INTENSIVE CASE MANAGEMENT AND THE MULTI-PROBLEM CLIENT:
AN EVALUATION OF THE INTER-MINISTERIAL PROJECT

by

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The purpose of this study is to assess if the Inter-Ministerial Project (I.M.P.), an intensive case management project jointly sponsored by the Greater Vancouver Mental Health Services Society, the Forensic Psychiatric Services, and Vancouver Adult Probation, is associated with a reduction in the number of institutional bed day use of a non-random selection of 25 of its clients. The institutional venues considered were all British Columbia provincial correctional institutions, the Forensic Psychiatric Institution, and the psychiatric wings of any general hospital or any provincial psychiatric hospital. By using a pre-test, post-test one group design, with comparisons being made at the one year before and during point, and the two year before and during point, the results indicate a significant reduction in institutional bed day use at both time periods. By examining the dependent variable in each of its component parts—corrections, forensic, and mental health—results indicate that although overall institutional change at the one year and two year follow-up points obtains statistical significance, it is obtained only through the great change in corrections bed day use and no change in either forensic or mental health bed day use. There is also
some indication that some of the savings in bed days incurred by corrections might have been owing to bed days expended by the mental health system. Despite design limitations which resulted in an inability to infer causation, the study shows that intensive case management is associated positively with a reduction in corrections system use by multi-problem clients. There is also a suggestion that there might be a transferring of bed day use out of the corrections system and into the mental health system. Given these findings the author concludes that intensive case management might be seen as an effective community intervention, both at reducing institutional use, and for directing use towards institutions more properly suited to the needs of multi-problem clients.
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Introduction

The purpose of this study is to assess whether intensive case management is associated with a reduction in the institutional bed day use by multi-problem clients. More specifically, the intent is to assess if the advent of the Inter-Ministerial Project (I.M.P.), an intensive case management project sponsored jointly by the Forensic Psychiatric Services, the Greater Vancouver Mental Health Services Society, and Vancouver Adult Probation, has been positively associated with a change in the institutional recidivism rates of a non-random sample of 25 of its clients. As ancillary questions of inquiry this study also explores (a) whether or not any improvement in institutional bed day use occurs as the length of I.M.P. involvement increases, and (b) how changes in institutional bed day use impact the corrections, forensic, and mental health systems individually.

This area should be of significance to social work for two main reasons. First of all, what is commonly defined under the general rubric of intensive case management, community interventions which include functions of linking, monitoring, assessing, and advocacy, are seen by many as being synonymous with social work. Secondly, there is a small but growing body of literature which suggests that the social work profession is avoiding the area of intensive case management of the chronic mentally ill, and that this important area of care is being maintained by the nursing profession and other paraprofessionals. Such writers as Deitchman (1980) and Kurtz, Bagarozzi, and Pollane...
(1984) suggest that the reason for this avoidance is that the desire to professionalize and the desire to engage in the humble tasks of what is seen as poverty work, often operate in an inversely correlational fashion. Hopefully, the present study will be seen as an example of social work research operating counter to this trend.

In other research projects throughout the literature, intensive case management has generally been shown to be effective intervention for reducing psychiatric hospital recidivism. However, no other study has considered recidivism rates of either corrections institutions or forensic psychiatric institutions, as part of the dependent variable. This is despite the fact that it is now generally accepted that chronic mentally ill use these systems in much the same way that they use the mental health system, for reasons as varied as respite and care. The present study may be seen as a new departure as it includes these two institutional systems as part of its outcome measures.

One of the shortcomings of many related research projects is that they have not been specific about what the intervention entails nor to the group to which the intervention is being applied. In the present study, Chapter 1 concerns itself with defining the term multi-problem client. The term is used in a very specific sense in the Vancouver system of psychiatric aftercare, and it overlaps with other well-known terms. Likewise, the intervention is examined in detail in Chapter 2, with some attempts made to verify that the project under scrutiny in this paper, the Inter-Ministerial Project, is an intensive case management project.
Most evaluative studies use either a two group randomized repeat measures design, or a one group pre-test post-test design. Because of ethical and environmental limitations, the methodology used was that of a pre-test, post-test one group design. The implementation of and limitations of this type of design are discussed at length in Chapter 3.

The statistical analysis of the pre-test and post-test data occupy the central part of Chapter 4. The results, discussed at length in Chapter 5, indicate that intensive case management is associated favourably with a reduction in institutional bed day use. However, a further examination of these results shows that this reduction does not appear in all three systems in the same way. Chapter 5 concludes with a list of the most important findings of this study and includes as well recommendations for further research.
Chapter One
The Multi-Problem Client Defined

Introduction

The literature devoted to describing both the multi-problem client and treatment interventions is sparse and localized to the Vancouver system of psychiatric aftercare. It is confined to the unpublished works of a handful of Vancouver researchers and program planners. In order to successfully ascertain what is meant by the term, multi-problem client, it is helpful to examine the historical context in which it arose. It is also helpful to examine a number of other related terms which are discussed at length throughout the literature. Hopefully, after having examined a number of these well-known groups with which the multi-problem client shares many features, then a clear definition can be made.

History of Deinstitutionalization

In order to fully understand what constitutes a multi-problem client, one must begin with a brief history of deinstitutionalization. This is because many of the groups which are now recognized in present-day community psychiatry owe their origin to events that occurred almost thirty years ago. In the 1950's, a number of factors combined to result in the discharge of thousands of mentally ill people into the community. The most important of these events was the invention of phenothiazine medications, which suppressed many of the overt symptoms of severe psychopathology. Another factor was the increasing pressure brought about by the growing civil rights consciousness of the
fifties and sixties to treat individuals in the least restrictive setting. There was also a growing optimism which created the belief that magnanimous things would stem from "the community" and "community psychiatry." The end result was the policy now known as deinstitutionalization, a policy of such importance that is now often referred to as the third great revolution in the care of the mentally ill (Steinhart, 1973). (The first two were the creation of the "mental hygiene" movement in the early twentieth century and the invention of the phenothiazine medication in the 1950's).

Deinstitutionalization was an exodus, a mass movement of people. In 1959 it was estimated that there were approximately 559,000 people in psychiatric hospitals throughout the United States. By 1988 this number was approximately 130,000 (Surber, Dwyer, Ryan, Goldfinger, and Kelly, 1988). Thus over a thirty year period, the psychiatric hospital population in the United States was reduced by over seventy five percent. Similar trends were observed in Canada. For example, in Toronto, the number of inpatient beds decreased from 370 per 100,000 population in 1955 to 69 per 100,000 in 1977 (Wasyljenki, Plummer, and Littman, 1981). This represents a decrease of over eighty percent.

In British Columbia, deinstitutionalization commenced later. Riverview Hospital, the sole provincial psychiatric hospital, did not begin discharging patients in great numbers until the 1960's. In 1960 it was estimated that Riverview's inpatient population was 5,500. By 1968 it had been reduced to 3,430. By 1978 it was 1,721 (Ministry of Health, 1979). In 1990 it was estimated as being under 1,000. Thus in the 30 year period between
1960 and 1990 the patient population of Riverview Hospital was reduced by roughly eighty one percent.

The many problems that faced the deinstitutionalization movement are now well documented (Brown, 1984; Dorwatt, 1980; Freedman, 1984). Chief among these was that money for programs did not follow the discharged mentally ill into the community (Pepper, 1990). There was evidence that this money stayed with the institutions, for, as Pepper further notes, the annual general budgets of many psychiatric hospitals actually increased during the critical years of deinstitutionalization. The same was true for Riverview Hospital. As The Report of the Mental Health Planning Survey (1979) showed, despite the fact that patient population had fallen drastically, nursing and support staff increased during the critical years of 1968-1978.

Another key problem appeared to be that no one was given the responsibility of searching out, treating, and being held accountable for the care of the most seriously mentally ill (Wasylenski, 1989). This huge discharged population was left, in most circumstances, to fend for itself. If a chronic mentally ill person did not present at a local mental health centre, it was within no one agency's mandate to go out and attempt to engage this person in treatment.

Concern about deinstitutionalization and the many problems it had created occupied a central part of the literature of the 1970's (Levine, 1980). The general consensus was that it was poorly planned and poorly implemented (Holden, 1972). Another major conclusion was that it produced a system of psychiatric aftercare which was disjointed, uncoordinated, and full of service gaps.
Another problem that was identified was the lack of a clear idea as to what constituted the chronic mentally ill population. Writers such as Fuller-Torrey (1986) began to suggest that what was being seen as one huge group of people, defined as the chronic mentally ill, was in reality a collection of various subsets of people of different diagnostic constellations. Barnes and Toews (1986), in their review of the literature, suggested that the roots of the problem lay in the fact that both the term "chronic" and "illness" had too many peripheral ideas loosely associated with them. Thus the literature of the 1980's began to witness the discovery of a number of marginal groups within the general category of the chronic mentally ill. These included such groups as the young adult chronic, the dual-diagnosed, the mentally ill offender, and the homeless mentally ill.

All of these subgroups shared a common theme. These were the people who were often described as having "fallen through the cracks," where the "cracks" referred to gaps in the poorly coordinated system of psychiatric aftercare. Since each of these subgroups overlaps with the population of the present study, the multi-problem client, each will be described further.

Descriptions of Subgroups

The young adult chronic patient.

It is generally believed that this important group was first noted by Pepper, Kirshner, and Ryglewicz (1981). In their work, Pepper and his colleagues described patients who, despite the fact that they had spent very little time in psychiatric hospitals, presented with a high degree of psychopathology and impaired social
functioning. This was disturbing, as this was the first group of people who had been the recipients of a mental health system not entrenched in the old thinking of days before deinstitutionalization. These were people who were the products of community psychiatry, and they were faring much worse in the community than the older, institutionalized patients. Pepper et al (1981) described this group as follows:

[This is]...a population of young adult chronic patients who have spent relatively little time in hospitals but who present persistent and frustrating problems to community caregivers in mental health and other social services systems. We are referring to people between the ages of 18 and 30 or 35 who are psychiatrically and socially impaired, so seriously, that they are continually and recurrently clients of mental health and other social service agencies over a period of years...Diagnostically, these young adults carry a variety of labels--schizophrenia, other psychosis, and personality disorders prominent among them. Although they present a variety of symptom profiles, they share two overarching characteristics: their severe difficulties in social functioning, and their tendency to use mental health services inappropriately, in ways that drain the time and energy of clinicians yet do not conform to viable treatment plans.

(p.463)

Pepper et al (1981) also pointed out that this was a new group, born out of the interface between changing social pressures, the lack of relevant aftercare services, and the inability of clinicians to deal with the type of shifting back and forth between dependence and hostility characteristic of this type of client. Pepper and his colleagues coined the terms "hostile-dependent" and "help-seeking/help rejecting" to describe this client's style of accessing mental health services. They described this group as more complicated than the older deinstitutionalized patient because of the many social problems they had along with their psychiatric problems.
Young adult chronic patients living in the community are socially and psychologically different from older deinstitutionalized patients, and from those never-institutionalized, older chronic patients who are sometimes included among the "new chronics." Younger patients are different because failure is new to them; because they are still struggling to be like their age-mates; because they have not learned, as have deinstitutionalized patients, to be docile and do as they are told; because they act out—in the manner of withdrawn or rebellious youth; and because they are as likely to blame mental health professionals as they are to turn for them for help. (p.464)

Robbins, Stern, Robbins, and Margolin (1978) had noted a similar group a few years before, but had not been able to bring the type of compassion to the topic that Pepper was capable of doing. They referred to their group as "unwelcome patients." Indeed, Robbins and his colleagues even went as far as to recommend that such an individual not be admitted to hospital "unless the clinical pattern changed" (p.44). Although they appeared to focus on the negative qualities of this group, the group described possessed characteristics similar to those of the young chronic.

Within the large group of chronic patients is a small but problematic subgroup of individuals who are in a state of disequilibrium because they cannot adapt to the community and cannot remain out of hospital. Typically, they are young men with few social or vocational skills who respond to stress with rage, often augmented by alcoholism or drug abuse. Although their symptoms respond well to the hospital environment, they refuse to remain more than a short time, either requesting discharge or eloping...They are disruptive and unmanageable in the hospital. They often insult staff or other patients and threaten staff who do not comply with their wishes. They accept medicine, but reject any sustained therapeutic program. (p.44)

Other researchers, most notably Schwartz and Goldfinger (1981), were impressed by the high number of personality disorders found among groups of high users of emergency mental health services. In keeping with other findings, Schwartz and Goldfinger noted how this group tended to be male (80%), young (90% were under
35 years of age), single (90%), unemployed (90%), and heavily involved in drugs and alcohol. They also illustrated the same help-seeking/help-rejecting, or hostile-dependent way of relating to the mental health system that Pepper and his colleagues had noted.

