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THE IMPACT OF RECENT REHOSPITALIZATION ON COMMUNITY ADJUSTMENT

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Abstract

In a study of 499 formerly hospitalized mentally ill residents of community-based sheltered-care facilities in California, results indicate that rehospitalization serves as a means of, ‘updating’ the chronic patient’s treatment. By returning to the hospital the patient is linked to the service system and its newest benefits accrue to him. In the absence of a care system which can more effectively link chronic patients to available services, rehospitalization may serve an unforeseen positive function.

INTRODUCTION

Recent years have seen an increasing emphasis on the rapid discharge of mental hospital patients with the hope of promoting community adjustment rather than on initiating a process of long-term institutionalization. This emphasis on rapid discharge, however, has been accompanied by a rapid increase in the number of readmissions. This phenomenon has come to be known as the “revolving door syndrome.” The revolving door syndrome is characterized by a continuing pattern of admissions to a mental hospital interspersed with brief periods of time spent by the patient in the community. While readmission to the hospital is currently looked on as something to be avoided, especially as manifested in the revolving door syndrome, in the absence of a well-coordinated system of community care service the hospital can serve an integral supportive function in the provision of community care. Does the hospital actually serve such a function? This study will seek to determine whether recently readmitted chronic mental patients are more likely to have their post-hospital community adjustment enhanced by their actual hospital experience.

In order to determine how an individual’s post-hospital adjustment might be enhanced by his hospital experience, it seems important to consider the factors related to recidivism of exmental patients. Numerous studies have attempted to explain this phenomenon. A brief ‘review of the literature indicates that four essential variables seems most likely to contribute to it. These are: 1) the type of hospital treatment prior to discharge, 2) the extent of participation in aftercare services following discharge, 3) the characteristics of patients prior to admission, .and 4) the characteristics of patients prior to readmission.

In a review of the literature, Anthony *et al.* (1972) concluded that overall differences in the types of service received within the hospital do not differentially effect rates of readmission. The fact that hospital treatment programs seem to be unrelated to rates of readmission is also

illustrated in the conflicting findings of Glick (1974), Herz *et al.*, (in press) and Bland (1976) with regard to the impact of long vs. short hospitalization on readmission rates.

Other factors relating to mental hospital recidivism—e.g. participation in aftercare programs, interpersonal, psychiatric, and social characteristics — may be considered as indicators of ‘social margin’. Social margin refers to the set of resources and relationships an individual can draw on either to advance or survive in society. It consists of family relations, friendships, possessions, and skills and personal attributes that can be mortgaged, used, sold or bartered in return for necessary assistance. In effect it is one’s social bank account. It aids in advancement and protects or softens the fall of the downwardly mobile (Segal, Baumohl and Johnson, p. 389).

Over time, and in the absence of a sound community care system, the chronically mentally ill individual incorporates the hospital into his social bank account and returns to it when he is in need of social support. In the extreme case the former patient uses the hospital as a refuge and vacation spot where he has a roof over his head, where it is warm, and where he gets “three squares.” Given this line of reasoning, people with less social margin would be most likely to recidivate. It is this group that is seeking the support the hospital has to offer.

Looking at access to services as one index of social margin, Anthony *et al.*, (1972) reviewing the recidivism literature, found that participation in an aftercare program was the variable most predictive of lower readmission rates. Wolkon (1971), Winston (1977) and Anthony (1973) report similar findings. In his ten-year follow-up study, Bland (1976) found that recidivists tended to actively use all types of community services. Bogdanow (1976), however, found that recidivists were less likely to seek help for their problems. Langsley and Barter (1975) point out that the largest decrease in state hospital admissions in California has been in communities that have shown the largest increase in community treatment especially those that have developed community treatment for the chronically ill patient.

Davis, Dinitz and Pasamanick (1974) and Kirk (1976) found that patients with the lowest rates of readmission were those who either used no aftercare or used a considerable number of aftercare services. From the perspective of the social margin hypothesis, it is assumed that these latter findings are explained by the fact that those using the least services had other sources of social support.

