for programs to promote continuing care involvement to assist patients after discharge was stressed. Fiorentine (1999) indicated studies on the effectiveness of NA or CA are also needed in addition to AA. Miller and Kurtz (1994) emphasize the importance of examining the factors related to a person’s spirituality while in treatment given the nature of AA.

Timko et al. (1999) examined the drinking and treatment history of previously untreated alcoholics. Of the 314 who chose to attend AA, increased attendance was related to fewer days intoxicated, reduced alcohol consumption, higher abstinence rates, more confidence to resist drinking, and more friendships and support.
Individuals who did not delay treatment ultimately had better outcomes.

Many researchers have examined variation in AA groups (Montgomery et al., 1991, 1995; Tonigan et al., 1995; & Fiorentine, 1999). Montgomery et al. (1995) found AA participation alone did not contribute to outcomes that are more positive; rather, the degree of involvement in AA was significant. Welcoming newcomers, accompanying others to meetings, and helping make coffee served at the meeting, are factors indicative of AA involvement.

Support for attendance at twelve-step meetings was also found by McKay et al. (1994), patients completing a Veteran’s Administration (VA) day hospital program involved in twelve-step groups had better outcomes compared to those who were not. Hoffman and Miller (1993, 1995) similarly reported participation in AA or continuing care contributed to abstinence. There was a 29% (69% versus 45%) increase in abstinent rates at twelve months, for individuals that attended AA for twelve months and six months of continuing care, compared to those that did not attend AA and attended continuing care less than six months. Seventy-seven percent of participants who attended twelve months of continuing care and AA sporadically were abstinent.
The most interesting finding was that 90% of individuals who attended AA weekly and continuing care for twelve months after treatment remained abstinent. Relapse was most often reported to occur at the six-month mark. Stress and boredom were the most frequently reported contributing factors for relapse. One difficulty in interpreting Hoffman and Miller's (1993, 1995) data is only percentages were provided in tables presenting outcome findings. Results of statistical analyses were not included for review. Patients were predominately male, again emphasizing the need for follow-up rates for females.

Hoffman and Miller (1993,1995) emphasized the exploration of methods to encourage continuing care participation. Support for group attendance and continuing care participation were significant predictors of positive outcomes for 2,029 patients in 33 abstinence-based outpatient programs. Fewer workdays missed, hospitalizations, and arrest rates were significantly associated with continuing care participation.

Bennett et al. (1996) reported individuals who participated in AA had better outcomes. However, the methodological problems of this study are problematic. Attendance is not the only measure to consider for
predicting individual outcomes for AA participants. The level of involvement and frequency of attendance are important factors in the consideration of the effects of AA attendance (Hambly 1999, McCrady et al., 1996). Valiant (1983) and Cross (1990) also reported on the frequency of AA attendance associated with improved outcomes.

McLatchie and Lomp (1988) examined the relationship between AA attendance and outcomes for patients who completed an inpatient program. The program was not AA oriented, but participants were encouraged to attend community meetings and received an orientation to AA by outside members. This study is useful to highlight problems of methodology and definition. Eighty percent of program participants attended one meeting while in treatment. Recommendations for continuing care also included ten continuing care sessions over a 12-month period with the patient’s clinical coordinator. The contact rate was 62%, 54% reported significant use of AA, and 53% reported regular use. The meanings of the terms are unclear. Definitions given in the result section do not correspond to the initial three categories given in the procedure section which the clinical coordinators grouped patients. However, the definition of significant use of AA
given is attending three or more meetings in the 12 months following discharge. Regular use appears to indicate the patient attended at least one meeting per month.

The clinical coordinators were responsible for designating patients as treatment successes or failures based on their clinical judgment. Out of 116 patients, 54% were classified as treatment successes; 37% reported continued abstinence, 7% had one slip, and 6% had more than one slip, but were placed in the successful category anyway. One of the problems with the data collection in this study was the clinical coordinators also collected the outcome data for their own patients. This practice may have lead to more positive findings due to a perceived reflection of the coordinator’s skill.

McLatchie and Lomp (1988) reported no differences of AA attendees versus non-attendees in terms of overcoming addictive behavior. The authors then used this to segue into alternatives to AA. One cannot help but recall Miller and Kurtz (1994) cautionary statements, as there appear to be political factors involved in the McLatchie and Lomp (1988) study. Of note, is if the definition of successful affiliation used from previous studies were applied, only ten individuals would have met the criteria.
Moos et al. (1999) found participants in twelve step programs were more likely to be abstinent, employed, and have fewer problems related to chemical use at one-year follow-up. Tonigan et al. (1996) expanded upon the meta-analyses of the AA literature conducted by Emrick et al., (1993). Tonigan et al. (1996) further explored AA affiliation and outcomes utilizing meta-analyses to summarize the findings of 74 studies. Overall, findings suggested the quality of the research was poor, better designed studies were more likely to report a positive relationship between AA involvement and outcome, and often statistical methods employed did not have a enough power to detect significant relationships. Use of large samples for outpatient populations are suggested to effectively assess level of affiliation and outcomes of AA (Tonigan et al., 1996).

Gailaif and Sussman (1995) provide a summary of empirical research pertaining to studies that examine the effectiveness of AA. Tables provide the reader with: an overview of the type of study, demographics of patients, presence of control groups, drinking patterns of patients, type and length of treatment, technique or instrument used, type of data collected, results, and implications and
limitations of the study. A table reports upon seven studies said to represent research on the effectiveness of AA. The studies highlighted are indicative of methodological problems that appear in much of the research pertaining to AA. It is not clear why these studies were selected as a representative sample of those examining AA effectiveness. Only two of the studies presented, O’Leary et al. (1980) and Thurston et al. (1987) examined patients from an inpatient chemical dependency program, one of which was a Veterans Hospital.

Montgomery et al. (1995) assessed the effectiveness of AA by examining the attendance of AA meetings as well as the involvement level of AA. Involvement is assessed using a new questionnaire referred to General AA Tools of Recovery (GAATOR). Patients were from a public, inpatient, 28-day program that emphasized the disease concept. The medically monitored detoxification was a separate part of the program that typically lasted three to seven days. Discharge planning consisted of recommendations to continue AA and to get a sponsor and work the steps. The authors reported on a follow up study indicating patients who reported more involvement in AA had better outcomes in terms of abstinence in comparison to meeting attendance.
only (Montgomery et al., 1995). There were some methodological concerns in this study. Patients admitted to the program had a diagnosis of abuse or dependence indicating variation in addiction severity. Furthermore, of 496 patients admitted, 397 were eligible to participate, but only 66 volunteered, 18 of which were female. The follow-up period was initially for one, three, and six months, but due to a low contact rate, the data was collapsed into two periods.

Thurston et al. (1987) examined abstinence rates and AA attendance for patients discharged from a VA Hospital inpatient program. Detoxification was also a separate component of the program and the length of stay ranged from 32-25 days. Follow up was at six, twelve and eighteen months. The authors reported AA attendance and abstinence were only significant at the 18-month period. There was a 50% abstinence rate at 18 months for those that attended the entire period. Patients were defined as ‘AA attending’ if they went to ten meetings or more in the preceding six months at the time of the follow up contact. Although the study by Thurston et al. (1987) cannot be easily compared to other studies on AA attendance due to definitional problems, other researchers have suggested AA attendance
alone is not enough to contribute significantly to maintaining abstinence.

Ouimette et al. (1997) reported better abstinence outcomes for patients who completed a twelve-step program. The sample was predominately male and conducted in a VA setting. Another factor to consider is the combined patients with chemical dependency diagnoses and a psychiatric diagnoses. Therefore, varying rates of problem severity existed in the population.

Emrick (1987) examined the literature related to the effectiveness of AA. He found patients who attended AA during or after treatment had better outcomes compared to patients who did not. Comparisons of individuals who participated in AA were made indicated outcomes were further enhanced for those more involved in the AA group such as, leading meetings, completing step work, having a sponsor and sponsoring others. Individuals who attended more often than weekly also had better outcomes in terms of maintenance of sobriety. Jindra and Forsund (1978) reported similar findings. Emrick et al. (1993) found individuals who participated more frequently in AA or outpatient sessions were more likely to maintain abstinence.
Hambly (1999) reported on the follow-up of patients after discharge from an inpatient residential program to evaluate the effectiveness of the treatment program. Now in its sixth year, 63% of sample of 45 adults were abstinent, 15% moderately improved and 22% unimproved. Replication of the initial study occurred in 1995 and 1996.

Findings from Hambly’s (1999) study indicated patients who work a program by regular attendance of twelve-step meetings and attend the facility’s continuing care meetings or therapy sessions are more likely to be abstinent at 12 months post discharge. Hambly (1999) suggests her findings support the need for follow-up with patients for a five-year period to assess long-term effects of treatment.

Davidson’s (1976) findings indicated patients discharged form a 12-14 week inpatient hospital-based program were more likely to remain abstinent if they kept some kind of formal or informal contact, such as attended AA meetings at the unit or called in. The sample consisted of 75 males and 25 females; females were less likely to make use of available contacts. The higher male population contributing to females perceiving less support available may explain this.
Effectiveness of Treatment

The research related to the effectiveness and outcomes of treatment are difficult to sort through due to the diversity of chemical dependency programs. An initial review of the research reveals a wealth of information. However, upon closer examination, there are gaps in the research pertaining to programs utilizing a Minnesota-based model that incorporate the twelve-steps of Alcoholics Anonymous (AA).

Miller (1992) presents a useful summary of the literature that outlines research studies and findings to date pertaining to effectiveness of various treatment approaches. Miller (1992) cautions some forms of treatment may appear ineffective, but are ineffectively administered. There is no one treatment strategy that will be effective for everyone, rather the key is to determine, "for whom is treatment A effective in producing improvement?" and "for patient type x, which treatments have the most impact?" (Miller, 1992, p.99).

Emrick (1975) reported no significant differences in abstinent rates for individuals who received treatment compared to those who did not. One problem with his methodology was data were compiled from studies in which
alcoholics received no treatment or minimal treatment. There is no way to know the amount of error introduced in the analyses of pooled data. Another problem was the no treatment group included individuals who left treatment early. Although he stated it was unlikely patients were affected by any intervention, the effect is not known.

Upon evaluation of 742 patients among six programs, McLellan et al. (1982) found patients demonstrated improvements after substance abuse treatment. There were decreases in both chemical use and criminal behavior and increases in employment rates and psychological functioning. The length of follow-up was limited to six months; a longer follow-up period is preferred. Patients examined were male veterans; this influences the extent findings can be generalized to other populations.

Length of Treatment

There has been an ongoing debate as to how much treatment is needed to be effective. Treatment provided on an outpatient basis is less costly than inpatient treatment. A person's level of care or time in treatment may be solely determined by insurance benefits available. A Kaiser-Permanente study examined outcomes of 1,986
patients with varying lengths of time in treatment services consisting of inpatient detoxification, day treatment, and outpatient services (Ershoff et al., 1996). There were higher abstinence rates for patients with a primary diagnosis of alcohol dependence that remained in treatment for a minimum of three months, as well as poly-drug users that remained in treatment for six months or more.

Verins et al. (1986) examined the weekly progress of patients in a 28-day program and found patients made the most progress in the first two weeks. However, no description of the program is provided. Generalizability of the findings is again problematic as patients were male and from a Veterans Administration (VA) hospital setting.

According to NIDA's publication "Principles of Drug Addiction Treatment", 90 days is the optimal length of treatment for inpatient or outpatient treatment to be effective (1999). NIDA also reported more than one treatment episode may be necessary for individuals to be successful.

Finney, Moos, and Chan (1981) examined components of treatment in three residential programs. The programs consisted of a 16-bed county-funded halfway house with a therapeutic community orientation (n = 44 men, n = 15
women). A 20-bed private facility described as a 4-week milieu-oriented program that included AA and prescribed vitamins frequently, anti-anxiety medications and sedatives (n = 69 men, n = 23 women) and a 65-bed Salvation Army program (n = 97 men) with a recommended stay of six months.

Although the authors acknowledge the unique populations of each facility, the attempt was to assess the effects of individual treatment components (therapy sessions, AA meetings, films/lectures) as a correlation to length of stay. The authors reported a longer length of stay was associated with better outcomes for residents in the halfway house only. Moderately beneficial effects were found related to the treatment components. It is difficult to understand how evaluation of treatment components occurred since program components varied.

A simple explanation for better outcomes associated with a longer length of stay in the halfway house can be attributed to a lesser intensity of services provided. Another factor illustrated by this study is the danger of programs prescribing potentially addictive substances 'frequently' to patients. The program goals were unclear.

Another relevant area in assessing patient outcomes pertains to the method used to collect the data.
Specifically, which patient groups are the data collected? The reliability of self-reported data are often disputed in the literature (Shakeshaft, 1997). The assumption is individuals will say they are abstinent when in fact they are not. Therefore, it may be argued that the outcome is only reliable when there is physical proof obtained, such as results of urine testing. An important part of collecting outcome data are the training of the person collecting the information. There are visible signs of a person under the influence. There area also signs that can be heard on the phone such as slurred speech, delayed response or incongruent speech. The ability to detect relapse is magnified when the person collecting the data has developed an ongoing relationship with the person.

Self-Reported Data

There is sufficient evidence in the literature supporting the use of self-reported data. Verins (1983) found self reported data were as reliable as data obtained from relatives. Adair et al. (1996) examined the reliability of self-reported data over a two-month period with a large number of patients. The study consisted of 2,968 patients at multiple sites in the United States that
participated in the Drug Abuse Treatment Outcome Study (DATOS). The extensive study's findings indicated the self-reports of patients were found to be reliable (Adair et al., 1996).

