Day Versus Inpatient Hospitalization:  
A Controlled Study

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The authors report the results of their controlled study to compare the efficacy of day versus inpatient hospitalization for those patients for whom both treatments are equally feasible clinically. Newly admitted inpatients from the catchment area were randomly assigned to either day or inpatient care. Outcome evaluations, including measures of psychopathology and role function, were conducted at various follow-up intervals. The authors found clear evidence of the superiority of day treatment on virtually every measure used to evaluate outcome.

Although day hospitalization has been utilized as an alternative to inpatient treatment for acutely disturbed psychiatric patients, the scarcity of controlled studies as well as the limitations of those that exist do not permit conclusions regarding the advantages of one treatment over the other. The main purpose of this study is to answer the following question: What is the relative efficacy of day hospitalization as an alternative to inpatient hospitalization for those patients for whom both treatments are judged clinically feasible? In addition, we wish to delineate some of the characteristics of the group of patients for whom day care is clinically feasible as an alternative to inpatient treatment.

In 1964 Zwerling and Wilder (1) reported a study showing that day hospitalization was a feasible alternative to inpatient care for seriously disturbed psychiatric patients. They found that two-thirds of a group of newly admitted inpatients who were randomly assigned to a day hospital were actually accepted for treatment at the day hospital. The remaining third were rejected and were treated on a 24-hour-a-day inpatient basis. Of the patients accepted for treatment at the day hospital, three-fifths never required boarding on the inpatient service.

The Zwerling and Wilder study demonstrated that day hospitalization could be an alternative to inpatient care for large numbers of acutely disturbed psychiatric patients, but it did not answer the question of whether day hospitalization should be used in place of inpatient care for acutely disturbed patients. In a subsequent article on day hospitalization, Zwerling (2) stated that there are no reliable data demonstrating either the advantage or disadvantage of psychiatric day hospitals in comparison with traditional 24-hour ward units. He cited only one study, that by Craft (3), which reported equal effectiveness in a shorter period of time for day treatment, compared with inpatient treatment, for depressed patients. However, this study was entirely retrospective and the groups were only matched in the broadest dimensions.

A Joint Information Service report (4) also notes that controlled studies in this area are scarce. It mentions two studies. Kris (5) studied a small group of chronic patients who had experienced a severe psychotic relapse. The 17 patients who were treated in the day hospital were released


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within six weeks and were still in the community three years later, whereas eight of the ten control patients who went to a state hospital remained hospitalized for the full three years. This study dealt only with chronic patients, and continued hospitalization was the only outcome measure reported. Smith and Cross (6) found no significant differences on various outcome measures when they matched 38 neurotic day patients with an equal number of inpatients. Since the samples were limited to patients diagnosed as neurotic, the results cannot be generalized to most inpatient groups.

Method

Subjects

The study was conducted on the Washington Heights Community Service (WHCS) of the New York State Psychiatric Institute, an integral unit of the Columbia Presbyterian Medical Center operated jointly by the New York State Department of Mental Hygiene and the department of psychiatry of Columbia University. The WHCS accepts anyone over 13 from its local catchment area (population: 50,000) who is in need of psychiatric hospitalization. The service offers comprehensive care including inpatient, day, and night hospitalization. Aftercare consists of outpatient therapy, home visits by family aides, and a halfway house.

Each weekday morning during the period of the study (April 15, 1967–June 15, 1969) the senior author (M.I.H.) saw all new admissions to the inpatient service alone and with their families and screened them for inclusion in the study. A total of 424 patients were evaluated.

Table 1 shows the results of this screening procedure. Patients were excluded from the study for a number of different reasons. The most common reason for exclusion was that the patients were judged “too psychiatrically ill” for day care, i.e., suicidal, potentially violent, or extremely disorganized. The next largest group was rejected because they were judged “too psychiatrically healthy” to warrant further inpatient care. Only 13 percent were rejected for day hospitalization because of “family factors,” e.g., the patient lived alone and nighttime supervision was judged necessary. A small group was excluded because of “physical illness” that required hospital care, e.g., congestive heart failure. Such miscellaneous reasons as elopement or signing out against medical advice accounted for the rest.

