A 15-Year Followup of 646 Schizophrenic Outpatients

by David M. Engelhardt, Bernard Rosen, Judith Feldman, Jo Ann Z. Engelhardt, and Patricia Cohen

Abstract

The 15-year hospitalization course of 646 chronic schizophrenic outpatients treated between 1958 and 1963 was determined using records of the research clinic, the Kings County Psychiatric Hospital, and the New York State Department of Mental Hygiene. The cohort was heterogeneous with regard to previous history of hospitalization: 20.6 percent had never been hospitalized, 22.0 percent had experienced only crisis admissions, and 57.4 percent had experienced long-term psychiatric hospitalization. The results indicate that 58.8 percent were hospitalized subsequent to project entry. A relationship was observed between previous history of hospitalization and hospitalization during the followup period. Patients with no previous history of hospitalization were less likely to be hospitalized than patients with crisis admissions only, who in turn were less likely to be hospitalized than patients with a history of hospitalization in a long-term psychiatric treatment facility (39.1 percent vs. 53.5 percent vs. 67.9 percent; \( p < .001 \)). The implications of these findings for future followup studies are discussed.

This is the first of a series of reports on a 15-year followup of the hospitalization course of 646 schizophrenic outpatients who participated in a federally funded research project that began in 1958. The project, *A Study of Ataractics in Schizophrenic Outpatients* (U.S.P.H.S. MH-01983), was designed to establish the feasibility of maintaining schizophrenic patients in the community on a program of drug treatment and supportive psychotherapy. This project was one of the earliest attempts to evaluate, under double-blind, placebo-controlled conditions, the long-term effects of phenothiazine treatment in a group of schizophrenic outpatients (Engelhardt and Freedman 1961, 1969; Engelhardt et al. 1963, 1967; Cohen et al. 1968; Engelhardt and Margolis 1970).

This initial report will deal with the various parameters of the hospitalization course of these patients over a period of 15 years following their entry into the project. We were prompted to conduct a historical prospective study for a variety of reasons:

1. Our sample was composed exclusively of outpatients referred to our research clinic for maintenance pharmacotherapy. We thus had the unique opportunity of studying course of illness in a group of schizophrenic patients seeking outpatient treatment. Most studies examining the future hospitalization course of schizophrenic patients begin with already hospitalized patients, either upon admission or discharge.

2. Among our 646 schizophrenic outpatients, there was a significant proportion (21 percent) who had no history of psychiatric hospitalization before entering treatment at our clinic. From an epidemiologic point of view, this group is of extreme importance since it contains patients who may never appear in a psychiatric hospital and, therefore, may not be represented.
in traditional hospital-based followup studies.

3. We were in a position to follow the hospitalization course of all of our patients over an extended period of time, a minimum of 14.5 years. We, therefore, avoided those problems so often besetting followup studies of patients who:

- Had been at risk for hospitalization for only relatively short periods of time, or
- Had been followed for varying lengths of time and, therefore, differed with respect to the period at risk for hospitalization.

4. The nature of our data permitted presentation of cumulative hospitalization rates separately for each followup year. Thus, it was felt that our data could reveal valuable information about the hospitalization course of schizophrenic patients not provided by classical, hospital-based followup studies.

**Population and Procedures**

The original project was carried out at the Psychopharmacology Treatment and Research Clinic of the Kings County Hospital Center in Brooklyn, New York. Between March 1958 and February 1962, 670 patients were admitted to the study. The majority of these patients (62 percent) were drawn from the intake of the Mental Health Clinic of the Kings County Hospital Center. A smaller number (12 percent) were discharged patients referred from the acute observation wards of the Kings County Psychiatric Service. The remaining 26 percent were referred by state hospital aftercare programs in the community.

To qualify for admission to the project, patients were required to be between the ages of 18 and 45, have a primary diagnosis of schizophrenia based on DSM-II criteria, and give evidence of mental illness of at least 1 year’s duration. In fact, the patients admitted were generally chronically ill. More than half of our sample showed signs of mental illness for 10 or more years before admission to the project.

The patients displayed considerable variability in the amount and type of psychiatric treatment received before clinic admission. Eleven percent of the sample had never received any type of psychiatric treatment, 10 percent had received outpatient treatment only, and 30 percent had been hospitalized less than 90 days in aggregate before clinic admission. Twenty-five percent of our sample had an aggregate history of hospitalization in excess of 1 year.