The literature also provides a number of suggestions as to what techniques may be useful in maximizing the accuracy of self-reported data. Babor et al. (1987) suggest the following techniques: provide clear instructions, increase motivation, establish rapport, ask questions in a logical order, place more sensitive questions toward the end, consider question length and wording. Additional techniques may be utilized when patients may have memory problems such as timelines of contacts, fixed response choices, and review of prior contacts (Babor et al., 1987). Memory recall ability is an important consideration for individuals in early recovery due to the known impact of drug use on brain pathways (Leshner, 1997, 2001; O'Brien & McLellan, 1996).

Some criticisms of self-reported data pertain to factors that can influence data collection, such as the relationship with the patient. The reliability of data may be impacted if the patient liked the staff member; they may be more likely to say what they think the interviewer wants.
to hear (Embree et al., 1991; National Institute of Justice, 1996). Furthermore, the perception of the risk of providing an undesirable answer may affect the validity of the response. Therefore, the person interviewing the patient should be aware of such risks and emphasize the confidential nature of responses (Babor et al., 1987).

Hoffman and Miller (1995) reviewed the CATOR data that consisted of a number of years of outcome studies for multiple chemical dependency programs across the nation, self-reported data were utilized. The researchers stated self-reported data were valid if care was taken in the selection of the instrument and questions were subjective in nature. The researchers were employed with CATOR; ideally, such a review would be more valuable if done by outside researchers. Although there may be factors influencing the reliability and validity of self-reports, the research indicates there are sufficient methodological techniques available to maximize the accuracy of the data.

Another area of debate is what percentage of a sample must be contacted for data to be valid. This can be an area of great difficulty for programs treating a transient population. Often the criticism is the portion of the sample that could not be contacted must have relapsed. The
fact remains, if a person cannot be located; it is not known if the outcome is positive or negative.

Patient Follow-up

Gillespie (1967) stated although some researchers may report a 75% follow-up rate as acceptable, 90% is needed to have confidence in generalizability of findings. Gillespie (1967) emphasized the use of control groups in evaluating treatment effectiveness and discussed problems of scattergun approaches to gathering patient data. He also supported the use of self-reported data and emphasized the importance of researchers respecting patient confidentiality when involving family and friends to collaborate in data collection efforts.

Fitzgerald and Mulford (1985) contacted patients by telephone after discharge to provide support and help if needed as a means of providing ongoing continuing care. Although the study did not find support for the effectiveness of the phone calls, the study was inherent with methodological problems.

Hazelden’s Chicago Recovery Case Management Pilot Project assessed the impact of following patients after discharge by a series of scheduled calls (Owen, 1994). The
stated purpose of the calls was to assist patients with the transition home and to provide support for the first crucial year of recovery. Patients met with the Recovery Case Manager on two occasions during treatment: a) initially in a group setting in which the calling schedule was reviewed and, b) prior to discharge to review the continuing care plan and obtain releases for continuing care facilities and family members.

Patients were contacted weekly for the first month, biweekly for months 2-3, monthly for months 4-6, and bimonthly for months 7-12, a total of 14 contacts. Standardized questions were asked at months three, nine, and twelve. Two staff made the calls, one a certified chemical dependency counselor, the other an assistant experienced in making follow-up calls. The counselor made the initial call and the assistant made subsequent calls. If the person were having difficulty, the counselor would take over the call and subsequent calls. The average length of the calls was 20 minutes. Probing questions were asked to assess sobriety, follow-up of continuing care plan recommendations, AA attendance and level of involvement, and involvement with a sponsor. The pilot program found 116 participants out of 122 (95%) were abstinent at twelve
months compared to 51-59% of Hazelden’s general population. The pilot provided very promising information in terms of engaging patients in continuing care to improve abstinent outcomes. Findings must be taken with caution when high abstinent rates are reported.

In the Substance Abuse Newsletter (February 2, 1999) Dr. Stout, a professor from Brown University described the protocol for an intervention referred to as case monitoring. The process involves long-term phone follow-up contact as a method for identifying clinical deterioration of patient’s after discharge and referral to additional treatment or services as soon as possible. The belief is the continued contacts are one of the keys to long-term success in dealing with the chronic, relapsing condition of chemical dependency (p.6). Another benefit of the intervention is that it illustrates the facility’s investment in the success of the patient. Stout reported follow-up calls are a cost-effective intervention in terms of time needed to conduct calls and the minimal training needed for individuals making calls.

There are similarities between case monitoring and the FCC program. Similarities include: contact frequency, with more initially after discharge; establishing rapport with
the patient while in treatment; supportive and non-judgmental calls; identifying early signs of relapse to redirect participants to appropriate service; calls are considered an adjunct to continuing care recommendations; and the facility’s goal is to remain invested in the patient’s progress after treatment.

There are also differences between the programs. The follow-up period is two years in case monitoring and eleven months for FCC. Case monitors have set criteria to assess the person’s level of functioning; in FCC, the participant’s progress is assessed in terms of reported sobriety and level of follow-through with continuing care recommendations. If a person is in active relapse, case monitors will give the patient the option of returning to treatment; FCC counselors will redirect the person to follow recommendations in continuing care plan or obtain additional referrals for the patient.
CHAPTER FOUR

METHODOLOGY

This study examined an additional program service involving scheduled telephone contacts as an intervention to encourage follow-through of continuing care recommendations following short-term residential treatment. Contacts were made for eleven months post discharge. The program duration was intended to place emphasis on the first year of recovery. The study specifically examined if continuing care participation, twelve-step meeting attendance, and sponsor communication were related to continuous sobriety and gender.

Detailed information is provided on the methods previously used by the organization to collect information on patient outcomes. Previous outcome data are compared to the study’s findings representing a control group for the FCC model. An overview is also given explaining how the FCC model was introduced into the organization. The FCC program continued to evolve in the facility. Major changes leading up to pilot described are explained. Complete details are given on the pilot to facilitate replication of
future studies and to emphasize the importance of information that can be gained during the pilot phase.

Historical Overview of Outcome Data Collection

Total Quality Management

The organization under study adapted the principles of Total Quality Management (TQM) in 1994. The organization continues to apply these principles. Teams consisting of various interdisciplinary members are utilized in the design of new services as well as improvements to existing services. A team approach was applied in the development of FCC.

Hazelden, an organization that also treats chemical dependency describes its quality measurement system as a method to continuously improve services by gathering and interpreting real-time data to change clinical processes as needed (Duda, 1997). The Rancho Mirage facility's approach is similar in terms of identifying each point in the continuum of care as an opportunity to collect and analyze data to improve processes which will in turn positively impact patient care and outcomes.
Comprehensive Assessment and Treatment Research

From 1991 to 1994, the organization outsourced its outcome studies to New Standards, Incorporated. New Standards maintained the Comprehensive Assessment and Treatment Research (CATOR) database which provided organizations with comparative data to other similar organizations as well as data specific to the organization. Indicators and comparisons were offered in the areas of: demographics; patients' frequency of attendance at weekly meetings; frequency of continuing care attendance; patients' outcome based on time in treatment; reduction in motor vehicle accidents and criminal offenses; employment; healthcare utilization; nicotine use and/or abstinence; gender comparisons for main indicators; and cost effectiveness.

Data analyses based on 333 inpatient admissions from August, 1991 to April 1994 indicated 73% of patients who attended weekly twelve-step meetings throughout the 12 months following discharge reported as continuously sober compared to 48% of patients who attended meetings less frequently (New Standards Inc., 1994). One of the significant findings of the report was 80% of patients who...
attended continuing care regularly for the first six months after discharge reported as continuously sober. The rate dropped to 34% for months 7-12. The definition for continuing care included attendance at either AA or a formal continuing care program.

New Standards Incorporated made various suggestions to the facility. One of the suggestions pertained to the facility's educational programming. It was suggested greater emphasis be placed on both the importance of continuing care and the concept that treatment does not end after discharge. A verbal or written contractual type commitment from patients to attend continuing care was also suggested.

In Ahles' (1983) study, the impact of obtaining a written contract to follow continuing care recommendations for six months after treatment was assessed. The contracted group had higher rates of abstinence and increased participation for the first six months, the number dropped substantially by month twelve. Since the effects of a signed agreement appeared to have the most impact on the first six months after discharge it would seem appropriate to determine what intervention could be utilized to enhance ongoing participation in continuing
care since there is support for higher abstinence rates with ongoing participation. FCC is one intervention that can be utilized. Although the effects of a signed agreement were more evident in the first six months, this is still an important finding given the ongoing effects of certain drugs on brain pathways after use (O’Brien & McLellan, 1996).

It was further suggested the facility concentrate efforts on those groups least likely to follow through with continuing care. The report offered no characteristics of such groups and stated increased efforts could be directed to anyone who appeared resistant. Incorporation of relapse prevention into the program components was also suggested (New Standards Incorporated, 1994).

Another report finding pertaining to differences in gender found females were more likely to follow through with continuing care then males. The drugs of choice for females were more likely to be licit drugs, such as alcohol and prescription drugs, males were more likely to use illicit drugs, such as cocaine and marijuana. Abstinent rates for females were reported as 70%, males reported 66%.

In examining the aggregate data of inpatient residential programs, CATOR analyses revealed abstinence
rates were higher for those that stayed in treatment longer; 55% of inpatients were abstinent at 12-month follow-up that remained in treatment from 1-12 days whereas 70% were abstinent in treatment for greater than 24 days.

There were a number of concerns related to the reports and analyses. First, graphs and tables were difficult to interpret. Inaccuracies were also noted; figures in narrative reports differed from figures in tables and graphs. The database consisted of 2125 individuals, yet reports only provided information on the 333 people from the facility. Therefore, comparisons could not be made to similar facilities unless supplied by CATOR. The method of sampling utilized could offer little understanding in terms of the degree of error present. Also problematic was the use of a matched comparison group. The method did not provide comparisons with patients in like facilities, rather it compared patients individually in terms of four variables: clinical severity, gender, ethnicity and age. If no four variables could be matched, then fewer were used starting with the elimination of age, then ethnicity, gender, and lastly clinical severity until there was a match.
Contact rates were lower for the facility compared to the aggregate CATOR database. Only general demographic descriptions of groups likely to consent and not to give consent were given as the explanation as to why. The report had previously stated consent for participation was higher than at other facilities which appeared to indicate fewer contact rates had more to do with sampling used to determine who would be contacted. Cost effectiveness of outsourcing outcome studies and timeliness of reports were also problematic.

As noted above, findings providing insight into patients' ongoing recovery and extent of follow-through with continuing care recommendations was not received in a timely manner. Therefore, empowerment of clinical staff was reduced due to the lack of information to make timely process changes in response to the data. The organization recognized that for the data to be most useful, it was necessary to shift from a summative evaluation to a formative evaluation (Duda, 1997).

Outcome Measurement

In July 1996, an agreement was made with another company to provide additional analyses of the CATOR data. One of the main differences in the type of agreement was
that the provider would work directly with the treatment facility staff in terms of data collection and analyses. This company report provided much more information that was easily interpreted and understood. A review of the follow-up indicators by the second company revealed lower abstinence rates than initially reported, 58% were found to be abstinent 12 months after treatment compared to 70% (Performance-Based Outcomes, Inc. 1997). The difference was attributed to different sampling techniques used by the two companies. Ultimately, the organization realized the benefits of having greater involvement with the methodologies chosen to evaluate outcome studies.

The data obtained from the outcome reports clearly led to the implementation of significant programmatic changes within the facility. Additional education was provided to patients while in treatment on the importance of continuing care; the job descriptions of the Continuing Care Department changed, as did the reporting structure. Patients continuing care plans were more individualized. More time was dedicated to creating and reviewing continuing care plans with patients. Patients were also asked to sign the plan as a first step in showing their commitment to following through with the plan. Weekly
continuing care groups were established as an adjunct to the relapse prevention groups to provide more education to patients on the importance of continuing care.

Case Management Model

In 1996, the Rancho Mirage facility was interested in adapting a case management model. Initially, the goal was to have the case manager follow patients across the continuum of services to include follow-up calls. The concept was case managers would act as an interface between patients and the treatment center to facilitate the transition to the next level of care or the home. However, when the facility created teams to design the model, the case manager position evolved as a response to meeting direct patient care needs in terms of coordinating services and interfacing with referents and professionals. Case managers were also needed to provide patients with a greater degree of individualized referrals for continuing care. Since patients were from across the continental United States, as well as other countries, it was determined the expertise of resources available needed to be concentrated among a smaller group to keep up with rapidly changing information.
Creation of Focused Continuing Care Program

To that end, reported results combined with results from the Hazelden pilot study (Owen, 1994) led to the creation of the FCC program. The FCC program was the vehicle identified to assist patients with the transition from treatment. FCC also provided a mechanism to keep clinical staff informed. Information obtained on the various program components would provide data on where to concentrate improvement efforts. For the data to be most useful to the organization, as well as meet the immediate needs of patients after discharge, follow-up calls needed to be more than an exercise in data collection. If data collection were the only focus, questionnaires could be sent rather than utilizing staff resources.

The main purpose of the program was to expand the continuum of services to assist patients in applying the tools learned in recovery. The duration of the program was established to be eleven months after discharge to emphasize the importance of the first year of recovery and to reinforce the fact that treatment does not end after discharge. Patients would also benefit from additional education after treatment on what they need to do to
maintain continuous sobriety. The importance of 12-step meeting attendance, getting and communicating regularly with a sponsor, attending gender-specific support groups, utilizing Alumni contacts and following any other items listed on the continuing care plan could be continually emphasized.

Administrative Changes

The Rancho Mirage facility has undergone significant administrative changes since the original concept of FCC emerged and the need to revise the handling of patient outcome data were discussed. Of the 11 people initially involved, only two people are in the same role. Two people's roles have changed, one moved to the sister company and six have left the organization. The importance of providing new employees with a historical overview of the evolution of outcome development within the organization is crucial, especially at the upper and middle management levels.