The remaining 90 patients, comprising 22 percent of the admissions, were judged suitable for inclusion in the study and, through the use of a table of random numbers, were immediately assigned to either day or inpatient hospitalization. By coincidence, 45 were assigned to each group.

It should be noted that by the time the patients entered the study, they had all had at least an overnight stay in the hospital. The average length of inpatient stay prior to evaluation and randomization was approximately three days for both groups because of occasional difficulty in arranging to see family members, admission during a weekend, and occasional deferring of the final clinical categorization.

Description of Treatment

Both day patients and inpatients were treated on the same 55-bed inpatient ward, which has an open-door policy except for a closed ten-bed intensive care unit. Patients in both groups were treated by the same staff and participated together in the same activities during the day. The ward program is group oriented, with a strong emphasis on activation of patients.

A full range of psychiatric treatments was utilized, including individual psychotherapy; group, family, milieu, and somatic

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therapy; and vocational rehabilitation. If it was deemed appropriate, patients were followed, after discharge from either day or inpatient hospitalization, as outpatients.

The inpatients generally spent 24 hours a day in the hospital. Except for weekend or overnight passes, all inpatients slept at the hospital. A patient randomized to inpatient status could not be placed on day care for a period of two months.

Day patients started their treatment by spending the full eight hours during the day at the hospital from Monday to Friday. Later, participation could be reduced if deemed appropriate. In actual practice, the day patients attended the hospital program less regularly than the inpatients since they had more freedom to self-regulate their participation.

**Evaluations**

An initial and three follow-up cross-sectional evaluations of psychopathology and role functioning were made. The first two follow-up evaluations were made at two and four weeks after admission to the study to
determine the differential effects of the two treatment modalities on the resolution of acute symptomatology. The final follow-up evaluation was begun five months after the last patient entered the study to determine if there were any long-term differences between the two treatment groups. The follow-up period varied from 21 weeks to 143 weeks; the average for patients in both groups was a little less than two years.

Psychopathology and role functioning were evaluated with two instruments: the Psychiatric Status Schedule and the Psychiatric Evaluation Form. The Psychiatric Status Schedule (PSS), developed by Spitzer, Endicott, and Cohen (7), is a standardized research procedure that utilizes a structured interview and an inventory of 321 items describing psychopathology and impaired role functioning. The procedure yields 17 factor-based scales of psychopathology and six scales of role functioning. These 23 measures can be further summarized into four factor-analytically-derived symptom scales and one scale of role functioning. An evaluation was conducted on admission to the study and four weeks later by research interviewers who had no clinical contact with the patients.

The Psychiatric Evaluation Form (PEF), developed by Spitzer, Endicott, Mesnikoff, and Cohen (8), consists of 19 six-point rating scales of basic dimensions of psychopathology, five scales of role functioning, and one scale of overall severity of illness. These scales are further combined into five factor-analytically-derived summary scales of psychopathology and one summary scale of impaired role functioning. The PEF was completed by the treating psychiatric resident or psychology intern on admission to the study and at two and four weeks. In addition, research interviewers used the PEF in the long-term follow-up evaluation.

Results

Description of Study Patients

How did the study groups compare with patients excluded for psychiatric reasons? In table 2, the demographic characteristics of the two study groups are contrasted with those of patients excluded because they were "too psychiatrically ill" or "too psychiatrically healthy," the two major reasons for exclusion.

There were a number of notable differences among the three groups. The "too ill" group had the largest proportion of patients who were over 65, male, and unmarried. In contrast, the "too healthy" group had the largest proportion of women and married persons. In terms of diagnosis, the "too ill" group had the highest proportion of schizophrenics (mainly paranoid), while the "too healthy" group had the fewest schizophrenics (mainly chronic undif-
ferentiated) and the largest proportion of patients diagnosed as neurotic (mainly depressive).

