

A Cognitive, Behaviorally Based Program for Patients With Persistent Mental Illness and a History of Aggression, Crime, or Both: Structure and Correlates of Completers of the Program

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Standard psychiatric treatment programs have limited success in reducing recidivistic violent and criminal behavior in patients with persistent mental illness. A specialized, cognitive behavioral treatment program was developed for such a population. The purpose of this study was to identify factors that contribute to the patients' completing the program and to improve the selection criteria for program admission, so that those who participate are more likely to complete the program and be discharged. One hundred eighty-one patients with persistent mental illness with histories of aggression, crime, or both participated in a cognitive skills inpatient treatment program adapted for use with psychiatric patients. Ninety patients were able to complete the program and were discharged into the community. In comparison with the 91 who did not complete the program, those who did were less cognitively impaired and less impulsive. We present a new, intensive treatment program and define the predictors of successful completion of the program.

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An increasing proportion of state psychiatric hospital patients have a history of recidivistic criminal behavior.¹ Assessment of the risk of such behavior has been at the center of research over the past two decades.^{2–6} The studies of risk assessment are summarized elsewhere.⁷ In the present study, we focused on a program aiming to reduce criminal recidivism among

patients with serious mental illness. The need for such a program is felt particularly in major metropolitan areas. Among patients newly admitted to a New York City area state psychiatric hospital, 39.2 percent had been charged with a felony, 16.5 percent were admitted from a correctional setting, and 34.2 percent had a history of prior incarceration.¹ Responding to the need, the New York State Office of Mental Health developed a specialized program for such patients. The program, called STAIR (Service for Treatment and Abatement of Interpersonal Risk), has been operating since 1997 at the Manhattan Psychiatric Center (MPC), a state hospital providing treatment to the severely mentally ill in the New York City region.

Programs most successful in reducing criminal recidivism combine cognitive and behavioral treatment techniques^{8,9} with case management.^{9–13}

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Thus, a cognitive skills program was selected that was originally developed to reduce criminal recidivism in Canadian criminal offenders with no mental illness.^{14,15} Robinson¹⁶ reported that this structured, cognitive skills training reduced the re-arrest and re-conviction rates in the one-year follow-up of 1444 federal offenders by 11.2 percent, compared with the 379 control subjects. A reduction of 57.8 percent was found in sex offenders, and a reduction of approximately 35 percent was found for both violent and drug offenders.

Considerable expenditures, in both money and manpower, were necessary for the preparation and operation of the STAIR program. Physical modifications were made to existing ward units to accommodate patients with histories of violence or aggression. Twenty staff members underwent comprehensive training in the cognitive skills program, and a group of staff was also trained to become case managers. The cognitive skills training was financed from a grant provided to the program by the New York State Office of Mental Health. In view of the cost of preparation and the current funding, it is important that patients selected for the program have the best possible chance of succeeding in the program. In the present study, we delineate the characteristics of those who successfully completed the program.

STAIR: The Clinical Treatment Program

STAIR was designed by modifying the Canadian cognitive skills program^{14,15} and enhancing the program with a behavioral reward structure called the "Step System," in which attainment of each step provides a set of rewards and privileges. This inpatient treatment program specifically targets the factors associated with violent and criminal behavior. Substance-abuse programs such as a peer-run 12-step program complete the curriculum. The overall emphasis is on rehabilitation and goal setting, job training, and ongoing psychiatric treatment in a multidisciplinary inpatient setting. All patients are provided standard psychopharmacological management. Following the completion of the program and discharge into the community, each patient is assigned a case manager and provided a standard psychiatric follow-up.

The Cognitive Skills Training course serves as the core of the inpatient component. The principal purpose of the Cognitive Skills Program is to train the patient in the skills, values, and attitudes necessary

for successful living in the community. Six specific cognitive techniques are used: problem solving, creative thinking, values enhancement, improvement of social skills, use of critical reasoning, and managing emotions. Each cognitive skill is taught over a series of lessons ranging from 3 to 10 classes. Skills are taught to small groups in 45-minute sessions, two times a week by two clinicians.