The socio-demographic characteristics of the population also may be considered as social margin indices. A number of researchers have reported that married patients have lower rates of readmissions to the hospital (Segal and Aviram 1978; Serbin 1974; Manino 1974). Recidivists tend to have less contact with family members or significant others (Fontana 1974), to have lower incomes, lower status occupations and more unemployment (Kirk 1976; Keyser 1974) than do non-recidivists. Similarly, non-recidivists are more likely to be involved in productive activities such as employment and education (Hog 1976).

Finally, in looking at social margin, the extent to which the patient has incorporated the hospital into his social support system and adopted the social role of the mental patient are crucial factors in their return to the hospital. These latter indicators may be considered a credit to a person’s social margin account. One of the most interesting findings in this regard

is that the best predictor of readmission to the hospital is the number of previous readmissions (Rosenblatt 1974; Kirk 1969; Mintz 1976). Fontana (1974) concludes that recidivists are those patients who become acculturated to the patient role through a series of rehospitalizations. A psychotic and especially schizophrenic diagnosis has also been found to be related to readmissions (Winston 1977; Michaux *et al.* 1969 Kirk 1976; Keyser 1974; Bogdanow 1976).

In looking at community care, Allen (1974) points out that “regardless of what treatment programs exist in the community, they surely are not providing *enough* therapy. I myself see many, many people who, so far as I can tell, are untouched by anything that resembles treatment.... (p. 4).

In the gap created by the absence of effective community care for the ever increasing number of released patients, the hospital, it seems, is stepping in as a long-term social support or as a “prosthetic” device whereby it becomes just one means of enabling the long-term chronic patient to cope with his total life situation. In line with this observation, our study seeks to assess the impact of recent rehospitalization in the community on an individual’s social margin account particularly defined as his access to goods and services and to other social support in the community.

METHOD

This study was completed as part of a larger study of the mentally ill in community-based sheltered care (see Segal and Aviram, 1978). The major component of the research was a structured interview survey. Interviews were conducted with a sample of 499 non-retarded, sheltered-care residents between the ages of 18 and 65 with a history of psychiatric hospitalization, and with the operators of the 234 facilities in which they lived. The samples of interviewed residents and operators are representative of their respective California sheltered-care populations. Each sheltered-care resident (with the above characteristics) and operator in California had an equal chance of being interviewed. Formal, interview data was supplemented with observations and commentary collected during the planning phase of the study and following the completion of each structured interview.

SURVEY SAMPLE

The sample is a self-weighting, representative sample (Kish 1965) of all individuals between 18 and 65 years of age with a past history of mental illness, currently living in sheltered-care facilities (i.e. family care homes, board-and-care homes, and halfway houses for the mentally ill) in California).

In order to obtain the sample, the State was divided into three master strata:

1. Los Angeles County,
2. The San Francisco Bay Area — that is, Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma Counties, and
3. All other counties in the State.

In the Los Angeles and Bay Area strata, the sample was drawn from the total population. In each of these areas a two-stage cluster sample was designed with sheltered care facilities as the primary sampling units, and individuals within facilities as the second sampling stage.

Facilities were stratified by size in both Los Angeles and the Bay Area, and a sample was drawn of paired primaries taken probability-proportionate to size. Individuals within facilities were sampled using systematic random sampling from specially prepared field listings. Individuals were sampled in clusters of three in those facilities with four or more residents. In facilities with three or fewer residents, one individual interview was completed.

In the third stratum, comprising “all other counties,” a three-stage cluster sample was designed using counties as primary selection units, facilities as the second stage, and individuals within facilities as the third stage. All counties within this stratum with 20 or fewer facilities were arbitrarily excluded from the sample. This procedure eliminated only 3% of the population (618 residents) from consideration and allowed us to draw conclusions with respect to the other 97%. The remaining counties were further divided into two substrata: north and south. Two counties were picked as paired primaries from the north and two from the south. The facility and individual samples in this stratum were taken within each of the selected primaries using systematic random sampling in the latter and selections probability-proportionate to size in the former. (Further details of the sampling procedures are available in Segal and Aviram, 1977).