Were the two study groups comparable on variables that might affect prognosis? Despite the use of a randomization procedure for assigning patients to the two study groups, there were several differences worth noting. The inpatient group was somewhat younger, of a higher social class, more likely to have been born in the continental United States, and more likely to be diagnosed schizophrenic; the inpatient group also had a larger proportion of patients who had had two or more previous psychiatric hospitalizations. These differences were taken into account in the analysis of the data.

How did the psychopathology of the study group compare with that of patients admitted to the service? Figure 1 shows the average scores on the summary scales of the PEF evaluations made on admission for all patients hospitalized on the service, for patients who entered the study, and for those rejected from the study because they were either too ill or too healthy. It is evident that in terms of broad dimensions of psychopathology, the study group was comparable to the entire group of patients admitted to the service. The differences between the study group and the two groups excluded from the study were often statistically significant (p < .05 by two-tailed test) but the magnitude of the differences was never large. In no instance was the proportion of variance of scores attributable to group membership larger than three percent. Compared with the “too ill” group, the study group had lower scores on Disorganization, Grandiosity-Externalization, and Overall Severity. Compared with the “too healthy” group, the study group had higher scores on Withdrawal, Grandiosity-Externalization, Role Impairment, and Overall Severity.

Further evidence that the study group is typical of an inpatient population is that almost all of their average scores on the PSS hover around the mean for the instrument standardization sample, which consisted of a large group of unselected newly admitted inpatients (7). An examination of the proportion of study patients who exhibited specific signs of psychopathology, as noted on the PSS, justifies characterizing the study group as seriously ill (see table 3).

Hospital Course

What was the hospital course for study groups during the first four weeks after randomization? Since the day patients would ordinarily have been treated in inpatient care, it was anticipated that for a variety of reasons it might be clinically necessary to “board” some patients on the ward overnight for one or more nights. During the first four weeks of the study, ten of the day patients (22 percent) were boarded. This figure was comparable to that reported by Salzman and others (9). The most common reasons for boarding were suicidal and violent behavior. The length of boarding ranged from one to 27 days, with a mean of 13.7 days. Our impression was that there was a tendency for patients to remain as boarders longer than was clinically necessary and that with more intense supervision the average length of boarding could have been reduced.

The use of the intensive care unit on the ward was an index of regressive, suicidal, or disruptive behavior. During the first month of the initial hospitalization, 12 inpatients required placement in the intensive care unit.

| TABLE 3
| Proportion of Study Patients Exhibiting Specific Signs of Psychopathology During the Week Prior to Admission |
|---------------------------------|---------------------------------|
| PSS ITEM                                       | PERCENTAGE |
| | (N = 90) |
| Fear prevents him from doing some routine activity | 29 |
| Will not leave home without a companion | 12 |
| Continually anxious | 52 |
| Continually depressed | 48 |
| Feels like crying | 73 |
| Avoids contact with people | 36 |
| Has no friends or has little contact with friends | 36 |
| Hit someone | 21 |
| Suicidal thoughts | 47 |
| Suicidal behavior | 27 |
| Trouble sleeping | 61 |
| Stays in bed more than ten out of 24 hours (for no good reason) | 31 |
| Takes unprescribed amphetamines | 5 |
| Uses heroin | 5 |
| Admits alcohol problem | 24 |
| Goes on alcoholic binges | 12 |
| Intoxicated most of the time | 8 |
| Derealization | 20 |
| Olfactory hallucinations | 11 |
| Auditory hallucinations | 25 |
| Visual hallucinations | 17 |
| Convinced of a delusion | 29 |
| Ideas of reference | 24 |
| Occasionally incoherent during interview | 9 |
| Did not perform a role as a wage earner, housekeeper, or student because of psychopathology | 40 |
care unit, compared with only five day patients.