All instructors are either social workers or psychologists who have received formal training in the cognitive skills model. Cognitive skills training is taught in English in a course-curriculum, lesson-plan format to facilitate consistency of delivery across group instructors. The instruction takes place in a classroom setting, where the instructors use visual aids such as blackboards or flip charts to display concepts. Patients are provided handouts during each class that summarize the lesson of the day in a bulleted-list format. The reading level of the handouts is fourth to fifth grade. Although patients are not routinely assigned homework, they store their handouts in a personal binder that is always available and that they can review at their discretion. In addition, patients can make notes on the handouts during and after class, to facilitate understanding. Active participation is encouraged to demonstrate understanding of the cognitive skills concepts.

Patients are assigned to a cognitive skills group within six to eight weeks of their admission to STAIR. Group size ranges from six to eight patients. The number of groups is dependent on the census, with an average of four to eight groups at any one time. The model, developed for mentally ill offenders, consists of 72 sessions given over six months. However, the total number of sessions necessary for completion is related to the progress of the individual members. A new cognitive skill is not introduced until the current skill is fully understood by each individual group member. If patients have a psychiatric setback or a medical illness that precludes attendance, group leaders provide make-up sessions. If the setback extends to more than four continuous classroom sessions, the patient is reassigned to another cognitive skills class once he or she is stable.

Patients receive a certificate on completion of the cognitive skills program. Ward behavior is monitored by the treatment team for application of learned concepts, a necessary requirement for discharge.

The cognitive skills training program is enhanced by the behavioral grading system (Step System) mentioned earlier, which rewards participation in the program and the acquisition of skills with increased personal liberty within the institution and with the ability to participate in the paid work-rehabilitation program within the hospital. The system comprises seven steps, with each step being more challenging than the prior one. Each step has a series of requirements to maintain the level and the privileges unique to the step. Step level is dependent on the patient's behavior and involvement in the ward. Steps 2, 3, and 4 reflect the ability to refrain from violent and otherwise destructive behavior and reflect the degree of participation in the therapeutic activities. Steps 5 to 7 require an increased degree of insight into one's disease and one's triggers for violent behavior and the ability to apply skills learned in the cognitive skills training in real-life situations. Patients can move up in step status or they can be returned to a lower step based on performance. The clinical team makes the decision based on input from the patient and the entire staff during a biweekly ward meeting.

Once a STAIR patient achieves Step 6, he or she is assigned to a "Bridger" (case manager) who helps the patient prepare for discharge. A patient is eligible for discharge once Step 7 is achieved. Discharge from the inpatient program is determined by the patient's progress through the Step System and is decided formally by a committee of hospital psychiatrists and psychologists who are not directly involved in the STAIR program. The committee determines whether the patient has been free of violent behavior and whether he or she has gained insight into past violence and into ways to prevent the violent behavior from occurring in the future. The hospital's clinical director approves the committee's decision.

Patients who are not able to benefit from the cognitive skills training or who cannot meet the demands of the Step System are transferred to another hospital ward or facility. In addition, some patients are transferred out of the program because they cannot regulate psychotic symptoms or behavioral disturbances, or because of the development of medical problems that could not be properly controlled or stabilized. The decision to transfer a patient out of STAIR is made by the STAIR treatment team.

Candidates for STAIR are referred from the inpatient population of MPC and from inpatients in the New York City metropolitan area state psychiatric

hospitals. STAIR candidates are told that the goal of the program is to learn new ways to think and behave that will help them to break the cycle of repeated incarcerations and hospitalizations. Prior to admission to STAIR, candidates are screened to ascertain that they meet the following admission criteria: an Axis I diagnosis (psychotic symptoms, if present, adequately managed with psychopharmacological treatment); an Axis II diagnosis or significant signs of a personality disorder; history of interpersonal violence or victimization; a demonstrated inability to function in the community as evidenced by relapse and/or criminal recidivism and arrests; a demonstrated inability to participate meaningfully in the treatment services available in traditional nonsecure psychiatric inpatient settings (e.g., escapes, patterns of interpersonal victimization, or failure to progress); and absence of medical problems that may interfere with participation in the program or florid psychosis at the time of admission to the STAIR program; and the absence of a diagnosis of Mental Retardation.

The principal purpose of this article is to describe the program and to determine factors affecting psychiatric patients' ability to complete it and to be discharged. Specifically, we will provide data on the following subjects:

1. Demographic, clinical, and psychological correlates of participants
2. Comparison of participants who complete the program ("completers") with those who do not ("non-completers"). This comparison describes the interaction between patients and treaters and the behavior and characteristics of the patients that led to continued program inclusion or transfer. It cannot be used to assess the effectiveness of the program.

