Order Number 9304665

Factors related to repeated episodes of treatment with a mobile emergency psychiatric service

Friedman, Laura Jean, Ph.D.

City University of New York, 1992

U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

FACTORS RELATED TO

REPEATED EPISODES OF TREATMENT

WITH A MOBILE EMERGENCY PSYCHIATRIC SERVICE

By

Laura J. Friedman

A dissertation submitted to the Graduate Faculty in Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

1992

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

9-27-92
Date

Steven Tuber
Chair of Examining Committee

Sept. 30, 1992
Date

Hubert D. Lehrman
Executive Officer

Dr. Steven Tuber

Dr. Juliet Lesser

Dr. Michael Moskowitz

Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

Acknowledgements

I would like to thank the members of my committee for their assistance and support in the course of my work on this project. My special thanks to Dr. Steven Tuber, the chairman of my committee, for his willingness to undertake the sponsorship of a project already underway and to lend the insights, encouragement, and guidance that brought it to completion. Thanks also to Dr. Juliet Lesser who gave so freely of her time and advice in the early stages of the study.

I am indebted as well to the late Dr. Louis Gerstman, whose mentorship was instrumental in providing the initial impetus for this research.

My thanks to the administration of the Crisis Intervention Service of the Westchester County Medical Center for allowing me to use data from the files of the service and to my co-workers who were encouraging throughout.

And I am deeply grateful to the good friends who supported me through this endeavor and without whose help and caring this paper would never have come to be.

Table of Contents

List of Tables

Introduction

Within the last forty years there have been profound changes in the treatment of severe mental illness. For generations institutional confinement had been the primary means of dealing with persons whose symptoms rendered them incapable of caring for themselves or identified them as representing a danger to themselves or others. The introduction of neuroleptic medications in the 1950s and the remarkable amelioration of symptoms they brought about gave rise to hopes that these chronically disabled patients could attain a level of functioning that would allow them to return to the community and lead more productive lives. Furthermore, there was some evidence that long-term confinement created its own syndrome of dysfunction that only exacerbated the individual's difficulties in attaining independence.

The Community Mental Health Act of 1963, which legislated the establishment of outpatient treatment facilities, provided government funding for such, and specified the range of services to be offered, codified this new view of mental health care delivery and brought about an abrupt shift of emphasis from institutional to community-based care. At the same time, recent changes in the mental hygiene law regarding involuntary treatment have made more stringent the criteria for commitment, detention, and medication of individuals in inpatient facilities. The underlying assumption has been that heretofore the mental

health system had fostered an unwarranted dependency among the patients it served and that fewer and shorter hospital stays would further enhance an individual's ability to function independently and would in turn lead to decreased need for institutional care.

It has become increasingly clear, however, that this shift in locus of treatment has not been entirely successful. The existing outpatient facilities, because of poor system-wide planning and inadequate funding, have been unable to provide the structure, support, outreach, and continuous case management that many chronically ill individuals need. As a result, many of the most severely dysfunctional patients have been unable to sustain ongoing outpatient treatment, have experienced more frequent hospitalizations, and have come to rely more heavily on emergency services for treatment in acute episodes.

Because of this substantial increase in the utilization of emergency facilities, there is much current interest in how such services can best serve this "new young chronic" population either by preventing unnecessary inpatient admissions or by helping patients establish ongoing treatment relationships with appropriate outpatient facilities.

This study is an examination of a mobile crisis service, one aspect of emergency psychiatric treatment that has attracted increasing attention because of its unique potential contribution to maintaining the severely

chronically ill in the community. This study will attempt to identify those characteristics that distinguish individuals who are the frequent users of such a service and will explore the issue of how best to evaluate the effectiveness of this mode of treatment.

Chapter I: Review of the Literature

Recent Expansion of Emergency and Crisis Intervention Services

In recent decades there has been a rapid proliferation of crisis intervention and emergency psychiatric services and an increase in utilization of such services estimated to range from 120% to 600% (Bassuk & Schoonover, 1981; Wellin, Slesinger, & Hollister, 1987). In large part this has been the result of the trend toward deinstitutionalization set in motion by the Community Mental Health Act of 1963 and its asserted commitment to community-based treatment of the mentally ill. While publicly funded long-term treatment facilities have either closed their doors or drastically reduced admissions and length of stay, services in the community have struggled to provide adequate care on an outpatient basis. Emergency services, while always seen as an essential and integral part of the overall plan, have become for many patients the major point of entry into the system (Marson, McGovern, & Pomp, 1988), the sole source of treatment (Gerson & Bassuk, 1980), and/or the most frequently utilized mental health resource (Pepper, Kirshner, & Ryglewicz, 1981).

To some extent this is a reflection of the inadequacy and fragmentation of the system as a whole. Financial constraints and a lack of well-coordinated planning have left the community-based facilities ill-prepared to keep pace with the ever-increasing demands on their services

(Bassuk & Schocnover, 1981). In particular, there is much debate as to how successful traditional outpatient facilities have been in responding to the needs of those who in prior times would have spent long years in public inpatient settings (Surles & McGurrin, 1987). Many would argue that deinstitutionalization has served only to create a population of the "uninstitutionalized" or "never institutionalized"--that is, those severely and chronically mentally ill who by virtue of the very nature of their illnesses are most prone to frequent crises and who require constant and consistent support and structure in order to maintain daily functioning. Unfortunately the very aspect of the overall community mental health plan that has been most neglected is that of which this population is most in need, that is, the provision of concrete supports and resources such as housing, vocational training, employment opportunities, and consistent case management. Without such social supports, a minor stress can precipitate a psychiatric emergency for these patients.

The ever-increasing problem of homelessness is another major factor contributing to the growing burden on emergency services. Whether deinstitutionalization has created its own homeless population comprised of those whose mental illness interferes with their ability to negotiate or tolerate available resources, or whether the lack of available housing is yet another stress that throws into crisis those whose functioning is already tenuous (Oldham,

Lin, & Breslin, 1990), the fact remains that homeless individuals represent a growing proportion of emergency service users (Bachrach, 1984). Faced with a patient who is undomiciled and without available social supports, the clinician in the emergency service often must spend unusually long periods of time on assessment and disposition tasks.

Also of major import in the heavy utilization of emergency psychiatric services is the growing epidemic of substance abuse. Not only can substance abuse in and of itself create a medical or psychiatric emergency, but substance abuse among those with a pre-existing psychiatric illness virtually guarantees rapid and frequent decompensation. Intoxication of the patient at the time of presentation at the emergency service makes reliable evaluation and diagnosis and appropriate disposition a complicated and time-consuming process, often involving numerous laboratory tests and long periods of detention while acute symptomatology clears (Oldham et al., 1990). Determining which among the psychiatric and substance-induced symptoms are primary and which secondary may prove impossible and further confuses the treatment picture (Schwartz & Goldfinger, 1981).

The role of substance abuse in incidents of self-injurious behavior or suicide attempts is also well-documented. Self-inflicted injury, or ideation of such, in itself accounts for a substantial proportion of psychiatric

cases seen in an emergency room (Bassuk, 1980; Oldham et al., 1990). Such episodes occur frequently in those with severe personality disorders or major depressions, or may be in response to psychotic thought processes. Substance abuse on top of such disorders usually only serves to heighten intolerable affect and decrease impulse control, a combination that at worst may be lethal and at best may result in the need for emergency medical or psychiatric intervention. Even in those without a preexisting mental illness, substance abuse alone can create affective or psychotic symptoms or impulse control disorders that predispose the individual to self-injurious or suicidal actions.

In the face of such varied and burgeoning demands on utilization, the traditional functions of the psychiatric emergency service frequently have been expanded to include screening, outreach, follow-up and brief inpatient services (Bassuk & Schoonover, 1981). In many cases such services are based on the crisis intervention model, which had its roots in the work of Lindemann (1944) and was further elaborated and refined by Caplan (1964). The focus on the here and now, identifying the immediate problem, evaluating and enhancing coping skills, marshalling available supports, and returning the individual to a state of equilibrium or homeostasis make this mode of treatment particularly well-suited to dealing with acute psychiatric episodes. In addition, many emergency services, whether hospital- or

community-based, have instituted a mobile or home treatment component that offers immediate and effective response to those in need who are unable or unwilling to present themselves to a treatment facility.

While psychiatric emergency and crisis intervention services vary widely in their treatment methods and goals, they have come to play a critical role in community mental health. For overcrowded emergency rooms and clinics with long waiting lists, the appeal of such services lies in their potential for treating large numbers of patients in a timely, time-limited, and cost-effective fashion. Furthermore, many such services are geared toward reducing hospital admissions, thereby easing the load on already pressured inpatient units. Given the ever-increasing role these services have assumed in the mental health system, it is not surprising that numerous studies have been undertaken not only to evaluate the effectiveness of such modes of treatment delivery but also to identify those individuals who are frequent or repeated users.

Evaluating the Effectiveness of Crisis Intervention Treatment

Frequently-Used Outcome Measures

The issue of how to evaluate the effectiveness of a particular type of psychotherapeutic intervention has always been a complex one, and much has been written about the outcome measures appropriate to this type of investigation. In general, when examining various modes of outpatient

treatment, researchers have relied on outcome measures that fall into three broad categories: (a) therapist ratings of improvement in a patient's symptoms or functioning, (b) patient self-reports or ratings of the same, and (c) whether the patient keeps appointments or drops out (Luborsky, Chandler, Auerbach, Cohen, & Bachrach, 1971).

Many studies of the effectiveness of crisis intervention treatments have focussed on the above types of outcome variables. In most of these studies, improvement in symptoms as measured by checklists or other rating instruments (Maris & Connor, 1973; Rusk & Gerner, 1972), therapist ratings of improvement (Blouin, J., Minoletti, Blouin, A., Nahon, Natarjan, & Croken, 1985; Wolkon, 1972), whether the patient kept his appointment (Wolkon, 1972), whether he dropped out (Blouin et al., 1985), and patient ratings of their own improvement (Maris & Connor, 1973) have all pointed to some degree of efficacy of the treatment. The one exception is the study by Gottschalk, Mayerson, and Gottlieb (1967) which found no difference in improvement in symptoms between those patients who received crisis intervention and those who were placed on a waiting list after the initial interview. Unfortunately, most of these studies do not specify the exact nature or length of the treatment involved, nor the specific diagnostic characteristics of the sample studied. It appears that, for the most part, these studies have dealt with other than a severely and chronically ill population.

One study of a crisis intervention program that employed a different measure of effectiveness is that of Calsyn, Pribyl, and Sunukjian (1977). In this study, the outcome measure was whether or not the client needed subsequent inpatient or outpatient treatment within three years after crisis intervention treatment. Here again, the specifics of the patients' diagnoses were not provided except to note that some had prior histories of state hospitalization and/or suicidal behavior. Since less than 30% of the 305 participants received any type of subsequent treatment in the course of the three years studied, it would appear that this sample as well is not of a primarily severely and chronically ill population. One finding of note in this study, however, is that the strongest predictor of subsequent inpatient treatment was a prior history of state hospitalization and suicidal behavior.

While all the studies mentioned above have been of clinic- or emergency room-based crisis intervention services, only Calsyn and his associates used subsequent treatment as the outcome variable. There are, however, other types of crisis intervention programs that have focussed on the avoidance of hospitalization or decreasing length of stay as a measure of treatment effectiveness.

Subsequent Inpatient Treatment as Outcome Measure

Decker and Stubblebine (1972) conducted a 2 1/2-year follow-up of two groups of young adults admitted to San Francisco General Hospital, one group admitted prior to the

institution of a crisis intervention service which included an acute inpatient treatment component, and the other admitted after such a program was in place. The researchers found that after the institution of the crisis intervention program there was a significant decrease in the average number of admissions per month among the young population studied (ages 18-30). This difference was primarily accounted for by a significant decrease in admissions of women, which the researchers attributed to women tending to have a more available support system and therefore being more successfully treated by crisis intervention outside the hospital.

In this same study, Decker and Stubblebine found that a significantly smaller proportion of patients admitted under the crisis intervention program required transfer for further inpatient treatment and that a significantly smaller proportion of the crisis intervention patients spent time in psychiatric hospitals in the 2 1/2 years following the index hospitalization.

Although Decker and Stubblebine did not specify the diagnoses of the patients in their sample, other studies of inpatient crisis treatment programs have found that patients with a diagnosis of schizophrenia or other psychotic disorders comprise as much as 59% of their sample (Walker, Parsons, & Skelton, 1973), personality disorders as much as 14% (Rhine & Mayerson, 1971) and substance abuse as much as 11% (Walker et al., 1973).

Walker et al. (1973) and Rhine and Mayerson (1971) are two examples of other studies of crisis intervention programs with inpatient components where the focus is the avoidance of long-term hospitalization. Walker and his associates found that only 32% of their sample required transfer for longer-term inpatient treatment, whereas 57% were discharged to outpatient treatment and 11% required no further follow-up. These researchers noted that the decision to discharge to outpatient treatment did not appear to be affected by the individual's past history of treatment (in the sample, 45% had a prior history of inpatient treatment and 29% prior outpatient treatment), and that the percentage of those patients carrying a diagnosis of schizophrenia was the same in both groups discharged to outpatient and to inpatient treatment. The researchers concluded from this that " a sizeable number of seriously disturbed persons, as judged by a history of inpatient treatment, were to be treated in the community rather than in a hospital" (Walker et al., 1973, p. 899).

Rhine and Mayerson found that only 16% of their sample required transfer for further inpatient treatment and 73% could be discharged to outpatient treatment. As in the Walker et al. study, 11% were discharged with no further follow-up recommended. These researchers also noted that "previous hospitalization need not adversely affect the outcome of crisis hospitalization" (Rhine & Mayerson, 1971, p. 124). They attributed this finding to their "reeducation

of the patient and his family ... and to the continued involvement of the family and other significant persons throughout the treatment" (Rhine & Mayerson, 1971, p. 124).

Rhine and Mayerson followed about half their sample for a year after discharge and found that 70% of those patients admitted by the crisis program "needed neither transfer nor rehospitalization in the 12 months following their crisis admission" (Rhine and Mayerson, 1971, p. 124).

Studies of Inpatient Recidivism

Identifying Predictor Variables

The use of repeat admissions for treatment as an outcome measure, that is, as an indication of the relative effectiveness of that same or other intervening treatments, is not a new concept. The issue of recidivism among the psychiatric population has long been of interest, though most past research has focussed on readmissions to inpatient facilities, primarily public institutions. Numerous studies have been undertaken to identify those demographic, psychosocial, diagnostic, or treatment variables that would reliably predict the need for repeated hospitalizations.

While some researchers have found that individuals of a particular age range, gender, race, or marital status are over-represented among certain repeater populations, in general purely demographic variables have proven to be of little predictive value. The findings in terms of various psychosocial factors have also been equivocal. Although there can be little doubt that chronic and severe mental

illness affects an individual's cognitive and functional capabilities, variables such as level of education, employment history, and socioeconomic status in and of themselves have not been found to be reliable predictors of the need for rehospitalization. The one psychosocial factor that may be more strongly related to an individual's ability to remain in the community is the nature of his social support network. There is evidence that the availability of family and friends, the person's living situation, and the involvement of mental health, community support, and other agency personnel all may be instrumental in an individual's ability to avoid repeated inpatient admissions (Gerson & Bassuk, 1980; Marson et al., 1988).

There is evidence as well that a patient's compliance with outpatient treatment can play an important role in avoiding the need for frequent inpatient admissions (Caton, 1981). In a retrospective chart review of two groups of patients attending a community mental health center, Green (1988) found that "for the group of 25 frequently hospitalized patients, the most prevalent [precipitating] factors related to rehospitalization were noncompliance with medication and aftercare" (pp. 964-965), and that there was a highly significant correlation between medication noncompliance and frequent rehospitalization. As the author noted, however, "the question of which came first--noncompliance or relapse--was not addressed" (Green, 1988, p. 965).

Since certain mental illnesses by their very nature predispose an individual to frequent relapses, it is not surprising that certain diagnostic categories have been found to be over-represented among the repeater inpatient population. In general, those patients with diagnoses of recurring psychotic disorders or severe personality disorders, those with histories of suicidal or violent behavior, and those with substance abuse problems are most likely to require repeated hospitalizations.

Identifying "Heavy Users"

In a study of two "heavy user" cohorts at the Harlem Valley Psychiatric Center (HVPC), Casper and Pastva (1990) found that those individuals with schizophrenia represented 56% of the sample, those with schizoaffective disorder represented 18%, and bipolar disorder or major depression 13%. In addition, over 40% abused drugs and/or alcohol, 30-50% of the cases had suicide attempts, violence, or arrest histories, and 75% were found to be noncompliant with medication and treatment programs.

In their study of heavy users of inpatient services in Philadelphia and in New York State, Hadley, McGurrin, Pulice, and Holohean (1990) found that schizophrenia accounted for 45-48% of their samples and major affective disorders 21-25%. Casper and Donaldson (1990) studied those patients who had three or more inpatient admissions from HVPC outpatient services over an 18-month period. They found that 54% of these frequent users had a diagnosis of

schizophrenia, 15% a diagnosis of bipolar disorder, 6% major depression, and 12% schizoaffective disorder. In a cluster analysis of the frequent user group, these researchers identified two clusters out of six which were characterized by a high proportion of patients with histories of substance abuse, violent behavior, and arrests.

Casper, Romo, and Fasnacht (1991) examined readmission rates for frequent-user populations at eight hospitals in New York State. They found that the frequent users "showed similar patterns of relapse and readmission over the six years in the follow-up period" (Casper et al., 1991, p. 1167) and concluded that "these patients shared common characteristics of functioning and constituted a distinct subgroup within the patient population" (p. 1166).

In keeping with these findings, the one variable that has been found most consistently to predict rehospitalization is the number of previous admissions. In a systematic review of 32 previous studies of inpatient recidivism from 1935-1971, Rosenblatt and Mayer (1974) found that "regardless of the patient's diagnosis, record of attendance at aftercare clinics, and so forth, the more frequently he has been in the hospital during the past, the more likely he is to return in the future" (pp. 700-701). A more recent study by Havassy and Hopkin (1989) reported similar findings: that the strongest predictor of both number of hospitalizations and number of hospital days was the number of prior hospitalizations.

The Havassy and Hopkin study had several other interesting findings. These researchers examined a three-month admission cohort at San Francisco General Hospital and divided the 300 participants into two groups, one of those with multiple admissions (more than one inpatient episode in the preceding twelve months) and the other of those with just the single admission. Patients with diagnoses of schizophrenia, affective disorders, and other psychoses accounted for 88% of the multiple admission group and 67% of those with single admissions. Personality disorders as a primary diagnosis accounted for only 3% and 5% of the two groups respectively. A regression model predicting the number of hospitalizations in the twelve month period, however, found that the next most powerful predictor after number of prior hospitalizations was a <u>secondary</u> diagnosis of personality disorder. (Borderline personality disorder was the most frequent diagnosis in this category.) Another finding of note was that not having a place to live was one of the factors associated with more inpatient hospital days. In fact, the researchers found that in their overall sample, 77% of the patients had trouble maintaining housing and 80% were judged in need of a conservator. Furthermore, 46% of the overall sample had substance abuse problems, and 60% had records of arrests--34% having been arrested more than once.

One of the most interesting findings, however, was that the multiple admission patients had significantly more visits to psychiatric emergency services, significantly more

telephone counseling contacts with such services, and, to a significant degree, their visits to the emergency service more frequently resulted in their being held for an extended evaluation. This suggests that the population of frequent users of inpatient services may constitute a substantial proportion of heavy users of emergency services as well.