Facility Description

Overview

The data collected for this study is based upon a program located in Southern California that has been in
continuous operation since 1982. It is a private, non-profit, chemical dependency treatment center licensed as a Chemical Dependency Recovery Hospital (CDRH) by the State of California. The facility provides treatment for alcohol and other drug dependencies and has a variable length of stay of 25-32 days.

There is an extensive alumni network on a national and international level. The network consists of over 40,000 people who have gone through one of the center's programs. An alumni contact person is provided if available in the area. The alumni contact provides an additional support to a person in early sobriety. Family members who complete the family program are also given a contact person.

The treatment facility is comprised of multiple buildings consisting of five separate residences. There are two male residences, two female residences, and one residence that handle overflow and short-term patient assessments and evaluations. Admission, medical services, meals, lectures, 12-step meetings, and physical activities are provided in separate locations on the property.

One of the strengths of the facility is the founder of the program is a nationally recognized woman who openly
shares her story of recovery. Women are also attracted to a program that promotes gender-specific services.

**Admission and Exclusion Criteria**

Patients admitted for short-term residential treatment must meet criteria for Level III as defined by the American Society of Addiction Medicine (ASAM) and have a primary diagnosis of chemical dependency according to the DSM-IV. Patients must be capable of self-care. The facility typically has approximately a five-day waiting list, which serves as an additional screening process not often seen in other programs. Approximately 25% of patients are admitted within one to two days. If an individual requires an immediate admission, and there is not immediate availability, a referral is made to another facility.

Patients are typically assessed over the phone before entering treatment. Since patients seek treatment from all parts of the contiguous United States as well as about five percent from outside of the United States, it is important to determine if the program has a level of care that fits the needs of the individual.

After the initial phone assessment, if the Admissions Counselor determines there are medical or psychological
concerns, the assessment is forwarded to the department nurse. The nurse will either obtain more information from the prospective patient or ask for consent to communicate with the known medical and/or other professionals familiar with the individual’s case. The Admissions Nurse will either make the determination the individual meets criteria for admission or will have the case further reviewed by other members of the interdisciplinary team.

If it is determined the facility cannot sufficiently meet the individual’s needs, referrals are given in conjunction with input from referents and other professionals involved. There are instances in which there may be some level of uncertainty as to whether the facility can meet an individual’s needs. In such cases, the individual can be admitted for a four-day evaluation. Communication continues with outside treatment professionals to gather information and assist with the evaluation. After the evaluation period, the patient may be admitted to one of the available levels of care at the facility or discharged elsewhere.

**Referrals**

Referral sources reported by patients entering treatment indicate approximately 45% were self-referred
(see Table 1). Professionals, such as attorneys and interventionists make up 20%. Medical and healthcare professionals such as physicians, psychiatrists, psychologists, or therapists comprise 15%. Ten percent are referred by family/friends and Employee Assistance Programs (EAP) refers five percent. The organization's alumni also refer approximately five percent.

Table 1. Referral Sources

<table>
<thead>
<tr>
<th>Referral Source</th>
<th>Percentage of Referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Referral</td>
<td>45</td>
</tr>
<tr>
<td>Professional</td>
<td>20</td>
</tr>
<tr>
<td>Medical / Healthcare Professional</td>
<td>15</td>
</tr>
<tr>
<td>Family / Friends of Patient</td>
<td>10</td>
</tr>
<tr>
<td>Employee Assistance Programs</td>
<td>5</td>
</tr>
<tr>
<td>Alumni</td>
<td>5</td>
</tr>
</tbody>
</table>

Information on referents and professionals involved with the potential patient is collected at the time of the pre-admission assessment. Collaboration and continued involvement with referents and professionals during patients' treatment is important in providing continuity of care. Patients sign releases of information at the time of admission to consent for referent and professional involvement during the treatment process.

Patients referred to the facility by professional interventionist do not typically complete a telephone pre-
admission assessment. The interventionist contacts the facility before the intervention to reserve a bed. The interventionist completes the pre-admission assessment with input from the potential patient’s family and friends. The facility relies upon the clinical judgment of the interventionist to determine if the facility can meet the patient’s needs. The admission nurse is available to the interventionist if there are concerns during the initial assessment. Upon admission of the patient, the assessment information is reviewed with the participant to substantiate information provided by friends and family. Intervention patients must meet the admission criteria of the facility for admission.

Interventions

Family and friends often contact the facility to obtain information for a potential patient. If the family or friend indicate the person in need of treatment and is unwilling to seek treatment, the name of a professional interventionist is provided. Admission information, program description, approximate costs, and answers to questions are provided to the family at the time of the initial call.
Professional interventionists work with family and friends to develop a plan to facilitate the person's entry into treatment. Although there is a variety of intervention styles, generally a date is planned for family and friends to discuss their concerns with the individual and ask them to go to treatment. Typically, the person intervened upon is not informed of the meeting for fear they will not show up.

Treatment Modality

The program is based upon a Minnesota model; the twelve steps of AA are used to educate patients about the disease of chemical dependency. Importance is placed on the treatment of the mental, physical, and spiritual aspects of an individual. There is also a belief that a person's addiction affects those around him/her and those closest to the alcoholic/addict can also benefit from treatment. There is a five-day family program component of treatment in which at least one family member is strongly encouraged to attend. A Children's Program is also available for children from ages seven to twelve.

The short-term residential program, referred to as inpatient treatment by the facility is highly structured. Patients begin the day with a therapeutic duty assignment
that typically involves a housekeeping task such as vacuuming the common area and reminding peers to pick up after themselves. Patients are provided with a book of daily meditations and participate in a morning meditation walk with peers. Group therapy is an important component of the program and is part of the daily schedule. A series of morning and evening lectures provide patients with education about the twelve steps, cross-addiction, relapse, spirituality, and medical information pertaining to chemical dependency. Patients also attend daily twelve-step meetings.

A great deal of responsibility is placed on patients for their own recovery process. Daily reading and writing assignments are part of every patient’s treatment plan. Patients present their first step to peers after identifying consequences of their chemical use and preparing a life story of their chemical use history. Participants complete the first four steps of AA while in treatment and develop a relapse prevention plan and continuing care plan during treatment.

Participants gain insight about their lifestyle and what changes are needed to achieve sobriety. Continuing care is identified as essential to a person’s recovery;
emphasis is placed on attending twelve-step meetings and having a fellowship with other recovering individuals, including a sponsor, throughout the treatment process.

An interdisciplinary treatment approach is utilized, members of the interdisciplinary treatment team include: physician, psychologist, nurse, spiritual counselor, chemical dependency counselor, and continuing care facilitator, nutritionist and activities consultant. Treatment plan update sessions occur weekly for all patients involving interdisciplinary team members. Participant’s progress in treatment is documented on a daily basis. Discharge criteria are met when participants have completed the goals and objectives of identified problems on the treatment plan.

A variety of assessments and evaluations are conducted for each patient to develop an individualized treatment plan. These include, but are not limited to, a nursing assessment, Addiction Severity Index (ASI), psychological evaluation, history and physical, nutritional assessment, activity assessment, spiritual assessment and the Shipley test.
Program Components

**Detoxification.** All patients are medically monitored. Patients having signs and symptoms of withdrawal undergo detoxification, and are supervised by a physician. Patients begin participation in the program as soon as possible and are encouraged to utilize peer support during all phases of treatment. Patients have the opportunity to interact with individuals who have been in treatment for various times and can obtain support from others who have experienced the discomforts of detoxification.

**Group and Individual Therapy.** Patients participate in daily group therapy and participate in individual sessions with their primary counselor. Group therapy sessions are conducted utilizing a co-facilitation approach to provide patients with counselor continuity. Patients have both a primary and a secondary counselor. If the primary counselor is absent, the secondary counselor is available to the patient.

**Relapse Prevention.** Patients attend a weekly relapse prevention group. Patients are able to share concerns and discuss scenarios they may encounter after treatment that may lead to relapse and how to deal with them. The relapse prevention plan developed by the patient provides
mechanism to identify both relapse triggers and the action they will take. Patients present the plan to peers for feedback. Peers are useful resources in assessing the patient's level of honesty and commitment to the plan.

Spiritual. The program is not based on a specific religion. The program does place a great deal of emphasis on the importance of spirituality. Patients complete a spiritual self-assessment that is reviewed by a spiritual counselor to further develop the treatment plan. Patients may participate in grief group and work one to one with spiritual counselors.

Physical Activity. All patients participate in daily physical activities under the supervision of activities staff. The physician determines the appropriate level of activity and types of activities the patient is capable of being involved in.

Family. There is an emphasis on the treatment of the entire family. At the time of the pre-admission assessment, patients are informed a five-day family program is strongly emphasized and at least one family should attend. According to the facility's quarterly statistics, 90% or more of patients have at least one family member attend the program. The family component typically occurs
while the patient is in the third week of treatment.

Children. A Children's program is available for children from ages six to eleven. The program is educational in nature and the purpose is to assist children in coping with the experiences of living in a household with one or more chemically dependent parents. The program is four days in length and one parent is expected to participate. Since the program is not offered on a monthly basis, patients typically attend the program with their children after they have been discharged from inpatient treatment.

Gender Specific. Gender specific treatment is provided and is designed to meet the specific needs of men and women (Haver & Dahlgren, 1995; Jarvis, 1992; McLellan et al., 1993, 1996; Miller, W.R., 1986, 1992). Males and females reside in separate buildings. Although both men and women may participate in some program components together, such as morning and evening lectures, the expectation is interactions will primarily be with the individuals they share a residence. Fraternization is not permitted; failure to follow this rule is grounds for discharge from the facility. Gender specific groups are incorporated into the daily programming. Female groups cover areas such as
body image, relational and abuse issues. Male groups cover areas such as anger and body image.

Focused Continuing Care Program Pilot

Pilot Description

A pilot program began in March 1999 to provide FCC to 50% of the inpatient population. The purpose of the pilot was to determine if adequate staffing resources were in place to keep up with the calls and continuing care-planning needs of patients in treatment. The pilot was conducted in one male residence and one female residence. Two of six existing Case Manager positions were modified to carry out the new duties for the pilot. The two individuals selected to carry out the new duties of the pilot were given the job title Continuing Care Facilitator (CCF). One individual was in recovery and the other was not. Both people had Master's degrees and job-related experience.

The basic job duties consisted of conducting weekly continuing care groups, assisting patients with continuing care planning including locating referrals for continuing care in the patient's home area, orienting patients to the FCC program and contacting patients after discharge. The
CCF conducted a weekly continuing care group in which the FCC program component was discussed weekly with all new patients in their first week of treatment. One to two days prior to discharge, the CCF would meet with the patient to have the consent form signed, review the calling schedule, verify accuracy of information and discuss best calling days and times.

The instrument was created by the facility and consists of 22 questions (See Appendix B). There are five broad categories of questions within the instrument. Recovery Activities, relate to sobriety (2 questions); Continuing Care, relate to continuing care participation (17 questions); Health issues, assess if patients have followed through with health care recommendations including nicotine cessation; (2 questions); Psychological Areas, relate to responses to stress and expression of feelings (3 questions); and Spirituality, relate to application of the twelve-steps to spiritual issues (2 questions).

It is beyond the scope of this study to evaluate responses to all questions. For the purpose of this data analyses, only questions in the Recovery Activities and Continuing Care category will be utilized (i.e. questions 1,5,6,7 and 8).
Training was initially provided to the individuals in the new position through observation of staff members that had been doing the job. To assess the progress of the new staff, role-playing was utilized to assess inter-rater reliability. The appropriate use of open-ended questions and comparison of scoring methods were also assessed.

Each counselor set up a filing system labeled from one through thirty-one to represent the days of the month to track callbacks. The CCF could schedule the day according to the number of calls that needed to be made as well as coordinate one to one meetings with departing patients.

Responses to the questions were entered into the Access database at the time of the call. Pull-down menus, with pre-established scoring options facilitated consistency and single entries to reduce the amount of typing while on the phone. A field for notes was available in the database for counselors to record summarize important discussion points and enter prompts for the next call. Examples include, '1/12/00: Mother was diagnosed with cancer'; '1/14/01: Sister had baby'; and '1/16/01: Expressed difficulty sleeping, was going to Dr'. The note section provides the counselor with a method to keep the calls personable. Callers expressed sincere appreciation
for counselors taking the time to ask about personal matters.

Sample Selection

As indicated, one female residence and one male residence were selected to pilot the FCC program. The decision was made to select the two residences not utilized in a prior pilot. The non-pilot male and female residences made no changes in the program or delivery of services. Participants were assigned to residences as determined by bed availability. Participants in the non-pilot residences heard about the program from other participants. Those who inquired about FCC program participation were provided information on the pilot program. All participants were encouraged to discuss concerns related to the pilot with their counselor and to record comments on the patient satisfaction survey.

Positions Created

By January 1, 2000, two FCC counselors were hired and worked with the CCF to takeover FCC related job duties. During this transition time, the FCC program continued to be offered to 50% of the population. The CCF explained to program participants another person would be taking over the calls in the near future. Internal candidates
ultimately were selected for the positions. Typically, program participants were already familiar with the person who would be taking over the callbacks.

