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THE REHOSPITALIZATION OF ACUTELY DISTURBED MENTAL PATIENTS:
IDENTIFICATION OF SIGNIFICANT POST-HOSPITAL VARIABLES

A Dissertation Presented

By

DENNIS J. ROG

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

December 1975

Mental Health and Counseling

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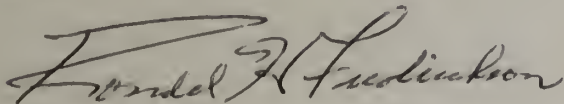
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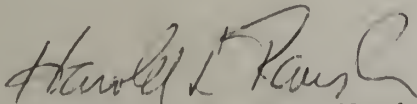
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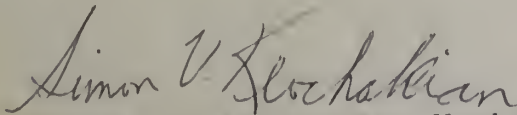
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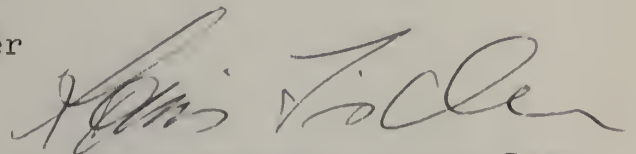
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December 1975

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assistance in the tabulation and analysis of the data, and to Mrs. Sara Ives, whose skill as a typist and value as a warm, understanding person have been significant factors in the completion of this study.

ABSTRACT

The Rehospitalization of Acutely Disturbed Mental Patients:
Identification of Significant Post-Hospital Variables

(December 1975)

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The primary purpose of this exploratory study was to determine if rehospitalization rates were lower for ex-patients who participated in one or more designated Productive Activities or Therapeutic Activities following hospital discharge than for ex-patients who did not.

Productive Activities were defined as employment, school or training, volunteer work, work in a sheltered workshop, homemaking, and residency in a halfway house. Therapeutic Activities were defined as individual psychotherapy, group therapy, family or couples therapy, day hospital treatment, ex-patient clubs, and similar activities (i.e., Alcoholics Anonymous).

A follow-up was made of 140 former inpatients of the psychiatric unit of a general hospital in Massachusetts to obtain data for the one-year period following discharge from their first psychiatric hospitalization. Post-hospital data were obtained through the use of a questionnaire developed

and pilot-tested by the author, supplemented by home visit interviews and telephone contact. Ex-patient responses were verified through contact with community mental health agencies and through the review of admission listings of area hospitals.

Data were tabulated to indicate the proportion of ex-patients rehospitalized who participated in designated activities. Data were also examined for rehospitalization with regard to point of involvement in post-hospital activities, regularity of participation, the interaction of these factors, and the interaction of Productive and Therapeutic Activity. Background and demographic factors were examined in relation to participation in designated post-hospital activities and rehospitalization and in relation to rehospitalization without regard to post-hospital activities. Types of activities were also examined in relation to rehospitalization.

The chi square test was used to determine the degree of association between variables. When small Ns made the use of the chi square test inappropriate, data were reported by percentages and visual examination.

Post-hospital information was obtained for 115 (82%) of the 140 ex-patients. Results indicated that rehospitalization rates were significantly lower for ex-patients who participated in Productive Activities (24%) following hospital discharge as compared to ex-patients who did not (55%). Re-

sults also indicated that there was no relationship between rehospitalization status and participation in Therapeutic Activities following hospital discharge. For ex-patients who participated in Productive Activity, there was no major difference between those who began doing so within two months after hospital discharge and those who did not, or between ex-patients who participated on a "regular basis" and those who did not. Results were similar for participation in Therapeutic Activity. Rehospitalization rates were not significantly lower for ex-patients who participated in both Productive and Therapeutic Activities (24%) following hospital discharged as compared to ex-patients who did not (36%).

None of the background and demographic factors examined were found to be directly related to rehospitalization. However, strong trends were found for seven such factors in relation to participation in Productive Activity and rehospitalization status. Rehospitalization rates were lower for ex-patients who participated in Productive Activity if they were: females, married, hospitalized from one through three weeks, discharged with no anti-psychotic medication, discharged with no psychiatric medication at all, judged by the unit director to be "not severely disturbed," or participating in Productive Activity prior to hospitalization.

Results indicated that there were no major differences in rehospitalization rates in relation to type of Productive

Activity or type of Therapeutic Activity. Major differences in rehospitalization rates were not found for ex-patients who were employed following discharge as compared to those who were not.

Findings were examined and discussed in detail. Conclusions, major implications, and suggestions for further research were stated, as well as limitations of the study.

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C H A P T E R I

INTRODUCTION

Many psychiatric hospital patients experience considerable difficulty returning to and remaining in the community (Buell & Anthony, 1973; Rosenblatt & Mayer, 1974). In a recent survey of rehospitalization studies, Rosenblatt and Mayer (1974) report that an increasing percentage of patients have been readmitted to mental hospitals during the past 25 years, and that by 1969, 57% of all patients admitted to state and county hospitals in the United States had a record of previous hospitalization (NIMH Biometry Branch, 1971). Taube (1970), also completing a nationwide study of state and county mental hospital admissions in 1969, states that nearly 50% of admitted patients had a previous hospitalization. Rising readmission rates have become a major concern to mental health practitioners and administrators.

It is a premise of this study that the rehospitalization of the psychiatric patient is an indication of "failure." The objective of modern "treatment" is to enable the individual to maintain himself in the community in a "normal" manner (Joint Commission on Mental Illness and Health, 1961). It seems reasonable to assume that a patient is discharged from the hospital because hospital personnel think that he is able to somehow maintain himself in the community. Return to the hospital would then indicate "failure" to meet this ob-

jective. Whether the "failure" is primarily that of the hospital, the community, the individual, his family, and/or society in general--or all of these--is a basic underlying question of all such studies.

Purpose of the Study

The purpose of the study reported here is to identify and examine post-hospital variables which may relate to the rehospitalization of psychiatric patients. More specifically, the attempt is made to determine whether or not the ex-patient's involvement in certain post-hospitalization activities significantly reduces hospital readmission.

The specific hypotheses tested in this study are as follows:

1. There will be a significant difference in rehospitalization rates¹ between ex-patients who do participate and ex-patients who do not participate in one or more designated activities (listed below) during the one-year period following hospital discharge.

- a. Further, rehospitalization rates will be lower for those ex-patients who participate in one or more of the designated activities within two months after their hospital discharge than for ex-patients who do not.

¹Defined as the number of patients who are readmitted per the number of patients originally discharged from the hospital.

b. Also, rehospitalization rates will be lower for those ex-patients who continue participating in one or more of the designated activities at least eight hours per week for more than half of the post-discharge period than for ex-patients who do not.

Designated activities include:

Being self-employed or employed by others for financial compensation
 Attending school, college, or a training program (to include vocational rehabilitation programs)
 Working in a sheltered workshop
 Being actively engaged in some form of structured volunteer work
 Working as a homemaker
 Functioning as a resident/member of a halfway house for mentally/emotionally disturbed individuals

2. There will be a significant difference in rehospitalization rates between ex-patients who do participate and ex-patients who do not participate in one or more designated "therapeutic" activities (listed below) during the one-year period following hospital discharge.

a. Further, rehospitalization rates will be lower for those ex-patients who participate in one or more of these therapeutic activities within two months after discharge than for ex-patients who do not.

b. Also, rehospitalization rates will be lower for those ex-patients who continue participating in one or more of these therapeutic activities at least once a month than for ex-patients who do not.

Designated therapeutic activities include participation in:

Individual counseling or psychotherapy
 Group psychotherapy
 Family or couples therapy
 A day-treatment program
 An ex-patient club
 Other similar activities or programs (to include such programs as Alcoholics Anonymous)

Involvement in the activities listed under Hypotheses 1 and 2 is specified according to the following criteria:

I. Point of Involvement after Discharge

- A. Within the first 2 months
- B. During the 3rd or 4th month
- C. During the 5th or 6th month
- D. During the 7th or 8th month
- E. During the 9th or 10th month
- F. During the 11th or 12th month

II. Length of Involvement

- A. 2 months or less
- B. 3 to 4 months
- C. 5 to 6 months
- D. 7 to 8 months
- E. 9 to 10 months
- F. 11 to 12 months

III. Degree of Participation (For Hypothesis 1 only)

- A. Full-time²--40 hours or more per week
- B. Part-time--8 hours or more per week (but less than 40 hours per week)

IV. Frequency of Participation (For Hypothesis 2 only)

- A. More than once a week
- B. Once a week

²For ex-patients attending school, college, or training programs, full and part-time status is defined according to the definitions of the school or program involved, as reported by the ex-patient.

- C. Every other week
- D. At least once a month
- E. Less than once a month

Background and Significance of the Study

Careful discharge planning and preparation, with a focus on those variables which may influence the patient after discharge, are viewed by the author as an important part of "treatment" for the hospitalized psychiatric patient. Such preparation together with providing a smooth transition back to the community may be of significance as a preventative measure against rehospitalization, especially with regard to the specific post-hospital factors examined in this study.

It may be appropriate for the ex-patient to become involved in some form of transitional or rehabilitation program to facilitate his return to and maintenance in the community. The psychiatric halfway house provides this service by helping the individual to become a more productive and self-reliant person in a supportive, structured environment. Most halfway houses require their residents to be actively engaged in some form of structured "productive" activity, such as employment, school or training, volunteer work, etc., as well as some form of continued psychotherapy during the transitional period. A recent evaluative survey of psychiatric halfway houses (Rog & Raush, 1975) indicates that the halfway house is effective in reducing rehospitalization. Results of the

survey suggest that an ex-patient's chances of being rehospitalized are reduced after residence in this type of transitional facility; a median of approximately 80% of halfway house residents adjust to community living. The halfway house is one means of helping the ex-patient make a successful return to the community and preventing further hospitalizations. Other approaches focusing on the same general objectives and direction as the halfway house may include sheltered workshops, vocational rehabilitation programs, ex-patient clubs, day treatment programs, supportive services such as individual and group counseling and psychotherapy, and more comprehensive rehabilitative/transitional programs providing some or all of these services. Studies indicate that such approaches are effective (Beard, Pitt, Fisher, & Goertzel, 1963; Black, Meyer, & Borgatta, 1960; Fairweather Sanders, Maynard, & Cressler, 1969; Hubbs, 1964; Mannino & Shore, 1974; McClamroch, 1971; Morgan, 1973; Nol & Fuller, 1972; Oetting & Cole, 1971; Reidda & McGee, 1972). The primary intent of this study is to focus on the type of activities included in these transitional approaches in an attempt to determine their effectiveness in reducing rehospitalization.

It may appear to be obvious that work and other productive activities should reduce the chances of rehospitalization. However, the challenges and pressures of employment,

school, or other structured productive activity, especially when experienced by the ex-patient shortly after discharge, may provide too great a strain too soon for the individual. To be in a structured situation where demands and responsibilities are placed on the ex-patient may weaken his confidence and threaten his mental/emotional stability during this crucial transition period. (Such views are very likely held and practiced by some mental health professionals and certainly by some family members of psychiatric patients.)

With regard to "aftercare" or therapeutic activities, it may appear even more obvious that such services could only help one's chances of remaining in the community. However, the continuation of "care" or "direct help" services following a period of "dependence" could serve to hamper one's becoming more independent and self-reliant. The possibility of this happening might be increased if the type of "service" or "therapeutic medium" (i.e., group therapy, day hospital treatment) were inappropriate to the needs of the individual or if the direction or expectations of the counselor or therapist were also inappropriate. Whether or not an individual has been prescribed medication upon hospital discharge produces another "therapeutic" variable affecting rehospitalization; this variable of "aftercare treatment" can be a crucial factor in rehospitalization and is examined in this study. Type of therapeutic activity is also examined in relation to ex-patient success or failure in the community.

Although the rehospitalization of psychiatric patients has been given considerable attention by researchers, several aspects of this study have the potential for making a contribution to the existing knowledge obtained from similar studies. Many of the areas of focus and factors examined were selected partly due to their strong representation in the results of other rehospitalization studies. These include the focus on the initial two-month period following hospital discharge, the one-year post-hospital follow-up period, the selection of first-admission patients, and the background and demographic variables examined, all of which are discussed fully in later chapters of this paper.

Another important consideration is that the overwhelming majority of rehospitalization follow-up studies have been conducted at state, county, and Veterans Administration hospitals with primarily chronic patients as Ss. In the attempt to identify some of the variables associated with rehospitalization, it seems appropriate to focus on first-admission, "acute" patients rather than on chronic patients with multiple hospitalizations and/or years of continuous stay in the hospital. Most mental health professionals agree that the chances of successfully "treating" and rehabilitating "mental patients" are much greater during the early stages of the "disturbance." Following a relatively short length of stay in a facility offering intense "treatment" and comprehensive

services rather than a long hospitalization in a facility offering primarily custodial care, the patient may be able to make better use of equally intense effort and attention placed on transitional, rehabilitative, and supportive post-hospital factors. In most cases, the individual has been able to somehow cope with life up to the point of his first hospitalization. It seems reasonable to consider that, before he becomes significantly handicapped or debilitated by developing institutional dependence, he could make greatest use of the resources and strengths that may have prevented him from being hospitalized sooner and thereby hopefully prevent an acute situation from becoming a more chronic disability.

In this chapter, the purpose, hypotheses, background, and significance of this study have been presented. Chapter II provides a review of the literature dealing with rehospitalization of psychiatric patients in general and an intensive review focusing on the factors examined in this study. Those studies providing support for procedural elements and approaches used in this study are also discussed.

C H A P T E R I I

REVIEW OF LITERATURE

Demographic Factors

The focus of attention in the literature has, to a large extent, been on the influence of demographic variables on rehospitalization. The results of several recent studies (Buell & Anthony, 1973; DiScipio & Sommer, 1973; Lorei & Gurel, 1973; Michaux, Katz, Kurland, & Gansereit, 1969; Rosenblatt & Mayer, 1973) indicate that the best demographic predictor of rehospitalization is the number of times the patient has been hospitalized previously. The greater the frequency of his hospitalization in the past, the more likely he is to return in the future. Other studies (Arthur, Ellsworth, & Kroeker, 1968; Buell & Anthony, 1975; Gorwitz, Bahn, Klee, & Solomon, 1966; Gregory & Downie, 1968; Weinstein, Dipasquale, & Winsor, 1973) also identify the number of previous hospitalizations as being strongly related to rehospitalization. In their survey of studies on readmission of patients to mental hospitals, Rosenblatt and Mayer (1974) conclude that the number of previous admissions is the only variable that has consistently predicted the rehospitalization of mental patients.

Length of hospitalization is also viewed as being a significant demographic factor related to rehospitalization.

Many researchers (Arthur et al., 1968; Burvill & Mittleman, 1971; Fairweather, 1964; Fairweather, Simon, Gebhard, Weingarten, Holland, Sanders, Stone, & Reabl, 1960; Harrington & Wilkens, 1966; Maisel, 1964; Morton, Lantz, & Halpern, 1969; Randlov & Tuthill, 1974; Reidda, 1972) have determined that those patients with a history of longer hospitalizations are more likely to be recidivists than those patients with a history of shorter hospitalizations, as did Michaux et al. (1969) for non-married schizophrenic patients during the first month after discharge. Freeman and Simmons (1963) reach the same conclusion for females and report that the relationship among males, although in the same direction, is a weak trend. In contrast to this general trend are the results of studies by Christensen (1974), who, in a five-year follow-up study of 119 male schizophrenic patients in a Danish state hospital, determined that those who were not readmitted had longer hospital stays than those who were readmitted, and by Altman, Sletten, and Nebel (1973), who found that Missouri hospitals with a short length of stay policy tended to have high readmission rates and those with a long length of stay policy had low readmission rates. Altman et al. (1973) conclude, however, that the relationship between the lengths of stay and the readmission rates is not necessarily a causal one. Levenstein, Klein, and Pollack (1965) also conclude that the shorter a patient's original stay in the hospital, the more likely he will be readmitted. Gorwitz et al. (1966) state that psychot-

ic patients who had been hospitalized for less than one month in Maryland state hospitals experienced higher return rates within the first few months after release than did patients hospitalized for longer periods. He adds, however, that as time in the community increased, these differences became negligible. In a six-month follow-up study of 78 state hospital patients, Buell and Anthony (1973) discovered that the length of the patient's last hospitalization contributed no unique variance to recidivism.

Other demographic factors showing a significant relationship to hospital readmission include marital status, age, sex, educational level, occupational level, diagnosis, and medication status. However, the research is notably inconsistent for these factors, and studies showing such a relationship for these factors are not nearly as great in number as studies which do so for "number of hospitalizations" and "length of hospitalization."

With regard to marital status, several researchers have reported that married patients are more likely than non-married patients to remain in the community after hospital discharge. Davis, Dinitz, and Pasamanick (1972) report such a finding in their five-year follow-up study of 150 acutely psychotic schizophrenic patients assigned to experimental and control groups. In a three-year follow-up study of 81 schizophrenic patients, Rosen, Klein, and Gittleman-Klein (1971)

also determined that a significantly higher proportion of the never-married patients were rehospitalized as compared to the ever-married patients (it appears, however, that the predictive power of marital status can be derived from its relationship with the patient's age of first psychiatric treatment contact). Serban and Gidynski (1974) observed 349 chronic schizophrenic patients discharged from New York City's Bellevue Hospital over a two-year period. They also found that single patients tend to be most prone to readmission, whereas the married patients appear to be least rehospitalized. Similar results are reported by Miller (1967) for only married males in her five-year study of over 1,000 patients from California state hospitals, and by Freeman and Simmons (1963) for both males and females in their well-known one-year follow-up study of 649 patients discharged from Massachusetts state and Veterans Administration hospitals. (This finding is not statistically significant, however.) These data are further confirmed by Gregory and Downie (1968). In their comparative study of 776 readmitted Veterans Administration hospital patients, the authors report that the married patients stayed out of the hospital longer.

Contrary to the results of the previous studies, Angrist (1974), in an eight-month follow-up study of 287 female mental patients, reports the non-significant finding that somewhat more married females were readmitted than remained in the community. Other researchers have found marital status

to be unrelated to rehospitalization (Forsyth & Fairweather, 1961; Lorei, 1967; Wessler & Iven, 1970). Serban and Gidynski (1974) also determined that marital status was not significantly associated with readmission of acute schizophrenic patients, contrary to their findings for chronic schizophrenic patients. Jansen and Nickles (1973), in an attempt to identify variables that differentiated between single and multiple admission state hospital patients over a five-year period, found that marital status failed to differentiate between the two groups.

