

AN ABSTRACT OF THE THESIS OF

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Title: Effects of Case Management on Deinstitutionalized Patients

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This study examined how incidence of hospitalization and length of hospital stay for chronically mentally ill adults were affected by type of outpatient mental health services and inconsistency of treatment. The participants were chronically mentally ill adult Kansas residents who had been seen in outpatient services at a community mental health center from 1992 to 1993. The participants were identified by statistical quarterly reports that had been completed by the mental health center professionals and were assigned to one of three groups, each consisting of 20 participants: a) clients who had been seen routinely in medication clinic for medication monitoring and prescription renewal by the agency's psychiatrist, b) clients who had received medication clinic services in combination with case management services on a regularly scheduled basis from 1 of 12 case managers, and c) clients who had been inconsistent with their treatment.

Following group assignment, data from the quarterly reports regarding incidence of hospitalization and length of hospital stay were collected and analyzed by an analysis of variance (ANOVA) for each variable. There were no significant effects for incidence of hospitalization or length of hospital stay for the three groups at this mental health center in Kansas. These results indicate that for these particular outpatients, type of mental health service or inconsistency with treatment had no impact upon incidence of hospitalization or length of hospital stay.

EFFECTS OF CASE MANAGEMENT ON  
DEINSTITUTIONALIZED PATIENTS

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A Thesis

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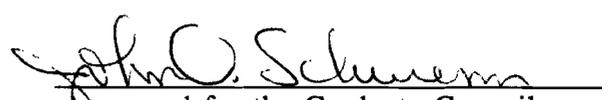
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## CHAPTER 1

### INTRODUCTION

Since the mid-1960s, mental health services have experienced several major changes in the structure and delivery of long-term care for the chronically mentally ill. One of the most important thrusts of this movement is deinstitutionalization, which is an attempt to shift chronically mentally ill individuals from institutionalized settings to community-based care. Deinstitutionalization is accomplished by one of two processes: the removal of institutionalized patients (depopulation) or preventing potential patients from being institutionalized (admission diversion) (Bachrach & Lamb, 1989). Deinstitutionalization has as its basic goal the humanization of care for those persons who are the victims of chronic mental illnesses and interprets community-based living as preferable to institutionalization for this population. As a result, the deinstitutionalization process introduced two new issues: the need for suitable housing for chronically mentally ill patients and the need for supportive services to help the patients remain in the community (Arce, 1978).

The concept of case management was established to provide therapeutic intervention to the chronically mentally ill for this transitional move from institution to community living. Although the definitions for case management are numerous, some of the standardized tenets state that the main focus of this service is to assist the chronically mentally ill individuals in adapting to their environmental stressors and to enhance their daily level of functioning, both of which would reduce the need for hospitalization or at least the length of hospital stay.

According to the Alcohol, Drug Abuse and Mental Health Administration's Reorganization Act (1993), individuals who are identified as chronically mentally ill

typically have undergone psychiatric treatment more intensive than outpatient care more than once in a lifetime (i.e., alternative home care, partial hospitalization or inpatient hospitalization) or experienced a single episode of continuous, structured, supportive residential care other than hospitalization for a duration of at least two months.

In addition, such individuals typically meet at least two of the following criteria, on a continuing or intermittent basis for at least two years:

- a) is unemployed, is employed in a sheltered setting, or has markedly limited skills and a poor work history.
- b) requires public financial assistance for out-of-hospital maintenance and may be unable to procure such assistance without help.
- c) shows severe inability to establish or maintain a personal social support system.
- d) requires help in basic living skills.
- e) exhibits inappropriate social behavior which results in demand for intervention by the mental health and/or judicial system.

#### Review of the Literature

Perhaps the two most important factors contributing to the growth of deinstitutionalization have been the concern over the deplorable conditions of life and treatment for psychiatric patients in large state hospitals and fiscal considerations at both the federal and state levels (Brill, 1985). Community mental health services are intended to shrink the size and influence of these hospitals through the development of noninstitutional alternatives. Simultaneously, patients are to be released to the community, and the need for new admissions to hospitals is to be gradually

eliminated. Community-based facilities are to provide a wide variety of services for persons with chronic mental illness that will reinforce the objectives of deinstitutionalization, namely minimizing the hospitalization need and length of stay (Joint Commission on Mental Illness, 1961).