Telephone Contact Comparisons: Non-Pilot Residences

Since 50% of the treatment population was involved in the pilot, the other 50% who did not receive the intervention were available for comparison purposes. A one contact method by telephone was utilized for quality improvement purposes to examine differences in self-reported sobriety rates and follow-through with continuing care recommendations between the groups. The FCC counselor assigned to the male residence conducted the calls for males in the non-pilot group and the FCC counselor assigned to the female residence conducted the calls for females in the non-pilot group. The data collected could also be compared to previous reports of outcome studies before FCC. The organization's historical outcome data also served as a useful method of comparison to assess the FCC program as a technique to encourage participation in continuing care recommendations.
Data Collection

A target sample of 30 was set and every third patient was contacted until the desired sample size was reached. Patients discharged with staff approval (WSA) from the non-pilot residences from March 1999 to January 2000 were contacted. Before contacting a patient, the calling staff verified only patients who had signed a release for alumni activities were contacted.

The same instrument and communication style were utilized to assess how patients were progressing. Initially, a shorter version of the instrument was going to be utilized. Since staff time and resources were being utilized to collect the data from the non-participant group it was decided that asking all questions may be useful in future projects. Responses were coded to the calling period that best represented the time since discharge. For example, a contact made six months after discharge was recorded in the month five, week four calling period. If the same patient was contacted six months and three weeks since discharge, the contact was recorded in the month six, week four calling period. If patients were contacted more than eleven months after discharge, the data were entered in the month eleven, week four column and given an alpha
code to indicate the calling period fell outside the eleven-month period.

If contact was made, the patient was informed the purpose of the call was for quality improvement purposes. Callers explained the interest in his/her progress since discharge to assist with the evaluation of a new program for alumni. Alumni were informed the information was needed to compare progress between pilot participants and non-participants. Alumni contacted were asked if they would be willing to take approximately 15 minutes to answer some questions and were reminded answers were confidential. The alumni contacted were very enthusiastic about participating and typically, expressed disappointment they were not able to participate in the pilot with ongoing calls.

Callers identified themselves as employees of the facility and stated their position. Since FCC counselors were most familiar with the scoring of the questions as well as highly trained in the use of the Access database, they were the most logical people to conduct the calls. It could be argued the FCC counselors making the calls had a specific interest in the success of the pilot and should not make the calls. However, it was determined
improvement purposes only. The contacts with the non-pilot participants cannot be considered a control group to the contacts with pilot participants as different methodologies were utilized.

The facility received a great deal of positive feedback from pilot and non-pilot patients related to the FCC program. An example of one of the many positive comments was: 'I wish there had been a program like that for me when I got out of treatment'.

Numerous similar anecdotal information from participants, non-participants, and alumni, was received in support of the program. It was determined there was sufficient information to indicate the program was making a difference. Another benefit of contacting individuals who did not participate in the FCC pilot program was the opportunity to offer additional assistance if needed. Feedback on the level of satisfaction with continuing care referrals was also collected.

Pilot Findings

The pilot was in effect until December 31, 2000. The result of the pilot indicated the CCF were unable to keep up with the call volume. There was a team in place
throughout the pilot who met weekly to utilize as a resource to address problems and make improvements. One example was to reduce the number of attempts made to contact participants from three to one.

Another important aspect of the CCF job was to work with his/her caseload of 20 patients to develop continuing care plans and locate referrals. The pilot revealed patients in treatment consistently took priority over calls. The final decision made was to separate the continuing care planning duties from the duties related to FCC. The position of FCC counselor was established.

Current Focused Continuing Care Program

Program Description:
After Pilot

Participants are contacted for 11 months from the date of discharge at regularly scheduled intervals (see Appendix A). The 11-month calling period was chosen to emphasize the importance of the first year of recovery after treatment. There is continuous emphasis placed on the fact treatment does not end after discharge and follow-through with continuing care recommendations are considered to be the next phases of treatment. Edwards et al. (1977) also
utilized a 12-month follow-up period beginning from the day of admission citing value in presenting the treatment process as a continuation rather than abruptly ending the treatment after discharge.

The goal of contacting participants after discharge is to provide support in follow-through with continuing care recommendations, the participant should not interrogated. The counselor asks a series of open-ended questions whenever possible to get answers to the questions. Questions may be asked directly if the person does not volunteer the needed information during the discussion. (See Appendix B).

As of February 1, 2000, the program was expanded to include all patients. Patients are invited to participate in the FCC program if they completed treatment with staff approval (WSA). Patients who leave Against Medical Advice (AMA) or are discharged to another facility (DOF) are not offered the program. There is no charge to patients for participation in the program; there is no impact on a patient’s treatment if participation in the program is declined.

It was determined the second week of treatment was a more appropriate time to introduce the FCC program given a
patient was more likely to have completed detoxification by this time. Since the job duties were divided, the Continuing Care Facilitator led the continuing care group. The FCC counselor spent the last fifteen minutes with new patients to discuss the FCC program.

**Job Duties.** The primary job duties of the FCC counselors as of January 10, 2000 were to make follow-up calls and meet with patients before discharge to explain the program and answer questions. Another member of the treatment team handles specific continuing care planning patient needs. The FCC counselors and the CCF continue to work together to meet participant needs after discharge.

The FCC counselors were not permitted to act as sponsors for participants. If a participant asked the FCC counselor to be a sponsor or reported difficulty finding a sponsor, the FCC counselor offered suggestions. One suggestion may be for the participant to ask someone of the same sex that he/she has gotten to know from a twelve-step meeting to act as a temporary sponsor. Participants were informed sponsors or temporary sponsors should have at least one year of sobriety.

**Patient Introduction to FCC Program.** Patients were introduced to the existence of the FCC program in the
second week of treatment. Patients were initially given a
general overview of the program in a group setting.

The FCC counselor, the person who contacts the
participant after discharge, meets with each patient to
obtain consent for program participation. A signed consent
was obtained from everyone that agreed to participate. For
the purposes of this study, the term participant denotes a
patient that has signed the FCC consent form. A program
orientation statement was included on the consent form to
emphasize the overall purpose of the program is to assist
participants in the first year of recovery through ongoing
coaching and supportive phone contacts. (See Appendix C).

Approximately two to three days before discharge, the
types of questions and calling schedule are reviewed with
the individual. The best calling days, time of day and at
what number are reviewed to maximize the chances of
reaching the person at the contact period.

Unscheduled Contacts. Participants in the FCC program
were encouraged to contact their FCC counselor whenever
assistance was needed. The FCC counselors provided
participants with their business card and work schedule.
An 800 number was also provided to reach a staff member at
the facility on a twenty-four hour basis. There was a
section available in the Access database to record notes and capture unscheduled interactions. There were occasional instances in which patients called in crisis. The majority of unscheduled calls received from participants were for general information, such as upcoming events or to report they were moving and wanted a contact person.

**Qualifications and Education.** Initially there were two FCC counselors, one male with over four years of recovery and one female with over nine years of recovery. Both counselors reported they worked a personal program of recovery, including twelve-step meeting attendance, communication with a sponsor, and sponsored other individuals in recovery. Both FCC counselors had approximately two years of related experience. One counselor held a Bachelor’s degree and one was working on a Bachelor’s degree.

Two additional counselors, one male, and one female were hired in October 2000. Both were in recovery. One individual had a chemical dependency counselor certification and approximately two years related experience. The other person was going to start a certification program and had 15 years of related
experience. Both were also internal candidates. The FCC program was also offered to the participants in the outpatient program when the two additional counselors were hired.

**Standardization and Training.** A procedural manual was created to outline all aspects of FCC counselor duties. The FCC counselors and the director of the program initially met weekly to discuss the progress of the program. Counselors shared techniques and discussed positive and negative experiences with participants. Procedures were discussed and continuously revised to assess applicability and usefulness. Actual calls were used as scenarios to assess counselor similarities in handling. All counselors utilized the same software program that outlined the flow of the calls that also contributed to standardization.

**Database.** A computer program was developed specifically for FCC in an Access database. The program was developed to record information on each contact with a participant. Initially, the Access database was only going to be used on a short-term basis. The initial plan was to develop a separate module for FCC in the main computerized program used by the facility. In assessing the
organization’s information management needs, the FCC module was moved down the priority list. As a result, a consultant was hired to further develop the Access database.

The consultant’s role was to make the database more user friendly, to reduce the amount of data that had to be typed and to create reports for data analyses and data entry problems. A series of menus were created so the interviewer could point and click whenever possible. Sections for notes in the database also provided the FCC counselors the opportunity to capture any additional information that may be helpful for subsequent contacts.

Buttons were created to categorize participants to assist in data analyses. If participants could not be contacted in a three-month period, participants were placed in inactive status. The period that the participant became inactive was logged so patterns and trends could be noted and used to make program improvements.

Data Collection. One of the main problems in the initial development of the Access program was a great deal of thought was put into what and how information should be entered into the program. However, little attention was given to how the information would be extracted. As a
result, a great deal of time and resources were needed to extract useable information.

An Access database was designed to facilitate data entry for FCC participants. The facility utilized a computerized medical record that FCC counselors could use to obtain participant information. Demographic information was recorded into the Access database at the time of the first contact. Thereafter, a number was utilized to locate the participant’s file and subsequent contacts were added.

The Information Management Systems (IMS) staff provided the initial training on use of the Access software and bi-monthly checks of the database were made to identify additional training needs. Various reports were created to denote records with missing data or other problems such as duplicate or missing field entries.

Calling Schedule and Procedures. Participants are contacted initially at weeks 1 and 3 after discharge. Contacts are then made every 2 weeks for months 2-3 and monthly for months 4-11. The treatment staff determined it was important to contact the participants within the first week after discharge. Therefore, there is a three-week time between the second and third contact (See Appendix A).
For ease of reference in describing calling periods, cycle 1 denotes participants in months 1-3; cycle 2 denotes participants in months 4-6; and cycle 3 denotes participants in months 7-11. A greater amount of staff resources were directed at calling attempts in cycle 1, with a reduction in cycle 2, and further reduction in cycle 3 (See Appendix D). If actual contact is made between a scheduled calling periods, data are entered into the database in the closest calling period. That is, if an attempt to contact a participant was made on day 7 (week 1), but contact was not actually made until day 19, the data would be recorded under the month 1, week 3 calling period.

Term Definitions

Participant

The term patient is used as a general term to denote a person in treatment for addiction. The term participant is used to describe individuals who consented to participate in the FCC program. Only patients who completed the inpatient treatment program with a discharge status of with staff approval (WSA) were eligible to participate in the
program. Patients who were offered the program, but chose not to participate, are considered non-participants.

Continuing Care Recommendations

Participants were instructed to follow the recommendations on the plan for continuing care. Ongoing participation in twelve-step meetings and obtaining a sponsor are common plan components. Since plans are individualized, additional recommendations were also included.

Program Completion

Participants who completed the program were defined as those that the counselor made contact with during cycle 4 (months ten and eleven). One contact made during cycle 4 was required for a participant to be classified as completing the program.

Pilot Group and Non-Pilot Group

The aim of the pilot was for quality improvement purposes and not research purposes. Time and resources were not available to utilize the non-pilot group as a control group. Therefore, the results of this research topic will not include statistical analyses of the non-pilot group. The organization's goal of piloting the
program to half the patient population was to assess the resources needed to offer the program to all patients.

Variable Definitions

Continuous Sobriety

Continuous sobriety was defined as no use of mind or mood altering substances since discharge from the program. Since relapse is part of the disease of chemical dependency, data were also collected on the number of times participants relapse. A one (1) was entered into the database for self-reported continuous sobriety; a zero (zero) was entered into the database if the individual reported having a relapse or were in relapse at the time of the contact. For a score to be coded as continuously sober, a one must be entered for each contact. The numbers of zeros were added to determine how many times a participant relapsed. The assumption was if participants in the program relapsed, ongoing telephone support would contribute to a shorter relapse episode. Continuous sobriety was used as the independent variable for the first hypothesis and as the dependent variable for hypotheses two through four.
Continuing Care
Recommendations

All participants provided input into continuing care recommendations throughout treatment. A written plan outlined steps the participant needed to take after treatment to continue recovery. Core recommendations included: twelve-step meeting attendance, obtaining a sponsor, keeping an appointment with a therapist set up in treatment; or recommendations for another level of care (i.e. outpatient, extended care). Other recommendations may include direction to contact the American Lung Association for help to quit smoking, follow-up with a physician regarding abnormal lab values, or a suggestion to contact a local college for information on continuing education. Plans were signed by participants to indicate receipt of and a commitment to the recommendations.

The FCC counselor obtained a copy of the participants’ continuing care plan to inquire about the level of follow-through. The participants were asked open-ended questions, such as: 'what have you been doing for your continuing care?' The counselor listened for participants to report involvement in each item listed on their plan. If the
participant did not mention one of the items, the FCC counselor asked a question specific to the item. Counselor judgment was required to score the level of participation if there were parts of the plan the participant reported not having completed. Consideration was also given to the length of time the participant had been out of treatment and his/her current life situation. For example, if a participant returned home and had to move unexpectedly, it may not be practical to start an outpatient program right away. In this example, if the participant verbalized he/she had made contact with the program and set a start date, it is reasonable to categorize the participant as involved in continuing care recommendations. However, if a participant stated he/she was too busy to think of continuing care, then it becomes apparent he/she is not putting sobriety first and requires redirection. The participant in the above situation would be scored as not involved in continuing care recommendations.

A score of one (1) was entered if the participant reported involvement and a score of zero (0) was entered for no involvement. When two contacts were made in the last quarter, an overall score was calculated and coded. A
person was coded as a one (1) if involvement in continuing care was reported for both contacts. If one contact was made and the participant reported involvement, a one (1) would also be coded. If a person reported involvement at month 10 and not at month 11 or vice versa, a score of zero (0) was coded. Continuing care involvement was examined in hypothesis two and is the dependent variable.

