DIAGNOSTIC CHARACTERISTICS OF ADULT OUTPATIENTS OF PSYCHIATRIC CLINICS AS RELATED TO TYPE AND OUTCOME OF SERVICES*

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SINCE the days of Esquirol, substantive gains in understanding the mentally ill can be attributed to the routinely collected statistics on patients of mental hospitals (1–3). Systematic studies of outpatients are more recent—outpatient psychiatric clinics being largely a twentieth-century phenomenon (4–6).

Nationwide reporting on patients of these clinics for purposes of program planning and epidemiology was initiated in the United States in 1954 by the National Institute of Mental Health in cooperation with state mental health agencies (7). Our paper utilizes such data for one state (Maryland) where an intensive educational effort has been made to obtain good reporting (8). We hope to demonstrate how these data can aid in evaluating this modality of care for various diagnostic groups and in identifying those patients most likely to be helped by clinic treatment.

A description of the study area, the definitions followed and the life table method employed have been presented in an article on services to children which appeared in the preceding issue (9). The information is repeated here, however, for the benefit of those who have not seen that issue.

Study Area. Maryland is an eastern seaboard state of 10,000 square miles and 3 million population. It contains the large

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urban center, Baltimore City, with approximately one million people. Four of its counties met the 1950 census definition of a metropolitan area—Baltimore and Anne Arundel counties, contiguous with Baltimore City, and Montgomery and Prince Georges counties, adjacent to Washington, D.C. About a fourth of the population was classified by this census as rural. It is estimated that a sixth of the 1958 population was nonwhite, of whom nearly two-thirds lived in Baltimore City.

Some 50 of Maryland's facilities qualify as outpatient psychiatric clinics, defined as administratively distinct psychiatric services for outpatients where a psychiatrist is regularly in attendance and takes the medical responsibility for all patients. These 50 facilities are heterogeneous in affiliation and purpose and include (a) independent clinics which stem from the early child guidance and mental hygiene movements, (b) part-time local health department clinics organized to extend mental health services to the rural centers, (c) training clinics of two large medical schools in Baltimore, (d) after-care clinics for state hospital patients, (e) a federally operated clinic for veterans, and (f) a few clinics under miscellaneous auspices, including a court diagnostic clinic.

Method

Definitions. A patient in the outpatient clinic is *admitted* upon the first face-to-face interview with a professional clinic staff member. He is classified as *terminated,* i.e., removed from the clinic's active rolls, as soon as service is completed, and in *all* cases within a 90-day period following last interview. These definitions are in accord with the national definitions for clinic reporting (10).

A partial report containing the patient's demographic but not psychiatric data is submitted upon admission or first interview. A complete report containing information on psychiatric classification (11), type of service, number of interviews with or about patient, condition after treatment, and disposition is submitted at termination. The patient is classified as improved

if in the clinician's judgement there has been any gain in his condition. For our present study, a psychiatric classification was requested in all instances where the patient had not yet been terminated.

Life Table Method. Our study includes 8,500 admissions of Maryland residents 15 years of age and over reported by all of the outpatient psychiatric clinics in Maryland during an 18 month period (July 1, 1958–December 31, 1959). Discharge data on these patients were collected until March 31, 1960; this provided an observation period ranging from 3 to 20 months. Our life table cohort method permits the combination of data for observation periods of varying lengths (12), and eliminates any bias resulting from the study of terminated cases only.

A life table may be defined as a systematic method of describing survivorship in a population over time. In this instance, the "survivors" are those who remain in active clinic service [defined as the peried between first and final interview] for specified intervals.

Several modifications made in this analysis to the standard life table methodology are described in the appendix and include:

(1) the adjustment of observed time lapse data from calendar month intervals to exact 30 day intervals after admission, and

(2) a probability study of services received.

Findings

Let us first review our major findings from the study on children (9). For a large proportion of children admitted to clinics, services are brief. Clinic stay increases with age group until late adolescence, when it decreases; boys tend to stay in clinics somewhat longer than girls, and white patients considerably longer than nonwhite. Children with brain syndromes and mental deficiencies receive the briefest service. With few exceptions, social and other factors such as clinic policy appear

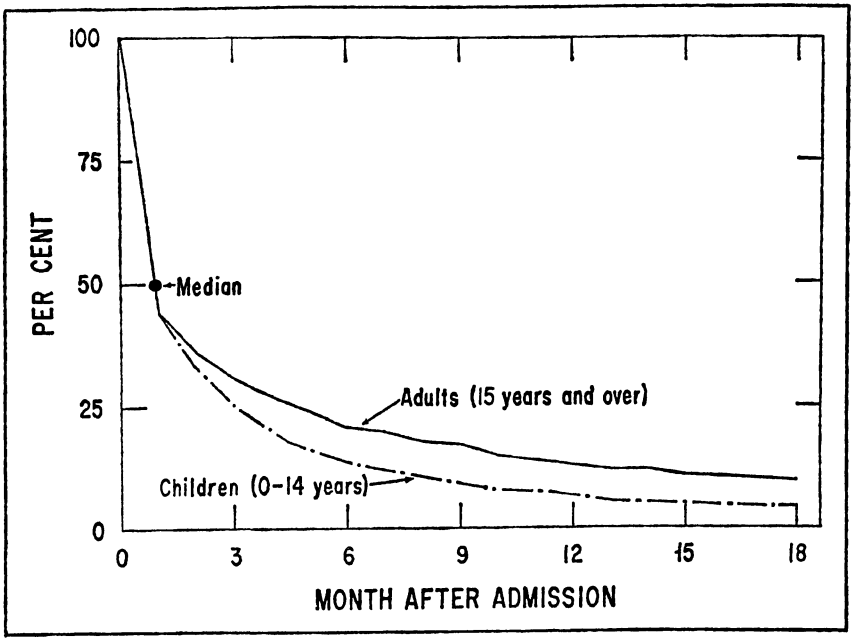
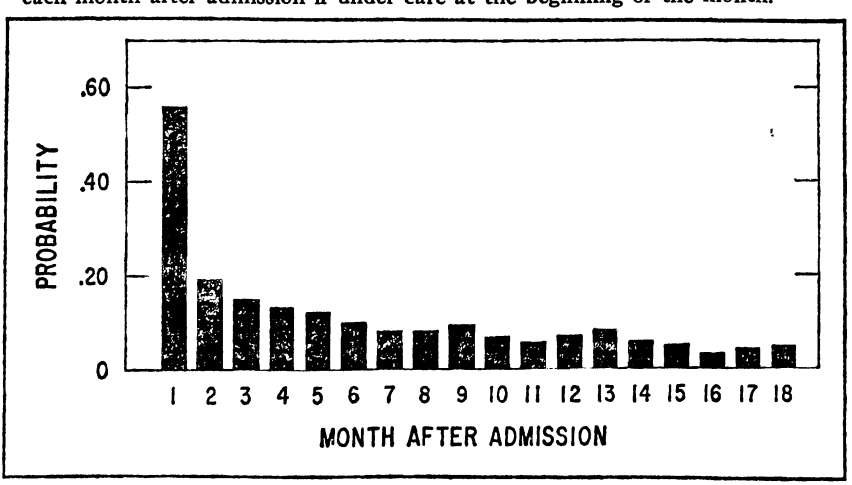


Fig. 1. Percentage of admissions remaining under care at the end of each month after admission, by age.

to be as significant in determining services received as the type of psychogenic disorder. We shall explore the same issues for adults.

Fig. 2. Probability that an adult admission will receive final interview during each month after admission if under care at the beginning of the month.



Month	All Patients		Age					
	Under 15 Years	15 Years and Over	15–24	25–34	35–44	45–54	55–64	65 and Over
Number of Admissions	3,723	8,532	1,883	2,427	2,166	1,190	573	285
1	44.0	44.5	39.1	44.3	49.5	45.0	45.1	38.1
3	25.4	30.8	24.0	30.8	35.9	32.1	33.3	26.0
6	14.1	21.4	15.1	21.5	25.1	22.9	25.5	16.8
9	9.4	16.6	10.8	16.5	20.2	18.3	19.9	12.9
12	6.8	13.5	8.5	12.9	17.8	14.9	14.3	9.1
Estimated Mean Number of Months Under Treatment	2.8	4.0	3.0	3.9	4.7	4.2	4.3	3.2

Table 1. Percentage of admissions remaining under care at the end of selected months after admission by age.