The age of the mental patient is another demographic factor which has received considerable attention but conflicting results in researchers' attempts to identify variables associated with recidivism. In the Danish study of schizophrenic males by Christensen (1974), it was determined that rehospitalized patients were younger at discharge than those who were not rehospitalized. Giving a somewhat different message, the results of studies by Rosen, Levenstein, and Shanian (1968) and Rosen et al. (1971) indicate that a significantly higher proportion of schizophrenic patients who entered psychiatric treatment prior to the age of 23 were rehospitalized, as compared to those who were older at the time of their first psychiatric treatment contact. Both studies utilized a three-year follow-up procedure for 166 and 81 schizophrenic patients respectively, discharged from Hillside

Hospital of Glen Oaks, New York. Tuckman and Lavell (1965) conducted a one-year follow-up study of 801 patients discharged from the psychiatric division of a general hospital. They discovered not only that proportionately more patients under the age of 25 were readmitted to the hospital, but also that more patients 65 years and older were readmitted. This was so despite the fact that the median age of the readmitted group was almost identical to that of the non-readmitted group.

The results of other studies have indicated that the rehospitalized patient tends to be older than the non-rehospitalized patient. Such were the findings of Gregory and Downie (1968) and of Gorwitz et al. (1966), the latter finding this relationship only for individuals with personality disorders. Their very comprehensive 18-month follow-up study provides data on over 4,000 patients of varied diagnoses who were admitted to three Maryland state hospitals in the Baltimore area. Arriving at a different conclusion are Wessler and Iven (1970), who obtained data on 350 mental patients of varied diagnoses who were discharged from a state institution serving primarily lower socioeconomic groups in the St. Louis area. They specify that disproportionately more of the persons in the age group 30-49 were readmitted during the three-year follow-up period, but that fewer persons over age 50 were readmitted.

Also, some researchers have determined that there is no

association between age and rehospitalization (Angrist, 1964; Freeman & Simmons, 1963; Jansen & Nickles, 1973; Lewinsohn, 1967; Lorei, 1967; Michaux et al., 1969). Although there is not a marked relationship for the patients (all female) in the Angrist study (an eight-month follow-up study of 287 female patients with varied diagnoses), there does appear to be a greater tendency for the rehospitalized patients to come from the 30-49 age group, as was also the case in the study by Wessler and Iven (1970). Thus, for these two studies, rehospitalization appears to some degree to draw a young to middle-age group, with the very young and old as well as the "older" middle-age range remaining in the community. With regard to very young and old patients, this tendency is in direct contrast to the results of Tuckman and Lavell (1965), based on data obtained from the records of over 800 patients (also of varied diagnoses) one year after their admission to a similar type psychiatric facility.

With regard to the sex variable, both Freeman and Simmons (1963) and Michaux et al. (1969) report that it shows no predictive relation to rehospitalization. However, Gorwitz et al. (1966) report that males of all diagnoses studied (psychosis, neurosis and personality disorder, alcohol disorder) had a higher probability than females of returning to the hospital, particularly if they were alcoholics. On the other hand, Bristow, Harris, and Henderson (1966) report that

the readmission rate for male psychotic patients during a five-year follow-up period was slightly lower than for female psychotic patients. A total of 1,113 patients were included in this Canadian study.

Researchers have also found educational level to be unrelated to hospital readmission (Gregory & Downie, 1968; Jansen & Nickles, 1973; Lewinsohn, 1967; Lorei, 1967; Serban & Gidynski, 1974). In contrast to this finding is that of Michaux et al. (1969), who report that returners were comparatively low in education for patients with varied diagnoses. In contrast--although education produced the least variation among patients of all characteristics studied by Gorwitz et al. (1966)--a consistent finding of note was that return rates were higher for college-educated patients with personality disorders than for those with fewer years of education.

For occupational level, the results of studies by Gregory and Downie (1968) and Michaux et al. (1969) indicate that it is unrelated to rehospitalization. Serban and Gidynski (1974) report, however, that a significantly greater proportion of unskilled chronic schizophrenic patients tends toward readmission as compared with their semi-skilled, skilled, and professional counterparts.

Diagnosis has been found by several researchers to be

ineffective at differentiating those who return to the hospital from those who remain in the community (Freeman & Simmons, 1963; Lorei, 1967; Wessler & Iven, 1970). Freeman and Simmons (1963), however, are concerned only with the different diagnoses for psychotic patients. Bristow et al. (1966) also provide data for only the psychotic population, but contrary to Freeman and Simmons (1963), report that the highest rates for readmissions are to be found in the patients diagnosed as schizophrenic. Michaux et al. (1969) also report that diagnosis is a significant factor, with schizophrenic patients being rehospitalized more than patients with other diagnoses.

The medication factor is certainly due some consideration with regard to rehospitalization. Since the introduction of ataractic medications³ in the mid-1950's, significant changes in "mental health care" have taken place. Individuals who once would have been institutionalized for the rest of their lives were then able to be discharged from the hospital and re-enter the community. Through the initiation and maintenance of such medication, patients' "thought processes" and emotional stability appeared to improve, and certainly their behavior was under some degree of control and more acceptable to life in the community. However, as stated earlier, readmission rates have steadily increased over the past

³Defined as drugs for the treatment of anxiety and tension states or "mental illness."

25 years. Many mental health administrators and practitioners consider the problems of medication maintenance to be a possible contributing factor to the rehospitalization of individuals discharged on antipsychotic medications. For a variety of reasons, many ex-patients discontinue taking their medication completely or according to prescribed regimen, often contributing to a return of "psychotic thoughts, experiences, and behavior." It appears that these individuals are usually readmitted to the hospital. The previously discussed Danish study (Christensen, 1974) of schizophrenic men supports this premise. Christensen states that aggravation of psychotic symptoms because of the patient's omission to take prescribed drugs was the most important cause of readmissions. Other researchers have also focused on the schizophrenic population (Hogarty, Goldberg, & the Collaborative Study Group, 1973; Hogarty, Goldberg, Schooler, & the Collaborative Study Group, 1974), these evaluating the post-hospital outcome of 374 schizophrenic patients discharged from three Baltimore-area state hospitals over a one-year follow-up period. Two months after discharge, patients were randomly assigned to experimental and control groups at three aftercare clinics. Results indicate that rehospitalization in the placebo group was twice that of the drug group, but that half of all patients rehospitalized (drug and placebo) ceased medication prior to being readmitted to the hospital. Additionally, it was reported that maximum restorative bene-

fits require both maintenance on antipsychotic medication and psychologic treatment continued beyond a year following hospital discharge. Other studies favorable to the ability of drugs to reduce the incidence of rehospitalization include those of Gross (1961) and Troshinsky (1962), both employing control groups with randomly assigned Ss, and others (Freyhan & Merkel, 1961; Gantz & Birkett, 1965; Goldman, 1966; Kris & Carmichael, 1957; McLaughlin, 1964; Pollack, 1958; Rajotte & Denber, 1963). Researchers presenting results not favorable to the ability of drugs to reduce rehospitalization rates include Michtom, Goldberg, Offenkrantz, and Whittier (1957), Shattan, DCamp, Fujii, Fross, and Wolff (1966), Soskis, Harrow, and Detre (1969), and Vaillant (1964), with the former two studies utilizing control groups.

Post-Hospital Factors

More in line with the primary focus of this study, numerous rehospitalization studies have been devoted to the ex-patients' community adjustment with regard to post-hospital factors, to especially include performance (primarily employment) and community "aftercare." Jansen and Nickles (1973) claim that family and community factors may be more important in the post-hospital adjustment of male psychiatric patients than personal characteristics, and Ellsworth (1970) states that behavior at work and at home are probably the best cri-

teria of treatment outcome. Talbott (1974), using a research team to closely examine 100 consecutive readmissions to a state hospital, concludes that 84% of the patient readmissions might have been prevented if patients had received better follow-up care through community services such as vocational rehabilitation and counseling, sheltered workshops, halfway house programs and other structured living arrangements, family and group therapy, day centers, and outpatient clinics.

With regard to ex-patient performance, researchers have reached several conclusions. The results of several studies (Anthony, Buell, Sharratt, & Althoff, 1972; Buell & Anthony, 1973; Freeman & Simmons, 1973; Lorei & Gurel, 1973; Gurel & Lorei, 1973) confirm the general belief that post-hospital employment is very low (about 25% to 50%). It is also reported that post-hospital employment is unrelated to local unemployment rates, a conclusion reached by Gurel and Lorei (1973) through correlating the work performance of a nationwide sample of approximately 1,000 schizophrenic patients discharged from Veterans Administration hospitals with labor market conditions and other community characteristics. Oetting and Cole (1971) state that failure is still the most frequent outcome when a former mental patient is placed on the job. Studying patients from the Fort Logan Mental Health Center of Denver, they specify that when patients leave the hospital and need help to be placed on a job, more than half will fail within

three weeks, and another half of those remaining will not endure on the job longer than three months.

Employment, Other Functioning

As to whether or not post-hospital employment can reduce the ex-patient's chances of being rehospitalized, Wessler and Iven (1970) report no significant differences between the proportions of employed and unemployed persons rehospitalized. Their results are based on a patient sample discharged from a state institution serving primarily lower socioeconomic groups. Such findings are not in agreement with those of other studies (Brown, Carstairs, & Topping, 1958; Dudgeon, 1964; Miller & Dawson, 1965; Monck, 1963), as reviewed by Drieman (1971) and Harrington and Wilkens (1966). These authors concur that gainful employment is a significant factor in reducing readmission. Maisel (1967) provides supporting data in an 18-month follow-up study of 60 patients discharged from state and Veterans Administration hospitals in Connecticut. His results indicate that those individuals who worked usually remained in the community, and those who did not work were commonly rehospitalized (11% of the ex-patients who worked were rehospitalized as compared to 52% of those who did not work). Gregory and Downie (1968) and Forsyth and Fairweather (1961), in follow-up studies of 12 and 6 months respectively, both report a significant association between post-hospital employment and ability to remain in the community in studies with patients discharged from Veterans Ad-

ministration hospitals (the latter reports a .66 correlation between "employed full time" and "not rehospitalized"). Such results are in agreement with those of Davis et al. (1972), who utilize control groups in their five-year follow-up study, and of Peretti (1974), whose Ss are all former halfway house residents. Lorei and Gurel (1973), who conducted a nationwide study of employment and readmission among schizophrenic patients recently discharged from Veterans Administration hospitals, report a small but significant correlation ($r = .20$) between failure to work and readmission. This is consistent with the results reported by Freeman and Simmons (1963) for the relationship between readmission and their work-inclusive measure of instrumental performance. They also report that, of the successful patients (those not rehospitalized) in their study,

. . .80% worked at some point during the year, and 76% of the failures were employed at some point between their relapse and rehospitalization. With respect to regularity of work performance, over 50% of the successful patients failed to work more than half the time during the year. Among failures, the proportion who worked more than half of the period between release and rehospitalization was significantly lower; only 30% were employed this amount of time. At the end of the year, about 60% of the successful males were gainfully employed. In comparison, only 35% of those who failed were employed at the time of their rehospitalization (p. 61).

Gurel and Lorei (1972) further state that "symptomatology" is clearly related to success in finding and holding employment and suggest that hospital and post-hospital experiences

should nurture and strengthen the patient's interest in productive activity. Michaux et al. (1969) conclude that, generally, the more industrious and responsible patients, those involved in work and homemaking, are somewhat less likely to return to the hospital. They add that "breadwinners" usually remained in the community during the entire follow-up year.

One may argue that the question is not simply how employment affects rehospitalization, but how the "motivation" of the individual, as is suggested in the terms "industrious," "responsible," and "breadwinner," affects his becoming employed and remaining in the community. Ellsworth (1970) comments that researchers have largely ignored the likelihood that the expectation, conviction, and motivation of the individual are important determinants of success. Some researchers in this country and the Netherlands have given attention to such factors and have, indeed, identified the patient's motivational level as a key determinant of post-hospital employment (Gurel & Lorei, 1972; Gregory & Downie, 1968; Oostenbrink, Peereboom, & Weijel, 1972).

One may further argue that post-hospital success is based more on one's "ability" to work than whether or not the individual actually did so. Such is the conclusion of Harrington and Wilkins (1966), Oostenbrink et al. (1972), and Tuthill.⁴ To some degree, this may certainly be the case.

⁴Personal communication (December, 1974) with Robert W. Tuthill, Ph.D., School of Health Sciences, University of Mas-

In such a study as this, one way to attempt to control for this variable would be to obtain data not only on the ex-patient's post-hospital employment experiences but his pre-hospital employment history as well and compare the two in relation to rehospitalization.

In examining the ex-patient's employment history, Buell and Anthony (1973) and Michaux et al. (1969) found that it showed virtually no predictive relation to rehospitalization. Freeman and Simmons (1963) also concluded that work experience was equally characteristic of both rehospitalized and non-rehospitalized male patients. Similarly, Serban and Gidynski (1974) determined that employment history was not significantly associated with readmission of both chronic and acute schizophrenic patients. However, Brown (1966) and Wirt and Simon (1959) have demonstrated that the patient's work record may be considered one of the most useful indices of post-hospitalization adjustment. This is supported by Jansen and Nickles (1973), who, in a five year follow-up study of state hospital patients of varied diagnoses, concluded that successful work experience just prior to hospitalization was an important factor in post-hospital maintenance in the community for males. They state that males who were not rehospitalized during the five-year period after their initial ad-

sachusetts, Amherst, Massachusetts, co-author of a readmission follow-up study of former Northampton State Hospital patients (Northampton, Massachusetts).

mission were significantly more likely to have been employed at the time of first admission than their counterparts who repeatedly returned to the hospital after discharge. Their data do not make it clear how many of the male patients actually had jobs to return to after discharge. Several researchers, treating post-hospital employment and rehospitalization as two independent criteria, provide data suggesting that pre-hospital employment is related to post-hospital employment. Lorei (1967) reported that success in obtaining and holding a job for six months after discharge is related to having had a recent job prior to hospitalization. Giving a slightly different message, Oetting and Cole (1971) state that patients who are most likely to succeed in their jobs after leaving the hospital are those who return to their old jobs, or who find their own employment. Anthony and Buell (1974), Buell and Anthony (1973), Lorei and Gurel (1972), and Lorei and Gurel (1973) have consistently shown that patients most likely to work following hospitalization were those regularly employed in the past. They have done so through replications, varied approaches and methodology, and with increased follow-up periods (the latter studies are based on a nationwide sample of close to 1,000 individuals). Studies have indicated that post-hospital employment is related to having worked on a single job for one year (Hall, Smith, & Shimkumas, 1966) or three years prior to hospitalization (Olshansky, Grob, & Ekdahl, 1960).

The in-hospital variables of length of stay and number of hospitalizations again appear to play a role as post-hospitalization predictors. Lorei and Gurel (1973) determined that the patient who did not work or worked very little in the follow-up period after discharge tended to have had a longer length of stay for that hospitalization and to have had more frequent and more lengthy hospitalization in the past. These findings are consistent with the results of Freeman and Simmons (1963), who state that patients who perform at high levels after hospitalization are much more likely to have been hospitalized only for a short time. They interpret their findings to mean that the longer a patient is isolated from the community, the less practice he obtains in work and social roles, and, consequently, the lower his performance levels when he does leave the hospital. Mendel (1966), in a study of over 2,000 schizophrenic patients from the psychiatric unit of a county general hospital, also concludes that the shorter the hospitalization, the higher the level of functioning in the post-hospital course. Such results were not obtained by Buell and Anthony (1973), who found that number of hospitalizations and length of last hospitalization contributed no unique variance to post-hospital employment.

Work is a major form of productive activity, and it may play a role in reducing the ex-patient's chances of hospital

readmission. However, employment may not be an appropriate activity for the individual following his hospital discharge. He may benefit more from some other form of productive activity, such as participation in school or college, a training program, homemaking, structured volunteer work, or a sheltered workshop. One's level and degree of involvement in such activities and the type of activity may be determined by one's abilities, interests, and level of functioning. Participation in such activities also could possibly reduce the ex-patient's chances of rehospitalization. Such is the conclusion of Brown et al. (1958) with regard to sheltered employment and of McGee (1965), who determined that one of the factors accounting for the major portion of outcome variance for rehospitalization was a comprehensive pattern of social adjustment defined mostly by the productive and meaningful use of time. This is in agreement with the conclusion of Michaux et al. (1969) that those ex-patients involved in work and homemaking are somewhat less likely to return to the hospital. Results of a study by Brodsky (1968) indicate that overall, the housewife's role was conducive to recovery and that married women functioning primarily as homemakers were rehospitalized less often than were single women or working married women.

Aftercare, Therapeutic Activity

Another post-hospital factor to be examined in this

study as a possible predictor of rehospitalization is whether or not the ex-patient maintained contact with a community-based clinic, mental health center, or other means of post-hospital counseling or psychotherapy. The continuation of such services on a regular basis might play an instrumental role in preventing readmission by providing support, feedback, and understanding to the individual as he experiences the pressures of community life following hospitalization. This supposition is supported by the results of a study by Reidda and McGee (1972) whose findings indicate that patients who make contact with the community mental health center have a significantly greater chance of remaining in the community and avoiding rehospitalization than patients who fail to make contact. Results were based on an evaluation of the effectiveness of aftercare services in relation to recidivism rates of individuals referred to fifteen community mental health centers in Chicago. Orlinsky and D'Elia (1964) also provide data supporting the role of post-hospital clinic care as a means of preventing rehospitalization. In their two-year study of over 2,000 schizophrenic patients (also in the Chicago area) who had been hospitalized in Illinois state hospitals, they found that significantly more clinic non-attenders than attenders were rehospitalized at every follow-up point of the study (15, 30, 60, 90, 183, 366, and 730 days). To see if the differences in rehospitalization between the two groups could be attributed to extraneous differences, the

authors computed percentages for various subgroups of the attender and non-attender groups (controlling for race, sex, age, marital status, etc.), finding that this was not the case. Zolik, Lantz, and Sommers (1968) conducted a similar type study with over 6,000 Virginia state hospital patients. They report similar results, specifically that significantly more patients released without a referral are rehospitalized than patients referred for outpatient mental health services or to other community supportive agencies. Similar results and conclusions are also reported by Free and Dodd (1961), Hornstra and McPartland (1963), Kliewer (1970), and by Serban and Thomas (1974) for chronic but not acute schizophrenic patients. Claghorn and Kinross-Wright (1971) not only report that clinic outpatients were rehospitalized significantly less often than patients who were not assigned to the "clinic group," but state that the decrease in the rate of rehospitalization continued up to the time of the publication of the study--for a period of seven years. All Ss were schizophrenic patients (N = 780) treated with antipsychotic medication who were randomly assigned to experimental and control groups. Finally, Gorwitz et al. (1966) report that psychotic patients who received clinic care within 30 days after discharge have considerably lower hospital return rates than similarly diagnosed persons without clinic care. However, these findings and conclusions are inconsistent with those of studies by Mayer, Hotz, and Rosenblatt (1973) and Williams and Walker

(1961), which show no association between aftercare attendance and rehospitalization.