Upon admission to the project, patients were randomly assigned to either placebo, chlorpromazine, or promazine treatment and were treated under double-blind conditions. Clinic visits were scheduled weekly for the first month, bi-weekly for the next 2 months, and monthly thereafter. Patients were free to leave the clinic at will with no attempt being made to pressure their return. When a clinic appointment was missed, a postcard with a new appointment was sent. If the patient failed to keep this appointment, he was dropped from the project. Average duration of clinic attendance was 20.6 months. However, the median length of stay was 5.6 months. Only 20 percent of the patients attended the research clinic for more than 2 years.

The patients were relatively young (mean age 30.4 years with a median of 30.7 years). Slightly more than half the sample (53.6 percent) were males. The patients were representative of the Borough of Brooklyn at the time of intake into this study. Sixty-eight percent were white, 28 percent were black, and 4 percent were Hispanic. Thirty-six percent were Protestant, 29 percent Catholic, and 35 percent Jewish. Three-quarters of the patients were in the lower two socioeconomic classes (IV, V) as measured by Hollingshead’s Two Factor Index of Social Position. Forty-seven percent of our sample had not been married up to the time of admission to the clinic. Of the 53 percent who had been married, almost one third were separated, divorced, or widowed.

Slightly more than one third of the patients could be considered as functioning in “independent” roles, either as self-supporting or supported by a spouse. Forty-five percent were supported by relatives, usually parents, and 19 percent were recipients of public assistance. For those patients for whom employment was role appropriate (students and housewives were excluded) only 27 percent had a “good-to-excellent” history of employment, suggesting fairly regular employment; 21 percent had a “fair-to-poor” work history with sporadic employment; and 52 percent had rarely or never been employed. The employment history of our sample of outpatient schizophrenics was thus very similar to that reported in the literature for ambulatory schizophrenic patients in general (Mosher et al. 1971; Anthony et al. 1972).

This observed variability in functioning level, as well as in pre-
vious psychiatric treatment history, is consistent with the view of many experts that schizophrenia is not a unitary disorder, but comprises a number of subgroups which differ significantly with respect to clinical course and outcome. The followup data to be presented in this study further confirm the notion of heterogeneity among schizophrenic patients with respect to clinical course.

Followup data were gathered through December 31, 1977, providing for a possible followup period ranging from 15 to 20 years depending on date of admission to the project. To allow for a uniform followup period for each patient, the actual end of the followup period ranged from December 31, 1972, for patients admitted in 1958, to December 31, 1977, for patients admitted during 1963. Because patients were admitted to the study in relatively equal numbers during each month of a project entry year, the postproject-entry followup time for the group as a whole averaged 6 months during the first year of the followup with an additional 12 months added during each succeeding year for an average followup of roughly $14\frac{1}{2}$ years.

Although some project patients continued to return to the clinic from time to time, permitting a "real live" followup, the major source of hospitalization data for patients, subsequent to leaving the project, was the records of the New York State Department of Mental Hygiene, and the Kings County Psychiatric Hospital.

For each of the 670 patients admitted to the outpatient project, we provided the statistical division of the New York State Department of Mental Hygiene the full name and last known address, as well as additional identifying data such as birth date, maiden name, and name of spouse and other relatives to assure accurate identification. The Department then returned to us, for each patient with a record of hospitalization, the dates of admission and discharge for each hospitalization (both public and voluntary) in chronological order from the patient's first recorded hospitalization through December 31, 1977.

Independent checks using data on hospitalization in our clinic files, as well as from the Kings County Hospital Center Record Room, satisfied us that the Department of Mental Hygiene's search was comprehensive and thorough. The admission and discharge records of the Kings County Psychiatric Hospital were valuable, not only as a check on the Department of Mental Hygiene's records, but also as a source of information regarding those crisis admissions which resulted in return to the community as opposed to transfer to a long-term psychiatric treatment facility.

Information with regard to diagnosis was also obtained from the New York State Department of Mental Hygiene and the Kings County Psychiatric Hospital for the 565 patients in our sample (87.5 percent) who had been hospitalized either before or after admission to the original project. On the basis of this information we were able to verify the diagnosis of schizophrenia in 97 percent of the patients who had been hospitalized at least once.