After the first month, adults leave the clinic at a somewhat slower rate than children (Fig. 1 and Table 1). Nevertheless, out of each one hundred who enter only 44 remain at the end of the first month and 21 at the end of six months. The proba-

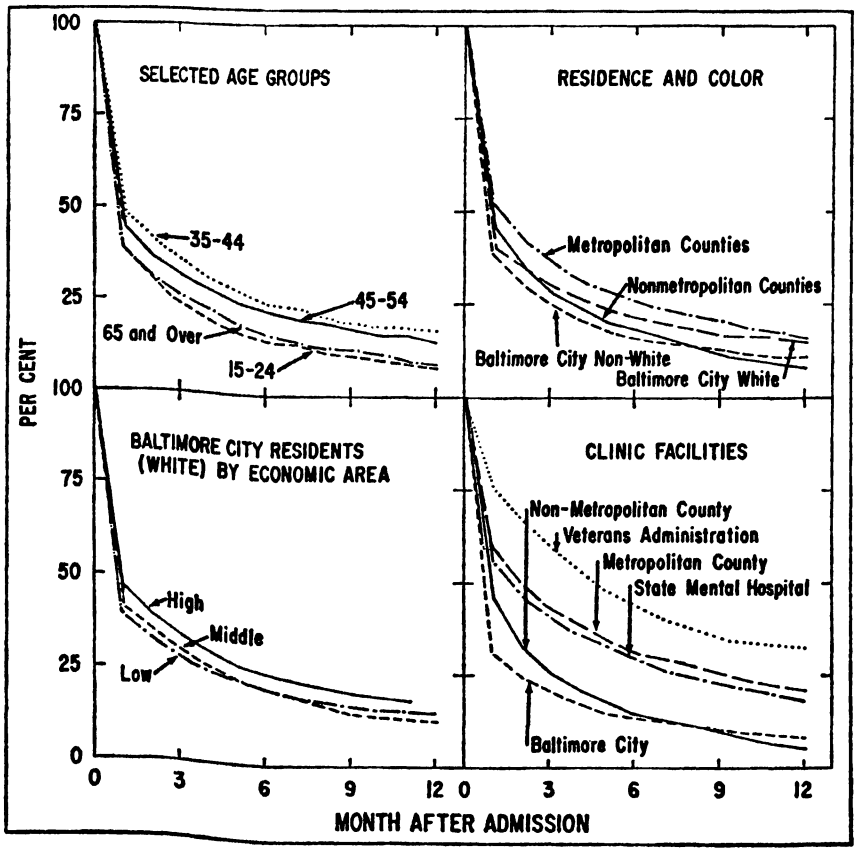
Table 2. Percentage of admissions 15 years of age and over remaining under care at the end of selected months after admission, by residence and race, by economic areas of Baltimore City (white residents), and by clinic facilities.

Month	Residence and Race				Baltimore City White Residents			Clinic Facilities				
	White			Non-white	Economic Area							
	Metropolitan Counties	Non-metropolitan Counties	Baltimore City		Low	Medium	High	Baltimore City	Veterans Administration	State Mental Hospital	Metropolitan Counties	Non-ropol Coun
Number of Admissions	2,454	1,198	3,021	1,858	1,039	983	994	4,236	533	2,003	845	9
1	51.5	46.4	42.2	37.5	38.6	42.3	45.8	31.7	76.3	55.8	60.1	45
3	37.2	28.1	30.3	25.0	27.6	29.6	33.7	20.9	61.2	40.6	43.4	26
6	26.1	17.5	22.1	16.4	20.7	20.7	24.9	13.8	43.9	29.6	32.0	15
9	20.5	12.1	17.5	12.8	17.0	15.2	20.2	10.6	35.9	23.3	25.9	9
12	16.4	8.3	14.9	10.5	15.0	13.5	16.4	8.8	32.7	17.8	22.1	6
imated Mean o. of Months der Treatment	4.7	3.3	4.0	3.2	3.9	3.8	4.4	2.8	7.7	5.1	5.7	3

bility of leaving declines with time; therefore 10 out of 100 are still under care at the end of 18 months.

As indicated by the heights of the retention curves in Fig. 3 (from Tables 1 and 2) clinic stay for adults is shortest for the ages 15–24 years, and 65 years and over. Patients of middle adult years are retained longest. Retention rates for white adults are highest in the metropolitan counties, next highest in Baltimore City, and generally lowest in the non-metropolitan counties. Within Baltimore City, white patients from the highest economic area tend to stay somewhat longer than those from lower economic areas, paralleling the findings of Hollings-

Fig. 3. Percentage of adult admissions remaining under care at the end of each month after admission by age, residence and race, economic area in Baltimore City and clinic facilities.

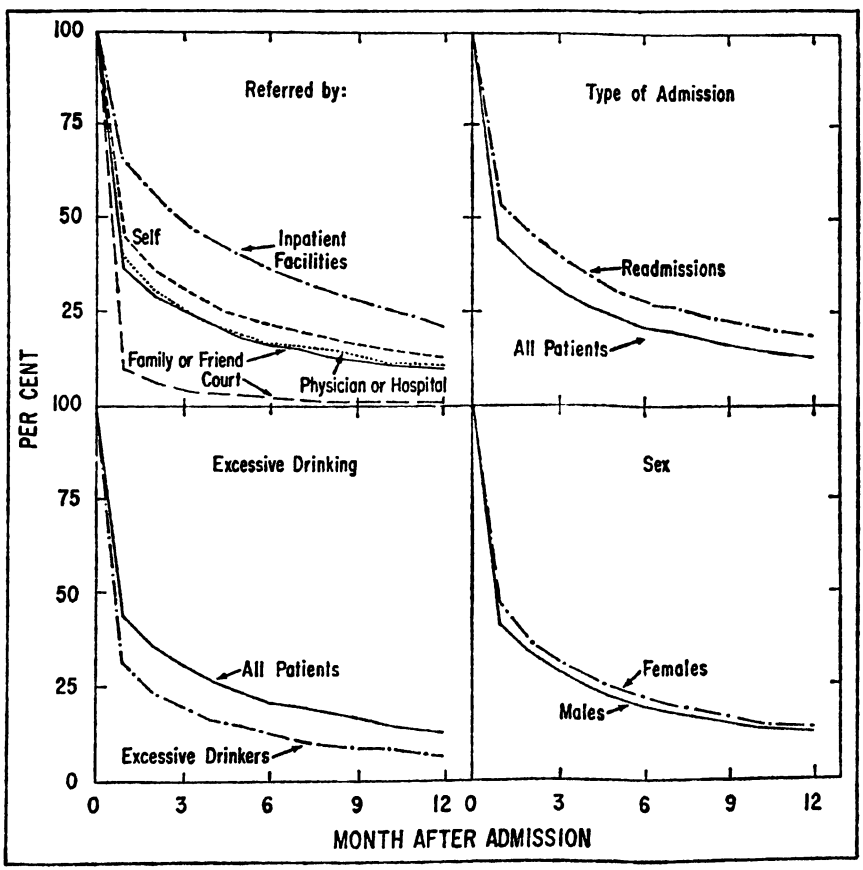


head and Redlich (13). Nonwhites in Baltimore City have lower retention rates than whites.

Variability due to clinic policy and staffing may be more important than residence *per se*. For example, we contrast (Fig. 3) the high retention rates for the veterans' clinic, the large-staff metropolitan clinics and the state mental hospital clinics with the lower rates for the part-time clinics in the non-metropolitan counties and the Baltimore City clinics.

Referrals from inpatient facilities have the highest retention rates (Fig. 4 and Table 3). Self-referrals, medical referrals and referrals by friends and relatives rank next. Court referred

Fig. 4. Percentage of adult admissions remaining under care at the end of each month after admission by source of referral and sex, and for re-admissions and excessive drinkers.



Month	All Patients	Source of Referral					Readmissions	Excessive Drinkers	Sex	
		Self	Family or Friend	Physician or Hospital	Inpatient Facility	Court			Male	Female
Number of Admissions	8,532	1,128	663	2,361	1,583	776	2,125	1,071	4,230	4,302
1	44.5	44.8	36.1	39.5	65.3	10.1	53.8	30.8	41.8	47.1
3	30.8	31.0	25.0	25.7	48.6	4.1	40.0	20.0	29.1	32.4
6	21.4	21.6	16.0	17.1	36.0	2.0	28.5	12.6	19.8	22.9
9	16.6	16.3	11.7	13.3	27.8	0.1	22.5	8.6	15.6	17.6
12	13.5	12.8	10.0	11.2	21.2	0.1	18.6	7.0	12.8	14.1
Estimated Mean Number of Months Under Treatment	4.0	3.9	3.1	3.4	6.0	1.0	5.0	2.6	3.7	4.1

Table 3. Percentage of admissions 15 years of age and over remaining under care at the end of selected months after admission, by selected sources of referral, by sex and for readmissions, and excessive drinkers.

cases have the shortest stay. The readmitted patient is retained longer than those seen for the first time. These findings corroborate those of our earlier studies (8). [We note also that excessive drinkers do not remain as long as those without this symptom.]