Costs of Community-Based Programs

If involvement in productive and therapeutic activities is at all related to a reduction in rehospitalization for the ex-patient, one would be justified to ask whether transitional, rehabilitative, and aftercare programs with these objectives "pay off" economically. Using data from a study by Rockwell and Rhody (1968) done at a comprehensive treatment program with a heavy emphasis on day-hospital treatment, Cole and Oetting (1971) conclude that successful rehabilitation efforts must pay off in dollars. They state:

The cost of care and rehabilitation efforts per patient can be amortized over the working life of the patient when he leaves the hospital. When we do this, we find that if the rehabilitation and treatment efforts increase the average income of the patients by only \$133 a year, they will earn back the total cost of the entire program, including hospital, work therapy, rehabilitation counseling and placement, and follow-up supportive counseling costs! Another way of saying the same thing is to point out that if we provided services for 50 people, and among them was one person who was unable to work before but able after treatment to earn the median national income, he would earn back the costs of providing services to all 50 patients. The profit potential of rehabilitation is, in fact, so great, that the state and federal income taxes paid in one year, when added to the welfare costs of the group before rehabilitation should more than pay back the entire cost of the program (p. 5).

Also, results of a study by Cassell, Smith, Grunberg, Boan,

and Thomas (1972) clearly indicate that it costs significantly less to care for the chronic psychiatric patient in the community than in a mental hospital that offers a reasonably acceptable standard of care.

Related Studies

In selecting methods and approaches to use in the development of a study such as this, one may consider the information available through a review of the literature. Several of the approaches used in this study were selected partly due to the strong representation of certain methods and the fairly consistent results obtained in studies reviewed in preparation for this project.

Such is the case in the selection of the time span of one year for the follow-up period. Although the one-year period was a realistic one for the scope of this study and chosen with that in mind, it is one used in many rehospitalization studies, as is evident through the review just presented. Of considerably greater importance are the results of several studies, indicating that the one-year period is a significant length of time with regard to rehospitalization in the mental patient's post-hospital community tenure. Taube (1974), in completing a nationwide study of admissions to state and county mental hospitals, reports that nearly 50% of admitted patients had been hospitalized previously, and

usually within the twelve months prior to the admissions examined. Supporting this finding in their five-year follow-up study in Canada, Bristow et al. (1966) found that almost half the readmissions for the whole five-year period occurred during the first year following discharge (Total N = 1,113 psychotic patients). Results also indicate that, in general, readmission rates declined the longer the patients stayed out of the hospital, a finding supported by other studies (Gorwitz et al., 1966; Weinstein et al., 1973). The significance of the one-year period following hospital discharge is again indicated by the findings of Miller (1967), who states that four out of every ten California mental patients discharged from a state hospital are readmitted within twelve months. Also, Zolik et al. (1968) report that, during the one-year period following discharge, a significantly greater percentage of patients were readmitted who had been discharged without any referral than patients referred to a mental health service or to a community supportive agency. Since an objective of this study is to examine the ex-patient's involvement in community-based productive and supportive activities, it seemed reasonable to expect that differences in rehospitalization rates stemming from involvement or non-involvement in such activities would probably appear within one year (assuming that, for the most part, referral leads to involvement).

The two-month period after hospital discharge is also treated as an important time period in this study, as indicated by the sub-hypotheses in Chapter I. Several studies provide data indicating that a significantly large proportion of discharged patients return to the hospital during this period, with rehospitalization noticeably tapering off after this point (Gorwitz et al., 1966; Weinstein et al., 1973; Zolik et al., 1968). All report a readmission rate of about 15% (cumulative) by the end of the two-month period. Similarly, Michaux et al. (1969) report that the greatest frequency for readmissions was during the second month. In view of these findings, the two-month point following hospital discharge was considered to be a point by which factors hypothesized to make a difference in rehospitalization rates should show a significant degree of influence.

The selection of only first-admission patients in this study was influenced primarily by the reasoning expressed in the "Significance of the Study" section of Chapter I, and by the findings and conclusions of other studies as well. In their study of psychotic patients in Canada, Bristow et al. (1966) observed that the first admission discharges had considerably lower rehospitalization rates than the readmission discharges for all diagnostic groups studied. Strauss, Sirotkin, and Grisell (1974), in comparing paranoid and non-paranoid schizophrenic patients, conclude that the social progno-

sis of first admissions was more favorable than that of readmissions, independent of paranoid "symptomatology." Ruth (1970), drawing conclusions from his study of adult schizophrenic patients, states that the individual with previous hospitalizations is older and less able to adapt to the community and society than are first-admission patients following discharge from their first hospitalization. Finally, the selection of only first-admission patients in this study provides a means of controlling for "number of previous hospitalizations," consistently determined by researchers to be a significant factor to rehospitalization.

Summary

The objective of this chapter has been to present a thorough review of the literature on the rehospitalization of mental patients, reporting those areas receiving the greatest amount of attention, and concentrating especially on factors examined in this study.

Many researchers have reported that the best demographic predictor of rehospitalization is the number of times the patient has been hospitalized previously. Length of hospitalization has also been found to be a significant demographic factor to rehospitalization in most studies reviewed, although some researchers disagree with the general trend of results which suggest that a longer stay in the hospital in-

creases the likelihood of being rehospitalized. Other demographic factors have shown a significant relationship to hospital readmission. Several studies report that the married ex-patient is less likely to return to the hospital, with just as many reporting that this is not the case. Inconsistent results have also been reported for age, sex, educational level, occupational level, and diagnosis. Several studies, many using control groups and random selection, have focused on the ex-patient's medication status in relation to rehospitalization. Researchers have indicated that omission to take prescribed medication is an important cause of readmission. There is conflict, however, as to the ability of drugs to reduce rehospitalization rates.

Many researchers have focused on post-hospital factors as possible predictors of rehospitalization. Most studies that examine post-hospital performance or productive activity do so with regard to employment. Many studies report that post-hospital employment tends to reduce the possibility of rehospitalization. Other researchers examine the motivational factors involved in obtaining and maintaining employment. Others, in examining prehospital employment, indicate that it increases the likelihood of post-hospital employment, but do not agree on whether or not it has any predictive relation to rehospitalization. Employment is also linked to hospital length of stay and number of previous hospitalizations. Positive results and conclusions of studies that have examined

other means of post-hospital functioning in relation to hospital readmission are presented.

The ex-patient's involvement in supportive or therapeutic activity through attending outpatient clinics and other mental health agencies has been examined by researchers as a possible predictor of rehospitalization. Most studies indicate that such an involvement lowers the chances of rehospitalization.

Researchers have provided data indicating that it "pays off" economically to provide transitional, rehabilitative, and aftercare programs for the ex-patient, and that the cost of community care is significantly less than comparable institutional care.

Finally, several studies, the results of which contributed to the approach and design of this dissertation study, are presented and discussed.

In Chapter III, the study sample is defined, and a detailed description of the methods and procedures used in this study is presented.

CHAPTER III

METHOD

The primary purpose of this study is to determine if rehospitalization rates are reduced when ex-patients participate in one or more of the designated activities of Hypotheses 1 and 2 during the one-year follow-up period. Other variables which may influence rehospitalization are also examined. The methods and procedures used in this study, the selection of subjects, the development of the instrument used, and the collection, tabulation, and methods of analyzing the data are described in detail throughout this chapter.

Subjects

Subjects (Ss) in this study are 140 former inpatients of the psychiatric unit of a general hospital in Massachusetts. Ss are of varied diagnoses and were discharged from the hospital during the period beginning 1 January 1973 and ending 31 December 1973. The study does not include patients under eighteen years of age, patients who had previous "known" psychiatric hospitalizations, patients who were transferred to other hospitals (for psychiatric reasons), and patients who were discharged against medical advice. Individuals who qualified under these criteria as Ss for the

study are represented according to demographic characteristics in Table 1.

TABLE 1
DEMOGRAPHIC CHARACTERISTICS OF STUDY SAMPLE, N = 140

Factor Descriptors	N	Percentage
Sex		
Male	53	38%
Female	87	62%
Age		
18-22	31	22%
23-45	63	45%
46-65	35	25%
Over 65	11	8%
Marital Status		
Married	74	53%
Single	38	27%
Divorced	19	14%
Widowed	9	6%
Educational Level		
Non-High School Graduate	43	31%
High School Graduate	60	43%
2+ Years of College	34	24%
Information Not Available	3	2%

TABLE 1 (continued)

Occupational Level		
Professional	5	3.5%
Managerial	5	3.5%
Technical	19	14%
Homemaker	14	10%
Skilled	37	26%
Unskilled	41	29%
N/A (Student) or Information Not Available	19	14%

Diagnosis		
Psychosis	14	10%
Neurosis	58	41%
Personality Disorder	29	21%
Transient Situational Disturbance	14	10%
Alcohol Disorder	20	14%
Drug Dependency	5	4%

Length of Hospital Stay		
Under 1 Week	17	12%
1 Through 3 Weeks	95	68%
1 Month or More	28	20%

The Hospital Facility

The participating facility is a 27-bed inpatient unit serving primarily acutely-disturbed men and women on a voluntary basis. It is located in a 200-bed private, non-profit general hospital. The psychiatric unit provides short-term care (average length of stay is about two weeks) to approximately 600 patients a year (Killian & Bloomberg, 1975). The treatment program, as described by Killian and Bloomberg

(1975),

. . . is based on the concept of the therapeutic community (Caplan, 1964; Brenner, 1957; Jones, 1953, 1968). Individual therapy, group therapy, psychodrama, and occupational-recreational therapy operate within the context of the utilization of the total social structure of the unit. There are frequent patient-staff and patient governance meetings. Emotional distress resulting in hospitalization is seen primarily as the result of interpersonal and social experience. Knowledge of developmental phases and of intrapsychic dynamics is constantly utilized in individualizing the treatment plan and in clinical decisions. Group and interpersonal interaction, however, remain the focus in therapy. Members of a multi-disciplinary mental health team share responsibility for the daily activities and management of the patient group. Decision-making by patients is restricted to certain selected areas. There is a system of clinical and supervisory conferences that results in psychiatric responsibility for the therapeutic program. This responsibility and control is always operative. Although medical-psychiatric direction for the therapeutic program is not always clearly recognizable to an observer outside of the staff-patient group, the fact of psychiatric control at the top of the hierarchy of responsibility is always apparent to all participants in the program.

The theoretical frame of reference for the therapeutic plan for each patient varies according to individual need. The basic orientation, however, is psychoanalytic. This does not exclude the utilization of behavioral modification, transactional analysis, supportive psychotherapy, marital and family therapy, and medications. . . . The crisis-intervention orientation of the treatment program is specifically designed to help the patient (1) to become educated as to what he himself is contributing to a difficult interpersonal relationship outside the hospital, and (2) to learn more effective ways of relating as a result of experiencing from others positive responses to his changing his characteristic reaction patterns When the symptoms that resulted in hospitalization subside, the staff immediately begins to hunt for ways to help the patient confront the stressing situation outside the hospital (p. 41).

Members of the clinical staff include two psychiatrists (one of whom is unit director), two psychologists, three social workers, thirteen registered nurses (one of whom is a master's degree level psychiatric nurse), four licensed practical nurses, five staff members who function as vocational rehabilitation counselors or occupational therapists, an associate's degree level mental health worker, and fourteen psychiatric aides. Six or more trainees or interns may be added to these figures. Several of the staff members are not full-time employees of the hospital, and the nurses and aides work on shifts "around the clock."

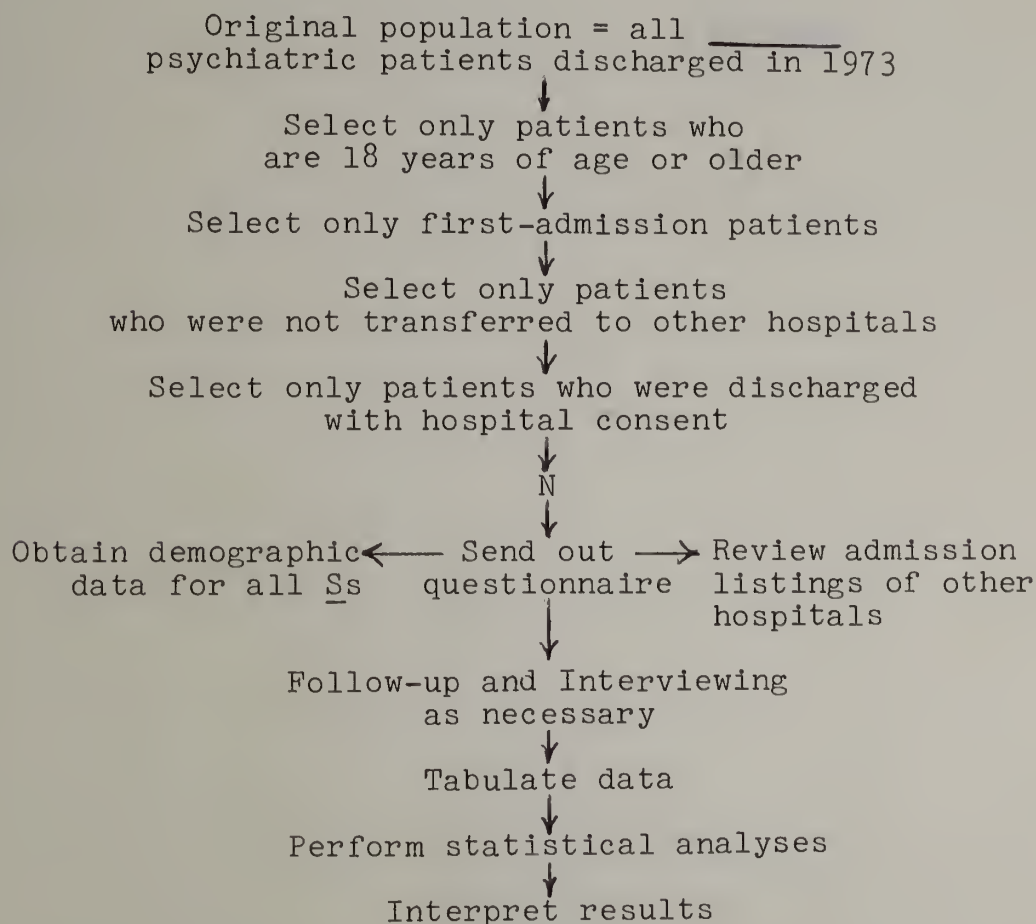
The patient's involvement in psychotherapy on the unit is fast-paced and should form a foundation for outpatient referral upon hospital discharge. It should demonstrate to the patient the potential for psychotherapy and give him new tools for understanding himself and making more effective use of his potential for dealing with his problems (Brechenser, 1972). In agreement with the views expressed in the "Significance of the Study" section of Chapter I, careful discharge planning and preparation are a very important part of this facility's treatment. In helping to provide a smooth transition back to the community for the patient, unit staff make referrals to community clinics and professionals, and consistently and conscientiously follow through on those referrals. For most patients, considerable emphasis is placed on the importance of functioning in some form of

constructive, productive activity that is meaningful to the patient following his hospital discharge. Referrals are also made to and close working relationships maintained with public and private vocational rehabilitation agencies and training programs and halfway house programs. This facility's commitment to providing a smooth transitional experience for the patient is further evidenced by its "Day Care" program, which provides outpatient hospital care to former hospital inpatients during the interim between hospital discharge and integration into an outpatient program elsewhere, and by its alcohol clinic and halfway house. Additionally, the clinical staff includes a mental health worker who is involved in aftercare for drug abuse patients and a community psychiatric nurse, who functions as a coordinator for various community mental health centers and as a consultant to community, social, health, and welfare agencies and halfway house programs. This individual also makes "follow-up" contact with former patients, is involved in community education projects, and is usually involved in compiling resource material for referral purposes.

Design

This study is exploratory and retroactive in design. Hospital records were used to select Ss according to the criteria previously presented. The attempt was then made to

contact each S in the study sample to obtain follow-up information. Follow-up procedures were initiated only after one full year had passed following the date of hospital discharge for each S. Follow-up information was obtained through the use of a questionnaire mailed to each S, as well as through telephone and/or personal contact. Following collection of the data, tabulations were completed and appropriate statistical analyses were conducted. The general structure of this procedure may be more clearly presented in the following "flow chart":



Instrument

The questionnaire used in this study (Appendix A) was developed by this researcher. It is designed to obtain information related to the individual's post-hospital activities, as specified in the hypotheses, and his rehospitalization status. With regard to Ss who were rehospitalized during the one-year follow-up period, no further data was gathered on these individuals for the period following the date of their second admission.

A "closed format" is utilized in the questionnaire, with the appropriate response to questions in most cases being a "check mark" in the space by the answer to which it best applies. The available choices correspond to the specifications presented in Chapter I for S's "point of involvement" in certain activities after discharge, "length of involvement," etc. Ss are also asked to identify institutions, agencies, and programs by name. One "open-ended" question is included which asks Ss to make any comments they think might be helpful.

The instrument is divided into two sections following an introductory paragraph in which specific directions are given. Questions in the first section are concerned with the designated activities covered in Hypothesis 1, and those in the second section deal with the designated "therapeutic" activities covered in Hypothesis 2. The questionnaire was

typed on 8-1/2" by 11" sheets and "photo-copied" on both sides of white paper of the same size as the original.

Development of Questionnaire

Questionnaires used in other follow-up studies were reviewed, and several different formats and styles were developed for the instrument used in the study described in this report. Each of these was evaluated by two academic professionals and two mental health practitioners. Recommendations were considered and modifications made by the researcher. Such modifications included (1) using terminology that is more easily understood by the general population and (2) spacing questions and response choices in a more consistent format throughout the questionnaire.

After three revisions, the questionnaire was pilot-tested by the researcher with ten former patients of the participating facility who are not Ss in this study. All were either discharged the day of the pilot test or were visiting the hospital as outpatients. All were initially "briefed" about the pilot test by their psychotherapist. This researcher then met with each "testee" individually, explained the purpose of the project (covering the same information later appearing in the cover letter to the questionnaire), and asked the individual to complete the questionnaire. The "testees" were informally timed so as to obtain a reasonable estimate of the time required to complete

the questionnaire. (The instrument took between five and ten minutes to complete.) The ten former patients were encouraged to ask questions during the exercise and, following completion of the questionnaire, were asked if they had any suggestions or further questions. Finally, they were asked a series of prepared questions about the instrument's format, length, vocabulary used, and general clarity (Appendix B). Pilot-testing sessions lasted approximately 30 minutes.