According to Gronfein (1985), the deinstitutionalization process was an attempt to conserve state Medicaid budgets by shifting service reimbursement from expensive mental health inpatient settings to the more financially conservative community-based resources. In Gronfein's opinion, having mental health policy decided, in part, by other programs was problematic, questioning whether the consequences for inadequate implementation/availability of community services were even considered. Treffert (1985) argued that the politicians involved in the deinstitutionalization decision making process were more interested in the financial aspect of the process than the system itself. As a result, Treffert felt the system of inpatient institutional resources was dismantled before community alternatives were in place.

In Brill's (1985) opinion, many deinstitutionalized patients are worse off since the introduction of this process, ending up as homeless or living in poorly run nursing homes, board and care homes, welfare hotels, and jails. He also extended concern to the communities now accepting people with all sorts of deviant behavior, including life-threatening. Brill concluded that reestablishment of asylums for the mentally ill, involuntary hospitalization for those who need it, and adequate financing for appropriate programs was needed to replace poorly conceived programs and wishful thinking such as outlined in the concept of deinstitutionalization.

Chronically mentally ill individuals have often conformed to an "institutionalized personality" in that they have minimal experience in independent

living skills and comprise a basically dependent population. For both psychiatric and economic reasons, independent living is simply not a realistic goal for a large portion of this population and communities are not prepared to provide for the housing needs of this group. Families are often forced into the position of providing housing for their loved ones, a blessing or a punishment depending upon the family attitudes.

Board and care homes provide one kind of congregate-living environment for the chronically mentally ill. Typically, patients are provided with room and board with varying degrees of supervision and structure and some treatment, especially in the form of psychotropic medications -- services not unlike those of the old custodial state hospital. Thus, the board and care home has not only replaced the state hospital but has also taken over a number of the functions performed by those institutions, which defeats the concept of deinstitutionalization. In her study of the mentally ill who resided in such facilities in Massachusetts, Markson (1985) confirmed that deinstitutionalization had just shifted the population from one institution to another.

In those instances where housing opportunities are not an option, the chronically mentally ill person is forced to become homeless. Bassuk (1985) felt poor implementation of deinstitutionalization had left the chronically mentally ill population vulnerable to the housing crisis. In response to this crisis, the emergency shelter system has flourished but cannot provide essential services such as asylum on a 24-hour basis or long-term treatment for these individuals. She suggested a renewed commitment to strengthening other community services.

To some extent, the early focus on rehabilitation and independent living was overgeneralized due to the many different kinds of chronic mental patients differing considerably in the degree to which they can be rehabilitated (Kirk & Therrien, 1975;

Lamb, 1979). Although rehabilitative interventions were initially assumed to be effective, patients vary in their ability to cope with stressors without decompensating and in their motivation to change. However, in spite of the modest gains in rehabilitation functioning, the chronically mentally ill individuals' needs are the greatest of the psychiatric population. Thus, the success of deinstitutionalization is dependent upon a careful and realistic definition of which individuals are to be treated in the community. According to Bachrach (1978), such planning must attempt to match patients and appropriate treatment settings and aim at enhancing rehabilitation, where feasible, through a skills training approach.

Bachrach's postulate is supported by Anthony, Cohen and Cohen (1983) who argued that the deinstitutionalization movement has been plagued by inefficient treatment approaches and a fragmented and unresponsive community-based treatment system. The authors felt that attempts to rehabilitate deinstitutionalized patients could not be adequately implemented unless mental health professionals improved their understanding of the philosophy, treatment process, and the principles of psychiatric rehabilitation. The client needs to be involved in all rehabilitation phases and encouraged to make individualized goals while remembering that the most important variable in influencing the outcome of rehabilitation rests in the determination of the client involved.

Given the limitations based on the severity of the illness, the solution to the institutionalization problem is not as simple as just sending the long-term patients back to the communities. As Rachlin (1978) stated, deinstitutionalization may not be in the best interest of the patients because community-based resources for domiciliary, treatment, and rehabilitation services are inadequate, and society responds negatively

to deviant behavior. He contended prevention of institutionalization is more feasible but requires a comprehensive outpatient program that recognizes the role of the mental hospital for system stabilization, not custodial care.