Methods

Participants

Participants were male and female psychiatric inpatients, consecutively admitted to the STAIR program at the Manhattan Psychiatric Center (MPC) from its inception on April 1, 1997, and who were discharged to the community or transferred out of the STAIR ward by October 31, 2001. Patients who successfully completed the program composed the discharged group (DC Group). Patients who were transferred from the STAIR unit before completion composed the non-discharged group (non-DC Group).

MPC is a minimum security, civil psychiatric hospital serving the New York City metropolitan area. The STAIR unit comprises four mixed-gender wards serving a total of approximately 96 patients at any given time.

This study is a program evaluation that utilized data obtained in the course of the clinical evaluation of the STAIR patients. All data were gleaned by review of the patients' clinical charts and records. The study was approved by the institutional review boards (IRBs) of the Manhattan Psychiatric Center and the Office of Mental Health of the State of New York. The study satisfied the IRB criteria for the waiver of consent. The research involved no more than minimal risk to subjects. The waiver would not adversely affect the rights and welfare of the subjects; the research could not practicably be performed without the waiver or alteration. At the time of the study, some of the patients were no longer available to provide informed consent (because of incarceration or lack of compliance with outpatient treatment). Excluding the group of unavailable patients would selectively bias the study sample.

Assessments

Historical, demographic, and diagnostic information was obtained from patients' clinical records to characterize fully the STAIR patient population variables that relate to the outcome of patients who participated in the program. Psychological testing became part of the clinical evaluation process in March 1999. The selection of the assessments was based on literature reviewed elsewhere.⁷

The STAIR admitting physicians verified psychiatric diagnoses according to a DSM-IV standard. Patients' criminal history was obtained from a collective database operated by the Division of Criminal Justice Services and available through the New York Office of Mental Health. The number of arrests for violent offenses such as murder, rape, assault, and arson were distinguished from the number of arrests for nonviolent offenses such as burglary, misdemeanors, and drug-related crimes. Disposition of each offense was recorded, including the length of incarceration. Patients' histories of psychiatric hospitalizations within the New York State system were obtained from the Department of Mental Health Information Services, which also included psychiatric hospitalizations during periods of incarceration. Information regarding psychiatric hospitalizations in

other settings was obtained by chart review and patient's account. Other demographic and control variables such as educational achievement, employment, and social history were obtained through chart review.

Cognitive functioning was assessed by two measures, the Beta-II¹⁷ and selected subtests of the Wechsler Adult Intelligence Scale-Revised (WAIS-R).¹⁸ The Beta-II was selected because it is considered to be relatively insensitive to cultural, educational, and language effects. It was designed to measure the general intellectual ability of persons who are not completely literate or who have a language barrier. The selection of the WAIS-R subtests was governed by similar considerations; the subsets administered were: Digit Span, Comprehension, Similarities, Picture Arrangement, and Block Design.

Two measures were used to assess overlapping but unique aspects of impulsivity: the Zuckerman Sensation Seeking Scale Version V¹⁹ and the Barratt Impulsivity Scale Version 11.²⁰ The Sensation Seeking Scale taps the behavioral aspects of impulsivity, such as risk taking, pursuing new or exhilarating experiences, and having an aversion to routine that may be regarded as boring. Conversely, the Barratt Impulsivity Scale taps the cognitive elements of impulsivity, such as the ability to focus or sustain attention and to plan and think carefully. It also measures consistency. The Buss Durkee Inventory²¹ was administered to assess both attitudinal and motor aspects of different types of aggression and hostility.

The Hare Psychopathy Checklist: Screening Version (PCL:SV), a structured interview, was used to assess psychopathy.² This measure was used to obtain information about the individual's early life, relationship history, education, employment experiences, medical, psychiatric, and criminal history (juvenile and adult), which was corroborated with file information.