Table 4. Percentage of admissions aged 25–54 years remaining under care at the end of selected months after admission by sex and major diagnostic classification.

Month	Males				Females			
	Brain Syndromes	Psychotic Disorders	Psychoneurotic Disorders	Personality Disorders	Brain Syndromes	Psychotic Disorders	Psychoneurotic Disorders	Personality Disorders
Number of Admissions	305	850	669	643	175	1,147	1,003	398
1	38.7	50.4	47.8	36.4	37.4	52.0	47.1	47.0
3	26.6	37.9	33.0	24.7	22.3	39.2	30.8	31.8
6	18.9	27.4	19.9	15.8	13.3	29.3	20.6	22.4
9	13.6	23.0	13.5	13.3	8.5	23.4	15.4	17.5
12	11.1	19.9	11.5	10.1	7.2	19.1	12.0	14.6
Estimated Mean Number of Months Under Treatment	3.4	5.0	3.8	3.2	2.7	5.1	3.8	4.1

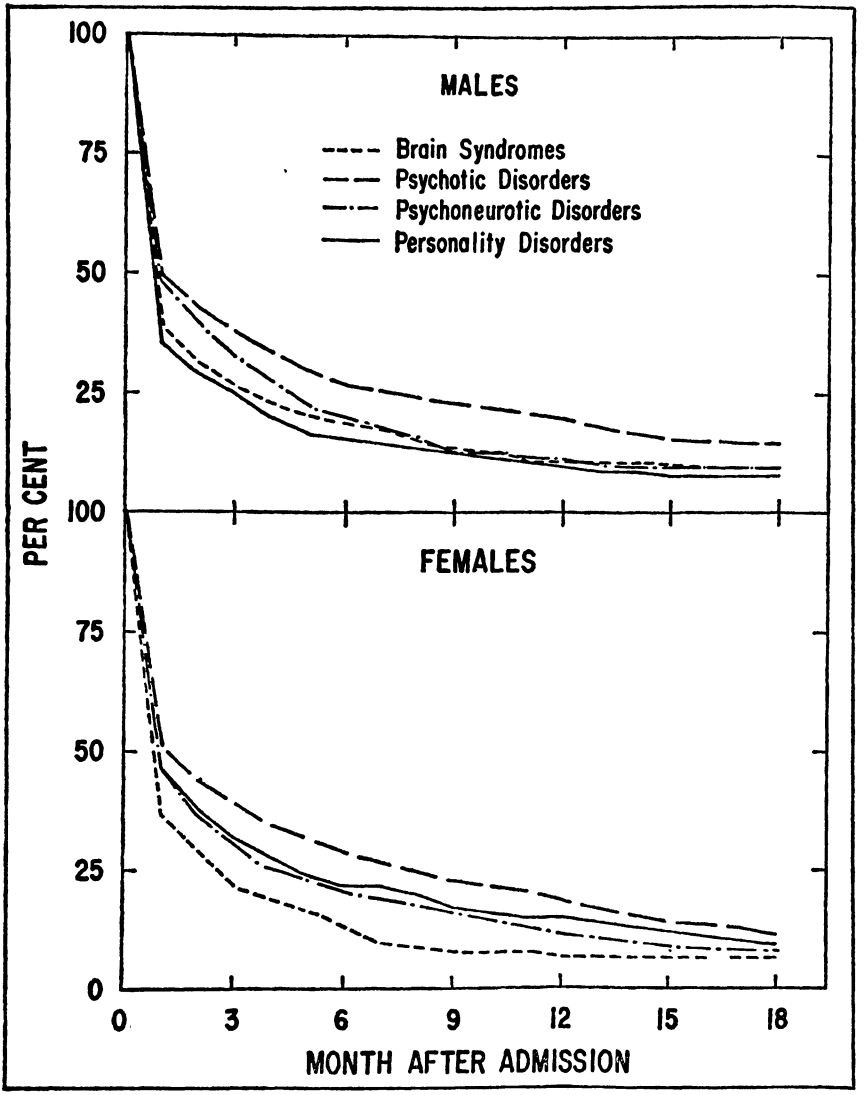


Fig. 5. Percentage of admissions aged 25–54 years remaining under care at the end of each month after admission by sex and major diagnostic classification.

Retention rates are generally higher for females than for males, but this is not true for every adult age group. With few exceptions, the variation by clinic and patient characteristics is the same for women as for men.

Major Disorders. Against this background let us focus on the

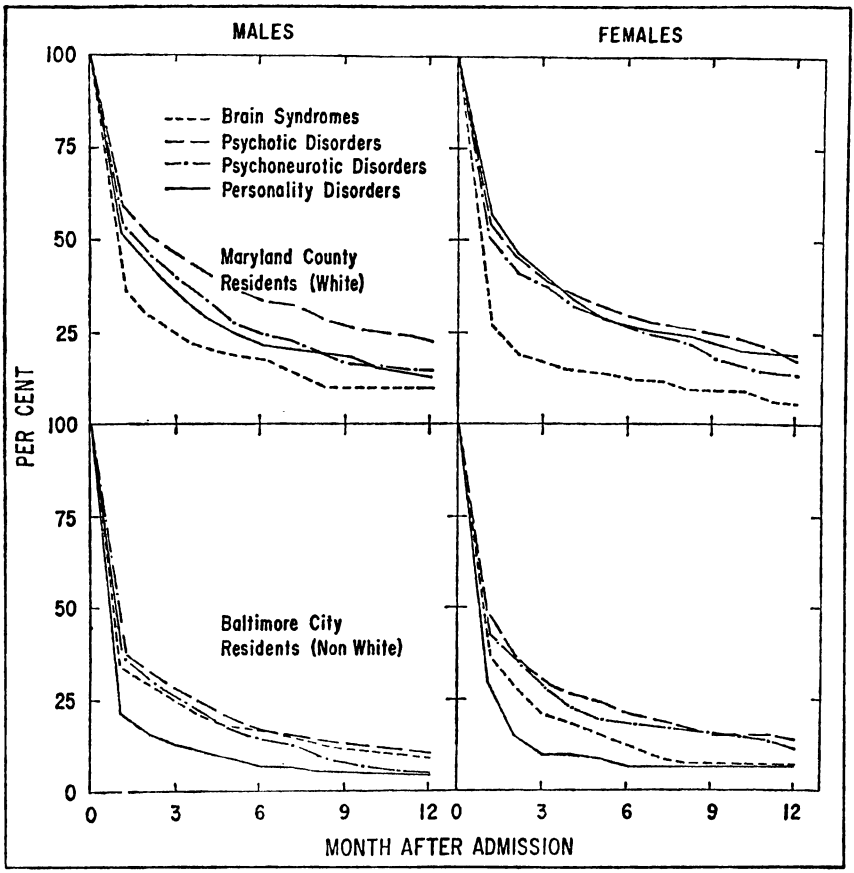


Fig. 6. Percentage of admissions aged 25–54 years remaining under care at the end of each month after admission by residence, race, sex and major diagnostic classification.

service pattern for the major diagnostic classifications first. We shall limit our analysis to the ages from 25 to 54 in order to exclude the effects of late adolescence and old age. We note somewhat more consistency in length of stay by major rubric and sex than was found for children (9). Adults with psychotic disorder tend to rank first in retention rate for both male and female groups (Fig. 5 and Table 4). Among males, those with psychoneurotic disorder usually rank second; among females, those with psychoneurotic disorder have a length of stay approximately the same as those with personality disorder.

The lowest retention rates for females are for patients with

Month	Males				Females			
	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders
Number of Admissions	61	247	246	294	37	424	392	212
1	38.5	60.3	55.7	51.7	28.4	55.7	52.6	58.3
3	24.6	46.6	40.2	35.9	17.6	40.2	37.5	39.9
6	17.7	33.9	24.8	22.4	13.1	30.3	27.3	27.3
9	10.9	26.9	17.2	18.9	9.8	25.7	19.3	23.0
12	10.9	23.3	15.9	12.9	6.6	18.3	13.7	19.0
Estimated Mean Number of Months Under Treatment	3.3	5.9	4.6	4.3	2.5	5.2	4.5	5.1

Table 5. Percentage of admissions of white Maryland County residents, aged 25–54 years, remaining under care at the end of selected months after admission by sex and major diagnostic classification.

brain syndrome, whereas for males the minimum rates are for patients with personality disorders.