In his description of other community reintegration obstacles, Peterson (1982), a former long-term patient of a state psychiatric hospital, stated the chronically mentally ill need emotional and practical support necessary in becoming a contributing part of the general community. Peterson stated outpatient group processes, particularly those of a clubhouse model, emphasize leadership roles for the clients, and address critical issues such as housing, loneliness, absence of choice, lack of meaningful activity, and unrealistic expectations of others.

In a descriptive study of psychiatric aftercare in Toronto, Canada, Wasylenki, Goering, Lancee, Ballantyne and Farkas (1985a) reported evidence of overreliance on medical/therapeutic services such as chemotherapy and an underreliance on nonmedical/therapeutic services such as supportive housing, vocational/educational and social/recreational programs, and financial assistance. Six months postdischarge patients showed high symptom levels and poor social functioning, and rehospitalization and employment rates were in the usual range reported for chronic patient populations. At two years postdischarge, there was little evidence of improvement. These findings prompted further research by Wasylenki, Goering, Lancee, Ballantyne and Farkas (1985b) by comparing 92 patients in a rehabilitation practitioner program to 92 carefully matched controls from the original study. Their conclusion was that the rehabilitation practitioner program resulted in more comprehensive aftercare needs assessments, greater numbers of referrals for aftercare services, and increased use of aftercare services by the chronically mentally

ill. However, levels of symptomatology and rehospitalization rates between program patients and controls did not differ. The authors felt that since fewer program patients than controls were in the severely impaired category, meaning that more were able to function in the community for longer periods of time than were the controls, the results were somewhat biased.

Further investigation of the rehabilitation-oriented case management model was provided by Goering, Wasylenki, Farkas, Lancee, and Ballantyne (1988). Their study evaluated the outcomes of 82 patients involved for 2.5 years in a rehabilitation-oriented case management program as compared to 82 matched control patients discharged from the same inpatient settings before the case management group was established. At the two year follow-up, the patients in the case management program relative to the controls were significantly more likely to have better occupational functioning, to live more independently than they did at the six-month follow-up, and to be less socially isolated. The patients and the controls did not differ in their rehospitalization rate or total number of rehospitalizations at either the six-month or the two year follow-up, which was a disappointment to the researchers. They had anticipated that case management and better service utilization would reduce rehospitalization rates, and speculated that the program failed because of its emphasis on improving patients' functioning rather than on providing crisis intervention and preventing hospitalization. The scarcity in the service system of alternative methods of treating acute psychotic episodes and the limited influence of case managers on the control of patients' medical and other kinds of therapeutic care were also factors.

According to Lamb (1982), the chronically mentally ill strive for independence, satisfying relationships, a sense of identity, and a realistic vocational

choice. Lacking the ability to withstand stress and intimacy, they struggle and often fail. The result is anxiety, depression, psychotic episodes, and hospitalizations; gradually, many begin to give up the struggle. Deinstitutionalization means patients can no longer escape stresses through hospitalization. Other solutions such as helping the clients cope with stress without decompensating, developing appropriate resources, and supporting realistic goals must be provided within the community.

Case management is defined as the modality of mental health practice that addresses many of the concerns for community reintegration expressed by many authors (Modrcin, Rapp, & Chamberlain, 1985). The service is designed to provide psychiatric services to the chronically mentally ill and to assist clients in resolving or minimizing the effect of the mental and emotional impairment for which clinical and/or hospital services have previously been provided. The goal is to enhance independent functioning through which the client is integrated into and/or maintained within the community, so that institutionalization is not as likely or frequent. Because many mentally ill clients do not have the skills to negotiate multiple bureaucracies on their own, case managers attempt to assure a comprehensive assessment of client needs and help secure services by functioning as expeditors and advocates.

As stated by Bachrach (1984) and Kanter (1989), vulnerable patients with long-term psychiatric disorders have developed methods and styles of adaptation to environmental stressors, and the aim of therapeutic intervention is to optimize patient adjustments and minimize their functional disabilities. These principles place the case manager in a facilitating relationship with a client where the common goal is to be one of maximizing the client's level of independence. As stated by Torrey (1986), the aim is to ensure that clients with long-term psychiatric disorders receive consistent

and continuing services for as long as they are required.

