

COUNTY OF LOS ANGELES
DEPARTMENT OF MENTAL HEALTH
QUALITY SUPPORT BUREAU

E & R Papers

DATE: June, 1983

Vol. X No. 5

AN EVALUATION OF THE EFFECTS OF DAY TREATMENT
PROGRAMS ON DISCHARGED HOSPITAL PATIENTS

By

Roger E. Rice, Ph.D.

ABSTRACT

AN EVALUATION OF THE EFFECTS OF DAY TREATMENT
PROGRAMS ON DISCHARGED HOSPITAL PATIENTS

BY

Roger E. Rice, Ph.D.

One hundred and seventy-four (174) patients discharged from four day-treatment programs were tracked within the Los Angeles County's mental health system's patient file from July 1975 to December 1981. Their treatment histories were divided into the time prior to entering the treatment programs (average 33.4 months) and the time following the admission date (average 33.4 months). The average number of months tracked was 66.8. The average number of days that the patients participated in treatment programs was 26.8 days. Forty-seven percent (47%) of the clients experienced one or more hospital readmissions following their admission into the treatment program. This compares to recidivisms rates of 45-60% reported in the literature for this follow-up period of time. Using the patients as their own controls, their post-treatment hospital days was 35.5 days less than their pre-treatment days. Thus, these patients were able to function in the community for a longer period of time after participation in the program. In addition to the benefits to these 174 patients, the utilization of a less costly treatment modality by them allowed 6,173 more hospital-bed days to be available to others who need such services.

In addition to greater community tenure, there was on the average, an improvement of functioning as measured by the Global Assessment Scales for the 174 patients in the day treatment programs.

AN EVALUATION OF THE EFFECTS OF
DAY TREATMENT PROGRAMS ON
DISCHARGED HOSPITAL PATIENTS

The major problem in mental health today is the rehabilitation of the severely mentally ill in the community. This has been an increasingly serious problem since the political policy makers redefined the hospitals from asylums to places where only the acutely mentally ill are to be admitted and treated. This policy, stimulated by fiscal constraints and a philosophy for treatment in a least restrictive setting, was made possible because of the development of anti-psychotic medications in the 1950's and new welfare laws that allowed the chronically mentally ill to receive the same welfare benefits as the physically disabled population.

These policies, new medications and welfare laws resulted in the release of mental patients from hospitals where they had resided for decades. Thus, the national hospital census of mentally ill patients decreased from a peak of 559,000 in 1955 to less than 150,000 in 1980 (Toward a National Plan, 1981). Between 1955 and 1972, readmissions increased from about 50,000 to 250,000 (Bassuk and Gerson, 1978). Deinstitutionalization was a national phenomenon but it was duplicated in the State of California and the County of Los Angeles. For example, in 1955 there were more than 36,000 patients in the state hospitals and over 13,000 of these were from Los Angeles County. In that year the population of the State was 13,000,000 and that of the County was 5,000,000. Today the State population has increased to over 22,000,000 and the county's population to more than 7,000,000. Despite this population increase, there are now fewer than 2,000 state hospital beds occupied by residents of Los Angeles County.

Concurrently with the decreasing hospital census, the total inpatient admissions of Los Angeles County residents increased from 5,500 in 1960 to a peak of 19,000 in 1976. The rate of readmissions to the State Hospital from Los Angeles County increased three fold between 1960 and 1970 (26/100,000 to 76/100,000). This reflected a numerical increase of readmissions from 1,591 to 5,288 (Friedland and Brydges, 1970). Thus the state and the community of Los Angeles experienced the same phenomenon of deinstitutionalization and the revolving door as reported nationally (Miller, 1963; Rosenblatt and Mayer, 1974; Anthony, Cohen and Vitale, 1978; Rice, 1982c). This made the psychiatric profession aware of the problem caused by the wholesale release of the backward patients into the community. In fact as early as 1963, Freeman and Simmons accurately suggested that "... it is no exaggeration to observe that the major problem in the field of mental illness is not the hospitalized but the formerly hospitalized" (p 1).

Figure 1 illustrates the decline of state hospital usage along with the events that occurred nationally and locally that stimulated this decline.