*Time Spent in the Hospital and in the Community*

Did the length of hospital stay differ for the two groups? The average number of days from randomization until the patient was discharged from inpatient or day care and lived in the community full-time for at least one week was 48.5 days for the day patients and 138.8 days for the inpatients. Figure 2 shows the cumulative percentage of patients in both groups who were discharged back to the community at various points in time after randomization. At each time period, a larger proportion of the day patients than of the inpatients returned to the community. At 30 days, while only 33 percent of the inpatients had returned to the community, 58 percent of the day patients had left the hospital. At 60 days, the figures were 42 and 78 percent, respectively.

*FIGURE 3*
Cumulative Percentage* of Patients Who Were Rehospitalized Within Given Periods of Time After Discharge from Initial Hospitalization

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1 The average was 119 for the inpatients if one patient who stayed 1,009 days is not included. He went back and forth from inpatient to day care many times before he was eventually discharged.

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Was the earlier return to the community by the day patients associated with a higher readmission rate to the hospital? Figure 3 shows the cumulative percentage of patients who were rehospitalized within different time periods following discharge from initial hospitalization. At every point in time, it was the inpatients who had a higher readmission rate, e.g., within three and nine months it was almost double that of the day patients. Thus, the shorter initial hospital stay associated with day hospital treatment was not followed by a higher readmission rate, as might have been anticipated.

What percentage of patients was living in the community at different points in time? A patient was only considered to be “in the community” if on the day of evaluation he had spent the entire previous week out of the hospital. At every cross-section evaluation, more of the day patients were in the community (see figure 4). At 13 weeks, 87 percent of the day patients were in the community, compared with only 49 percent of the inpatients.

**Measures of Psychopathology**

Did the study groups differ on measures of psychopathology at various points in time? Both groups of patients improved on virtually all measures of psychopathology at each follow-up evaluation. Analysis of covariance was used to evaluate whether the groups differed in the amount of improvement. Differences between the two groups were noted if they were significant at the .10 level (by two-tailed test) or beyond.\(^3\)

At each follow-up period, the number of patients actually evaluated was fewer than the 45 who were in each group. There were a number of reasons for the lack of a follow-up evaluation on all patients. The two- and four-week cross-section evaluations were not done on the first 13 patients because this procedure was not initiated until the 14th patient had been in the study for two weeks. Some of the patients could not be interviewed because they were out of town or could not be located, or, on rare occasions, because they refused to be interviewed. A PEF could not be completed by the resident if the patient was no longer in therapy with him. The number of patients actually evaluated at two and four weeks varied from 75 percent to 82 percent, with the percentages for the two groups comparable at each follow-up evaluation. A comparison of the initial levels of psychopathology of those who were not followed with that of those who were indicated that the “missed” patients were less sick initially. There is no reason to expect that this biased the follow-up results since patients who were not followed in the two groups did not differ significantly from each other on initial levels of psychopathology.

At the two-week evaluation, only two of the 19 PEF scales showed significant differences (expected by chance using a .10 significance level). The day patients made more improvement in Speech Disorganization (p < .07) and the inpatients more in Anxiety (p < .09).

In contrast to the two-week follow-up, at four weeks the day patients had made more improvement than the inpatients on five of the 19 PEF scales: Agitation-Excitement (p < .04); Inappropriate Affect, Appearance, and...
The difference between the day patients and the inpatients was significant at the .10 level.

The finding of inconsistencies in outcome measures is a common one when different sources of information and different measurement techniques are used (10). It should be remembered that the PSS interviewer had no source of information other than his brief contact with the patient during the structured interview. On the other hand, the psychiatric resident who completed the PEF not only had his own personal contacts with the patient but also had access to information about the patient from nursing staff, social workers, and family members.

One might question whether the findings on the PEF at four weeks could be explained on the basis of bias of the treating resident. However, this is unlikely because the residents clearly preferred inpatient treatment to day care. If this type of bias were present, it would have been in the direction of showing greater improvement for the inpatients.