The hospital record of each patient who participated in the pilot test was reviewed, especially with regard to age, educational level, "intelligence rating," diagnosis, and any other information that might have helped to give reason for differences in completion time, difficulty in completing the instrument, and behavior during the session. Based on "testee" responses, suggestions, and criticisms, the questionnaire was revised by the researcher following the pilot test to be more readable, explicit, and understandable in an attempt to increase the percent of return. Suggestions by "testees" included:

1. Increasing general clarity by listing response choices in columns rather than rows.
2. Changing terminology (i.e., "Did you have individual psychotherapy. . ." to "Did you see a therapist alone. . ." and ". . .any other form of therapeutic or transitional program. . ." to ". . .a program or activity similar to those already mentioned. . .").
3. Including the names of local agencies and programs to more clearly define the type of agency or program referred to.

The revised questionnaire was then reviewed and approved by the hospital unit director before being sent to Ss in the study sample.

Copies of a cover letter (Appendix A) signed by the unit director, which had been "photo-copied" on hospital stationery, were enclosed with the questionnaire and mailed to the Ss. A draft of the letter had been presented to the unit director, who revised the letter to its final form. In the letter, Ss were asked to complete and return the questionnaire by a particular date, ten days after its receipt, and were given a telephone number to call if they had any difficulties or questions. Confidentiality was indicated, and Ss were assured that their names would not be used in the study.

Follow-Up Procedure

To obtain post-hospital information, a questionnaire, with a stamped, self-addressed (hospital address) envelope enclosed, was sent to each S at the home address recorded in the hospital records. Approximately 25% of the questionnaires were returned as undeliverable by the postal service. When this occurred, hospital records, telephone directories, and postal service resources were used in the attempt to locate the S's up-to-date address or telephone number. Through the use of hospital records, relatives or close friends

listed by the S on admission were contacted by the researcher, usually by telephone, as were mental health agencies to which the S had been referred by the hospital. In requesting the assistance of friends and relatives in locating the S, specifics were not discussed, and confidential details were not revealed (the researcher identified himself as representing the participating hospital in conducting a hospital study). In the case of the agencies, the study and its purpose were explained in requesting information, often in writing. Upon receiving an up-to-date address, a questionnaire was again sent to the S.

Questionnaires were numbered, so it was known which Ss had not responded. After ten days, the attempt was made by the researcher to contact by telephone any S who had not yet responded. When telephone contact was made with an S, he was asked if he had received the questionnaire (if not, another questionnaire was sent) and, if so, if he had encountered any difficulties in completing it or had any questions about its purpose. The attempt was made to lessen any discomfort or doubts, to explain the purpose and importance of the study and the S's contribution, and to request his cooperation. Unless the S refused to complete the questionnaire, he was contacted by telephone and given "gentle reminders" at approximately weekly intervals until he responded. In 18 cases, questionnaires were completed by the S and the researcher together over the telephone. In these cases, the

researcher read the questions directly from the questionnaire. When telephone contact was not possible, the attempt was made to locate Ss in the manner previously described. This procedure was continued for two months after the initial questionnaire was mailed out. At the end of that period, home visits were made to those Ss who had not yet responded, and interviews were conducted by the researcher, following the questionnaire format. For Ss who still could not be located, post-hospital information was obtained from hospital readmission records when applicable.

Validation of Data

Upon receipt of questionnaires, responses were examined and data coded and recorded. Hospital records and other resources were used to substantiate Ss' self-reports. To verify and clarify questionnaire responses, the S and the mental health agencies identified by the S were contacted. Also, to confirm responses as to rehospitalization status, admission listings of area hospitals were reviewed by the researcher during the data-collection phase of the study. Letters explaining the purpose of the study and enlisting cooperation were sent by the unit director to these facilities. In one case, the researcher appeared before a hospital's "Human Rights Committee" for this purpose.

Tabulation and Analysis of the Data

The major hypotheses tested in this study state basically that there will be lower rehospitalization rates (1) for Ss who participated in post-hospital Productive Activities⁵ than for Ss who did not and (2) for Ss who participated in post-hospital Therapeutic Activities than for Ss who did not. It is further hypothesized that Ss who began participating within two months of discharge and Ss who participated "regularly" during the follow-up period will have lower rehospitalization rates than for Ss who did not.

To test the hypotheses, information obtained in the follow-up was examined in relation to rehospitalization status. Data were tabulated to indicate the proportion of Ss who were rehospitalized. Also, in an attempt to further determine the possible influence of the S's "point of involvement" in Productive Activities and in Therapeutic Activities, data were tabulated according to the two-month periods specified in Chapter I.

To determine if there is a relationship between rehospitalization status and the interaction of Productive Activity and Therapeutic Activity, data were tabulated to indicate the proportion of Ss who participated in both and whether or not they were rehospitalized. These proportions

⁵An inclusive term used in this study to represent the designated activities in Hypothesis 1.

were compared to those of Ss who did not participate in both. The latter group was then broken into its mutually exclusive possibilities, and the proportions for these were compared to those of Ss who participated in both Productive and Therapeutic Activity. The above procedure for tabulating the data was conducted for the "sub-hypotheses" of each major hypothesis to examine the possibility of a significant association between rehospitalization status and the interaction between "participation within two months after discharge" and "participation at least once a month" for Therapeutic Activities, and between "participation within two months after discharge" and participation at least eight hours per week for the majority of the post-hospital period" for Productive Activities.

To address the question that post-hospital success or failure with regard to rehospitalization may be more of an indication of pre-hospital, in-hospital, or demographic factors than of post-hospital activity, data were tabulated and examined with respect to such factors. Three-way cross-tabulations for participation in post-hospital activities, as to rehospitalization, were carried out for each of the background and demographic factors listed in Table 2. When strong associations were found between a demographic factor and rehospitalization with regard to involvement in Productive or Therapeutic Activity, four-way cross-tabulations were made for those three factors in relation to other

demographic factors showing a strong relationship to rehospitalization.

TABLE 2
BACKGROUND AND DEMOGRAPHIC FACTORS EXAMINED

Factor	Factor Values
1. Sex	Male Female
2. Age	18-22 23-45 46-65 Over 65
3. Marital Status	Married Single Divorced Widowed
4. Educational Level	Non-High School Graduate High School Graduate 2+ Years of College
5. Occupational Level	Professional Managerial Technical Homemaker Skilled Unskilled
6. Prior Employment (within one year prior to hospitalization)	Yes No
7. Prior Productive Activity (within one year prior to hospitalization)	Yes No
8. Prior Mental Health Services (other than hospital prior to this hospitalization)	Yes No

TABLE 2 (continued)

9. Length of Hospitalization	Under 1 Week 1 through 3 Weeks 1 Month or More
10. Medication* (prescribed upon discharge)	Yes No
11. Anti-Psychotic Medication (prescribed upon discharge)	Yes No
12. Degree of Severity	Severe Non-severe
13. Diagnosis	Psychosis Neurosis Personality Disorder Transient Situational Disorder Alcohol Disorder Drug Dependency
14. Hospital Rating (by <u>S</u>)	Extremely Helpful Helpful Helpful in Some Ways Not Very Helpful Harmful

*Medication includes anti-depressant drugs, minor tranquilizers, and major tranquilizers (anti-psychotic drugs) used for the most serious disorders.

The background and demographic factors were also examined in relation to rehospitalization status without regard to post-hospital activities. Additionally, demographic factors were examined for Ss for whom post-hospital data were not obtained and compared to the demographic factors for Ss for whom post-hospital data were obtained.

Demographic factors were selected primarily according to what factors were most often found to be significant to rehospitalization in the literature and/or their degree of relevancy to this study. "Number of previous hospitalizations," the demographic factor most consistently determined by researchers to be significant, was excluded and controlled by selecting a study sample consisting of only first-admission patients. The variable, "prior Productive Activity," is used so as to especially examine this study's measure of Productive Activity in the same manner that employment is extensively examined in other studies.

The attempt is made to examine "prior mental health services" primarily in relation to Therapeutic Activity and rehospitalization in similar fashion. "Anti-psychotic medication," supplemental to the "medication" factor, is used because most medication studies have examined psychotic patients who are maintained in the community on anti-psychotic medications. "Degree of severity" is an inclusive term used to distinguish between those patients who were judged by the unit director to be severely disturbed or not. Included in this judgment were the patient's diagnosis, medication status upon admission to and discharge from the hospital, and final disposition. This factor is supplemental to the "diagnosis" factor given. In the case of the variable, "hospital rating," hospital personnel were especially interested to know if a patient's evaluation of care might influence rehospitaliza-

tion.

The "descriptors" used for the demographic factors were selected as they were judged to be critical or reasonable points of measure again because of their relevancy to this study and/or their treatment in other studies. Such is the case with "age," especially in the case of the 65-year-old retirement age and the age of 23 (Rosen et al., 1968; Rosen et al., 1971). The selection of titles for "occupational level" was influenced by the advice of a specialist⁶ in occupational counseling as well as by an occupational classification system discussed by Roe (1956). This classification system appeared originally in the Dictionary of Occupational Titles (1949), listed as follows:

Professional and Managerial Occupations
 Clerical and Sales Occupations
 Service Occupations
 Agricultural Occupations
 Skilled
 Semi-skilled
 Unskilled

The title, "homemaker," is used in an attempt to treat this activity as a significant means of productive functioning and performance, requiring considerable expertise (i.e., dietary planning and preparation of balanced meals, care of infants and the education and training of children, etc.). The home-

⁶Ronald H. Fredrickson, Ph.D., Professor in the School of Education at the University of Massachusetts, Amherst, Massachusetts.

maker role is now being considered seriously by researchers in its possible relation to rehospitalization (Angrist, 1964; Brodsky, 1968; Chesler, 1972; Michaux et al., 1969).

Other tabulations were performed to further isolate factors which may prove to be significantly related to rehospitalization. These include examination of the different types of Productive Activity and Therapeutic Activity in relation to rehospitalization. As employment is the type of Productive Activity most often studied in the literature, a closer examination of this factor was made. Data were tabulated to examine the association between post-hospital employment and rehospitalization status. This association was also examined in relation to demographic factors. Finally, post-hospital employment was examined in relation to pre-hospital employment and rehospitalization.

Tabulation procedures for this study were performed primarily through the use of the "Statistical Package for the Social Sciences" (SPSS) system of computer programs (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975). (Tabulations were also made by hand.) Statistical analyses to determine the degree of significance of the associations appearing in the cross-tabulations were also performed by the SPSS system. Computer operations were performed on a "Control Data, Cyber 74-18" computer at the University of Massachusetts Computer Center, Amherst, Massachusetts.

The "chi-square" test, as defined by Runyon and Haber (1967), is the statistical test used in determining the degree of association between variables. This is an appropriate test for dealing with two or more nominal categories in which the data consist of a frequency count which is tabulated and placed in the appropriate cells. Limitations of the chi square test include the following:

1. The frequency counts must be independent of one another. Failure to meet this requirement results in an inflated N and may lead to rejection of the null hypothesis when it is true.
2. In the one-degree-of-freedom situation, the expected frequency should equal or exceed 5 to permit the use of the chi square test. When $df > 1$, the expected frequency in 80% of the cells should equal or exceed 5.

When the expected frequency in a cell is less than 5, the data are reported by percentages and visual examination. The strongest trends are reported where differences are based on Ns of sufficient size. For a relationship to be considered statistically significant in this study, it must be at the .05 level of significance or better.

In this chapter, a detailed description of the methods and procedures used in this study have been presented. The subjects and the hospital facility from which they were discharged were described, as were the study design, the development of the instrument used, the follow-up procedures

used, and the tabulations and analyses performed on the data. In Chapter IV, the results of these procedures are reported.

C H A P T E R I V

RESULTS

Results of this study are based on a sample of 140 patients discharged from a psychiatric unit of a general hospital. Detailed follow-up data were obtained from 115 patients or 82% of the original sample. The Ss for whom post-hospital information was obtained are listed according to their demographic characteristics in Table 3. Of the 25

TABLE 3
 DEMOGRAPHIC CHARACTERISTICS OF Ss FOR WHOM
 POST-HOSPITAL INFORMATION WAS OBTAINED, Maximum N = 115

Factor Descriptors	N	Percentage
Sex		
Male	46	40%
Female	69	60%
	115	
Age		
18-22	28	24%
23-45	54	47%
46-65	26	23%
Over 65	7	6%
	115	

TABLE 3 (continued)

Marital Status		
Married	61	53%
Single	31	27%
Divorced	16	14%
Widowed	7	6%
	<u>115</u>	

Educational Level		
Non-High School Graduate	35	31%
High School Graduate	53	46%
2+ Years of College	26	23%
	<u>114</u>	

Occupational Level		
Professional	5	5%
Managerial	4	4%
Technical	14	14%
Homemaker	11	11%
Skilled	31	31%
Unskilled	35	35%
	<u>100</u>	

Diagnosis		
Psychosis	12	10%
Neurosis	49	43%
Personality Disorder	22	19%
Transient Situational Disturbance	11	10%
Alcohol Disorder	16	14%
Drug Dependency	5	4%
	<u>115</u>	

Length of Hospital Stay		
Under 1 Week	11	10%
1 through 3 Weeks	82	71%
1 Month or More	22	19%
	<u>115</u>	

Ss for whom post-hospital data were not obtained, 14 did not respond, four could not be located by the researcher, and seven died during the follow-up period. Although follow-up data is not available for seven Ss due to death, a total of ten Ss in the study actually died (data were obtained from cooperative relatives or hospital readmission records for three Ss who died after the one-year follow-up period). All these figures are presented with their corresponding percentages in Table 4.

TABLE 4
DISTRIBUTION OF Ss AS TO RESPONSE SOURCE, N = 140

Response Source	N	Percent
Questionnaire Response	79	56%
Telephone Response	20	14%
Hospital Readmission Records	11	8%
Home Visit Interview	5	4%
Deceased during Follow-up Period	7	5%
Did not respond	14	10%
Could not locate	4	3%
	140	100%

Hypothesis 1

Hypothesis 1 states that there will be a significant difference in rehospitalization rates between ex-patients who do participate and ex-patients who do not participate in one or more designated Productive Activities during the one-year period following hospital discharge. As noted in Chapter 1, Productive Activities have been designated as:

1. Employment for financial compensation
2. Attending school, college, or a training program
3. Structured volunteer work
4. Working as a homemaker
5. Functioning as a halfway house resident
(Also: "attending a vocational rehabilitation program," which is included in 2. and "working in a sheltered workshop," which is included in 1. or 2., depending on the individual workshop program).

The results of this study provide support for Hypothesis 1, as indicated in Table 5. The proportion of Ss who were rehospitalized is significantly smaller for those who participated in Productive Activities during the one-year post-hospital period than for those who did not participate in Productive Activities (24% as compared to 55%). These results are statistically significant at better than the .01 level of confidence, as determined by a corrected Chi Square test ($\chi^2 = 6.74$, $df = 1$).

The first sub-hypothesis of Hypothesis 1 states that:

Rehospitalization rates will be lower for those ex-patients who participate in one or more of the designated Productive Activities within two months

TABLE 5
 REHOSPITALIZATION STATUS AS TO PARTICIPATION
 IN PRODUCTIVE ACTIVITY, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Productive Activity	22	24%	71	76%	93
No Productive Activity	<u>12</u>	55%	<u>10</u>	45%	<u>22</u>
	34		81		115

after their hospital discharge than for ex-patients who do not.

Examination of Table 6a indicates that, for the 93 Ss who participated in Productive Activities, there was not a major difference in rehospitalization rates between those who began doing so within two months after discharge and those who did so later than two months after discharge (23% as compared to 27%). However, for all 115 Ss studied, rehospitalization rates are significantly lower ($\chi^2 = 4.59$, $df = 1$, $p < .05$) for those who began participating in Productive Activities within two months than for those who either did not participate in Productive Activities or did participate but not within two months after discharge (23% as compared to 45%). These results are presented in Table 6b.

TABLE 6a
 REHOSPITALIZATION STATUS AS TO PARTICIPATION
 IN PRODUCTIVE ACTIVITY WITHIN TWO MONTHS AFTER DISCHARGE
 (FOR Ss PARTICIPATING IN PRODUCTIVE ACTIVITY), N = 93

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Productive Activity Within 2 Months	19	23%	63	77%	82
Productive Activity But Not Within 2 Months	<u>3</u>	27%	<u>8</u>	73%	<u>11</u>
	22		71		93

TABLE 6b
 REHOSPITALIZATION STATUS AS TO PARTICIPATION
 IN PRODUCTIVE ACTIVITY WITHIN TWO MONTHS AFTER DISCHARGE
 (FOR TOTAL SUBJECT SAMPLE), N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Productive Activity Within 2 Months	19	23%	63	77%	82
No Productive Activity Within 2 Months	<u>15</u>	45%	<u>18</u>	55%	<u>33</u>
	34		81		115

The second sub-hypothesis of Hypothesis 1 states:

Rehospitalization rates will be lower for those ex-patients who continue participating in one or more of the designated Productive Activities at least eight hours per week for more than half of the post-hospital period than for ex-patients who do not.

Results of this sub-hypothesis are similar to those of the first sub-hypothesis. However, for those Ss participating in Productive Activity, rehospitalization rates for Ss who participated at least eight hours per week for more than half of the post-hospital period are lower than for Ss who did not (21% as compared to 45%). However, the difference in the bottom cells is only one. As evidenced by the results presented in Table 7b, statistically significant results ($\chi^2 = 9.03$, $df = 1$, $p < .01$) are again obtained for the difference in rehospitalization rates when focusing on the entire study sample (21% as compared to 52%).