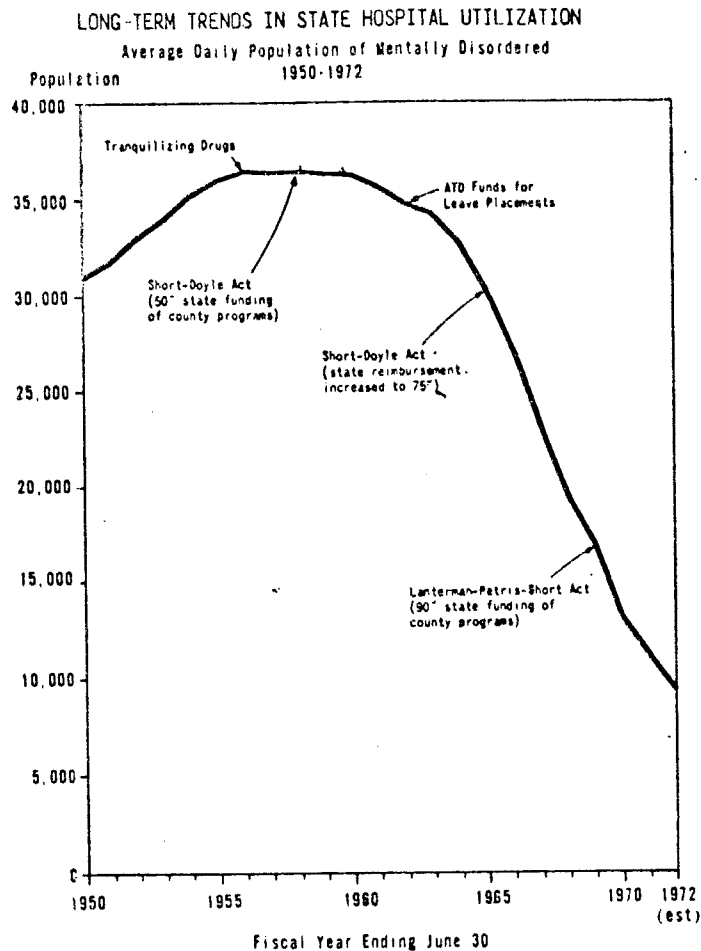


Figure 1. Long-range trends in California State Hospitalization: Average daily population and events effecting hospitalization between 1950 and 1972 (California Mental Health, 1972).

Published studies on hospital readmissions have been so extensive that there is now a base expectancy range of rates of recidivism (Rice, 1982c). These hospital recidivism rates range from 9% (David, 1971) to 58% (Caton, 1981) one year after discharge. This range of rates depends primarily on the community experience of the patient. Those community experiences that mitigate against hospital readmissions are the after care programs established for ex-hospital patients.

These after care programs seem to be the only method of reducing hospital usage. Attempts to alter the hospital routine, itself, in the hopes of effecting community adjustment have consistently failed. In the most complete review of studies through 1971, Anthony, Buell, Sharratt and Althoff (1972), found that traditional hospital treatment had no effect on community adjustment. "It does not seem to matter whether hospitalized psychiatric patients receive eclectically oriented group therapy (Haven and Wood, 1970); psychoanalytically oriented individual or group therapy (Walker and Kelley, 1963); individual or group therapy (Fairweather and Simon, 1963; Fairweather, Simon, Gebhard, et al,

1960); or drugs, shock, individual or group therapy (Freeman and Simmons, 1963)." In their review they found that no matter what type of therapy the patients received in the hospital, their recidivism or employment rates were not differentially affected. In a survey of the literature on hospital work therapy, Kunce (1970) concluded from the studies that he reviewed that they did not support the concept that work therapy might have an effect on community adjustment. Other studies also found hospital work programs to have no effect on recidivism or community adjustment (Barbee, Berry and Micek, 1969; Johnson and Lee, 1965; and Walker and McCourt 1965).

Paul (1969), after reviewing the literature, states that none of the hospital approaches would affect community stay unless there is a community aftercare program into which the discharged patient can go. This was the same conclusion as Anthony et al (1972, 1978). Wolkon (1970) explained this phenomenon in terms of extreme role discontinuity between functioning in a hospital and in the community and argues that hospital programs are intrinsically limited in preparing people for community functioning and community aftercare programs are necessary.

In a more recent publication (Braun, et al, 1981) did a comprehensive and critical review of comparative studies between long-term hospital programs and their alternatives that were reported in the literature. After analyzing 22 studies, the authors state, "The available studies do not permit firm conclusions regarding alternatives to continued long-term hospitalization of chronically ill patients or for a critical analysis of the optional management of specific sub-population of psychiatric patients. Satisfactory deinstitutionalization appears to depend on the availability of appropriate programs for care in the community."

A review of the previous studies of the effectiveness of aftercare programs is displayed in Table 1. The programs reviewed varied greatly and range from a volunteer program of individuals and relatives to more elaborate ones where a full array of services are offered to the ex-hospital patient. Although not entirely conclusive, the majority of studies do indicate that providing aftercare programs is the most effective way of maintaining the chronic patients in the community.

The local mental health program in Los Angeles County, despite being underfunded, offers a full array of mental health services. These services include outpatient, crisis and emergency services, local inpatient, day treatment (partial hospitalization), and residential treatment facilities. One primary function of the day treatment programs is to provide aftercare services to persons discharged from inpatient facilities. Although the County has an extensive process evaluation program, no outcome studies of these day treatment services had been conducted.