Within the emergency services, these patients, frequently brought in involuntarily, are often angry, demanding, hostile, and uncooperative. Their behaviour towards the interviewer and their affective state may shift dramatically during an interview, often leading the interviewer to conclude that their requests are manipulative and illogical. Although they begin by dependently begging for whatever interventions the clinicians can offer, they disdainfully reject any treatment plan proposed. Such behaviour may further alienate and confuse the emergency therapist, leading to feelings of impatience, anger, and the wish to reject the patient. (p.44)

Ely (1985), in her work in organizing groups focused on the most troubled psychiatric inpatients, described a similar group. Varying slightly from other writers, her perspective seemed to be more concentrated on the aspect of an underlying personality disorder. It was this feature which she felt brought about many of the their problems in adjusting to community life. Indeed it was the personality disorder, in Ely's opinion, which caused such strong countertransference reactions in helping professionals. Ely referred to her new group as "schizopaths."

The author and other clinicians use the term "schizophren" to describe young adults who have been diagnosed as chronic schizophrenics but who, in remission, often present as character-disordered or sociopathic individuals. They regularly abuse drugs and alcohol and generally appear to be wending their way through life via manipulation, deceit, and bravado. However, this unsavoury facade is quite fragile. These individuals do not have the emotional backup to sustain such characterological manoeuvres. They are empty, sad, vulnerable people who desperately use every shred of ego strength available to survive. (p.5)

In keeping with the views of other authors, Ely described her
"schizopaths" as predominantly young, male, angry, drug dependent or drug abusive, and treatment resistant clients. Like Pepper et al (1981) she speculated that much of their dysfunctional behaviour was owing to a need to protect themselves from the thought of the bleak future they were facing.

...these young men review their current situation and their lives, grieve for the life ambitions they had prior to becoming mental patients, and quickly fall back into the morass of drugs and alcohol that clearly is an attempt to dull the pain. The same wish to avoid the pain and emptiness in their lives, coupled with the inability to delay gratification, gets played out in the arena of medication. These clients tend to view medication either as a potential panacea for all their ills or as a "downer," as something that brings them back to a painful reality. Thus they either beg and manipulate people to get more medication or they resist taking it altogether....[We] have realized that the trait of these young men that has alienated caregivers--the willingness to beg, borrow, or steal to get what they need--is, in essence, the source of their ego strength. It is a coping mechanism for street life and needs to be viewed by professionals within the environmental context from which it arises. (p.8)

The appearance of the young adult chronic was a disturbing phenomenon. In many ways it made the business of caring for the chronic mentally ill an item of more serious concern because young people were involved. The literature on the young adult chronic also revealed the importance of substance abuse in creating complex, diagnostic constellations, which leads the way to the next category, the "dual-diagnosed."

The dual-diagnosed.

While the term dual-diagnosed is most commonly used to refer to individuals who have an alcohol and drug problem and a mental illness, it is also used by specialist in the field of mental retardation to refer to individuals who are both mentally retarded and who have a mental illness. Although incidence rates vary
according to the definitions of variables used and type of methodology employed, findings show that the rates of mental illness among the mentally retarded is very high, somewhere between 30 and 67.3 percent (Campbell and Malone, 1991). The deinstitutionalization of the mentally retarded is an area that has not been discussed to the same extent as the deinstitutionalization of the mentally ill, although many of the same mistakes did occur (Gualtieri, 1989).

The term dual-diagnosed in the literature of psychiatric aftercare has come to refer to individuals who have problems sufficiently severe to warrant a diagnosis both in the area of mental illness and substance abuse. Estimates of actual numbers vary according to how one defines "abuse" and "substance." Kofoed and Keys (1988) estimated that upwards of 37% of people with substance abuse problems also had psychiatric problems warranting a mental health diagnosis. Approaching this from the other direction, Drake and Wallach (1989) estimated that up to 1/3 of all chronic mentally ill patients had severe drug and/or alcohol problems. Furthermore, they found that dual diagnosed people tended to be younger, predominantly male, more apt to be treatment resistant, unable to manage for themselves in the crucial areas of housing, personal hygiene, money management, and the structuring of spare time. They also showed greater tendencies towards hostility, suicidal activity, and rehospitalization.

Various dual-diagnosis projects are only now being set up throughout North America with an emphasis on viewing the two aspects of the condition, mental illness and substance abuse, as inter-dependent factors. There has also been some movement in this
direction from community mental health centres as treatment philosophies now frame the problem as inter-dependent areas of concern. The most recent annual report of the Greater Vancouver Mental Health Services Society (1990) shows that many of the mental health teams now recognize the high percentage of dual diagnosed patients among their general caseloads.

The homeless mentally ill.

Another subgroup that has come to prominence during the early eighties is that of the homeless mentally ill. Homelessness, as defined by the International Year of Shelter (I.Y.S.H.C.) for the Homeless Committee (1986), "is the absence of a permanent home over which individuals have personal control and which provides the essential needs of shelter, privacy, and security at an affordable cost" (Oberlander and Fallick, 1986). According to the I.Y.S.H.C., the homeless include people with no shelter for varying periods of time, those without permanent shelter, those occasionally using emergency shelter, and those living in substandard dwellings costing in excess of 30% of their total income. A recent Time Magazine feature article estimated that there were over 2 million homeless people in the United States (Lamar, 1988).

Although most researchers agree that the homeless are a heterogeneous group (Surber et al, 1988), most contend that there is consistently high rates of mental illness ranging between 30% to 50% (Lamb and Lamb, 1990; Morisette and McIntyre, 1989; Surber et al, 1988; Quick, 1990). The incidence rate of substance abuse among the homeless is also very high. In one report completed by Rosenheck and Leda (1991) of a nation-wide study of homeless U.S. military veterans, 84% were found to have a diagnosis of either or
both substance abuse and mental illness.

Studies of the homeless show that this group tends to contain a high percentage of young, male, mentally ill and drug and alcohol involved individuals. In Arana's (1990) study of the homeless mentally ill admitted to a Baltimore mental health centre, 75% were between 18 and 39 years of age, with a large representation of males (62%), and unattached (92%), i.e. without a roommate, spouse, or close family attachments. They were also likely to be unemployed (100%). They were found to have a very high incidence rate of a dual-diagnosis consisting of a mental illness and a substance abuse problem (31%), but were relatively low in the area of schizophrenic diagnosis (26%). The group illustrated a moderate rate of personality disorder (42%). Of special note, a small number (4%) were diagnosed as being mentally handicapped.

Lamb and Lamb's (1990) study of a similar hospital program in California corroborated Arana's results. Lamb and Lamb found the average age of his study group to be 31 years of age, with a large part of the sample (75%) being male. However, the incidence rate of schizophrenia was found to be almost double that of the Baltimore study (66%). In keeping with the findings of the Baltimore study, substance abuse was very high (68%). The Lambs further noted that a large percentage of the study group (74%) had been arrested at least once, almost half of these for violent crimes.

Despite the fact that these two studies differed in some areas, both authors concluded that contrary to popular opinion, when offered services, the homeless mentally ill were likely to accept them. In the Baltimore study, 78% of the group accepted an
aftercare plan, and a sizeable proportion of this group was still in treatment two years late. Similarly, the California study found that 53% of the sample accepted placement in board and care facilities, and another 10% accepted placement with relatives or friends. Taken in total, 2/3 of the California study group accepted some sort of community placement when offered. The California study also discovered a correlation between age and an individual's willingness to accept help. It found that those under the age of thirty were more likely to refuse help and to deny their illness than those over thirty. Lamb and Lamb concluded as follows:

The homeless mentally ill present us with one of our greatest challenges; the younger among them are perhaps the greatest challenge of all. The younger persons are more apt to have life goals, to deny their dependency and their illness, and to be unready to come to terms with living in a sheltered, segregated, low-pressure environment...It may be that this is the group that most cries out to us to set aside our preconceived ideologies, to come face to face with clinical reality, and to do what is necessary to provide them with support, protection, treatment, and rehabilitation. (p.305)

The mentally ill offender.

The term mentally ill offender has been interpreted with marked inconsistency by a number of authors. Monahan and Steadman (1983) used the term to describe four subgroups: those found not guilty by reason of insanity; those found unfit to stand trial; mentally ill sex offenders; and mentally ill prison inmates who are sent to mental hospitals for treatment while still in custody for criminal offenses. Other writers such as Jemelka, Trupin, and Chiles (1989) use the term to describe any individual in a jail or prison who has a diagnosable major mental illness.

Stated most simply, the mentally ill offender may be defined
as anyone who has a recognizable mental illness and who comes into contact with any branch of the criminal justice system. These branches may include police intervention, arrest, detention, court appearance, bail, sentencing, and incarceration. This group might include people who commit crimes as a direct result of their mental illness, and those whose criminal activity is not related to their mental illness.

It is now generally believed that because of the dearth of community programs following in the wake of deinstitutionalization, many of the chronic mentally ill are beginning to surface in the criminal justice system. Unable to care for themselves they typically are incarcerated for vagrancy, shoplifting, or minor assaults, crimes associated with poverty, poor judgement, or a lack of social skills. This emergence has been recently termed the "criminalization" of the chronic mentally ill. Abramson's (1972) described this process as follows:

If the entry of persons exhibiting mentally disordered behaviour into the mental health system of social control is impeded, community pressure will force them into the criminal justice system of social control. Further, if the mental health system is forced to release mentally disordered persons into the community prematurely, there will be an increase in pressure for use of the criminal justice system to reinstitutionalize them....From my own vantage point as a psychiatric consultant...mentally disordered persons are being increasingly subjected to arrest and criminal prosecution....Police seem to be aware of the more stringent criteria under which mental health professionals are now accepting responsibility for involuntary detention and treatment, and thus regard arrest and booking into jail as a more reliable way of securing involuntary detention of mentally disordered persons. Once the criminal justice machinery is invoked, it is frequently hard to stop. (p.15)

Teplin (1984) called the same process "transinstitutionalization," that is, the transferring of the chronic mentally ill from the back wards of the mental hospitals of
the 50's and 60's to the back cells in local jails of the 70's and 80's. Borzecki and Wormith (1985) described the criminal justice system as the last possible step in a social control system that has been greatly depleted since deinstitutionalization. As they state, the criminal justice system is the system of default, the system "that just can't say no." In other words, it is a system that cannot resort to cut-backs, stricter admission criteria, and hidden black lists to keep people out of their institutions. In the opinion of many writers, jails have become the poor person's mental health facility.

It is very difficult to determine the exact number of mentally ill offenders in jail and prison populations. Estimates vary according to the definition of "mental illness" and "offender" used by the researcher, as well as to the type of methodology used. Monahan and Steadman (1983) surveyed a total of 307,276 offenders in American state and federal prisons and found an incidence rate of mental illness of 6.5%. Similarly, in a later study, Steadman, Fabisick, Dvoskin, and Holsheen (1987) surveyed a sample of 3,684 offenders in New York state prisons and found an incidence rate of 8%. In Canada, Holley and Arboleda-Florez (1988) in a survey of provincially jailed individuals in Alberta, found a very high incidence rate of 65%. In Vancouver, British Columbia, Hart and Hemphill (1989), in a survey of the Vancouver Pretrial Services Centre, found an incidence rate of 23.8%. Despite the great variety among findings, one basic trend seems to be apparent: that mentally ill offenders are more likely to be found in large numbers in local prisons and pretrial centres (institutions traditionally used for minor offenses and to hold those awaiting trial), than in
penitentiaries (institutions used to house individuals convicted of more serious crimes.)

Comorbidity.

Comorbidity is the term used to describe conditions comprised by a combination of diagnoses. What all of these subgroups—the young adult chronic, the dual diagnosed, the mentally ill offender, and the homeless mentally ill—have in common as constructs is that they are identified by the central tenet of severe mental illness with the added feature of one other diagnosis, either social or psychiatric. These features include youth, criminality, homelessness, and substance abuse. In this regard they are all constructs comprised of two inter-dependent variables.

Each of the aforementioned categories is identifiable by only one characteristic, such as homelessness or criminality, along with the common denominator of mental illness. One then wonders what frame of reference might be used to describe a group which has all of the problems of all of these groups. This leads us in to the next group, the multi-problem client, a term which is associated with the Vancouver system of psychiatric aftercare. As a term it synthesises all the various groups discussed up to this point.

The multi-problem client.