Of the 499 resident interviews attempted, there was a loss (due to refusal and inaccessibility) of 12%. Of the 234 operators contacted, 10% refused to participate in the study.

MEASURES

As part of the larger study, both residents and operators responded to an extensive interview and assessment schedule (Segal and Aviram, 1978). Assessments were made of the levels of each resident's social integration. Our research operationalized the concept of social integration on two scales: one measuring external and one internal integration. We defined internal integration as the degree to which an individual becomes socially involved in activities sponsored by the sheltered-care facility. We defined external integration as the degree to which an individual independently becomes involved in the community outside the facility. Our index of external integration is composed of seven subscales which measure the amount of time the individual spends outside the facility, his access to goods and services available in the community, his social contact and participation in community activities, his contribution to the community through work or study, and his activities as a consumer of goods and services. Internal integration is composed of five subscales which assess similar involvements that occur in or are mediated by the facility.

In addition to variables descriptive of the residents, the assessment also included variables descriptive of all available types of sheltered-care facilities (Segal and Moyles, forthcoming) — i.e., a typology of facilities based on five dimensions: complexity of organizational structure, social program orientation, control orientation, mutual support available, and

medical orientation. Also included were variables relating to characteristics of the surrounding community environment. Included in this assessment was information as to whether or not the resident has been hospitalized in the last year and how many times a resident has been hospitalized. Only those residents with more than one hospitalization were included in the study since it was primarily concerned with recidivism. Thus only that subsection of the resident population for whom the recent return to the hospital would have been a readmission were considered in the study.

DATA ANALYSIS

Utilizing discriminant function analysis (Klacka 1975; Bennett and Bowers 1976), an attempt was made to identify those factors related to social margin that best distinguish between residents hospitalized in the past year and those not. Potential predictors were selected from the full spectrum of individual facility and community environment characteristics obtained in the study. Preliminary analyses were done with each major grouping of characteristics to determine those most related to having been hospitalized in the past year.

Age was used in this analysis as a control variable. It is significant in distinguishing the type of environment former hospital patients return to. Perhaps the key factor in the influence of age is the fact that community-care facilities often tend to be age-segregated. It is rare to find people over 50 in homes catering primarily for 20 to 30 year-olds and similarly, it is rare to find 20 to 30 year-olds in homes catering primarily for an older group. This is largely due to different styles of life in the different age groups and to the greater potential for the occurrence of physical violence in homes catering for younger residents. Consequently, the types of facilities considered and the types of environments selected by and for younger and older patients differ as do their 'careers' in the mental health system. Because of the importance of age groupings in community care and in predicting social behavior, the overall sample was broken into three age groups (young: 18–33 years; middle: 34–39 years; old: 50–65 years). Following exploratory analyses, discriminant function analyses were completed for each group separately.

RESULTS

At the time of the study, two-thirds of the residents in sheltered care in California had more than one prior admission to a mental hospital. Of this population 26.7% had been rehospitalized in the past year. A resident's age was a significant factor in determining whether or not he/she had been rehospitalized in the past year: 41% of the younger age group (18–33), 25% of the middle-aged group (34–49), and 33.5% of the older age group (50–65) had been rehospitalized.

Comparing the rehospitalized and non-rehospitalized residents within age-groupings, it became clear that those likely to be rehospitalized in the past year were also more likely to have a more chronic experience with the mental health system. Young and middle-aged residents who were readmitted in the past year were also more likely to have had a greater number of readmissions to the mental hospital than the non-readmitted group. While 69% of

young readmissions had four or more previous hospitalizations, only 31% of young non-readmissions had as many previous hospitalizations. The comparable figures for the middle-aged groups are 33% and 13%, respectively.