The key component through which effective care is channeled is the staff-patient relationship. Initial work on practical issues, such as unclaimed welfare benefits, can win the trust of suspicious or demoralized patients (Intagliata, 1982). The care plan should be established with the patient dictating his or her own goals (Anthony, Cohen, Farkas, & Cohen, 1988; Harris & Bergman, 1987).

There are many models for case management. According to Intagliata (1982) and Renshaw (1988), the aims of case management are: a) assessment of client need, b) development of a comprehensive service plan for the client, c) arrangement of service delivery, d) monitoring and assessment of services, and e) evaluation and follow-up.

The needs model of Stein and Test (1980), referred to as a Program of Assertive Community Treatment, identified factors that are important in maintaining chronic mentally ill individuals in the community, such as making contact with clients in their homes rather than in mental health centers, attention to the practical problems of daily living, assertive advocacy on clients' behalf, manageable caseload size which would permit workers to have frequent client contact, a team approach in which caseloads are shared, and long-term commitment to clients. This model was the format for a pilot project funded by the Department of Mental Health in Indiana to three community mental health centers. Bond, Miller, Krumwied, and Ward (1988) studied 167 clients at risk for rehospitalization. The subjects were randomly assigned to the experimental group receiving assertive case management (ACM) or to the control groups receiving all other aftercare services at the centers. Overall, ACM clients were rehospitalized an average of 9.2 days, significantly less than the 30.8

days for controls. Programs offering assertive outreach and service coordination are effective in reducing psychiatric hospitalizations, particularly among clients at high risk for readmission.

Dincin (1990) also felt that assertive case management programs for the chronically mentally ill reduced the rehospitalization rate and length of stay. As the director of a community-based demonstration project called "Thresholds" in Chicago, Dincin studied 57 clients referred from an Illinois state hospital to his program which also followed the Stein and Test needs model. A year after program participation, he found the hospitalization rate had improved by 76% as compared to the pre-program implementation rate. The results also indicated bed-days went from a total of 4,312 preprogram to 1,344 postprogram, a 69% improvement. Dincin attributed a large part of the program success to the case management dedication and assertiveness and their seeing clients at home rather than the office. Case managers made sure their clients had medication and took it as prescribed, provided transportation for any aftercare appointments such as medication clinic, assisted with housing needs, and assured that monthly money allotments would last.

Not all research has provided remarkable results in measuring the effects of assertive community treatment methods designed for the chronically mentally ill. Bond et al. (1990) found conflicting results in a one-year study comparing referred clients randomly assigned to either assertive community treatment (ACT) or a drop-in center (DI) in a large city environment. During the treatment year, ACT clients had significantly fewer state hospital admissions and significantly fewer hospital days than DI clients. Private hospital admissions were also down for ACT clients, but not significantly more than DI clients. The authors attempted to explain these differing

results when compared to other ACT studies by way of internal validity threats, including sample attrition, sampling differences, and differences in mental health services. This study demonstrated the efficacy of ACT in establishing regular ongoing contact between a team of mental health professionals and clients who were previously receiving minimal outpatient services.

A second element in the effectiveness of ACT suggested by this study was the focus on concrete problem solving. ACT helped the clients solve practical problems in their natural environment. The ACT team addressed difficulties a) with money by helping clients budget their income, b) with symptoms by helping them follow through with medication treatment, and c) with self care by offering concrete assistance. ACT is effective in helping clients with tangible problems that might otherwise lead to rehospitalization.

As mentioned many times in the research, case management services are varied, and not all studies have focused only on the assertive case management modes. Bigelow and Young (1991) provided evidence, by way of a questionnaire, that quality of life for the chronically mentally ill is maintained or improved by case management. Their results indicated that case management leads to more services being provided and reduced rate of rehospitalization and length of stay. The authors felt improving clients' quality of life in the community can also reduce hospital use.