In Vancouver's downtown eastside service sector--commonly called "skid row"--there has recently been a great deal of focus on a small group which subsumes the features of all the aforementioned groups. This group is unique in that it is not entirely described by the common terms which only suggest two types of problems. This group is presently known, rather inauspiciously, as the multi-problem client. Buckley (1990) defines the term as follows:
"Multi-problem" is a catchall term used to describe those individuals with mixed symptomatology and multiple diagnosis—not just "dual"—who cannot or will not be accommodated with the mandate of most existing service agencies....This group of individuals has a variety of social, behavioural, and oftentimes medical problems which results in their involvement with numerous service agencies....At various times, multi-problem individuals will display the following characteristics: they are non-compliant, uncooperative, verbally abusive, threatening and manipulative; they are occasionally violent to either or both property and others; and they are extremely difficult, if not impossible, placement problems. Diagnostically these people can suffer from paranoid schizophrenia, a bi-polar illness, a paranoid disorder, a borderline, anti-social or sociopathic personality disorder; organic brain syndrome, mental retardation and chronic substance abuse. Usually they comprise a mixture of many of these. (p.2)

Using the main features of Buckley's (1987) description (see Appendix A, "Operationalizing the Multi-Problem Client"), it appears that the group is characterized by a distinct diagnostic constellation of five essential features. These include (a) severe psychopathology, usually comprised of a major mental illness, a personality disorder, substance abuse, or, to a lesser extent, mental retardation; (b) a history of treatment resistance; (c) a history of involvement with the criminal justice system; (d) a history of excessive use of institutions (not just psychiatric institutions but criminal justice system institutions as well); and (e) because of a - d, a certain amount of infamy, or a certain reputation, within the localized system of care of one medium sized city, namely Vancouver. Thus for the purposes of this study, the term multi-problem client will be defined as an individual who has all of these features.

The term multi-problem person in this context is used in a specific and distinct fashion particular to Vancouver. It is not found in the literature of psychiatric aftercare as a specific
clinical construct. In the social work literature, the term has been used in a very general sense, usually synonymous with the customary idea of a person with a lot of problems. In this paper, the term multi-problem client, referring to the context of the Vancouver system of psychiatric aftercare, describes something very unique and specific. It refers to a particular constellation of psychiatric and accompanying social features which goes beyond those suggested by previous terms.

The term in this context appears to have originated with Buckley (1987), and then been used by other Vancouver researchers, most notably Corrado (1987) and Tiens (1988). It has gone through a number of refinements: in the mid-eighties this same group was referred to as "multi-systems abusers," but the term was changed because it was felt to be too pejorative (R. Buckley, personal communication, May 15, 1988). In time it appeared to have gained so much acceptance that it served as the topic for a two day conference sponsored by the Multi-Service Network (1989) in Vancouver. Its earlier form, "multi-systems abuser," appeared in The Mental Health Consultation Report (1987), the blueprint for all mental health service in British Columbia throughout the 1990's.

It is estimated that 25-30% of outpatient mental health patients are those who have been described as difficult and multi-system users. The young (18-35) are over-represented in this group. Often they have had little or no hospitalization, are noncompliant with traditional office-based treatment, and have few personal care, social or job skills. Substance abuse is often an exacerbating problem. Although this group is relatively small, it is important to note, as its members tend to use proportionally more service, often in a revolving-door fashion. There is much evidence to suggest that this group may be consuming a disproportionately large part of our mental health care dollar. (p.3)

It appears that the term multi-problem client has enjoyed a
certain popularity among Vancouver mental health workers and program planners. It is a dynamic concept that incorporates both notions of psychiatry and sociology. However, as a research construct, there are some serious conceptual and methodological limitations. The main limitation is that the term has not been used with any sort of consistency throughout the literature.

Researchers who have studied this population have dealt with this problem of definition in a variety of ways. Corrado (1987) in his cost evaluation of 10 cases referred to the Multi-Service Network (M.S.N), a case coordinating and planning agency which specifically targets multi-problem clients in Vancouver, made no overt references to the term. He merely referred to his subjects as "cases" dealt with by the Multi-Service Network, and suggested that if there was any homogeneity about this small group it was that they were expensive clients because of the great amount of community services they used. Tiens (1988) used the term mentally disordered individuals with multiple problems, and he operationalized the term to stand for individuals who consumed, over a two year period, services from Riverview Hospital, Forensic Psychiatric Institute, and the Greater Vancouver Mental Health Services Society. The assumption here was that there was a recognizable group of people (estimated at 457) who, for a while at least, embark upon a career of peripatetic contact with inpatient care, outpatient care, and conflict with the legal system. Beggs (1979) in a much earlier work, conducted a survey of several downtown eastside agencies and discovered a group of what she called "difficult cases" (estimated at 147) with features of severe psychiatric symptomatology, alcohol and drug abuse, lack of
suitable housing, high service consumption, great mobility, and who were also of great expense to maintain. It appears that the Beggs work was completed before the word in both its forms, multi-systems abuser and multi-problem client, came into popular use. In these three related studies only Tiens (1988) has provided a specific, operationalized definition for the concept.

For the purpose of this study, Buckley's (1987) definition rather than Tiens' (1988) definition, was used for two basic reasons: First of all, the five point inclusion criteria reduced from Buckely's definition is the criteria that the Inter-Ministerial Project, the project under study, uses to identify clients in its target group. Secondly, Buckley's definition, describing as it does many of the social problems that occur as a result of this population's severe psychopathology, appears more encompassing than any other definition.

Summary

This chapter has traced the evolution of several subgroups within the huge category of chronic mentally ill through the early days of deinstitutionalization. It has also been illustrated how the Vancouver construct, the multi-problem client, is in this same tradition. While this group is similar to other sub-groups described in the literature, it is in reality a category unto itself. Vancouver program planners have been aware of the uniqueness of this group for some time, with the result that a number of programs have been created specially for them. The Inter-Ministerial Project, the program evaluated in the following chapters, is an example of one of these programs.
Chapter Two

Intensive Case Management as an Intervention

Introduction

This chapter describes the intervention of intensive case management evaluated in this study. In order to fully understand what is meant by intensive case management, a review of the literature concentrating on history, definition, and evaluation is provided. How the Inter-Ministerial Project fits into the area of intensive case management is also discussed as well as difficulties in evaluating model programs elsewhere in North America.

History of Case Management

It is now generally believed that during the critical years of deinstitutionalization, effective community treatment interventions were lacking (Schulberg and Baker, 1975). There were a few model programs initiated in a variety of settings, (Lamb, Heath, and Downing 1969; Anthony 1979), but for the most part, effective community interventions were inconsistent and often encountered tremendous resistance from both the community and the institutional systems (Levine 1980).

One noted community intervention was that devised by Stein and Test (1980). Both Leonard Stein, a psychiatrist, and Mary Ann Test, a social worker, were employees at the Mendota State Hospital in Madison, Wisconsin. Using the hospital as a base, they commenced working with newly-discharged patients in the community on tasks of daily living such as cooking, shopping, and medication compliance, and found in evaluating the project that the high recidivism rates of chronic mentally ill patients could be reduced.
The concept was called Training in Community Living (T.C.L.). Although not a novel idea, it was a new departure for mental health professionals because it took the emphasis away from the more abstract aspects of mental health care such as counselling and psychotherapy, and placed it in the more concrete area of teaching skills for survival. In time this new type of intervention was called intensive case management. Over the years, case management became so well regarded that it has now become a major focus of policy and fiscal reform of the mental health system (Rapp and Chamberlain, 1991).

The literature devoted to case management is voluminous and still growing rapidly. There appears to be two major themes to this literature: works devoted to coming to some sort of definition as to what constitutes case management, and works devoted to describing or evaluating various case management projects.

Definitions of Case Management

As an intervention, there is very little consensus as to what case management entails. Intagliata (1982) is generally regarded as the writer who first set the parameters for a definition of case management. He described it as a "...process, or method, for ensuring that consumers are provided with whatever services they need in a coordinated, effective, and efficient manner." What he meant by consumers were the chronic mentally ill patients living in the community. Schwartz (1982) defined case management as a process of "...providing a client/patient with an individual who is ultimately responsible for coordinating the client's care and treatment in the least restrictive setting." Ashley (1988) defined
it somewhat more generally as "a new focus on managed service delivery...neither a new activity or a new concept." Lamb (1980) defined the role of case manager as being a "broker of service" for clients/patients caught up in a disorganized and fragmented system of care. Similarly, Fuller-Torrey (1986) saw case management as a programmatic response to the breakdown in the continuity of care following in the wake of deinstitutionalization. He described it as "the glue that binds the otherwise fragmented services into arrangements that respond to the unique and changing needs of patients."

In the past few years, a number of writers have struggled with the lack of consensus as to a practical definition of case management. Bachrach (1989), examining several definitions, stated that there were actually two types of case management services and, therefore, two types of definitions. There were those that were system-oriented, macro-focused and therefore requiring a "brokerage" type of definition. In this type of service the case manager would act as a type of broker, or coordinator, of required services. Then there were those that were individual-oriented, micro-focused and therefore calling for more of a "relationship" type of definition. In this type of service the case manager would likely provide the most important ingredient, spending time with the client, himself/herself. Extrapolating upon the theories of Harris and Bergman (1988), two program planners employed at the Community Connections Program in Washington, D.C., Bachrach defined the individual-oriented type of case management as "an interactional phenomenon that consists of more than the mere sum of its constituent parts, [in] that the relationship between patient
and case manager is the essential ingredient."

Deitchman (1979), in a much earlier paper, found the same bifurcation happening with the definition and made the distinction between "coordinating case management projects," and "intensive case management projects." Coordinating case management projects, he stated, were more likely to work with the system, while intensive case management projects were more likely to work with the individual. He used the analogy of the travel agent (coordinating case management project) versus the travelling companion (intensive case management projects) to describe the difference. In the present study, case management is of the intensive case management type.

Descriptions of What a Case Manager Does

Other writers have sought to define case management in much more functional terms. They attempted to define it by describing what a case manager does as opposed to what the term means. Hargreaves et al (1984) described case management as comprising five essential functions: an assessment of the client's needs; planning a service strategy to meet those needs; linkage of the client to appropriate or needed services; monitoring both the client's service participation and services' ability to deliver this service; and advocacy when the client is accepting service or if it is denied. Similarly, Sullivan (1981), listed the duties of a case manager as monitoring, linking, integrating, expediting and planning. Likewise, Intagliata (1982), defined the case manager's job as assessing a client's needs; developing a comprehensive care plan; arranging for services to be delivered; monitoring and assessing services; and evaluating service plans and follow-up. In
fact, variations on the theme of these five core functions have resulted in the Joint Commission on Accreditation of Hospitals (J.C.A.H.), a health care regulatory body in the United States, designating assessment, planning, linking, monitoring, and advocacy as the five functions typical of case management (Kurtz et al, 1984).

Despite the specificity of the case manager's duties, all of these tasks may still be performed by a coordinating case management project which has no direct contact with clients. The question remains, when does a case management project become an "intensive" case management project? Is it, as Deitchman (1979) suggests, the point at which the case manager has face-to-face contact with the client? Bachrach (1990) provides the answer to this question. She sees case management as occurring only when a human service generalist "assures continuity of care by coordinating services at the client level."

It appears to be this concept of "at the client level" that is critical. It calls for someone who is constantly aware of the client's needs, and the only way to achieve this awareness is through regular contact. A community mental health worker carrying a caseload of 35-40 individuals is not as likely to be aware of client's changing needs as an intensive case manager who is carrying only a caseload of 10. In describing the essential features of a good case management project, Bachrach also lists aggressive outreach, direct service provision, crisis intervention, and program/resource development. According to Bachrach it seems that a case management project can only become "intensive" when it has something to be intensive about--namely, a caseload of clients
the case managers see on a regular basis. Thus the main difference between an "intensive" case management project and a coordinating case management project is the presence of a direct service component to the program with a small enough client-worker ratio to ensure some sort of intensivity of service.

**Definition of Intensive Case Management**

For the purpose of this study, intensive case management will be defined to be a type of community based psychiatric intervention characterized by five essential features. These include: (a) an emphasis on developing a strong relationship between the client and the case manager (and therefore calling for a small client-worker ratio); (b) an emphasis on the tasks of linking, advocating, assessing and monitoring; (c) an emphasis on teaching the type of concrete skills required of an individual with psychiatric and concomitant social obstacles to function outside of institutions in the community; and (d) an over-all commitment to the idea that the case manager is the primary agent for ensuring that the community functioning of the client is maximized.