Twelve-Step Meeting Attendance

Participants were asked if they attended twelve-step meetings since the last phone contact. Twelve-step meetings included AA, NA, and CA. If participants reported attending meetings since the last contact, they were asked about attendance frequency. The interviewer determined which of five categories to place response: never (0); rarely (1 time per month); sometimes (1-2 times per week); often (3-5 times per week); or very frequently (daily). The interviewer determined which category best described the pattern of attendance since discharge. Since data from the last quarter were utilized, if data from two contacts were present then an average of the two scores was used to code individuals on the five-point scale. Meeting attendance was examined in the third hypothesis and is the dependent variable.
**Sponsorship**

FCC Participants were asked if they obtained a sponsor or a temporary sponsor since the last contact. A temporary sponsor is someone who acts as a sponsor to the participant until he/she has gotten the chance to interact with others in recovery before asking someone to be a permanent sponsor. Participants in the first 90 days of recovery are encouraged to utilize temporary sponsors. Participants reporting having no sponsor in month 10 or 11 were coded as a zero (0). Participants, who reported having a sponsor, were asked how often they communicated. The FCC counselor determined which of five categories to place the response: never (0); rarely (1 time per month); sometimes (1-2 times per week); often (3-5 times per week); or very frequently (daily). Similarly, since data for the last quarter were utilized, if data from two contacts were obtained then an average of the two scores was used to code participants on the five-point scale. Sponsorship communication was examined in hypothesis four and is the dependent variable.

**Hypotheses**

The effects of providing supportive telephone contact to participants following discharge from a short-term
residential program were examined. Specifically, are continuously sober participants in the FCC program, more likely to report a higher frequency of following continuing care recommendations, attending weekly twelve-step meetings and communication with a sponsor? When examining relationships between continuous sobriety and the variables continuing care involvement, twelve-step meeting attendance, and sponsor communication, does gender predict the relationship? If relationships exist, in any of the above areas, then further analyses may offer an answer to Miller’s (1992) question of whom short term residential treatment appears to be effective.

Minnesota model treatment programs were initially designed for males. Therefore, the expectation is males do better in these programs compared to females. However, outcome research directed at females is minimal and additional empirical research is needed. The data collected during the pilot phase supported a higher rate of continuous sobriety for males. However, the residential treatment program studied offers gender specific treatment and prior outcome studies found higher rates of continuous sobriety for females. The organization’s historical
outcome studies provide a useful comparison group to findings from this study.

The first hypothesis predicted a relationship between continuous sobriety and gender. The relationships examined for each hypothesis are outlined below.

**Hypothesis One: Gender and Continuous Sobriety**

There is a relationship between gender and continuous sobriety.

**Hypothesis Two: Continuing Care Involvement**

There is a relationship between participants reporting as continuously sober and following through with continuing care recommendations as well as gender and continuing care involvement.

**Hypothesis Three: Twelve-Step Meeting Attendance**

Relationships will be examined for participants reporting as continuously sober and how often twelve-Step meetings are attended. Gender will also be considered in the examination of relationships between sobriety and meeting attendance.
Hypothesis Four: Sponsor Communication

Lastly, a relationship between participants reporting as continuously sober and the frequency of communicating with a sponsor (or temporary sponsor) is predicted. The gender of the participant was also examined in the relationship between continuous sobriety and sponsor communication. Table 2 provides and overview of the hypotheses examined.

Table 2. Summary of Hypotheses and Variables

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Dependent Variable</th>
<th>Independent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a relationship between gender and continuous sobriety.</td>
<td>Continuous Sobriety</td>
<td>Gender</td>
</tr>
<tr>
<td>2. There is a relationship between continuing care involvement and a) Continuous sobriety; b) Gender and continuing care involvement.</td>
<td>Continuing Care Involvement</td>
<td>a) Continuous Sobriety; b) Gender</td>
</tr>
<tr>
<td>3. There is a relationship between 12-step attendance and a) Continuous sobriety; b) Gender.</td>
<td>12-Step Attendance</td>
<td>a) Continuous Sobriety; b) Gender</td>
</tr>
<tr>
<td>4. There is a relationship between sponsor communication and a) Continuous sobriety; b) Gender.</td>
<td>Sponsor Communication</td>
<td>a) Continuous Sobriety; b) Gender</td>
</tr>
</tbody>
</table>

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Research Design

Another approach in research design would be to randomly assign patients to a treatment or control group. The treatment group would receive the scheduled calls according the schedule (see Appendix A) and the same instrument would be utilized (See Appendix B). The control group would be asked a standardized set of questions at repeated intervals, such as 3, 6, and 12 months after discharge. In the control group, the questions would be for the purpose of data collection and in the treatment group the calls would be for the purpose of support. In the case of the selected hypotheses for this study, the standardized questions for the control group would pertain to the patient’s sobriety, involvement in continuing care, attendance at twelve-step meetings and communication with a sponsor. In the control group, the person who made the calls would not interact with the patient while in treatment.

To further add value to the research design, it would be ideal to obtain a pre-test and post-test score for both the treatment and control groups. The one contact method utilized in this study was not preferable to test significant differences between the two groups.
In the one contact method used during the pilot phase of the program development, the callers worked in the residences. In many cases, the non-participants contacted knew the person calling. It was difficult to assess the differences; in essence, the patients contacted from the non-pilot halls received a similar intervention during the one contact.

Although self-reported data are accepted in the research, it is a limitation of this study. In an ideal research design, procedures could be put in place to verify the self-reported data. Procedures may include collaboration with family members regarding the participant's sobriety and participation in continuing care. Ideally, drug testing could be performed to substantiate the self-report. However, these procedures were not used in this research design.

The utmost care was taken to protect participant confidentiality. Even with consent from a participant to speak to a family member, there is a risk of violating confidentiality. After treatment, there are a number of relationship problems that may arise. A person's behavior in active addiction can be held against him/her in recovery. Therefore, FCC counselors did not seek out
family member input on how the participant was doing. Due
to the geographical location of program participants, drug
testing was not possible. Drug testing is a viable option
for programs that serve a local community.

Validity and Reliability

In terms instrument validity, only questions 1, 5, 6, 7,
and 8, are discussed (See Appendix B). Testing was not
completed for responses to all questions. The requirements
for content validity are met. The necessary information
was obtained from participants regarding sobriety and
continuing care participation. The counselors collected
information on the frequency of 12-step meeting attendance
and the level of communication with sponsors. Construct
validity was achieved in the area of continuous sobriety.
For a participant to be continuously sober, it is generally
agreed upon, this would mean no use of mind or mood or
altering substances. However, the acceptance level for
this construct would vary by field or group of
professionals. In terms of defining behaviors associated
with the construct of continuing care participation, there
is agreement within the Minnesota model based treatment
community. Acceptance as a construct in the literature
would be debated. Currently, there is not agreement within the chemical dependency field of accepted constructs. Agreement is difficult to achieve due to the wide-range of philosophies and approaches to treatment.

There are few similar and well-established instruments to compare to the new instrument utilized in this study. A comparable instrument was utilized in the recovery case management pilot conducted by Hazelden (Owen, 1994). Testing was not conducted to compare the correlation coefficients of the two instruments. The FCC program model is still new and a longer period will be needed to determine if there is predictive validity. Since the same instrument is used for outpatient participants, it will be possible to measure this more effectively in the future.

In terms of reliability, the instrument utilized has consistently demonstrated the desired information can be obtained from the same participants over time. The instrument was also utilized by a number of FCC counselors. There has not been evidence of a wide variation in responses between male and female residences. If there were inherent problems regarding reliability and validity, we would expect to see fluctuations. There is variation
between males and females but this is attributed to gender differences and not the instrument.

Available resources determined the design chosen for this study. Treatment facilities in general typically do not have unlimited resources for research. A balance needs to be achieved in conducting useful research with what is available. However, available resources will limit the extent of research conducted in treatment facilities. It is believed the findings of this study are value-added and fill a gap in the research. Interventions must continue to be explored that can be replicated in treatment facilities that encourage patients to follow through with continuing care recommendations.

Analytical Tools

Data were first exported from an Access database to an Excel file. This was necessary to assess an overall score. For example, if two contacts were made in the last quarter, months 10 and 11, the responses were averaged. The Excel file was imported into a SPSS database, a statistics software package for social science. SPSS was utilized to create a database to analyze data gathered from the contacts. The variables were named, value labels were
assigned, and responses were coded. The exploratory function in SPSS was utilized to review the accuracy of the data. The descriptive statistics functions were utilized to examine the demographic information to compare to the general population.

Frequencies, cross tabulations and chi squares were utilized to obtain descriptive data analyses. It was appropriate to perform chi square analyses because the data were at a nominal level.

Independent sample t-tests were utilized to determine the strength of the sample size. Homogeneity of variance was utilized to determine if the two groups could be considered equal.

The first hypothesis pertains to observed differences in sobriety rates between male and female FCC participants. The DV is continuous sobriety and the IV is male and female FCC participation. Both are nominal level variables. Continuous sobriety is used as the grouping variable in this test.

The second hypothesis suggests FCC participants that report as continuously sober will be more likely to report involvement in their continuing care plans. The DV is continuing care participation and the IV is continuous
sobriety. In this case, the test variable is continuing care involvement and the grouping variable is continuous sobriety. Both variables are nominal level data.

In hypotheses, three and four the grouping variable is continuous sobriety and it is the IV in both cases. The test variables, or DV's are communication with a sponsor and frequency of twelve step meeting attendance.

Limitations of the Study

There are a number of factors to consider regarding the generalizability of the data. The study is based upon data from one private, non-profit, inpatient residential treatment program. The patient population is unique compared to other settings in a number of areas: the majority of patients are self-paying versus insurance, the length of stay is approximately 25-32 days, the facility typically runs at capacity, treatment is gender specific and there are an equal number of male and female beds.

In many other treatment facilities, the majority of patients in treatment utilize insurance, resulting in a much shorter length of stay. Since the focus of this study is on patients who complete treatment, it is not known what
the impact of the FCC program would have on patients with a shorter treatment stay.

To meet patient care needs and best utilize staff resources, it was necessary to separate who would get the treatment intervention by patient residence. Office space availability was an important consideration in deciding which patient residences were offered FCC. From the beginning, the decision was to include one male and one female residence in the pilot.

The initial pilot began with two residences, one male, and one female. Two female FCC counselors were assigned to make the calls. Given one focus of the study is to examine gender differences, it is possible initial data collected from male residences, may have been influenced by participants responding more positively to a female caller.

The female FCC counselor initially assigned to the male pilot residence was not in recovery and may have limited the male participants from utilizing the calls as a source of support. The female FCC counselor assigned to the female residence went on a leave of absence for a six week period, during that time, a male took over the calls that was familiar with the calling procedures and processes. Speaking to a male may have limited the discussions.
Overall, responses from participant satisfaction surveys consistently included positive feedback for the FCC counselors making the calls.

Another limitation of the study pertains to the data examined for quality improvement purposes during the pilot phase of the program for patients who completed the inpatient program but were not involved in the FCC pilot. Thirty-three percent of the males and thirty-four percent of the females were contacted. The sample size was small and patients contacted ranged in time from discharge from one to twelve months. Therefore, sobriety rate comparisons were interpreted with caution. Ideally, if a larger sample were available, responses of participants and non-participants would be compared from time since discharge.

An outside company obtained the initial data available to the facility regarding outcomes of patients before the implementation of FCC. Previous findings from outcome studies were used as baseline for comparing pilot and non-FCC participants. Although the company described data collection methods, the use of sound research principles by the company was not confirmed.

During initial training efforts on the Access database there were instances in which entries were inadvertently
entered over and the entry had to be recreated from the caller's notes. Although these errors were caught early and primarily occurred at the beginning, it is possible errors were made in recreating entries from notes after the fact. Another limitation of the study is that organizational changes were made during the pilot study. Staff supervision changed after the pilot phase.

As the volume of calls increased, the availability of staff resources led to a reduction in the number of attempts that could be made to reach a participant. Contact rates were higher when more attempts were made to reach the participant. As a result, the number of total contacts with participant was reduced. However, it was only for a period of approximately four months that fewer attempts were made which should not significantly affect the data.

Although a great deal of effort was put into the standardization of coding responses, differences among scorers must be acknowledged as a limitation since the scorer may in part account for any gender differences noted. It is not expected this limitation had any significant impact on the data analyses. Weekly meetings
were utilized to review scoring methods and overall scoring was consistent among counselors.

Another limitation may be the variation in call length, eight to nine minutes for men and twelve to fifteen minutes for women. It may be women respond more positively to the intervention due to having more phone time with the FCC counselor.

There are limitations to the research design selected. Ideally, a control group would be utilized to compare findings. Due to limited resources and a specified time line, it was not possible to have a randomized control group and treatment group. However, the facility’s historical outcome data was used to compare findings. The data analyses provided insight into factors related to continuous sobriety.
Purpose of Study

The purpose of this study was to determine what influence scheduled phone contacts would have on the extent of follow-through of continuing care recommendations by participants after treatment. Continuing care recommendations associated with ongoing sobriety include going to another level of care (individual therapy, group therapy, outpatient treatment), attending twelve-step meetings and communicating with a sponsor. Continuing care recommendations are typically written and referred to as a continuing care plan.

Gender was first explored as related to continuous sobriety. Relationships between continuous sobriety and twelve step meeting attendance, sponsor communication and overall continuing care involvement were also examined. When relationships were found, other variables were introduced to further explore relationships. Measures of association were used to assess the strength and predictability of significant relationships.
Demographics

General Population

The facility has 40 male beds and 40 female beds and runs at approximately 92% occupancy. Forty-six percent of patients admitted to the program are between the ages of 41 and 55. Males and females were admitted with similar frequencies, 48% for females, and 52% for males. The average length of stay for patients that complete treatment was 25.7 days. A breakdown of geographical location indicated 46% of the patients were from California, 50% from other states, and 4% from other countries.