But what if case management services were no longer provided? McRae, Higgins, Lycan, and Sherman (1990) studied a group of 72 clients who had received intensive case management for five years in Spokane, Washington. Following the discontinuation of these services due to financial restrictions, patients were mainstreamed into existing mental health programs. In comparing the five years of

case management with two years of community mental health services, including outpatient, day treatment, and medication management, the authors discovered hospitalization did not decrease and 91% of the clients were still receiving treatment at the end of two years. This is a hopeful indication that case management can have a lasting impact on the clients who receive such services. However, it is not a definite conclusion that the process of deinstitutionalization and the problems associated with it can be completely resolved by the treatment modality of case management. One may question if a treatment method actually exists for such a monumental task, but the exploration of efforts must continue in the treatment of the chronically mentally ill.

This study is based on the hypothesis that chronically mentally ill adults receiving case management services have less incidence of hospitalization and length of hospital stay than clients receiving medication clinic services only. This belief is based upon the treatment advocacy, emotional support and exposure to community resources that case managers provide to the chronically mentally ill adults as compared to the less frequent contact with a psychiatrist. Furthermore, clients who are inconsistent with outpatient treatment have significantly higher incidence of hospitalization and longer hospital stay when compared to outpatients receiving medication clinic services or those clients seen by case managers.

## CHAPTER 2

### METHOD

#### Participants

The global population under investigation were the clients in the United States identified as chronically mentally ill. Their primary diagnoses, as defined by the DSM III-R, included psychotic disorders such as schizophrenia, schizo-affective disorder, schizotypal personality disorder, atypical psychosis, bipolar disorder, major depression, and finally borderline personality disorder. The sample for the study consisted of chronically mentally ill adult Kansas residents who had been involved in outpatient mental health services from 1992 to 1993 at the Mental Health Center of East Central Kansas, Emporia, Kansas. The participants were identified by statistical quarterly reports that had been completed by the primary mental health caregiver (case manager or psychiatrist) and compiled by the University of Kansas. These participants were then assigned to one of three groups, each containing 20 participants: a) clients who had been seen routinely in medication clinic for medication monitoring and prescription renewal by the agency's psychiatrist, b) clients who had received medication clinic services in combination with case management services on a regularly scheduled basis from one of twelve case managers, and c) clients who had been inconsistent with their outpatient treatment such that they had 10 or more cancellations and/or "no shows," 10 or more incidences of treatment/medication non-compliance, or 10 or more combinations of cancellation/noncompliance.

#### Program description

The Community Support Program (CSP) is one of five programs within the

Mental Health Center of East Central Kansas (MHCECK) in Emporia, Kansas. The MHCECK provides services to a seven county catchment area that includes Lyon, Coffey, Osage, Greenwood, Chase, Morris, and Wabaunsee.

Community Support Program (CSP) was designed to provide community-based intensive support for outpatients who suffer from prolonged mental illness.

Recognizing that this chronically mentally ill population was especially prone to relapse that often resulted in hospitalization, case management was introduced in the late 1980s to deal with this population's multiple deficits in psychosocial functioning. In 1992-1993, 3 of the 12 case managers were credentialed mental health professionals (a social worker, a psychiatric nurse, and a clinical psychologist). Eight of the case managers were bachelor level graduates, six with a social-service oriented degree (three of which were in graduate school for clinical psychology), one with a degree in history, and one with a degree in education. One case manager was a certified activity director.

A psychiatrist was also part of the team, providing medication/side effect monitoring and prescription renewal for the clients. The psychiatrist would also meet monthly with the entire CSP staff to review individual cases and provide education in medications, side effects, diagnostic issues, psychological concepts, and treatment recommendations to the case managers. In July, 1993, there was a personnel change in this position, but service was never interrupted.

All CSP staff had participated in a case manager's orientation program provided by the University of Kansas' School of Social Welfare. The training included: a) definition of mental illness, b) crisis intervention, c) problem solving skills, and d) patient perspective of treatment. The University of Kansas' School of

Social Welfare emphasized the strength's model approach for case management, which empowers the client to make life decisions with the support and advocacy of the case manager.