The "New Chronic Patient"

Definition

In this era of deinstitutionalization, much has been written about the emergence of "a new generation of persistently dysfunctional young adults" (Pepper et al., 1981, p. 463), a population that has been labeled the "young adult chronic" or the "new chronic patient." Caton (1981) discusses the new chronic patient in terms of those with chronic schizophrenia. She studied 119 patients admitted to the hospital with a diagnosis of schizophrenia who had a history of at least two prior hospitalizations. Many probably had many more prior admissions, but such data were difficult to document. They were young (mean age of 34), most having become ill after the start of deinstitutionalization. In a one-year follow-up she found that five had committed suicide, 26 had been arrested as perpetrators of a crime, 61% had had at least one psychotic symptom during the year, 58% had been hospitalized during the period of follow-up, and 28% had had multiple hospitalizations. She also found that only 17% had been compliant with outpatient treatment.

> Indeed for years it was assumed that chronicity was caused largely by the custodial philosophy of public mental institutions.... It was hoped that outpatient management of mental illness with minimal use of the psychiatric hospital would facilitate maintenance of social competence and involvement in the life of society at large. However, it is now widely recognized that the phasedown of the asylum will not eliminate chronicity. (Caton, 1981, p. 477)

Schwartz and Goldfinger (1981) described the new chronic patient as one with severe borderline pathology. They describe this population as young, primarily male, single, unemployed, making frequent visits to emergency services, and requiring repeated short-term inpatient stays. This group has severe ego deficits in the areas of reality-testing, impulse control and affect modulation. Because of their difficulties with impulse control, they frequently present with suicidal acts or threats, are frequently in trouble with the law, and are frequent substance abusers. Because their functioning fluctuates over time, they may appear more or less disorganized on presentation to a psychiatric service and therefore often receive a wide range of diagnoses. The authors state, however, that over repeated episodes, a picture in keeping with a diagnosis of severe character pathology is what emerges.

Because these patients have poor social supports, are often hostile, argumentative, and uncooperative, and tend to deny their illness, they are very difficult to engage in ongoing treatment. The short-term contact with the emergency service tends to have little effect on their long-term functioning, they refuse or drop out of follow-up

outpatient treatment, and because of their impulsive acting out are usually inappropriate for residential placement. Schwartz and Goldfinger conclude that long-term hospitalization may be the only effective means of engaging these patients in ongoing treatment.

Pepper et al. (1981) describe the population of young adult chronic patients as being comprised of individuals with a variety of diagnoses who share two major characteristics: severe difficulties in social functioning and inappropriate use of mental health services. These researchers stress that these patients need to be viewed functionally rather than diagnostically. In a study of 294 such patients (ages 18-30) at Rockland County Community Mental Health Center, Pepper and his colleagues discovered that these 294 patients carried 40 different specific diagnoses. Of the total sample, 33% were diagnosed as schizophrenic, 12% as personality disorders, 5% as behavior disorders, 7% as major affective disorders, and 8% as neurotic. In addition, 37% abused alcohol, 37% abused drugs, 24% had had trouble with the law, and 42% presented some risk for suicide. Fifty-five percent of their sample had received psychiatric treatment before the age of 18.

What all these patients had in common was an acute vulnerability to stress, difficulty in establishing stable, supportive relationships, a history of repeated failures in their lives, and a tendency to deny their illnesses and the need for treatment. Despite the fact that the mental health

center described in the article offered a wide range of treatment and community support services, the authors felt that the needs of this population were far from being adequately met and stressed the need for residential treatment facilities specifically geared to dealing with this difficult-to-manage and treatment-resistent group of patients.

The New Chronic Patient and Emergency Services

Surles and McGurrin (1987) have also written about "the increasing numbers of young adult chronic patients who refuse to utilize traditional outpatient services and instead rely on emergency services during periods of relapse and crisis" (p. 405). In a study of the utilization of emergency services in Philadelphia, they found that every year over a four year period from 1982 there was an increase in the number of patients seen, the number of total visits, and the average number of hours for each visit. Furthermore, they found that while heavy users (three or more visits to the emergency room in one year) accounted for 20% of the total caseload, they accounted for 55% of all admissions to the emergency service and for 60% of all service hours. From 1980 to 1985, the total number of contacts with heavy users had increased almost five-fold, and it was noted that these heavy users "resemble the young chronic patients described in the literature" (Searles & McGurrin, 1987, p. 403).

The authors comment that "persons who suffer from a severe mental disorder are now experiencing their illness in a decentralized community environment rather than at a state hospital" and attribute the rapid rise in emergency service utilization to a "tendency of this group to remain in the emergency-treatment system for years, each new cohort adding to the demand on emergency services" (Searles & McGurrin, 1987, p. 405).

The issue of whether this population of new young adult chronic patients contributes significantly to the increase in utilization of emergency services has been addressed by other researchers as well. Bassuk (1980) examined a sample of patients presenting to the emergency ward of Beth Israel Hospital in Boston over a four year period, 1972-1976. The mean age of the sample was 30.3 years, and 62% of the patients were between the ages of 20 and 34. About 60% of the patients were single. Almost one-fifth had had previous psychiatric hospitalizations, and 41% were either currently in outpatient treatment or had a past history of such. The most common diagnosis (25% of the sample) was psychosis (including both schizophrenia and affective disorders). Twenty-four percent of the patients were nonpsychotically depressed, 17% were diagnosed as having a borderline personality disorder, and an additional 15% had other character disorders. Nine percent of the sample had a primary diagnosis of substance abuse. (Patients with

substance abuse problems are generally referred to hospitals other than Beth Israel.)

The most common presenting symptoms were suicidal behavior (30%), psychotic thoughts or behavior (21%), depression (18%), and anxiety (16%). The most common precipitant of the visit (50% of the sample) was a problem with a primary relationship in the patient's life; this included problems with a therapist such as vacation or termination. In terms of disposition, 27% of the visits resulted in hospitalization, 31% in referral to outpatient treatment, and 22% in referral back to the current therapist.

In examining the data on a year-by-year basis, however, Bassuk discovered some changes in utilization by the fourth year: (a) there was a decrease in patients presenting with suicidal behavior and an increase in those exhibiting psychotic behavior; (b) the total percentage of sampled patients labelled chronically psychotic increased from 23% to 35%; (c) the percentage of patients previously hospitalized rose from 19% to 31%, with a disproportionately high percentage coming from state facilities; and (d) there was a marked decrease in patients with no previous hospitalizations (from 81% to 69%).

Bassuk (1980) suggests that "as the number of deinstitutionalized patients has increased, the other facilities, like the community mental health centers, have become saturated" (p. 627), and she urges that new programs

involving extensive support systems and alternatives to hospitalization be developed to provide better care for these patients.

Bassuk and Schoonover (1981), in a later article discussing the shortcomings of emergency services, state: "The emergency ward has unwittingly been placed in a position previously occupied by the state facilities; problems have been transferred to it without any attempt at proper prevention or adequate remedy" (p. 182). They go on to say:

> Unfortunately the transformation of the emergency unit during the decade of the 1970s was not based on rational planning but rather was a response to a system out of control. The evaluation and referral model of service delivery--no longer viable within the current context--has not yet been replaced by a creative set of programs that can bypass the chaos in the system and prevent further deterioration of patient care. (Bassuk & Schoonover, 1981, p. 184)

These authors also discuss repeater or chronic crisis patients, who they report comprised 17% of their sample. They describe them as a discrete clinical group with a past history of frequent hospitalizations and outpatient contacts, few social supports, a higher referral rate for inpatient treatment, and exhibiting a "self-defeating style of seeking and rejecting help" (Bassuk & Schoonover, 1981, p. 184). They go on to note that, above and beyond the problems inherent in the management of these patients, "it is clear that the chaos in the system has contributed to their status as repeaters" (Bassuk & Schoonover, 1981, p. 184).

Identifying Frequent Users of Emergency Services

Who are the repeaters or heavy users of emergency psychiatric services? Many researchers have addressed this specific question. At the Orange County Medical Center in California, Schwartz, Weiss, and Miner (1972) studied a sample of 552 admissions to the Emergency Admitting Unit, the holding unit component of the emergency service. Of the 552 patients, 67 had more than one visit over the four months studied, 40% of these had the second admission within a month of the first, and an "appreciable number" had a second admission within days. While the percentage of patients diagnosed as schizophrenic or neurotic did not differ between the single-visit group and the multiple-visit group, there were significantly more patients diagnosed as having a personality disorder and/or substance abuse problem in the repeater group.

Raphling and Lion (1970), in a primarily descriptive paper on frequent users of emergency services, discussed in some detail the characteristics of 15 patients whom they had identified as frequent visitors to the Acute Psychiatric Service at Massachusetts General Hospital. All 15 patients were diagnosed as having borderline personality disorders, although two had been labelled psychopathic on at least one visit, and five had also been diagnosed as chronic schizophrenics. These patients tended to be demanding, provocative, manipulative, hostile, and threatening. Each had made at least one threat of suicide or homicide within

the course of their visits to the service. Five patients who were in ongoing therapy used the emergency service in times of crisis in their treatments, but the majority were unable to engage in ongoing treatment and used the emergency room as their primary treatment facility in time of need. Interestingly enough, the authors found that those patients in their sample who were engaged in ongoing treatment used the service as frequently as those who were without a current therapeutic relationship.

As in other studies, Raphling and Lion found that these repeated users frequently did not keep appointments, displayed a marked disorganization of ego functions and poor frustration tolerance, and had chaotic and chronically disturbed lifestyles. The authors hypothesized that (a) because of their fear of close personal relations, these patients could better tolerate the impersonality of the emergency room, and (b) the emergency room provided the external controls and reality testing that allowed them to reorganize in times of crisis.

Ellison, Blum, and Barsky (1989) compared a group of 62 frequent repeaters at the emergency service of the Massachusetts General Hospital with a group of 62 controls. Frequent repeaters were defined as those patients who made six or more visits to the service in the course of six months. The control group was comprised of randomly selected single-episode visitors to the service within that same time period.

The group of frequent repeaters tended to have more past hospitalizations and a larger percentage of individuals with substance abuse problems (26% vs. 12% of the controls). Their visits were more often characterized by homicidal ideation, self-injury, and intoxication, and often were precipitated by the absence or vacation of their therapists. In terms of statistically significant findings, repeaters were more often in concurrent treatment, were more often self-referred, and their visits more often resulted in disposition to outpatient treatment. Individuals with diagnoses of schizophrenia, alcohol abuse and borderline personality disorder represented significantly larger proportions of the repeater group. Furthermore, 66% of the repeaters reported symptoms of anxiety versus 35% of the controls, another highly significant difference.

Ellison et al. (1989) focussed on the prominence of symptoms of anxiety and impulsivity in the repeater group and suggested that emergency services may play a crucial role in stabilization: in contrast to more destructive means of discharging unmanageable anxiety (e.g., substance abuse or self-injury), the visit to the emergency service could be seen as a more constructive way of dealing with intolerable affect.

Bassuk and Gerson (1980) examined a sample of 307 patients seen at the psychiatric emergency service of Beth Israel Hospital in Boston. Of these 307 patients, 50 who had been seen by the service more than once in the previous

12 months were defined as repeaters. Diagnoses of psychoses accounted for half of the repeater group and character disorders for the other half (compared with the control group's being comprised of one-third and one-third of these two diagnostic groups respectively). More repeaters than controls were in current outpatient treatment, and more repeaters had a history of previous inpatient treatment. Of all patients in the sample who had previous hospitalizations, repeaters had a significantly greater number of inpatient episodes. The social supports for the repeaters were significantly more sparse (84% arrived at the emergency room unaccompanied vs. 39% of the controls), and repeaters were rated by the staff as significantly more hostile, suspicious, and uncooperative. Furthermore, ratings of psychopathology (Brief Psychiatric Rating Scale) and functional impairment (Global Assessment Scale) were significantly more severe for the repeater group.

Although the repeaters and non-repeaters did not differ significantly in the degree of psychotic, suicidal, homicidal, anxious, or depressive symptoms they presented, a significantly larger proportion of repeaters (52%) was referred for inpatient treatment than was true of non-repeaters (34%). The authors attributed this latter finding to the fact that the repeaters as a group tended to elicit more negative reactions from the clinician, that their support systems were minimal, and that they failed to

establish adequate rapport with the mental health professional. Bassuk and Gerson (1980) note that

> this disengagement is an expectable part of the behavior of some patients when involved in treatment. It partially reflects their incapacity to negotiate a comfortable distance without feeling isolated or a reasonable closeness without feeling engulfed. They are unable to tolerate the limits of a relationship and defend against it by seeking an alternative source of support, again repeating the cycle. (p. 1515)

The authors point out that these patients use multiple entry points to the system simultaneously as a means of coping with their intolerable ambivalence, which only serves to further sabotage their treatment.

Perez, Minoletti, J. Blouin, and A. Blouin (1986) studied a sample of 913 patients seen in the course of one year at the psychiatric emergency service at Ottawa Civic Hospital. In the overall sample, 69% of the patients were 39 years old or younger, and 82% of these were between the ages of 20 and 39. Of the 913 patients, 38% had had one or more visits to the emergency service in the six months preceding the study period. The researchers found the repeaters more likely to be single, to be self-referred, and to have a history of previous or current treatment. Repeaters, as compared with controls, were significantly more frequently diagnosed as having schizophrenia or personality disorders, although affective disorders accounted for 34% of the repeater group.

In comparing repeaters with non-repeaters within specific diagnostic categories, Perez et al. found that

schizophrenic repeaters tended to be younger, were less likely to be employed, and were less likely to establish rapport with the clinician. Among those individuals diagnosed as having personality disorders, repeaters were younger, tended to arrive at the emergency room unaccompanied, and were more often dissatisfied with the care received. Among those with affective disorders, repeaters were more likely to be referred for hospitalization and were more likely to comply with outpatient follow-up. (It should be noted that in the entire sample of 913, only 22% of all patients with affective disorders had major affective disorders, while 78% had dysthymic disorders.)

The authors noted that overall the repeaters tended to be chronic patients with limited social networks and minimal stress tolerance. They also noted that the subgroup of 81 patients diagnosed as having schizophrenia or personality disorders who had two or more repeat visits to the emergency service most closely resembled the young adult chronic patient described in the literature, including being unemployed and having particular difficulty establishing rapport with the emergency room therapist. These authors as well stress the need for specialized programs to deal effectively with this population.

Ellison, Blum, and Barsky (1986), in a review of previous studies of repeat users of emergency services (including some of the studies noted above), characterize

repeaters as being those patients most likely to (a) lack social supports, (b) have a history of prior and/or current treatment, (c) be suffering from a chronic mental illness, and (d) carry a more serious diagnosis. These authors hypothesize that there may be three distinct groups of repeated users, each characterized by a specific set of treatment needs: one may use the emergency service as a means of dealing with treatment-related crises, thereby making ongoing treatment bearable; another group may use the emergency service as their sole support during a time-limited crisis; and a third may find the emergency service the only acceptable or tolerable form of treatment.

Clinical Characteristics of Heavy Users of Inpatient and Emergency Services

The basic question underlying the research presented thus far is to what extent a population of psychiatric patients traditionally treated for long periods of time in inpatient settings can be adequately cared for in the community. We have seen that there is a great deal of evidence that deinstitutionalization has not worked for a substantial proportion of these patients and that emergency services, in their frequent role as the treatment of last resort, have themselves become overwhelmed. If the shift to community treatment has not worked for many patients, is it because there are certain mental illnesses that inevitably require long-term inpatient treatment, or is it because the

appropriate community-based services are either not available or not effective?

The studies of heavy users of inpatient services and of repeated users of emergency services have provided evidence that these two populations are similar in many respects. In terms of clinical characteristics, these repeater populations are comprised primarily of individuals with recurrent psychotic disorders, severe personality disorders, and/or histories of substance abuse; the most common presenting symptoms tend to be psychosis, suicidal acts or threats, or unmanageable anxiety or depression.

Recurrent Episodes of Psychosis

Schizophrenia. There are several mental illnesses associated with periodic episodes of psychotic symptoms. The most disabling of these is schizophrenia. Patients with schizophrenia use a disproportionate share of medical and psychiatric services. Schizophrenics 65 years of age or older use a disproportionate share of psychiatric hospital days, especially in state facilities, while those between 25-44 years of age have the highest rate of acute hospital episodes. Furthermore, schizophrenia is the most frequent or second most frequent diagnosis at the time of inpatient admission (Black, Yates, & Andreasen, 1988). With good outpatient follow-up and treatment with neuroleptic medication, only 10-15% of patients with schizophrenia relapse within a year; without such treatment, the relapse rate for the same time period is 65-70%. Thirty to forty

percent of schizophrenics tend to function at a level of "stable chronicity" over time, that is, they experience persistent symptoms but are able to be maintained in the community for long periods. As many as 10% of patients with schizophrenia, however, require continuous hospitalization (Lehmann & Cancro, 1985).

Breier, Schreiber, Dyer, and Pickar (1991), in a two- to twelve-year follow-up of 58 schizophrenics found that only 20% had a good outcome. Over the follow-up period, 78% suffered a relapse, 38% attempted suicide, and 24% experienced episodes of major affective illness. These authors write that in studies with longer follow-up, results over time tend to be better and attribute this to the fact that schizophrenia may involve three phases of the illness: an early stage, during which there is a steadily deteriorating course; a middle stage, which occurs 10-15 years into the illness and during which functioning is relatively stable, though at an impaired level; and a later stage in which there is some gradual though moderate improvement (usually at the age of 50 or 60). The heterogeneity in outcome observed across numerous studies may be related to variables such as the stage of the illness and the length of follow-up.

Black et al. (1988) state that the five most powerful predictors of poor outcome are: social isolation, long duration of episodes, a history of past psychiatric treatment, being unmarried, and a history of behavioral

problems in childhood (e.g., truancy or tantrums). Indications of a better prognosis tend to be: a more acute onset, better premorbid adjustment, the presence of an affective component of the illness, and compliance with medication (Lehmann & Cancro, 1985). These authors state that with good treatment compliance, 60% of schizophrenics can be maintained successfully at some level of stability.

McGlashan (1988), in a review of ten studies of the long-term course and outcome of schizophrenia, concluded that: schizophrenia is a chronic disease, frequently disabling for a lifetime; the average outcome is worse than for any other major mental illness; there is an increased risk of suicide, physical illness and mortality; that it does not have a continuously declining course, but tends to plateau about five to ten years into the illness; outcome is heterogeneous; and "long-term followup studies have yet to demonstrate clearly the effects of treatment on the natural history of schizophrenia" (p. 531).

Major affective disorders. Major affective (bipolar and unipolar depressive) disorders comprise another large segment of those mental illnesses that are characterized by recurrent episodes of psychotic symptoms. Although these disorders, as in the case of schizophrenia, are usually of lifelong duration, their overall outcomes tend to be better and their long-term effects less disabling.

For those individuals with unipolar depression, the effects of the illness can be quite severe. The recovery

period from an episode of major depression can be very long--sometimes up to a year for all the symptoms to clear (Keller & Shapiro, 1981)--and the risk of relapse is very high. Favarelli, Ambonetti, Pallanti, and Pazzagli (1986) in a one-year follow-up of recovered patients found that one half had relapsed within the year. Keller, Shapiro, Lavori, and Wolfe (1982) found that 24% of their sample of 75 patients with a major depressive disorder relapsed within 12 weeks of recovery; 12% relapsed within 4 weeks. These researchers found that an underlying clinical depression and three or more previous affective episodes were significant predictors of an increase in the rate of relapse.

In a one-year follow-up of 101 patients with a major depressive disorder, Keller and Shapiro (1981) found that 74% had recovered within the year, but that 36% of these had subsequent affective episodes, and 60% had at least some affective symptoms within the year. Of the 26% that had not fully recovered within the year follow-up, over one half (representing 16% of the overall sample) were not able to sustain even a partial remission. Only 30% of the entire sample recovered and remained symptom-free for one year.

Several researchers (Faravelli et al., 1986; Keller, Lavori, Endicott, Coryell, & Klerman, 1983; Keller & Shapiro, 1982) have found that an acute episode of major depression superimposed on an underlying depression (e.g., long-standing dysthymia, residual symptoms from a previous episode, or personality pathology with

predominantly depressive features) increases the risk of chronicity and treatment resistance. This so-called "double depression", which increases relapse rates and decreases chances for complete recovery, may account for the high rates of chronicity (15-25%) in this illness.