Another possible source of bias is that residents may have had more access to information about the pathological behavior of inpatients than of day patients because the nursing staff had more opportunity to observe inpatients. However, the notion that the greater improvement shown by the day patients was an artifact is not consistent with the greater use of the intensive care unit and the longer hospitalization of...
the inpatient group.

No attempt was made to compare levels of improvement on the specific role scales of either the PEF or the PSS because there were too few patients fulfilling comparable roles for meaningful comparison. However, a key item in the PSS records whether or not the subject has performed the duties of any occupational role (i.e., wage earner, housekeeper, or student) at any time during the past month. Only 45 percent of the inpatients, compared with 63 percent of the day patients, had performed in an occupational role during the first four weeks of the study. This finding is primarily accounted for by the large number of inpatients who were still in the hospital and therefore unable to perform in an occupational role.

Seventy-six percent of the day patients and 84 percent of the inpatients were interviewed in the long-term follow-up. Most of the patients who were not interviewed had moved from New York City or could not be located. One inpatient, a drug addict, had drowned under unclear circumstances and another inpatient, also a drug addict, was in jail.

At the long-term evaluation, the only notable differences were that day patients showed more improvement on the scales evaluating Daily Routine-Leisure Time Impairment (p < .02) and Housekeeper-Role Impairment (p < .007).

Discussion

This study attempted to answer the question: What is the relative efficacy of day hospitalization compared with inpatient hospitalization for patients for whom both treatments are judged clinically feasible? This question could only be answered by studying a group of patients that excluded those for whom one or the other treatment was clearly unsuitable. The screening procedures described above were introduced on the service especially for this study. It is interesting to note that a large number of admissions could be sent home almost immediately (20 percent) because further inpatient care was clearly not indicated. This accounts in part for the relatively small proportion of the admissions (22 percent) for whom day care as an alternative to inpatient treatment could be considered. The fact that only ten percent of these patients were readmitted within three months of their discharge suggests that the decision to discharge them immediately was appropriate.

The results showed that, on virtually every measure used to evaluate outcome, there was clear evidence of the superiority of day treatment. Not only did day patients return to full-time life in the community and resume their occupational roles sooner, but they were more apt to remain in the community without subsequent readmission to the hospital. In addition, the measures of psychopathology showed that at four weeks the day patients had made more improvement in several dimensions of manifest psychopathology. It is not surprising that the long-term results were not as clear-cut as those in earlier evaluations; however, they suggested that the differential treatment received did have some long-term effects that were consistent with those noted earlier. More day patients were in the community on a full-time basis and the more striking differences in improvement in functioning were in favor of the day patients.

We can only speculate as to why day care proved superior to inpatient care. Day care apparently avoids the regressive features associated with “total institutionalization.” In addition, day patients have a greater opportunity to maintain healthy areas of functioning, including the preservation of social and instrumental roles. Another major factor is that the powerful therapeutic effects of psychotropic drugs probably make it unnecessary to subject the patient to the stress of complete separation from familiar ties in order to effect a remission of the illness.

In contrast to previous studies comparing the efficacy of day care with other modalities (3, 5, 6, 11-13), this study was unique in that both treatment groups were treated in the same physical location and by the same staff. There was no special day program; day patients participated in all ward activities along with the inpatients. Therefore the differences in outcome for the two groups cannot be attributed to differences in staff-patient ratios, administrative policies regarding criteria for discharge, treatment approaches, or levels of clinical competence. Rather, the outcome differences must largely be due to the main variable

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that differentiated the two treatments: the day patients were only on the ward from 8:30 a.m. to 4:30 p.m. on weekdays and spent the rest of the time with their families in the community. One can only speculate whether a separate day program geared to the special needs of day patients (e.g., discussion of current interaction with family members) might have enhanced the efficacy of the day care treatment.

The superiority of day hospitalization cannot be attributed to staff enthusiasm for this modality of treatment. As a matter of fact, staff members initially voiced considerable apprehension about and antagonism to the plan of placing acutely ill patients on day care. During the course of the study, as the clinical staff gained experience in treating day patients, the antagonism and apprehension lessened but the staff continued to prefer inpatient care.