A word of caution is in order regarding the limitations of the postclinic data. Data on crisis admissions in Boroughs of New York City other than Brooklyn were basically not available to us (except in those few instances when we received a request for information from the admitting hospital). The probable data loss here is minimal if preclinic data on out-of-borough crisis admissions can be used as a guide. Only 3 percent of the crisis admissions during the preclinic period occurred at out-of-borough municipal hospitals. Our preclinic data were derived from lengthy detailed interviews with the patients and a close relative which were then cross-checked against existing hospital records and found to be better than 98 percent accurate.

Some loss of hospitalization data could stem from the possibility that some of our male patients who had served in the military were admitted directly to federal hospitals without appearing in the Department of Mental Hygiene or the Kings County Psychiatric Hospital's records. With respect to veterans passing through Kings County Hospital, they generally were transferred to state rather than federal hospitals because of the shortage of beds at local VA facilities. For these patients, discharge from the state hospital generally occurred before the availability of a VA bed. The Kings County Record Room data indicate that only one veteran in our group was transferred directly to a VA hospital from the Kings County Psychiatric Hospital. With regard to the state data, no veteran in our group was transferred from a state hospital to a VA hospital.

For those of our patients who may have left New York State between the time of departure from the research clinic and December 31, 1977, and who may have been
hospitalized out of state, we must assume their existence without any clear idea of the numbers involved. A rough estimate of the magnitude of this problem can be obtained from the fact that only three requests for clinical summaries were received from out-of-state treatment services through December 31, 1977. However, the possibility exists that the data to be presented with respect to hospitalization may tend to underestimate the actual incidence and occurrence of hospitalization.

As of December 31, 1977, we were able to identify 24 patients, out of the original group of 670, who had died during the followup period. These patients have been excluded from presentation in order to provide uniform data on all patients for each year of the followup period. Thus, we will report on the hospitalization course of 646 patients.

Results

First we will consider the cumulative hospitalization rates for the full cohort of 646 patients. As can be seen in the first row of table 1, 58.8 percent of our cohort had been hospitalized at least once during the 15-year followup period. It is of interest that of the 646 patients, 266, or 41.2 percent, escaped hospitalization during the 15 years of followup.

The cumulative incidence of hospitalization reported in this study (table 1) is similar to that reported in the literature for heterogeneous groups of previously hospitalized patients. The rates reported in the literature range between 23 and 42 percent at 1 year (Sanders, Smith, and Weinman 1967; Silverstein 1968; Bockoven and Solomon 1975; Gove and Fain 1977); between 38 and 57 percent at 2 years (Orlinsky and D’Elia 1964; Hargreaves et al. 1977; Leaf 1977; Matthews et al. 1979; Watt and Szulecka 1979); and between 30 and 60 percent at 3 years (Sanders, Smith, and Weinman 1967; Silverstein 1968; Bockoven and Solomon 1975; Mattes, Rosen, and Klein 1977). Bland and Parker (1976) report that at an average of 11.5 years (range of 10–12 years) after discharge, only 63.6 percent of first admissions were rehospitalized. Ciompi (1980) reported that only 53 percent of his cohort had been rehospitalized during the average of 37 years following release from their first hospitalization.

The second row of table 1 presents cumulative hospitalization rates only for the 380 patients who were hospitalized. As can be seen, roughly two thirds (63 percent) of those patients destined to be hospitalized were hospitalized by the end of the second followup year. By the end of the fifth followup year, 84.7 percent of these patients had been hospitalized at least once, and by the end of the seventh year after clinic admission over 90 percent had been hospitalized.