Summary for Hypothesis 1. Results support Hypothesis 1, indicating that Ss who participated in Productive Activity during the one-year period following hospital discharge had significantly lower rehospitalization rates than Ss who did not participate. The sub-hypotheses of Hypothesis 1, although not receiving the support earned by the major hypothesis, are not completely without support. Rehospitalization rates remain about the same or slightly lower than those of Hypothesis 1 for Ss who participated in Productive Activity

TABLE 7a
 REHOSPITALIZATION STATUS AS TO PARTICIPATION
 IN PRODUCTIVE ACTIVITY FOR AT LEAST EIGHT HOURS
 PER WEEK FOR MORE THAN HALF THE POST-HOSPITAL PERIOD
 (FOR Ss PARTICIPATING IN PRODUCTIVE ACTIVITY) N = 92*

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Productive Activity ≥ 8 hr/wk for $>1/2$ Post- Hospital Period	17	21%	64	79%	81
Productive Activity But Not ≥ 8 hrs/wk for $>1/2$ Post-Hospital Period	$\frac{5}{22}$	45%	$\frac{6}{70}$	55%	$\frac{11}{92}$

*Information not available for one S

TABLE 7b
 REHOSPITALIZATION STATUS AS TO PARTICIPATION
 IN PRODUCTIVE ACTIVITY FOR AT LEAST EIGHT HOURS
 PER WEEK FOR MORE THAN HALF THE POST-HOSPITAL PERIOD
 (FOR TOTAL SUBJECT SAMPLE), N = 114*

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Productive Activity ≥ 8 hrs/ wk for $>1/2$ Post- Hospital Period	17	21%	64	79%	81
No Productive Activity ≥ 8 hrs/wk for $>1/2$ Post- Hospital Period	<u>17</u>	52%	<u>16</u>	48%	<u>33</u>
	34		80		114

*Information not available for one S.

within two months after discharge (24% as compared to 23%), and for Ss who participated at least eight hours per week for more than half of the post-hospital period (24% as compared to 21%). However, there is not a major difference in rehospitalization rates between these Ss and Ss involved in Productive Activity who did not meet these "sub-criteria." But, in comparing Ss who met the criteria specified in the sub-hypotheses for Productive Activity, there is a statistically significant difference in rehospitalization

rates between these Ss and Ss in the entire study sample who did not meet the criteria of the sub-hypotheses.

Hypothesis 2

Hypothesis 2 states that there will be a significant difference in rehospitalization rates between ex-patients who do participate and ex-patients who do not participate in one or more designated Therapeutic Activities during the one-year period following hospital discharge. Therapeutic Activities have been designated as participation in:

1. Individual psychotherapy
2. Group psychotherapy
3. Family or couples therapy
4. Day-treatment program
5. Ex-patient club
6. Similar activities or programs (i.e., Alcoholics Anonymous).

Results do not support Hypothesis 2 (28% of those Ss participating in Therapeutic Activity were rehospitalized as compared to 32% for "non-participants"). Table 8 indicates that there is no association ($\chi^2 = .026$, $df = 1$, $p > .05$) between participation in Therapeutic Activities during the post-hospital period and rehospitalization status.

The first sub-hypothesis of Hypothesis 2 states that:

Rehospitalization rates will be lower for those ex-patients who participate in one or more of the designated Therapeutic Activities within two months after discharge than for ex-patients who do not.

TABLE 8
 REHOSPITALIZATION STATUS AS TO PARTICIPATION
 IN THERAPEUTIC ACTIVITY, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Therapeutic Activity	21	28%	53	72%	74
No Therapeutic Activity	<u>13</u>	32%	<u>28</u>	68%	<u>41</u>
	34		81		115

This sub-hypothesis is also not supported by the results of this study. Inspection of Table 9 indicates that rehospitali-

TABLE 9
 REHOSPITALIZATION STATUS AS TO PARTICIPATION IN THERAPEUTIC
 ACTIVITIES WITHIN TWO MONTHS AFTER DISCHARGE, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Therapeutic Activity Within 2 Months	21	32%	45	68%	66
No Therapeutic Activity Within 2 Months	<u>13</u>	27%	<u>36</u>	73%	<u>49</u>
	34		81		115

zation rates for Ss participating in Therapeutic Activity within two months after hospital discharge (32%) were not lower, but slightly higher ($\chi^2 = .166$, $df = 1$, $p > .05$) than for Ss who either did not participate in Therapeutic Activity at all or did so, but not within two months after discharge (27%).

The second sub-hypothesis of Hypothesis 2 states:

Rehospitalization rates will be lower for those ex-patients who continue participating in one or more of the designated Therapeutic Activities at least once a month than for ex-patients who do not.

No statistically significant difference ($\chi^2 = .043$, $df = 1$, $p > .05$) in rehospitalization rates exists between Ss who participated in Therapeutic Activity at least once a month (32%) and Ss who either did not participate in Therapeutic Activity at all or did participate, but less frequently than once a month (27%). These results are presented in Table 10.

Summary for Hypothesis 2. Hypothesis 2 is not supported by the results, as there was not a statistically significant difference in rehospitalization rates between Ss who participated in Therapeutic Activity during the post-hospital period and Ss who did not. Results also show no support for the sub-hypotheses of Hypothesis 2. Rehospitalization rates are not significantly lower for Ss who participated in Therapeutic Activity within two months than for those who did not, or for Ss who participated at least once a month than for

TABLE 10
 REHOSPITALIZATION STATUS AS TO PARTICIPATION IN THERAPEUTIC
 ACTIVITIES AT LEAST ONCE A MONTH, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Therapeutic Activity at Least Once a Month	20	32%	51	68%	71
No Therapeutic Activity at Least a Month	<u>14</u>	27%	<u>30</u>	73%	<u>44</u>
	34		81		115

those who did not. Results also indicate that rehospitalization rates for Ss who meet the criteria of the sub-hypotheses are not lower than for Ss who meet the criteria of the major hypothesis.

Point of Involvement

Data were also tabulated to better examine the possible relationship between Ss' point of involvement in the post-hospital activities studied and rehospitalization status. Data were tabulated according to the two-month time periods specified in Chapter I. These tabulations appear in Table 11 for Productive Activity and Table 12 for Therapeutic Activity. Visual examination indicates that there is no relationship between rehospitalization status and Ss' point of involvement

TABLE 11
 REHOSPITALIZATION STATUS AS TO POINT OF INVOLVEMENT
 FOR PRODUCTIVE ACTIVITY, N = 93

Point of Involvement	N Rehos- pitalized	N Not Rehos- pitalized	Row Totals
≤2 Months	19	63	82
3-4 Months	2	4	6
5-6 Months	1	2	3
7-8 Months	0	1	1
9-10 Months	0	0	0
11-12 Months	<u>0</u>	<u>1</u>	<u>1</u>
	22	71	93

both in Productive Activity and in Therapeutic Activity. Points of involvement occur at or before the two-month period following hospital discharge for more than 88% of the Ss examined both for Productive Activity and Therapeutic Activity. Very small Ns therefore appear for Ss whose point of involvement was after the initial two month period (N = 11 for Productive Activity, and N = 9 for Therapeutic Activity).

For Ss who participated in Productive Activity, there is some directionality shown. The number of Ss for each "point of involvement" period decreases as the length of time after hospital discharge increases. This trend appears for

TABLE 12
 REHOSPITALIZATION STATUS AS TO POINT OF INVOLVEMENT
 FOR THERAPEUTIC ACTIVITY, N = 74

Point of Involvement	N Rehospitalized	N Not Rehospitalized	Row Totals
≤2 Months	21	45	66
3-4 Months	0	2	2
5-6 Months	0	2	2
7-8 Months	0	1	1
9-10 Months	0	2	2
11-12 Months	<u>0</u>	<u>1</u>	<u>1</u>
	21	53	74

Ss who were rehospitalized and Ss who were not rehospitalized. The very small Ns represented over the six "point of involvement" periods make it impossible for these results to be meaningful.

For Ss who became involved in Therapeutic Activity after the two-month period, the very small Ns do not show any directionality for Ss who were not rehospitalized. For Ss who were rehospitalized, all began participating in Therapeutic Activity within the initial two-month period.

Interactions

Data were tabulated to examine the relationship between rehospitalization status and the interaction of Productive and Therapeutic Activity. These data are presented in Table 13a. Results indicate that rehospitalization rates are not significantly lower ($\chi^2 = 1.05$, $df = 1$, $p > .05$) for Ss who participated in both Productive and Therapeutic Activity as compared to Ss who participated in just one or the other, or neither (24% as compared to 36%). In breaking the latter category into its mutually exclusive possibilities, as presented in Table 13b, indications are that rehospitalization

TABLE 13a

INTERACTION OF PRODUCTIVE ACTIVITY AND THERAPEUTIC ACTIVITY
AS TO REHOSPITALIZATION STATUS, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
BOTH Productive Activity and Therapeutic Activity	15	24%	47	76%	62
Just Productive or Therapeu- tic Activity, or Neither	<u>19</u>	36%	<u>34</u>	64%	<u>53</u>
	34		81		115

TABLE 13b
 MUTUALLY EXCLUSIVE CROSS-TABULATIONS FOR PRODUCTIVE
 AND THERAPEUTIC ACTIVITY AS TO
 REHOSPITALIZATION STATUS, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
BOTH Productive Activity and Therapeutic Activity	15	24%	47	76%	62
Just Productive Activity	7	23%	24	77%	31
Just Therapeutic Activity	6	50%	6	50%	12
Neither Productive Activity nor Therapeutic Activity	<u>6</u>	60%	<u>4</u>	40%	<u>10</u>
	34		81		115

rates are considerably higher for Ss who participated in neither activity (60%) as compared to Ss who participated in just Productive Activity (23%). This same general trend exists between Ss who participated in neither activity and those who participated in both Productive and Therapeutic Activity (60% as compared to 24%). The data also suggest that Ss who participated in just Therapeutic Activity tended to be rehospitalized more than Ss who participated in both Therapeutic and Productive Activity (50% as compared to 24%) and more than Ss who participated in just Productive Activity

(50% as compared to 23%).

A similar procedure was performed for the sub-hypotheses of Hypotheses 1 and 2 to examine the possibility of a significant association between rehospitalization status and the interactions between:

(1) participation within two months after discharge

and

(2) participation at least eight hours per week for the majority of the post-hospital period

for Productive Activity

and between

(1) participation within two months after discharge

and

(2) participation at least once a month

for Therapeutic Activity.

Visual examination of Table 14a indicates that there is no such association for the interaction of "Productive Activity within two months" and "Productive Activity at least

eight hours per week for more than half the post-hospital period." Rehospitalization rates are not significantly lower for Ss who satisfied requirements for both "sub-criteria" than for Ss who did either or neither (23% as compared to 29%). Closer examination of this interaction through inspection of mutually exclusive possibilities in Table 14b

TABLE 14a

PRODUCTIVE ACTIVITY--INTERACTION OF "PRODUCTIVE ACTIVITY WITHIN TWO MONTHS" AND "PRODUCTIVE ACTIVITY AT LEAST EIGHT HOURS PER WEEK FOR MORE THAN HALF OF THE POST-HOSPITAL PERIOD" AS TO REHOSPITALIZATION STATUS, N = 92

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
"Within 2 Mos/" and "≥8 hrs/ wk for >1/2 Post- Hospital Period"-- BOTH	17	23%	58	77%	75
Either or Neither	<u>5</u>	29%	<u>12</u>	71%	<u>17</u>
	22		70		92

TABLE 14b
 PRODUCTIVE ACTIVITY--MUTUALLY EXCLUSIVE TABULATIONS FOR
 "PRODUCTIVE ACTIVITY WITHIN TWO MONTHS" AND "PRODUCTIVE
 ACTIVITY AT LEAST EIGHT HOURS PER WEEK FOR MORE THAN HALF
 OF THE POST-HOSPITAL PERIOD" AS TO
 REHOSPITALIZATION STATUS, N = 92

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
BOTH	17	23%	58	77%	75
Just Productive Activity: "Within 2 Mos."	2	33%	4	67%	6
Just Productive Activity: "≥8 hrs/wk for >1/2"	0	0%	6	100%	6
Neither	<u>3</u>	60%	<u>2</u>	40%	<u>5</u>
	22		70		92

is limited by expected frequencies under 5 in cells with very small Ns. Rehospitalization rates for Ss who satisfied requirements for both "sub-criteria" for Productive Activity (23%) appear to be lower than for Ss who did neither (60%). Results also suggest that rehospitalization rates are lower for Ss who participated in Productive Activity at least eight hours per week for the majority of the post-hospital period than for Ss who met neither of the "sub-criteria" (0% as compared to 60%).

Visual examination of Table 15a clearly indicates that Ss who participated in Therapeutic Activity within two months of discharge and also continued participating at least once a month do not have lower rehospitalization rates than Ss who did either or neither (31% as compared to 10%). Major differences in rehospitalization rates are also lacking when comparing all mutually exclusive possibilities of the sub-hypotheses for Therapeutic Activity. These data are presented in Table 15b.

TABLE 15a

THERAPEUTIC ACTIVITY--INTERACTION OF "THERAPEUTIC ACTIVITY WITHIN TWO MONTHS" AND "THERAPEUTIC ACTIVITY AT LEAST ONCE A MONTH" AS TO REHOSPITALIZATION STATUS, N = 74

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
BOTH Therapeutic Activity Within 2 Mos. and ≥1/Mo.	20	31%	44	69%	64
Either or Neither	<u>1</u>	10%	<u>9</u>	90%	<u>10</u>
	21		53		74

TABLE 15b
 THERAPEUTIC ACTIVITY--MUTUALLY EXCLUSIVE POSSIBILITIES FOR
 "THERAPEUTIC ACTIVITY WITHIN TWO MONTHS" AND "THERAPEUTIC
 ACTIVITY AT LEAST ONCE A MONTH" AS TO
 REHOSPITALIZATION STATUS, N = 74

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
BOTH	20	31%	44	69%	64
Just Therapeutic Activity Within 2 Mos.	1	50%	1	50%	2
Just Therapeutic Activity ≥1/Mo.	0	0%	7	100%	7
Neither	<u>0</u>	0%	<u>1</u>	100%	<u>1</u>
	21		53		74

Statistically significant differences in rehospitalization rates have been determined for participation in Productive Activities, but not for participation in Therapeutic Activities. Further tabulations and analyses are therefore primarily in relation to participation in Productive Activities.

Background and Demographic Factors

It is possible that the association between participation in Productive Activity and rehospitalization status may

be to some degree a function of factors other than S's participation in Productive Activity itself. To examine this possibility, the association between participation in Productive Activity and rehospitalization rates was examined in relation to the pre-hospital, in-hospital, and demographic factors discussed in Chapter III. Resulting relationships were tested by the Chi Square when appropriate. Data in relation to sex (examining the association between participation in Productive Activity and rehospitalization status for males and for females) are presented in Table 16. Data are presented in the same manner with regard to the other background and demographic factors in Tables 17 through 29.

Examination of Tables 17 through 29 indicates strong trends in lower rehospitalization rates for Ss who participated in Productive Activities in relation to a number of background and demographic factors. These factors include Sex, Marital Status, Prior Productive Activity, Length of Stay in the hospital, Medication Status upon discharge, and Degree of Severity. Strong trends are not found for Ss who participated in Productive Activity when "controlling" for the other demographic factors examined. These factors include Age, Educational Level, Occupational Level, Prior Employment, Prior Mental Health Services, Diagnosis, and Ss' Hospital Rating. Results suggest that rehospitalization rates are lower for Ss participating in post-hospital Productive Activity than Ss not participating in Productive

TABLE 16
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND SEX, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
MALES, N = 46					
Productive Activity	9	26%	26	74%	35
No Productive Activity	<u>4</u>	35%	<u>7</u>	64%	<u>11</u>
	13		33		46
FEMALES, N = 69					
Productive Activity	13	22%	45	76%	58
No Productive Activity	<u>8</u>	73%	<u>3</u>	27%	<u>11</u>
	<u>21</u>		<u>48</u>		<u>69</u>
(Column Totals)	34		81		115

TABLE 17
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND AGE, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
AGES 18-22, N = 28					
Productive Activity	3	14%	19	86%	22
No Productive Activity	<u>3</u>	50%	<u>3</u>	50%	<u>6</u>
	6		22		28
AGES 23-45, N = 54					
Productive Activity	12	25%	35	75%	47
No Productive Activity	<u>3</u>	43%	<u>4</u>	57%	<u>7</u>
	15		39		54
AGES 46-65, N = 26					
Productive Activity	7	33%	14	67%	21
No Productive Activity	<u>4</u>	80%	<u>1</u>	20%	<u>5</u>
	11		15		26
OVER AGE 65, N = 7					
Productive Activity	0	0%	3	100%	3
No Productive Activity	<u>2</u>	50%	<u>2</u>	50%	<u>4</u>
	<u>2</u>		<u>5</u>		<u>7</u>
(Column Totals)	34		81		115

TABLE 18a
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND MARITAL STATUS, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
MARRIED, N = 61					
Productive Activity	12	24%	38	76%	50
No Productive Activity	<u>8</u>	73%	<u>3</u>	27%	<u>11</u>
	20		41		61
SINGLE, N = 31					
Productive Activity	5	21%	19	79%	24
No Productive Activity	<u>2</u>	29%	<u>5</u>	71%	<u>7</u>
	7		24		31
DIVORCED, N = 16					
Productive Activity	3	21%	11	79%	14
No Productive Activity	<u>1</u>	50%	<u>1</u>	50%	<u>2</u>
	4		12		16
WIDOWED, N = 7					
Productive Activity	2	40%	3	60%	5
No Productive Activity	<u>1</u>	50%	<u>1</u>	50%	<u>2</u>
	<u>3</u>		<u>4</u>		<u>7</u>
(Column Totals)	34		81		115

TABLE 18b
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND NON-MARRIED STATUS, N = 54

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Productive Activity	10	23%	33	77%	43
No Productive Activity	<u>4</u>	36%	<u>7</u>	64%	<u>11</u>
	14		40		54

TABLE 19
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND EDUCATIONAL LEVEL, N = 114*

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
NON-HIGH SCHOOL GRADUATE, N = 35					
Productive Activity	8	30%	19	70%	27
No Productive Activity	<u>5</u>	63%	<u>3</u>	38%	<u>8</u>
	13		22		35
HIGH SCHOOL GRADUATE, N = 53					
Productive Activity	8	19%	35	81%	43
No Productive Activity	<u>4</u>	40%	<u>6</u>	60%	<u>10</u>
	12		41		53
TWO PLUS YEARS OF COLLEGE, N = 26					
Productive Activity	6	26%	17	74%	23
No Productive Activity	<u>2</u>	67%	<u>1</u>	33%	<u>3</u>
	<u>8</u>		<u>18</u>		<u>26</u>
(Column Totals)	33		81		114

*Information not available for one S.

TABLE 20
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND OCCUPATIONAL LEVEL, N = 100*

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
PROFESSIONAL, N = 5					
Productive Activity	0	0%	4	100%	4
No Productive Activity	<u>1</u>	100%	<u>0</u>	0%	<u>1</u>
	1		4		5
MANAGERIAL, N = 4					
Productive Activity	1	33%	2	67%	3
No Productive Activity	<u>0</u>	0%	<u>1</u>	100%	<u>1</u>
	1		3		4
TECHNICAL, N = 14					
Productive Activity	4	33%	8	67%	12
No Productive Activity	<u>1</u>	50%	<u>1</u>	50%	<u>2</u>
	5		9		14
HOMEMAKER, N = 11					
Productive Activity	2	25%	6	75%	8
No Productive Activity	<u>3</u>	100%	<u>0</u>	0%	<u>3</u>
	5		6		11

*Information not available for 15 Ss.