Patients with bipolar disorders tend to have substantially higher relapse rates than patients with unipolar depressions; though their episodes tend to be shorter, they are usually more frequent (Lehmann, 1985). Joyce (1985), in a one-year follow-up of 50 patients hospitalized for a bipolar episode, found that 36 out of the 50 (72%) were readmitted within the year. He further found that those who were rehospitalized had a history of more past hospitalizations, were less able to recognize and respond to early symptoms of the illness, and were less accepting of medication. The author did not specify whether the patients in the overall sample were hospitalized for a manic or for a depressive episode.

Keller et al. (1986) examined the prognostic importance of the type of presenting episode in a sample of 155 bipolar patients participating in a National Institute of Mental Health (NIMH) study of depression. The patients came from a variety of treatment settings, both inpatient and outpatient. The episodes were grouped as to whether they were pure manic, pure depressive, or mixed/cycling. Based on an 18-month follow-up, they found that the probability of remaining ill for at least one year was 7% for those

patients who had presented with a pure manic episode, 32% for those with a mixed/cycling episode, and 22% for those with a purely depressive episode. This rate of chronicity for those with the purely depressive episode was very similar to the chronicity rate for unipolar depressed patients who participated in another segment of the NIMH study (21%).

Using a sample of 559 patients from the same NIMH study, Coryell et al. (1989) examined differences in outcome over a five-year period for three groups of patients. Although all the patients had entered treatment with a major depressive episode, the authors subtyped them as unipolar, bipolar type I, or bipolar type II disorders based on past history. The researchers found that the two bipolar groups had substantially higher relapse rates than the unipolar group. Bipolar II disorders had no fewer affective episodes than the bipolar I disorders over the five-year follow-up.

A particularly interesting finding was that, episodes of mania or hypomania aside, both groups of bipolar disorders had more episodes of major depression than did the group of unipolar disorders. They also found that all three groups tended to recover from their depressive episodes at the same average speed, that over follow-up there were no apparent differences among the groups in psychosocial impairment, and that while none of the groups displayed a clear downward trend, neither was there a clear tendency to improve over the follow-up period. Coryell et al. go on to

note that no group was more likely than the other to need hospitalization, require somatic therapy, display psychotic features, or be more incapacitated.

Schizoaffective disorders. Although there is still debate as to whether schizoaffective disorder warrants a separate, discrete diagnosis or whether it represents another form of schizophrenia or of affective illness (Harrow & Grossman, 1984), most studies of chronic illnesses treat it as a separate disorder.

Outcome measures for those patients suffering from schizoaffective disorders consistently indicate that the level of impairment of these individuals falls between that of schizophrenics and that of those with affective disorders (Samson, Simpson, & Tsuang, 1988). In a recent article reviewing past studies of this disorder, Samson et al. summarized the diagnostic characteristics of this illness: (a) the presence of symptoms resembling both schizophrenia and affective disorders, (b) an acute onset with evidence of confusion and disorientation, (c) evidence of good premorbid functioning, (d) the presence of an identifiable precipitant, and (e) a course characterized by brief duration of the episode and remission to premorbid level of functioning.

The authors note that while rates of recovery from a schizoaffective episode range from 50-83% depending on length of follow-up (shorter term follow-ups tend to show higher rates of recovery), 25% of these patients go on to a

deteriorating course. The average patient with a schizoaffective disorder spends 20% of his lifetime in the hospital or suffering from episodes of illness. The median number of episodes over 25 years was found to be 6.7. In measures of course of symptoms, schizoaffectives tend to resemble those patients with affective disorders. In terms of social and occupational functioning, the outcome is heterogeneous, some patients more closely resembling schizophrenics, some resembling those with affective disorders.

Suicidal Symptoms

The fact that suicidal acts or ideation are a common presenting problem with the heavy-user population is not surprising since suicide risk is a phenomenon common to many psychiatric illnesses. It has been estimated that over 90% of the completed suicides in the general population have involved individuals with a psychiatric disorder. Individuals with affective disorders, primarily major depression, have been found to comprise 40-80% of completed suicides; an estimated 15% of patients with depressive illnesses die by suicide. Alcoholism has been found to account for 20-30% of all completed suicides, and 7% of alcoholic psychiatric patients commit suicide within five years of discharge from their last psychiatric admission. The lifelong suicide rate for all alcoholics is estimated to be 15%.

Ten to fifteen percent of schizophrenics die by suicide. Young males in the early stages of their illness are at the highest risk. Depressive rather than psychotic symptoms are most closely associated with suicide in the schizophrenic population, and the completed act often follows soon after discharge from inpatient treatment.

Personality disorders are also associated with high suicide risk. This may be either because these disorders in themselves predispose the individual to depression or substance abuse or because these disorders make it more difficult for the individual to cope with concomitant disorders such as depression or substance abuse. Those with personality disorders may also be at higher risk for suicide because of the conflictual interpersonal relationships and vulnerability to loss that characterize their functioning.

> Comparisons of people who have made suicide attempts with those who have completed suicide reveal a lower incidence of psychosis and a higher incidence of personality disorders with transient situational disturbances in the former group. The personality traits noted commonly among attempters include immaturity, egocentricity, dependency, anxiety, low tolerance for frustration, and impulsivity. (Stevenson, 1988, p. 1032)

Among all psychiatric patients, "psychiatric and social risk factors for suicide include a past suicide attempt, suffering with a chronic psychiatric disorder, a recent admission, living alone, being unemployed, being unmarried, and being liable to develop a depressive episode" (Roy, 1985, p. 238).

In terms of suicide risk among heavy users of emergency services, there is one study of particular interest. Hillard, Ramm, Zung, and Holland (1983) in a study of 5284 patients followed over a seven-year period reported on 22 completed suicides. The researchers identified two groups at risk for suicide: one, patients with either depressive disorders, schizophrenia, or substance abuse; the other, patients who had made repeated visits to the emergency room.

Substance Abuse as a Concurrent Diagnosis

Substance abuse, in addition to playing a critical role in the risk for suicide, is also a major factor in determining the course and outcome of various psychiatric disorders. Compared to other psychiatric patients of similar age, gender, and socioeconomic status, those patients with concurrent substance abuse problems display more social disability, have more problems with impulsivity, tend to be less compliant with treatment, and have poorer prognoses (Mirin & Weiss, 1991) Among inpatients with a variety of psychiatric diagnoses, the prevalence of substance abuse problems ranges from 18-50%. Caton, Gralnick, Bender, and Simon (1989) examined a sample of 100 consecutive admissions of adolescents and young adults to a long-term private hospital. The patients ranged in age from 12 to 35, with a median age of 18. Thirty-seven percent of the sample were diagnosed as depressive disorders and 21% as schizophrenic or schizoaffective. These researchers found

that 51% of the patients received an additional diagnosis of substance abuse.

Studies of the severely mentally ill population have found high rates of substance abuse (25-75%), with the highest rates being among the younger patients and those who are frequently rehospitalized. Substance abuse among the chronically ill is associated with exacerbations of their illness and frequent episodes of disruptive behavior. Mentally ill substance abusers have trouble managing the practical aspects of their lives, maintaining stable housing, and avoiding institutionalization.

Drake and Wallach (1989) studied a sample of 187 patients discharged to outpatient care from Metropolitan State Hospital in Waltham, Massachusetts. The patients ranged in age from 20 to 65, with a mean age of 40. They carried diagnoses of schizophrenia, schizoaffective disorder, bipolar disorder, and personality disorders. One third of these patients had problems with drug and/or alcohol abuse. Over the course of a one-year follow-up, the researchers found that the patients who carried dual diagnoses were less able to care for themselves, were more vulnerable to homelessness, were more likely to be noncompliant with medication, and overall were found to be more hostile, more suicidal, more prone to episodes of disruptive behavior, and extremely vulnerable to rehospitalization.

Given the clinical and diagnostic characteristics of those patients who comprise the populations of heavy users of inpatient and emergency services, it is not surprising that community-based treatment facilities have been only minimally successful in the management and treatment of these individuals. It is easy to see how emergency services have come to play such a critical role in the chronically unstable lives of these patients and how it is unlikely that the burden on these services will ease appreciably in the foreseeable future.

Mobile Psychiatric Services

While much has been written about the heavy users of emergency services in general, there is little research specifically focussing on mobile emergency treatment services. There are several studies of a primarily descriptive nature of various types of mobile or home treatment services (Delaney, Seidman, & Willis, 1978; Goldberg, 1973; Hatch & Schut, 1980; Perry, 1963; Ruiz, Vazquez, W., & Vazquez, K., 1973; Tufnell, Bouras, Watson & Brough, 1985), but few researchers have examined in detail the diagnostic and clinical characteristics of the patients served or the differing patterns of utilization among various subgroups.

Home Treatment Services

There is evidence that home treatment of the severely and chronically mentally ill can be effective. In an article about the Home Treatment Service of Boston State

Hospital, Meyer, Schiff, and Becker (1967) described a sample of 154 patients diagnosed as functional psychotics at initial evaluation. These referrals had come from a variety of sources, including families, medical personnel, clergy, and other community agencies. Of the 154 patients, 40% had no history of prior psychiatric hospitalizations, 26% had one prior hospitalization, and 35% had two or more.

Of the initial sample of 154 cases, 23 (15%) were hospitalized, 12 (8%) were referred elsewhere or did not receive any further services, and 119 (77%) were followed up by the Home Treatment Service (HTS). Of the 119 followed by the HTS, 36 (30%) ultimately required hospitalization (bringing the hospitalization rate for the entire sample of 154 to 38%), but 83 (70%) were able to be maintained in the community. It is important to note that the HTS was a long-term treatment service: 38% of the 119 were treated continuously for more than one year, 34% for from 4 to 11 months, and 28% for less than 4 months.

Ninety-eight of the 119 patients treated by the HTS were interviewed for a follow-up evaluation 1 1/2 to 3 years after intake. Of the 98 available for follow-up, 81 had been terminated by the service, but 28 of these (35%) had suffered a recurrence of symptoms between termination and follow-up. The HTS was contacted again in 16 of these 28 cases and was able to prevent hospitalization 87% of the time. In those cases where HTS was not contacted, hospitalization was avoided only 50% of the time.

In an earlier study of another phase of this same Home Treatment Service (Friedman, Becker, & Weiner, 1964), the overall hospitalization rate was roughly the same (40%) as in the later study. The earlier study involved 93 patients, roughly half of whom were diagnosed as psychotic, the other half either severe character disorders or "incapacitated neurotics." Forty-three percent of the sample had a history of one prior hospitalization, and 20% had been hospitalized two or more times; 26% of the sample had no prior history of any kind of psychiatric treatment. The researchers found that 50% of the psychotic patients in the sample received ten or more visits from the team, whereas only 29% of the nonpsychotic patients received as many visits.

In terms of outcome, in addition to the 40% hospitalized already noted, the authors felt that 30% of the patients in the overall sample were hospital-bound but were able to be maintained in the community, and that the remaining 30% for whom inpatient treatment was averted were not hospital-bound to begin with.

One of the questions these researchers raised was whether or not the 30% felt to be hospital-bound but treated in the community had really been at risk for hospitalization. In order to study this question more fully, they obtained a sample of patients who were already at the admitting room of Boston State Hospital. Of 50 cases deemed appropriate for home treatment, half were randomly assigned to the HTS and half were admitted to the hospital.

The researchers found that all of the experimental cases (HTS treatment) ultimately required hospitalization, and they concluded that it is virtually impossible to avert hospitalization once the patient has arrived at the admitting office.

In contrast to these findings, Langsley and his associates concluded that home treatment could be a very effective alternative to hospitalization, even when the patient had already presented for admission (Langsley, Flomenhaft, & Michotka, 1969; Langsley, Michotka, & Flomenhaft, 1971; Langsley, Pittman, Michotka, & Flomenhaft, 1968). Their random sample of 300 was drawn from patients already admitted to Colorado Psychiatric Hospital. One hundred fifty of these patients (experimentals) were assigned to the Family Treatment Unit, and the other 150 (controls) were admitted to the inpatient unit. The two groups did not differ significantly on any demographic variables recorded, nor did they differ significantly as to diagnosis, suicidality, or number of prior hospitalizations or outpatient psychiatric contacts.

The experimental group received Family Crisis Therapy (FCT), which lasted an average of 3 weeks and consisted (on average) of 4.2 office visits, 1.3 home visits, 5.4 telephone calls, and 1.2 collateral contacts with social agencies. Hospitalization was able to be avoided in all the experimental cases. For controls, the average length of stay in the hospital was 28.6 days.

At six-month follow-up of the first 75 cases in each group, the researchers found that 21% of the controls had been readmitted and 19% of those treated with FCT had required hospital admission (Langsley et al., 1968). The authors concluded from this that the initial hospitalization had indeed been avoided and not just postponed for the experimental group. They further noted that 81% of the FCT cases did not require hospitalization either during the initial episode or within the six-month follow-up period. They also found that the controls spent three times longer in the hospital than did the experimentals during the six-month follow-up, and that rating scales of social adjustment and overall functioning did not reveal any significant differences between the two groups either at the start of the study or at follow-up.

The six-month follow-up for the total sample (150 controls, 150 experimentals) came up with virtually identical results (Langsley et al., 1969). At 18-month follow-up, the differences between the two groups in terms of need for hospitalization and total hospital days were somewhat smaller but still in favor of the experimental group (Langsley et al., 1971). The authors concluded that, overall, those patients treated with Family Crisis Therapy are less likely to require hospitalization post-treatment and spend less time in the hospital than the controls.

While these studies of both the Home Treatment Service at Boston State Hospital and the Family Treatment Unit of

Colorado Psychiatric Hospital point to the efficacy of home treatment for some severely ill individuals, they leave several questions unanswered.

First, these are studies of home treatment services, not mobile emergency teams, and it is unclear to what extent these findings are applicable to the latter. The HTS, for instance, provided much longer-term treatment than would be possible with an emergency service, and though there was mention of a subgroup of patients who recontacted HTS after termination, the characteristics of repeated users of the service were not specified.

The Family Treatment Unit provided shorter-term, crisis-oriented treatment, but all the individuals in the study were living at home and had strong support systems. Langsley and his associates also did not discuss disposition at termination (e.g., were these patients referred for ongoing outpatient treatment?), specifics of past inpatient and/or outpatient treatment (or concurrent treatment), or the proportions of specific diagnoses represented in the sample. Furthermore, the researchers did not address the issue of repeat users, if any, and the length of time between termination of treatment and the need for hospitalization.

Mobile Emergency Services

There are a few studies which examine more specifically the populations served and patterns of utilization of mobile emergency psychiatric services. Gillig, Dumaine, and

Hillard (1990) compared 100 consecutive visits made by a mobile crisis service over a five-month period with a random sample of 100 patients seen in the hospital-based emergency room of the same service. A team of two social workers made the home visits and consulted by phone if necessary with the attending physician at the hospital-based service. The researchers found that the mobile team saw a significantly older population and significantly more patients with major mental disorders such as psychoses, affective disorders, and organic mental disorders. Three times as many referrals from family members were seen by the mobile team (45%) as compared with the hospital-based service. Of the patients seen by the mobile team, 39% had refused to come to the emergency service, 37% did not realize they needed help, 9% were experiencing a crisis at home or in the community, 5% did not keep appointments, 5% were seen as a follow-up to a hospital visit, and 5% were housebound for either psychiatric or other reasons.

According to Global Assessment Scale (GAS) ratings, there was no significant difference in impairment between those patients seen by the mobile team and those seen at the hospital emergency service. Rates of hospitalization for the two groups were not significantly different.

The Gillig et al. study did not address the issue of repeat users of the service. The study design had specifically excluded those patients seen more than once;

the authors note, hoevever, that no such patients were encountered during the sample selection.

Steer, Diamond, Litwok, and Henry (1979) examined the mobile component of an emergency service based in a large municipal general hospital.

> The primary goals of the service were to evaluate and stabilize emergent or full-blown crises and to arrange for the further treatment or management of patients and their families. Although the prevention of unnecessary hospitalization was always attempted, it was considered a secondary goal. (Steer et al., 1979, p. 215)

The team consisted of a Navy psychiatric corpsman and a registered psychiatric nurse. A physician participated in the home visits on an as-needed basis. The sample consisted of the 442 patients seen by the mobile team from 1973 to 1976. The mean age of the patients was 42, only 22% of the total sample were married, and 93% were unemployed. Twenty-nine percent were referred by family members, and 53% were referred by another program of the same community mental health center of which the mobile team was a part.

The reasons for the initial visit (as described by the team members) were: 21% were violent, 26% were bizarre, 24% presented thought disturbances, and 29% were for other reasons (e.g., drug abuse, phobic reactions). Fifty-four percent of the patients seen were diagnosed as schizophrenic, but proportions of the sample represented by other diagnoses (depressive neuroses, anxiety reactions, drug addiction, alcoholism, and situational disturbances) were not specified. Sixty percent had no prior history of

hospitalizations, but 43% were currently registered in another program of the mental health center. Of all patients seen, 34% were subsequently hospitalized by the team.

Of the 442 patients in the total sample, 153 (35%) had to be seen again. The mean number of repeat visits was 1.57. Only one of the ten variables coded, "reason for first visit", was significantly related to the number of repeat visits: patients displaying bizarre behavior were more likely to require subsequent visits. No mention is made of length of time between visits, therefore it is unclear whether the repeat visits made to a given patient were treatment for the same or for a new episode of crisis. The researchers concluded that "a potential exists for the creation of a separate, recidivistic psychiatric population that uses mobile psychiatric home visiting as its primary treatment source" (Steer et al., 1979, p. 217).

A study by West, Litwok, Oberlander, and Martin (1980) of an Emergency Psychiatric Home Visiting Team more specifically addressed the issue of repeat users of such a service. The mobile team studied was attached to a psychiatric emergency service at Philadelphia General Hospital. The team was staffed by a B.S.-level social worker, a psychiatric nurse, and a psychiatrist. The nurse and social worker as a team made most of the home visits, and the psychiatrist participated when needed. Possible outcomes of visits were (a) recommendation for

hospitalization, (b) referral to an outpatient service, or (c) follow-up by the home visiting team.

The sample was of 624 home visits made over a period of four years (1973 through 1976). The patient group was divided into those seen for a single episode and those seen for multiple episodes. An episode might be comprised of several subsequent visits, but discrete episodes by definition were at least a month apart. Data from first visits only were used, giving a final count of 337 single-episode patients and 106 multiple-episode patients.

The mean age of the total sample was 41.6 years, patients were most often referred for psychotic behavior (50%), and the most frequent diagnosis was schizophrenia (54%). Multiple-episode patients had from 2 to 11 visits per patient, were significantly more likely than single-episode patients to have psychotic behavior as the reason for the initial visit, were significantly more likely to be diagnosed as schizophrenic, and were more likely to have "home visiting team prn" as a disposition.

The single-episode and multiple-episode groups did not differ significantly in age, gender, marital status, employment, or source of referral. The hospitalization rate for the total sample was 34%, and the proportion referred for outpatient treatment was 36%. The authors did not make mention of differences, if any, in hospitalization rates between the two groups. Suicidal behavior or threats as the reason for the initial visit was seen only in the single

episode group and represented only a small proportion of those patients (6%).

West et al. (1980) noted that

> the majority of the patients seen by the team were not patients in acute situational crisis, but were chronic patients with severe pathology exhibiting behavior which was dangerous or socially unacceptable. This was even more likely to be the case in patients seen for multiple episodes. (p. 115)

The authors went on to say that "the team served 2 unanticipated functions: 1) facilitating hospitalization and 2) serving as the primary psychiatric care provider for a subgroup of patients requiring visits for multiple episodes of symptoms" (West et al., 1980, p. 115). These were patients who in most cases were unlikely to seek follow-up treatment and did not qualify for or refused hospitalization.