Procedure

The evaluative component of the STAIR program was initiated in March 1999. Although comprehensive demographic data were obtained for every STAIR patient, several patients were discharged from the STAIR ward before psychological testing could be completed. Forty-seven patients were transferred to other inpatient wards (non-DC Group) either before March 1999 or shortly thereafter and

Program Structure and Correlates of Program Completers

Table 1 Diagnosis and Medical History

	Total Sample (<i>n</i> = 181)		Completed and Discharged (<i>n</i> = 90)		Non-completers (<i>n</i> = 91)		
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Diagnosis							
Psychosis	143	79	70	78	73	80	NS
Mood disorder	24	13	14	16	10	11	NS
Comorbid substance abuse	125	69	61	68	64	70	NS
Antisocial PD	82	45	42	47	40	44	NS
Borderline PD	21	12	10	11	11	12	NS
Medical history							
History of learning disability	51	29	26	29	25	28	NS
History of loss of consciousness	24	13	16	18	8	9	NS
History of head injury	22	12	10	11	12	14	NS

PD, personality disorder.

underwent no testing. Fourteen patients were successfully discharged to the community before or shortly after March 1999 (DC Group) and were unable to complete the neuropsychological testing. Eighty-four percent of patients in the DC Group were available for testing. Testing was completed by 77 to 89 percent of patients in the DC Group and by 34 to 41 percent of patients in the non-DC Group (see Table 3).

Data Analyses

One-way analysis of variance (ANOVA) was used on continuous explanatory variables to compare the outcome groups of interest: patients who completed the STAIR program and were discharged into the community (DC Group, *n* = 90) and patients who did not complete the program (non-DC Group, *n* = 91). Chi-square analysis was used for categorical variables. *Post hoc* pair-wise group comparisons were conducted if the overall analysis yielded a significant result. The Statistical Analysis Software (SAS) package was used to analyze the data. One-way ANOVA was performed by using the General Linear Model procedure (GLM).

An ordinal logistic regression model for polytomous data was used to test the hypothesis that a high degree of impulsivity—as captured by the Barratt Impulsivity Scale, Zuckerman Sensation Seeking Scale, and Buss-Durkee Hostility Inventory—and lower intelligence would predict failure to complete the STAIR program. Outcome status served as a bimodal dependent variable (i.e., DC, non-DC) in the logistic regression analyses. The relationship between

the outcome and explanatory variables was expressed by R^2 (i.e., % of variance explained) and by the odds ratio statistics.

Results

Demographic, Clinical, and Psychological Correlates of Participants

Subject Characteristics

The study sample consisted of 181 patients who were consecutively admitted to STAIR after April 1, 1997, and were discharged or transferred by October 31, 2001 (164 men and 17 women.) The average age of the sample was 37.5 ± 9.4 (SD) years. The patients were predominantly African American (74%); 15 percent were Hispanic, and 10 percent were white. Diagnosis and medical history can be viewed in Table 1. Gender distribution was equal between the groups. There were nine women in the DC Group (10%) and eight women in the non-DC Group (9%). A comparison of men versus women on WAIS and Beta IQ and Barratt Impulsivity showed that the mean scores on IQ and Barratt were almost identical. A nonsignificant five-point discrepancy was in evidence for Beta IQ (males, 70; females, 65). While all data included women, the limited number prohibits any meaningful statistical analysis of gender effect. Most of the patients had a diagnosis of a psychosis (Schizophrenia, Schizoaffective Disorder, Delusional Disorder, or Psychotic Disorder Not Otherwise Specified).

As can be seen in Table 2, the average number of psychiatric hospitalizations was eight. In addition,

Table 2 Criminal and Psychiatric History

	(1) Completed and Discharged (n = 90)		(2) Non-completers (n = 91)		(1) vs. (2) F (p > F)
	Mean	SD	Mean	SD	
Arrests	9.07	8.5	8.9	10.3	NS
Arrests for violent crimes	3.26	3.33	3.1	2.9	NS
Days spent in prison	1517	1897	1654	2286	NS
Hospitalizations	8.2	6.8	10.0	8.6	NS
Days spent in hospitals	2069	1654	2511	2240	NS

Data are expressed as the mean number of each item ± SD.

most patients had a formal arrest history, and the average number of arrests was nine. Years institutionalized averaged four years in prison and five years in a psychiatric hospital. Thus, this was a predominantly male population of chronically psychotic patients with a history of substance abuse and repeated incarcerations and hospitalizations.