In terms of primary diagnosis, a breakdown of the patient population indicated: 77% alcohol dependence, 7% cocaine dependence, 7% opiate dependence, 3% poly-substance dependence (dependence on three or more mood-altering chemicals), 2% amphetamine dependence, 3% cannabis dependence; and 1% benzodiazepine dependence.

An in-depth review of the primary diagnosis of the population indicated: 61% had a diagnosis of alcohol dependence only; 16% alcohol dependence with a secondary diagnosis of addiction to another drug; 13% had a diagnosis of dependence on a single drug other than alcohol; 7% had a diagnosis of dependence on two or more
drugs other than alcohol; and 2.3% had a primary diagnosis of dependence on a drug other than alcohol with a secondary diagnosis of addiction to alcohol.

A review of method of payment for treatment indicated 62% paid for treatment themselves. Health insurance benefits were accessed for 32% of the patients and 6% qualified for financial assistance provided by the facility.

The majority of patients completed treatment successfully. There were 1,070 discharges for the year 2000 and 87.9% (941) of patients admitted were discharged with staff approval (WSA). Females were slightly more likely to complete treatment than males, 93.2%, and 91% respectively. The monthly average for patients who left treatment against medical advice (AMA) was 8%. There were no significant difference between AMA rates for males and females. Patients asked to leave treatment at the request of staff (ASR) made up approximately 2.6% of discharges. Patients discharged to another treatment facility (DOF) accounted for 1.4%. The most frequent occurring race and ethnicity were white (84.8%) and non-Hispanic (95.1%).
Focused Continuing Care Population

In terms of the demographics of the FCC population compared to the general population, the most significant difference was observed for gender. The sample of the FCC population was 68% (n=131) females and 32% (n=61) males in comparison to 48% and 52% in the general population. Data entry inconsistencies for a portion of the male population were found. Inconsistencies traced back to one FCC counselor. Due to the unreliability of the data, questionable cases were thrown out. Therefore, the male population contains fewer cases than the female population.

Table 3. Male and Female Participants

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>61</td>
<td>31.9</td>
</tr>
<tr>
<td>Females</td>
<td>130</td>
<td>68.1</td>
</tr>
</tbody>
</table>

The mean age of participants was forty-seven. Age groups 31-40, 41-50 and 51-60, as shown in table 4, represented three quarters of the population.
Table 4. Age Distribution of Participants

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30 years</td>
<td>12</td>
<td>6.0</td>
</tr>
<tr>
<td>31-40 years</td>
<td>45</td>
<td>24.0</td>
</tr>
<tr>
<td>41-50 years</td>
<td>60</td>
<td>31.5</td>
</tr>
<tr>
<td>51-60 years</td>
<td>36</td>
<td>19.0</td>
</tr>
<tr>
<td>61-70 years</td>
<td>33</td>
<td>17.0</td>
</tr>
<tr>
<td>71-80 years</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>Totals</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The geographical make-up of the FCC population was similar to the general population. Approximately 50% were from California, 47% from other states, and 3% from other countries.

Table 5 illustrates the primary diagnoses of the FCC population mirrored the general population. The most frequent diagnosis was alcohol dependence, accounting for 69%. Another 9% had a diagnosis of alcohol dependence as well as a dependence on another drug. Opiate dependence (7%) and poly-substance dependence (6%) were the second and third most occurring diagnosis. At the end of the FCC program, 61% of the population reported continuous sobriety since discharge.
Table 5. Participants' Primary Diagnoses

<table>
<thead>
<tr>
<th>Drug Dependence</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>131</td>
<td>68.6</td>
</tr>
<tr>
<td>Cannabis</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>Opiod</td>
<td>12</td>
<td>6.3</td>
</tr>
<tr>
<td>Amphetamine</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Benzodiazepine</td>
<td>4</td>
<td>2.1</td>
</tr>
<tr>
<td>Cocaine</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>Polysubstance</td>
<td>11</td>
<td>5.8</td>
</tr>
<tr>
<td>Benzo &amp; Opiod</td>
<td>8</td>
<td>4.2</td>
</tr>
<tr>
<td>Alcohol &amp; Barb</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Alcohol &amp; Benzo</td>
<td>9</td>
<td>4.7</td>
</tr>
<tr>
<td>Alcohol &amp; Cocaine</td>
<td>6</td>
<td>3.1</td>
</tr>
<tr>
<td>Alcohol &amp; Cannabis</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100</td>
</tr>
</tbody>
</table>

The majority (93%) of participants in the program were white and non-Hispanic. As illustrated in Table 6, approximately 60% of the population was married. Divorced and separated each accounted for 17% of the population.

Table 6. Marital Status of Participants

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>112</td>
<td>58.6</td>
</tr>
<tr>
<td>Single</td>
<td>33</td>
<td>17.3</td>
</tr>
<tr>
<td>Divorce</td>
<td>33</td>
<td>17.3</td>
</tr>
<tr>
<td>Separated</td>
<td>7</td>
<td>3.7</td>
</tr>
<tr>
<td>Widowed</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>Never Married</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The categories utilized for occupation and daily activity were collected from the Addiction Severity Index (ASI), one of the initial assessment tools utilized by the organization. Tables 7 and 8 provide the categories.
utilized for occupation and daily activity including the frequency and percentages of cases. Approximately one fourth of the population reported their usual occupation to be in the area of business manager. Higher executives accounted for approximately 17% followed by administrative personnel at 16%. Participant reports of daily activity indicate 25% employed full time with an occupation in the business manager area. Homemakers accounted for approximately 20%, followed by 15% unemployed.

Table 7. Occupation of Participants

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Executive</td>
<td>33</td>
<td>17.3</td>
</tr>
<tr>
<td>Business Manager</td>
<td>42</td>
<td>22.0</td>
</tr>
<tr>
<td>Administrative Personnel</td>
<td>31</td>
<td>16.2</td>
</tr>
<tr>
<td>Clerical, Sales</td>
<td>17</td>
<td>8.9</td>
</tr>
<tr>
<td>Skilled Manual Labor</td>
<td>18</td>
<td>9.4</td>
</tr>
<tr>
<td>Semi-skilled Worker</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>Unskilled</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Homemaker</td>
<td>23</td>
<td>12.0</td>
</tr>
<tr>
<td>Student</td>
<td>9</td>
<td>4.7</td>
</tr>
<tr>
<td>Not Answered</td>
<td>13</td>
<td>6.8</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 8. Daily Activity of Participants

<table>
<thead>
<tr>
<th>Daily Activity</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed Full Time</td>
<td>47</td>
<td>24.6</td>
</tr>
<tr>
<td>Employed Part Time</td>
<td>7</td>
<td>3.7</td>
</tr>
<tr>
<td>Work temp/on-call/intermittent</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Self-Employed- Full Time</td>
<td>19</td>
<td>9.9</td>
</tr>
<tr>
<td>Student</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>Homemaker</td>
<td>38</td>
<td>19.9</td>
</tr>
<tr>
<td>Institutionalized</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Retired</td>
<td>16</td>
<td>8.4</td>
</tr>
<tr>
<td>Not working due to Disability</td>
<td>5</td>
<td>2.6</td>
</tr>
<tr>
<td>Unemployed</td>
<td>29</td>
<td>15.2</td>
</tr>
<tr>
<td>Unknown</td>
<td>25</td>
<td>13.1</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 9 provides a breakdown of self-reported sobriety from participants by quarter over the eleven-month contact period. The rates of continuous sobriety appear to get higher each quarter. This is because summaries of the individual quarter are examined and the data does not take into account reports from other quarters. Consequently, data needs to also be studied cumulatively.
Table 9. Quarterly Self-Reported Sobriety Rates of Participants

<table>
<thead>
<tr>
<th>Sobriety Status</th>
<th>Frequency</th>
<th></th>
<th></th>
<th>Percent</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
</tr>
<tr>
<td>Continuous Sobriety</td>
<td>152</td>
<td>165</td>
<td>168</td>
<td>167</td>
<td>79.6</td>
<td>86.4</td>
<td>88.0</td>
</tr>
<tr>
<td>1 Relapse, Sober Last contact</td>
<td>18</td>
<td>11</td>
<td>5</td>
<td>4</td>
<td>9.4</td>
<td>5.8</td>
<td>2.6</td>
</tr>
<tr>
<td>1 Relapse, Relapse Last Contact</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>2 Relapses, Sober Last contact</td>
<td>13</td>
<td>12</td>
<td>12</td>
<td>16</td>
<td>6.8</td>
<td>6.3</td>
<td>6.3</td>
</tr>
<tr>
<td>2 Relapses, Relapse Last Contact</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>0.0</td>
<td>1.0</td>
<td>2.1</td>
</tr>
<tr>
<td>3 or more Relapses</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>16.2</td>
<td>0.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>191</td>
<td>191</td>
<td>191</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 10 provides a cumulative score that takes into account all participant reports and depicts the status of sobriety for each quarter. For example, a participant reporting as continuously sober in the first quarter, has one relapse the second quarter, and reports sober for the last two quarters would be coded as '1' to indicate relapse in the cumulative table for quarters 2-4. The cumulative data indicates continuous sobriety rates go down over time. The purpose of tables 9 and 10 is to show participants that reported relapse frequently returned to sobriety. At the end of the FCC program, 61% of the population reported continuous sobriety since discharge.
Table 10. Quarterly Summary of Cumulative Sobriety Rates of Participants

<table>
<thead>
<tr>
<th>Sobriety Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
</tr>
<tr>
<td>Continuous Sobriety</td>
<td>152</td>
<td>138</td>
</tr>
<tr>
<td>1 Relapse</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td>2 Relapses</td>
<td>13</td>
<td>23</td>
</tr>
<tr>
<td>3 or more Relapses</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>191</td>
</tr>
</tbody>
</table>

Participants who had one relapse accounted for 13%, 19% of the population reported two relapses. One of the program goals was to provide support to participants that relapsed to reduce the time in relapse. By the end of the program, 27% of the population that had experienced a relapse was sober. Therefore, 88% of the population were sober a year after the admission to the inpatient treatment program. The remaining 12% that were in relapse at the end of the year continued to communicate with the FCC counselors.

Data Analyses

Frequencies and cross tabulations were initially examined. Two-way tables were used to first describe the variables: continuous sobriety, continuing care involvement, twelve-step meeting attendance, and
communication with a sponsor. To draw conclusions about relationships in the population, the chi square test of independence was utilized. This test was appropriate because nominal (categorical) data were used. All assumptions for Chi Square have been met including the independence of the variables. Expected frequencies were large enough to provide a reasonable approximation to the distribution of the statistic. The requirements for non-occurrences are included in the analysis. An alpha level of .05 was used for each statistical test. Alpha levels of .01 and .001 are depicted in the tables to provide additional information.

When relationships were detected, measures of association were run to determine the strength of predictability and association of the relationship. These tests included the Phi and Cramer’s V for association, the Lambda for predictability and Kendal’s Tau-b for the ordinal data. Three-way tables, cross tabulations were introduced to further explore the data when significant relationships were found. Chi square tests of independence were utilized to make additional inferences into the population studied. Phi values are depicted in the tables presented.
Hypotheses

Hypothesis One: Gender and Continuous Sobriety

The purpose of the first hypothesis was to explore if there was a relationship between gender and continuous sobriety. The cross tabulations revealed a difference of 7.5% between rates of reported continuous sobriety between males and females. Male continuous sobriety was 78.7% compared to females at 86.2%.

A chi square test of independence was used to calculate the number of participants expected to fall into each cell assuming no relationship between gender and sobriety. The chi square test indicated no relationship was found between continuous sobriety and.

Hypothesis Two: Continuing Care Involvement

The second hypothesis examined if there was a relationship between continuous sobriety and continuing care involvement. The majority of the population, 72%, reported no involvement in continuing care recommendations provided on the plan. See Table 11 for participants' responses to continuing care involvement.
Table 11. Continuing Care Involvement

<table>
<thead>
<tr>
<th>Reported Involvement in Continuing Care</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Involved</td>
<td>138</td>
<td>72.3</td>
</tr>
<tr>
<td>Involved</td>
<td>53</td>
<td>27.7</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The second hypothesis further examined relationships between continuing care involvement and a) continuous sobriety, b) gender. The cross tabulation table for continuous sobriety and continuing care involvement indicated a higher than expected count for participants reported to be in relapse not involved with continuing care. No involvement in continuing care was reported by 90% of the relapse population indicated. In contrast, a higher than expected count was reported for participants who reported continuous sobriety and were involved in continuing care, 31.3%.

The results of the chi square test of independence found a significant association between continuing care involvement and continuous sobriety $X^2 (1, N = 191) = 6.02$, $p < .014$. Therefore, a relationship was found between continuous sobriety and continuing care involvement. See Table 12. Since a relationship was found, measures of
association were used to determine the association and predictability of the relationship. These tests indicated the extent to which the variable can be predicted is weak although the degree of association is very strong.

Table 12. Continuing Care Involvement and Sobriety Status

<table>
<thead>
<tr>
<th>Continuing Care Involvement</th>
<th>Sobriety Status</th>
<th>Total (%)</th>
<th>$X^2$</th>
<th>$\phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Relapse (%)</td>
<td>Continuous Sobriety (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>28 (14.7)</td>
<td>110 (57.6)</td>
<td>138 (72.3)</td>
<td>6.028*</td>
</tr>
<tr>
<td>Yes</td>
<td>3 (1.6)</td>
<td>50 (26.2)</td>
<td>9 (27.7)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31 (16.2)</td>
<td>160 (83.8)</td>
<td>191 (100)</td>
<td></td>
</tr>
</tbody>
</table>

* $p<.05$

Since a relationship was found between continuing care involvement and continuous sobriety, a three-way analyses was conducted to determine if gender was a factor in the relationship. No relationships were found for gender.