Although the study by West and his associates is of particular interest because of the researchers' distinction between number of visits and number of episodes and their comparisons of patients in terms of single-episode and repeated users, they did not address the issue of what particular variables would best predict the occurrence of a subsequent treatment episode.

The Current Study: Rationale and Hypotheses

The prediction of subsequent treatment episodes is the problem I intend to address in the current study. The mobile crisis service I will be examining has been described in two previous articles, one detailing the development of a

triage rating scale used by the team in making a rapid assessment of the need for hospitalization (Bengelsdorf, Levy, Emerson, & Barile, 1984), and one a general description of the service's organization and functioning (Bengelsdorf & Alden, 1987).

This crisis service, based in the Westchester County Medical Center and serving all of Westchester County, New York, most closely resembles the service described in the West et al. study, but with some important differences. The Westchester crisis service has a much larger staff (some 30 professionals, roughly a third of them psychiatrists), and a psychiatrist participates in almost every visit. The primary goal of the service is to prevent hospitalization or, if this is not feasible, to facilitate admissions to various private hospitals in the county, thereby easing the burden on the public institutions. In addition, while the service described by West et al. saw patients only in their homes and only if the patient were informed beforehand, the Westchester service sees patients in a variety of settings and, if someone will give access, will evaluate acute emergencies even if the patient himself is unwilling to be seen.

The facts that the team described by West et al. functioned only on a 9-to-5 basis, saw people only in their homes, and did not have prevention of hospitalization as its primary goal may have contributed to the shaping of what they found to be their repeater population, that is, those

with chronic illnesses (mostly schizophrenia) who were experiencing acute exacerbations of their symptoms and for whom the team became the primary care provider.

The question is to what extent the Westchester mobile team, with its 24-hour availability, its more frequent use of psychiatrists, and its focus on prevention of hospitalization serves a different population, and with what results. More specifically, who are the frequent users of such a service?

In light of the literature reviewed above, my hypotheses are that, at initial presentation for treatment, the significant predictors of the need for subsequent episodes of treatment by this mobile emergency service will be:

(1) a high degree of overall functional impairment (as measured by the Global Assessment Scale),

(2) the presence of psychotic symptoms,

(3) the presence of suicidal symptoms, and/or

(4) the presence of substance abuse.

Chapter II: Method

Description of the Service

The mobile psychiatric crisis intervention service is a 24-hour service based in the emergency room of the Psychiatric Institute of the Westchester County Medical Center in Valhalla, New York. The crisis team serves all of Westchester County and, in addition to the main unit at the Psychiatric Institute, has two satellite units of the service which serve the northern and southeastern portions of the county during the weekday daytime hours.

The crisis service was established in 1979, and its primary mandate is to evaluate and stabilize in the community those individuals who might otherwise require inpatient treatment, thereby easing the burden on the public institutions (including the Medical Center itself) serving the county. The team receives much of its funding from the two state hospitals (Harlem Valley Psychiatric Center and Rockland County Psychiatric Center) in whose catchment areas the county lies, and a substantial amount in addition from the state's Community Support System program. At the time of this study, the population of Westchester County was roughly 870,000, comprised primarily of affluent, well-educated suburbanites. The crisis team, however, tends to serve the less affluent segments of the population who live in the larger cities of the county (Bengelsdorf & Alden, 1987).

The entire team is comprised of some 30 mental health professionals: psychiatrists, psychologists, psychiatric social workers, and psychiatric nurses. The staff works in teams of two, one of whom is usually a psychiatrist, and evaluates patients in the emergency room of the Psychiatric Institute, other local emergency rooms, patients' homes, police stations, or wherever the need arises. The crisis team serves as the screening service for admissions to the Westchester County Medical Center (which, during the course of this study, was the major receiving hospital in the county for acute emergency admissions) but can also arrange or facilitate voluntary or involuntary admissions to other institutions.

Most of the referrals to the crisis service are initiated by phone and come from a variety of sources, for example, patients themselves, family members, friends, treating agencies, police departments, emergency rooms, landlords, and social service agencies. If possible, an extensive amount of information-gathering and evaluation occurs before the first visit. The team will see any case of an acute or emergent nature providing substance abuse is not the sole presenting problem. In cases where the person has made a suicide attempt or gesture, where there is a serious question of medical complications, or where the person is acutely intoxicated, the patient is first referred to the nearest emergency room for medical clearance prior to the team's evaluation.

The team prefers to conduct the initial face-to-face evaluation in the field, but on those occasions when staff availability precludes an out-of-office visit, the patient will come or be brought to the crisis facility. During the initial visit, a determination is made as to whether the patient needs immediate hospitalization, needs to be followed by the crisis team for stabilization, or merely needs referral to another treating or helping agency.

The crisis team is able to follow patients for up to eight sessions if necessary, during which time attempts are made to stabilize the person by means of medication (if needed), conduct therapy sessions with family members (if possible), and involve other agencies when indicated. At the time of termination with the crisis service, the patient is usually referred to a clinic or private therapist (or back to his current therapist) for longer-term follow-up.

Sample Selection

The basic design for this research is that of a retrospective chart review. The charts comprising the sample have all come from the Peekskill satellite unit of the crisis service. This unit serves the northern portion of the county during daytime hours and is usually staffed by 3 full-time and 2 part-time team members. Although the crisis team itself was established in 1979, the Peekskill unit did not open until 1983. Charts of all patients seen in this unit from its opening until the end of 1990 were initially included. The charts were then divided into two

groups, one representing those patients seen for one episode only within that period of time, the other of individuals seen for more than one episode. An episode is defined as the period of time between the initial visit and the final or termination visit. Any one episode, therefore, may be comprised of from one to eight (occasionally more) face-to-face sessions.

In order to eliminate from the group of single-episode charts those cases which might represent individuals just beginning a multi-episode history, a frequency distribution of the typical time elapsed between episodes was run for the group of repeaters. A value two standard deviations above the mean was computed in order to define that interval which would allow for an assumption with 95% certainty that those single-episode clients would not be seen for further episodes. On the basis of this computation, all single episode charts with visits dating after the end of 1987 were eliminated. This initial selection procedure resulted in 186 multiple-episode and 738 single-episode charts.

Excluded from both groups of charts were individuals under the age of 18, cases where the diagnosis was mental retardation or an organic disorder, and cases where there was documentation that the individual had moved away, had died, or for other reasons could not have presented for a repeat episode within the time frame of the study. Also excluded were those cases in which the individual's initial episode with the crisis team occurred at one of the other

two locations of the service. This was done in an attempt to control as much as possible for effects of differences in site and treatment teams.

As only the first episode of treatment was examined in depth, those cases in the repeater group which had later episodes at other sites were included. Excluded from the single episode charts were those individuals discovered to have had subsequent episodes at one of the other team sites. The above exclusions resulted in a final pool of 138 multiple-episode and 421 single-episode charts.

Data Coding

A random sample of 50 charts each from the single and multiple episode groups was selected for the data analysis. For the group of repeaters, while the total number of episodes was recorded, only the first episode was coded in detail as the intention was to explore the issue of whether or not recidivism could be predicted based on the person's initial presentation for treatment. Each chart was coded for the demographic variables of gender, age, marital status, and type of residence. Information on race or ethnicity, level of education, occupation or work history, and socioeconomic status was incomplete in too many of the charts to allow use of these variables.

Clinical and Treatment Variables

The specifics of the crisis team treatment during the initial episode were coded in terms of referral source, site of first visit, first visit and final visit dispositions,

total number of visits (broken down by mobile vs. office visits), length of treatment in weeks, whether medication was prescribed, and whether support system collaterals were present at sessions. Although telephone contacts with patients themselves as well as with their personal and service networks play an important role in crisis team treatment, chart documentation in this area was too uneven to prove useful.

Each chart was coded for presence or absence of: current or past psychiatric treatment (both inpatient and outpatient), current medication, and current or past treatment for substance abuse problems. Whether the person was currently abusing alcohol or drugs, whether he had a past history of such, and presence or absence of psychotic or suicidal symptoms at initial presentation were also recorded.

The individual's DSM-III-R diagnoses (assigned by the treatment team) and total number of episodes were also coded for each chart. Total number of episodes for the group of nonrepeaters was, of course, always "one"; for the repeater group the total number included subsequent episodes at any of the three sites of the team and ranged from two to eight.

The Crisis Triage Rating Scale

In making a determination about the need for hospitalization, the team utilizes a Crisis Triage Rating Scale (CTRS) devised by the service for use in its initial assessment (Bengelsdorf et al., 1984). The triage

instrument rates the level of the patient's dangerousness, support system, and cooperativeness on three Likert-type subscales (range of 1-5) to arrive at a total score which indicates the likely need for hospitalization.

Early trials and subsequent use of the CTRS (as reported by Bengelsdorf et al., 1984) indicated that those individuals with a total score of 8 or lower usually were referred for hospital admission, those with a score of 10 or higher usually were able to be maintained in the community, and those with a score of 9 tended to be evenly divided between the two dispositions. Although there was a high concordance of triage scores with clinical disposition (97%), the statistical significance of this finding could not be evaluated by the authors as the triage score itself is used in the decision-making process about disposition.

For the present study, the total triage score as well as individual subscale scores were recorded for each chart in order to examine the CTRS' usefulness in distinguishing the repeater population.

The Global Assessment Scale

The Global Assessment Scale (GAS) (Endicott, Spitzer, Fleiss, & Cohen, 1976) was used at the time of the coding to assign a rating of overall functioning of the individual at the time of the initial evaluation. For those patients seen for more than one visit during the episode, a GAS score was also assigned based on the person's functioning at the time of disposition.

The GAS is a rating scale that takes into account not only the person's symptoms but also the overall severity of their disturbance in terms of behavioral measures. The scale values range from 1-100 (1 representing the most impaired individual) and are divided into ten equal intervals. Each interval has defining characteristics (e.g., "needs constant supervision for several days to prevent hurting self or others, or makes no attempt to maintain personal hygiene" for the 1-10 range), and scores can be assigned at any point within the interval that best describes the person's functioning.

In five studies of interrater reliability of the GAS conducted by Endicott et al. (1976), the intraclass correlation coefficients ranged from .69 to .91, with a standard error of measurement between 5 and 6. Lower correlation coefficients were associated with those studies involving more homogeneous populations. In terms of validity, the authors report moderate correlations of the GAS with two other measures of overall severity of illness, but stress the GAS' greater sensitivity to change over time (as compared with other measures) and the significant relationship between GAS ratings and probability of rehospitalization (former inpatients in the community with a GAS rating below 40 had a higher probability of readmission than did those who scored 40 or above.)

All coding of the GAS ratings for the current study was done by the author. A subset of 20 charts from the total

sample of 100 was also coded by an independent rater. An interrater agreement of 80% was attained.

Statistical Analyses

Frequency distributions of all variables were run for the entire sample and for each of the two groups. Regression analyses were performed to test the main hypotheses of this study, that is, the significance of Global Assessment Scale ratings and presenting symptoms of psychosis, suicidality, and/or substance abuse in predicting repeated episodes of crisis team treatment. Differences between the single- and multiple-episode groups were examined further by means of chi-square and t-test analyses.

Chapter III: Results

Prediction of Repeater Status

In order to examine the specific hypotheses of this study, a simultaneous multiple regression analysis was run with total number of episodes as the dependent variable and predictor variables of (1) first visit Global Assessment Scale rating and presence or absence of (2) psychosis, (3) suicidal symptoms, and (4) substance abuse. While the overall equation was significant ($F = 2.97$, $df = 4,95$, $p < .05$), none of the predictor variables by itself accounted for a significant amount of the variance (Table 1).

An additional regression analysis was performed using just the three predictor variables of psychosis, suicidality, and substance abuse (Table 1). The equation was again significant ($F = 3.67$, $df = 3,96$, $p < .05$), and in this instance the variable of presence or absence of psychotic symptoms itself made a significant contribution ($t = 2.76$, $p < .01$). The variable of substance abuse made the next most important contribution but did not reach significance ($t = 1.96$, sig. = .053).

Since the repeater population of emergency services is assumed to be similar to that of the recidivist inpatient population, whether or not the person had a past history of hospitalizations was entered as another predictor variable along with psychosis, suicidality, and substance abuse (Table 1). Again the overall equation was significant

Table 1

Simultaneous Multiple Regression Analyses

Predicting Total Number of Episodes

Variable Entered	Beta	Partial Corr	T	Sig T
GAS Rating	-.121398	-.096451	-.944	.3473
Suicidality	-.070121	-.065217	-.637	.5257
Substance Abuse	.184839	.172845	1.710	.0905
Psychosis	.199874	.149175	1.470	.1447

F(4,95) = 2.97174 Sig. F = .0232*

Variable Entered	Beta	Partial Corr	T	Sig T
Psychosis	.283682	.270821	2.757	.0070**
Substance Abuse	.206607	.195961	1.958	.0531
Suicidality	-.057497	-.053659	-.527	.5997

F(3,96) = 3.66909 Sig. F = .0149*

Variable Entered	Beta	Partial Corr	T	Sig T
Past Inpatient	.181165	.186545	1.851	.0673
Suicidality	-.053287	-.050616	-.494	.6225
Psychosis	.253248	.244688	2.460	.0157*
Substance Abuse	.173161	.165650	1.637	.1049

F(4,95) = 3.67760 Sig. F = .0079**

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

(F = 3.68, df = 4,95, p < .01), but again only presence or absence of psychotic symptoms made a significant contribution (t = 2.46, p < .05). Past hospitalizations was the next most powerful predictor, but its contribution did not reach significance (t = 1.85, sig. = .067).

The fact that all the predictor variables (with the exception of the GAS rating) are dichotomous variables may in part account for the modest findings in terms of significant contributions of individual predictors.

In light of these analyses, the hypotheses that first-visit Global Assessment Scale ratings and presence of suicidal symptoms and substance abuse would be significant predictors of subsequent episodes of treatment were not confirmed. The hypothesis that presence of psychotic symptoms at initial presentation would be a significant predictor of repeated treatment episodes was confirmed in two of the three regression equations.

Repeater/Nonrepeater Group Comparisons

Demographic Variables

Frequency distributions for the total sample as well as for the two groups (repeaters/nonrepeaters) for the variables of gender, age, marital status, and housing are displayed in Table 2.

There are slightly more females (58%) in the overall sample, and this pattern holds true for the two groups as well. This is in keeping with the consistent finding that overall more females than males utilize emergency

Table 2

Repeater/Nonrepeater Group Comparisons:

Demographic Variables

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Gender						
Male	42	(42.0)	23	(46.0)	19	(38.0)
Female	58	(58.0)	27	(54.0)	31	(62.0)
			x^2 = 0.37, df = 1, n.s.			
Marital Status[a]						
Single	41	(50.6)	25	(61.0)	16	(40.0)
Married	24	(29.6)	10	(24.4)	14	(35.0)
Other[b]	16	(19.8)	6	(14.6)	10	(25.0)
			x^2 = 3.63, df = 2, n.s.			
Housing[c]						
Homeless	5	(5.3)	0	(0.0)	5	(10.6)
With Family	40	(42.6)	26	(55.3)	14	(29.8)
Independent	40	(42.6)	15	(31.9)	25	(53.2)
Other[d]	9	(9.6)	6	(12.8)	3	(6.4)
			x^2 = 12.1, df = 3, p <.01			
Age						
Mean	37.4		37.3		37.5	
SD	16.2		17.1		15.4	
Median	32.0		31.5		34.0	
			t = 0.06, df = 98, n.s.			

[a]19 cases had missing data. [b]Divorced, separated, widowed. [c]6 cases had missing data. [d]Boarding house, adult home, nursing home, residential treatment facility.

services (Ellison et al., 1986). The single-episode group displays the largest gender discrepancy (62% females vs. 38% males), but the differences between the two groups did not reach statistical significance.

The mean age of the overall sample is 37.4 years, and ages range from 18 to 88 years. The mean ages for the two groups are virtually identical to that of the total sample.

In terms of marital status, individuals who are single account for the largest proportion (51%) of the overall sample. This is also true for each of the two groups, but repeaters have the larger proportion (61%) of single individuals. The differences between the two groups, however, were not statistically significant.

Housing is the only demographic variable in which there is a significant difference between the repeat- and single-episode groups. In the total sample, 85% of the cases fall within the two categories "living in the house of a family member, friend, or significant other" (family members account for the overwhelming majority of these cases) and "living in ones own house or apartment". While for the total sample such cases are evenly divided between these two categories, the groups of repeaters and nonrepeaters display opposite patterns. Those individuals in the repeater group are more likely to reside with family, while the single-episode people more often live in their own homes.

There are surprisingly few cases of homeless individuals (n = 5) in the total sample. This may be due in

part to the fact that there are relatively few shelters for the homeless in the northern part of the county. One possible explanation for the fact that all such cases are found in the single-episode group might be that those homeless individuals were subsequently relocated outside the crisis team catchment area, but data on this issue could not be examined in the course of this study.

Differences between the two groups in terms of housing were statistically significant ($x^2 = 12.6$, df = 3, $p < .01$).

Psychiatric Treatment History

Data concerning the individual's current and past psychiatric treatment are displayed in Table 3.

More than three-fourths of the individuals in the total sample were not in outpatient treatment and not on psychiatric medication at the time of their initial presentation to the crisis team. The proportion of individuals not receiving treatment was slightly larger in the single episode group, but group differences were not significant.

Some episode of past outpatient treatment was reported by slightly more than half of the total sample. In the repeater group, 61% of the individuals reported past outpatient treatment; in the single episode group, however, less than half reported such past treatment. Differences between the groups were not statistically significant.

The variable of past hospitalizations did not significantly differentiate between the two groups.

Table 3

Repeater/Nonrepeater Group Comparisons:

Psychiatric Treatment History

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Current Outpatient[a]						
Yes	23	(23.2)	15	(30.0)	8	(16.3)
No	76	(76.8)	35	(70.0)	41	(83.7)
			$x^2 = 1.88$, df = 1, n.s.			
Current Medication[a]						
Yes	21	(21.2)	14	(28.0)	7	(14.3)
No	78	(78.8)	36	(72.0)	42	(85.7)
			$x^2 = 2.02$, df = 1, n.s.			
Past Outpatient[b]						
Yes	52	(54.7)	30	(61.2)	22	(47.8)
No	43	(45.3)	19	(38.8)	24	(52.2)
			$x^2 = 1.22$, df = 1, n.s.			
Past Inpatient						
Yes	44	(44.0)	27	(54.0)	17	(34.0)
No	56	(56.0)	23	(46.0)	13	(66.0)
			$x^2 = 3.29$, df = 1, n.s.			

[a]1 case had missing data. [b]5 cases had missing data.

In terms of the total sample, more than half the individuals reported no past history of inpatient treatment. More than half the repeaters, however, did report past hospitalizations, while two-thirds of the single-episode people did not. Information on the exact number of prior hospitalizations was incomplete in too many of the charts to allow use of these data, therefore this variable was coded merely for the presence or absence of such treatment. This may account in part for the fact that the group differences approached (sig. = .07) but did not reach significance.

Substance Abuse History

Data on substance abuse history for the sample are reported in Table 4. Since the overall numbers for these variables were relatively small and since there were no significant group differences when the data were broken down by type of substance, information on alcohol abuse and drug abuse was combined into one substance abuse variable.

Only 25% of all charts contained a reference to current substance abuse, and less than one-third of the overall sample reported substance abuse in the past. The numbers reporting current or past treatment for such a problem are smaller still. Contrary to the earlier stated hypothesis, while individuals in the repeater group were slightly more likely to report a substance abuse problem, the differences between the two groups were not significant.