Table 1

Selected Studies of Aftercare Community Treatment Programs: Procedure and Results

Author/Study	Procedure	Results
Alden, Weddington, Jacobson and Gianturco (1979)	All patients on medications. Supportive groups met once/week. Many came once every 3 weeks. Before period was 375 patient months and study period consisted of 293 patient months.	In prestudy period there was a mean of 1.1 admission/patient year. In the post study period there was a mean of .2 admission per patient year.
Claghorn and Kinross-Wright (1971)	Treatment and Control Groups. Every fifth patient arriving at the clinic was designated a control subject. Experimentals seen approximately once per month. Treatment was primarily medication.	After 6 months the experimental recidivism rate was 11%; the controls rate was 23%. After 12 months it was 17% and 39% respectively.
David (1971)	1 year follow-up of "resocialization" program. Cost \$328 per year per patient.	Only an 8% recidivism rate.
Hogarty et al (1974a)	Two year follow-up of 4 treatment groups: Drugs alone, drugs plus a socialization program, Placebo alone, Placebo plus socialization program.	Placebo--80% relapsed Drug--48% relapsed Drug + socialization--37% relapsed.
Hornstra and McPartland (1963)	Patients referred to an after care clinic and patients not referred. One year follow-up.	Aftercare patients had a lower recidivism rate.
Katkin, Zimmerman, Rosenthal and Ginsburg (1975)	Used volunteers to teach ex-patient living and social skills.	Reduced recidivism.
Kirk (1976)	Two to three year follow-up of attenders and non-attenders.	Aftercare attenders had a lower recidivist rate than non-attenders. For attenders, the greater number of visits the lower the recidivist rate.
Mayer, Hotz and Rosenblatt (1973)	One year follow-up of aftercare attenders and non-attenders.	Rehospitalization rates same for both groups.

Table 1 (continued)

Selected Studies of Aftercare Community Treatment Programs: Procedure and Results

Author/Study	Procedure	Results
- McCranie and Mizell (1978)	Follow-up periods ranged from 1 to 4-1/2 years. All took some part in an aftercare program.	As the number of visits increased from 10 the likelihood of rehospitalization steadily decreased.
McNees, Hannah, Schnelle, and Bratton (1977)	Attempted to determine how recidivism had been effected by the development of aftercare programs in three Tennessee counties.	Recidivism rates were "substantially" lower for those who contacted the aftercare programs.
Rubenstein (1972)	Six month follow-up study of patients who had experienced crisis intervention after being discharged from the hospital.	Attributed low recidivist rate (11%) to the crisis intervention program.
Shenoy, Shires, and White (1981)	"Hard-core" group of ex-hospital patients who spent an average of 83.3 days in the hospital in the two years prior to the program. The program consisted of group work with relatives of schizophrenics (Schiz-Anon).	The average days in the hospital during the 2 years in the program was 3.6 days. The average decrease in hospital days was 79.6.
Wilder, Kissel, Caufield, Davis, Kent (1966)	Halfway house treatment. No controls.	Recidivism in first year was 40%.
Wolkon and Tanaka (1966)	Non residential social rehabilitation program. Followed discharged patients up to 2 years.	45% recidivism in 1 yr. for those attending the program 25 or fewer times and 22% recidivism for those attending 25 or more times.
Wolkon, Karmen, and Tanaka (1971)	Non residential rehabilitation center for ex-patients. Followed patients for 12-30 months.	Those who used the transitional facilities 10 times or less were more likely to be rehospitalized than those who attended 50 times or more. A control group, after 30 months, had a significantly higher rate of rehospitalization.

Present Study: Day Treatment Programs and Their Effects

The remainder of this paper reports the evaluation of four day treatment programs offering services to discharged hospital patients that operate within one administrative area of the County of Los Angeles.

Program A is part of the services offered by a federally funded community mental health center in an Hispanic area of the county. Program B is a traditional day treatment services operating within a private psychiatric hospital setting. Program C is a long established service that is directly-operated by the County's Department of Mental Health. They all offer a full array of services including psychiatric, psychological and social work services. Program D is a privately-operated establishment that is a social service unit that does not itself offer medication or psychological services. Medication when needed, is given by an outside psychiatrist.

All are funded through the public mental health system.

METHODOLOGY

Procedure

A computerized psychiatric register (Rice, Crowell and Yaw, 1971; Rice, 1973), is used as the basic tool in this study. This register contains a record for each episode of treatment of every Los Angeles County resident who has been admitted to the public mental health services (Short-Doyle and Short-Doyle/Medi-Cal system) in the County of Los Angeles and the State hospitals. These services are located in over 100 different geographical areas in the County or in State hospitals. The register was designed to enable investigators to make systematic studies of patient histories, as this allows for cost efficient follow-up studies (Rice, Crowell and Yaw, 1971; Rice, 1973, 1982a and 1982b; Van Dorn and McAdams, 1976).