Comparison of Completing and Non-completing Participants

Ninety patients completed the treatment program and were discharged to the community, whereas 91 patients did not complete the program. Two patients escaped, two went to jail, and six were released by court order. The remaining 81 patients were transferred off the STAIR ward. The mean duration of STAIR treatment for the 81 non-DC patients was 332 ± 297 (SD) days, whereas the mean duration of STAIR treatment for the 90 in the DC Group was

637 ± 313 (SD) days. Review of the total length of inpatient stay for the 81 patients in the non-DC Group until discharge to the community yielded 818 ± 469 (SD) days. The difference between total lengths of hospitalization of patients in the DC Group (637 days) was significantly shorter than the 818 days in the non-DC Group ($F = 8.97, df = 1, p = .0032.$) As of the cutoff date for this article (November 5, 2001), 47 of the 81 patients in the non-DC Group remained hospitalized.

The DC and non-DC Groups showed no statistically significant differences in any of the demographic, criminal, or medical histories or in diagnostic variables. The results of baseline psychological measures and the numbers of subjects who completed each of the tests are displayed in Table 3. As mentioned earlier, 77 to 89 percent of the DC Group completed the baseline psychological tests, but only approximately 34 to 41 per-

Table 3 Baseline Psychological Measures

Clinical Measure	Completers (DC) (n = 90)		Non-completers (Non-DC) (n = 91)		Intergroup Comparison*		
	Mean	SD	Mean	SD	F	df	P
WAIS full scale IQ	80.8 n =70	9.18	75.4 n =32	7.03	8.94	1	<.01
WAIS verbal IQ	82.3	10.7	77.2	6.4	6.35	1	.01
WAIS performance IQ	81.2	8.8	76.2	10.3	6.47	1	.01
Beta II IQ	72.8 n =69	10.8	65.0 n =31	7.8	13.22	1	<.01
PCL:SV total score	16.1 n =80	4.1	16.5 n =33	3.3	0.20	1	NS
Barratt total score	62.3 n =72	10.9	68.6 n =36	8.6	9.02	1	<.01
Sensation seeking scale	15.2 n =74	5.1	17.6 n =36	4.1	6.01	1	.02
Buss-Durkee hostility inventory	33.7 n =75	11.8	40.3 n =37	9.8	8.54	1	<.01

* One-way ANOVA.

cent of the non-DC Group completed the measures. This lower percentage in the non-DC Group is explained by the higher unavailability (because of transfer) and higher refusal rate.

Under these conditions, it was necessary to ascertain (to the extent possible) whether the group that had test score data were representative of the whole non-DC Group. Patients who did and did not complete testing were compared on relevant demographic and diagnostic variables. Patients who did not complete the baseline psychological measures did not differ from test completers in age ($F = 0.0$, $df = 1,90$, $p = .95$), education ($F = 0.05$, $df = 1,90$, $p = .82$), psychiatric history (total hospitalizations: $F = 0.0$, $df = 1,88$, $p = .96$), Axis I psychiatric diagnosis (psychosis: $\chi^2 = 1.24$, $df = 1$, $p = .27$), Axis II diagnosis (Antisocial Personality Disorder: $\chi^2 = .22$, $df = 1$, $p = .64$), total number of arrests ($F = 0.30$, $df = 1,90$, $p = .59$), or number of violent arrests ($F = 0.05$, $df = 1,90$, $p = .82$). These comparisons suggest that the test takers were representative of the non-DC Group in the standard demographic and clinical variables that were used to describe the samples.

As indicated by the ANOVA, IQ and impulsivity scores significantly differentiated the two groups (Table 3). The difference in IQ scores was particularly prominent when obtained by the Beta-II. Although they scored slightly more than one standard deviation below the mean compared with the normative group, the DC Group had higher IQ scores as measured by the Beta-II and WAIS-R than did the non-DC Group. The DC Group also had lower impulsivity and hostility indices than did the non-DC Group. Specifically, scores on two factors from the Barratt Impulsivity Scale (Attentional Impulsivity and Motor Impulsivity) and the Disinhibition factor from the Zuckerman Sensation Seeking Scale significantly differentiated the two groups.