The data on substance abuse may very well represent an under-reporting of the problem. This could be the result of

Table 4

Repeater/Nonrepeater Group Comparisons:

Substance Abuse History

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Current Use						
Yes	25	(25.0)	15	(30.0)	10	(20.0)
No	75	(75.0)	35	(70.0)	40	(80.0)
			x^2 = 0.85, df = 1, n.s.			
Past Use						
Yes	31	(31.0)	17	(34.0)	14	(28.0)
No	69	(69.0)	33	(66.0)	36	(72.0)
			x^2 = 0.19, df = 1, n.s.			
Treatment						
Yes	14	(14.0)	6	(12.0)	8	(16.0)
No	86	(86.0)	44	(88.0)	42	(84.0)
			x^2 = 0.08, df = 1, n.s.			

an inability to elicit this information from a patient because of his mental status, a lack of knowledge on the part of the person's support system, or the general tendency of many patients to deny problems in this area.

Diagnoses and Clinical Characteristics

Psychiatric diagnoses assigned at the time of initial presentation are displayed in Table 5.

Table 5

Repeater/Nonrepeater Group Comparisons:

DSM-III-R Diagnoses

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Axis I[a]						
Schizophrenia	22	(25.6)	16	(37.2)	6	(13.9)
Major Affective	30	(34.9)	15	(34.9)	15	(34.9)
Dysthymia	6	(7.0)	2	(4.7)	4	(9.3)
Adjustment Dis	17	(19.8)	4	(9.3)	13	(30.2)
Other[b]	11	(12.8)	6	(13.9)	5	(11.6)
			$x^2 = 10.07$, df = 4, $p < .05$			
Axis II						
Yes	28	(28.0)	11	(22.0)	17	(34.0)
No	72	(72.0)	39	(78.0)	33	(66.0)
			$x^2 = 1.24$, df = 1, n.s.			
Axis I Substance Abuse[c]						
Yes	15	(15.0)	9	(18.0)	6	(12.0)
No	85	(85.0)	41	(82.0)	44	(88.0)
			$x^2 = 0.31$, df = 1, n.s.			

[a]N = 86: 5 cases received no Axis I diagnosis; 9 cases received substance abuse diagnoses and were examined separately. [b]Anxiety disorder, somatoform disorder, other mood disorders (n=3), other psychotic disorders (n=6). [c]Includes 9 cases eliminated from Axis I category above.

Over half the cases in the total sample fall within the categories of schizophrenia and major affective disorders (bipolar disorders and major depressions). The group differences of note are in the areas of schizophrenia and adjustment disorders, where repeaters represent a larger proportion of the former and single-episode individuals a larger proportion of the latter. The group differences in Axis I diagnoses were significant ($x^2 = 10.07$, $df = 4$, $p < .05$).

Only 28 of the 100 cases received an Axis II diagnosis (personality disorder), and only 15 of the 100 were assigned an Axis I diagnosis of substance abuse. Group differences in these two variables were not significant.

Table 6 contains data on Crisis Triage Rating Scale (CTRS) scores and on those clinical ratings assigned by the author at the time of the data coding.

In keeping with the earlier stated hypothesis, the presence or absence of psychotic symptoms at the time of the first visit significantly distinguished the repeater from the nonrepeater group ($x^2 = 5.14$, $df = 1$, $p < .05$). While the repeaters were evenly divided between presence and absence of such symptoms, almost three-fourths of the single-episode people displayed no psychotic symptoms.

Contrary to two of the earlier stated hypotheses, suicidal symptoms and scores on the Global Assessment Scale (GAS) were not significantly different for the two groups. While the differences in the GAS scores were in the

Table 6

Repeater/Nonrepeater Group Comparisons:

Clinical Ratings

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Psychotic						
Yes	38	(38.0)	25	(50.0)	13	(26.0)
No	62	(62.0)	25	(50.0)	37	(74.0)
			$x^2 = 5.14$, df = 1, $p < .05$			
Suicidal						
Yes	39	(39.0)	17	(34.0)	22	(44.0)
No	61	(61.0)	33	(66.0)	28	(56.0)
			$x^2 = 0.67$, df = 1, n.s.			
CTRS Score						
Mean	10.6		10.9		10.3	
SD	3.3		3.3		3.4	
			$t = -0.81$, df = 98, n.s.			
GAS Score						
Mean	40.7		38.2		43.2	
SD	15.8		15.2		16.3	
			$t = 1.58$, df = 98, n.s.			

expected direction (i.e., repeaters tended to score somewhat lower), differences in suicidality were not: a larger proportion of single-episode individuals reported suicidal symptoms. CTRS scores for the two groups were virtually identical, nor did individual subscale scores significantly differentiate the two groups.

Crisis Tear Treatment

Data on specific aspects of the crisis team treatment during the initial episode are contained in Tables 7-11.

The two groups differed significantly in terms of who referred the patient for treatment ($x^2 = 9.46$, df = 3, $p < .05$). Repeaters were more likely to be referred by family members, while nonrepeaters were more often self-referred or referred by other agencies (Table 7).

The two groups did not differ significantly in terms of site of the first visit or the first visit disposition (Table 7). While first visits for both groups were more often mobile visits rather than office visits, this was particularly true for the repeater group, with 48% of the visits occurring at the patient's home. It is interesting to note that in terms of first-visit disposition, slightly more nonrepeaters than repeaters were hospitalized, and slightly more repeaters were referred for crisis team follow-up.

There was a significant difference between the two groups in terms of the total number of visits in the

Table 7

Repeater/Nonrepeater Group Comparisons:

Crisis Team Treatment Variables

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Referrer						
Self	21	(21.0)	8	(16.0)	13	(26.0)
Family/Friend	30	(30.0)	21	(42.0)	9	(18.0)
Therapist	13	(13.0)	8	(16.0)	5	(10.0)
Other[a]	36	(36.0)	13	(26.0)	23	(46.0)
			$x^2 = 9.46$, df = 3, $p < .05$			
Visit 1 Site						
Crisis Office	42	(42.0)	18	(36.0)	24	(48.0)
Patient's Home	38	(38.0)	24	(48.0)	14	(28.0)
Other	20	(20.0)	8	(16.0)	12	(24.0)
			$x^2 = 4.29$, df = 2, n.s.			
Visit 1 Disposition						
Hospital	30	(30.0)	13	(26.0)	17	(34.0)
Outpatient	12	(12.0)	5	(10.0)	7	(14.0)
Crisis F-U	48	(48.0)	27	(54.0)	21	(42.0)
Other Agency	4	(4.0)	2	(4.0)	2	(4.0)
None[b]	6	(6.0)	3	(6.0)	3	(6.0)
			$x^2 = 1.62$, df = 4, n.s.			

[a]Emergency room, police, physician, other agency. [b]Refused referral, dropped out, no follow-up needed.

episode, whether or not medication was prescribed, and whether or not someone accompanied the person during sessions (Table 8).

Table 8

Repeater/Nonrepeater Group Comparisons:

Crisis Team Treatment Variables

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Medication						
Yes	37	(37.0)	25	(50.0)	12	(24.0)
No	63	(63.0)	25	(50.0)	38	(76.0)
			$x^2 = 6.18$, df = 1, $p < .05$			
Collaterals At Sessions						
Some/All	63	(63.0)	38	(76.0)	25	(50.0)
Never	37	(37.0)	12	(24.0)	25	(50.0)
			$x^2 = 6.18$, df = 1, $p < .05$			
Total No. Visits In Episode						
Mean		2.5		3.1		1.8
SD		2.3		2.8		1.4
			$t = -2.97$, df = 73.05, $p < .01$			

Individuals in the repeater group were more likely to be seen for more visits (t = 2.97, df = 73.05, p < .01), were more likely to be prescribed medication (x^2 = 6.18, df = 1, p < .05), and more often had collaterals present at some or all of the sessions (x^2 = 6.68, df = 1, p < .05). These findings are perhaps not surprising in light of the fact that repeaters were significantly more likely to present with psychotic symptoms. The finding of a larger proportion of visits involving collaterals for the repeater group, however, does differ from what the literature would predict, that is, that repeaters tend to have poorer support systems.

In examining the subsample of those individuals seen for follow-up by the crisis team (i.e., those seen for more than one visit; n = 48), the significant group differences in terms of number of visits, weeks of treatment, and participation of collaterals remain (Table 9). Although repeaters within this subsample were more often prescribed medication, the group differences were not significant. (The most likely explanation for this lies in the fact that, within this subsample, group differences in terms of presence of psychotic symptoms were not significant.) Final dispositions for the two groups within this subsample were not significantly different.

For this subsample of those patients seen for more than one visit, group differences in initial and final GAS

Table 9

Repeater/Nonrepeater Group Comparisons

Within Subsample of Cases Seen for Follow-Up (N =48)

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Medication						
Yes	30	(62.5)	20	(74.1)	10	(47.6)
No	18	(37.5)	7	(25.9)	11	(52.4)
			x^2 = 2.49, df = 1, n.s.			
Collaterals At Sessions						
Some/All	34	(70.8)	23	(85.2)	11	(52.4)
Never	14	(29.2)	4	(14.8)	10	(47.6)
			x^2 = 4.67, df = 1, p <.05			
Total No. Visits In Episode						
Mean		4.1		4.9		3.0
SD		2.4		2.6		1.6
			t = -3.21, df = 43.71, p <.01			
Total No. Weeks In Episode						
Mean		3.5		4.7		1.9
SD		2.9		3.2		1.2
			t = -4.08, df = 34.88, p <.001			
Final Visit Disposition						
Hospital	8	(16.7)	6	(22.2)	2	(9.5)
Outpatient	23	(47.9)	13	(48.1)	10	(47.6)
Other Agency	3	(6.3)	3	(11.1)	0	
None	14	(29.2)	5	(18.5)	9	(42.9)
			x^2 = 5.88, df = 3, n.s.			

ratings were examined by means of a repeated-measures analysis of variance (Table 10).

Table 10

Repeated Measures Analysis of Variance:

GAS Scores by Repeater/Nonrepeater Groups

Sources	df	SS	MS	F Value
Repeat/Single Visit	1	784.34	784.34	2.59
Within-Group (Error)	46	13951.62	303.30	
Time	1	556.14	556.14	15.89*
Time x Group	1	54.48	54.48	1.58
Within-Group (Error)	46	1609.48	34.99	
Total	95	16956.06		

* $p < .001$

	Mean GAS Scores	
Group	Pre-test	Post-test
Repeat	41.1	47.5
Nonrepeat	48.4	51.8
Total	44.3	49.4

While group differences between repeaters and nonrepeaters were not significant, there was a significant improvement in GAS ratings for both groups over time ($p < .001$). This finding suggests that whatever the individual's

repeater/nonrepeater status, there was improvement in his functioning over the course of crisis team treatment.

Table 11 displays information on the ultimate dispositions for the total sample. The differences between the groups were not statistically significant. In fact, exactly the same number of patients (n = 19) from each group was ultimately hospitalized, giving an overall hospitalization rate of 38%. This finding is in keeping with hospitalization rates reported in many of the studies cited earlier.

Table 11

Repeater/Nonrepeater Group Comparison:

Final Outcome for Total Sample

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Final Visit Disposition						
Hospital	38	(38.0)	19	(38.0)	19	(38.0)
Outpatient	35	(35.0)	18	(36.0)	17	(34.0)
Other Agency	7	(7.0)	5	(10.0)	2	(4.0)
None	20	(20.0)	8	(16.0)	12	(24.0)
			$x^2 = 2.11$, df = 3, n.s.			

Comparisons Within Selected Subsamples

Since so few of the variables differentiated repeaters from nonrepeaters, further analyses of group differences within selected subsamples of the data were conducted.

Subsamples were selected of: (a) all individuals with past inpatient treatment (n = 44), (b) all those who were hospitalized by the crisis team during the episode under study (n = 38), (c) all who were assigned a diagnosis of a personality disorder (n = 28), (d) all those with psychotic symptoms (n = 38), (e) those with suicidal symptoms (n = 39), and (f) those reporting current or past substance abuse problems (n = 34). These subsamples were examined for group differences (repeater/nonrepeater) across a variety of clinical and treatment variables. Very few of the findings were significant.

Among all individuals with an Axis II diagnosis (Table 12), repeaters were significantly more likely to have support collaterals at sessions ($x^2 = 4.09$, df = 1, $p < .05$). This finding seems to differ from those of previously cited studies which indicated that individuals with personality disorders tend to have weaker support networks.

Among all individuals presenting with psychotic symptoms (Table 13), repeaters were significantly younger ($t = 2.39$, df = 36, $p < .05$) and significantly more likely to be referred by family members ($x^2 = 6.22$, df = 2, $p < .05$).

Table 12

Repeater/Nonrepeater Group Comparison

Within Subsample of Cases With Axis II Diagnoses (N = 28)

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Collaterals At Sessions						
Some/All	15	(53.6)	9	(81.8)	6	(35.3)
Never	13	(46.4)	2	(18.2)	11	(64.7)
			$x^2 = 4.09$, df = 1, $p < .05$			

The finding in terms of age difference is in keeping with the literature data that repeat users of emergency services resemble the young chronic population.

Because the overall numbers are small for these subsamples, the significance of these findings should be viewed with caution. It is perhaps of equal or greater interest that within so many subsamples and across so many variables repeaters and nonrepeaters appear so similar.

Overall Sample Analyses

Since so few of the examined variables significantly distinguished the repeat-episodes group from the single-episode group, and since only one of the hypothesized variables (presence of psychotic symptoms) significantly contributed to the prediction of repeater status, further

Table 13

Repeater/Nonrepeater Group Comparisons

Within Subsample of Cases With Psychotic Symptoms (N = 38)

	Total		Episodes			
			Repeat		Single	
Variable	N	(%)	n	(%)	n	(%)
Referrer						
Self	3	(7.9)	2	(8.0)	1	(7.7)
Family/Friend	16	(42.1)	14	(56.0)	2	(15.4)
Other	19	(50.0)	9	(36.0)	10	(76.9)
			x^2 = 6.22, df = 2, p <.05			
Age						
Mean	40.3		36.0		48.4	
SD	16.0		15.0		15.2	
			t = 2.39, df = 36, p <.05			

analyses of the total sample (disregarding repeater/ nonrepeater status) were undertaken in order to examine how this population might differ from that expected as a result of the literature review.

Demographic and Clinical Variables

Table 14 contains data on the demographic variables of gender, age, and marital status. There is no significant age difference between males and females in the overall sample. Males in the sample are more likely to be single, while females are more often currently or previously married (x^2 = 8.95, df = 2, p < .05). Those individuals in the

Table 14

Total Sample Analyses:

Gender by Age by Marital Status

Variable	Gender			
	Male		Female	
Marital Status[a]	n	(%)	n	(%)
Single	23	(65.7)	18	(39.1)
Married	10	(28.6)	14	(30.4)
Other[b]	2	(5.7)	14	(30.4)
	$x^2 = 8.95$, df = 2, $p < .05$			
Age				
Mean	34.9		39.3	
SD	14.2		17.4	
	$t = -1.35$, df = 98, n.s.			

Age	Marital Status	
	Never Married	Ever Married
Mean	29.7	42.4
SD	12.5	17.2
	$t = 3.79$, df = 79, $p < .001$	

[a]19 cases had missing data. [b]Divorced, separated, widowed.

sample who have never been married are significantly younger than those who currently are or have been married (t = 3.79, df = 79, p < .001). This latter finding is not surprising.

Age differences in terms of selected clinical and diagnostic variables are displayed in Table 15. When compared to all others in the sample, those individuals presenting with suicidal symptoms (t = 3.11, df = 97.12, p < .01) and those with substance abuse problems (t = 3.39, df = 93.71, p < .001) are significantly younger. Those with psychotic symptoms tend to be slightly older than those without such symptoms, but the difference is not significant. This latter finding is surprising in light of the prediction that heavy users of emergency services resemble the new young chronic population.

In terms of specific diagnostic categories, those individuals with a major affective disorder are significantly older when compared to the rest of the sample (t = -2.25, df = 98, p < .05). Compared with the rest of the sample as a whole, those individuals with a diagnosis of schizophrenia are also somewhat older, but the difference is not significant. Those individuals with a personality disorder tend to be younger than those without, but again the difference is not significant. Once again the findings in terms of the major Axis I diagnoses seem to contradict the literature cited.

Table 15

Total Sample Analyses:

Clinical Variables by Age

Variable	Variable: Schizophrenia		Variable: Major Affective Disorder	
	Yes	No	Yes	No
Age				
Mean	38.7	37.0	42.9	35.1
SD	15.1	16.6	15.6	16.0
	t = -0.43, df = 98, n.s.		t = -2.25, df = 98, p <.05	

	Personality Disorder		Substance Abuse	
	Yes	No	Yes	No
Age				
Mean	32.9	39.2	31.0	40.7
SD	12.3	17.2	11.1	17.5
	t = 1.76, df = 98, n.s.		t = 3.39, df = 93.71, p <.001	

	Psychotic Symptoms		Suicidal Symptoms	
	Yes	No	Yes	No
Age				
Mean	40.3	35.7	31.8	41.0
SD	16.0	16.2	12.2	17.4
	t = -1.39, df = 98, n.s.		t = 3.11, df = 97.12, p <.01	

Table 16 displays the findings on the interrelationships among several of the clinical variables. Those individuals who presented with psychotic symptoms were significantly less likely to report substance abuse (x^2 = 5.56, df = 1, $p < .05$), to display suicidal symptoms (x^2 = 9.56, df = 1, $p < .01$), and to receive an Axis II diagnosis (x^2 = 7.94, df = 1, $p < .01$). Those individuals with a diagnosis of personality disorder more often presented with suicidal symptoms than did those without an Axis II diagnosis, but this difference was not significant. Substance abusers were significantly more likely to present with suicidal symptoms (x^2 = 12.72, df = 1, $p < .001$) and to receive an Axis II diagnosis (x^2 = 5.48, df = 1, $p < .05$).

These findings would suggest that these anticipated predictor variables are associated with two different subgroups within the sample: (1) those with major Axis I disorders and psychotic symptoms, and (2) those characterized by Axis II disorders with suicidal symptoms and/or substance abuse problems.

Variables Related to Referral for Hospitalization

Table 17 contains analyses of variables related to whether or not the individual was ultimately hospitalized over the course of the episode studied. Contrary to predictions based on the literature review, a history of prior hospitalizations was not significantly related to current disposition, though the results were in the expected direction. As noted before, the fact that past

Table 16

Total Sample Analyses:

Interrelationships of Clinical Variables

Variable	Personality Disorder		Substance Abuse		Suicidal Symptoms	
	Yes	No	Yes	No	Yes	No
Psychotic Symptoms						
Yes	4	34	7	31	7	31
No	24	38	27	35	32	30
	$x^2 = 7.94$ df = 1 p <.01		$x^2 = 5.56$ df = 1 p <.05		$x^2 = 9.56$ df = 1 p <.01	
Suicidal Symptoms						
Yes	15	24	22	17	-	-
No	13	48	12	49	-	-
	$x^2 = 2.67$ df = 1 n.s.		$x^2 = 12.72$ df = 1 p <.001			
Substance Abuse						
Yes	15	19	-	-	-	-
No	13	53	-	-	-	-
	$x^2 = 5.48$ df = 1 p <.05					

Table 17

Total Sample Analyses:

Relationships of Clinical Variables to

Referral for Hospitalization

Outcome	Current Outpt Treatment		Past Outpt Treatment		Past Inpt Treatment	
	Yes	No	Yes	No	Yes	No
Hospital	12	25	20	14	21	17
Other	11	51	32	29	23	39
	$x^2 = 2.04$ df = 1 n.s.		$x^2 = 0.15$ df = 1 n.s.		$x^2 = 2.46$ df = 1 n.s.	
	Psychotic Symptoms		Suicidal Symptoms		Substance Abuse	
Hospital	21	17	17	21	12	26
Other	17	45	22	40	22	40
	$x^2 = 6.62$ df = 1 p <.05		$x^2 = 0.50$ df = 1 n.s.		$x^2 = 0.03$ df = 1 n.s.	
	Schizophrenia		Major Affective		Personality Disorder	
Hospital	10	28	17	21	5	33
Other	12	50	13	49	23	39
	$x^2 = 0.32$ df = 1 n.s.		$x^2 = 5.26$ df = 1 p <.05		$x^2 = 5.56$ df = 1 p <.05	

hospitalization is a dichotomous variable may contribute to the lack of significant findings in this area. Neither current nor past outpatient treatment was significantly related to outcome, but these data as well were in the expected direction.