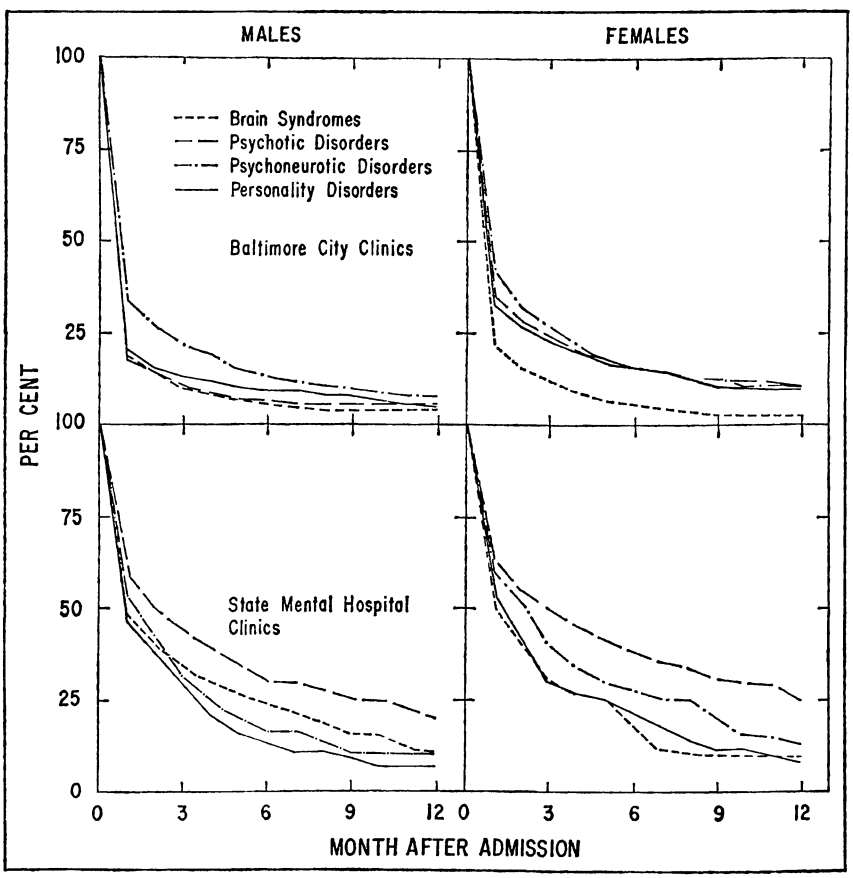
Among patients with personality disorder females are retained longer than males, while among those with brain syndromes, males are retained somewhat longer.

Table 6. Percentage of admissions of nonwhite Baltimore city residents, aged 25–54 years, remaining under care at the end of selected months after admission by sex and major diagnostic classification.

Month	Males				Females			
	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders
Number of Admissions	123	228	122	90	87	280	249	41
1	34.2	39.3	38.1	21.7	39.7	43.6	48.0	29.3
3	24.8	28.1	25.8	12.8	22.4	30.9	29.1	9.8
6	16.6	16.6	13.7	7.4	12.9	21.9	18.9	7.3
9	12.1	13.4	7.9	5.9	7.6	15.9	15.8	7.3
12	9.4	10.8	5.7	5.9	7.6	13.8	12.4	7.3
Estimated Mean Number of Months Under Treatment	3.1	3.4	2.7	1.9	2.8	4.0	3.8	2.1

Nevertheless, in the overall picture on length of stay, if we examine each clinic and patient variable, males and females with the same disorder tend to show the same rank order in retention pattern. For example, in Fig. 6 (and Tables 5 and 6) we note some similarities in retention between male and female patients, by residence and color. The prehospital diagnosis and commitment services of Baltimore City clinics account for their low retention rates for psychotic disorders (Fig. 7 and Tables 7 and 8). This contrasts with the state mental hospital clinics, which are exclusively for after-care. Similar data for

Fig. 7. Percentage of admissions aged 25–54 years remaining under care at the end of each month after admission by clinic faculty, sex and major diagnostic classification.



Month	Males				Females			
	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders
Number of Admissions	140	274	374	388	82	395	755	214
1	19.3	18.3	33.7	20.8	22.6	34.9	42.1	33.4
3	10.4	10.8	22.5	13.4	11.6	23.7	26.8	22.9
6	6.2	6.7	12.9	9.2	5.8	16.1	16.4	16.0
9	3.7	5.6	9.4	8.0	2.7	12.9	12.5	10.7
12	3.7	5.2	8.0	5.8	2.7	10.9	9.9	9.7
Estimated Mean Number of Months Under Treatment	1.6	1.8	2.8	2.0	1.6	3.2	3.3	3.0

Table 7. Percentage of admissions to Baltimore City clinics, aged 25–54 years, remaining under care at the end of selected months after admission, by sex and major diagnostic classification.

self or physician and hospital-referred admissions are given in Fig. 8 and Tables 9 and 10.

Directly related to length of care is amount and type of service. For example, for males the median number of interviews for personality disorders by patient and clinic group is generally 2–3, for brain syndromes and psychotic disorders 3–4,

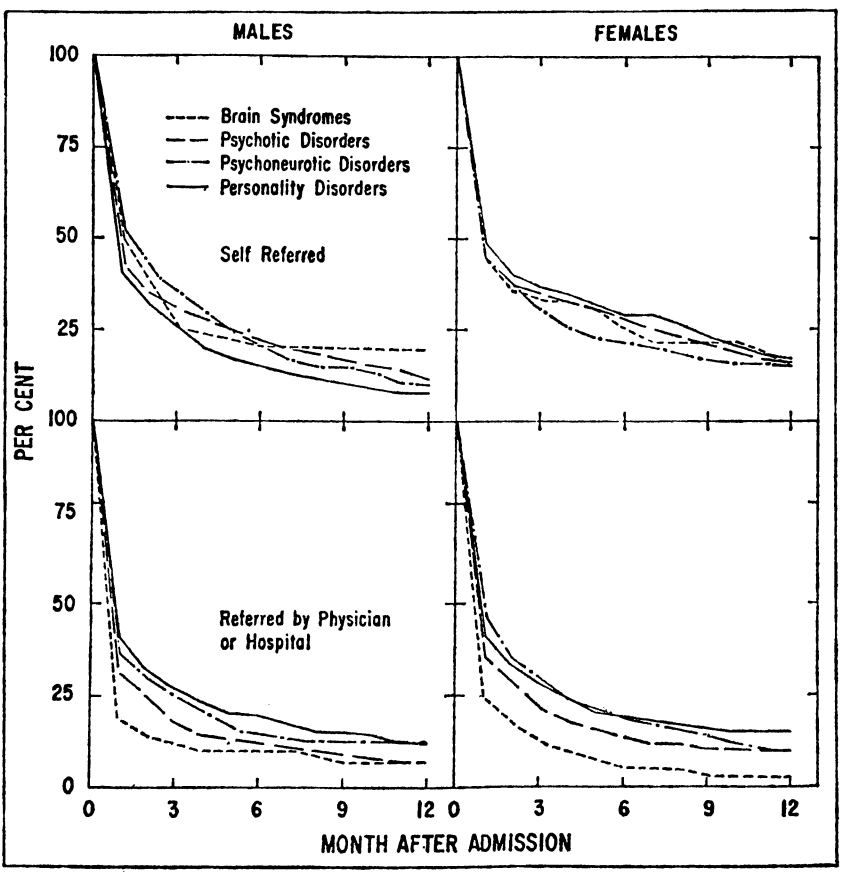
Table 8. Percentage of admissions to state mental hospital clinics, aged 25–54 years, remaining under care at the end of selected months after admission, by sex and major diagnostic classification.

Month	Males				Females			
	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders
Number of Admissions	116	332	22	34	81	626	57	30
1	49.1	59.3	54.6	47.1	52.5	63.5	61.4	55.0
3	33.6	44.1	31.8	29.4	31.5	50.0	41.2	30.0
6	23.6	31.5	17.1	12.9	18.0	38.8	27.6	21.7
9	16.2	25.9	11.4	9.2	10.9	31.0	21.4	12.0
12	11.4	20.2	11.4	7.4	10.9	25.3	13.2	8.0
Estimated Mean Number of Months Under Treatment	4.0	5.5	3.7	3.1	3.7	6.4	4.8	3.6

for psychoneurotic disorders 4 (Table 11). Medians are somewhat higher for females than for males except for psychoneurotic disorders.