Older residents, on the other hand, were significantly more likely to have spent a shorter amount of time in the mental hospital if they were readmitted in the past year than if they were not readmitted. 67% of the readmissions had spent less than a year in the hospital, while only 23% of the non-readmissions had been hospitalized for so brief a period. Given recent changes in the mental health service delivery system, whereby chronic patients are handled with a large number of revolving door admissions as compared to the past policy of long-term hospitalization for chronic patients, we see that chronicity contributes to the readmission of the young and middle-aged. Chronicity of older residents, however, tends to reduce the likelihood of their readmission to the hospital.

THE SOCIAL CONTEXT OF THE REHOSPITALIZED AND NON-REHOSPITALIZED PATIENT

Older Residents

Table 1 lists those factors which distinguish older residents who have been rehospitalized in the past year from those who have not.

The two factors which are most likely to make the largest independent contribution to distinguishing these two subgroups in the older resident population are: the receipt of services, and placement in a non-medically-oriented community care facility. The recently rehospitalized older patient upon returning to the community has increased access to social and psychological support services. He/she is more likely to be placed in a group home with a programmatic orientation or in a therapeutic community type facility. This resident is unlikely to be placed in a medically oriented facility — i.e. one that de-emphasizes social programs related to independence and concentrates on the physical requirements of the resident (see Segal and Moyses, 1979).

Finally, older residents who have been recently rehospitalized are less likely to be internally integrated within the sheltered-care facility and are more likely to be older if they have been rehospitalized in the past year. As noted above, older recently rehospitalized residents are likely to have had only a brief involvement with the mental health system. They thus may have had less time to become committed to and acquainted with their current community care facilities (external integration scores did not discriminate the hospitalized from the non-rehospitalized in either age group).

The result of recent rehospitalization for the older population seems to be expressed in enhanced opportunity for social participation and service, though no immediate evidence of such participation is manifested in the internal integration scores.

Middle-aged Residents

Middle-aged residents also seem to benefit from their recent rehospitalization as indicated by the resources they garner in their post hospital environment in comparison to the non-

rehospitalized population. Middle-aged rehospitalized residents (see Table 2) are more likely to be living in group homes having a programmatic orientation or in facilities which can be described as therapeutic communities (Segal and Moyles, 1979). These residents are also more likely to have chosen their community care facility than to have been placed in a facility without their participating in the choice.

Rehospitalized middle-aged residents, like rehospitalized older residents, have lower internal integration scores indicating less of an involvement with the life of their sheltered-care facilities (external integration scores did not discriminate the rehospitalized from the non-rehospitalized in either age group).

Contrary to expectation middle-aged residents who have been rehospitalized are more likely to be placed at a greater distance from community resources than non-rehospitalized residents. This phenomenon may be the result of the current emphasis on placing people in facilities that are located in suburban type areas as opposed to downtown neighbourhoods. While the latter tend to be threatening, the former tend to be far removed from community resources.

Younger Residents

Younger residents are likely to be located in homes which were globally assessed by interviewers as of "high quality". Operators of such homes did not own the facility, nor did they view themselves as parents. These two factors would seem to indicate that the facility was run by a staff and had some form of service orientation (see Table 3).

Operators tended to discourage rehospitalized residents from external contact with neighbours. Often facility operators do this appropriately. However, the extension of such policies over time can be detrimental. Operators must have faith in their residents' ability to conduct themselves properly in the community before they will encourage them to reach out.

DISCUSSION

It would appear from initial inspection of the results of this study that rehospitalization serves as a means of updating the chronic patient's environment. By returning to the hospital, the patient is put into the service system and its newest benefits accrue to him in the types of environment he can expect to be placed in when leaving the hospital. Given our initial discussion of social margin, it would appear that the placement of patients leaving the hospital in the therapeutic community and the more programmatically oriented facility contributes to the enhancement of their social margin, and ultimately may lead to some reduction in the probability of their future relapse.