**History of the Inter-Ministerial Project as an Intensive Case Management Program**

In the early 1980's in Vancouver's downtown eastside, several managers from the Ministry of Social Services and Housing (then called the Ministry of Human Resources), the Forensic Psychiatric Services, Greater Vancouver Mental Health Services Society, Vancouver Adult Probation, and the Alcohol and Drug Commission commenced a series of informal meetings to discuss the growing problem of individuals who had "fallen through the cracks." These were people who had mental health problems, alcohol and drug
problems, and who were constantly appearing in probation offices, bail offices and court. These were people who were generally referred to as "multi-systems abusers." There was also some concern expressed about the fact that this group tended to be appearing in larger numbers in local jails. The general consensus was that apart from the grave problems these people possessed on their own, the system was actually aggravating their problems by constantly referring these clients from one agency to the next, hoping that somewhere along the line someone would take responsibility for them.

The end result of these discussions was that in 1985 a case coordinating agency called the Multi-Service Network (M.S.N.) was created. It was planned that the M.S.N. would regularly hold case conferences on the most complex cases in an attempt to establish a service strategy, to document this service strategy, and to ensure that this service plan would be put into effect. The M.S.N. did not provide any direct service to clients, but instead coordinated, monitored, and gave advice to the services already working with the client. In this respect it might have been viewed as a coordinating case management, as opposed to an intensive case management, project.

After two years of operation, it was found that there were still a small number of clients who were not being adequately assisted. In response to this, managers from Greater Vancouver Mental Health Services Society, Forensic Psychiatric Services, and Vancouver Adult Probation Services decided to create an inter-agency team to focus on this relatively small target group. It was hoped that by creating a "hands on" team which would go out and
engage this client group "on their own turf" in the community, some of the severe problems encountered by this group could be dealt with. It was felt that in order to accomplish such a task the following ingredients were necessary: a small worker-client ratio (no more than ten to one); a community based, as opposed to office based, treatment setting; and a focus on the tasks of daily living, as opposed to counselling or other more abstract interventions. Although the original planners were not using the guidelines of Training in Community Living and other tested programs in the United States, their methods were very close to those outlined in the literature (R. Buckley, personal communication, May 1989). As a result, the Inter-Ministerial Project (I.M.P.) was created in January of 1987 with one staff each of from the Greater Vancouver Mental Health Services Society and the Forensic Psychiatric Services, and one part-time staff from Vancouver Adult Probation.

On December 31, 1990, the data collection point of this study, the I.M.P. still operated under the same mandate and the same style of service delivery. An examination of the job description of the individual case managers (called "workers" by the I.M.P.), illustrated that the functions of assessment, linking, monitoring, advocacy, and planning were still of paramount importance.

At the time of this evaluation, the I.M.P. still maintained the same client-worker ratio, usually under ten to one, which allowed for greater client contact. This was in comparison to other out-patient psychiatric services in Vancouver such as the Strathcona Mental Health Team, which maintained a worker-client ratio of 48-1, or the Broadway Mental Health Team (58-1) or the
Mount Pleasant Team (35-1), (Greater Vancouver Mental Health Services Society, 1990). On average, the I.M.P. saw their clients 2.8 times a week. This was in comparison to the Strathcona and other mental health teams which usually saw their chronic patients, on the average, once every 3 to 4 weeks to administer long-acting neuroleptic medications. Measured on an intensive case management frequency of activity scale (Kutz, Bagarozzi, and Pollane, 1984) (see Appendix C, "The Inter-Ministerial Project as an Intensive Case Management Project"), the I.M.P. showed that it performed all of the 26 tasks typical of an intensive case management project, half of these on a weekly or daily time frame. Some of these tasks included conducting telephone intakes, conducting office intakes, performing emergency screening, taking social histories, conducting family interviews, forming service plans, arranging case conferences, taking clients to appointments, meeting with other agency staff, visiting with clients in other facilities, interceding for clients to obtain service, interceding in personal disputes, and others. Because of this it was assumed that the I.M.P. was an intensive case management project, and not a coordinating case management project or any other similar type of service.

A Literature Review of Case Management Evaluations

Experimental designs.

The first published study of an intensive case management project was that reported by Stein and Test (1975). Using a randomized two-group design, they found that with the intervention of intensive case management, hospital rates and symptom levels for chronic mentally ill patients could be reduced, occupational
functioning increased, and the patient's over-all quality of life, measured on relevant psychometric tools, improved. Marx's (1980) study, again using a randomized two-group design, found that although hospitalization rates for chronic patients were reduced, symptom levels remained the same. Furthermore, he also found that only social functioning, and not occupational functioning, was improved with intensive case management.

Stein and Test (1980) repeated their experiment once again and found the same results: hospitalization rates were reduced, symptom levels reduced, and over-all functioning increased. Also added to this study was an economic evaluation which indicated that clients attached to an intensive case management project cost the mental health system less money to maintain. Mulder (1985), repeated the same experiment using a similar methodology and found that, although hospitalization rates were reduced and the case managed study group found to be less expensive to maintain in the community, there tended to be more suicidal behaviour among the study group. Bond (1989), used a two-group randomized methodology, and found that hospital rates were reduced for the study group, but that community functioning, both occupationally and socially, was not altered. He also found that clients receiving intensive management services were more satisfied with their care than controls receiving ordinary mental health follow-up services.

Jerrel and Hu (1989), used a two-group randomized design, and found that although there was some difference in hospital rates between case managed studies and unattached controls, it was not found to be statistically significant. They also found no noticeable difference between the two groups' quality of life.
Morse (unpublished, reported in Olfson, 1990), used a two-group randomized design and found that with homeless mentally ill patients receiving case management services, homeless days could be reduced. There was also an increase in client satisfaction with the quality of service they were receiving. Their level of symptomatology, however, was not effected.

Quasi-Experimental designs.

Borland (1989), used a one group repeat measures design and found that although hospitalization rates for chronic mentally ill patients were reduced, acute cases were relying more heavily upon other parts of the service systems such as emergency shelters and boarding homes. Wright (1989), used the same methodology, and found that hospital admissions were reduced and that clients were more satisfied with the type of service they were receiving. Stein and Diamond (1985), used a repeat measures design and verified the earlier findings of Stein and Test (1975) that hospital admissions were reduced through intensive case management. Cutler, Tatum, and Shore (1987) used repeat measures on three non-randomly assigned groups, a case managed group, a group who regularly attended a drop-in centre, and group which received regular mental health care. They found that although the case managed group were hospitalized for fewer days, their symptoms were not any less severe than the other two groups, nor was their community functioning any better. Furthermore, their over-all quality of life was worse than the group that regularly attended the drop-in centre.

Negative findings.

Only Franklin, Solovitz, Mason, Clemons, and Miller (1987),
using a two-group randomized design, have reported negative findings in the area of hospital admissions. In a comparison of two groups of chronic mentally ill patients they found that those who were the recipients of a case management service were, in fact, hospitalized at a higher rate than unattached controls. Furthermore, although they found that occupational functioning was improved to some degree, both groups reported no significant increase in their over-all quality of life. Franklin and his colleagues made an interesting speculation in suggesting that since advocacy was a central function of case management, it seemed likely that chronic mentally ill clients might be hospitalized at a greater rate when someone, such as a case manager, was championing their cause.

Case Management Projects in the Vancouver Area

In Vancouver, case management projects have been the object of much less rigorous methods of evaluation. Corrado (1987), in his cost measurement study of a non-random sample of 10 clients of the Multi-Service Network (a case coordinating as opposed to intensive case management project), found that costs were greatly reduced, but not equally to all aspects of the care system. He found that costs to the Corrections system (jail, court, probation, etc.) were moderately increased; that costs to the Ministry of Social Services and Housing (Welfare) were moderately increased; and that costs to the Ministry of Health (Mental Health) were substantially reduced. He indicated that although over-all savings occur, some parts of the care system actually experienced an increase in costs.

Etches (1989) studied 86 patients discharged from Riverview and placed in psychiatric boarding homes with nursing follow-up.
This arrangement might be seen as a type of case management program although he described it as an "outreach initiative program." He found that outreach program patients had their community tenure increased from 30% to 78%, that symptom levels were reduced, and community functioning increased. It is difficult to compare these results to any other case management project, as it is not clear what arrangements for returning patients were made between the hospital and the boarding homes. This clearly confounds the main outcome measure, hospital recidivism. Also, the relatively advanced mean age of the study population, at 43, is at least ten years higher than the mean age of most studies. One might suspect that this is an older institutionalized population that the hospital was trying to move out into alternate care, rather than a young chronic population or a group of multi-problem clients.

Summary

The conflicting results reported in the literature evaluating intensive case management projects possibly reflects different definitions and designs used in the studies. Taken as a body of work, the literature evaluating the many intensive case management programs presents a number of different problems. First of all, as Rapp and Chamberlain (1991) have pointed out in their review of the literature, there appears to be very little standardization of definitions of the client population. Most projects state very generally that their focus is the chronic mentally ill, but this is a very large and somewhat amorphous group that could really contain many subgroups with variable hospital use and idiosyncratic effects upon other dependent variables. Some projects do not include people with a drug and/or alcohol problems, organic brain syndrome,
a diagnosis of mental retardation, or a diagnosis or borderline or another personality disorder. Despite the methodological superiority of ruling out these variables, one wonders if the intervention being measured has any utility as clients rarely come with a single problem calling for a single solution.

Secondly, Olfson (1990) in his literature review notes that the duration of most studies is too limited. Many are surveying relatively short periods of time—six months, or, at the most, one year. Since chronic mentally ill people suffer from lifelong conditions, it is doubtful if evaluations of such short duration are useful. It is now recognized that the pattern of acuteness, hospitalization, convalescence, and remission spans years in its repetitive occurrence. A six month or a one year period of study will likely miss this important information. Likewise, it is now acknowledged that any program, including a program of intensive case management, is likely to experience good results in the early stages simply because it is new and both workers and clients experience a brief period of enthusiasm. The "honeymoon" factor of all new programs is an established fact, and it is an even stronger confounding factor if the entry point into a program is from a facility where some sort of detention or loss of liberty has occurred. Intensive case management projects which take their clients directly from psychiatric hospitals or jails might be measuring the benefit gained from liberty rather than the effects of intensive case management.

Thirdly, there is some question as to whether it is truly intensive case management that is being studied. Few studies actually define what is meant by intensive case management. Few
studies analyze the job descriptions of the individuals providing the service, nor are the key features of an intensive case management program (policies of outreach, client-worker ratios, and direct service) often evaluated. There is virtually no distinction made between intensive case management and coordinating case management. It is possible that what is being called intensive case management in one study might be called traditional mental health service in another study in an area with a more developed system of aftercare.

The same criticism applies to two-group comparative designs: often the alternate treatment is not defined. For example, Cutler et al (1987), compared a case managed group to a group that received traditional mental health follow-up. Depending on what part of North America one lives in, "traditional mental health follow-up" could range anywhere from bi-weekly appointments with a skilled therapist, to a monthly injection and a brief chat, to absolute neglect. Thus any improvements in hospital rates, symptom levels, and community functioning could be solely as a result of some intervention as opposed to none.

Finally, the dependent variable in practically every case, that of hospital admissions, is never given the intense scrutiny that it should be given. As Rapp and Chamberlain (1991) have suggested, with the localized nature of each of these intensive case management projects and the relatively small numbers of clients involved, perhaps there is a special arrangement between the local psychiatric hospitals and the intensive case management project to treat case managed studies differently when they present at an emergency waiting room. If, for example, a chronic mentally
ill person presents at an emergency waiting room and the hospital staff know they can phone a case manager who will take the person elsewhere—to a hostel, or some type of community psychiatric facility—then this is likely to happen. If this is the case, then it would certainly make a difference in admission rates between the case managed clients and the, supposedly, randomized controls. It would then be the process (case managers intervening to redirect psychiatric emergencies), not the outcome (clients not needing to go to hospital as much because of the intensive case management they are receiving in the community), that is being evaluated.