There were several limitations to this study. First of all, family members were not questioned regarding the effect on them of the early return of the day patients. Neither were the families of the inpatients questioned regarding the effects of having the patient remain in the hospital. Many critics of community psychiatry have suggested that the new wave of enthusiasm for early return of patients to the community is merely shifting the burden of the patient's difficulties from the hospital to the family. Moreover, they raise the question of whether the imposition of living with a seriously disturbed patient could be harmful to other family members, especially children. On the other hand, advocates of day or brief hospitalization have noted the potentially destructive effects of having a key member of the family, e.g., the mother, absent for long periods of time. The social service department, which was in close contact with the families, was aware of undue stress on only a few of the families of the day patients.

Another limitation of the study was the absence of any data regarding drug therapy. We do know that virtually all patients were treated with some form of tranquilizer and/or antidepressant. Although levels of drug usage were not monitored, it is our impression that both groups received comparable dosage levels.

We had hoped to have large enough sample sizes so that we could try to identify subgroups of patients who responded differentially to the two treatments. For example, there may be a particular type of patient who needs the external controls that only inpatient care can provide. However, the small sample sizes precluded this kind of data analysis.

What are the implications of the findings of this study for the planning of services for the seriously disturbed psychiatric patient who would ordinarily be treated in an inpatient setting? Optimal treatment requires a well integrated inpatient, day, and outpatient program. Close monitoring of the status of an acutely disturbed patient should be routine and should allow for early transfer to day hospital status or discharge to full-time community life, with aftercare when appropriate. Too often, patients are left to languish in a hospital until a lengthy evaluation period is completed. After a patient has been admitted to an inpatient service, if there are no contraindications to day hospitalization, day care is preferable to continued inpatient care.

Experience in our own facility suggests that mere knowledge of the efficacy, or even superiority, of day care over inpatient care is not sufficient to motivate many therapists to use this treatment modality. Administrative pressure must be maintained to counteract the preference of most therapists for inpatient care.

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DISCUSSION

Jack F. Wilder, M.D. (Bronx, N. Y.)—The study design reported by Dr. Herz and his colleagues is of special interest for at least three reasons. First, the sample of patients was refined. A subgroup that might be truly vulnerable to the experimental condition was identified by excluding those patients who apparently required further inpatient hospitalization and those patients who no longer needed any hospitalization. Second, the experimental variable was refined. The day hospital and inpatient groups were treated in the same facility, with the same staff and daytime programs. One group was expected to spend its nights and weekends in the hospital, the other at home. Third, standardized instruments were used to evaluate psychopathology and role functioning at several points of each patient’s illness and recovery.

I will comment on the results reported in the areas of duration of hospitalization, resolution of psychopathology, readmission patterns, family attitudes to day hospitalization, and staff attitudes to day hospitalization. I will contrast the findings, where relevant, with those reported in two studies in which the subjects were an unselected group of acute psychiatric admissions to the Bronx Municipal Hospital Center (BMHC) who were assigned at random to the two treatment conditions (1, 2).

The briefer hospital stay for day hospital patients, a mean of 48.5 days vs. a mean of 119 days, was an unexpected finding. In the BMHC study, the median day hospital project hospitalization was longer, a median of 57 days vs. a median of 20 days. It is my impression that, given equal administrative pressures, day hospital stays are generally longer than inpatient stays. The optimal discharge point for day hospital patients is often vague since early in treatment patients “look well,” travel by themselves, and assume increasing responsibilities at home. On the other hand, the intensive contact with family members leads to a major staff commitment to each patient. I suspect that administrative considerations, rather than clinical considerations, determined the contrasting discharge patterns in the two institutions. At the Washington Heights Community Service (WHCS) there was pressure to keep the inpatients in order to meet training obligations, whereas at BMHC, a busy municipal hospital, there was pressure to discharge inpatients as rapidly as possible.