### Apparatus

The statistical information pertinent to this study, incidence of hospitalization and length of hospital stay, was contained in quarterly reports completed by mental health professionals from a community mental health center. These quarterly reports, introduced in 1987 by Kansas' Mental Health and Retardation Services (MH/RS) in conjunction with the University of Kansas' School of Social Welfare, were designed to collect and analyze data for the chronically mentally ill clients of Kansas served through MH/RS grant funded programs, more commonly known as Community Support Programs. The quarterly reports were to provide information in three life domains, one of which was "community tenure" which included statistical information regarding incidence of hospitalization and length of hospital stay. For this study, the information was contained in 1992 and 1993 quarterly reports completed by the mental health professionals employed at the Mental Health Center of East Central Kansas, Emporia, Kansas, and deposited at the School of Social Welfare at the University of Kansas in Lawrence, Kansas.

### Procedure

Since the quarterly reports from 1992 and 1993 were destroyed once the data had been entered into the computer at the University of Kansas' School of Social Welfare, a copy of the mainframe data was obtained. The data did not include the identification of the mental health professional who completed the report or the name of the client. The identification number (client chart number) on each entry was

cross-referenced with the agency's client chart in order to obtain the identity of the mental health professional for randomized placement of each client. Since the quarterly reports separated state hospitals from community/private hospitals in regard to incidence of hospitalization and length of hospital stay, the numbers from both categories were combined to establish a total incidence of hospitalization and total length of hospital stay.

## CHAPTER 3

### RESULTS

The independent variable in the present study was client treatment. The dependent variables were incidence of hospitalization and length of hospital stay. In the medication group, 2 out of 20 participants had been hospitalized in 1992-1993 for a total of 65 days. In the medication and case management group, 5 out of 20 participants had been hospitalized in 1992-1993, with 1 participant having 3 separate incidences of hospitalization and 1 participant having 2 separate incidences of hospitalization. The total number of hospital days was 86. In the inconsistent treatment group, 8 participants out of 20 had been hospitalized in 1992-1993, with 2 participants having 2 separate incidences of hospitalization. The total number of hospital days was 213.

Because incidence of hospitalization is a frequency dependent variable, a chi-square analysis was used to determine significant effect across the three client treatment groups. The chi-square analysis resulted in a significant effect between the three client treatment groups,  $X^2(2, N=60) = 28.40, p < .05$ . The incidence of hospitalization was less for the medication group.

For length of hospital stay, the standard deviations for the three conditions differed markedly from each other (see Table 1), questioning the homogeneity of variance assumption for performing an analysis of variance (ANOVA). Therefore, the data were rank ordered for the three groups, creating a series of ordinal measures needed to conduct the Kruskal-Wallis H test to determine if significant differences exist between the three client treatment groups. The Kruskal-Wallis H resulted in no significant effect between the three client treatment groups,  $X^2(2, N=60) = -141.62,$

$p > .05$ . These results are indicative that the three conditions are from the same population.

Table 1

Means and Standard Deviations for Length of Hospital Stay by Client Treatment

Treatment Group	Length of Hospital Stay in Days	
	Mean	SD
Medication Clinic Only	3.25	13.06
Case Management with Medication Clinic	4.30	6.16
Clients Inconsistent with Treatment	10.65	13.81

## CHAPTER 4

### DISCUSSION

Considering the frequency of contact, emotional support and advocacy that case managers provide to the chronically mentally ill adult clients, it was expected that the incidence of hospitalization and length of hospital stay would be significantly less for the clients receiving case management services than those clients who received medication clinic services only. Although the analysis for incidence of hospitalization was significant, the data did not support this prediction. Clients who were seen by a psychiatrist had less incidence of hospitalization than the clients receiving case management in combination with medication clinic services. Perhaps the results are an indication that case managers optimistically overrate clients' functioning rather than providing crisis intervention and preventing hospitalization or have less influence on the control of clients' medical care when compared to the psychiatrist.

Another explanation for the results may be attributed to the variance of severity of the mental illness among the three groups. Perhaps the clients receiving medication clinic services suffered from milder symptoms of their mental illness than those clients who were seen in case management services. Wasylenki et al. (1985a) questioned if degrees of impairment between their groups influenced the significant results regarding rehospitalization rates. These authors interpreted impairment as the inability to function in the community for long periods of time. Future research might attempt to more closely match the subjects' severity of impairment.