The relationship between continuing care involvement and gender indicated a higher than expected count for males who reported not being involved in continuing care, 78.7% compared to 69.2% of females. A higher than expected count was also found for females who reported involvement in continuing care, 30.8% versus 21.3% for males. A chi
square test found no significant association between gender and follow-through with continuing care recommendations.

**Hypothesis Three: Twelve-Step Meeting Attendance**

Over half (53%) of the population reported attendance at twelve-step meetings three to five times per week, 17% reported no attendance, and 14% reported daily attendance. Table 13 provides the frequencies for each group.

**Table 13. Participants Reported Twelve-Step Meeting Attendance**

<table>
<thead>
<tr>
<th>Frequency of Meeting Attendance</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>32</td>
<td>16.8</td>
</tr>
<tr>
<td>1 time per month or less</td>
<td>10</td>
<td>5.2</td>
</tr>
<tr>
<td>1-2 times per week</td>
<td>22</td>
<td>11.5</td>
</tr>
<tr>
<td>3-5 times per week</td>
<td>101</td>
<td>52.9</td>
</tr>
<tr>
<td>Daily</td>
<td>26</td>
<td>13.6</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Relationships were examined between twelve-step meeting attendance and a) continuous sobriety, b) gender. Cross tabulations for frequency of meeting attendance indicated 41.9% of the total relapse population reported no twelve-step meeting attendance. In comparison, 11.9% of the continuous sobriety population reported no meeting
attendance, a difference of 30%. There was a large spread between the relapse participants (25.8%) and the continuous sobriety participants (58.1%) for attending meetings three to five times per week.

The chi square test of independence found a highly significant relationship between continuous sobriety and twelve-step meeting attendance, $X^2 (2, N = 191) = 16.360, P < .001$. See Table 14. Measures of association were examined to interpret the chi square statistic. The Phi measure indicated a very small observed level of significance supporting an association between the variables.

Table 14. Twelve-Step Meeting Attendance and Sobriety Status

<table>
<thead>
<tr>
<th>Sobriety Status</th>
<th>Meeting Attendance</th>
<th>Total (%)</th>
<th>$X^2$</th>
<th>$\phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 1 meeting/month (%)</td>
<td>1-2 meetings/week (%)</td>
<td>3-7 meetings/week (%)</td>
<td></td>
</tr>
<tr>
<td>Relapse</td>
<td>14 (7.3)</td>
<td>6 (3.1)</td>
<td>11 (5.8)</td>
<td>31 (16.2)</td>
</tr>
<tr>
<td>Continuous Sobriety</td>
<td>28 (14.7)</td>
<td>16 (18.4)</td>
<td>116 (60.7)</td>
<td>160 (83.8)</td>
</tr>
<tr>
<td>Total</td>
<td>42 (22.0)</td>
<td>22 (11.5)</td>
<td>127 (66.5)</td>
<td>191 (100)</td>
</tr>
</tbody>
</table>

*p<.05 **p<.01 ***p<.001
Cross tabulations for gender and meeting attendance indicated the highest frequency for meeting attendance was found in the three to five times per week category, 53.1% for females and 52.5% for males. A chi square test found no significant relationship between twelve step meeting attendance and gender.

A three-way analyses was used to examine if gender interacts with the relationship between continuous sobriety and twelve-step meeting attendance. No relationships were found.

Hypothesis Four: Communication with Sponsor

Table 15 shows the frequency of communication with a sponsor reported by the participants. The most frequent communication occurred three to five times per week for approximately 40% of the participants. Only 4% of participants reported daily communication.

Table 15. Frequency of Sponsor Communication

<table>
<thead>
<tr>
<th>Frequency of Sponsor Communication</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>56</td>
<td>29.3</td>
</tr>
<tr>
<td>1 time per month or less</td>
<td>9</td>
<td>4.7</td>
</tr>
<tr>
<td>1-2 times per week</td>
<td>42</td>
<td>22.0</td>
</tr>
<tr>
<td>3-5 times per week</td>
<td>76</td>
<td>39.8</td>
</tr>
<tr>
<td>Daily</td>
<td>8</td>
<td>4.2</td>
</tr>
<tr>
<td>Total</td>
<td>191</td>
<td>100.0</td>
</tr>
</tbody>
</table>
A relationship between the two independent variables a) continuous sobriety, b) gender, and communication with a sponsor was predicted. See Table 16 for frequencies of sponsor communication and continuous sobriety. The greatest number of participants reporting as sober, 36.6%, attended three to five meetings per week. The relapse group was smaller, 9.9% of the participants who had a relapse reported no contact with a sponsor. The chi square test for independence indicated a highly significant relationship between continuous sobriety and communication with sponsor, $X^2 (4, N = 191) = 19.087$, $p < .001$. The results of the Phi measure indicate there a moderate association between the two variables ($p < .001$).

Table 16. Sponsor Communication and Sobriety Status

<table>
<thead>
<tr>
<th>Frequency of Sponsor Communication</th>
<th>Sobriety Status</th>
<th>Total (%)</th>
<th>$X^2$</th>
<th>$\phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Relapse (%)</td>
<td>Continuous Sobriety (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>19 (9.9)</td>
<td>3 (19.4)</td>
<td>56 (29.3)</td>
<td>19.087***</td>
</tr>
<tr>
<td>1 time/month</td>
<td>1 (0.5)</td>
<td>8 (4.2)</td>
<td>9 (4.7)</td>
<td></td>
</tr>
<tr>
<td>1-2 times/month</td>
<td>5 (2.6)</td>
<td>37 (19.4)</td>
<td>42 (22)</td>
<td></td>
</tr>
<tr>
<td>3-5 times/month</td>
<td>6 (3.1)</td>
<td>70 (36.6)</td>
<td>76 (39.8)</td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td>0</td>
<td>8 (4.2)</td>
<td>8 (4.2)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>31 (16.3)</td>
<td>160 (83.7)</td>
<td>191 (100)</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05 **p<.01 ***p<.001
Cross tabulations for gender and sponsor communication found 22.5% of the females reported no contact with a sponsor compared to 6.83% of the males, see Table 17. Both females (24.1%) and males (15.7%) reported contact three to five times per week with the most frequency. The chi square test of independence was not significant for gender and sponsor communication.

Table 17. Sponsor Communication and Gender

<table>
<thead>
<tr>
<th>Frequency of Sponsor Communication</th>
<th>Gender</th>
<th>Total (%)</th>
<th>X²</th>
<th>φ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (%)</td>
<td>Female (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>13 (6.8)</td>
<td>43 (22.5)</td>
<td>56</td>
<td>4.552</td>
</tr>
<tr>
<td>1 time per month</td>
<td>2 (1)</td>
<td>7 (3.7)</td>
<td>9</td>
<td>(4.7%)</td>
</tr>
<tr>
<td>1-2 times per month</td>
<td>14 (7.3)</td>
<td>28 (14.7)</td>
<td>42</td>
<td>(22)</td>
</tr>
<tr>
<td>3-5 times per month</td>
<td>30 (15.7)</td>
<td>46 (24.1)</td>
<td>76</td>
<td>(39.8)</td>
</tr>
<tr>
<td>Daily</td>
<td>2 (1)</td>
<td>6 (3.1)</td>
<td>8</td>
<td>(4.2)</td>
</tr>
<tr>
<td>Total</td>
<td>61 (31.9)</td>
<td>130 (68.1)</td>
<td>191</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05 **p<.01 ***p<.001

A three-way analysis was used to examine if gender interacts with the relationship between continuous sobriety and sponsor communication. No relationships were found.

Table 18 provides a summary of the chi square tests for each of the hypotheses. Phi values are indicated for significant relationships detected.
Table 18. Summaries of Hypotheses Findings

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>$X^2$</th>
<th>$\phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a relationship between gender and continuous sobriety.</td>
<td>Continuous Sobriety</td>
<td>Gender</td>
<td>1.702</td>
<td></td>
</tr>
<tr>
<td>2. There is a relationship between continuing care involvement and a) Continuous sobriety; b) Gender and continuing care involvement.</td>
<td>Continuing Care Involvement a) Continuous Sobriety b) Gender</td>
<td>6.028*</td>
<td>0.178</td>
<td></td>
</tr>
<tr>
<td>3. There is a relationship between 12-step attendance and a) Continuous sobriety; b) Gender.</td>
<td>12-Step Attendance a) Continuous Sobriety b) Gender</td>
<td>16.360***</td>
<td>0.293</td>
<td></td>
</tr>
<tr>
<td>4. There is a relationship between sponsor communication and a) Continuous sobriety; b) Gender.</td>
<td>Sponsor Communication a) Continuous Sobriety b) Gender</td>
<td>19.087***</td>
<td>0.316</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05  **p<.01  ***p<.001

Various three-way analyses were performed in addition to the variables outlined in the hypotheses examined involving gender. For variables twelve-step meeting
attendance, gender, and sobriety status, a positive relationship was reported for sobriety. Significance was found for the group reporting as continuously sober, $X^2 (2, N = 160) = 6.399, p < .041$. Gender, sponsor communication, and sobriety were also examined. Significance was found for both females, $X^2 (2, N = 130) = 7.395, p < .025$; and continuous sobriety $X^2 (2, N = 160) = 6.490, p < .039$.

Lastly, the variables continuing care involvement, sponsor communication and sobriety status were studied. A highly significant relationship was found for no involvement in continuing care, $X^2 (2, N = 138) = 18.326, p < .001$. The purpose of the additional three-way analyses illustrates the ongoing possibilities of data analyses for future study. Significant relationships are listed in Table 19.
Table 19. Summaries of Hypotheses Findings: Three-way Analyses

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>3-way Analyses Variables</th>
<th>Area of Significant Relationship</th>
<th>X²</th>
<th>φ</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Twelve-step Meeting</td>
<td>Sobriety: Continuous Sobriety</td>
<td>6.399*</td>
<td>.283</td>
</tr>
<tr>
<td></td>
<td>Attendance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sobriety Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Gender</td>
<td>Gender: Females</td>
<td>7.395*</td>
<td>.239</td>
</tr>
<tr>
<td></td>
<td>Sponsor Communication</td>
<td>Sobriety: Continuous Sobriety</td>
<td>6.490*</td>
<td>.201</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sobriety</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Continuing Care</td>
<td>Continuing Care Involvement: No Involvement</td>
<td>18.326***</td>
<td>.364</td>
</tr>
<tr>
<td></td>
<td>Involvement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sponsor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communication Frequency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sobriety</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*P<.05  **p<.01  ***p<.001
The study's purpose was to determine if ongoing telephone contacts influence participation in continuing care recommendations. The assumption was participation in recovery related activities would contribute to the ongoing sobriety of participants. Furthermore, the assumption was participants who relapse, have not participated in continuing care recommendations. Ongoing telephone contacts were also intended to serve as an intervention for participants in relapse to reduce the duration of the relapse episode.

At the end of the FCC program, 61% of the participant population indicated they had remained continuously sober since discharge. This figure is comparable to the facility's historical outcome studies for sobriety rates. The most significant finding was the percentage of participants who experienced relapse, but got back on track and returned to sobriety. Participants who reported one to two relapses during the program accounted for 32%. By the end of the program, 27% of the population who had experienced a relapse was again sober. Therefore, 88% of
the population were sober a year after the admission to the inpatient treatment program. Participants in relapse at the end of the program, maintained communication with the FCC counselors.

To assess the level of participation in continuing care recommendations, the variables continuing care involvement; twelve-step meeting attendance and communication with a sponsor were examined in relation to sobriety. Significant relationships were found for sobriety and each variable.

Gender and sobriety was also examined to determine if differences existed for males and females. No relationships were found. Gender was examined for the recovery related activity variables, involvement in continuing care, twelve-step meeting attendance and sponsor communication to assess differences for males and females. No significant relationships were detected. Of the many three-way analyses conducted using gender as the control variable, one relationship was detected. A relationship was found for the female group and the variables continuous sobriety and sponsor communication.

More males reported as sober but not involved in continuing care. It may be males were more likely to
participant in other recovery related activities, such as meeting attendance and sponsor communication, versus following other continuing care recommendations. Significant relationships were found for both males and females reporting as sober and attending twelve-step meetings. Attendance at three to five twelve-step meetings per week was the most frequent group reported by males and females. Familiarity with twelve-step meetings during treatment may have contributed to ongoing participation in meetings.

A topic for further study would be to further explore twelve-step meeting attendance and the reported daily activity. A larger sample would be needed to determine if significant relationships existed for continuous sobriety and various daily activity groups. It would be useful to explore participants employed full time and homemakers to determine differences in sobriety status. It may be that both have higher rates of sobriety. Homemakers have some flexibility in their schedules and could attend meetings at various times. It may also be that homemakers have the support of spouses and family members to attend meetings. To continue to explore the theory of the homemaker group having family support, an area of future study would be to
determine what proportion of the family members attended the family program and/or participated in Al-Anon (twelve-step meeting support group for those close to an alcoholic/addict). Full-time employed individuals may be more likely to follow a daily schedule and attend meetings before or after work. This would also help explain the finding that the majority of the population attended meetings three to five times per week.

Lastly, a relationship was found for no involvement in continuing care, sobriety, and sponsor communication. The majority of participants who reported no communication with a sponsor reported as sober. It may be this group chose twelve-step meetings as the primary recovery activity. For those communicating with a sponsor, contact three to five times per week was the most reported frequency.

The strength of the FCC program is that it is a program that can be easily replicated in a variety of settings. It may be useful to explore the use of the FCC model in probation to target offenders with a history of dependence upon substances. Using the FCC model would also be one method to evaluate drug and alcohol programs delivered in the correctional setting. The success of a
similar follow-up intervention is not known for programs not based upon a Minnesota model.