The PEF and PSS findings suggest some short-term superiority for the day hospital group. The inconsistencies in outcome measures imply that the clinical differences, if any, are subtle and larger samples or more sensitive instruments are required to identify them. The staff in the BMHC studies, like their counterparts at WHCS, also had the subjective impression that, as a group, the day patients were “better put together.” There appears to be some validity to the position that for some patients 24-hour hospitalization has some unintended antitherapeutic effects. There is less evidence for the long-term superiority for day treatment; the critical variable in two-year follow-up studies is probably the intervening aftercare.

The higher inpatient readmission rate was a striking finding. This trend was noted in the BMHC study, but it was not statistically significant. I suspect, because the study was conducted with an unselected group of patients in contrast to the more selective sampling of the WHCS study; when readmission did occur in the BMHC study, however, the interval between discharge and first readmission was significantly longer for the day hospital patients. Day patients in the WHCS study were discharged sooner and stayed out longer; day patients in the BMHC study were discharged later and stayed out longer. The project hospitalization for day patients in both institutions was about the same duration. The combined findings of the two studies suggest that the differential therapeutic effects of the two treatment conditions are more critically related to rehospitalization than the relative durations of inpatient and day hospitalization.

The subjective impression of the WHCS social service department that families were generally receptive to day treatment for their relatives is in keeping with the findings in the BMHC study and the experience of most day hospital staffs. This should not be too surprising since most patients were ill at home for some time prior to obtaining help and since day hospital staffs generally take a greater interest in patients’ families.
than do inpatient staffs.

The preference of the residents for inpatient treatment rather than day care is a common bias. There is a general underutilization of day treatment programs for acute psychiatric patients—it is more demanding work for the staff, especially for the therapist.

We are indebted to Dr. Herz and his colleagues for demonstrating the value of a day treatment program in a continuum of comprehensive services. Services should be offered in the best interests of the patients, not the staff. A patient should be able to enter the treatment continuum at any point, move to any point, and exit at any point. The aim of any mental health intervention is to preserve and enhance the patient’s personal autonomy. All other things being equal, it is better for a patient to receive care in a hospital where he spends the night at home than in a hospital where he spends the night in the hospital.

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Cost Efficiency of Treatments for the Schizophrenic Patient

BY PHILIP R.A. MAY, M.D.

The findings of a controlled experimental study in which five treatment methods were compared by both clinical and cost criteria indicate that, for most schizophrenic patients, milieu care alone is both expensive and relatively ineffective. In terms of cost per patient released and cost per case treated, it is far less expensive to provide the most effective available treatment than to merely provide a good level of milieu care without special additional treatment.

The cost of hospital care is customarily expressed per diem, i.e., as the average daily budget of the hospital divided by the average daily census. On this basis the cost of psychiatric care varies greatly, ranging (in the United States at the present time) from a low of perhaps five dollars a day (or even less) to a high of ten to 20 times that figure. These crude per diem figures may be useful for limited budgetary comparisons, but they are not a measure of therapeutic efficiency.

Consider two hospitals with the same per diem cost. In hospital A the average patient "recovers" after 30 days; in hospital B the same degree of recovery takes 300 days. It is obvious that the total cost per case for hospital B will be ten times more than for hospital A. In other words, per diem cost comparisons may fall into the same error as the person buying on credit who inquires only about the size of the monthly payment, without bothering to ask how long he will have to keep on paying.

Unfortunately, as White (1) observes, the health services have in general been slow to adopt the ideas and methods of cost-benefit analysis, and the study of cost efficiency has advanced but little from per diem estimates. In a recent review of the literature on cost efficiency of mental health care delivery systems (2) it was pointed out that systematic research on fiscal outcome is surprisingly meager in amount and relatively unsophisticated in methodology. Statistics abound, but not statistical thinking. With two exceptions (3, 4) the reports are, in effect, retrospective surveys based on per diem costs and on official hospital statistics whose reliability

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