We also have seen, however, that simply placing these individuals in more desirable facilities does not guarantee their increased involvement in the community external to the facility or within the facility. Resident levels of external integration did not differ among the hospitalized or rehospitalized within age groups. Also, internal integration tended, contrary to expectation, to be lower in the rehospitalized older and middle-aged groups. This finding can indicate several possibilities: 1) that programme oriented care facilities fail to develop any

significant level of internal involvement in their middle-aged and older residents; 2) those middle-aged and older residents returning to the hospital are those with the least social margin and therefore those who are least likely to be internally integrated into a sheltered-care facility; and 3) older residents returning to the hospital had briefer periods of involvement with the mental health system and consequently may have had less time to develop internal involvement with those people living in their community care facilities.

It would seem that further research is needed into the role of the community-care facility in enhancing the social margin of sheltered-care residents who return to these facilities from a mental hospital. Certainly, a prospective study which follows individuals from community care into the hospital and back into community care again, with basic assessments of their level of social margin at different points in time, would be an important contribution to understanding the role of this set of factors in affecting the probability of readmission to the hospital and in ultimately affecting the current status of the individual in community care.

Aside from the problems of internal integration faced by older and middle-aged rehospitalized residents, in the absence of an existing community care system the hospital seems to serve a significant function. It brings the patient's care up to current standards. Thus while it would be wise to continue to discourage the use of indiscriminate hospitalization, the passage of laws which generally reduce admissions to the hospital may, without providing for an adequate system of community care, lead to a less than adequate standard of life for chronic patients. This result could ultimately lead to the development of 'backwards' in the community.

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REFERENCES

- Allen PL A consumer's view of California's mental health care system. *Psychiatric Quarterly*, 1974, 48, 4.
- Anthony WA, Buell GJ, Sharratt S, & Althoff ME Efficacy of psychiatric rehabilitation. *Psychological Bulletin*, 1972, 78, 447-456. [PubMed: 4345654]
- Anthony W and Buell G Psychiatric aftercare clinic effectiveness as a function of patient demographic characteristics. *Journal of Consulting and Clinical Psychology*. 1973, 41, 116-119. [PubMed: 4353680]
- Bennett S, and Bowers D An introduction to multivariate techniques for social and behavioural sciences A Halsted Press Book. New York: Wiley, 1976.
- Bland RC, Parker JH & Orn H Prognosis in schizophrenia: a ten-year follow-up of first admissions. *Archives of General Psychiatry*, 1976, 33, 949-954. [PubMed: 949228]
- Bogdanow WJ Predicting rehospitalization among mental patients Ph.D. Dissertation University of Wisconsin, Madison, Wisconsin, 1976.
- Carpenter J and Bourneston N Performance of psychiatric hospital discharges in strict and tolerant environment. *Community Mental Health Journal*, 1976, 12, 45-51. [PubMed: 954396]
- Davis A, Dinitz S, and' Pasamanick B Schizophrenics in the new custodial community: five years after the experiment. Columbus, Ohio: Ohio State University Press, 1974.
- Fontana AF and Dowds BN Assessing treatment outcome: II. the prediction of rehospitalization. *Journal of Nervous and Mental Diseases*, 1975, 161, 231-238.