A relatively high proportion (over one-fifth) of both males and females with personality disorder receive one interview. However, twenty-three per cent of females with this disorder receive 10 or more interviews—about the same proportion as for psychotic or psychoneurotic disorders. In contrast to personality disorders, organic cases are much more likely to receive two interviews than one and less likely to be seen 10 or more times.

Fig. 8. Percentage of admissions aged 25–54 years remaining under care at the end of each month after admission by sex, source of referral, and major diagnostic classification.



Month	Males				Females			
	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders
Number of Admissions	39	100	97	119	21	131	190	94
1	50.0	43.5	51.6	40.8	45.2	45.4	45.0	49.5
3	25.6	31.0	35.6	25.6	33.3	34.7	31.1	36.7
6	20.0	22.5	20.6	14.9	25.2	28.2	21.8	29.3
9	20.0	17.1	15.4	10.8	22.4	21.4	16.6	23.1
12	20.0	12.2	9.6	8.2	14.9	15.6	14.8	17.4
Estimated Mean Number of Months Under Treatment	4.4	3.9	3.9	3.1	4.4	4.6	4.1	4.9

Table 9. Percentage of self-referred admissions, aged 25–54 years, remaining under care at the end of selected months after admission, by sex and major diagnostic classification.

Females and males differ strikingly in the per cent treated and per cent improved (Fig. 9 and Table 12). Of the 55 per cent of male psychoneurotics who are treated, only 40 per cent improve. Almost the reverse is true for females, among whom we find that while only 45 per cent are treated, 65 per cent improve. A further clearcut illustration of the contrast between the sexes

Table 10. Percentage of admissions referred by physician or hospital, aged 25–54 years, remaining under care at the end of selected months after admission, by sex and major diagnostic classification.

Month	Males				Females			
	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders
Number of Admissions	63	104	215	143	57	230	520	127
1	19.1	31.3	36.5	41.3	24.6	35.9	46.7	41.7
3	11.9	18.3	25.4	26.9	13.2	22.2	29.0	28.0
6	9.5	12.1	14.6	18.5	6.0	13.6	18.7	18.9
9	7.4	8.7	12.6	14.8	3.0	11.3	13.9	16.0
12	7.4	7.0	12.6	12.4	3.0	9.9	10.5	15.3
Estimated Mean Number of Months Under Treatment	2.1	2.5	3.3	3.6	1.7	3.0	3.6	3.9

is shown when we look at personality disorders. For this disorder, we find that while only 30 per cent of the males are treated as compared with 40 per cent of females, a relatively high proportion of both sexes improve. Improvement rates are consistently higher for females, overall 55 as against 40 per cent for males.

By disorder, improvement rates among adult males tend to be low for excessive drinkers, patients of lower economic status and, oddly, for those self-referred. Improvement rates are higher for nonwhites than whites for psychotic disorders and brain syndromes. They are lowest (less than 20 per cent) for white males with brain syndromes.

Let us look at the relation between disorder and disposition.

Table 11. Percentage distribution of number of interviews of admissions aged 25–54 years by sex and major diagnostic classification.

Number of Interviews	Per Cent of Patients			
	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders
	MALES			
Number of Admissions[1]	261	661	573	566
1	16	17	15	22
2	26	17	18	27
3–4	22	23	21	21
5–9	24	24	23	16
10 and Over	12	19	23	14
Median	3	4	4	3
	FEMALES			
Number of Admissions[1]	157	917	856	335
1	15	14	17	25
2	21	15	13	20
3–4	17	18	21	14
5–9	39	30	24	18
10 and Over	8	23	25	23
Median	4	5	4	3

[1] With final interview within 18 months of admission.

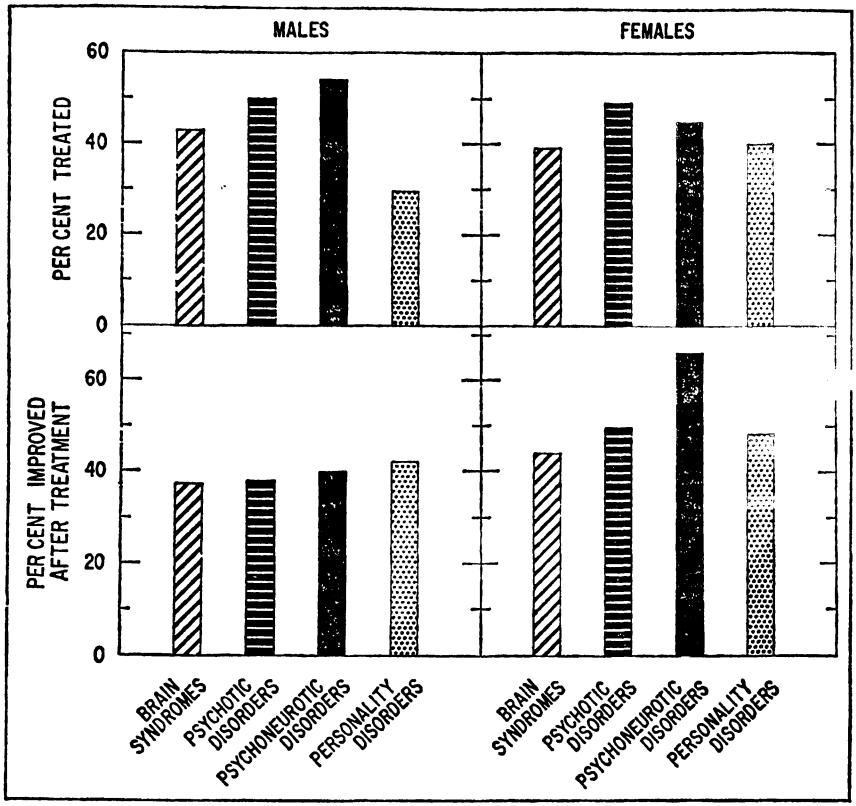


Fig. 9. Percentage of admissions aged 25–54 treated and improved after treatment by sex and major diagnostic classification.

Table 12. Percentage distribution of condition after treatment for admissions aged 25–54 years, by sex and major diagnostic classification.

Condition After Treatment	Males				Females			
	Brain Syndromes	Psychotic Disorders	Psychoneurotic Disorders	Personality Disorders	Brain Syndromes	Psychotic Disorders	Psychoneurotic Disorders	Personality Disorders
Number of Admissions[1]	261	661	573	566	157	917	856	335
Not Treated	56.8	49.6	45.8	71.4	60.6	50.9	54.7	59.6
Treated	43.2	50.4	54.2	28.6	39.4	49.1	45.3	40.4
Of Patients Treated								
Improved	37.3	38.3	40.3	42.0	44.2	49.4	65.8	47.9
Not Improved or Worse	62.7	61.7	59.7	58.0	55.8	50.6	34.2	52.1

[1] With final interview within 18 months of admission.

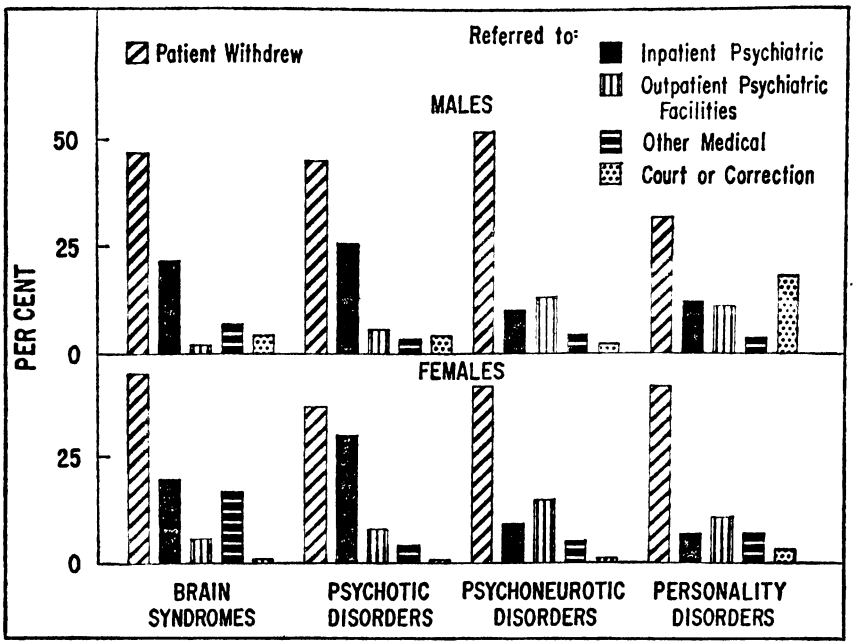


Fig. 10. Percentage distribution of disposition of admissions aged 25–54 years by sex and major diagnostic classification.