Those individuals presenting with psychotic symptoms were significantly more likely than those without such symptoms to be hospitalized ($x^2 = 6.62$, df = 1, $p < .05$), while outcome was not significantly related to suicidal symptoms or substance abuse. In terms of specific diagnoses, those individuals with personality disorders were significantly less likely to hospitalized than those without such a disorder ($x^2 = 5.56$, df = 1, $p < .05$), while those with major affective disorders were significantly more often hospitalized than those without these diagnoses ($x^2 = 5.26$, df = 1, $p < .05$). Differences in outcome between those individuals with schizophrenia and those without were not significant but were in the expected direction.

As shown in Table 18, those cases seen for more than one visit within the episode (i.e., those with follow-up by the crisis team rather than immediate hospitalization or referral) were significantly less likely to be hospitalized in the current episode ($x^2 = 16.13$, df = 1, $p < .001$). The GAS scores and CTRS scores for the group with crisis team follow-up, however, were significantly higher than the scores for those with only one visit (Table 18). This would

suggest that those cases seen for more than one visit were not at comparable risk for hospitalization.

Table 18

Total Sample Analyses:

Crisis Team Follow-Up Group vs. Others

By Outcome and Rating Scales

	Crisis Team Follow-Up			
Variable	Yes		No	
	n	(%)	n	(%)
Outcome				
Hospital	8	(17.0)	30	(58.0)
Other	40	(83.0)	22	(42.0)
	$x^2 = 16.13$, df = 1, $p < .001$			
CTRS Score				
Mean	12.3		9.1	
SD	2.1		3.6	
	$t = -5.53$, df = 82.38, $p < .001$			
GAS Score				
Mean	44.3		37.4	
SD	13.0		17.5	
	$t = -2.25$, df = 93.84, $p < .05$			

A comparison of CTRS scores for those individuals hospitalized or referred out at the first visit and for those referred for crisis team follow-up (Table 19) indeed shows that the follow-up group scores significantly higher than the hospitalized group ($t = -9.80$, $df = 76$, $p < .001$) and closely resembles the group referred for outpatient treatment. The Crisis Triage Rating Scale, however, is an instrument designed to assist in the task of disposition, that is, to differentiate those who require hospitalization from those who can be kept out. It is not surprising, therefore, that there is no significance difference in CTRS scores for the crisis team follow-up group and the outpatient referral group.

An examination of GAS scores for these same groups shows that while the crisis team follow-up group scored significantly higher than the hospitalized group ($t = -5.67$, $df = 76$, $p < .001$), it scored significantly lower than the group referred for outpatient treatment ($t = 2.54$, $df = 58$, $p < .05$). The Global Assessment Scale, unlike the CTRS, rates an individual's overall functioning. We have already seen that all patients followed by the crisis team improved significantly over the course of treatment as rated by the GAS. This finding in conjunction with the finding that followed-up cases scored significantly lower at first visit than did those immediately referred for outpatient treatment would suggest that crisis team treatment does contribute to an individual's ability to remain in the community.

Table 19

Total Sample Analyses:

First Visit Disposition By Rating Scales

	First Visit Disposition	
Variable	Hospital	Crisis Team
CTRS Score		
Mean	6.9	12.3
SD	2.8	2.1
	t = -9.80, df = 76, p <.001	
GAS Score		
Mean	26.6	44.3
SD	14.1	13.0
	t = -5.67, df = 76, p <.001	

	Crisis Team	Outpatient
CTRS Score		
Mean	12.2	12.7
SD	2.1	2.1
	t = 0.72, df = 58, n.s.	
GAS Score		
Mean	44.3	54.5
SD	13.0	9.1
	t = 2.54, df = 58, p <.05	

CTRS, GAS Scores and Referral for Hospitalization

Earlier clinical trials of the Crisis Triage Rating Scale (as reported by Bengelsdorf et al., 1984) suggested that individuals with total scores of less than nine on the scale would be more likely to be hospitalized, those scoring higher than nine would be more likely to be kept out of the hospital, and those scoring nine exactly would be equally divided between the two dispositions. Table 20 displays data from the current study on the relationship of CTRS scores to outcome. The results are strongly in the expected direction and are statistically significant ($x^2 = 53.80$, $df = 2$, $p < .001$). This is not surprising in that the CTRS is used in determining outcome.

In their article on the development of the Global Assessment Scale, Endicott et al. (1976) indicate that individuals in the community who have a previous history of inpatient treatment and who score below 40 on the GAS are significantly more likely to be hospitalized. Data from the current study (Table 20) confirm this prediction: those individuals who scored less than 40 on the GAS at first visit were significantly more likely to be hospitalized in the current episode, whether or not they had a past history of inpatient treatment.

Table 20

Referral for Hospitalization

By CTRS and GAS Scores

Variable	Outcome	
	Hospital	Other
CTRS Score		
Less than 9	24	0
9	4	6
More than 9	10	56
	x^2 = 53.80, df = 2, p <.001	
GAS Score		
Less than 40	28	12
40 or More	10	50
	x^2 = 26.76, df = 1, p <.001	
GAS Score for Those Previously Hospitalized (n=44)		
Less than 40	16	2
40 or More	5	21
	x^2 = 17.99, df = 1, p <.001	

Chapter IV: Discussion

The main hypotheses of this study were that Global Assessment Scale (GAS) ratings and the presence of psychotic symptoms, suicidal symptoms, and/or substance abuse at initial presentation would be significant predictors of repeated episodes of treatment at the emergency service under study. For the most part, these hypotheses were not confirmed. Only the presence or absence of psychotic symptoms consistently distinguished between the repeater/nonrepeater groups and made a significant contribution to the prediction of number of repeat episodes.

The above hypotheses were based on earlier studies which suggested that repeated users of emergency services closely resemble what has become since deinstitutionalization the population of heavy users of inpatient services, that is, the new young chronic population. This generation of young adults, who before the era of deinstitutionalization would most likely have spent long periods of time in inpatient settings, has been described as those individuals who carry Axis I and Axis II diagnoses of severe chronic disorders, frequently have concomitant problems of substance abuse, often present with self-injurious or threatening behavior, display chaotic and chronically unstable social functioning, and are extremely difficult to engage in ongoing treatment.

The fact that most of the anticipated variables were not significant predictors of repeat visits to the service

studied raises two basic issues: first, to what extent this sample population may differ from those of earlier studies and that described as the new chronic generation; and second, to what extent certain methodological aspects of the research or characteristics of the treatment service itself may have shaped the results.

Review of the Findings

Prediction of Repeater Status

The main hypotheses of this study were explored through simultaneous multiple regression analyses with number of episodes of crisis team treatment as the dependent variable. First-visit ratings of overall functioning (GAS scores), psychotic and suicidal symptoms, presence of substance abuse, and history of prior inpatient treatment were the independent variables.

While all three regression models were themselves significant, only presence or absence of psychotic symptoms was a significant contributing independent variable in two of the three equations. Substance abuse and past hospitalizations were the next strongest predictors but were not significant. GAS ratings and suicidal symptoms were the weakest predictors, and the trend of the latter was in the opposite direction from that expected, that is, suicidal individuals tended to have fewer episodes of treatment.

The fact that presence of psychotic symptoms was a significant predictor is in keeping with earlier studies which indicated that emergency service repeaters carry

diagnoses of severe chronic illnesses (Bassuk & Gerson, 1980; Ellison et al., 1986, 1989; Perez et al., 1986; Purdie, Honigman, & Rosen, 1981). The fact that past hospitalizations was not a significant contributing factor in predicting repeat episodes would seem to contradict these previous findings. As was noted earlier, however, the fact that past inpatient treatment was a dichotomous variable and did not reflect number of inpatient episodes may have contributed to the lack of significance.

None of the previously cited studies of repeat users of emergency services utilized multivariate techniques of analysis, therefore this study's analyses in this area cannot be compared with others.

Repeater/Nonrepeater Group Comparisons

Demographic variables. Group comparisons (repeater vs. nonrepeater) of the variables of gender, age, and marital status for the study sample yielded no significant differences. This is in keeping with earlier findings that these variables do not consistently distinguish heavy users from others. Also in keeping with earlier findings is the fact that the total sample is predominantly female, predominantly single, and relatively young (Ellison et al., 1986).

Although gender and marital status do not differ significantly between the repeater/nonrepeater groups, single males represent a substantially larger proportion of the repeater group, while females who are currently or

previously married represent a substantially larger proportion of the single-episode group. This finding is in keeping with the young chronic population and heavy inpatient users often being described as primarily young adult single males (Casper & Donaldson, 1990; Casper & Pastva, 1990; Schwartz & Goldfinger, 1981).

The significant finding in the current study that repeaters more often lived with family while nonrepeaters more often lived in their own homes is in keeping with at least two previous studies of young adult chronics that indicated that large proportions of these individuals are still living with family rather than living on their own (Caton, 1981; Pepper et al., 1981). On the other hand, other studies have found this population to be characterized by unstable living situations, homelessness, and frequent moves among isolated residences (Casper & Donaldson, 1990; Schwartz & Goldfinger, 1981).

One possible explanation for the current sample's preponderance of repeaters who live with family is that a substantial proportion of referrals within this group came from family members, and families familiar with the crisis service tend to call during subsequent episodes of illness. Furthermore, the young chronic has been described as resistant to treatment and frequently unwilling to seek treatment on his own (Pepper et al., 1981; Schwartz & Goldfinger, 1981; Surles & McGurrin, 1987).

Psychiatric treatment history. In the current study population, a history of past or current psychiatric treatment did not significantly distinguish repeaters from nonrepeaters, though all the results were in the expected direction (i.e., repeaters more often reported episodes of treatment.) This finding is in contrast to most of the other studies of repeated users of emergency services where past or current treatment was frequently a significant distinguishing variable (Bassuk & Gerson, 1980; Bassuk & Schoonover, 1981; Ellison et al., 1989; Munves, Trimboli, & North, 1983; Perez et al., 1986). It is difficult to explain the lack of significant differences in this study, especially in the area of past treatment, except to speculate that with a larger sample the findings might have proved stronger.

It is interesting to note, however, that in the total population of the current study significantly more individuals with a diagnosis of schizophrenia had a history of past hospitalizations ($x^2 = 5.49$, df = 1, $p < .05$) and past outpatient treatment ($x^2 = 6.91$, df = 1, $p < .01$) when compared with the rest of the sample. This finding is perhaps not surprising given the nature of the illness, but similar comparisons of (a) those with major affective disorders versus not and (b) those with personality disorders versus not in terms of past treatment were not significant. These latter findings will be discussed more fully in a later section.

Substance abuse history. The variables of current or past substance abuse or treatment for such did not differ significantly across groups in the current study. The numbers suggest, however, that this is a problem more often characteristic of the repeaters. Findings from earlier studies of substance abuse as a significantly distinguishing characteristic of repeated users of emergency services have been equivocal. Although there have been several studies that have found significantly higher rates of substance abuse among repeaters (Ellison et al., 1989; Purdie et al., 1981; Schwartz et al., 1972), other researchers have not found this to be the case (Munves et al., 1983; Nurius, 1983; Perez et al., 1986). Ellison et al. (1986) in their review of previous research on repeated users categorized substance abuse as a "nondistinguishing variable" (p. 41).

The overall proportion of substance abusers among the current study population (34% of the total sample reported current and/or past substance abuse) is in keeping with at least one previous study (Szuster, Schanbacher, & McCann, 1990), which found a 33% rate of substance abuse disorders in a sample of psychiatric emergency room patients. Other studies of substance abuse among emergency service users have found such individuals to represent from 13% (Ellison et al., 1986) to 50% (Atkinson, 1973) of the studied populations.

DSM-III-R diagnoses. The repeaters in the current sample were significantly more often diagnosed as

schizophrenic than were the nonrepeaters, a finding in keeping with earlier studies of repeat users of emergency services (Ellison et al., 1989; Nurius, 1983; Perez et al., 1986). Contrary to earlier study findings, however, the repeater group in this study did not differ significantly from nonrepeaters in frequency of Axis I substance abuse diagnoses (Ellison et al., 1989; Schwartz et al., 1972; Slaby & Perry, 1980) or Axis II diagnoses (Ellison et al., 1989; Nurius, 1983; Perez et al., 1986; Raphling & Lion, 1970; Schwartz et al., 1972). In fact, the single episode group had the larger proportion of individuals with personality disorders.

This would suggest that the personality-disordered individuals represented by this sample are not as severely dysfunctional as those described in the cited studies. In support of this hypothesis are the findings of the current study that those individuals with personality disorders received significantly higher GAS ratings ($\underline{t}$ = -2.73, df = 92.94, $\underline{p} < .01$) and were significantly less likely to be hospitalized by the crisis team as compared with the rest of the sample.

Psychotic and suicidal symptoms. As was noted earlier, the presence of psychotic symptoms at first visit significantly distinguished repeaters from nonrepeaters and made a significant contribution to the prediction of repeat-visit status. This finding seems in keeping with earlier studies identifying severe chronic illnesses, especially

schizophrenia, as being characteristic of repeaters. It is quite surprising, therefore, that two of the three studies of repeated users of emergency services that specifically examined psychotic symptoms as a separate variable found that such symptoms did not significantly distinguish repeated users from others (Bassuk & Gerson, 1980; Ellison et al., 1989). Nurius (1983), by contrast, found repeaters "more likely to report problems associated with psychosis (especially disorientation and hallucinations)" (p. 245).

Presence or absence of suicidal symptoms did not significantly distinguish repeaters from single-episode individuals in the current study. Past studies of suicidality as a distinguishing characteristic of repeated users of emergency services have been mixed: at least three studies have found suicidal symptoms significantly more often in the repeater population (Bauer & Balter, 1971; Ellison et al., 1989; Nurius, 1983), while two others (Bassuk & Gerson, 1980; Perez et al., 1986) found no such significant difference.

Although information in the charts did not allow for an accurate rating of the severity of the symptoms, it is the impression of the author that the vast majority of the suicidal individuals in this study presented with mild rather than severe symptoms. This impression is lent support by the fact that GAS ratings and CTRS scores were not significantly different for the group of suicidal individuals as compared with the rest of the sample.

Certain procedural aspects of crisis team functioning may have contributed to the fact that the more severely suicidal individuals may be under-represented in the sample. This issue will be addressed in a later section.

GAS and CTRS scores. At least one previous study found that significantly lower Global Assessment Scale ratings distinguished emergency service repeaters from nonrepeaters (Bassuk & Gerson, 1980). In the current study, while repeaters tended to have lower GAS ratings, the differences between the two groups were not significant.

Differences in GAS scores did, however, distinguish certain other subsets of the sample. For instance, significantly lower GAS scores differentiated those individuals with schizophrenia (t = 2.55, df = 98, p <.05) and those with major affective disorders (t = 2.56, df = 98, p <.05) from others in the sample.

The Triage Rating Scale proved of little value in significantly distinguishing repeaters from nonrepeaters or various other subgroups within the sample. This is not surprising in that the CTRS was developed as a tool to aid in rapid assessment and disposition and is not a rating of an individual's overall functioning or severity of symptoms.

Crisis team treatment variables. In the current study, repeaters were seen for significantly more visits during the initial episode, over a significantly longer period of time, and with collaterals present at sessions significantly more often than was true of nonrepeaters. These findings, in

conjunction with the finding that the ultimate dispositions for both groups did not differ significantly, would suggest that the repeaters were more dysfunctional or symptomatic and were more difficult to stabilize. This hypothesis is lent support by the group comparisons of mean GAS ratings at first and last visit: although the group differences were not statistically significant, repeaters displayed lower mean scores at both first and last visit. In fact, the average GAS rating for a repeater by the final visit had barely reached that of a nonrepeater at the first visit.

Although it has been noted by some authors that heavy users of emergency services consume a disproportionate number of visits and hours of service, this is the only study that has specifically compared repeaters and nonrepeaters in terms of duration of episode.

Overall Sample Characteristics

Since repeaters in the current study did not closely resemble the young chronic population, statistical analyses of the overall sample (disregarding repeater/nonrepeater status) were undertaken to explore more fully the characteristics of the users of the emergency service studied.

Interrelationships of clinical variables. In the current study, all individuals presenting with psychotic symptoms were significantly less likely than those without such symptoms to receive an Axis II diagnosis, to report substance abuse, or to display suicidal symptoms. One

possible explanation of this is that the acute psychotic state of the individual made it difficult or impossible to identify other concurrent disorders. It is also possible, however, that the group of individuals in the sample with psychotic symptoms represent a population distinctly different from those individuals with personality disorders, substance abuse problems, and suicidal symptoms.

Substance abusers, on the other hand, were significantly more likely to be suicidal and/or character-disordered. The frequent association of substance abuse with these two disorders has been noted earlier in the literature review, and a high association of suicidality and substance abuse in a psychiatric emergency room population has been documented in a previous study (Szuster et al., 1990). In the current study, over half the individuals with an Axis II diagnosis presented with suicidal symptoms, whereas only one third of those without an Axis II diagnosis reported such symptoms. This difference, however, was not statistically significant.

It has already been noted that the individuals with personality disorders received significantly higher GAS ratings as compared with the rest of the sample. Similar comparisons of those with suicidal symptoms and those with substance abuse problems versus others in the sample found no significant differences--the mean GAS scores in both comparisons were virtually identical.

The hypothesis that there may be two distinct subgroups within the sample population is lent further support by the fact that the groups of individuals with personality disorders, suicidal symptoms, or substance abuse are younger (the latter two significantly so) than the rest of the sample, while those with psychotic symptoms, a diagnosis of schizophrenia or of major affective disorder are older (the last significantly so) when compared with the rest of the sample. Neither of these subgroups, however, appears to be truly representative of the new young chronic population--the Axis-I-diagnoses/psychotic-symptoms group by virtue of their being older, the Axis-II/suicidal/substance-abuser group by virtue of their not being as severely dysfunctional.

Psychiatric treatment history. As was noted in an earlier section, schizophrenics as a group in comparison with the rest of the sample reported past episodes of inpatient and outpatient treatment significantly more often. This was not the case for those individuals with Axis II diagnoses or with major affective disorders.

For those individuals with character pathology, the lack of significant findings in terms of past outpatient treatment is perhaps not surprising given the particular difficulty in establishing interpersonal relationships which is characteristic of this diagnostic group. The fact that past inpatient treatment was not more prevalent in this group is perhaps an indication, as noted earlier, that the

individuals in this sample are not as severely dysfunctional as the population of character-disordered individuals described as frequent users of emergency services.

In view of the frequency and severity of acute episodes characteristic of major affective disorders, it is difficult to explain the fact that individuals with these diagnoses in the current sample did not report significantly more prior hospitalizations. This fact is all the more puzzling given the current study's finding that those with major affective disorders were significantly more likely to be hospitalized during the current episode.

One possible explanation for this finding is that the age of onset for major affective disorders tends to be later than that for schizophrenia. Although those individuals in the sample with major affective disorders are older than those without, the overall sample is still a relatively young one; those with affective disorders, therefore, may be in the early stages of their illness and do not yet have a lengthy history of past episodes. Furthermore, roughly half the individuals receiving diagnoses of major affective disorders were categorized as bipolar. While data on the age of onset of illness was not examined in this study, it has been found that bipolar disorders of later onset tend to be characterized by fewer episodes of acute symptoms (Winokur & Kadrmas, 1989).

Several factors may account for the finding that those individuals with major affective disorders do not have

significantly higher reports of past outpatient treatment. First, the later age of onset for these disorders, as mentioned above, may account for a relatively shorter illness history for those individuals in the present sample. Second, those patients with bipolar disorders tend to be less accepting of treatment, particularly medication, in part due to their reluctance to dampen the "highs" of hypomanic episodes (Jamison & Akiskal, 1983). Finally, there exists a substantial overlap (40-60%) between major affective disorders and personality (particularly borderline) disorders (Gunderson & Elliott, 1985). As was noted earlier, individuals with character pathology have great difficulty engaging in and tolerating ongoing treatment relationships, a fact that further complicates the treatment of concurrent disorders. Assuming a similar proportion of (undiagnosed) concurrent Axis II disorders exists among individuals with major affective disorders in the current study may in part explain why past outpatient treatment was not reported more frequently among this group.