- Glick ID, Hargreaves WA and Goldfield MD Short vs. long hospitalizations: a prospective controlled study: I. the preliminary results of a one-year follow-up of schizophrenics. *Archives of General Psychiatry*, 1974, 30, 363–369. [PubMed: 4813139]
- Keyser DJ Psychiatric hospital recidivism Ph.D. Dissertation University of Kansas, Lawrence, Kansas, 1974.
- Kirk S Effectiveness of community services for discharged mental hospital patients. *American Journal of Orthopsychiatry*, 1976, 46, 646–659.
- Kish L Survey sampling. New York: Wiley, 1965.
- Klecka WR Discriminant analysis In Nie N. et al., (eds.). *SPSS: Statistical package for the social sciences*. New York: McGraw-Hill Book Co, 1975, 434–467.
- Mannino F & Shore M Family structure, aftercare, and post-hospital adjustment. *American Journal of Orthopsychiatry*, 1974, 4, 76–85.
- Michaux W, Katz M, Kurland A and Gansereit K The first year out. Baltimore: The Johns Hopkins Press, 1969.
- Mintz J, O'Brien C and Luborsky L Predicting the outcome of psychotherapy for schizophrenics. *Archives of General Psychiatry*. 1976, 33, 1183–1187. [PubMed: 9919]
- Rog DJ The rehospitalization of acutely disturbed mental patients: identification of significant post-hospital variables Ph.D. Dissertation University of Massachusetts, 1976.
- Rosenblatt A and Mayer JE The recidivism of mental patients: a review of past studies. *American Journal of Orthopsychiatry*, 1974, 44, 697–706.
- Segal S and Aviram U The mentally ill in community based sheltered care. New York: Wiley, 1978.
- The mentally ill in community-based sheltered care: a technical supplement on study methodology, 1972–1977. Unpublished manuscript, University of California, Berkeley.
- Segal S, Baumohl J & Johnson E Falling through the cracks: mental disorder and social margin in a young vagrant population. *Social Problems*, 1977, 24, 387–400. [PubMed: 32921838]
- Segal S and Moyles WM Sheltered care: a typology of residential settings, paper presented at the 1979 meetings of the American Sociological Association, New York.
- Serban G and Gidynski C Significance of social demographic data for rehospitalization of schizophrenic patients. *Journal of Health and Social Behaviour*, 1974, 15, 117–126.
- Winston A, Pardes H, Papernik DF Aftercare of psychiatric patients and its relation to rehospitalization. *Hospital and Community Psychiatry*, 1977, 28, 118–121. [PubMed: 188744]
- Wolkon G, Karmen M and Tanaka H Evaluation of a social rehabilitation program for recently released psychiatric patients, *Community Mental Health Journal*, 1971, 7 312–322. [PubMed: 5163677]

TABLE 1

Factors that Distinguish Older (50–65 year-old) Residents Who Have Been Hospitalized In the Past Year

Variable	Standardized Discriminant, Function Score
1. Services are more available	.475 *
2. Less likely to live in a Medically Oriented Facility	.520 *
3. Less likely to be internally integrated within their sheltered-care facility	.477
4. Likely to be older	.466
5. Use services more often	.216
6. More likely to be in (Group Home-Programmatic)	.226
7. More likely to be in Facility Type E (Therapeutic Community)	.057
Wilk's Lambda	.807 ($p < .03$)
Canonical correlation	.439
Percent correctly classified on the basis of discriminant function score	71.0% ($p < .000$)
N rehospitalized = 18; not rehospitalized = 54	

* These variables add a significant ($p < .05$) increment in new information facilitating discrimination given the Rao's V criterion.

TABLE 2

Factors That Distinguish Middle-Aged (34–49) Residents Who Have Been Hospitalized In The Past Year

Variable	Standardized Discriminant Function Score
1. More likely to live in (Group, Home, Programmatic)	1.007 *
2. More likely to live in (Therapeutic Community)	.745 *
3. Lower internal integration scores	.466
4. Choose facility	.425
5. Greater distance to community resources	.404
Wilk's Lambda	.744 (.002)
Canonical correlation	.505
Percent correctly classified on the basis of discriminant function score	74.7% (p < .000)
N rehospitalized = 14; not rehospitalized = 55	

* These variables add a significant ($p < .05$) increment in new information facilitating discrimination given the Rao's V criterion.

TABLE 3

Factors That Distinguish Young (19–33) Residents Who Have Been Hospitalized In The Past Year

Variable	Standardized Discriminant Function Coefficient
1. Located in homes where the operator does not view him/herself as a parent	.033
2. Located in homes not owned by the operator	.607 [*]
3. Located in homes where operator discourages external contacts with neighbours	.997 [*]
4. Treated in “high quality” homes	.483 [*]
Wilk’s Lambda	.747 (.004)
Canonical correlation	.512
Percent correctly classified on the basis of discriminant function score	75.9% (p < .000)
N rehospitalized = 23; not rehospitalized = 31	

* These variables add a significant (p < .05) increment in new information facilitating discrimination given the Rao’s V criterion.