Table 13. Percentage distribution of dispositions for admissions aged 25–54 years, by sex and major diagnostic classification.

Disposition	Males				Females			
	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders	Brain Syndromes	Psychotic Disorders	Psycho-neurotic Disorders	Personality Disorders
nber of Admissions[1]	261	661	573	566	157	917	856	335
ient Not Referred	59.3	57.4	69.2	49.6	51.1	54.2	65.7	65.5
urther Care Not Indicated	6.9	8.0	10.0	8.6	3.1	11.4	13.4	11.3
Vithdrew, Moved, Ill, Other Reasons	7.2	11.8	11.1	10.5	10.5	12.2	11.6	16.0
Vithdrew, Clinic Not Notified	39.4	33.6	40.6	21.7	33.0	24.4	30.5	25.7
ther Not Referred	5.8	4.0	7.5	8.8	4.5	6.2	10.2	12.5
ient Referred To:	40.6	42.6	30.8	50.7	48.9	46.0	34.2	34.6
npatient Psychiatric Facility	22.4	25.7	9.9	12.3	20.3	30.1	8.9	6.7
utpatient Psychiatric Facility	2.2	6.4	13.2	10.9	6.3	8.4	14.7	11.3
ther Medical	6.9	3.3	3.5	3.2	16.8	4.0	5.1	7.4
ourt or Correctional	4.4	4.3	1.6	17.6	0.6	0.4	0.3	3.1
ther	4.7	2.9	2.6	6.7	4.9	3.1	5.2	6.1

[1] With final interview within 18 months of admission.

For every disorder, patients who withdrew from clinic service with or without notifying the clinic constitute the largest disposition category—two-fifths terminate in this fashion (Fig. 10 and Table 13). Withdrawals are particularly numerous for patients with brain syndrome and psychoneurosis, three-fourths of whom do not notify the clinic. The withdrawal rate is higher for males than females for each major disorder except personality disorder. The small proportion of males with personality disorder taken into treatment probably accounts for their relatively low withdrawal rate. High dropouts by disorder

Fig. 11. Percentage of adult admissions with brain syndromes or psychotic disorders remaining under care at the end of each month after admmission by sex and minor diagnostic classification.

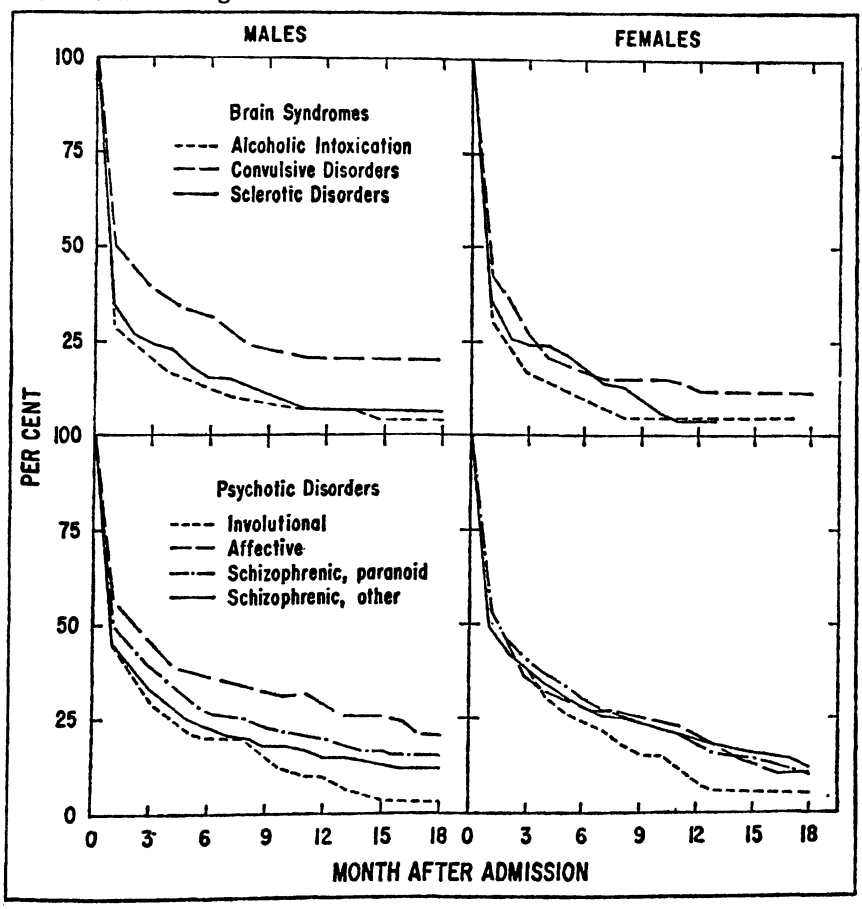


Table 14. Percentage of admissions aged 15 years or over remaining under care at the end of selected months after admission by minor diagnostic classification and sex.

Month	Brain Syndromes			Psychotic Disorders				Psychoneurotic Disorders		Personality Disorders		
	Alcohol Intoxication	Convulsive Disorders	Sclerotic Disorders	Involutional	Affective	Schizophrenic Paranoid	Schizophrenic Other	Anxiety Reaction	Depressive Reaction	Schizoid	Passive-Aggressive	Alcoholism Addiction
	MALES											
Number of Admissions	178	85	59	44	83	438	624	406	267	145	284	148
1	30.3	50.6	33.9	46.6	57.2	51.0	45.9	47.9	40.8	43.5	35.2	23.3
3	20.5	39.4	23.7	30.7	46.4	39.3	32.8	32.0	27.2	30.7	23.9	12.5
6	12.5	32.1	14.8	20.5	36.6	27.5	22.9	20.5	13.8	20.5	15.2	8.1
9	8.9	22.9	11.1	15.3	33.2	23.3	18.4	13.7	8.6	18.3	12.3	8.1
12	6.9	21.0	6.9	8.5	29.5	20.1	15.5	10.8	7.1	16.8	9.5	6.4
Estimated Mean Number of Months Under Treatment	2.6	5.3	2.8	3.6	6.5	5.1	4.3	3.7	2.9	4.2	3.1	2.1
	FEMALES											
Number of Admissions	80	66	68	92	166	478	735	452	592	74	173	46
1	31.9	43.2	36.0	47.8	53.9	53.6	50.4	41.3	46.0	58.8	49.7	31.5
3	16.9	26.5	23.5	37.5	36.5	41.1	37.7	27.0	29.7	45.3	31.5	19.6
6	10.1	17.3	17.7	24.2	28.5	30.5	28.3	18.4	19.2	35.1	21.7	12.5
9	4.7	15.1	10.4	15.8	25.3	23.7	23.0	12.6	14.2	27.4	14.9	5.0
12	4.7	12.5	3.8	7.9	20.9	18.5	18.9	9.7	11.5	23.7	12.6	5.0
Estimated Mean Number of Months Under Treatment	2.2	3.6	2.7	3.9	5.2	5.2	5.0	3.4	3.7	5.9	4.0	2.3