The FCC program offers participants an ongoing source of support after leaving the program through a series of planned phone contacts. The pilot phases of program development were instrumental in fine-tuning the program.

The findings from the analysis support the findings from the literature; ongoing recovery is rooted in following continuing care recommendations, communicating with a sponsor, and attending twelve-step meetings.

Additional information and studies are needed on the effectiveness of twelve-step programs that utilize a Minnesota model. Such programs typically place emphasis on going to meetings and talking with a sponsor to achieve abstinence. We are not a society that takes things at face value. A level of proof is required before society can accept information. Recovering treatment professionals may also promote the cornerstones of recovery as attending AA and getting a sponsor. Although professionals have a great deal of experience to draw from, the experience of treatment and principles of the Minnesota model are generally new to participants in treatment for addiction. Whereas lectures may go into great deal on how various
chemicals interact with brain chemistry, insufficient time may be spent explaining why going to meetings and getting a sponsor is crucial to a person’s continuing sobriety.

Since the effects of chemicals on the brain continue after the use of the substance, repetition of key educational components is crucial (Leshner, 2001, 1997).

The findings of this study support previous findings on the importance of continuing care (Ahles et al. 1983; Chappel, 1994; Hambly, 1999; Sheeren, 1988). People are not cured after treatment, treatment facilities must continue to look for ways to be a resource to participants after treatment to promote the participation in recovery activities.

More specifically, the findings of this study provide support for the importance placed on encouraging patients to go to twelve-step meetings (Hoffman & Miller, 1993, 1995; McKay et al., 1994). The most significant relationship between meeting attendance and sobriety was found for the participants who attended meetings three to five times per week. This finding is supported by Fiorentine’s study (1999) that indicated weekly or more frequent meeting attendance was associated with abstinence.
Chi square tests indicated continuous sobriety was related to involvement in continuing care, meeting attendance and sponsor communication. It would be beneficial to provide actual data as part of the education provided to participants in treatment programs. Patients may be more likely to follow recommendations, if the progress of other program participants was shared. Future studies could explore the impact of providing patients with research results as part of program education to determine if follow-through with recovery activities may be enhanced.

There are limitations of this study. The participant population at the facility observed has some unique characteristics. A few of these differences were: males and females are admitted with a similar frequency; admissions are from a vast geographical area; a high percentage of private pay participants; and the admission criteria requires chemical dependency to be the primary addiction. It is not known if the same benefits of the program could be attained in a publicly funded program. With the benefit of serving a smaller community, this model could be expanded to include other ways to reach people such as home visits.
Another limitation that must be mentioned is that the data are self-reported. However, the research supports self-reported data (Adair et al., 1996; Babor et al., 1987; Hoffman & Miller, 1995; Verins, 1983). The length of the follow-up period would ideally be for at least two-year period (Gilbert & Maxwell, 1987; Gillespie, 1967; Goodwin et al., 1971; Gottheil et al., 1982; Hambly et al., 2001; Pokorny, 1968; Rathod et al., 1966; Rohrer et al., 1996; Ramon et al., 1997,1998; Vaillant, 1998; Vaillant et al., 1983). It may be the program could be expanded another 12 months cost effectively utilizing alternate forms of communication such as mailings and electronic communications. This would also be a useful area for future research to explore.

Although all the participants met criteria for chemical dependency upon admission, the severity of addiction was not examined nor was the severity of other diagnoses. It is not known for what levels of addiction severity the program would be most beneficial. Recommendations for future research include replicating this study in a wide variety of settings and levels of care. It would also be worthwhile for replication of a similar program in a psychiatric setting. More stringent
research methodologies would be suggested to include randomly assigned treatment and control groups whenever possible. To add weight to the findings, the collection of other corroborating evidence to support self-reported data is always desirable if resources permit.

The FCC program can be modified to fit the specific needs and resources of the organization. The program studied utilized 14 phone contacts. Other options for program delivery should be explored to include mailings as well as email communication. One area the data was not able to capture was the sincere appreciation expressed from the alumni who completed the program. Feelings of "support" and "encouragement" were often utilized to express gratitude. It may be phone contacts ultimately assist the participant in developing relationships resulting in increased participation in continuing care, twelve-step meetings, and sponsor communication. Miller (1992) indicated recovery could be enhanced even with short-term interventions.

Calls for females were twice as long as for males, which may be the result of females requiring additional time to build trust to continue the relationship.
Therefore, the importance of starting the relationship while females are in treatment may be especially important. The nature of relationship development should be considered separately for females and males with clinical staff in treatment. It may be highly significant relationships were detected for males in both twelve-step meeting attendance and sponsor communication because males do better in interactive settings. Programmatic changes would then equate to more group therapy for males, and more individual sessions for females. More research is needed to verify the accuracy of this assumption.

Another area to consider is the common directive for participants to attend '90 meetings in 90 days' after discharge. Significance between meeting attendance and sobriety was only found for participants who attended three to five meetings per week in this study. It would be in the better interest of treatment participants to individualize what have come to be known as the 'standard recommendation' for meeting attendance. A female with a history of abusive relationships and male dependence may not benefit the most from daily twelve-step meeting attendance. Depending upon the area and type of twelve-step meeting, the meeting may be dominated by males and
therefore detrimental to the female with a history of abusive relationships and male dependence. Additional research examining frequency of twelve-step meeting attendance and meeting types by participants after treatment would be beneficial.

A useful guideline for clinicians to individualize continuing care recommendations is to provide ongoing data on how participants do after discharge. A forum for clinicians to discuss findings and brainstorm ideas for implementation would further contribute to ongoing improvements in care delivery. We must continue to explore what recommendations are most effective for which groups of people. This study has only scratched the surface.

Further studies exploring the ongoing impact of developing and sustaining relationships after treatment would be valuable. The significance found for continuous sobriety and the variables, continuing care involvement, twelve-step meeting attendance and sponsor communication may all share having structured relationships in place as found by Vaillant (1988). If that is the case, then the FCC program adds another dimension to having a structured supportive relationship in place for the recovering individual.
APPENDIX A

CALLING SCHEDULE
<table>
<thead>
<tr>
<th>DAY</th>
<th>WEEK</th>
<th>DATE</th>
<th>INTERVIEWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month 1</td>
<td>Day 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Day 21</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 2</td>
<td>Week 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Week 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 3</td>
<td>Week 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Week 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 4</td>
<td>Week 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 5</td>
<td>Week 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 6</td>
<td>Week 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 7</td>
<td>Week 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 8</td>
<td>Week 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 11)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 9</td>
<td>Week 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 10</td>
<td>Week 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Call 13)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 11</td>
<td>Week 4</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>(Call 14)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Recovery Activities

1. Have you been able to maintain sobriety since discharge / last call?
   Yes ______  No_______

2. If no, how often do you drink or use?
   None _______ Daily _____ Weekly_____ Monthly____

Continuing Care

3. Have you communicated with alumni contact since discharge / last call?
   Yes ______  No_______  N/A _______

   If yes, how often have you had contact?
   ______ Times per month

4. Is there an alumni chapter in your area?
   Yes ______  No_______

   If yes, what percentage of time have you attended since discharge / last call?
   ______ % of time

5. Have you obtained a sponsor (Includes temporary sponsors) since discharge / last call
   or do you still have a sponsor?
   Yes ______  No_______

   If yes, go to question No. 6.
   If no, go to question No. 7.

6. If yes to No. 5, how often have you communicated with your sponsor since discharge / last call?
   Never _____ Rare occasion (1x mo or less) _____
   Sometimes (1-2x / wk) ____  Often (3-5x week)____
   Very frequently (daily)____

7. Have you attended 12-step meetings since discharge / last call?
   Yes _______  No_______

   If yes, how often have you attended since our last call?
   Never _____ Rare occasion (1x mo or less) _____
   Sometimes (1-2x / wk) ____  Often (3-5x week)____
   Very frequently (daily)____

8. Refer to patient's continuing care recommendations:
   Have you followed your continuing care recommendations since discharge / last call?
   Yes _____  No _______
9. To what extent do you feel that your CC recommendation is benefiting you in recovery since discharge / last call?
   Not at all _____ Slightly _____ Somewhat _____ Strongly _____
   Totally _____

10. Did significant other and/or family members attend Family/Children’s Program?
    Yes _____ No ________

11. How often have you been communicating with your family since discharge / last call?
    Never _____ Rare occasion (1x mo or less) _____
    Sometimes (1-2x / wk) _____ Often (3-5x week)_____ 
    Very frequently (daily)____

12. How satisfied are you with the level of communication with your family since discharge / last call?
    Not at all _____ Slightly _____ Somewhat _____ Strongly _____
    Totally _____

13. To what extent are you participating in your vocational/educational pursuits since discharge / last call?
    Not at all ___ Slightly ___ Somewhat ____ Strongly ___
    Totally ____ N/A _____

14. What is your level of productivity in your vocational/educational pursuits since discharge / last call?
    Not at all ____ Slightly ____ Somewhat ___ Strongly ___
    Totally ____ N/A _____

15. How satisfied are you with your vocational/educational pursuits to date?
    Not at all ___ Slightly ____ Somewhat ___ Strongly ___
    Totally ____ N/A _____

Health Issues

16. To what extent have you committed to following your health care recommendations (e.g., visit the dentist, have a physical) since discharge / last call?
    Not at all ___ Slightly ____ Somewhat ___ Strongly ___
    Totally ____ N/A _____

17. To what extent have you committed to remaining nicotine-free since discharge / last call?
    Not at all ___ Slightly ____ Somewhat ___ Strongly ___
    Totally ____ N/A _____
Psychological Areas

18. To what extent would you describe your ability to identify and differentiate your feelings since discharge / last call?
Not at all ___ Slightly ___ Somewhat _____ Strongly ___
Totally ____ N/A ____

19. To what extent would you describe your ability to express your feelings since discharge / last call?
Not at all ___ Slightly ___ Somewhat _____ Strongly ___
Totally ____ N/A ____

20. To what extent would you describe your ability to respond to stress since discharge / last call?
Not at all ___ Slightly ___ Somewhat _____ Strongly ___
Totally ____ N/A ____

Spirituality

21. To what extent would you describe your experience of serenity since discharge / last call?
Not at all ___ Slightly ___ Somewhat _____ Strongly ___
Totally ____ N/A ____

22. To what extent would you describe your ability to apply the Steps to help you with spiritual issues since discharge / last call?
Not at all ___ Slightly ___ Somewhat _____ Strongly ___
Totally ____ N/A ____
The ________ staff recognizes that your first year of sobriety is crucial to your success in recovery and commits to offering you consultative services for eleven (11) months after you complete your inpatient stay.

During this time, Focused Continuing Care staff will contact you by telephone according to the calling schedule discussed with you prior to your discharge. They will assist you in following your Continuing Care Plan, provide additional referrals where necessary, and coach you in your recovery process.

CONSENT TO PARTICIPATE IN
FOCUSED CONTINUING CARE PROGRAM

By signing this consent form, I am granting permission for the Focused Continuing Care staff of the ____________ to contact me regarding my recovery program for eleven (11) months after my discharge. I understand that my refusal to participate in Focused Continuing Care will not impact my treatment.

I further understand that I may withdraw this consent for follow-up at any time.

Date: ______________ Patient Name (Print)

__________________________
Patient Signature

Date: ______________ Staff Signature
APPENDIX D

CALL ATTEMPTS PROCEDURE
CYCLE 1
MONTHS 1-3

M1 W1
- Call Attempt 1
- Call Attempt 2
- Call Attempt 3

M1 W3
- Call Attempt 1
- Call Attempt 2
- Call Attempt 3

M2 W2
- Call Attempt 1
- Call Attempt 2

M2 W4
- Call Attempt 1
- Call Attempt 2

M3 W2
- Call Attempt 1
- Call Attempt 2

M3 W4
- Call Attempt 1
- Call Attempt 2

Next Scheduled Call
CYCLE 2
MONTHS 4-6

M4 W4

Call Attempt 1
If no response and history of patient not returning calls

Call Attempt 2
If no response, but you have experienced regular communication

M5 W4

Call Attempt 1
If no response and history of patient not returning calls

Call Attempt 2
If no response, but you have experienced regular communication

M6 W4

Call Attempt 1
If no response, and history of patient not returning calls

Call Attempt 2
If no response, but you have experienced regular communication

Next Scheduled Call

If no response in this cycle for any two (2) scheduled calls - total four (4) call attempts

Move patient file to next cycle

175
If no response and history of patient not returning calls

If no response, but you have experienced regular communication

Call Attempt 1

Call Attempt 2

If no response and history of patient not returning calls

If no response, but you have experienced regular communication

Call Attempt 1

Call Attempt 2

If no response and history of patient not returning calls

If no response, but you have experienced regular communication

Hold File
CYCLE 4
MONTHS 10-11

Submit patient packet to send letter, medallion, and survey if active participation.

M10 W4

Call Attempt 1

If no response and history of patient not returning calls

Call Attempt 2

If no response, but you have experienced regular communication

M11 W4

Call Attempt 1

If no response and history of patient not returning calls

Call Attempt 2

If no response, but you have experienced regular communication please try to call one more time

Hold File 3 months

Dead File
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Roman, P.M., Blum, T.C. & Johnson, J.A. (1999). National Treatment Center Study, summary report (No. 4) results of treatment center staff questionnaires and new center/older center comparisons, October 1999. A report detailing the findings from the second wave of data collection with a nationally representative sample of private alcohol and drug problem treatment centers participating in the National Treatment Center Study conducted by the University of Georgia and the Georgia Institute of Technology.
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