Variables related to referral for hospitalization. Since the crisis service that served as the basis for this study has as its primary mandate to prevent hospitalization and maintain individuals in the community whenever possible, the analyses of the overall sample in terms of whether or not an individual was ultimately referred for inpatient treatment by the team are of particular interest.

In contrast to most other previous studies, a history of past hospitalizations did not significantly distinguish the hospitalized/not hospitalized groups in the current study, though the trend was in the expected direction. The possible importance of the variable of past inpatient treatment being dichotomous rather than continuous has been previously noted.

Among the variables of psychosis, suicidality, and substance abuse, only psychosis was significantly related to a disposition of hospitalization. The fact that suicidality and substance abuse were not significantly related to a disposition of hospitalization in the current study appears to contradict those studies of heavy users of inpatient services and of the new chronic patient which found high rates of these disorders among the identified populations (Casper & Donaldson, 1990; Casper & Pastva, 1990; Pepper et al., 1981; Schwartz & Goldfinger, 1981).

In terms of the Axis I and Axis II diagnoses, those individuals with major affective disorders were significantly more likely to be hospitalized as compared with all others in the sample. This is in keeping with previous research that indicates that individuals with these disorders are prone to more frequent and often more severe episodes of acute symptomatology. This is also in keeping with the findings of Joyce (1985) that those individuals with bipolar disorders who required hospitalization were significantly less likely to recognize and respond to early

symptoms of relapse. Perez et al. (1986) found in their study of an emergency service that repeaters with major affective disorders were significantly more likely to be hospitalized than were nonrepeaters. The sample size of the current study, however, precluded investigating such a distinction.

Individuals with a diagnosis of schizophrenia compared with others in the sample were also more likely to be hospitalized, but the difference did not reach significance. As was noted earlier, individuals with Axis II disorders were significantly less likely to be hospitalized.

Evaluation of Treatment Effectiveness

In an earlier chapter of this study, the issue of how to evaluate the effectiveness of crisis intervention treatment was addressed. Many studies of such services have used subsequent need for inpatient treatment as the outcome measure. It was not feasible to examine such data for this study. Furthermore, the use of readmission rates as a measure of treatment program effectiveness has been questioned by some researchers (Solomon & Doll, 1979). The process of hospitalization and the factors contributing to such a decision are so complex that many would argue that to use such a measure is overly simplistic.

Reduction of symptoms and avoidance of the need for inpatient treatment at the time of a specific acute episode are other commonly used measures of outcome. Outcome data

from the current study fall within the framework of these two categories.

In terms of symptom reduction, the finding that GAS ratings for both repeaters and nonrepeaters improved significantly from the first visit to the final visit of the episode suggest that crisis team treatment resulted in some amelioration of symptoms.

In terms of avoidance of hospitalization, the findings are less compelling but nonetheless suggestive of some efficacy of treatment in this area as well. The individuals seen for more than one visit were significantly less likely to be hospitalized than were those seen for one visit only. This finding is not surprising in light of the fact that those seen for crisis team follow-up scored significantly higher on both the GAS and CTRS scales than did those individuals hospitalized at first visit, and therefore would appear to have been at significantly less risk for hospitalization. However, the finding that the crisis team follow-up group received significantly lower GAS ratings than the group referred for outpatient treatment at first visit lends support to the hypothesis that those seen for more than one visit might not have been able to be maintained in the community without such treatment.

The Findings of the Current Study As Compared With Earlier Similar Research

Demographics. As compared with the other studies of mobile emergency services cited earlier (Gillig et al., 1990; Steer et al., 1979; West et al., 1980), the current sample population is very similar in terms of its being predominantly female and comprised predominantly of single (never married) individuals. The mean age of individuals in the current study (M = 37.4) is only slightly younger than that reported by the others (M =41.6, in both the Steer and West studies). In terms of housing, however, the current study found a much larger proportion of individuals living with their families (43%) than was true of the other studies, which reported 27% of such cases.

Referral source. The proportions of the sources of referrals to the treatment services varies widely in the current and cited studies. All three earlier studies report extremely low proportions of self-referrals: Gillig et al. (1990) report that only one percent of the cases were self-referred; West et al. (1980) report less than one percent of such referrals; and Steer et al. (1979) report none. In the current study, by contrast, 21% of the cases were self-referred. In terms of referrals from outpatient psychiatric treatment facilities, the Steer study reports 54% from such sources, while the Gillig study reports only 13%; the current study also found 13% of the cases to be referred by the current therapist. In the current study, 30% of the

patients were referred by family, a proportion similar to that reported by Steer and his colleagues (29%); the Gillig study, on the other hand, found that 45% of the cases were referred by family members.

Diagnostic and clinical characteristics. Both Steer et al. (1979) and West et al. (1980) found that individuals diagnosed as schizophrenic comprised 54% of their samples; the current study found that only 26% of the sample fell within this category. Gillig et al. (1990) report that those with psychotic disorders comprised 38% of their sample (the exact percentage of individuals in the current study judged to have psychotic symptoms) but that personality disorder and substance abuse diagnoses represented very small proportions (2% and 5% respectively) of the study population. By contrast, the proportion of individuals in the current study receiving diagnoses of personality disorders (28%) and substance abuse (15%) is substantially higher. In terms of these latter findings, it is important to note that the service described by Gillig and her colleagues has as a policy not to serve those individuals who are acutely intoxicated or imminently suicidal. West et al. (1980) is the only one of the studies that specifically addresses the issue of suicidality: they found that only 6% of their sample was characterized by suicidal threats or behavior. The current study, by contrast, found 39% of the individuals to have suicidal symptoms.

Only Steer et al. (1979) report data on past or current psychiatric treatment. They found that 60% of their sample reported no past history of inpatient treatment, a proportion roughly similar to that found in the current study (56%). In terms of current treatment, while the current study found only 23% of the sample to be engaged in ongoing treatment, Steer and his colleagues report that 43% of their sample population was attending the mental health center. This finding is perhaps not surprising since over half of the referrals to the service under study came from that same mental health center, with which it had some affiliation. By contrast, referrals from the patient's current therapist comprised only 13% of the current study sample.

Outcome. Both West et al. (1980) and Steer et al. (1979) report that 34% of their sample had hospitalization as the disposition, a proportion slightly lower than that of the current study (38%). The study by West and his colleagues reports that 36% of their sample was referred for outpatient treatment, a percentage very similar to that in the current study (35%).

Repeater/nonrepeater group comparisons. Neither of the two earlier studies that examined repeat users of the service (Steer et al., 1979; West et al., 1980) found any significant group differences in terms of demographic variables or source of referral. The current study found, however, that referral source significantly differentiated

repeaters from nonrepeaters. In terms of diagnostic and clinical variables, West et al. (1980) found that a significantly larger proportion of the repeater group was diagnosed as schizophrenic, a finding in keeping with the current study. Steer et al. (1979) found no significant differences in this area. The West study also reported that almost all the cases involving suicidal symptoms fell within the single-episode group. In the current study, though the contrast is less striking, the single-episode group contained the larger proportion of suicidal individuals. In the areas of past inpatient or current outpatient treatment, the Steer study reports there were no significant group differences, a finding in keeping with those of the current study.

Only West and his colleagues reported a group difference in the area of outcome. While the differences were not statistically significant, a larger proportion of the single-episode group had hospitalization (35% vs. 28% for the repeater group) and referral for outpatient treatment (37% vs. 30%) as the final disposition. A finding that was significant, however, was that the repeater group more often had "PRN follow-up by the service" as the disposition. The researchers attribute this finding to the fact that the repeater sample contained a subgroup of individuals with chronic illnesses who would consistently refuse referral for follow-up at an outpatient facility. This observation is in keeping with some of the earlier

cited literature on the new chronic population and the difficulties in engaging them in treatment.

Methodological Limitations

Retrospective Chart Review

Retrospective chart review as a research design has its own inherent drawbacks. Since there is no standardized research instrument and since the researcher is not a participant in the actual data gathering, much of the specific information of interest may be missing, incomplete, or of inconsistent quality and comparability. In the current study, the important variables of psychosis, suicidality, substance abuse, and past hospitalizations could ultimately be coded only as dichotomous variables (presence/absence), whereas some rating of the severity of suicidal symptoms, an expanded coding of substance abuse history, and information on the exact number of prior inpatient stays might have yielded different results.

Global Assessment Scale ratings assigned at the time of treatment (rather than after the fact) would have more accurately reflected the individual's level of functioning, since the clinician no doubt had available more information than was ultimately recorded in the chart. Also the fact that GAS ratings were done by the author and not by an independent rater blind to the repeater/nonrepeater status of the patient must be taken into account when considering the study's findings.

Furthermore, more complete demographic data and more extensive information on the individual's support system, compliance with current outpatient treatment and medication, and compliance with crisis team treatment all would have been of particular interest to the current study.

Reliability of Diagnoses

The Axis I diagnoses assigned at the time of treatment must also be viewed cautiously. A study comparing the reliability of emergency room diagnoses with diagnoses assigned at a subsequent inpatient admission found that psychosis (as a broad category), major depression, and alcohol abuse could be diagnosed reasonably reliably, while schizophrenia, bipolar disorder, other psychotic disorders, and nonalcoholic substance abuse could not (Lieberman & Baker, 1985). Even the reliability of the diagnosis of adjustment disorder was only marginal.

The reliability of the Axis II diagnoses is also questionable. In general, the diagnosis of a personality disorder can reliably be made only after extensive interviewing and history-taking, a time-consuming process not usually feasible in a situation where rapid assessment is required. In an emergency service setting this diagnosis is particularly difficult to make since the individual often presents with other acute symptomatology such as psychosis, substance intoxication, depression and suicidal ideation, or anxiety. There is evidence that even in inpatient settings Axis II disorders are under-diagnosed (Oldham & Skodol,

1991) It is reasonable to assume, therefore, that in the present sample personality disorders may be misdiagnosed or under-represented.

The incidence of substance abuse among the sample population is also probably not an accurate representation of the extent of the problem. As has been noted before, substance-induced symptoms are extremely difficult to sort out from other acute symptomatology, patients are often not forthcoming about their substance abuse histories, and those in the patient's support network may be unaware of the problem or consider it of only secondary importance. Often a substance abuse diagnosis can be reliably arrived at only after the patient has been stabilized for a long period of time. In a recent study of 75 patients admitted to a state hospital, Ananth et al (1989) made 189 diagnoses of substance abuse, whereas the referring emergency rooms had made only 4 such diagnoses, and the treating doctors on the inpatient unit had made only 29.

Characteristics of the Treatment Service

The fact that cases for this study were drawn only from the files of the northern satellite unit of the crisis team may also have shaped the character of the sample. First, the size of the sample was more limited than it would have been had the files of the main office of the team been used. This unit was chosen because its files were more accessible to the author and because the method of record-keeping facilitated identification and selection of appropriate

cases. However, the relatively small sample size not only may have obscured what might otherwise have been significant findings, but also precluded group analyses of other smaller subsamples of the data.

Second, while the main office of the team is located in the emergency room of the Psychiatric Institute of Westchester County Medical Center and the southern satellite has its office in the outpatient clinic of the local hospital, the Peekskill office is housed in a county office building. Many referrals to the team come from other agencies located in the same building, for example, the department of social services, probation, public health nursing, and the county mental health clinic. While the other crisis team offices receive referrals from these county agencies as well, the proportion of such cases and the clinical characteristics of the individuals may be slightly different for this northern satellite.

In terms of specifics of crisis team functioning, it has already been noted that individuals whose sole presenting problem is substance abuse are usually not seen by the team. Exceptions to this would be if the patient were acutely suicidal or a danger to others. In most cases, if the person is intoxicated but otherwise appropriate for assessment, he or she is referred to the nearest emergency room to be held until the acute effects of the substances have subsided enough to allow reasonable evaluation. Often it is the case that once the person is sober, the acute

symptomatology clears and the person is either discharged or may insist on leaving prior to the team's evaluation. In addition, individuals who have made a suicide attempt may require a medical admission, in which case they would later be evaluated by the hospital's own psychiatric consultant, not by the crisis team. If the individual is referred to the emergency room of a hospital that has its own psychiatric unit, the crisis team would be called only if (a) the person required admission to the Psychiatric Institute or (b) the person did not require admission but did need crisis follow-up for stabilization prior to other outpatient referral.

These specifics of crisis team functioning may in part account for those individuals with acute suicidal symptoms and/or substance abuse problems not representing a more significant proportion of the repeater population.

Relevance of Findings

The findings of the current study are relevant to previous as well as future research in the areas of both frequent users of emergency services and the effectiveness of such crisis treatment. In particular this study addresses the issue of the role of mobile emergency services at a time when serious questions have arisen as to the effectiveness of existing treatment facilities in dealing with the post-deinstitutionalization generation.

The primary focus of the current study was to examine to what extent the repeat users of a mobile emergency

service resemble the new young chronic population. This population is assumed to be heavy users of emergency services because of the decreasing length of inpatient stays since deinstitutionalization and the seeming inadequacy of existing outpatient services in treating these individuals. For the most part, the individuals in the current sample did not appear to closely resemble this population.

It is the author's impression, however, that over the past few years the service studied has seen an increasing number of the severely dysfunctional individuals described in the literature. It may very well be that a similar study of the same service undertaken at this or a later time would result in a sample of repeated users more closely resembling the new chronic population.

While the findings in terms of repeated users were modest at best, of equal or perhaps greater interest were the data suggesting that the crisis team effectively treated a subgroup of the sample that might otherwise have been too symptomatic to follow through with an outpatient referral and might subsequently have been at greater risk for either hospitalization or a repeat episode of emergency treatment. This is an issue that warrants further research.

Recommendations for Future Research

Emergency psychiatric services have three primary goals: evaluation, stabilization, and referral. Emergency rooms and other outpatient emergency services have traditionally focussed on evaluation and referral, while the

role of stabilization has been relegated to emergency room holding beds or short-term inpatient units. It is in this area of stabilization that mobile emergency services might prove the most effective.

For such a service, the process of stabilization might best be viewed not strictly within the context of a given episode of treatment but across subsequent episodes as well. For instance, relative effectiveness of treatment might be judged by: (1) a decrease in the severity of presenting symptoms at subsequent episodes (an indication that the individual has learned to recognize early signs of a relapse or is demonstrating an increased willingness to seek treatment); (2) an increased length of time between episodes; (3) a decreased length of treatment within each subsequent episode; (4) increased cooperativeness with crisis team treatment (e.g., keeping appointments, compliance with medication, and a shift toward being self- rather than other-referred); and (5), perhaps most important, an increased willingness to accept referral for ongoing treatment or increased compliance with already existing treatment.

With emergency services increasingly in the position of filling current treatment gaps, especially in terms of treatment of the new chronic population, the questions of whether a mobile service is uniquely suited to the treatment of a particular population and how it can be most effective in that role need to be addressed in future studies.

Bibliography

Ananth, J., Vandewater, S., Kamal, M., Brodsky, A., Gamal, R., & Miller, M. (1989). Missed diagnosis of substance abuse in psychiatric patients. Hospital and Community Psychiatry, 40(3), 297-299.

Atkinson, R. (1973). Importance of alcohol and drug abuse in psychiatric emergencies. California Medical Journal, 118, 1-4.

Auerbach, S. M., & Kilmann, P. R. (1977). Crisis intervention: A review of outcome research. Psychological Bulletin, 84(6), 1189-1217.

Bachrach, L. L. (1982). Young adult chronic patients: An analytical review of the literature. Hospital and Community Psychiatry, 33(3), 189-197.

Bachrach, L. L. (1984). The young adult chronic psychiatric patient in an era of deinstitutionalization. American Journal of Public Health, 74(4), 382-384.

Bartolucci, G., & Drayer, C. S. (1973). An overview of crisis intervention in the emergency rooms of general hospitals. American Journal of Psychiatry, 130(9), 953-960.

Bassuk, E. L. (1980). The impact of deinstitutionalization on the general hospital psychiatric emergency ward. Hospital and Community Psychiatry, 31(9), 623-627.

Bassuk, E. L. (1985). Psychiatric emergency services: Can they cope as last-resort facilities? New Directions for Mental Health Services, 28, 11-20.

Bassuk, E. L., & Gerson, S. (1980). Chronic crisis patients: A discrete clinical group. American Journal of Psychiatry, 137, 1513-1517.

Bassuk, E. L., & Schoonover, S. C. (1981). The private general hospital's psychiatric emergency service in a decade of transition. Hospital and Community Psychiatry, 32(3), 181-185.

Bauer, S. F., & Balter, L. (1971). Emergency psychiatric patients in a municipal hospital: Demographic, clinical, and dispositional characteristics. Psychiatric Quarterly, 45, 382-393.

Bengelsdorf, H., & Alden, D. C. (1987). A mobile crisis unit in the psychiatric emergency room. Hospital and Community Psychiatry, 38(6), 662-665.

Bengelsdorf, H., Levy, L. E., Emerson, R. L., & Barile, F. A. (1984). A crisis triage rating scale: Brief dispositional assessment of patients at risk for hospitalization. Journal of Nervous and Mental Disease, 172(7), 424-430.

Black, D. W., Yates, W. R., & Andreasen, N. C. (1988). Schizophrenia, schizophreniform disorder, and delusional (paranoid) disorders. In J. A. Talbott, R. E. Hales, & S. C. Yudofsky (Eds.), Textbook of Psychiatry (pp. 357-402). Washington, D.C.: The American Psychiatric Press.

Blouin, J., Minoletti, A., Blouin, A., Nahon, D., Natarjan, C., & Croken, M. (1985). Effects of patient characteristics and therapeutic techniques on crisis intervention outcome. Psychiatric Journal of the University of Ottawa, 10(3), 153-157.

Breier, A., Schreiber, J. L., Dyer, J., & Pickar, D. (1991). National Institute of Mental Health longitudinal study of chronic schizophrenia: Prognosis and predictors of outcome. Archives of General Psychiatry, 48, 239-246.

Bristol, J. H., Giller, E., Jr., & Docherty, J. P. (1981). Trends in emergency psychiatry in the last two decades. American Journal of Psychiatry, 138(5), 623-628.

Calsyn, R. J., Pribyl, J. F., & Sunukjian, H. (1977). Correlates of successful outcome in crisis intervention therapy. American Journal of Community Psychiatry, 5(1), 111-119.

Caplan, G. Principles of Preventive Psychiatry. New York: Basic Books, 1964.

Carpenter, W. T., Jr., & Kirkpatrick, B. (1988). The heterogeneity of the long-term course of schizophrenia. Schizophrenia Bulletin, 14(4), 645-652.

Casper, E. S., & Donaldson, B. (1990). Subgroups in the population of frequent users of inpatient services. Hospital and Community Psychiatry, 41(2), 189-191.

Casper, E. S., & Pastva, G. (1990). Admission histories, patterns, and subgroups of the heavy users of a state psychiatric hospital. Psychiatric Quarterly, 61(2), 121-134.

Casper, E. S., Romo, J. M., & Fasnacht, R. C. (1991). Readmission patterns of frequent users of inpatient psychiatric services. Hospital and Community Psychiatry, 42(11), 1166-1167.

Caton, C. L. M. (1981). The new chronic patient and the system of community care. Hospital and Community Psychiatry, 32(7), 475-478.

Caton, C. L. M., Gralnick, A., Bender, S., & Simon, R. (1989). Young chronic patients and substance abuse. Hospital and Community Psychiatry, 40(10), 1037-1040.

Chafetz, L. (1985). Issues in emergency psychiatric research. New Directions for Mental Health Services, 28, 79-92.