TABLE 20 (continued)

SKILLED, N = 31					
Productive Activity	7	25%	21	75%	28
No Productive Activity	<u>2</u>	67%	<u>1</u>	33%	<u>3</u>
	9		22		31
UNSKILLED, N = 35					
Productive Activity	8	30%	19	70%	27
No Productive Activity	<u>2</u>	25%	<u>6</u>	75%	<u>8</u>
	<u>10</u>		<u>25</u>		<u>35</u>
(Column Totals)	31		69		100

TABLE 21
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND PRIOR EMPLOYMENT, N = 108*

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
PRIOR EMPLOYMENT, N = 59					
Productive Activity	11	22%	38	78%	49
No Productive Activity	<u>5</u>	50%	<u>5</u>	50%	<u>10</u>
	16		43		59
NO PRIOR EMPLOYMENT, N = 49					
Productive Activity	9	23%	31	77%	40
No Productive Activity	<u>5</u>	56%	<u>4</u>	44%	<u>9</u>
	<u>14</u>		<u>35</u>		<u>49</u>
(Column Totals)	30		78		108

*Information not available for seven Ss.

TABLE 22
 REHOSPITALIZATION STATUS AS TO POST-HOSPITAL PRODUCTIVE
 ACTIVITY AND PRODUCTIVE ACTIVITY PRIOR TO
 HOSPITALIZATION, N = 112*

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
PRIOR PRODUCTIVE ACTIVITY					
Productive Activity	18	22%	63	78%	81
No Productive Activity	<u>8</u>	57%	<u>6</u>	43%	<u>14</u>
	26		69		95
NO PRIOR PRODUCTIVE ACTIVITY					
Productive Activity	3	30%	7	70%	10
No Productive Activity	<u>3</u>	43%	<u>4</u>	57%	<u>7</u>
	<u>6</u>		<u>11</u>		<u>17</u>
(Column Totals)	32		80		112

*Information not available for three Ss.

TABLE 23
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND PRIOR MENTAL HEALTH SERVICES,* N = 114**

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
PRIOR MENTAL HEALTH SERVICES					
Productive Activity	13	24%	41	75%	54
No Productive Activity	<u>6</u>	55%	<u>5</u>	45%	<u>11</u>
	19		46		65
NO PRIOR MENTAL HEALTH SERVICES					
Productive Activity	9	23%	30	76%	39
No Productive Activity	<u>5</u>	50%	<u>5</u>	50%	<u>10</u>
	<u>14</u>		<u>35</u>		<u>49</u>
(Column Totals)	33		81		114

*Other than hospitalization.

**Information not available for one S.

TABLE 24
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND HOSPITAL LENGTH OF STAY, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
UNDER ONE WEEK					
Productive Activity	2	33%	4	67%	6
No Productive Activity	<u>4</u>	80%	<u>1</u>	20%	<u>5</u>
	6		5		11
1-3 WEEKS					
Productive Activity	14	21%	54	79%	68
No Productive Activity	<u>7</u>	58%	<u>5</u>	42%	<u>12</u>
	21		59		80
1 MONTH PLUS					
Productive Activity	6	32%	13	68%	19
No Productive Activity	<u>1</u>	20%	<u>4</u>	80%	<u>5</u>
	<u>7</u>		<u>17</u>		<u>24</u>
(Column Totals)	34		81		115

TABLE 25
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND MEDICATION STATUS AT DISCHARGE, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
MEDICATION					
Productive Activity	10	28%	26	72%	36
No Productive Activity	<u>3</u>	33%	<u>6</u>	67%	<u>9</u>
	13		32		45
NO MEDICATION					
Productive Activity	12	21%	45	79%	57
No Productive Activity	<u>9</u>	69%	<u>4</u>	31%	<u>13</u>
	<u>21</u>		<u>49</u>		<u>70</u>
(Column Totals)	34		81		115

TABLE 26
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND MEDICATION STATUS AT DISCHARGE
 (ANTI-PSYCHOTIC MEDICATION), N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
ANTI-PSYCHOTIC MEDICATION					
Productive Activity	6	30%	14	70%	20
No Productive Activity	<u>2</u>	25%	<u>6</u>	75%	<u>8</u>
	8		20		28
NO ANTI-PSYCHOTIC MEDICATION					
Productive Activity	16	22%	57	78%	73
No Productive Activity	<u>10</u>	71%	<u>4</u>	29%	<u>14</u>
	<u>26</u>		<u>61</u>		<u>87</u>
(Column Totals)	34		81		115

TABLE 27
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND DEGREE OF SEVERITY, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
SEVERE					
Productive Activity	4	36%	7	64%	11
No Productive Activity	<u>2</u>	40%	<u>3</u>	60%	<u>5</u>
	6		10		16
NON-SEVERE					
Productive Activity	18	22%	64	78%	82
No Productive Activity	<u>10</u>	58%	<u>7</u>	41%	<u>17</u>
	<u>28</u>		<u>71</u>		<u>99</u>
(Column Totals)	34		81		115

TABLE 28
 REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY
 AND DIAGNOSIS, N = 115

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
PSYCHOSIS					
Productive Activity	3	30%	7	70%	10
No Productive Activity	<u>1</u>	50%	<u>1</u>	50%	<u>2</u>
	4		8		12
NEUROSIS					
Productive Activity	10	24%	32	76%	42
No Productive Activity	<u>4</u>	57%	<u>3</u>	43%	<u>7</u>
	14		35		49
PERSONALITY DISORDER					
Productive Activity	2	12%	15	88%	17
No Productive Activity	<u>3</u>	60%	<u>2</u>	40%	<u>5</u>
	5		17		22
TRANSIENT SITUATIONAL DISTURBANCE					
Productive Activity	0	0%	9	100%	9
No Productive Activity	<u>1</u>	50%	<u>1</u>	50%	<u>2</u>
	1		10		11

TABLE 28 (continued)

ALCOHOL AND/OR DRUGS					
Productive Activity	7	47%	8	53%	15
No Productive Activity	<u>3</u>	50%	<u>3</u>	50%	<u>6</u>
	<u>10</u>		<u>11</u>		<u>21</u>
(Column Totals)	34		81		115

TABLE 29

REHOSPITALIZATION STATUS AS TO PRODUCTIVE ACTIVITY

AND Ss' RATING OF HOSPITAL, N = 92*

Post-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
EXTREMELY HELPFUL					
Productive Activity	5	15%	28	85%	33
No Productive Activity	<u>1</u>	25%	<u>3</u>	75%	<u>4</u>
	6		31		37
HELPFUL					
Productive Activity	5	24%	16	76%	21
No Productive Activity	<u>1</u>	100%	<u>0</u>	0%	<u>1</u>
	6		16		22

*Information not available for 23 Ss.

TABLE 29 (continued)

HELPFUL IN SOME WAYS					
Productive Activity	1	5%	18	95%	19
No Productive Activity	<u>2</u>	50%	<u>2</u>	50%	<u>4</u>
	3		20		23
NOT VERY HELPFUL					
Productive Activity	1	17%	5	83%	6
No Productive Activity	<u>1</u>	50%	<u>1</u>	50%	<u>2</u>
	2		6		8
HARMFUL					
Productive Activity	1	50%	1	50%	2
No Productive Activity	<u>0</u>		<u>0</u>		<u>0</u>
	<u>1</u>		<u>1</u>		<u>2</u>
(Column Totals)	18		74		92

Activity if they are:

Females (Table 16; 22% of Ss involved in Productive Activity (P) rehospitalized as compared to 73% for Ss not involved in Productive Activity (NP)). Relationships are not as strong for males.

Married persons (Table 18; 24% of Ss with P rehospitalized as compared to 73% for NP). There are no major differences for single, divorced, or widowed persons, or for non-married persons as a group.

Individuals who participated in Productive Activities during the one-year period prior to hospitalization

(Table 22; 22% of Ss with P rehospitalized as compared to 57% for NP). There are no major differences for individuals who were not involved in Productive Activity during this period prior to hospitalization.

Individuals who were hospitalized from one through three weeks (Table 24; 21% of Ss with P rehospitalized as compared to 58% for NP). There are no major differences for individuals who stayed in the hospital a shorter or longer period of time.

Individuals for whom no medications at all were prescribed upon discharge from the hospital (Table 25; 21% of Ss with P rehospitalized as compared to 69% for NP). There are no major differences for individuals for whom medications were prescribed upon discharge.

Individuals for whom anti-psychotic medications were not prescribed upon discharge (Table 26; 22% of Ss with P rehospitalized as compared to 71% for NP). There are no major differences for individuals for whom anti-psychotic medications were prescribed upon discharge.

Individuals who were judged to be "not severely disturbed" by the unit director (Table 27; 22% of Ss with P rehospitalized as compared to 58% for NP). There were no major differences for individuals judged to be "severely disturbed."

The above factors can be tabulated so as to form different combinations in an effort to further isolate factors which may consistently suggest trends. In doing so, it appears that all but three of the possible combinations produce strong trends. These three represent Ss who are married and were in the hospital from one through three weeks, Ss who were discharged without medication after being in the hospital from one through three weeks, and Ss who participated in Productive Activity prior to their hospitalization of from

one through three weeks. The factor "length of stay from one through three weeks" is represented in all three non-significant combinations. All other possible combinations of the seven significant factors represent Ss who participated in Productive Activity for whom rehospitalization rates are much lower than those Ss who did not participate in Productive Activity. These combinations are:

Discharged with No Anti-Psychotic Medication, Discharged with No Medication.
 Female, Discharged with No Anti-Psychotic Medication
 Female, Discharged with No Medication
 Female, Length of Hospitalization 1-3 Weeks
 Female, Not Severely Disturbed
 Female, Prior Productive Activity
 Length of Hospitalization 1-3 Weeks, Discharged with No Anti-Psychotic Medication
 Length of Hospitalization 1-3 Weeks, Not Severely Disturbed
 Married, Discharged with No Anti-Psychotic Medication
 Married, Discharged with No Medication
 Married, Female
 Married, Not Severely Disturbed
 Married, Prior Productive Activity
 Not Severely Disturbed, Discharged with No Anti-Psychotic Medication
 Not Severely Disturbed, Discharged with No Medication
 Prior Productive Activity, Discharged with No Anti-Psychotic Medication
 Prior Productive Activity, Discharged with No Medication
 Prior Productive Activity, Not Severely Disturbed

The factors of the above combinations can be combined further in an effort to determine those factors which most consistently show strong relationships between Productive Activity and rehospitalization status. In doing so, one

shifts from examining the above four-way cross-tabulations to examining five-way cross-tabulations. However, in doing this, the Ns in each cell are reduced each time an additional factor is included in a combination. In this study, such a transition becomes critical because the total N is modest, but especially because so few Ns appear in the bottom cells (bottom row, indicating cells relating to "No Productive Activity"). Also, this is an exploratory study in which many demographic factors are examined, several having many categories. When so few Ns represent the proportions in these cells, it becomes extremely difficult to obtain meaningful results and conclusions. Further tabulations and analyses derived from the above four-way tabulations will therefore be concerned only with those areas which bear special interest and meaning with regard to the areas of focus in this study.

The above background and demographic factors (also listed and described in Table 2, Chapter III) are examined only in relation to Ss' participation in Productive Activity. These factors have also been examined directly in relation to rehospitalization status without regard to post-hospital activities. Tabulations appear with statistical information in Tables 30 through 43. Examination of these tables indicates no statistically significant associations (as determined by the Chi Square test) between any of these factors and rehospitalization status. (For example, rehospitalization rates do not differ significantly on the basis of sex alone, females

TABLE 30
 REHOSPITALIZATION STATUS AS TO SEX, N = 115

Sex	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Male	13	28%	33	72%	46
Female	<u>21</u>	30%	<u>48</u>	70%	<u>69</u>
	34		81		115

($\chi^2 = .002$, $df = 1$, $p > .05$)

TABLE 31
 REHOSPITALIZATION STATUS AS TO AGE, N = 115

Age	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
18-22	6	21%	22	79%	28
23-45	15	28%	39	72%	54
46-65	11	42%	15	58%	26
over 65	<u>2</u>	29%	<u>5</u>	71%	<u>7</u>
	34		81		115

($\chi^2 = 3.00$, $df = 3$, $p > .05$)

TABLE 32
 REHOSPITALIZATION STATUS AS TO MARITAL STATUS, N = 115

Marital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Married	20	33%	41	67%	61
Single	7	23%	24	77%	31
Divorced	4	25%	12	75%	16
Widowed	<u>3</u>	43%	<u>4</u>	57%	<u>7</u>
	34		81		115

($\chi^2 = 1.78$, $df = 3$, $p > .05$)

TABLE 33
 REHOSPITALIZATION STATUS AS TO EDUCATIONAL LEVEL, N = 114*

Educational Level	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Non-High School Graduate	13	37%	22	63%	35
High School Graduate	12	23%	41	77%	53
2 Plus Years College	<u>8</u>	31%	<u>18</u>	69%	<u>26</u>
	33		81		114

*Information not available for one S.

($\chi^2 = 2.21$, $df = 2$, $p > .05$)

TABLE 34
 REHOSPITALIZATION STATUS AS TO OCCUPATIONAL LEVEL, N = 100*

Occupational Level	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Professional	1	20%	4	80%	5
Managerial	1	25%	3	75%	4
Technical	5	36%	9	64%	14
Homemaker	5	45%	6	55%	11
Skilled	9	29%	22	71%	31
Unskilled	<u>10</u>	29%	<u>25</u>	71%	<u>35</u>
	31		69		100

*Information not available for 15 Ss.

TABLE 35

REHOSPITALIZATION STATUS AS TO PRIOR EMPLOYMENT, N = 108*

Pre-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Prior Employment	16	27%	43	73%	59
No Prior Employment	<u>14</u>	29%	<u>35</u>	71%	<u>49</u>
	30		78		108

*Information not available on seven Ss.

($\chi^2 = .002$, $df = 1$, $p > .05$)

TABLE 36
 REHOSPITALIZATION STATUS AS TO PRIOR PRODUCTIVE ACTIVITY,
 N = 112*

Pre-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Prior Productive Activity	26	27%	69	73%	95
No Prior Productive Activity	<u>6</u>	35%	<u>11</u>	65%	<u>17</u>
	32		80		112

*Information not available on three Ss.

TABLE 37
 REHOSPITALIZATION STATUS AS TO PRIOR MENTAL HEALTH SERVICES,
 N = 114*

Pre-Hospital Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Prior Mental Health Services	19	29%	46	71%	65
No Prior Mental Health Services	<u>14</u>	29%	<u>35</u>	71%	<u>49</u>
	33		81		114

*Information not available for one S.

($\chi^2 = .017$, $df = 1$, $p > .05$)

TABLE 38
 REHOSPITALIZATION STATUS AS TO HOSPITAL LENGTH OF STAY,
 N = 115

Hospital Length of Stay	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Under 1 week	6	55%	5	45%	11
1-3 weeks	21	26%	59	74%	80
1 month or more	<u>7</u>	29%	<u>17</u>	71%	<u>24</u>
	34		81		115

($\chi^2 = 3.72$, $df = 2$, $p > .05$)

TABLE 39
 REHOSPITALIZATION STATUS AS TO MEDICATION STATUS
 UPON DISCHARGE, N = 115

Medication Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Medication Prescribed	13	29%	32	71%	45
No Medication Prescribed	<u>21</u>	30%	<u>49</u>	70%	<u>70</u>
	34		81		115

($\chi^2 = .006$, $df = 1$, $p > .05$)

TABLE 40
 REHOSPITALIZATION STATUS AS TO ANTI-PSYCHOTIC MEDICATION
 STATUS UPON DISCHARGE, N = 115

Anti-psychotic Medication Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Anti-psychotic Medication	8	29%	20	71%	28
No Anti-psychotic Medication	<u>26</u>	30%	<u>61</u>	70%	<u>87</u>
	34		81		115

($\chi^2 = .011$, $df = 1$, $p > .05$)

TABLE 41
 REHOSPITALIZATION STATUS AS TO SEVERITY OF DISTURBANCE,
 N = 115

Severity of Disturbance	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Severe	6	38%	10	63%	16
Non Severe	<u>28</u>	28%	<u>71</u>	71%	<u>99</u>
	34		81		115

TABLE 42

REHOSPITALIZATION STATUS AS TO DISCHARGE DIAGNOSIS, N = 115

Diagnosis	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Psychosis	4	33%	8	67%	12
Neurosis	14	29%	35	71%	49
Personality Disorder	5	23%	17	77%	22
Transient Situational Disturbance	1	9%	10	91%	11
Alcohol and/or Drug Disorder	<u>10</u>	48%	<u>11</u>	52%	<u>21</u>
	34		81		115

($\chi^2 = 6.10$, $df = 4$, $p > .05$)

TABLE 43
 REHOSPITALIZATION STATUS AS TO Ss' RATING OF HOSPITAL,
 N = 92*

Hospital Rating	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Extremely Helpful	6	16%	31	84%	37
Helpful	6	27%	16	73%	22
Helpful in Some Ways	3	13%	20	87%	23
Not Very Helpful	2	25%	6	75%	8
Harmful	<u>1</u>	50%	<u>1</u>	50%	<u>2</u>
	18		74		92

*Information not available from 23 Ss.

were not rehospitalized significantly more than males.) In cases where it was not possible to determine statistical significance due to expected frequencies under five, the data indicate no association (Tables 34, 36, 41, and 43). However, in examining specific variables of the background and demographic factors, higher rehospitalization rates appear to exist especially for Ss with a hospital Length of Stay under one week in comparison to other lengths of stay as a group (55% as compared to 27%) and for Ss diagnosed as having alcohol or drug disorders as compared to the other diagnoses as a group (48%

as compared to 25%; $\chi^2 = 3.49$, $df = 1$, $p > .05$). These data are presented in Table 38 and Table 42 respectively.

A final examination using demographic factors was performed. To determine if there is a significant difference between Ss for whom post-hospital information was obtained ($N = 115$) and Ss for whom post-hospital information was not obtained ($N = 25$), these two categories of Ss were examined in relation to each of the background and demographic factors. Results indicate that there are no major differences between the two groups of Ss (Post-Hospital Information vs. No Post-Hospital Information) on the basis of background and demographic factors.