Every client in this system has recorded on the register selected demographic and clinical data.

The active and available register covers the period of July 1975 through December 1981. Thus there is a possible six-and-one-half year history on each individual--depending when they entered and left the system. Although there is no way to know when a person leaves the system by death, by moving to another state, or by obtaining service from a private or veterans agency, the author believes that this has minimal effects on the overall validity of studies using the register. People tend to enter, not leave, Los Angeles County and very few publicly funded hospital patients have the fiscal ability to use other inpatient facilities.

In the present study, the admission date to the day treatment program was the date that separated the pre from the post treatment period. If the admission date was December 1979, the possible post period was 25 months (to December 1981 which is the last month that the records are available). This determined the number of months at risk for the pre time period, i.e., 25 months. Thus, the client prehistory was only traced for 25 months, or to November 1977.

Patients

The patients in this study were all those individuals who were discharged from four day treatment facilities during calendar year 1979 and who had had at least one previous episode of hospitalization.

The patient file was searched for the patients' treatment history prior to their admission (back to July 1975) and after their admission and discharge from the selected treatment facility (to December 1981).

This allowed the identification of individuals with at least one previous hospitalization (174 were found). These records were then accumulated to give a total picture of the patients treatment history within the Short-Doyle system and allowed an analysis of patient characteristics.

Program Effectiveness Measures in Three Ways:

Effectiveness is measured in three ways: (1) by improvement on the Global Assessment Scale (Endicott, Spitzer, Fleiss, et al, 1976); (2) the rate of recidivism; and, (3) the number of hospital days after the treatment program. Post-hospitalizations and number of post-hospital days is compared to the number of prior hospital admissions and number of prior hospital days. The "before" period of time is equal to the "post" treatment period of time. Therefore, the subjects will, in effect, be their own controls so the "at risk periods" are the same for the time prior to entering the day treatment and the period after the admission date to the treatment program.

RESULTS

Patient Characteristics

The patient characteristics for all four programs are displayed in Table 2. They include: 1) Total months prior to and after admission to the treatment program (months at risk); 2) age; 3) Ethnicity; 4) Marital status; 5) Sex; and 6) Diagnosis prior to admission.

Table 2

<u>Selected Characteristics of Patients</u>		
<u>Total Months at Risk</u>	<u>N</u>	<u>%</u>
	44	25.3
50-51	41	23.6
62-67	52	29.9
68-73	37	21.3
74 +		
 <u>Age:</u>		
	26	14.9
16-21	57	32.8
22-29	50	28.7
30-44	31	17.8
45-59	10	5.7
60+		
 <u>Ethnicity:</u>		
	79	46.2
White	14	8.2
Black	68	39.8
Hispanic	10	5.8
Other		
 <u>Marital Status:</u>		
	113	64.9
Single	20	11.5
Married	7	4.0
Widowed	34	19.5
Divorced/Sep.		

(Continued on next page)

	<u>N</u>	<u>%</u>
<u>Sex</u>		
Male	92	52.9
Female	82	47.1
 <u>Diagnosis</u>		
Org. Br. Syn.	8	4.6
Schizophrenia	115	66.1
Aff/Paranoid	21	12.1
Other Psychosis	14	8.0
Non-Psychosis	16	9.2

Table 2 shows that the period that was searched and recorded for each patient ranged from 50 months to over 74 months. The majority of subjects had their histories analyzed for over 5 1/2 years. It should be noted that 76% of the patients are aged 44 years or younger and almost half (48%) are under 30. Thus, many of these patients appear to be from the young chronic population that has become the subject of numerous studies in recent years (Caton, 1981; Pepper, Kirshner and Ryglewicz, 1981; Schwartz and Goldfinger, 1981, Bachrach, 1982; Sheets, Prevost and Reihman 1982; Revost, 1982). There are about the same percentage of Hispanics (40%) in this study as found in the general population of this Region of Los Angeles County where 42% are Hispanic. The black population is under represented by about 13%. As could be expected in this population, only 11% had intact marriages. Almost all (84%) had a psychotic diagnosis.

Outcome Measures

The major measure of the effectiveness of the programs used in this study is the comparison of pre and post hospital days. These results are displayed in Tables 3, and 4. Table 3 seems to indicate that there is a difference between various programs from which the clients come. For instance Program A and C showed a difference of 38.6 and 61.4 between their patients prior and post treatment hospital days while Program B had an actual increase in post hospital days of 3.2. Statistically, however there are no significant differences between programs because of the small numbers of patients in each group and because the variance between patients in each program is so great. When all the data are combined, there is an average savings of 35.5 inpatient days that might be attributed to the post hospitalization treatment programs. This difference is statistically significant at the .024 level of probability.