Variability of education and experience among the 12 case managers might also have influenced the results. Only 3 were credentialed mental health professionals

with the remaining 9 possessing a bachelor's level degree or less. One might speculate from this fact alone that a difference exists in the way the case managers would perform crisis intervention which could have definite impact on incidence of hospitalization. For example, the staff nurse would perform crisis intervention from a medical model approach by focusing on quick symptom stabilization by immediate medication adjustments, whereas the social worker would focus more on the environmental needs and community resources available to reduce the crisis. Furthermore, since professional training/internship is not required for most social-service bachelor degrees, one might question the level of professional competence the noncredentialed case managers displayed in dealing with this potentially unstable population.

Based on previous research, it was expected that those outpatients who were inconsistent with their treatment were expected to have a significantly high incidence of hospitalization. This present study supported that belief. While mental health professionals propose that chronically mentally ill clients participate in services on a consistent outpatient basis in order to seek and maintain mental stability, this study does support that belief.

For length of hospital stay, the results indicate that the 3 client treatment groups represent the same population. In other words, the independent variable, client treatment, had no effect on length of hospital stay.

It is important to remember that the Kruskal-Wallis H test is a nonparametric test which has a tendency to increase the beta error (beta error is the probability of being wrong when accepting the null hypothesis, that is accepting  $H_0$  when it should have been rejected). Therefore, caution must be used when considering the lack of

significant differences between these three groups since nonparametrics are less sensitive to smaller differences and less able to detect that these differences might be significant.

Past research has not always supported the concept that case management makes a significant difference in the rehospitalization rate or length of stay for this chronic population. Perhaps this is indicative of their "institutionalized personality" that is not conducive to independent living. As Kirk and Therrien (1975) indicated, the chronically mentally ill patients differ considerably in the degree to which they can be rehabilitated based upon severity of illness and their motivation to change.

In summary, no universally accepted definition exists for the case management treatment, only goals of reduction of incidence of both hospitalization and length of hospital stay for the chronically mentally ill. Perhaps when case management is standardized, future research can explore the impact of this treatment modality upon the deinstitutionalization process over a larger, nationwide sample.

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## APPENDIX

Agency: \_\_\_\_\_

Soc. Sec. # (Client Name\*)

Completed By

Date

Living Arrangement Status

Vocational Status

Please circle client's current living arrangement

Please circle client's current vocational status

1. Psychiatric hospital ward
2. General hospital psychiatric ward
3. Nursing home or IC-MH
4. Adult foster care
5. Lives with relatives (heavily dependent for personal care and control)
6. Group home
7. Boarding house
8. Lives with relatives (but is largely independent)
9. Supervised apartment program
10. Independent living
11. Other (specify) \_\_\_\_\_
12. Emergency shelter
13. Homeless

1. No vocational activity
2. Prevocational classes
3. Screening and evaluation of vocational interests and abilities
4. Working on GED or basic academic skills
5. Attending college (6 credit hours or less)
6. Attending vocational school or training
7. Active job search
8. Participating in work program at MHC
9. Employed in sheltered employment outside of MHC
10. Participating in ongoing volunteer activity
11. Attending college (7 credit hours or more)
12. Any person who remains home to take care of children or others
13. Any job or set of jobs requiring less than 30 hours per week
14. Any job or set of jobs requiring more than 30 hours per week
15. Other (specify) \_\_\_\_\_
16. Retired

Does this living situation meet minimum standards of decency (heat, running water, etc.)? YES NO

**DURING THE LAST THREE MONTHS:**

(if you do not know please write D.K. or a question mark in the blank)

# of incidences of psychiatric hospitalizations in a STATE FACILITY: \_\_\_\_\_

# of days in hospital: \_\_\_\_\_

# of incidences of psychiatric hospitalization in a NON-STATE FACILITY: \_\_\_\_\_

# of days in this NON-STATE FACILITY: \_\_\_\_\_

\*Write client's name only during first reporting period and for cases opened during the last three months.

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Kathy A. Phillips  
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December 15, 1994

Date  
Effects of Case Management  
on Deinstitutionalized Patients  
Title of Thesis/Research Project

Doug Cooper  
Signature of Graduate Office Staff Member

December 15, 1994  
Date Received