To ascertain whether IQ and impulsivity independently contribute to group membership, the scores of Beta IQ and Barratt Impulsivity Scale were introduced as independent factors into a logistic regression model. Group membership (DC versus non-DC) was the dependent variable. The model explained 15 percent of the variance. Both factors (Beta IQ and Barratt) predicted group membership. Beta IQ was positively associated with successful program completion (odds ratio = 1.080; 95% confidence interval (CI): 1.021–1.143; $\chi^2 = 7.15$, $df = 1$;

$p = .0075$). The odds ratio for the total Barratt score was = 0.954 (95% CI: 0.909–1.000). A higher level of impulsivity and a lower level of intelligence as measured by the Beta-II both predicted lower likelihood of successful discharge.

Discussion

A cognitive skills rehabilitation program, amplified by a behavioral grading system, can be successfully administered to a large segment of people with mental illness with a history of recidivistic violent criminal behavior. Patients with IQ scores falling slightly more than one standard deviation below the mean when compared with the normative population were able to complete the program and achieve release from the hospital. The patients who successfully completed the STAIR treatment program were less cognitively impaired and impulsive than those who were unable to complete the program. Given the robust predictive power of the Beta-II for discriminating successful completers from non-completers, it is possible that the Beta-II serves as a better measure of the skills necessary for patients to complete the cognitive skills training component of the program than the WAIS-R. Furthermore, the elevated score for Attentional Impulsivity evidenced in the non-DC Group probably was indicative of a factor that further compromised these patients' learning abilities. The clinical implication of these findings is that for patients to succeed in this program they must demonstrate a minimum of cognitive skills and have lower levels of impulsivity.

In contrast, co-morbid psychopathic features were unrelated to patients' success in the program. This finding can also be interpreted as meaning that regardless of the presence of psychopathy, patients can succeed in a highly cognitively and behaviorally structured treatment program. However, the ultimate evidence of success of such a program rests in the patients' ability to reduce criminal and psychiatric recidivism once they are discharged to the community and no longer have available the inpatient supervisory structure. This matter is addressed in another article²² that examines the long-term follow-up of this patient cohort.

Approximately 50 percent of the patients admitted to the program were able to complete the program and be discharged to the community, despite a demonstrated history of an inability to participate meaningfully in or benefit from traditional inpatient

psychiatric settings or forensic facilities. To date, discharged patients have been observed for a range of six months to four years.²² The cutoff date for this long-term follow-up paper was May 5, 2002, given that a patient had to be in the community for a minimum of six months for inclusion in this article. Thirty-nine percent have been stable in the community (no re-hospitalizations or re-arrests). Given the refractory nature of this population and the apparent inability to benefit from previous therapeutic exposures, this proportion compares favorably to the re-arrest rates in general offender populations as well as to the mentally ill offender rates reported elsewhere.^{10,23}

Patients in the non-DC Group completed psychological tests at a substantially lower rate than patients in the DC Group. Although there were no significant differences between test takers and non-test takers on any demographic or diagnostic variables, it is possible that the groups differed on relevant personality characteristics such as the level of impulsivity or psychopathy. However, in our sample, psychopathy correlated highly with the diagnosis of Antisocial Personality Disorder (ASPD) and there was no difference between the test takers and non-test takers in the frequency of the diagnosis of ASPD. Furthermore, non-test takers' being more impulsive than test takers in the non-DC Group would only strengthen the difference between the DC-group and non-DC Group in the level of impulsivity.

The primary limitation of the study is the lack of a matched control group. The non-DC Group was not followed up once transferred out of the STAIR program, given that they were not transferred to one particular unit at MPC, and in some cases they were discharged directly into the community or returned to their referral facility. Furthermore, unlike those in the DC Group, all of whom were discharged into the care of case managers, no uniform outpatient treatment was required for the non-DC Group. Finally, no legal avenue exists for accessing criminal activity through the Division of Criminal Justice Services or for hospitalization in non-state psychiatric facilities for this group. Another limitation of the current version of the STAIR program is its lack of appropriate assessment and management of anger. Future efforts in this area should use the work reported in Novaco²⁴ and Robins and Novaco.²⁵ Given that the STAIR program is in its infancy, a program evaluation was warranted to assess program viability, as measured by patient completion rate and behavior in the commu-

nity after discharge. Patients referred to the STAIR program had a lengthy history of institutionalization, with little evidence of long-term success in the community as measured by psychiatric stability and/or lack of criminal involvement. It would have been unethical to deny possible treatment to a patient who met admission criteria and wanted to participate in the program. However, given the expense of programs such as these, appropriate selection of participants is a critical objective in maximizing scarce resources.

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