Table 3
Means and Standard Deviations for the Four Programs of Prior and Post-Hospital Days

Hospital Days	A (N = 71)		B (N = 33)		C (N = 56)		D (N = 14)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Prior	63.0	109.4	40.3	37.3	94.7	158.0	54.9	42.6
Post	24.4	49.8	43.5	91.5	33.3	58.0	47.9	84.0
Difference	-38.6		+3.2		-61.4		-7.0	

Table 4
Analysis of Variance Between Programs Comparing Prior and Post-Hospital Days

Source	SS	d.f.	MS	F	P
Program	31928.57	3	10642.86	1.08	.357
Error	1668113.93	170	9812.43		
Pre/Post	40358.12	1	40358.12	5.15	.024
Pre/Post x Program	49369.73	3	16456.58	2.10	.101
Error	1329034.97	170	7817.85		

Another measure of program effectiveness is the Global Assessment Scale measures which are shown in Table 5. The findings indicate that there was an overall improvement for the patients in all the programs as measured by the GAS (47.3 to 51.3). This is highly significant for each program (P=.006). The level of significance (P=.0001). Tables 5 and 6 illustrate these differences. Although the difference for all the programs is at an even higher functioning from one major range (41-50) to the next range of functioning (51-60). This movement raises the level of functioning from, "Any serious symptomology of impairment... (e.g., suicidal preoccupation or gesture...frequent anxiety attacks, serious anti social behavior)" to "Moderate symptoms or generally functioning with some difficulty."

Table 5

Analysis of Variance Between Programs
Comparing Prior and Post GAS Scores

Source	SS	d.f.		F	P
Program	3415.28	3	1138.43	4.34	.0056
Error	445577.54	170	262.22		
Pre vs Post GAS	1143.14	1	1143.14	23.59	.0000
Pre/Post x Program	257.85	3	85.95	1.77	.1540
Error	8236.42	170	48.45		

Table 6

Percentages of Patients in Each GAS Category
Before and After Treatment

Global Assessment Scores								
0-40		41-50		51-60		61 +		Total
Pre	Post	Pre	Post	Pre	Post	Pre	Post	N
35.6	27.6	24.1	20.7	30.5	29.3	9.8	22.4	174

Another measure often used for mental health program effectiveness is that of hospital recidivism. Only 90 subjects in this study had a hospital readmission in an average of three years after the original hospital discharge. This is a 47% recidivist rate for 3 years (Table 7) which is low compared to general findings.

Table 7

Patients' Number of Inpatient Admissions Prior
to Program by Number of Hospital Readmissions

Number of Readmissions	Number of Prior Inpatient Admissions						Total N
	1		2-3		4+		
	N	%	N	%	N	%	
0	52	57.8	26	28.9	12	13.3	90
1	15	45.5	11	33.3	7	21.2	33
2-3	13	40.6	12	37.5	7	21.9	32
4-12	4	21.1	9	47.5	6	31.6	19
Total	84	48.3	58	33.3	32	18.4	174

It should be noted that prior to the treatment program 32 patients had had four or more inpatient admissions, but only 19 had four or more such admissions subsequent to the program.

An indirect finding that provides further evidence that the above treatment programs are effective in disrupting the pattern of hospital reutilization are the non-significant correlations between pre and post hospital admissions and hospital days. These respective correlations were .20 and .12.

Other Findings

Another important finding is that of the total of 18,142 inpatient days of service received by those patients, 40.1% were consumed by 24 or 13.8% of the patients. This confirms other findings by the Los Angeles County Department of Mental Health (Rice, 1982a, 1982b). In these and several preliminary studies it was found that on the average 10% of a given patient population consumes over 50% of the inpatient services.

DISCUSSION

The outcome data collected and analyzed for these treatment programs provide strong evidence that the programs studied are effective in reducing post-hospital experiences of the patients. All of the measures of success utilized in this study tend to indicate that these programs had a beneficial effect on many of the patients.

There was a significant difference between the Global Assessment Scores given to the clients at admission and discharge. This difference is not only statistically significant but the average four point difference overall raised the patients from one category of functioning to the next (47.3 to 51.3). This makes it significant from a behavioral or functioning viewpoint. Also 11% of the patients moved upward from the below 50 category to the above 50 category and 8% moved out of the 0-40 category. Therefore, 11% moved from "serious symptomology" to "moderate symptoms"; 8% moved from "major impairment on several areas such as work, family relatives, judgement, etc." to a higher level of functioning and 12% moved into the category of "some mild symptoms".

The hospital readmissions measure of program success is also positive. First the 47% recidivist rate within 3 years after discharge is in the lower boundaries reported in other recidivist studies that included aftercare treatment programs. In most of those programs, the recidivist rate was 45% or greater for this or a lesser length of time after discharge. Thus a greater percentage of the patients in this project tended to remain out of the hospital than some of the other aftercare studies. These other studies are shown in Table 8.