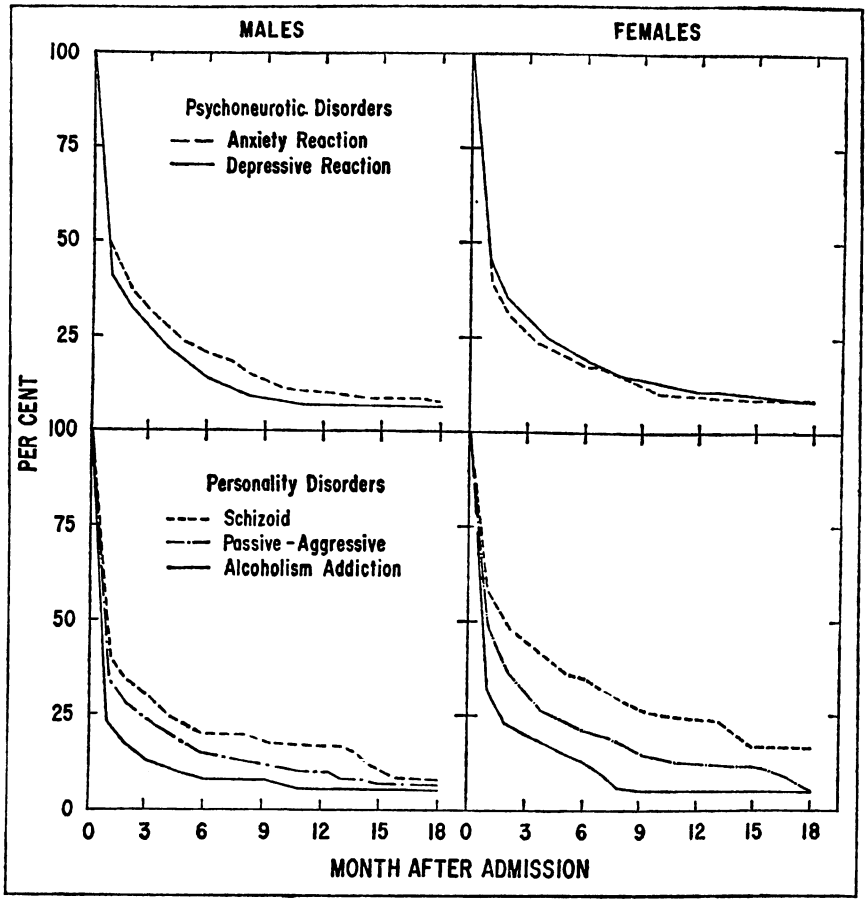


Fig. 12. Percentage of adult admissions with psychoneurotic or personality disorders remaining under care at the end of each month after admission by sex and minor diagnostic classification.

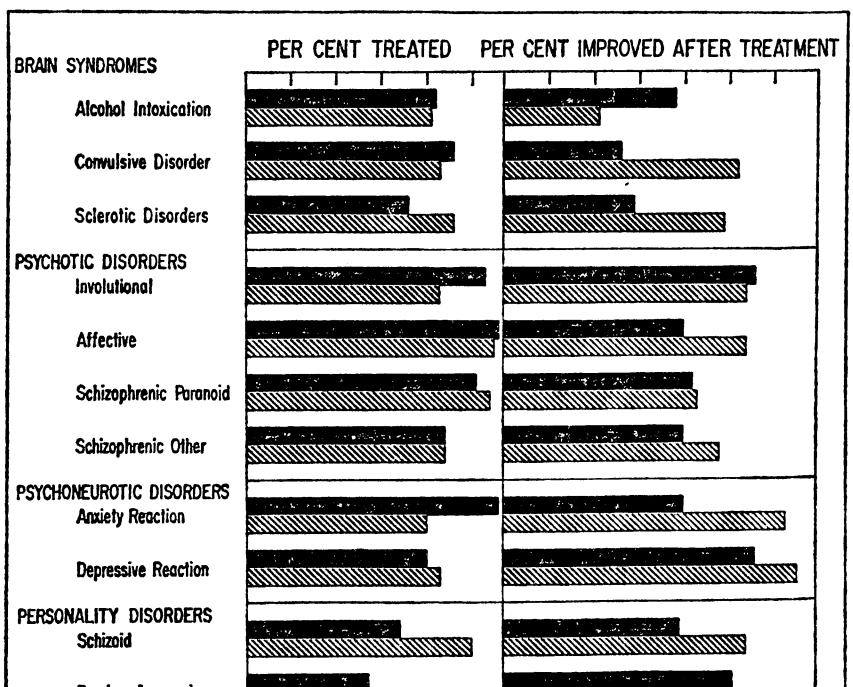
are noted among Baltimore City nonwhites, females with excessive drinking histories, and those referred from mental hospitals (many of the latter return to the hospital on their own accord).

Among those terminated by the clinic, patients with brain syndromes and psychotic disorders are referred principally to inpatient psychiatric facilities, psychoneurotics or other outpatient psychiatric services. For males with personality disorders, courts represent a primary pathway both to and from the clinic. More of the females than males are referred to other

medical agencies. Disposition to mental hospitals is reported frequently for those referred by self or relatives or courts, and for Baltimore clinic patients. The availability of private psychiatrists accounts for frequent referrals to this group from the higher economic Baltimore City patients as well as the self-referred.

Detailed Disorders. To what extent do differences by specific disorder account for variability within major rubrics? Let us turn to detailed disorders among adults of all ages. Among brain syndromes (Fig. 11 and Table 14), patients with convulsive disorders generally stay longest, sclerotic disorders next,

Fig. 13. Percentage of adult admissions treated and improved after treatment by sex and minor diagnostic classification.



and alcoholic syndromes, least. Among psychotic males, affective reactions are retained longest, paranoid schizophrenia next, and least, involutional; less variation is noted for females.

Males with neurotic depressive reactions (Fig. 12 and Table 14) leave earlier than those with anxiety reactions; the reverse occurs for females. Retention rates for females with personality disorders are higher than for males but rank order is the same, that is, schizoid, passive aggressive personality, and alcoholism addiction.

The specific disorders are also fairly well differentiated by service and disposition. Relatively few male sclerotics are treated (Fig. 13 and Table 15). Improvement rates for males are higher for alcoholism intoxication than for other organic conditions; the reverse is true for females. Few non-paranoid schizophrenics and female involutionals are treated. The ma-

Table 15. Percentage distribution of condition after treatment for admissions aged 15 years and over, with final interview within 18 months of admission, by sex and minor diagnostic classification.

Diagnostic Classification	Males					Females				
	Number of Admissions	Not Treated	Treated	Of Patients Treated		Number of Admissions	Not Treated	Treated	Of Patients Treated	
				Improved After Treatment	Unimproved or Worse				Improved After Treatment	Unimproved or Worse
Brain Syndromes										
Alcohol Intoxication	163	58.3	41.7	38.0	62.0	74	59.4	40.6	20.8	79.2
Convulsive Disorder	65	53.8	46.2	25.8	74.2	56	57.2	42.8	52.3	47.7
Sclerotic Disorder	51	63.7	36.3	28.9	71.1	62	54.2	45.8	48.9	51.1
Psychotic Disorders										
Involutional	40	47.1	52.9	55.6	44.4	81	57.3	42.7	54.1	45.9
Affective	58	44.4	55.6	39.6	60.4	135	44.7	55.3	53.9	46.1
Schizophrenic Paranoid	338	48.6	51.4	41.9	58.1	382	46.0	54.0	43.2	56.8
Schizophrenic, Other	508	56.2	43.8	40.1	59.9	584	56.4	43.6	48.1	51.9
Psychoneurotic Disorders										
Anxiety Reaction	350	43.9	56.1	39.7	60.3	395	60.2	39.8	63.1	36.9
Depressive Reaction	239	59.7	40.3	56.0	44.0	505	57.1	42.9	66.0	34.0
Personality Disorders										
Schizoid	120	65.6	34.4	39.0	61.0	55	49.9	50.1	53.5	46.5
Passive-Aggressive	251	73.1	26.9	50.9	49.1	147	59.1	40.9	51.1	48.9
Alcoholism Addiction	136	79.4	20.6	23.4	76.6	43	66.3	33.7	18.3	81.7

Table 16. Percentage distribution of dispositions for admissions aged 15 years and over, with final interview within 18 months of admission, by sex and minor diagnostic classification.