The number of hospitalizations for the 380 hospitalized patients ranged from 1 (n = 148, or 39 percent) to 15 (n = 1) with an average

<table>
<thead>
<tr>
<th>Postadmission followup year</th>
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<th>5</th>
<th>6</th>
<th>7</th>
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<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative % hospitalized (n = 646)</td>
<td>22.3</td>
<td>37.2</td>
<td>42.1</td>
<td>45.7</td>
<td>49.8</td>
<td>51.7</td>
<td>53.6</td>
<td>54.5</td>
<td>56.0</td>
<td>56.7</td>
<td>57.4</td>
<td>57.7</td>
<td>58.0</td>
<td>58.5</td>
<td>58.8</td>
</tr>
<tr>
<td>Cumulative % hospitalized of those eventually hospitalized (n = 380)</td>
<td>37.9</td>
<td>63.3</td>
<td>71.5</td>
<td>77.7</td>
<td>84.7</td>
<td>87.9</td>
<td>91.2</td>
<td>92.7</td>
<td>95.2</td>
<td>96.4</td>
<td>97.6</td>
<td>98.1</td>
<td>98.6</td>
<td>99.5</td>
<td>100.0</td>
</tr>
</tbody>
</table>
of 2.7 and a median of 2. This compares favorably with the median of 2 and the average of 3.14 hospitalizations reported by Bland and Parker (1976) for the 56 patients who had been rehospitalized in their study.

The average length of a single hospitalization was 16.4 months for the 380 patients who were hospitalized. However, there were some patients whose solitary hospitalization exceeded 6 years, while a number of patients who had experienced three or more hospitalizations during the followup period accumulated less than 1 year's aggregate time in a hospital.

The patients in our study were hospitalized an average of 44.4 months with a median of 28.9 months and a range of from 1 to 174 months. About 20 percent spent an aggregate of less than 3 months in mental institutions, while another 20 percent of those hospitalized accumulated over 7 years (about half of the followup period) in psychiatric hospitals. The 76 patients who had been hospitalized more than 7 years represent 11.8 percent of our entire group of 646 patients. This is similar to the findings of Huber et al. (1980) who followed up, for an average of 22.4 years, a group of patients first hospitalized between 1945 and 1959. Of these patients 13.3 percent were permanently hospitalized. Similarly Ciompi (1980) found that after an average followup period of 37 years, 14 percent of the patients had spent 80 percent or more of the followup period in a psychiatric hospital.

We now turn from a description of the cumulative hospitalization experience of our cohort to a description of yearly hospital utilization patterns as presented in Table 2.

The first part of Table 2 presents the proportion of the entire group (n = 646) who were in the hospital at least 1 day during each followup year. As can be seen, the proportion of patients using psychiatric hospital facilities during any 1 year ranged from a high of 34.7 percent in year 2, to 11.6 percent in the last year of the followup. Beginning with year 3, there is a steady decline in the proportion of patients spending at least 1 day in a psychiatric hospital, leveling off below 13 percent beginning with year 12.

In view of the uncertainty as to the fate of those patients for whom no record of hospitalization was found, the possibility must be considered that the decreasing risk for hospitalization may have been a function of sample attrition, that is, patients leaving New York State and thus lost to followup. However, it is our impression that this is not the case. The similarity of our findings with other short- and long-term followup studies previously cited suggests that the pattern of our results supports the contention of Bleuler (1968, 1972), Huber et al. (1980), and Ciompi (1980) that schizophrenia does not seem to be a disease of slow progressive deterioration. As Vaillant (1978) points out:

Bleuler has been able to arrive at the novel conclusion that it is only for the first 5 years that Kraepelinian deterioration may occur. Then, if even modest

Table 2. Proportion of patients residing in a psychiatric hospital, mean number of admissions, and mean number of months hospitalized during each followup year