Given the recent findings of Teplin (1987) that many mentally ill people use local jails for much the same purpose as local psychiatric hospitals, it is unfortunate that only Wright (1989) and Stein and Test (1981) expand the dependent variable in their experiment to include this information. No research project was found which used days spent in forensic psychiatric facilities as part of the outcome measures. An individuals' rehospitalization record during a one-year follow up period might look deceptively admission-free if this individual has spent all or part of this time in a jail or a forensic facility. Using only rehospitalization rates as an outcome measure reveals a bias in thinking which assumes that there is a direct relationship between hospitalization rates and degree of symptomatology. As both Rapp and Chamberlain (1991) and Drake and Wallach (1988) have shown, many chronic mentally ill use hospitals for other reasons such as loneliness, hunger, or homelessness. It is only by examining all institutional venues that an individual's community functioning can be truly assessed.
Definitions Used in the Present Study

In the present study, some attempts have been made to avoid the pitfalls of previous studies, first of all by providing a clear definition of the population being studied. The subjects of the study are not just loosely described as being chronic mentally ill, but form a small group of multi-problem clients which have the five features outlined in Buckley's definition and which are the same criteria used to accept referrals to the Inter-Ministerial Project. Secondly, this study clearly defines the independent variable, intensive case management, as exemplified by the program provided by the Inter-Ministerial Project. Thirdly, the dependent variable, institutional use--comprised of days in jail, days in hospital, and days in a forensic psychiatric unit--is an expansion beyond the usual methods of collecting data on just hospital admissions alone. This allows for the fact that many chronic mentally ill now use jails and forensic institutions in much the same way as they once used psychiatric institutions.

Summary

In this chapter, intensive case management has been defined. Various intensive case management projects have been discussed, and their methods of evaluation examined. The program under evaluation in the following chapters, the Inter-Ministerial Project, has been seen to be typical of an intensive case management project. The remainder of this paper will be concerned with assessing whether or not the I.M.P. is associated with a decrease in the rates of institutional bed day use of a sample of its clients.
Chapter Three

Methodology

Introduction

This chapter describes the methodology and the rationale for employing such methodology, used to evaluate the Inter-Ministerial Project in this study.

The Independent Variable: Intensive Case Management

For the purposes of this study, intensive case management is defined as that style of psychiatric aftercare which, by its use of a small client-worker ratio, attempts to provide comprehensive assistance to severely psychiatrically impaired individuals in all aspects of daily living with aim to improving their quality of life, adaptation into the community, and thus avoiding a dependence upon institutional care. This intervention is characterized by a concentration on the functions of linking, assessing, monitoring, liaising, and advocacy; a strong emphasis upon building trusting relationships; and an emphasis on performing these duties in the community, as opposed to traditional office-bound psychiatric care.

Services provided by the I.M.P. are intensive case management services, evaluated in the present study. Throughout its four year history the project has always maintained a worker-client ratio of not more than 10-1. As with other intensive case management projects, this low client-worker ratio enables greater client contact. During the time period January 1, 1990, to December 31, 1990, the workers of the I.M.P. saw its clients 2.8 times a week.

The Dependent Variable: Institutional Use
For the purposes of this study, institutional use is defined as any day or partial day spent in an institution of total care. These will include (a) all British Columbia provincial correctional institutions, (b) all psychiatric wings of general hospitals in British Columbia or any other province, and/or Riverview or any other provincial psychiatric hospital, and (c) the Forensic Psychiatric Institute of British Columbia. (The Forensic Psychiatric Institute is a licensed mental health facility used to assess and/or treat British Columbians who have come into contact with the legal system because of mental illness). Other possibilities, venues that might have an institutional quality about them such as detoxification centres, psychiatric boarding homes, emergency shelters, and corrections half-way houses—all will be considered to be part of the community. Only jails, hospitals, and the Forensic Psychiatric Institutes will be considered to be institutions.

Units are in terms of days and are inclusive. For example, if a subject was in jail April 2/83 to April 10/83, this would be a total of 9 days as both April 2'nd and April 10'th are counted, not merely the difference between the two. Thus partial days—days, for instance, when a person is admitted or discharged part-way through the day—will be counted as whole days. This approach has been adopted because it conforms to the manner in which B.C. Corrections counts days for terms of sentencing, and it thus standardizes the method used.

When gathering jail day totals, no difference was made between a day served on remand status and a day served on sentenced status. Each day and partial day was counted as one. Similarly,
when collecting Forensic Psychiatric Institute day totals, no difference was made between psychiatric remand status, involuntary status, warrant of committal status, not guilty by reason of insanity status, or temporary absence from a correctional facility status. Once again, each day and partial day was merely counted as one.

When calculating hospital day totals, only hospital days resulting from psychiatric problems were counted. When gathering hospital day totals, no distinction was made between voluntary or involuntary psychiatric hospitalizations. However, days spent in hospital for physical reasons were not included. Days spent in hospital for a physical injury sustained from a suicide attempt were counted, but only to the degree that these could be described as days in an acute unit since this could be defined as mental health admission. Follow-up stays for physical problems sustained through suicide attempts in long-term, convalescing, or physiotherapy wards were not counted since these prolonged stays were considered to be physical admissions.

Similarly, days described by psychiatric hospitals as "extended leave" were not counted, even though such days are usually recorded by hospitals to be officially part of a patient's stay because psychiatric patients typically spend "extended leave" days in the community. It would have been deceptive to consider these days as days spent in the hospital while people were actually at liberty in the community. Thus all extended leave days were assumed to be days spent in the community and were counted as such.

British Columbia Corrections data was collected by accessing records kept at the Vancouver Adult Probation office. Clearance
was authorized by the Local Director. Forensic data was collected by accessing files kept at the Forensic Psychiatric Institute, Port Coquitlam. Clearance was authorized by the Executive Director. Hospital data was collected by approaching each consenting subject individually and asking him/her to give a brief verbal history of all psychiatric hospitalizations and approximate dates. For each hospitalization, a standard Ministry of Health release of information form (see Appendix B for letters of authorization and release of information form) was completed requesting the number of bed days incurred. Once signed by the subject, the form was sent to the appropriate hospital. Totals were then calculated when the number of bed days was returned to the researcher by the hospital.

Factors confounding the dependent variable.

Gathering data in this way brought to the researcher's attention a number of factors that could influence the outcome of the study. The first of these was that both B.C. Corrections records and Forensic Psychiatric Institute records are limited to the province of British Columbia. If a subject travelled to another province some time during the "before or "during" period and be incarcerated or detained in a forensic psychiatric facility, this would not appear in the data collected. This was seen as being a problem that would likely confound the pre-test (before) period rather more than the post-test (during) period, for it was observed that while clients were on the I.M.P. caseload they usually remained in British Columbia. Since one of the inclusion criteria of the I.M.P. was that a client be on either probation or bail, many were bound by a court order limiting out-of-province travel. However, it is uncertain what restrictions on travel
applied in the "before" period, and it is possible that clients could have travelled out of the province for extended periods of time.

The same problem did not apply to hospital data. If, during a subject's verbal history about previous hospitalizations, an out-of-province hospital was named, it could be accessed in the same manner as a local hospital with a standard Ministry of Health release of information form. However, gathering the hospital data had other problems. Merely knowing what hospitals to access for data depended entirely upon the subject's verbal history. If a subject was forgetful, evasive, or otherwise erroneous about being in a hospital, then this information would not be sought out, and would likely be missed. The researcher tried to control for this in two ways: (a) by assuring subjects that the number of bed days only was the information being sought. It was thought that individuals might be more forthcoming if they were sure that diagnosis, treatment, and other experiences which might be looked upon negatively were kept out of scrutiny; and (b) by including in the release of information form the period January 1/83 to present, a period well before and after the parameters of the study period. This way, individuals might be mistaken about the actual dates they were in the hospital, but as long as they were correct about which hospital they were in, the data could still be collected.

**Hypothesis**

The purpose of this study was to determine a number of factors, the most important of which was the effectiveness of intensive case management as an intervention to reduce
institutional recidivism of multi-problem clients. Of considerable importance, too, was its effects over time, and its ability to impact the corrections, forensic, and mental health systems individually. In order to address these many questions, a number of hypothesis were posed.

Hypothesis #1.

The primary purpose of this study was to determine if intensive case management is an intervention that might be associated with a reduction in the institutional use of a sample of multi-problem clients. Thus the null hypothesis was posed as follows: the number of institutional bed use days of a group of multi-problem clients receiving intensive case management services for one year will not differ from the number of institutional bed days in the year preceding such case management.

Hypothesis #2.

Also of interest was the question of whether or not intensive case management might be associated with a reduction in the institutional bed use of a sample of multi-problem clients at the two year time period. Thus the null hypothesis was posed as follows: the number of institutional bed use days of a group of multi-problem clients receiving intensive case management services for two years will not differ from the number of institutional bed days in the two years preceding such case management.

Hypothesis #3.

Of further interest was the question of how the effects associated with intensive case management impacted each of the systems—corrections, forensic, and mental health—individually at the one year period. Thus the first null hypothesis in this area
was posed: the number of correctional bed use days of multi-problem clients receiving intensive case management for one year will not differ from the number of correctional bed use days in the year preceding such case management.

**Hypothesis #4.**

For the forensic system, a similar null hypothesis was posed as follows: the number of forensic bed use days of multi-problem clients receiving intensive case management for one year will not differ from the number of forensic bed use days in the year preceding such case management.

**Hypothesis #5.**

For the mental health system, a similar null hypothesis was posed as follows: the number of mental health bed use days of multi-problem clients receiving intensive case management for one year will not differ from the number of mental health bed use days in the year preceding such case management.

**Hypothesis #6.**

Of further interest was the question of how the effects associated with intensive case management impacted each of the systems individually at the two year period. Thus the first null hypothesis in this area was posed as follows: the number of correctional bed use days of multi-problem clients receiving intensive case management for two years will not differ from the number of correctional bed use days in the two years preceding such intensive case management.

**Hypothesis #7.**

For the forensic system at the two year period, a similar null hypothesis was posed as follows: the number of forensic bed use
days of multi-problem clients receiving intensive case management for two years will not differ from the number of forensic bed use days in the two years preceding such intensive case management.

**Hypothesis #8.**

For the mental health system at the two year period, a similar null hypothesis was posed as follows: the number of mental health bed use days of multi-problem clients receiving intensive case management services for two years will not differ from the number of mental health bed use days in the two years preceding such intensive case management.

**Time Parameters of the Study**

The maximum amount of time considered in this study was the two years before an individual commenced the I.M.P., added to the two years during the project. This was a total of four years. Since the I.M.P. began Jan. 1, 1987, this meant that the earliest possible date being considered was Jan. 1, 1985. However, not every client commenced the project on the starting date. Many commenced it somewhere during the year of 1987 or early 1988. A cut-off point to data collection was required, and Dec. 31, 1990 was seen as a convenient cut-off point. This meant that the maximum time parameters of the study were from Jan. 1, 1985, to Dec. 31, 1990.

**The Sample**

Data was collected on subjects (called clients by the I.M.P.), all members of the I.M.P.'s caseload. Between the inception of the project on Jan. 1, 1987, and the cut-off point of this study, Dec. 31, 1990, the project had offered intensive case management
services to 70 individuals. On Dec. 31, 1990, the project was providing service to 43 individuals. Of this group, 17 were involved in another research project called the "Oakalla Project." Of the remaining number (26), clients were chosen who fit the following criteria: (a) that they had been with the I.M.P. for a minimum of one year; (b) that their entry point on to the project was not Oakalla correctional institution (these individuals were all included in another research project); (c) that they were willing to cooperate to the extent that they would sign a release of information forms to allow the researcher to access hospital records to gather the number of bed days; and (d) that they had spent some time in a correctional, mental health, or forensic institution during the research period.

The criteria of a minimum of one year's tenure on the Project was set because this was seen to be a sufficient amount of time to allow for the therapeutic aspects, if there were any, of intensive case management to take effect. A few days, or a few weeks, was not seen as a sufficient amount of time. Also, in the early days of the project, a number of clients commenced with the I.M.P. only to drop out or disappear a few days or a few weeks later. It was felt that studying such clients would not be appropriate as the tenure of their participation was too brief to derive benefits from intensive case management services. Also, some clients commenced the project while still serving time on a mental health or other detention, and it was felt that a one year period was required to allow these persons to be released, given assistance with a community placement, and to await the effects of intensive case management services, if there were any, to take hold.
The criteria that the entry point be from anywhere other than Oakalla correctional institution was chosen because, as has been mentioned, those having been referred to the project through Oakalla were already being studied by another research project. It was felt that it would have been onerous to ask people, some of whom suffered from paranoid disorders or extreme withdrawal, to involve themselves in two separate research programs, both of which demanded some degree of scrutiny. The client's cooperation was necessary in order to access hospital data, and there was a concern that by asking too many questions, individuals might be reluctant to cooperate in this sensitive area.

The criteria that each individual had to have spent some time in an institution some time during the research period was chosen for the obvious reason that the outcome measure was that of improvement or regression in institutional use. If an individual had not spent any time in an institution either before or after the advent of intensive case management, then there was nothing that could either be improved or made worse through the intervention.