Table 8

Hospital Readmission Rates of Patient
Who Were in Aftercare Programs Study
and Length of Follow-up Period

Follow-up Period	Recidivism Rate	
24 months	45	Wolkon and Tanaka (1966)
24 months	41	Wolkon, Karman and Tanaka (1971)
24 months	55	Katkin, et al (1975)
24 months	37-80	Hogarty, Goldberg, et al (1974) ¹
24 months	60	Decker and Stubbelbine (1972)
24-36 months	36	Kirk (1976)
30 months	43	Wolkon, Karmen & Tanaka (1970)

¹Varies according to participation in after treatment and after treatment mix. 37% represents those with a intensive drug and socialization program; 80% are those that had no treatment program and 48% relapsed who only had a medication program.

It should also be noted that no relationships between prior hospital and post-hospital admissions or hospital days was found. Considering that previous hospitalization has been the most consistent predictors of post-hospitalization, one could conjecture that the treatment programs disrupted this expected pattern.

Implications

The findings have shown that there was a significant difference in the pre- and post-hospital days of 35.5. This advantage represents a total of 6,173 days for all 174 patients. Considering that the average time in the treatment program was 26.8 days, it appears that these programs are effective both from a client functional viewpoint and from a hospital bed use viewpoint.

Programs such as described in this evaluation that are designed to be alternatives to hospitalization or to maintain individuals in the community have, in most cases, proven to be effective in varying degrees (See Table 1). The evaluation results of this project also are positive. It is not possible to directly estimate the number of individuals in our society who would be in hospitals without such programs. It is known that over six billion dollars per year are expended on inpatient services. This is approximately 70% of the dollars spent in the United States for mental health (Kiesler, 1982; Rubin, 1978). Hopefully as more day treatment community type services are established in the community, this proportion of mental health dollars expended on mental hospitals will decrease.

In 1970 public mental hospital days utilized by residents of Los Angeles County totalled 1,224,500 days. In 1981 the number of inpatient days had decreased to 594,416. During the same time period non-hospital community services increased from 422,716 units to 921,019 units of service. These latter services include outpatient, residential and day treatment. (Patient and Service Statistics, Report No. 10. Los Angeles Department of Health Services - Mental Health Services, Program Development Bureau. Los Angeles 1973; Fact Sheet, Los Angeles County Department of Mental Health, Quality Support Bureau, Los Angeles, 1982). It is true that some of the decrease in hospital days was due to administrative directives to close down some hospital beds, but this "administrative decision" contributed to the creation of a few alternatives to hospitalization programs. Unfortunately, these hospital savings were not fully translated into other community services; in fact the total budget was cut.

If more community based programs had been created, it is doubtful that there would be the revolving door phenomenon and certainly there would have been a fewer number of disturbed people aimlessly roaming the streets of large urban centers.

Given a fixed budget, as fewer dollars are expended on hospitalization, more dollars should be made available not only for day treatment programs but for the further implementation of a comprehensive mental plan such as described in the California Model for Mental Health Service (DuBois, Elpers and Crowell, 1981; Elpers and Crowell, 1982). Even without full implementation of the Model, there is a great deal of evidence that pieces of the program are serving their primary purpose of decreasing hospital use. The direct pieces of evidence are the evaluation results reported here, as well as the evaluation results listed in the references and Table 1.

RR:mw

REFERENCES

- Alden, A. R., Weddington, W., Jacobson, C., & Gianturco, D. T. Group after care for chronic schizophrenics. Journal of Clinical Psychiatry, 1979, 40, 249-252.
- Anthony, W. A., Buell, G. J., Sharratt, S., & Althoff, M. E. Efficiency of psychiatric rehabilitation. Psychological Bulletin, 1972, 78, 447-56.
- Anthony, W. A., Cohen, M. R., & Vitale, R. The measurement of rehabilitation outcome. Shizophrenic Bulletin, 1978, 4, 365-383.
- Bachrach, L. L. Young adult chronic patients: An analytic review of the literature, Hospital and Community Psychiatry, 1982, 33, 189-196.
- Barbee, M. S., Berry, K. L., & Micek, L. A. Relationship of work therapy to psychiatric length of stay and readmission. Journal of Consulting and Clinical Psychology, 1969, 33, 735-738.
- Bassuk, E. L. & Gerson, S. Deinstitutionalization and mental health services. Scientific American, 1978, 238, 46-53.
- Bird, D. Help is urged for 36,000 homeless in city's streets. New York Times, March 8, 1981, p. 1(a).
- Bird, D. Wanderers find shelter and a new life. New York Times, April 21, 1981, p. B6(b).
- Braun, P., Kochansky, G., Shapiro, R., Greenberg, S., Gudeman, J. E., Johnson, S., Shore, M. F. Overview: Deinstitutionalization of psychiatric patients, a critical review of outcome studies. American Journal of Psychiatry, 1981, 138, 736-749.
- California Mental Health: A study of successful treatment. State of California, Human Relations Agency, Department of Mental Hygiene, Sacramento, Calif.: 1972
- Carmody, D. Proposed referral center for homeless disturbs westside neighborhood. New York Times, May 25, 1981, p. B5(a)
- Carmody, D. New York is facing "crisis" on vagrants. New York Times, June 28, 1981, p. 1(b).
- Caton, C. L. M. The new chronic patient and the system of community care. Hospital and Community Psychiatry, 1981, 32, 475-478.
- Claghorn, J. L., & Kinross-Wright, J. Reduction in hospitalization of schizophrenics. American Journal of Psychiatry, 1971, 128, 124-127.
- Cohen, R. Outside: One man, mentally ill and trapped. Philadelphia Inquirer, May 1, 1978, p. 81.