<table>
<thead>
<tr>
<th>Postadmission followup year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Proportion of patients residing in a psychiatric hospital (n = 646)</td>
<td>21.7</td>
<td>34.7</td>
<td>32.4</td>
<td>31.1</td>
<td>30.3</td>
<td>28.3</td>
<td>26.5</td>
<td>22.4</td>
<td>20.6</td>
<td>17.3</td>
<td>15.2</td>
<td>12.7</td>
<td>12.5</td>
<td>12.5</td>
<td>11.6</td>
</tr>
<tr>
<td>B. Mean number of admissions (hospitalized patients only; n = 380)</td>
<td>0.41</td>
<td>0.33</td>
<td>0.15</td>
<td>0.19</td>
<td>0.19</td>
<td>0.17</td>
<td>0.16</td>
<td>0.15</td>
<td>0.18</td>
<td>0.12</td>
<td>0.14</td>
<td>0.10</td>
<td>0.12</td>
<td>0.15</td>
<td>0.15</td>
</tr>
<tr>
<td>C. Mean number of months hospitalized (hospitalized patients only; n = 380)</td>
<td>1.56</td>
<td>4.73</td>
<td>5.01</td>
<td>4.58</td>
<td>4.37</td>
<td>4.15</td>
<td>3.77</td>
<td>3.30</td>
<td>2.93</td>
<td>2.42</td>
<td>1.97</td>
<td>1.75</td>
<td>1.39</td>
<td>1.24</td>
<td>1.32</td>
</tr>
</tbody>
</table>
The hospitalization data presented thus far have dealt with the cohort of patients as if they constituted a homogeneous group, ignoring the likelihood of differences in propensity for hospitalization among subgroups of schizophrenic patients. The followup literature involving discharged schizophrenic patients makes reference to a number of predictors of posthospital course. Previous history of hospitalization has consistently emerged as a powerful predictor of future hospitalization (Buell and Anthony 1973; Rosenblatt and Mayer 1974).

To determine the relationship between previous history of psychiatric hospitalization and hospitalization course during the followup period, we divided the 646 patients in our cohort into three groups based on their hospitalization experience before entering the project (see table 3).

Group A consists of 133 patients (21 percent of the cohort) who had no previous history of psychiatric hospitalization before seeking treatment at our clinic. This is a group of patients who are totally unrepresented in classical followup studies.

Group B consists of 142 patients (22 percent of the cohort) who had experienced exclusively "crisis admissions" in a municipal hospital before project entry. Crisis admission is defined as a brief hospital stay, usually in a general hospital psychiatric reception service, with invariably return to the community. This group of patients is also highly unrepresented in classical followup studies.

Group C comprises the remaining 371 patients (57 percent of the cohort) whose preproject history included at least one admission to a long-term psychiatric treatment facility. This is the group generally reported on in followup studies.

We based our decision to segregate "crisis admissions" from hospitalizations in long-term psychiatric treatment facilities on several factors. Admission to a long-term treatment facility, as opposed to a crisis admission, generally involves a prolonged period of hospitalization and major disruption of the patient's life. Furthermore, admission to a long-term psychiatric facility often stigmatizes the patient for the rest of his life in the eyes, not only of family members, but of mental health professionals as well, resulting in diminished acceptance by the community and increased likelihood of rehospitalization.

Table 3 presents the cumulative incidence of hospitalization over the 15 years of followup for each of the three hospitalization history groups defined above. As can be
Table 3. Cumulative percent hospitalized by preadmission hospitalization history group and postadmission followup year (n = 646)

<table>
<thead>
<tr>
<th>Preadmission hospitalization history groups</th>
<th>Postadmission followup year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>A. Never hospitalized (n = 133)</td>
<td>15.0</td>
</tr>
<tr>
<td>B. Crisis admission only (n = 142)</td>
<td>16.9</td>
</tr>
<tr>
<td>C. Long-term treatment facility (n = 371)</td>
<td>27.0</td>
</tr>
</tbody>
</table>

\(^1\)Differences across all three groups are significant for all years (p < .001); differences between groups A and B are significant (p < .05) for all but years 1 and 2; differences between groups B and C are significant for all years (p < .05).

seen in Table 3, there is a continuous ordinal relationship between previous history of hospitalization and incidence of hospitalization for each year of the followup period. By year 15, 39.1 percent of the patients with no previous history of hospitalization were hospitalized as compared to 53.5 percent of those with a history of only crisis admissions, and 67.9 percent of those with previous long-term hospitalization.

It is of interest to note that the 12-year cumulative hospitalization rate of 62.6 percent for our previously hospitalized patients (groups B and C) was almost identical with the 63.6 percent reported by Bland and Parker (1976) after an average of 11.5 years of followup. Statistical analysis (chi square) revealed that the incidence of hospitalization of the three groups differed significantly for each of the followup years (p < .001). For each year the groups maintained their ordinal position, with group A having the lowest and group C having the highest cumulative incidence of hospitalization. The crisis admission group, group B, occupied the middle position. Thus our data are consistent with general findings that previous performance predicts future performance with respect to incidence of hospitalization, even when prediction is made at the point of entry to an outpatient treatment setting, rather than at the point of hospital discharge.