Given these four criteria, the research group then consisted of 25 subjects. (Only one subject was deleted from the sample due to the fact that she/he had never spent any time in an institution during the study period). Of the group, 96% were male (24) and 4% (1) were female. The average age, as of Dec. 31, 1990, was 33 years. Diagnostically, 60% (15) had a primary diagnosis of schizophrenia; 8% (2) had a primary diagnosis of bipolar disorder; and 32% (8) had a primary diagnosis of a serious personality disorder, usually of an antisocial or a borderline type. Of the entire sample, 68% (17) were seen as being "dual diagnosed"--as
having a major mental illness (either schizophrenia or a bipolar disorder) or a serious personality disorder along with a substance abuse problem. In fact, of the entire group, 56% (14) were found to have the triple diagnostic constellation of a major mental illness, a personality disorder, and a substance abuse problem. Of the entire sample, 16% (4) were found to be in the borderline category of cerebral functioning. (See Appendix D).

All subjects had a criminal record, and no one subject had any fewer than 3 criminal convictions as an adult. The most common type of criminal conviction was for "theft of private property valued under $2,0000" followed by assault. During the year previous to their tenure with the I.M.P., the group had spent on average of 90 days in jail, 40 days in the Forensic Psychiatric institute, and 5 days in psychiatric hospitals. In other words, during the one year period previous to commencing the I.M.P. the group had spent on average 1/3 of this time in an institution of some type.

All (25) were single, and 84% (21) were unemployed and receiving regular social assistance or handicap benefits. Of the 16% (4) who were employed, all of these people worked only part-time or casually. More than half of the sample, 52% (16) had been referred to the I.M.P. by the Multi-Service Network (M.S.N.), a case documenting and case coordinating agency specializing in multi-problem clients. Another 20% (5) had been referred to the I.M.P. by their probation officer. Another 20% (5) had been referred to the project by the Forensic Psychiatric Service Outpatient Clinic. Another 4% (1) had been referred by crown counsel, and 4% (1) by correctional staff at the local jail.
Design

The study employed a one group pre-test, post-test design. The post-test was the period of time, called the "tenure" period, that the subject was receiving intensive case management services from the I.M.P.. These periods were investigated for institutional bed day use both at the one year and the two year point on the project. The pre-test period was the period of time, equal in length to the "tenure" period, immediately before case management services were being provided by the Inter-Ministerial project. Once again, these periods were investigated for institutional bed day use at the one year and the two year period of time. Thus the pre-test period was in actuality a "before" period, while the post-test period could be more accurately described as a "during" period. Comparisons were then made between this "before" and "during" period to see if there was any difference in institutional use.

Limitations Due to Design

The limitations of using such a quasi-experimental design as the pre-test, post-test one group design included threats to both internal and external validity. The major threats to internal validity were factors of history, maturation, selection, and the reactive effects of experimental procedures. The major threat to external validity was the interaction of selection bias and treatment.

Selection.

Undoubtedly the strongest threat to the validity of a study using a pre-test, post-test one group design occurred because a
control group was not used. Without a control group, causality could not be inferred. The creation of a control group in this study was not feasible. Since the I.M.P. had already been in operation over three years at the initiation of this study, it was not possible to create a control group retrospectively. Even if it were possible, there was the added concern that since the Inter-Ministerial Project focused on the most severe multi-problem persons in Vancouver's downtown eastside, the random assignment of individuals to treatment or no treatment would have invoked some serious ethical concerns. The Inter-Ministerial Project was created as a service driven, as opposed to a research driven, program. Depriving someone of needed case management services in order to fit the structure of a research paradigm was seen as ethically questionable.

Maturation.

The second largest threat to the internal validity of this study was seen to be in the area of maturation. Given that in this study individuals were being studied over time, certainly the mere passage of time must always be considered as a rival hypothesis to account for any change. However, a certain amount of time must be taken into consideration in order to be able to appreciate the historical process of major mental illnesses and severe personality disorders, especially those of a chronic sort such as this sample of 25 individuals possessed. Many major mental illness and severe personality disorders are now recognized as having a general pattern of stability, decompensation, acuteness, patienthood, and convalescence associated with them, and the recurring cycles of many chronic illnesses are only fully appreciated through the
passage of years. Unlike most other diseases, chronic mental illnesses only reveal their course through the passage of years. Short study periods aimed at ascertaining certain aspects of chronic mental illnesses are likely to miss this important point. In this study the maximum amount of time under consideration was four years (two years pre-test plus two years post-test). This was considered to be an adequate compromise, long enough to allow the patterns of chronic mental illnesses to flourish, and short enough to rule out the effects of aging being considered a rival hypothesis.

History.

Events that occurred during the time parameters of the study may also have confounded the results in a variety of ways. For example, once judges in provincial courts became aware of that the I.M.P. was, in their opinion, looking after certain mentally ill individuals, they become more apt to give these clients probation orders instead of a jail sentence. Also, over the time period 1987-1990, Riverview Hospital, through various policy changes, called for stricter admission criteria, and in accordance with The Mental Health Plan (1987), used Vancouver General Hospital as a screening unit for admissions to Riverview. As a result, fewer people were hospitalized than in the years previous to 1987.

Reactive effects of experimental procedures.

Another major threat to the internal validity of this type of design is that people often alter their behaviour just because they are part of a special project. While this might be true of all I.M.P. clients just by virtue of the fact that they are receiving special treatment, this is very difficult to isolate from what is
being accomplished by intensive case management interventions. Given that one of the main features of intensive case management is a "specializing," or a process of making the worker-client relationship more intense than that typical of ordinary mental health services, it is very difficult to determine whether changes in behaviour were owing to the techniques of case management—the linking, monitoring, etc.—or merely to the fact that people were receiving more attention or some sort of special status. However, retrospective studies can counter for this effect. Since the commencing date of this evaluation was almost four years after the beginning of the program, one can safely assume that subjects were not modifying their behaviour just because they knew they were part of a research project. They might have been modifying their behaviour because they were part of an intensive case management program; however, they were not modifying their behaviour because they were part of an evaluation component of an intensive case management program.

Interactive effects of selection biases and intervention.

A major threat to the external validity of this type of design is that the characteristics of the subjects chosen often limits how extensively the findings can be generalized. In this study there were two levels of self-selection at work: (a) first of all, clients on the caseload of the I.M.P. have already agreed to some extent to involve themselves in a special project, namely an intensive case management project; and (b) secondly, those who have agreed to be part of the research component have further agreed to be part of a special project. One can always raise the question of just how representative of the multi-problem population is a group
of people who exhibit this level of cooperation? Some attempts
have been made to control for (b) by making what is required to be
part of the research project—the signing of a release of
information form—as minimal as possible. However, there is no
doubt that some sort of self-selection has occurred. As a result,
generalizations to the population of all multi-problem clients are
not possible.

The Pre-Test, Post-Test Design as a Compromise.

The best solution to the many problems encountered in setting
up a method to evaluate the effectiveness of the I.M.P. seemed to
be by using a pre-test, post-test one group design, or what is some
times referred to as a repeat measures design. With this method,
the group itself, prior to the intervention, could stand as its
own comparison group. This was seen as desirable as it allowed for
the passage of some time and, furthermore, solved any ethical
problems about control clients being deprived treatment. The use of
such a design represents the classic compromise often faced by
researchers studying programs or treatments in real-life settings.
Such a compromise is often an exercise in negotiating the factors
of utility, credibility, and practicality in an attempt to bring an
evaluative effort to a project or treatment. While it has
limitations, many of which have been discussed, it was the best
possible alternative in attempting to reach the stated research
goals.

Data Analysis

Each of the 8 hypothesis was analyzed using a standard test of
significance. The test that was used was that of the $t$-test because
of its superior robustness. Although assumptions of normality can
be made with many variables, because of the small and rather idiosyncratic group under scrutiny in this study, there was no reason to assume that institutional admission rates would perform according to the normal curve. However, recent research (Glass, 1972) has shown that a violation to the assumption of normality has very little effect upon the $t$-test. Also, given the great discrepancy between individual tenure period institutional rates and corresponding pre-test institution rates, it seemed likely that little homogeneity of variance would occur. It has been shown, however, that the $t$-test is still robust given a lack of homogeneity of variance, just as long as sample sizes are kept equal. Since, in this study, all comparisons are in reality part of the same group either in a "before" or "during" state, then sample sizes will always be the same. Thus the $t$-test appeared to the best possible test for this study.

For each of the 8 hypothesis, the pretest and posttest means were subject to a $t$-test. T-tests were performed on (a) the means of all institutional bed day use before and during the one year period; (b) the means of all institutional bed day use before and during the two year period; (c) the means of all correctional bed day use before and during the one year period; (d) the means of all forensic bed day use before and during the one year period; (e) the means of all mental health bed day use before and during the one year period; (f) the means of all correctional bed day use before and during the two year period; (g) the means of all forensic bed day use before and during the two year period; (h) and the means of all mental health bed day use before and during the two year period. This amounted to a total of 8 $t$-tests in all.
Chapter Four

Results

Hypothesis Verification

Hypothesis #1.

A restatement of the primary null hypothesis to be tested is as follows: that the number of total institutional bed use days of a sample (n = 25) of multi-problem clients receiving intensive case management services for one year will not differ from the number of total institutional bed days used in the year preceding such intensive case management. Results indicate that the change in the mean of the number of institutional bed days used in the one year period before I.M.P. and the mean of the number of bed days used in the one year period during I.M.P. is significantly different ($t = 2.27$, D.F. = 74, p.<.05). One must keep in mind that with all systems considered together, all totals are then further divided by 3.

Hypothesis #2.

A restatement of the null hypothesis is as follows: that the number of total institutional bed use days of a sample (n = 17) of multi-problem clients receiving intensive case management services for two years will not differ from the number of total institutional bed days in the two years preceding such intensive case management. Results indicate that the difference in the mean of the number of institutional bed days used in the two year period before I.M.P. and the mean of the number of bed days used in the two year period during I.M.P. is significantly different ($t = 2.99$, D.F. = 50, p.<.05). Once again, one must keep in mind when
all three systems are considered together, all totals are then further divided by 3.

Hypothesis #3.

A restatement of the null hypothesis is as follows: that the number of correctional bed use days of a sample (n = 25) of multi-problem clients receiving intensive case management services for one year will not differ from the number of correctional bed use days in the year preceding such intensive case management. Results indicate that the difference in the mean of the number of correctional bed days used in the one year period during I.M.P. and the mean of the number of bed days used in the one year period preceding I.M.P. is significantly different (t = 2.48, D.F. = 24, p.<.05).

Hypothesis #4.

A restatement of the null hypothesis is as follows: that the number of forensic bed use days of a sample (n = 25) of multi-problem clients receiving intensive case management services for one year will not differ from the number of forensic bed use days in the year preceding such intensive case management. Results indicate that the difference in the mean of the number of forensic bed days used in the one year period before I.M.P. and the mean of the number of forensic days used during I.M.P. is not significantly different.

Hypothesis #5.

A restatement of the null hypothesis is as follows: that the number of mental health bed use days of a sample (n = 25) of multi-problem clients receiving intensive case management services for one year will not differ from the number of mental health bed use
days in the one year preceding such intensive case management. Results indicate that the difference in the mean of the number of mental health bed days used in the one year period during I.M.P. and the mean of the number of mental health bed days used in the same period preceding I.M.P. is not significantly different.

Hypothesis #6.

A restatement of the null hypothesis is as follows: that the number of correctional bed use days of a sample of multi-problem clients (n = 17) receiving intensive case management for two years will not differ from the number of correctional bed use days in the two years preceding such intensive case management. Results indicate that the difference in the mean of the number of correctional bed days used in the two year period during I.M.P. and the mean of the number of correctional bed days used in the same period preceding I.M.P. is significantly different (t = 2.73, D.F. = 16, p.<.05).

Hypothesis #7.

A restatement of the null hypothesis is as follows: that the number of forensic bed use days of a sample (n = 17) of multi-problem clients receiving intensive case management for two years will not differ from the number of forensic bed use days in the two years preceding such intensive case management. Results indicate that the difference in the mean of the number of forensic bed days used in the two year period during I.M.P. and the mean of the number of forensic bed days used in the same period preceding I.M.P. is not significantly different.
Hypothesis #8.

A restatement of the null hypothesis is as follows: that the number of mental health bed use days of a sample \((n = 17)\) of multi-problem clients receiving intensive case management for two years will not differ from the number of mental health bed use days in the two years preceding such intensive case management. Results indicate that the difference in the mean of the number of mental health bed days used in the two year period during I.M.P. and the mean of the number of mental health bed days used in the same period preceding I.M.P. is not significantly different.