Coryell, W., Keller, M., Endicott, J., Andreasen, N., Clayton, P. & Hirschfeld, R. (1989). Bipolar II illness: Course and outcome over a five-year period. Psychological Medicine, 19, 129-141.

Coryell, W., Lavori, P., Endicott, J., Keller, M. & VanEerdewegh, M. (1984). Outcome in schizoaffective, psychotic, and nonpsychotic depression: Course during a six-to 24-month follow-up. Archives of General Psychiatry, 41, 787-791.

Decker, J. B., & Stubblebine, J. M. (1972). Crisis intervention and prevention of psychiatric disability: A follow-up study. American Journal of Psychiatry, 129(6), 725-729.

Delaney, J. A., Seidman, E., & Willis, G. (1978). Crisis intervention and the prevention of institutionalization: An interrupted time series analysis. American Journal of Community Psychiatry, 6(1), 33-45.

Drake, R. E., & Wallach, M. A. (1989). Substance abuse among the chronically ill. Hospital and Community Psychiatry, 40(10), 1041-1046.

Dulit, R. A., Fyer, M. R., Haas, G. L., Sullivan, T., & Frances, A. J. (1990). Substance use in borderline personality disorder. American Journal of Psychiatry, 147(8), 1002-1007.

Ellison, M. D., Blum, N. R., & Barsky, A. J. (1986). Repeat visitors in the psychiatric emergency service: A critical review of the data. Hospital and Community Psychiatry, 37(1), 37-41.

Ellison, M. D., Blum, N. R., & Barsky, A. J. (1989). Frequent repeaters in a psychiatric emergency service. Hospital and Community Psychiatry, 40(9), 958-960.

Ellison, J. M., Hughes, D. H., & White, K. A. (1989). An emergency psychiatry update. Hospital and Community Psychiatry, 40(3), 250-260.

Ellison, J. M., & Wharff, E. A. (1985). More than a gateway: The role of the emergency psychiatry service in the community health network. Hospital and Community Psychiatry, 36(2), 180-185.

Endicott, J., Spitzer, R. L., Fleiss, J. L. & Cohen, J. (1976). The global assessment scale: A procedure for measuring overall severity of psychiatric disturbance. Archives of General Psychiatry, 33, 766-771.

Erickson, R. C., & Paige, A. B. (1973). Fallacies in using length-of-stay and return rates as measures of success. Hospital and Community Psychiatry, 24(8), 559-561.

Faravelli, C., Ambonetti, A., Pallanti, S., & Pazzagli, A. (1986). Depressive relapses and incomplete recovery from index episode. American Journal of Psychiatry, 143(7), 888-891.

Franklin, J. L., Kittredge, L. D., & Thrasher, J. H. (1975). A survey of factors related to mental hospital readmissions. Hospital and Community Psychiatry, 26(11), 749-751.

Friedman, T. T., Becker, A., & Weiner, L. (1964). The psychiatric home treatment service: Preliminary report of five years of clinical experience. American Journal of Psychiatry, 120(2), 782-788.

Galanter, M., & Castaneda, R. (1985). Self-destructive behavior in the substance abuser. Psychiatric Clinics of North America, 8(2), 251-261.

Gaynor, J., & Hargreaves, W. A. (1980). "Emergency room" and "mobile response" models of emergency psychiatric services. Community Mental Health Journal, 16(4), 283-292.

Geller, J. L. (1986). In again, out again: Preliminary evaluation of a state's worst recidivists. Hospital and Community Psychiatry, 37(4), 386-390.

Gerson, S. and Bassuk, E. (1980). Psychiatric emergencies: An overview. American Journal of Psychiatry, 137(1), 1-11.

Gillig, P., Dumaine, M., & Hillard, J. R. (1990). Whom do mobile crisis services serve? Hospital and Community Psychiatry, 41(7), 804-805.

Goldberg, H. L. (1973). Home treatment. Psychiatric Annals, 3(6), 59-61.

Gomez, R. (1983). Demographic and nondemographic characteristics of psychiatric emergency patients. Psychiatric Clinics of North America, 6(2), 213-224.

Gottschalk, L. A.. Fox, R. A., & Bates, D. E. (1973). A study of prediction and outcome in a mental health crisis clinic. American Journal of Psychiatry, 130(10), 1107-1111.

Gottschalk, L. A., Mayerson, P., & Gottlieb, A. A. (1967). Prediction and evaluation of outcome in an emergency brief psychotherapy clinic. Journal of Nervous and Mental Disease, 144(2), 77-96.

Green, J. H. (1988). Frequent rehospitalization and noncompliance with treatment. Hospital and Community Psychiatry, 39(9), 963-966.

Gunderson, J. G., & Elliott, G. R. (1985). The interface between borderline personality disorder and affective disorder. American Journal of Psychiatry, 142, 277-288.

Hadley, T. R., McGurrin, M. C., & Pulice, R. T. (1990). Using fiscal data to identify heavy service users. Psychiatric Quarterly, 61(1), 41-48.

Harrow, M., & Grossman, L. S. (1984). Outcome in schizoaffective disorders: A critical review and evaluation of the literature. Schizophrenia Bulletin, 10(1), 87-108.

Hatch, C., & Schut, L. (1980). Description of a crisis-oriented psychiatric home visiting service. Journal of Psychiatric Nursing and Mental Health Services, 13(4), 31-35.

Havassy, B. E., & Hopkin, J. T. (1989). Factors predicting utilization of acute psychiatric inpatient services by frequently hospitalized patients. Hospital and Community Psychiatry, 40(8), 820-823.

Henisz, J. E., & Johnson, D. (1977). A crisis model revisited. Comprehensive Psychiatry, 18(2), 169-175.

Hillard, J., Ramm, D., Zung, W., & Holland, J. (1983). Suicide in a psychiatric emergency room population. American Journal of Psychiatry, 140, 459-462.

Jamison, K. R., & Akiskal, H. S. (1983). Medication compliance in patients with bipolar disorder. Psychiatric Clinics of North America, 6(1), 175-192.

Joyce, P. R. (1985). Illness behavior and rehospitalization in bipolar affective disorder. Psychological Medicine, 15, 521-525.

Kaskey, G. B., & Ianzito, B. M. (1984). Development of an emergency psychiatric treatment unit. Hospital and Community Psychiatry, 35(12), 1220-1222.

Kay, S. R., Kalathara, A., & Meinzer, A. E. (1989). Diagnostic and behavioral characteristics of psychiatric patients who abuse substances. Hospital and Community Psychiatry, 40(10), 1062-1064.

Keller, M. B., Lavori, P. W., Coryell, W., Andreasen, N. C., Endicott, J., Clayton, P. J., Klerman, G. L., & Hirschfeld, R. M. A. (1986). Differential outcome of pure manic, mixed/cycling, and pure depressive episodes in patients with bipolar illness. Journal of the American Medical Association, 255(22), 3138-3142.

Keller, M. B., Lavori, P. W., Endicott, J., Coryell, W., & Klerman, G. L. (1983). "Double depression": Two-year follow-up. American Journal of Psychiatry, 140(6), 689-694.

Keller, M. B., & Shapiro, R. W. (1981). Major depressive disorder: Initial results from a one-year prospective naturalistic follow-up study. The Journal of Nervous and Mental Disease, 169(12), 761-768.

Keller, M. B., & Shapiro, R. W. (1982). "Double depression": Superimposition of acute depressive episodes on chronic depressive disorders. American Journal of Psychiatry, 139(4), 438-442.

Keller, M. B., Shapiro, R. W., Lavori, P. W., & Wolfe, N. (1982). Relapse in major depressive disorder. Archives of General Psychiatry, 39, 911-915.

Kiloh, L. G., Andrews, G., & Neilson, M. (1988). The long-term outcome of depressive illness. British Journal of Psychiatry, 153, 752-757.

Lamb, H. R. (1982). Young adult chronic patients: The new drifters. Hospital and Community Psychiatry, 33(6), 465-468.

Lamb, H. R. (1988). Community psychiatry and prevention. In J. A. Talbott, R. E. Hales, & S. C. Yudofsky (Eds.), Textbook of Psychiatry (pp. 1141-1160). Washington D.C.: The American Psychiatric Press.

Langsley, D. G. (1985). Community psychiatry. In H. I. Kaplan & B. J. Sadock (Eds.), Comprehensive Textbook of Psychiatry/IV (4th ed.): Vol. II (pp. 1878-1884). Baltimore: Williams & Wilkins.

Langsley, D. G., Flomenhaft, K., & Machotka, P. (1969). Follow-up evaluation of family crisis therapy. American Journal of Orthopsychiatry, 39(5), 753-759.

Langsley, D. G., Machotka, P. & Flomenhaft, K. (1971). Avoiding mental hospital admissions: A follow-up study. American Journal of Psychiatry, 127(10), 127-130.

Langsley, D. G., Pittman, F. S., III, Machotka, P. & Flomenhaft, K. (1968). Family crisis therapy: Results and implications. Family Process, 7(2), 145-158.

Lehmann, H. (1985). Affective disorders: Clinical features. In H. I. Kaplan & B. J. Sadock (Eds.), Comprehensive Textbook of Psychiatry/IV (4th ed.): Vol. I (pp. 807-833). Baltimore: Williams & Wilkins.

Lehmann, H., & Cancro, R. (1985). Schizophrenia: Clinical features. In H. I. Kaplan & B. J. Sadock (Eds.), Comprehensive Textbook of Psychiatry/IV (4th ed.): Vol. I (pp. 701-713). Baltimore: Williams & Wilkins.

Lieberman, P. B., & Baker, F. M. (1985). The reliability of psychiatric diagnosis in the emergency room. Hospital and Community Psychiatry, 36(3), 291-293.

Lindemann, E. (1944). Symptomatology and management of acute grief. American Journal of Psychiatry, 101, 141-148.

Luborsky, L., Chandler, M., Auerbach, A. H., Cohen, J., & Bachrach, H. M. (1971). Factors influencing the outcome of psychotherapy: A review of quantitative research. Psychological Bulletin, 75(3), 145-185.

Lyons, J. S., & McGovern, M. P. (1989). Use of mental health services by dually diagnosed patients. Hospital and Community Psychiatry, 40(10), 1067-1068.

Maris, R., & Connor, H. E. (1973). Do crisis services work?: A follow-up of a psychiatric outpatient sample. Journal of Health and Social Behavior, 14, 311-322.

Marson, D. C., McGovern, M. P., & Pomp, H. C. (1988). Psychiatric decision making in the emergency room: A research overview. American Journal of Psychiatry, 145(8), 918-925.

McGlashan, T. H. (1986a). The Chestnut Lodge follow-up study: II. Long-term outcome of schizophrenia and the affective disorders. Archives of General Psychiatry, 41, 586-601.

McGlashan, T. H. (1986b). The Chestnut Lodge follow-up study: III. Long-term outcome of borderline personalities. Archives of General Psychiatry, 43, 20-30.

McGlashan, T. H. (1988). A selective review of recent North American long-term followup studies of schizophrenia. Schizophrenia Bulletin, 14(4), 515-542.

Meyer, R. E., Schiff, L. F., & Becker, A. (1967). The home treatment of psychotic patients: An analysis of 154 cases. American Journal of Psychiatry, 123(11), 1430-1438.

Miller, F. T., & Tanenbaum, J. H. (1989). Drug abuse in schizophrenia. Hospital and Community Psychiatry, 40(8), 847-849.

Miller, W. B. (1968). A psychiatric emergency service and some treatment concepts. American Journal of Psychiatry, 124(7), 924-933.

Mirin, S. M., & Weiss, R. D. (1991). Substance abuse and mental illness. In R. J. Frances & S. I. Miller (Eds.), Clinical Textbook of Addictive Disorders (pp. 271-298). New York: The Guilford Press.

Munves, P. I., Trimboli, F., & North, A. J. (1983). A study of repeat visits to a psychiatric emergency room. Hospital and Community Psychiatry, 34(7), 634-638.

Nace, E. P., Davis, C. W., & Gaspari, J. P. (1991). Axis II comorbidity in substance abusers. American Journal of Psychiatry, 148(1), 118-120.

Nurius, P. S. (1983). Emergency psychiatric services: A study of changing utilization patterns and issues. International Journal of Psychiatry in Medicine, 13(3), 239-254.

Oldham, J. M., Lin, A., & Breslin, L. (1990). Comprehensive psychiatric emergency services. Psychiatric Quarterly, 61(1), 57-67.

Oldham, J. M., & Skodol, A. E. (1991). Personality disorders in the public sector. Hospital and Community Psychiatry, 42(5), 481-487.

Opjordsmoen, S. (1989). Long-term course and outcome in unipolar affective and schizoaffective psychoses. Acta Psychiatrica Scandinavia, 79, 317-326.

Pasamanick, B., Scarpitti, F. R., Lefton, M., Dinitz, S., Werner, J. J., & McPheeters, H. (1964). Home vs hospital care for schizophrenics. Journal of the American Medical Association, 187(3), 177-181.

Pepper, B., Kirshner, M. C., & Ryglewicz, H. (1981). The young adult chronic patient: Overview of a population. Hospital and Community Psychiatry, 32(7), 463-469.

Peretti, P.O. (1974). Precipitating factors of readmission of psychiatric patients. Community Mental Health Journal, 10(1), 89-92.

Perez, E., Minoletti, A., Blouin, J., & Blouin, A. (1986). Repeated users of a psychiatric emergency service in a Canadian general hospital. Psychiatric Quarterly, 58(3), 189-201.

Perlmutter, R.A. (1983). Family involvement in psychiatric emergencies. Hospital and Community Psychiatry, 34(3), 255-257.

Perry, S. E. (1963). Home treatment and the social system of psychiatry. Psychiatry, 26, 54-64.

Purdie, F., Honigman, B., & Rosen, P. (1981). The chronic emergency department patient. Annals of Emergency Medicine, 10, 298-301.

Raphling, D. L., & Lion, J. (1970). Patients with repeated admissions to a psychiatric emergency service. Community Mental Health Journal, 6(4), 313-318.

Rhine, M. W., & Mayerson, P. (1971). Crisis hospitalization within a psychiatric emergency service. American Journal of Psychiatry, 127(10), 122-127.

Rich, C. L., Young, D., & Fowler, R. C. (1986). San Diego suicide study. Archives of General Psychiatry, 43, 577-582.

Robins, E. (1985). Suicide. In H. I. Kaplan & B. J. Sadock (Eds.), Comprehensive Textbook of Psychiatry/IV (4th ed.): Vol. II (pp. 1311-1314). Baltimore: Williams & Wilkins.

Rosenblatt, A. and Mayer, J. E. (1974). The recidivism of mental patients: A review of past studies. American Journal of Orthopsychiatry, 44, 697-706.

Roy, A. (1985). Suicide and psychiatric patients. Psychiatric Clinics of North America, 8(2), 227-241.

Roy, A. (1986). Depression, attempted suicide, and suicide in patients with chronic schizophrenia. Psychiatric Clinics of North America, 9(1), 193-206.

Ruiz, P., Vazquez, W., & Vazquez, K. (1973). The mobile unit: A new approach in mental health. Community Mental Health Journal, 9(1), 18-24.

Rusk, T. N., & Gerner, R. H. (1972). A study of the process of emergency psychotherapy, American Journal of Psychiatry, 128, 882-885.

Samson, J. A., Simpson, J. C., & Tsuang, M. T. (1988). Outcome studies of schizoaffective disorders. Schizophrenia Bulletin, 14(4), 543-554.

Schwartz, D. A., Weiss, A. T., & Miner, J. M. (1972). Community psychiatry and emergency service. American Journal of Psychiatry, 129(6), 86-91.

Schwartz, S. R., & Goldfinger, S. M. (1981). The new chronic patient: Clinical characteristics of an emerging subgroup. Hospital and Community Psychiatry, 32(7), 470-474.

Skodol, A. E., Kass, F., & Charles, E. (1979). Crisis in psychotherapy: Principles of emergency consultation and intervention. American Journal of Orthopsychiatry, 49(4), 585-597.

Slaby, A. E. (1981). Emergency psychiatry: An update. Hospital and Community Psychiatry, 32(10), 687-698.

Slaby, A. E., Goldberg, R. J., & Wallace, S. R. (1983). Interdisciplinary team approach to emergency psychiatric care. Psychosomatics, 24(7), 627-637.

Slaby, A. E., & Perry, P. L. (1980). Use and abuse of psychiatric emergency services. International Journal of Psychiatry in Medicine, 10(1), 1-8.

Smith, F. A., Fenton, F. R., Benoit, C., & Barzell, E. (1976). Home-care treatment of acutely ill psychiatric patients. Canadian Psychiatric Association Journal, 21(5), 269-274.

Solomon, P. (1986). Receipt of aftercare services by problem types: Psychiatric, psychiatric/substance abuse and substance abuse. Psychiatric Quarterly, 58(3), 180-186.

Solomon, P., & Doll, W. (1979). The varieties of readmission: The case against the use of recidivism rates as a measure of program effectiveness. American Journal of Orthopsychiatry, 49(2), 230-239.

Solomon, P., & Gordon, B. (1988a). The psychiatric emergency room and follow-up services in the community. Psychiatric Quarterly, 58(2), 119-127.

Solomon, P., & Gordon, B. (1988b). Outpatient compliance of psychiatric emergency room patients by presenting problems. Psychiatric Quarterly, 59(4), 271-283.

Steadman, H. J., Braff, J., & Morrissey, J. P. (1988). Profiling psychiatric cases evaluated in the general hospital emergency room. Psychiatric Quarterly, 59(1), 10-22.

Steer, R. A., Diamond, H., Litwok, E., & Henry, M. (1979). Prediction of multiple visits by a community mental health center's psychiatric emergency home visiting team. Community Mental Health Journal, 15(3), 214-218.

Stephens, J. H., & McHugh, P. R. (1991). Characteristics and long-term follow-up of patients hospitalized for mood disorders in the Phipps Clinic, 1913-1940. The Journal of Nervous and Mental Disease, 179(2), 64-73.

Stevenson, J. M. (1988). Suicide. In J. A. Talbott, R. E. Hales, & S. C. Yudofsky (Eds.), Textbook of Psychiatry (pp. 1021-1035). Washington, D.C.: The American Psychiatric Press.

Surles, R. C., & McGurrin, M. (1987). Increased use of psychiatric emergency services by young chronic mentally ill patients. Hospital and Community Psychiatry, 38(4), 401-405.

Szuster, R., Schanbacher, B. L., & McCann, S. (1990). Characteristics of psychiatric emergency room patients with alcohol- or drug-induced disorders. Hospital and Community Psychiatry, 41(12), 1342-1345.

Tufnell, G., Bouras, N., Watson, J. P., & Brough, D. I. (1985). Home assessment and treatment in a community psychiatric service. Acta Psychiatrica Scandinavia, 72, 20-28.

Voineskos, G. (1985). New chronic patients in the emergency service. The Psychiatric Journal of the University of Ottawa, 10(2), 95-100.

Walker, W. R., Parsons, L. B., & Skelton, D. (1973). Brief hospitalization on a crisis service: A study of patient and treatment variables. American Journal of Psychiatry, 130(8), 896-900.

Wellin, E., Slesinger, D. P., & Hollister, D. (1987). Psychiatric emergency services: Evolution, adaptation and proliferation. Social Science and Medicine, 24(6), 475-482.

West, D. A., Litwok, E., Oberlander, K., & Martin, D. W. (1980). Emergency psychiatric home visiting: Report of four years experience. Journal of Clinical Psychiatry, 41(4), 113-118.

Winokur, G., & Kadrmas, A. (1989). A polyepisodic course in bipolar illness: Possible clinical relationships. Comprehensive Psychiatry, 30(2), 121-127.

Wolkon, G. H. (1972). Crisis theory, the application for treatment, and dependency. Comprehensive Psychiatry, 13(5), 459-464.

Zonana, H., Henisz, J. E., & Levine, M. (1973). Psychiatric emergency services a decade later. Psychiatry in Medicine, 4(3), 273-290.