This study has determined that Productive Activity is significantly related to rehospitalization status for this study sample. To further isolate factors which may prove to be significantly related to rehospitalization, the different types of Productive Activity utilized by Ss were examined. Mutually exclusive activities and combinations of activities were tabulated to indicate the proportion of Ss rehospitalized for each. These are presented in Table 44. Visual examination of the results indicates that there are no major differences in rehospitalization rates in relation to type of Productive Activity. In addition to the tabulation presented in Table 44, tabulations were performed in relation to sex with similar results found. Also, separate tabulations were made for each of the mutually exclusive categories in compari-

son to all others as a group. No major differences in rehospitalization rates were found through these operations.

(This same general procedure was performed for the different types of Therapeutic Activities, with no major differences found.)

TABLE 44

REHOSPITALIZATION STATUS AS TO TYPE OF PRODUCTIVE ACTIVITY,
N = 115

Type of Productive Activity	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Employment	9	31%	20	69%	29
School	1	25%	3	75%	4
Homemaker	4	22%	14	78%	18
Employment and School	0	0%	7	100%	7
Employment and Homemaker	5	24%	16	76%	21
School and Homemaker	1	25%	3	75%	4
Employment and School and Homemaker	1	14%	6	86%	7
Other	1	33%	2	67%	3
No Productive Activity	<u>12</u>	55%	<u>10</u>	45%	<u>22</u>
	34		81		115

Employment is the type of productive activity most often studied in the literature. For this reason, closer examination was made of this factor in this study. Data was tabulated to examine the relationship between post-hospital employment and rehospitalization status. Examination of Table 45 indicates that rehospitalization rates for Ss who were employed following hospital discharge are not significantly lower ($\chi^2 = 1.98$, $df = 1$, $p > .05$) than for Ss who were not employed (23% as compared to 37%).

TABLE 45
REHOSPITALIZATION STATUS AS TO POST-HOSPITAL EMPLOYMENT
STATUS, N = 115

Employment Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Employed	15	23%	49	77%	64
Not Employed	<u>19</u>	37%	<u>32</u>	63%	<u>51</u>
	34		81		115

To determine if post-hospital employment may be significantly related to rehospitalization status in relation to particular demographic factors, tabulations were performed in a manner similar to that for Productive Activity. Although no statistically significant differences were found, trends

in two cases should be noted. These trends are apparent through examination of Tables 46 and 47. The data suggest that rehospitalization rates are lower for Ss who were employed following hospital discharge in comparison to those

TABLE 46
REHOSPITALIZATION STATUS AS TO POST-HOSPITAL EMPLOYMENT
AND HOMEMAKER STATUS UPON ADMISSION, N = 11

Employment Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Employed	0	0%	4	100%	4
Not Employed	<u>5</u>	71%	<u>2</u>	29%	<u>7</u>
	5		6		11

TABLE 47
REHOSPITALIZATION STATUS AS TO POST-HOSPITAL EMPLOYMENT
AND AGE RANGE 46-65, N = 26

Employment Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Employed	4	25%	12	75%	16
Not Employed	<u>7</u>	70%	<u>3</u>	30%	<u>10</u>
	11		15		26

not employed if they were homemakers upon admission to the hospital (0% as compared to 71%); or if they were from 46-65 years of age upon admission (25% as compared to 70%). It is not possible to examine these relationships through combining such demographic factors due to the very small Ns appearing in the cells.

Rehospitalization rates for Ss who were employed following hospital discharge were also tabulated in relation to pre-hospital employment. This same procedure had been performed for pre- and post-hospital Productive Activity with a strong trend indicated (Table 22). Examination of Table 48 indicates that, for Ss who were employed within one year prior to hospitalization, rehospitalization rates for those Ss who were employed following hospitalization tended to be lower than for those who were not employed following hospitalization (20% as compared to 47%). These figures may be compared to those of Ss who were not employed within one year prior to hospitalization. These data indicate that for this group, rehospitalization rates were not significantly different between Ss who were employed and Ss who were not employed following hospital discharge (22% as compared to 32%). However, a trend exists for Ss who were 46-65 years of age upon admission. Data suggest that, for Ss in this age range who were employed within one year prior to hospitalization, those who were not employed following hospitalization were more likely to be rehospitalized (75%) than those who were

TABLE 48
 REHOSPITALIZATION STATUS AS TO POST-HOSPITAL EMPLOYMENT
 AND PRE-HOSPITAL EMPLOYMENT, N = 108*

Post-Hospital Employment Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
PRE-HOSPITAL EMPLOYMENT					
Employed	9	20%	35	80%	44
Not Employed	<u>7</u>	47%	<u>8</u>	53%	<u>15</u>
	16		43		69
NO PRE-HOSPITAL EMPLOYMENT					
Employed	4	22%	14	78%	18
Not Employed	<u>10</u>	32%	<u>21</u>	68%	<u>31</u>
	<u>14</u>		<u>35</u>		<u>49</u>
(Column Totals)	30		78		108

*Information not available for seven Ss.

employed (15%) following hospitalization. These data are presented in Table 49. This trend does not exist for Ss in this age range who were not employed within one year prior to hospitalization (60% as compared to 67%).

TABLE 49
 REHOSPITALIZATION STATUS AS TO POST-HOSPITAL EMPLOYMENT
 AND PRE-HOSPITAL EMPLOYMENT FOR Ss 46-65 YEARS OF AGE,
 N = 25*

Post-Hospital Employment Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
PRE-HOSPITAL EMPLOYMENT					
Employed	2	15%	11	85%	13
Not Employed	<u>3</u>	75%	<u>1</u>	25%	<u>4</u>
	5		12		17
NO PRE-HOSPITAL EMPLOYMENT					
Employed	2	67%	1	33%	3
Not Employed	<u>3</u>	60%	<u>2</u>	40%	<u>5</u>
	<u>5</u>		<u>3</u>		<u>8</u>
(Column Totals)	10		15		25

*Information not available for one Ss.

Summary

In summary, follow-up data were received for 82% of the 140 Ss pursued in this one-year follow-up study. Results of the study support Hypothesis 1, indicating that Ss who participated in Productive Activities following hospital discharge experienced significantly lower rehospitalization rates than Ss who did not participate. Results do not provide this support for the sub-hypotheses of Hypothesis 1. For Ss who participated in Productive Activity, there are no major differences in rehospitalization rates (1) between Ss who began participating within two months after discharge and Ss who began at a later point, and (2) between Ss who participated regularly (at least eight hours a week) for more than half of the post-hospital period and Ss who did not.

Results do not support Hypothesis 2, indicating that rehospitalization rates for Ss who participated in Therapeutic Activities following hospital discharge are not significantly different from Ss who did not do so. Participation in Therapeutic Activities within two months after discharge and participation at least once a month are also not significantly related to rehospitalization.

These major examinations are supplemented by further tabulation and analysis, particularly in the attempt to examine more closely the relationship between Productive Activity and rehospitalization. The results of these examinations

are discussed in detail in Chapter V, with conclusions, limitations, and suggestions for further study.

C H A P T E R V

DISCUSSION

The primary purpose of this exploratory study was to determine if rehospitalization rates were significantly lower for Ss who participated in one or more of the post-hospital activities designated in each hypothesis than for Ss who did not participate. This was accomplished through a one-year follow-up study, retroactive in nature, of 140 former inpatients of a psychiatric unit in a general hospital. Follow-up data were obtained on 115 of the patients (82%) and provide the evidence for this study.

Hypothesis 1

Results support Hypothesis 1, as a significantly smaller proportion (24%) of the ex-patients who participated in the designated Productive Activities were rehospitalized as compared to the proportion (55%) of ex-patients rehospitalized who did not participate in such activities. These results indicate only that a strong relationship (statistically significant at better than the .01 level of confidence) exists between participation in Productive Activities and rehospitalization. On the basis of these results alone, however, it is not possible to draw more definitive conclusions, i.e., to state that participation in Productive Activity actually

"reduces" rehospitalization.

Demographic Factors

One may argue that other "confounding" factors are contributing to or are primarily responsible for this relationship. For this reason, closer examination was made of the association between rehospitalization and participation in Productive Activity. One means of doing so was to "control" for background and demographic factors. By examining rehospitalization rates of Ss who participated and Ss who did not participate in Productive Activity as to demographic factors, it was found that rehospitalization rates were lower for Ss participating in Productive Activity if:

- (1) they were not prescribed anti-psychotic medication upon hospital discharge, or
- (2) they were not prescribed any psychiatric medications upon discharge, or
- (3) they were judged by the unit director to be "not severely disturbed", or
- (4) they had participated in Productive Activity during the one-year period prior to hospitalization, or
- (5) they were females, or
- (6) they were married, or
- (7) they were hospitalized for one through three weeks.

In combining these seven demographic factors so as to form four-way cross-tabulations with Productive Activity and rehospitalization, all but three of the resulting combinations were found to have close relationships with rehospitalization and

participation in Productive Activity. These combinations appear in Chapter IV. Although it would have been desirable to combine these demographic factors further, the data obtained from such tabulations would not be meaningful due to the very small Ns in the cells.

Tabulations were performed, however, to obtain a better idea of the relationship between the demographic factors and rehospitalization. Results indicate that none of the demographic factors studied have close relationships with rehospitalization. The rehospitalization rates of females, for example, are not significantly different from those of males. It appears, therefore, that the influence of these demographic variables and of their combinations on rehospitalization is only in relation to participation in Productive Activity.

Degree of debility. Four of the above demographic factors may be perceived as characteristics of Ss whose "disturbance" was not as serious or severe as that of other Ss. These include the factors:

discharged without anti-psychotic medication,
discharged without any psychiatric medication,
not severely disturbed, and
participated in pre-hospital Productive Activity.

It is important to note that all Ss in this study had been

judged by hospital personnel to be emotionally disturbed to the degree that they required 24-hour care in a hospital setting. Forty percent of the Ss studied had been prescribed anti-psychotic medication during hospitalization, and 82% were placed on some form of psychiatric medication regimen. Of the demographic factors just listed, the medication factors and the "degree of severity" factor are based on clinical judgments made at time of discharge. They are more of an indication of S's expected disturbance or debility (or lack of same) upon his return to the community than of his debility during hospitalization. Presumably, those Ss judged at discharge to be not severely disturbed and to not need medication benefitted to some degree from the intense "treatment" and comprehensive services of the type of hospital facility utilized in this study. This type of former inpatient may also benefit most from intense effort and attention placed on transitional, rehabilitative, and supportive measures in the community after hospitalization. It is this population that this study was designed to examine in regard to "the rehospitalization problem." Knowledge gained from studies of first-admission, acutely disturbed patients may help to prevent the development of more severe complications, leading to chronicity.

Pre-hospital Productive Activity, the final factor listed above, was also examined. Indications are that a large majority (89%) of the Ss who had participated in post-

hospital Productive Activity had also participated in pre-hospital Productive Activity. It certainly appears then, that a factor having a close relationship with post-hospital participation in Productive Activity (and therefore, rehospitalization) is pre-hospital participation in Productive Activities.

It had been expected that in a hospital follow-up study, the better performers in the community might be those ex-patients who were less severely disturbed. In the attempt to "control" for such a possibility, only first-admission patients were selected from a hospital facility serving primarily "acute" rather than "chronic" patients. It was assumed that most Ss in such a sample had somehow coped with life up to the point of their first hospitalization, that the chances were good that these Ss would have functioned productively before their first hospitalization, using the resources and strengths that may have prevented them from having been rehospitalized sooner. It is therefore not surprising that 85% of the Ss examined had participated in Productive Activity in the year prior to hospitalization or that 86% had been judged as "not severely disturbed" and medicated accordingly.

Results suggest that for a non-severely disturbed population, the chances of rehospitalization are reduced if ex-patients participate in post-hospital Productive Activity. It also appears that participation in Productive Activity following hospital discharge may be helpful in

reducing the chances of rehospitalization for Ss who are "severely disturbed." This is indicated by the fact that Ss who may be considered seriously disturbed on the basis of certain factors had lower rates of rehospitalization if they participated in post-hospital Productive Activity. This is the case for:

- (1) Ss judged to be severely disturbed (36% rehospitalized for those involved in Productive Activity as compared to 40% for those not involved in Productive Activity, Table 27),
- (2) Ss diagnosed as psychotic (30% rehospitalized as compared to 50%, Table 28),
- (3) Ss receiving medication at discharge (28% rehospitalized as compared to 33%, Table 25),
- (4) Ss receiving Mental Health Services prior to hospitalization (24% rehospitalized as compared to 55%, Table 23),
- (5) Ss with no pre-hospital Productive Activity (30% as compared to 43%, Table 22), and
- (6) Ss with no pre-hospital employment (23% as compared to 56%, Table 21).

The data suggest, therefore, that for Ss who participated in post-hospital Productive Activity, the chances of rehospitalization are lower as a whole, but especially so for the non-severely disturbed Ss, who comprise 86% of all Ss for whom follow-up data were obtained.

Married, female. Major trends were also reported in relation to participation in post-hospital Productive Activity for Ss if they were female or if they were married. This

general trend was also found for the "married female" combination. The review of the literature indicates that results are inconsistent for marital status and for sex in relation to rehospitalization, and this study found no direct relation between these variables and rehospitalization. It is possible that the marital relationship is more demanding, yet more supportive and fulfilling for the ex-patient than living alone as a single person or living with other relatives or friends. Especially in regard to post-hospital performance, the married ex-patient may feel a greater sense of responsibility to be productive. Having an instrumental role rather than a dependent role, knowing that his or her services are needed and possibly depended upon may provide significant motivation to perform productively. In the case of employment, Gurel and Lorei (1972) have identified the patient's motivational level as a key determinant of post-hospital performance. Angrist (1964) and Freeman and Simmons (1963) suggest that the expectations of the "significant other" (in this case, one's spouse) may significantly influence the ex-patient in the performance of his or her productive roles.

The fact that major trends were obtained for females and not for males, provides considerable food for thought in this age of rapidly changing women's roles in our society. Although clear conclusions just do not appear to be readily available, possibilities do exist.

It may be perceived that the American male has experi-

enced more independence and control over the various means to a variety of productive ends. The female has, for the most part, fulfilled a more passive, dependent role with a focus on meeting the needs and desires of others, rather than of herself. It may be that the female's new-found fulfillment in expanded productive functioning, especially if initially experienced after hospitalization, has significantly affected her post-hospital status. This may be so especially if she was encouraged by a professional in the mental health field to become involved in Productive Activity appropriate to her needs, abilities, and existing responsibilities. This encouragement may have provided her with the added motivation and validation to take action.

Further examination was made of the findings obtained for females who participated in post-hospital Productive Activity. The attempt was made to determine if the type of activity the female participated in may have influenced these results. Mutually exclusive categories were tabulated (similar to Table 44 for the total sample), and total frequencies were tabulated independently (i.e., Table 50) for a given type of Productive Activity. Results indicate that whether the female ex-patient functioned as a homemaker, worked, or attended school or training, it made no significant difference in rehospitalization rates. However, several trends appear to exist, the strongest being that for homemakers. As Table 50 indicates, 68% of the female Ss were involved in

TABLE 50
 REHOSPITALIZATION STATUS AS TO FEMALE SS'
 FUNCTIONING AS A HOMEMAKER, N = 69

Homemaker Status	Rehos- pitalized		Not Rehos- pitalized		Row Totals
	N	Row %	N	Row %	
Homemaking	11	23%	36	77%	47
No Homemaking	<u>10</u>	45%	<u>12</u>	55%	<u>22</u>
	21		48		69

homemaking after hospitalization. Of these, 23% were rehospitalized as compared to 45% for females not involved in homemaking. This trend is in agreement with the findings of Brodsky (1968) and Michaux et al. (1969) who conclude that the homemaker's role is conducive to recovery. Results of the former study indicated that married women functioning primarily as homemakers were rehospitalized less often than single women or working married women. Perhaps this is because homemaking has less rigid standards than employment and allows the individual to adapt to situations more at her own pace.

Homemaking was included in this study to represent a very significant means of productive functioning and performance. Most studies examine only employment as an important post-hospital activity and possible means of preventing

rehospitalization. Perhaps this is because it is a factor that is easier to measure and control. Homemaking, while less structured than formal employment, provides many of the pressures and responsibilities found in employment.

It may be important that the type of Productive Activity an S becomes involved in be appropriate to the needs and abilities of the individual. Specifically, if part of the problems leading to hospitalization were rooted in S's role as a homemaker, it may be important for her to not be involved in that activity following hospitalization, or at least to the same degree.

Length of stay. It appears that the "length of stay" factor may also be associated with rehospitalization in relation to participation in Productive Activity. Ss who were hospitalized from one through three weeks and participated in Productive Activity after discharge experienced lower rates of rehospitalization than Ss who did not participate in Productive Activity. Consistent with the general trend in the literature, the short length of stay in the hospital seems conducive to lower rehospitalization rates and better post-hospital performance. Freeman and Simmons (1963) interpret this to mean that the longer a patient is isolated from the community, the less practice he obtains in work and social roles, and, consequently, the lower his performance levels when he does leave the hospital. There are limits to this rationale, as what is considered an appropriately short length

of stay for one individual may be too short or too long for another. There also may be a point at which a particular length of stay period is not beneficial to most patients in an inpatient setting. Examination of the length of stay variable directly in relation to rehospitalization (Table 38) indicates that this may be the case for hospitalization under one week in length for this study. Although based on a total N of only 11, the data suggest, that in comparison to Ss with longer hospitalizations, Ss who were hospitalized under one week experienced higher rehospitalization rates.

The type of hospital facility and its program must also be considered here. A short length of stay at the hospital facility described in this study, which offers intense treatment and comprehensive services, is not comparable to the same period of hospitalization at a facility with limited staffing and programs offering primarily custodial care. However, it appears that a length of stay under one week may be insufficient even for the inpatient facility with a strong program.

Type of Productive Activity

The data indicate that there are no major differences in rehospitalization rates in relation to type of Productive Activity. However, these results may not necessarily imply that it is not important that the type of Productive Activity in which an ex-patient becomes involved be appropriate to his

needs, interests, abilities, and level of functioning. Ss in this study had all selected the types of Productive Activity in which they participated, although they may have received advice or encouragement from hospital personnel or other professionals in making their choice. The results of this study in relation to type of Productive Activity may have shown statistically significant differences in rehospitalization rates if (1) Ss had been randomly assigned to different types of Productive Activity, or if (2) a group of Ss who were assigned to a type of Productive Activity which was considered to be appropriate to their needs, interests, etc. was compared to a group of Ss who were assigned to a type of Productive Activity considered inappropriate.

Hypothesis 2

Results of the study do not support Hypothesis 2, indicating there is no significant association between rehospitalization and participation in Therapeutic Activities. Rehospitalization rates for Ss who participated in Therapeutic Activities were not lower than for Ss who did not participate in one or more of these designated activities. These results are contrary to expectation and are not in agreement with the great majority of the studies reviewed in Chapter II. These studies, however, are based on psychotic patients, primarily chronic patients who were discharged from state in-

stitutions.