A more detailed break-down of the difference in means between the pre-test and the post-test periods may be seen in Table 1.
Table 1

Pre-Test and Post-Test Results, One Year and Two Year Follow-Up
Points

<table>
<thead>
<tr>
<th></th>
<th>Pre-Test</th>
<th></th>
<th>Post-Test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>One year follow up</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Over-all inst. days</td>
<td>44.78</td>
<td>81.69</td>
<td>21.88</td>
<td>48.58*</td>
</tr>
<tr>
<td>2. Corrections</td>
<td>90.80</td>
<td>101.95</td>
<td>37.00</td>
<td>65.49*</td>
</tr>
<tr>
<td>3. Forensic</td>
<td>38.40</td>
<td>77.95</td>
<td>18.64</td>
<td>42.21</td>
</tr>
<tr>
<td>4. Mental Health</td>
<td>5.16</td>
<td>14.88</td>
<td>10.00</td>
<td>28.44</td>
</tr>
<tr>
<td>Two year follow up</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Over-all inst. days</td>
<td>84.39</td>
<td>138.54</td>
<td>34.64</td>
<td>61.18*</td>
</tr>
<tr>
<td>6. Corrections</td>
<td>178.70</td>
<td>196.72</td>
<td>67.11</td>
<td>90.76*</td>
</tr>
<tr>
<td>7. Forensic</td>
<td>48.00</td>
<td>67.19</td>
<td>17.35</td>
<td>35.43</td>
</tr>
<tr>
<td>8. Mental Health</td>
<td>26.47</td>
<td>48.43</td>
<td>19.47</td>
<td>22.82</td>
</tr>
</tbody>
</table>

N = 25
p. < .05.
* denotes statistical significance

N = 17
p. < .05.
* denotes statistical significance
Chapter Five  
Discussion  

Verifying the Hypothesis  

Intensive case management services was associated with a reduction of the bed day use for multi-problem clients in this study. However, due to the limitations of the repeat measures design, no causation can be inferred. Causation can only be inferred when all other rival hypothesis are ruled out through the use of more rigorous experimental designs such as the randomized two-group design. Without a control group, rival hypothesis are always tenable, and conclusions must be limited to the following: that this group of 25 multi-problem clients appears to have incurred significantly lower rates of institutional recidivism after the advent of intensive case management. Whether or not intensive case management caused this difference is beyond the scope of this paper, and points to the fact that more research with rigorous designs are required in this area.

These data also showed that rates of reduction of institutional bed use varied with the type of institution considered. Intensive case management was associated with variable decreases in corrections, forensic, and mental health institutional use. Corrections bed use was significantly reduced, forensic bed use was not significantly reduced, and mental health bed use was not significantly reduced. In summary, while total institutional bed use was significantly reduced, it appeared to be due primarily to decreases in correctional facilities.

Given these results it would appear that following the
intervention of intensive case management, this group of multi-problem clients illustrates a vast improvement at staying out of jail, a possible trend in remaining out of forensic psychiatric institutes, and no change in remaining out of psychiatric hospitals. In fact, according to the raw data, the group is in hospital for slightly more days during the periods of intervention than during the corresponding periods of no intervention. This negative difference is not statistically significant.

In interpreting results it is necessary to consider whether the positive change shown in the corrections data might, in part, be owing to the negative change in the mental health data. There is already some speculation in the literature that these two variables (psychiatric hospitals and jails) might be inter-dependent and what is at work here is a dynamic which exists between these two systems of social control.

It is possible that with the advent of intensive case management services, multi-problem clients were not going in to the corrections system as much because they were going in to the mental health system more. This seems even more reasonable when one considers that advocacy is an essential ingredient of intensive case management intervention, and advocacy works in opposite directions in the corrections and mental health system. In the corrections system, advocacy is likely to produce more lenient sentences or probation or bail in lieu of incarceration, while in the mental health system it is likely to encourage doctors, nurses, and other mental health professionals to give multi-problem clients greater access to treatment. Studying such a question would require a quantitative analysis aimed at determining if there is an
inverse correlation between days prevented in the corrections system and days incurred in the mental health system. This would provide an excellent topic for further research.

The lack of change in bed day use in forensic and mental health facilities might lead to the conclusion that intensive case management is a somewhat ineffective intervention. However, such a conclusion needs to be tempered given the characteristics of the population. Given the relatively high degree of psychopathology, substance abuse, and history of previous institutional use of this group, one might expect some institutional use to continue no matter what the intervention. The decrease in corrections use might be seen as an example of a shift away from the most inappropriate institution, with a somewhat lesser effect on decreasing the use of institutions which have a component of mental health care about them. This is very important when one considers that the central unifying feature about this group is mental illness. Regarded in this way, the intervention of intensive case management may be associated not only with a reduction of institutional use, but also a redirecting of individuals towards institutions more appropriate to their needs.

One Year Results Compared To Two Year Results

The finding of a reduction of institutional bed day use was maintained for both the one year and two year follow-up period. Although the change at the two year period appeared to be slightly stronger than at the one year period, this reflects primarily the smaller sample size in the two year follow up as compared to the one year follow up. The findings suggest that the change associated with intensive case management continues over time, but
it does not suggest that the change is increased as intensive case management is increased in duration. Such a finding can only be shown through the use of a more rigorous research design, such as the control-study design.

Summary

The results of this study can be summarized as follows:

Intensive case management was associated with increased community tenure of multi-problem clients. This program evaluation of the Inter-Ministerial Project showed that this group of multi-problem clients resided in the community longer while on the project than during the same period of time immediately before the project. Given that since the era of deinstitutionalization treatment philosophies are in keeping with the belief that the best treatments occur in the least restrictive settings, then the Inter-Ministerial Project appears to be an effective intervention accomplishing this goal. As a community based program, it is certainly to be less restrictive than any program held within the grounds of in an institution.

Intensive case management was associated with a move towards more mental health use by multi-problem clients and less corrections use. Those who are interested in cost-effective interventions might state the fact that it costs up to five times as much per day for an emergency bed at hospital than a jail. However, this argument is not completely true on two accounts. First of all, a jail day is cheaper than a hospital day, but when one considers all the other costs associated with processing a person for a day in jail—the cost of a trial with a judge, a crown counsel, a legal aid lawyer, and witnesses, some of whom might be
police officer—then it is, in fact, more expensive. Secondly, there is the philosophical argument that if individuals are mentally ill, then they should be cared for in a mental health setting rather than a corrections setting. Given these additional factors, intensive case management presents as a financially feasible and philosophically sound treatment option.

The corrections system might be the most effective point in the system for establishing contact with multi-problem clients for further interventions. The use of the corrections system by multi-problem individuals is an interesting topic and a detailed discussion of it is beyond the scope of this paper. (see Appendix F, "Transinstitutionalization" for a more detailed discussion of this trend). However, in terms of engaging the multi-problem client, the corrections system seems to be an important entry point. Although most of the sample had contact with all three systems, there were noticeable gaps here and there. Yet in only one case, was an individual not in contact with the corrections system. Besides having a mental health diagnosis, spending some time in the corrections system seems to be another common denominator that this, otherwise, heterogeneous group shared. This might be considered an important finding for program planners who are looking for ways to target the multi-problem client. Local jails, although certainly not the venue of care for the multi-problem client, might serve as a target point for program planners interested in trying further interventions with this type of client.

There is a need for evaluative and outcome research projects to be built into community interventions right at their beginning.
The type of design used in this study shows the importance of building evaluation methods into programs at their inception. Retrospective studies with quasi-experimental designs can only make tentative conclusions. In order to be able to say with greater confidence that an intervention is effective, a control group is required. In order to set up a proper control group, one must do so at the start.

The findings of this study appear to contradict the findings of the one research project most similar to it, that of Carrado's (1987) evaluation of a population of multi-problem clients of the Multi-Service Network. In that work he found that after Multi-Service Network intervention, mental health costs were reduced, corrections costs were increased, and welfare costs (Social Services and Housing) were increased. If costs were attached to the present study, the following would likely emerge: welfare costs would be increased (because the subjects are in the community for a longer period of time), mental health costs would be increased, and corrections costs decreased. This difference in findings might be owing to a difference in methodology, a difference in what is being measured—case coordination as opposed to intensive case management—and a difference in the study group. Even though Carroda picked clients of the M.S.N., who given the mandate of the M.S.N., would necessarily be multi-problem clients, his very small sample (10), undoubtedly influenced his results. The inability to gather large populations when studying the multi-problem client group will likely hamper program planners and researchers in the future.

There is a need to continue to devise new interventions for
this population. Both the Corrado (1987) Report and this study say, in one respect, the same thing: that given the institutional use of this group, multi-problem clients will end up costing some part of the system a great deal in terms of financial resources. At this point, it does not appear that their problems will ameliorate over time; nor will ignoring them improve their situation or reduce the cost they represent to the various parts of the care system. It is more appropriate to create programs which are meant to engage this group and to help them with their many problems. These programs should be funded and staffed by various ministries for this client group is not just the responsibility of mental health, or corrections, or forensic, but of every part of the system concerned.
References


Buckley, R. (1990). The Inter-Ministerial Project. An unpublished paper, Greater Vancouver Mental Health Services Society, Vancouver,
Buckley, R. (1990). Presentation Given at the U.B.C. Faculty Club, May 3, 1990, on the Multi-Service Network (M.S.N.), the Inter-Ministerial Project (I.M.P.), and the Dual Diagnosis Project. Vancouver: Greater Vancouver Mental Health Services Society.


Appendix A

Operationalizing the Term Multi-Problem Client

In February of 1988 the researcher and two colleagues attempted to address the problem of a lack of general consensus as to what constituted a multi-problem client. Two of us were employed as case managers (called "workers") with the I.M.P. (the program under scrutiny in this paper), and we wondered if we were really targeting the multi-problem client. We began our task by asking if there really was such an individual as the multi-problem client. To answer this question we constructed a questionnaire and circulated it to the line workers of the Greater Vancouver Mental Health Services Society. Our assumption was that if such an entity as the multi-problem person did exist, then the professionals who provide front-line mental health services to the Vancouver community would know of them.

Using the guidelines of Buckley's (1987) definition as the prototype, we collapsed this definition into what we considered to be 5 discrete elements. These were (a) multiple diagnosis on Axis I and Axis II (which would diagnosis as disparate as alcohol\drug use\abuse, mental retardation, personality disorders, as well as major mental illnesses); (b) treatment resistance; (c) intermittent presence before the courts; (d) repeated contacts with mental health and corrections institutional systems; and (e) a certain "larger than life" reputation or a marked degree of "community infamy." Our rationale here was that rather than lead the informants by asking them if they knew anything about the multi-problem person, we would ask them if they recognized a certain constellation of psychiatric and social features reoccurring in clients on their caseload. If the answer was regularly "yes," then we thought that we could say with confidence that such an individual existed.

After listing the 5 criteria we then asked the following three questions: (1) Do you now have on your caseload any client(s) who meet all 5 of the criteria? (2) If "yes," how many such individuals are on your caseload? (3) Do you think there are a lot more\a few more\no more in your team's catchment area than a year ago? (See Appendix B for a complete questionnaire). We then provided each of the eight team directors of the Greater Vancouver Mental Health Services Society with a packet of questionnaires to distribute and collect at a regular morning intake meeting some day during the first week of March, 1988. We hoped that by making our questionnaire quick and easy to do we could achieve a better return rate as well as avoid taking time away from regular daily business. Our questionnaire received a return rate of 76% (N=87). A geographical breakdown of respondents and their answers to question 1 (Do you have any such individuals on your caseload?) appears as shown in Table 2).
Table 2

**Answer to Question (1): Do You Have Any Such Individuals on Your Caseload?**

<table>
<thead>
<tr>
<th>Team</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Side</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>West End</td>
<td>0</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Mount Pleas.</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Kitsilano</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Strathcona</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Richmond</td>
<td>3</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>South</td>
<td>1</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Broadway</td>
<td>2</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
<td><strong>65</strong></td>
<td><strong>87</strong></td>
</tr>
</tbody>
</table>

N = 87, which represents 76% of all G.V.M.H.S.S. line workers.
A number of confounding factors must be taken into account here. First of all, this was never meant as an attempt at scientific research, and our questionnaire is recognizably not a rigorous research instrument. Our efforts were merely to ascertain if such a client really existed. Secondly, if a person is very treatment resistant, then it is quite likely that he/she will not be on any mental health worker's caseload. We hoped to counter for this by including question 3 (Do you think there are more/less such individuals than there were one year ago) which is speculative and might provide, in a very rough sense, some idea of actual numbers. Also, if a person has repeated contacts with the court and is intermittently on probation and bail, then it is possible that he/she might be followed by Forensic Psychiatric Services rather than Greater Vancouver Mental Health. These two services are mutually exclusive in that a client can only be a patient with either one or the other at any given time. Certainly a more accurate count of actual numbers could have been garnered by surveying Forensic Psychiatric Services primary workers as well.