Previous history of hospitalization also significantly predicted duration and number of hospitalizations during the followup period for the entire group of 646 patients (p < .001). The mean duration of hospitalization over the 15-year followup period was 15.44 months for group A, 15.17 months for group B, and 34.61 months for group C. The mean number of hospitalizations was 1.03 for group A, 1.16 for group B, and 1.96 for group C.

This pattern of results justifies our decision to separate out the crisis admission group (group B) from the group of hospitalized patients. As the data indicate, the proportion of patients hospitalized in group B (53.5 percent) was sig-
significantly less than the proportion hospitalized in group C (67.9 percent; \( p < .05 \)). With respect to group A, the proportion of patients hospitalized (39.1 percent) was significantly less than the proportion hospitalized in group B (53.5 percent; \( p < .02 \)). However, with respect to mean duration and number of hospitalizations, groups A and B were statistically similar to each other and both significantly lower than group C (\( p < .01 \)).

Table 4 presents cumulative hospitalization rates only for the 380 patients actually hospitalized. The cumulative hospitalization rate is almost identical for the three groups in each year of the followup period.

While history of previous hospitalization seems to have a powerful influence on whether a patient becomes hospitalized, this factor appears to have no effect on the rapidity with which hospitalization occurs, when it does occur, postclinic admission.

Previous history of hospitalization is clearly a powerful factor influencing a patient's potential for rehospitalization. However, it is important to recognize that it does not have a universal, overriding effect. Table 5 highlights the limitations of previous history of hospitalization as a predictor of future hospitalization.

On an overall basis, table 5 indicates that 41.2 percent of the cohort of 646 patients had succeeded in maintaining community status, free of any type of psychiatric hospitalization, with an additional 44 patients (6.8 percent) experiencing only crisis admissions during the followup period. Thus 48 percent, almost half of the original group of patients who entered the project, had successfully escaped major psychiatric hospitalization during the 15-year followup period.

Of particular interest are the 141 patients in group C (119 not hospitalized and 22 with only a crisis admission) who experienced no major psychiatric hospitalization postproject entry despite a history of previous admissions to long-term psychiatric treatment facilities. These 141 patients had been hospitalized on the average 29 months before entering the research project. This can by no means be viewed as an insignificant period of previous hospitalization.

### Table 4. Cumulative percent hospitalized by preadmission hospitalization history group and postadmission followup year for hospitalized patients only (n = 380)

<table>
<thead>
<tr>
<th>Preadmission hospitalization history group</th>
<th>Postadmission followup year</th>
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<tr>
<td></td>
<td>1</td>
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<tr>
<td>Never hospitalized (n = 52)</td>
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<tr>
<td></td>
<td>38.5</td>
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<tr>
<td>Crisis admission only (n = 76)</td>
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<td></td>
<td>31.6</td>
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<tr>
<td>Long-term treatment facility (n = 252)</td>
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<td></td>
<td>39.7</td>
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Table 5. Type of postadmission hospitalization experience by preadmission hospitalization history group

<table>
<thead>
<tr>
<th>Preadmission hospitalization history group</th>
<th>Type of postadmission hospitalization experience</th>
<th>None</th>
<th>%</th>
<th>Crisis only</th>
<th>%</th>
<th>Long-term</th>
<th>%</th>
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<tbody>
<tr>
<td>A. Never</td>
<td></td>
<td>81</td>
<td>60.9</td>
<td>6</td>
<td>4.5</td>
<td>46</td>
<td>34.6</td>
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<td>(n = 133)</td>
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<tr>
<td>B. Crisis only</td>
<td></td>
<td>66</td>
<td>46.5</td>
<td>16</td>
<td>11.3</td>
<td>60</td>
<td>42.2</td>
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<td>(n = 142)</td>
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<tr>
<td>C. Long Term</td>
<td></td>
<td>119</td>
<td>32.1</td>
<td>22</td>
<td>5.9</td>
<td>230</td>
<td>62.0</td>
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<tr>
<td>(n = 371)</td>
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<td></td>
</tr>
<tr>
<td>Total group</td>
<td></td>
<td>266</td>
<td>41.2</td>
<td>44</td>
<td>6.8</td>
<td>336</td>
<td>52.0</td>
</tr>
<tr>
<td>(n = 646)</td>
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While 52 percent of the 646 patients experienced major psychiatric hospitalizations at some time during the followup period, for 48 percent the clinical course was characterized basically by a community mode of adjustment to their illnesses. This picture of the clinical course of the chronic schizophrenic patient is considerably at odds with the view, originally presented by Kraepelin (1919), that schizophrenia is a progressive nonremitting illness with an inevitable deteriorating prognosis leading to the expectation that most chronic schizophrenics are destined, sooner or later, to become hospitalized, and once hospitalized to experience recurrent hospitalizations. One possible explanation for this is that as many as 25–50 percent of schizophrenic patients are not represented in classical followup studies which are limited to patients already admitted to or discharged from a long-term treatment facility.