- David, A. C. Effective low cost aftercare. Mental Hygiene, 1971, 55, 351-357.
- Decker, J. B., & Stubbeltine, J. M. Crisis intervention and prevention of psychiatric disability: A follow-up study. American Journal of Psychiatry, 1972, 129, 725-729
- Dickey, B., Gudeman, J. E., Hellman, S., Donstelle, A., & Grinspoon, L. Hospital and Community Psychiatry, 1981, 32, 326-330.
- Du Bois, P., Elpers, J. R., & Crowell, A. The California model: Getting the act together. Paper presented to the 33rd Institute of Hospital and Community Psychiatry, American Psychiatry Association, San Diego, 1981.
- Elpers, J. R. & Crowell, A. How many beds? An overview of resource planning. Hospital and Community Psychiatry, 1982, 33, 755-761.
- Endicott, J., Spitzer, R. L., Fleiss, J. L., et al. The Global Assessment Scale: A procedure for measuring overall severity of psychiatric disturbance. Archives of General Psychiatry, 1976, 33, 766-771.
- Fact Sheet. Los Angeles Department of Mental Health, Quality Support Bureau, Los Angeles, 1982.
- Fairweather, G. W., & Simon, R. A. A further follow-up of psychotherapeutic programs. Journal of Consulting Psychology, 1963, 27, 186.
- Fairweather, G. W., Simon, R., Gebhard, M. E., Weingarten, E., Holland, J. L., Sanders, R., Stone, G. B., & Reahl, J. E. Relativeness effectiveness of psychotherapeutic programs: A multicriteria comparison of four programs for three different patient groups. Psychology Monographs, 1960, 74 (Whole No. 492).
- Freeman, H. E., & Simmons, O. The mental patient comes home. New York: John Wiley & Sons, 1963.
- Friedland, L. and Bridges, S. A brief summary on state hospital use. Los Angeles County Department of Mental Health, Evaluation and Research Division, November, 1970.
- Haven, G. A. & Wood, B. S. The effectiveness of eclectic group psychotherapy in reducing recidivism in hospitalized patients. Psychotherapy: Theory, Research and Practice, 1970, 1, 153-154.
- Hogarty, G. E., Goldberg, S., Schoder, N. R., & Ulrich, R. F. Drugs and Sociotherapy in the aftercare of schizophrenic patients: II. Two year relapse rates. Archives of General Psychiatry, 1974, 31, 603-609(a).
- Hornstra, R. K., & McPartland, T. S. Aspects of psychiatric aftercare. International Journal of Social Psychiatry, 1963, 9, 135-142.

- Johnson, R. G., & Lee, H. Rehabilitation of chronic schizophrenics: major results of a 3 year program. Archives of General Psychiatry, 1965, 12, 237-240.
- Katkin, S., Zimmerman, V., Rosenthal, J., & Ginsburg, M. Using volunteer therapists to reduce hospital readmissions. Hospital Community and Psychiatry, 1975, 26, 151-153.
- Kiesler, C. A. Mental hospitals and alternative cure. American Psychologist, 1982, April, 349-380.
- Kirk, S. A. Effectiveness of community services for discharged mental hospital patients. American Journal of Orthopsychiatry, 1976, 46, 646-659.
- Kunce, J. T. Is work therapy really therapeutic? Rehabilitation Literature, 1970, 31, 297-299.
- Mayer, J. E., Hotz, M., & Rosenblatt, A. The readmission patterns of patients referred to aftercare clinics. Journal of the Bronx State Hospital, 1973, 1, 180-188.
- Miller, D. Five year follow-up study of leave of absence patients: A progress report. (NIMH 1269-1) Mimeographed paper. San Francisco: Social Research Laboratory, 1963.
- McCranie, E. W., & Mizell, T. A. Aftercare for psychiatric patients: Does it prevent rehospitalization? Hospital and Community Psychiatry, 1978, 29, 584-587.
- McNees, M. P., Hannah, J. T., Schnelle, J. F., & Bratton, K. M. The effects of aftercare programs on institutional recidivism. Journal of Community Psychology 1977, 5, 128-133.
- Patient and Service Statistics, Report No. 10, Los Angeles Department of Health Services--Mental Health Services, Program Development Bureau, Los Angeles, 1973.
- Paul, G. L. Chronic mental patient: Current status - future directions. Psychological Bulletin, 1969, 71, 81-94.
- Pepper, B., Kirshner, M. C. and Ryglewicz, H. The young adult chronic patient: Overview of a population. Hospital and Community Psychiatry, 1981, 32, 463-469.
- Rice, R. E. Proposal for a prototype patient follow-up study within a large computerized patient record file. Evaluation & Research Drafts, Los Angeles, California: Department of Mental Health, August 1973.
- Rice, R. E. Continuity of care of Central Region patients discharged from local and state hospitals. Evaluation Report, Los Angeles, California: Department of Mental Health, Quality Support Bureau, January 1982a.