Nevertheless, the results do indicate that 25% of all Greater Vancouver Mental Health Services primary workers who responded have first-hand knowledge of a client who has the five main features of Buckley's multi-problem client. Furthermore, as Table 3 reveals there is also some indication that this client constitutes a small group (41), less than 1% of the Greater Vancouver Mental Health Services Society's total (1988) caseload. There is also a tendency of residing towards the inner city core given the relatively high numbers at the Strathcona Team (18) and the Mount Pleasant Team (7) as illustrated in Table 3.
Table 3

Answer to Question (2): If "yes," How Many of These Clients Do You Have On Your Caseload?

<table>
<thead>
<tr>
<th>Team</th>
<th>No. of Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Side</td>
<td>0</td>
</tr>
<tr>
<td>West End</td>
<td>0</td>
</tr>
<tr>
<td>Mount Pleasant</td>
<td>7</td>
</tr>
<tr>
<td>Kitsilano</td>
<td>4</td>
</tr>
<tr>
<td>Strathcona</td>
<td>18</td>
</tr>
<tr>
<td>Richmond</td>
<td>6</td>
</tr>
<tr>
<td>South</td>
<td>2</td>
</tr>
<tr>
<td>Broadway</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total =</strong></td>
<td><strong>41</strong></td>
</tr>
</tbody>
</table>
The results of the questionnaire point only in very general directions. Along with the confounding factors already mentioned, there are others which include the assumption that each worker is talking only about clients on his/her caseload and not clients shared with other workers; and the assumption that workers are familiar enough with the categories of D.S.M.III to know that such features as mental retardation and substance abuse are included in Axis I and Axis II.

In spite of all this, the data does suggest that there is a distinct constellation of features which designates a client that at least 25% of respondents see on a regular basis. It also suggests that such a client tends to live towards the inner city core in the catchment areas of teams closer to what is known as the "skid row" area, or the downtown eastside. What this does is to suggest that as a construct, the "multi-problem" person can stand on its own as a research entity. For the purposes of this paper, any future references to the term "multi-problem" client will be used to describe an individual who fits the 5 point inclusion criteria of the questionnaire, or members of caseloads of projects which use the 5 point criteria to target their population. It should also be noted that the Inter-Ministerial Project, the independent variable under scrutiny in this paper, still uses the same 5 point criteria to designate clients appropriate to its mandate.
Appendix B

Release of information Form, Letters of Authorization, and Multi-Problem Questionnaire

QUESTIONNAIRE
INTER - MINISTERIAL PROJECT QUESTIONNAIRE

INCLUSION CRITERIA:

1. Periodically non-compliant with the prescribed treatment plan.

2. Multiple diagnoses on Axis I and/or Axis II.

3. An established history of repeated contacts with mental health and corrections services.

4. Intermittently on probation or bail.

5. "Notorious reputation" in the community, i.e., well known by local service providers.

1. Do you now have on your caseload any client(s) who meet all £mma of the above inclusion criteria? FIVE

YES_______ NO_______

2. IF YES, how many such clients are on your caseload?_________

3. Do you think there are a lot more such persons in your Team's catchment area than a year ago?

NO_______ A FEW MORE_______ A LOT MORE_______

DON'T KNOW_______

THANK YOU FOR YOUR ASSISTANCE
RELEASE OF INFORMATION FORM
Mental Health Programs or
Greater Vancouver Mental Health Services

Authorization for Release of Information

I hereby authorize ________________________________ to release the following information:

To NAME OF AGENCY

ADDRESS

This consent will expire on _____________________, or sixty days after the date below.

Client's Signature or Person Authorized to sign for client

Witness ____________________________ Date ____________________________

H87-519 REV 87/02
CERTIFICATE OF APPROVAL TO DO RESEARCH
Appendix C

The Inter-Ministerial Project as an Intensive Case Management Project

An obvious concern to the researcher was whether or not the Inter-Ministerial Project was an intensive case management project. Despite the fact that it called itself an intensive case management project, there was still little proof that it fit the criteria of the independent variable, intensive case management project. A review of the job description of the case managers (called "workers" by the I.M.P.) showed that the five functions most commonly outlined in the literature were listed. These included assessing, linking, monitoring, liaising, and advocating. However, there was no way of proving that the workers actually did these things. Also, although there was evidence that the I.M.P. maintained a worker-client ratio (10-1) significantly lower than the local mental health team (32-1), and that they saw their clients more often (2.8 times/week) than the local mental health team (once every 3 or 4 weeks), there was a question whether or not this alone constituted intensive case management.

In order to verify whether or not the I.M.P. fulfilled the criteria of the independent variable, intensive case management, the researcher decided to test using a case management assessment tool created by Kurtz et al (1984). This tool, called the "Frequency of Performance Scale" by the authors, consisted of twenty-six separate duties most commonly performed by case managers in intensive case management projects in the state of Georgia, U.S.A.. These were each rated on a six point scale of performance from "never" to "several times daily." The assumption was that if the I.M.P. scored at a high level in the majority of the categories, then it could be assumed with some confidence that it was an intensive case management project. The tool was given to each of the six workers of the Inter-Ministerial Project and, once completed, an average score for each of the categories was compiled. A copy of the tool and the I.M.P. average score in each category appears as in table 4.
Table 4
Frequency of Performance Scale and Average Inter-Ministerial Project Scores

<table>
<thead>
<tr>
<th>Activities</th>
<th>Frequency of Performance</th>
<th>I.M.P. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Circle only one</td>
<td></td>
</tr>
<tr>
<td>1 = never; 2 = occasionally; 3 = monthly; 4 = weekly; 5 = daily; 6 = more than once per day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct telephone intakes</td>
<td>1 2 3 4 5 6</td>
<td>3.0</td>
</tr>
<tr>
<td>Conduct office intakes</td>
<td>1 2 3 4 5 6</td>
<td>2.8</td>
</tr>
<tr>
<td>Conduct in-home intakes</td>
<td>1 2 3 4 5 6</td>
<td>1.3</td>
</tr>
<tr>
<td>Perform emergency screening</td>
<td>1 2 3 4 5 6</td>
<td>1.6</td>
</tr>
<tr>
<td>Take social histories</td>
<td>1 2 3 4 5 6</td>
<td>2.2</td>
</tr>
<tr>
<td>Conduct family interviews</td>
<td>1 2 3 4 5 6</td>
<td>1.8</td>
</tr>
<tr>
<td>Planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form service plans</td>
<td>1 2 3 4 5 6</td>
<td>3.6</td>
</tr>
<tr>
<td>Discuss clients with other staff</td>
<td>1 2 3 4 5 6</td>
<td>5.8</td>
</tr>
<tr>
<td>Discuss clients with supervisor</td>
<td>1 2 3 4 5 6</td>
<td>5.5</td>
</tr>
<tr>
<td>Arrange case conferences</td>
<td>1 2 3 4 5 6</td>
<td>2.8</td>
</tr>
<tr>
<td>Attend case conferences</td>
<td>1 2 3 4 5 6</td>
<td>2.6</td>
</tr>
<tr>
<td>Linking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrange appointments with agencies</td>
<td>1 2 3 4 5 6</td>
<td>5.2</td>
</tr>
<tr>
<td>Take clients to other agencies</td>
<td>1 2 3 4 5 6</td>
<td>5.3</td>
</tr>
<tr>
<td>Meet with other agency staff</td>
<td>1 2 3 4 5 6</td>
<td>4.6</td>
</tr>
<tr>
<td>Visit with clients in other facilities</td>
<td>1 2 3 4 5 6</td>
<td>4.6</td>
</tr>
<tr>
<td>Help plan clients' discharge from other facilities</td>
<td>1 2 3 4 5 6</td>
<td>3.6</td>
</tr>
</tbody>
</table>
Monitoring

<table>
<thead>
<tr>
<th>Activity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss progress with clients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Monitor clients' progress by consulting with other agencies</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Read progress notes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Conduct follow-up after discharge</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Monitor client's progress by consulting with families</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Advocacy

<table>
<thead>
<tr>
<th>Activity</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercede for clients to obtain service</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Intercede in interpersonal disputes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
</tr>
<tr>
<td>Take part in activities to encourage resource development</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
When interpreting the results of this survey, some caution must be observed for this assessment tool is unverified in the areas of reliability and validity. However, it is difficult to find an assessment tool that is verified in the literature. Despite this serious flaw, the results show that the Inter-Ministerial Project performs all of the functions as a regular part of its job duties. In fact, in the areas of monitoring, advocacy, and liaison, it performs many of these functions on a daily basis. Based on these results, one can say with some confidence that the Inter-Ministerial Project is an intensive case management project.
## Appendix D

**Inter-Ministerial Project Client List and Diagnosis**

<table>
<thead>
<tr>
<th>Client</th>
<th>Age</th>
<th>Schiz.</th>
<th>P.D.</th>
<th>Sub.Ab.</th>
<th>M.R.</th>
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<td>35</td>
<td>x</td>
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<td>x</td>
</tr>
</tbody>
</table>

Schiz. = schizophrenia  
P.D. = personality disorder  
Sub.Ab. = substance abuse  
M.R. = mental retardation
## Appendix E

### Raw Data

### Corrections Data

<table>
<thead>
<tr>
<th>Client</th>
<th>Before</th>
<th>During</th>
<th>Change</th>
<th>No. Days</th>
</tr>
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<tr>
<td>#1</td>
<td>677</td>
<td>235</td>
<td>442</td>
<td>1430</td>
</tr>
<tr>
<td>#2</td>
<td>977</td>
<td>317</td>
<td>660</td>
<td>1398</td>
</tr>
<tr>
<td>#3</td>
<td>74</td>
<td>18</td>
<td>56</td>
<td>1386</td>
</tr>
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**Before** = Days in custody (sentenced and remand) before I.M.P.

**During** = Days in custody (sentenced and remand) during I.M.P.

**Change** = Difference between before and during. (*A negative number here reflects more time spent in custody while on the I.M.P.*)

**No. Days** = Number of days as a client on the project
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**Mirror** = Days in the Forensic Psychiatric Institute before I.M.P.

**Tenure** = Days in the Forensic Psychiatric Institute during I.M.P.

**Change** = Difference between before and during. (*A negative number here reflects more days spent in detention while on the I.M.P.*)

**No. Days** = Number of days as a client on the project
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Mirror = Days in psychiatric hospital before I.M.P.

Tenure = Days in psychiatric hospital during I.M.P.

Change = Difference between before and during. (* A negative number here reflects more days spent in detention while on the I.M.P.)

No. Days = Number of days as a client on the project.
## Total Institutions Data

*(Forensic + Corrections + Mental Health)*

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**Before** = Days in institutions (jail + hospital + forensic) before I.M.P.

**During** = Days in institutions (jail + hospital + forensic) during I.M.P.

**Change** = Difference between before and during. (*A negative number here reflects more days spent in detention while on the I.M.P.*)

**No. days** = Number of days as a client on the project.
Appendix F

Transinstitutionalization

The institutional career of Orpheus, Table 5, one of the 25 individuals in this study, makes Teplin's (1987) theory of transinstitutionalization much more obvious. This is especially true when one observes his very sudden descent into the correctional system around the middle of 1979 and his rather consistent use of this system until his reemergence into the mental health system, after the advent of intensive case management service, early in 1987. Such data makes one wonder how an individual, who seems to be so entrenched in the mental health system, could so suddenly become entrenched in the corrections system. There are certainly many factors at work here, and the data is only able to indicate an abrupt change in the type of institution Orpheus either chooses at his own volition, or has it chosen for him by the agents of social control. Such writers as Teplin (1987) go as far as to suggest that such an abrupt shift represents the loss of responsibility shown by the mental health system following deinstitutionalization, and the assuming of this responsibility, by default, by the corrections system.
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Y Axis = Years (Jan. 1, 1968--Dec. 31, 1990)

X Axis = Months

o = hospital admission

x = jail admission

Bold Print = point (Feb. 1, 1987) at which Orpheus commences

I.M.P.