It may be that for the acutely disturbed, first-admission patients in this study, psychotherapy in some form was not as critical an issue as it is for most hospital ex-patients studied. For many Ss who were involved in Therapeutic Activities, their involvement may have played an important or crucial role in their not being rehospitalized. However, for others, the hospital experience was perhaps sufficient to strengthen their confidence and understanding so as to enable them to utilize their abilities, resources, and possibly new insights in constructive, productive ways.

It is possible that such individuals viewed out-patient therapy and other Therapeutic Activities as continued dependence in a process they perceived as a transition away from "care services" to greater independence and self-reliance. Such a decision has its risks but may be more characteristic of this less-disturbed population, experiencing their first admission to a 24-hour care facility. However, it seems important that such supportive services be available to the ex-patient in the potentially traumatic and tense transition from the hospital back to the community.

Therapeutic Activities were examined as to the different types designated in Hypothesis 2 and listed in Chapters I and IV. Results indicate that there are no major differences in rehospitalization rates on the basis of type of Therapeutic Activity.

Interactions

The interaction between Therapeutic Activity and Productive Activity was examined (Table 13). Indications were that Ss who participated in both Therapeutic and Productive Activity were rehospitalized less than Ss who participated only in Therapeutic Activity. It appears that, for the majority of Ss, the combination of Productive and Therapeutic Activities, as practiced by most halfway houses and other transitional facilities and programs, was an appropriate and effective means of community adjustment and maintenance.

There is also a trend, though not as strong, indicating that rehospitalization rates are lower for Ss participating in just Productive Activity as compared to Ss participating in just Therapeutic Activity. It appears that, as mentioned earlier, the designated Therapeutic Activities of Hypothesis 2 may not be as crucial a factor to some Ss of a first-admission, acutely-disturbed population such as that represented in this study. One must also consider that individuals who are included in the "just Therapeutic Activity" category were not involved in any of the Productive Activities presented. Perhaps this category is more definitive of the type of Ss involved than of Therapeutic Activity, for individuals in this category are likely to not be self-reliant, as they do not function in a productive manner (as defined by the criteria in Hypothesis 1). It should probably not be surprising that 50% were rehospitalized. It may very well be

that Therapeutic Activity was instrumental in keeping the other 50% out of the hospital.

Sub-Hypotheses

Major differences in rehospitalization rates were lacking in the testing of the sub-hypotheses for both Hypothesis 1 and Hypothesis 2. Basically, the inclusion of the sub-hypotheses represented the idea that participation in designated post-hospital activities should begin soon after hospital discharge and should continue on a regular basis during the post-hospital period to be most effective. Perhaps participation on a regular basis is not as important an issue for the type of population examined in this study. Many individuals who have never needed psychiatric hospitalization before may retain sufficient ego-strength following their first hospitalization to be more flexible in their participation in post-hospital activities and still benefit from their participation.

As to S's point of involvement in the post-hospital activities, the period of two months following discharge was selected in consideration of the importance given to this time period in other studies (Gorwitz et al., 1966; Michaux et al., 1969; Weinstein et al., 1973; Zolik et al., 1968). However, it was very difficult to obtain meaningful results in relation to this time factor as a very large majority of the Ss who participated in post-hospital activities did so

within two months. Eighty-two of 93 Ss or 88% did so for Productive Activities and 66 of 74 Ss or 89% did so for Therapeutic Activities. It would appear that these figures reflect the hospital staff's emphasis on helping to provide a smooth transition from hospital to community for the patient. This may also be reflected in the large proportions of Ss who participated in Productive Activity (81%) and Therapeutic Activity (64%). Such large proportions in the top cells (participation) certainly contributed to the difficulty experienced in obtaining meaningful results due to small Ns in the bottom cells (non-participation).

Implications for Mental Health Services

The findings of this study have a number of implications for the mental health professional in helping the mental patient prepare for and maintain himself in the community.

1. The results suggest that the mental health practitioner and administrator should encourage the patient to become involved or continue involvement in some form of Productive Activity. This may include referral to a halfway house or other form of transitional facility which stresses the importance of productive functioning and places expectations and demands on the ex-patient that require him to participate in Productive Activities. As discussed in Chapter I, research indicates that an ex-patient's chances of being re-

hospitalized are less after residence in a halfway house (Rog & Raush, 1975).

2. Most halfway houses require their residents to also be involved in some form of psychotherapy during their transitional period at the facility. Results of this study indicate, however, that post-hospital participation in psychotherapy or other forms of Therapeutic Activity do not have any relationship to rehospitalization. This finding certainly raises some serious questions, as most in-patient and out-patient facilities and transitional and rehabilitative programs rely on psychotherapy and milieu therapy as major means of attempting to help the individual.

Perhaps if therapy focused more directly on the problems related to participation in Productive Activity, Therapeutic Activity might become more effective with regard to rehospitalization. Many halfway house therapy programs are of this nature. Community-based therapy might play an instrumental role in preventing hospital readmission by providing support, feedback, and understanding to the individual as he is experiencing the pressures and challenges of structured productive activity.

3. A hospital facility with a program similar to that described in this study might concentrate heavily in the later stages of hospitalization on planning and preparation for involvement in Productive Activity, stressing the importance

of this involvement in providing a smooth transition to the community. A gradual integration into the community and into Productive Activity could be achieved, for example, by allowing the patient to take day passes from the hospital for the purpose of going to work, school, etc. Upon return to the hospital each day, the patient could deal in therapy with his feelings, emotions, and behavior under the expectations and pressures of work or school.

This particular hospital facility already puts a great deal of emphasis on such planning and preparation for participation in Productive Activity. Using the results of this study as a guide, hospital personnel might consider limiting the length of hospitalization for most patients to one month with a minimum length of stay of one week. Hospital personnel might use such factors as discharge medication status, pre-hospital Productive Activity, sex, and marital status as rehospitalization predictors.

4. Changes in the education and training of mental health professionals may be implied by the results of this study. Most programs training professionals in the mental health field focus on therapeutic variables related primarily to the individual's personality and psychological and social processes. It may be important for professionals in mental health to become more aware of community-oriented variables, particularly in relation to participation in Productive

Activity. Other researchers have found community factors to be important in post-hospital adjustment (Ellsworth, 1970; Talbott, 1974), some suggesting that community factors may be more important than personal characteristics of the ex-patient (Jansen & Nickles, 1973).

However, before any major change in the operation of mental health services is considered, the results of this study need further research. Suggestions for this research as related to the limitations of this study are presented below.

Limitations and Suggestions for Further Research

1. The self-report nature of this study forces the researcher to rely on the willingness, memory, reliability, and interpretation of the Ss in obtaining post-hospital information. This may have been of greater significance due to the nature of the population with regard to the stigma placed on mental/emotional disturbance.

a. The questionnaire responses of all Ss were validated through the use of hospital records in regard to rehospitalization, and many Ss' responses regarding post-hospital activities were confirmed through community agencies. There still may have been some inaccurate information which could not be detected. Because of limitations in time, personnel, and financial resources, it was not possible to verify every date

and event.

b. The retroactive nature of this study is an area of weakness. More accurate, reliable, and consistent results would seemingly be assured with a study beginning with Ss presently hospitalized and then followed up at regular intervals over a longer period of time. Such a technique would also present the opportunity to increase the size of the N considerably. This would definitely be an advantage.

In many instances in this study, very small Ns were at least partly responsible for the inability to obtain meaningful results. A larger N would certainly increase the strength of the results and allow for closer examination of relevant factors.

2. Sixty-nine percent of Ss' responses were received through questionnaires returned by mail. In addition to questionnaire responses, post-hospital information was obtained over the telephone, through hospital readmission records, and through cooperative relatives of Ss who had died after the one-year follow-up period. Those questionnaires completed over the telephone were in accordance with the questionnaire format. However, the variety of methods and sources allows for researcher bias and other possible confounding influences.

3. A 100% return was not obtained for this follow-up study. The remaining questionnaires, representing 18% of the study

sample, might have all contained responses collectively similar but different from those of the sample examined here, possibly changing the results.

4. This study is exploratory in design, and causative results cannot be obtained from the data.

To increase the predictive power of the study, Ss could be randomly selected and assigned to post-hospital experimental and control groups. Such groups could include Ss who were referred or not referred to Productive Activity or Therapeutic Activity in general and to different types of Productive Activity and Therapeutic Activity. Although studies utilizing random selection procedures have been performed, such experimental procedures for this type of population seem to be a deviation from the attempt to do as much as one can for the individual in his time of need.

5. Examination of the data for this exploratory study was based primarily on proportions produced through cross-tabulation of relevant factors. Such proportions do not indicate the differences in number between categories. One must therefore be more cautious in generalizing from the findings.

If the study were designed and the data tabulated in such a manner that continuous "scored" data were produced rather than discrete "yes" or "no" proportions, more sophisticated and flexible techniques might be applied, allowing

for more meaningful results stated in more definitive terms.

6. The results of this study are based on primarily acutely disturbed Ss who had experienced one hospital admission.

Results and conclusions cannot be generalized to ex-patients who are not members of this population.

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APPENDIX A

We are currently engaged in a study of former _____ patients in order to determine which activities after hospitalization are important in preventing coming back to the hospital. For this reason, we would like to know about some of the things you did during the first year after your discharge. We would very much appreciate your completing the enclosed questionnaire and returning it to us in the stamped, self-addressed envelope by _____.

Names will not be used in this study, and the information in the questionnaire will be kept strictly confidential and will not be shared with anyone other than mental health professionals and researchers involved in our study.

If you have any questions about this request for you to fill out the enclosed questionnaire, please call _____. Thank you for your cooperation and consideration in this matter. We hope that as a result of your cooperation we will be able to be of more help in the future to other persons who come to the _____ for help with their problems.

Sincerely,

Director

/mr

Enclosures - 2

POST-HOSPITAL QUESTIONNAIRE

Please complete and return this questionnaire in the enclosed stamped, self-addressed envelope within the next ten days.

Please check answers for the first year after your discharge in 1973. If you were hospitalized more than once, answer questions only for the first psychiatric hospitalization. If you returned to a psychiatric hospital in less than a year, answer questions only up to when you were hospitalized the second time. Add any comments you wish to make in the questionnaire.

-ACTIVITIES -

1. Did you have a job (with pay) after your discharge?

___ YES ___ NO

If NO, go on to Number 2.

If YES:

a. How long after discharge did you start working?

___ within 2 months	___ 7-8 months
___ 3-4 months	___ 9-10 months
___ 5-6 months	___ 11 months or more

b. Approximately what length of time did you work?

___ 2 months or less	___ 7-8 months
___ 3-4 months	___ 9-10 months
___ 5-6 months	___ 11 months or more

c. Full or part-time?

___ Full-time (40 hours or more per week)
___ Part-time (8 hours or more per week; less than 40)

2. Did you attend school, college, or a training program after your discharge? (Training programs may include vocational rehabilitation programs).

___ YES ___ NO

If NO, go to Number 3.

If YES:

a. How long after discharge did you start?

<input type="checkbox"/> within 2 months	<input type="checkbox"/> 7-8 months
<input type="checkbox"/> 3-4 months	<input type="checkbox"/> 9-10 months
<input type="checkbox"/> 5-6 months	<input type="checkbox"/> 11 months or more

b. For what length of time?

<input type="checkbox"/> 2 months or less	<input type="checkbox"/> 7-8 months
<input type="checkbox"/> 3-4 months	<input type="checkbox"/> 9-10 months
<input type="checkbox"/> 5-6 months	<input type="checkbox"/> 11 months or more

c. Full or part-time?

Full-time student
 Part-time student

3. Did you work as a volunteer worker for an agency, hospital, school, etc. after your discharge?

YES NO

If NO, go on to Number 4.

If YES:

a. How long after discharge did you start?

<input type="checkbox"/> within 2 months	<input type="checkbox"/> 7-8 months
<input type="checkbox"/> 3-4 months	<input type="checkbox"/> 9-10 months
<input type="checkbox"/> 5-6 months	<input type="checkbox"/> 11 months or more

b. For what length of time?

<input type="checkbox"/> 2 months or less	<input type="checkbox"/> 7-8 months
<input type="checkbox"/> 3-4 months	<input type="checkbox"/> 9-10 months
<input type="checkbox"/> 5-6 months	<input type="checkbox"/> 11 months or more

c. Full or part-time?

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___ Full time (40 hours or more per week)

___ Part-time (8 hours or more per week; less than 40)

4. Did you work as a homemaker after your discharge?

___ YES ___ NO

If NO, go on to Number 5.

If YES:

a. How long after discharge did you start?

___ within 2 months

___ 7-8 months

___ 3-4 months

___ 9-10 months

___ 5-6 months

___ 11 months or more

b. For what length of time?

___ 2 months or less

___ 7-8 months

___ 3-4 months

___ 9-10 months

___ 5-6 months

___ 11 months or more

c. Full or part time?

___ Full-time (40 hours or more per week)

___ Part-time (8 hours or more per week; less than 40)

5. Were you in a halfway house after your discharge?

___ YES ___ NO

If NO, go on to Number 6.

If YES:

a. How long after discharge were you admitted?

___ within 2 months

___ 7-8 months

___ 3-4 months

___ 9-10 months

___ 5-6 months

___ 11 months or more

b. For what length of time?

- | | |
|---|--|
| <input type="checkbox"/> 2 months or less | <input type="checkbox"/> 7-8 months |
| <input type="checkbox"/> 3-4 months | <input type="checkbox"/> 9-10 months |
| <input type="checkbox"/> 5-6 months | <input type="checkbox"/> 11 months or more |

c. Please identify the halfway house _____

- THERAPEUTIC ACTIVITIES -

6. After discharge, did you see a therapist alone for counseling or psychotherapy?

YES NO

If NO, go on to Number 7.

If YES:

a. How long after discharge did you start?

- | | |
|--|--|
| <input type="checkbox"/> within 2 months | <input type="checkbox"/> 7-8 months |
| <input type="checkbox"/> 3-4 months | <input type="checkbox"/> 9-10 months |
| <input type="checkbox"/> 5-6 months | <input type="checkbox"/> 11 months or more |

b. For what length of time?

- | | |
|---|--|
| <input type="checkbox"/> 2 months or less | <input type="checkbox"/> 7-8 months |
| <input type="checkbox"/> 3-4 months | <input type="checkbox"/> 9-10 months |
| <input type="checkbox"/> 5-6 months | <input type="checkbox"/> 11 months or more |

c. How often?

- more than once a week
- once a week
- every other week
- at least once a month
- less than once a month

d. Please identify the agency _____

7. Did you participate in group therapy, family therapy, or couples therapy after your discharge?

___ YES ___ NO

If NO, go on to Number 8.

If YES:

- a. How long after discharge did you start?

___ within 2 months	___ 7-8 months
___ 3-4 months	___ 9-10 months
___ 5-6 months	___ 11 months or more

- b. For what length of time?

___ 2 months or less	___ 7-8 months
___ 3-4 months	___ 9-10 months
___ 5-6 months	___ 11 months or more

- c. How often?

___ more than once a week
 ___ once a week
 ___ every other week
 ___ at least once a month
 ___ less than once a month

d. Please identify the agency _____

8. Did you attend a day treatment program after your discharge?
 (These may include the programs at the _____
 _____).

___ YES ___ NO

If NO, go on to Number 9.

If YES:

a. How long after discharge did you start?

within 2 months 7-8 months
 3-4 months 9-10 months
 5-6 months 11 months or more

b. For what length of time?

2 months or less 7-8 months
 3-4 months 9-10 months
 5-6 months 11 months or more

c. How often?

more than once a week
 once a week
 every other week
 at least once a month
 less than once a month

d. Please identify the program _____

9. Did you participate in some form of ex-patient club after your discharge?

YES NO

If NO, go on to Number 10.

If YES:

a. How long after discharge did you start?

within 2 months 7-8 months
 3-4 months 9-10 months
 5-6 months 11 months or more

b. For what length of time?

___ 2 months or less

___ 7-8 months

___ 3-4 months

___ 9-10 months

___ 5-6 months

___ 11 months or more

c. How often?

___ more than once a week

___ once a week

___ every other week

___ at least once a month

___ less than once a month

d. Please identify the club _____

10. After your discharge, did you participate in a program or activity similar to those already mentioned? (These may include programs such as Alcoholics Anonymous).

___ YES ___ NO

If NO, go on to Number 11.

If YES:

a. How long after discharge did you start?

___ within 2 months

___ 7-8 months

___ 3-4 months

___ 9-10 months

___ 5-6 months

___ 11 months or more

b. For what length of time?

___ 2 months or less

___ 7-8 months

___ 3-4 months

___ 9-10 months

___ 5-6 months

___ 11 months or more

c. How often?

___ more than once a week

___ once a week

___ every other week

___ at least once a month

___ less than once a month

d. Please identify the program _____

11. Were you hospitalized a second time during the one-year period following your first hospitalization?

___ YES ___ NO

If NO, go on to Number 12.

If YES:

a. How long after discharge were you hospitalized again?

___ within 2 months

___ 7-8 months

___ 3-4 months

___ 9-10 months

___ 5-6 months

___ 11 months or more

b. Please identify the hospital _____

12. Please feel free to make any other comments you think might be helpful:

Thank you. Please return within 10 days to:

Dennis J. Rog
Study Coordinator

As a separate question, please check one of the following choices:

How helpful did you find your hospitalization at _____ to be?

- Extremely helpful
- Helpful
- Helpful in some ways
- Not very helpful
- Harmful

APPENDIX B

QUESTIONS ASKED DURING PILOT TEST

1. Are the paragraphs at the top of the questionnaire confusing in any way?
2. If you received this questionnaire in the mail, do you think you would answer it and mail it back? Why or why not?
3. Is the questionnaire too long?
4. Can you think of any way it could be made clearer, easier to understand?
5. How about the spacing on the pages--is that confusing at all?
6. Do you find the "check off" periods used to be confusing at all? Can you suggest a better way to ask these questions?
7. Are the terms "volunteer worker" and "homemaker" clear to you?
8. Is the term "individual psychotherapy" clear to you? If not, what term would you use? How about the terms "group therapy, family therapy, and couples therapy"?
9. What do you think is meant by "full or part-time student status"?
10. Is the term "day treatment program" clear to you? If not, what term would you use?
11. What do you think is meant by the terms "therapeutic or transitional program" and "ex-patient club"?
12. Do you understand for what period of time these questions apply?
13. Is it difficult for you to remember the specifics of what occurred during the year after your hospitalization? Do you have any suggestions as to how we could make it less difficult?
14. Do you have any overall suggestions or criticisms?