Table 5 further indicates that of the 646 patients, 81, or 12.5 percent, had completely escaped hospitalization during their lifetimes. An additional 88 patients (13.6 percent) had experienced only crisis admissions. In other words, we could find no evidence of a major psychiatric hospitalization for over one-quarter (26.2 percent) of the 646 schizophrenic patients. It is notable in this context that the mean age of the cohort at the conclusion of the followup period was 45 years with an age range of 33 to 60.

Discussion

The results of our 15-year followup, involving 646 schizophrenic outpatients admitted to a community clinic, are consistent with the findings of other long-term followup studies (Bleuler 1968, 1972; Bland and Parker 1976; Stephens 1978; Ciompi 1980; Huber et al. 1980) which showed a relatively favorable long-term course for schizophrenic patients. These results also support previous findings (Buell and Anthony 1973; Rosenblatt and Mayer 1974) with regard to a significant relationship between previous and subsequent hospitalization course. However, it is of considerable import that among our most hospitalization prone patients, fully 38 percent experienced no major psychiatric hospitalization over the course of 15 years.

Assuming that our group of 646 patients is representative of the chronic schizophrenic population at large, then the results of our 15-year followup study raise some serious questions about current approaches for the provision of services to the chronically ill schizophrenic patient. The shift in the last decade from the hospital to the community as the setting of choice for maintenance treatment, while laudatory in many ways, fails to provide for the specific needs of a sizable number of schizophrenic patients.

While there is a large group of schizophrenic patients, 48 percent in our cohort, who probably make little or no use of inpatient psychiatric treatment facilities during their lifetimes, and who would, no doubt, be best served by long-term outpatient treatment, 52 percent of chronic schizophrenic patients will need repeated and at times prolonged access to inpatient facilities. For the most vulnerable group, the 371 patients who had experienced at least one admission to a long-term psychiatric treat-
ment facility before project entry, the probability of readmission to a psychiatric treatment facility during the followup period was almost 68 percent with a mean duration of hospitalization of 34.6 months.

In studying long-term prognosis, as it relates to the hospitalization of schizophrenic patients, one must start with a cohort of patients, ideally at the point the illness becomes manifest, and at least before a hospitalization has occurred. This is best exemplified by our group of 133 patients who had not been hospitalized before our followup study began. After 15 years of followup, 60.9 percent had remained in the community continuously. Thus, less than half of the individuals carrying a diagnosis of schizophrenia are likely to be represented in “classical” followup studies originating in hospital. It is only by studying schizophrenic patients who have not yet experienced hospitalization that one can obtain the maximum heterogeneity possible in order to develop adequate data to understand the course and prognosis of schizophrenia.

There is a need for additional long-term studies starting at the point the schizophrenic patient first seeks psychiatric care. The community mental health center carries the primary responsibility for the pursuit of such followup studies.

A second need, if we are further to advance our knowledge of schizophrenia, is the intensive study of groups of patients whose clinical course does not follow expected patterns. Specifically, if we can understand why a substantial group of patients with a history of prefollowup hospitalization aver-

aging 29 months were able to remain out of the hospital for the next 15 years, we may be able to improve our treatment methods and reduce the need for psychiatric hospitalization.

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Acknowledgment

The authors would like to thank Abbott S. Weinstein, Director of Analytical Services, and John Stevenson, both of the New York State Office of Mental Health, for their assistance. The study reported was supported in part by USPHS/NIMH grants MH–01983 and MH–25125.

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