- Rice, R. E. Continuity of care of Southeast Region patients discharged from local and state hospitals. Evaluation Report, Los Angeles, California: Department of Mental Health, Quality Support Bureau, April, 1982b.
- Rice, R. E. Following patients within a computerized register: A study of the effects of day treatment programs in the severely mentally ill. Unpublished doctoral dissertation, International College, 1982c.
- Rice, R. E., Crowell, A., & Yaw, E. C. Following mental patients through a large computer file: Phase I. Paper presented at the meeting of the California State Psychological Association, San Diego, California, January 1971.
- Robinson, E. & Pearson, R. Shelters for homeless are filled to capacity during better weather. Washington Post, December 27, 1980, p. C1.
- Rosenblatt, A., & Mayer, J. E. The recidivism of mental patients. American Journal of Orthopsychiatry, 1974, 44, 697-706.
- Rubenstein, D. Rehospitalization versus family crisis intervention. American Journal of Psychiatry, 1972, 129, 91-96.
- Rubin, J. Economics, mental health, and the law. Lexington, Mass., D. C. Heath, 1978.
- Schwartz, S. R. & Goldfinger, S. M. The new chronic patient: Clinical characteristics of an emergency subgroup. Hospital and Community Psychiatry, 1991, 32, 470-474.
- Segal, S. P. & Baumohl, J. Engaging the disengaged: Proposals on madness and vagrancy. Social Work, 1980, 25, 358-365.
- Sheets, J. L., Prevost, J. A. & Reihman, J. Young adult chronic patients: Three hypothesized subgroups. Hospital and Community Psychiatry, 1982, 33, 197-202.
- Shenoy, R. S., Shires, B. W., & White, M. S. Using a Schiz-Anon group in the treatment of chronic ambulatory schizophrenics. Hospital and Community Psychiatry, 1981, 32, 421-422.
- Sokolovsky, J., Cohen, C., Berger, et al. Ex-mental patients in a Manhattan SRO hotel. Human Organization, 1978.
- Timnick, L. The new drifters: Societies costly and dangerous burden. Los Angeles Times, July 20, 1981, p. 13.
- Toward a national plan for the chronically mentally ill: Report to the Secretary by the Department of Health and Human Services Steering Committee on the chronically mentally ill, December 1980 (DHHS Publication No. (AOM) 81-1077). Rockville, Md.: Department of Health and Human Services, 1981.

- Van Dorn, P., & McAdams, L. Mental Health Services' patient file and its tracking capability. Evaluation & Research Papers, Los Angeles, California: Department of Mental Health, 1976.
- Walker, R. G., & Kelly, F. E. Short-term psychotherapy with schizophrenic patients evaluated over a three year follow-up period. Journal of Nervous and Mental Disease, 1963, 137, 348-352.
- Walker, R., & McCourt, J. Employment experience among 200 schizophrenic patients in hospital and after discharge. American Journal of Psychiatry, 1965, 121, 316-319.
- Wilder, J. F., Kessel, M., Caufield, S. C., Davis, S., & Kent, J. A high-expectations" halfway house: A follow-up. Paper presented at the Annual Meeting of the American Psychiatric Association, Atlantic City, New Jersey, May 11, 1966.
- Wolkon, G. H. Role discontinuity and resocialisation of the psychiatric patient. Social Science and Medicine, 1970, 3, 679-687.
- Wolkon, G. H., Karmen, M., & Tanaka, H. T. Evaluation of a social rehabilitation program for recently released psychiatric patients. Community Mental Health Journal, 1971, 7, 312-322.
- Wolkon, G. H. & Tanaka, H. T. Outcome of social rehabilitation service for released psychiatric patients: A descriptive study. Social Work, 1966, 11, 53-61.