Diagnostic Classification	Number of Admissions	Not Referred					Referred to:					
		Total	Patient Withdrew		Further Care Not Indicated	Other Not Referred	Total	Inpatient Psychiatric Facility	Outpatient Psychiatric Facility	Other Medical	Court or Correctional	Other
			Moved, Ill, Other Reasons	Clinic Not Notified								
		MALES										
Brain Syndromes												
Alcohol Intoxication	163	61.6	5.3	41.7	5.8	8.8	38.7	27.5	1.2	1.2	4.7	4.1
Convulsive Disorder	65	50.6	9.6	33.3	6.2	1.5	49.6	16.7	1.5	19.4	4.5	7.5
Sclerotic Disorder	51	46.4	9.8	33.0	3.6	0.0	53.5	14.6	5.4	10.9	1.8	20.8
Psychotic Disorders												
Involutional	40	57.7	20.0	16.5	16.5	4.7	42.4	28.2	2.4	9.4	0.0	2.4
Affective	58	54.1	16.5	23.0	14.6	0.0	45.8	27.7	6.1	10.5	0.0	1.5
Schizophrenic Paranoid	338	61.3	13.7	34.4	8.8	4.4	38.8	26.5	5.8	1.8	2.5	2.2
Schizophrenic, Other	508	51.3	9.5	30.7	7.1	4.0	48.7	23.8	9.0	3.1	7.2	5.6
Psychoneurotic Disorders												
Anxiety Reaction	350	73.6	11.0	47.7	9.6	5.3	26.7	6.4	12.9	2.6	1.1	3.7
Depressive Reaction	239	57.2	10.5	26.6	6.8	13.3	42.8	20.1	13.1	4.4	1.6	3.6
Personality Disorders												
Schizoid	120	51.8	20.0	16.3	6.3	9.2	48.2	6.8	14.3	4.5	18.8	3.8
Passive-Aggressive	251	46.3	10.3	15.8	9.8	10.4	53.8	3.4	11.1	3.3	24.1	11.9
Alcoholism Addiction	136	42.9	8.3	23.1	1.4	10.1	57.2	33.2	7.3	2.9	6.5	7.3
		FEMALES										
Brain Syndromes												
Alcohol Intoxication	74	60.7	8.1	44.7	2.6	5.3	39.4	19.7	9.2	3.9	1.3	5.3
Convulsive Disorder	56	46.7	15.2	24.5	3.6	3.4	53.4	17.4	5.2	27.3	0.0	3.5
Sclerotic Disorder	62	47.1	12.7	22.9	10.0	1.5	52.9	32.1	12.5	1.5	6.8	0.0
Psychotic Disorders												
Involutional	81	49.5	10.5	20.7	11.3	7.0	50.5	31.4	6.9	9.4	0.0	2.8
Affective	135	44.3	7.2	18.0	15.4	3.7	55.7	39.1	3.1	9.9	0.6	3.0
Schizophrenic Paranoid	382	57.8	10.9	27.3	12.7	6.9	42.3	27.1	6.3	4.9	0.5	3.5
Schizophrenic, Other	584	50.9	12.5	22.5	9.8	6.1	49.1	32.6	9.6	2.8	0.2	3.9
Psychoneurotic Disorders												
Anxiety Reaction	395	64.4	10.6	28.0	13.2	12.6	35.6	6.4	17.9	6.1	0.2	5.0
Depressive Reaction	505	67.6	10.2	33.0	11.9	12.5	32.3	12.0	10.9	4.3	0.0	5.1
Personality Disorders												
Schizoid	55	70.1	16.4	27.3	21.5	4.9	29.7	6.5	9.7	6.5	1.6	5.4
Passive-Aggressive	147	65.7	16.2	25.6	12.8	11.1	34.5	6.4	12.0	2.5	3.1	10.5
Alcoholism Addiction	43	70.3	23.2	30.8	0.0	16.3	29.7	13.7	11.4	2.3	2.3	0.0

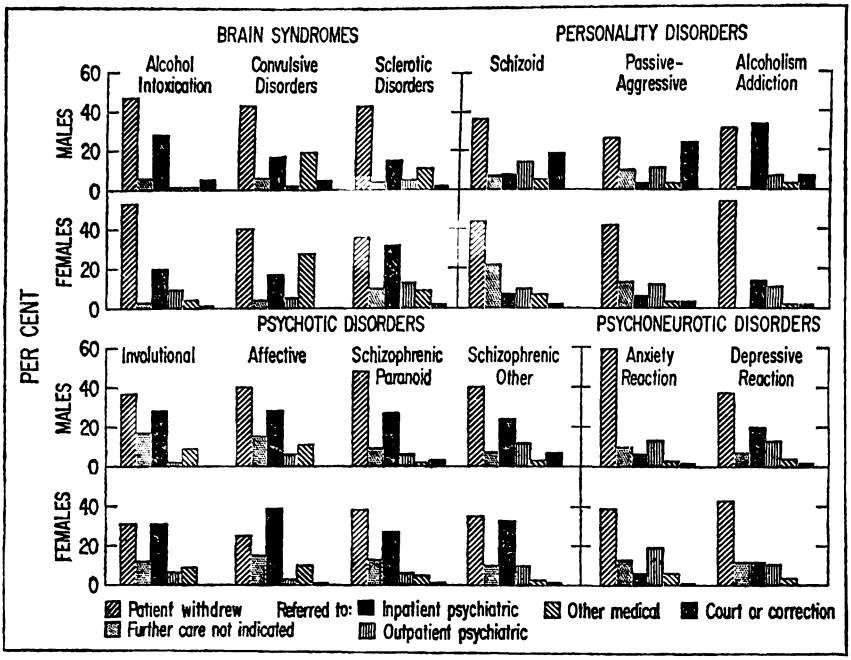


Fig. 14. Percentage distribution of disposition of adult admissions by sex and minor diagnostic classification.

jority of involutionals of each sex, however, improve, as do females with affective reactions.

Sex differences in the outcome for anxiety and depressive reactions are noteworthy. More females than males with anxiety reactions improve, but more males are treated. Both treatment and improvement rates for depressive reactions tend to be higher for females. For all three types of personality disorders examined, male treatment rates are lower than female. The lowest improvement for all disorders is found for alcoholism addiction.

Only a few contrasts in disposition will be discussed (Fig. 14 and Table 16). Dropouts and referrals to inpatient care are relatively frequent for both alcohol intoxication and alcoholism addiction. Anxiety reaction in males is associated with both relatively long term treatment and high dropouts. For 15 per cent or more of affective reactions, male involutionals, and female schizoids, services end because "further care is not in-

dicated." The low clinic treatment rate for male neurotic-depressives is related to the relatively high referrals of this group to mental hospitals. Court referrals are important for male schizoid and passive aggressive disorders, but not for alcoholism. Disposition to "other medical agencies" is common for convulsive disorders, involutional and effective reactions, and sclerotics.

Before concluding our findings,—a few comments about the remaining major rubrics. Mental deficiency without organic etiology is diagnosed infrequently in adults (14, 15) although a few mental deficients are referred by social agencies or courts. As with children, services are brief; only 15 per cent are treated, many being referred to caretaker agencies. Psychophysiologic disorders are likewise rarely reported. The retention rates for these disorders, however, are among the highest of all disorders for males. Adjustment reactions or situational disorders disappear suddenly as a diagnosis at the age of 18. The possible reasons for this phenomenon have been discussed in our earlier paper on children (12).

Discussion

At this point let us return to several questions posed earlier. To what extent is psychiatric classification an operationally important variable in determining the course of clinic service for the adult patient? What do our data on outpatients suggest regarding the effectiveness of this type of care? We shall review our findings for each disorder and attempt some answers.

It appears that the clinic has played only a minor role for two types of illness which are among the most outstanding public health problems today—the alcoholic patient and the patient with degenerative disorders. We shall discuss the alcoholic patient in detail later.

With advancing age groups, both in Maryland (16) and nationally (17), clinic admission rates decline markedly while inpatient admissions increase sharply. Apparently the clinic does not consider disorders of the aged, particularly in males, amenable to clinic treatment. Only 35 per cent of males are

treated, none long-term (25 interviews or more) and only 30 per cent improve. Although half of the females improve, one-third are referred to mental hospitals.

On the other hand, the length of service and the high admission (8, 16), treatment and improvement rates for the psychotic indicate that outpatient clinics in Maryland play a significant role in the care of this group. About half of the involutional, affective and paranoid schizophrenic reactions and about two-fifths of other psychotic disorders are treated, over a third long-term. Improvement rates range from 40 to 50 per cent, the outcome being most favorable for involutional reactions. Although referrals to state mental hospitals account for 25 to 30 per cent of the dispositions, 10 to 15 per cent of involutional, affective and paranoid schizophrenic reactions require no further care.

These data suggest that the concept of the clinic as primarily preventive or for the care of the less sick is changing, reflecting the development of comprehensive community mental health programs at home and abroad—including not only prevention and promotion of mental health but also consultation, diagnosis, treatment and after-care services (18, 19).

The psychoneurotic, regarded by some as the "classic" outpatient, is not retained as long as the psychotic. Treatment rates for psychoneurosis on the average are about the same as for psychosis (50 per cent) but when treatment is given it is more apt to be long-term, particularly for females (60 per cent). Improvement rates are about the same for males for both psychosis and psychoneurosis (40 per cent), but for females they are considerably higher for psychoneurosis (65 per cent).

Some seeming inconsistencies between clinic experience and clinic practice are suggested by the data on psychoneurotics. We note, for example, the high withdrawal rate (60 per cent) among males with anxiety reactions—the group with the highest treatment rate (55 per cent); also the low treatment rate for psychoneurotic females (45 per cent), although 65 per cent

improve. This suggests that the clinics may not be treating the patients who have the best potential for improvement and may also be treating patients who because of undue length of treatment drop out.

A high improvement (55 per cent) but low treatment rate (40 per cent) is noted for males with depressive reactions, one-fifth being referred to mental hospitals. Probably this reflects anxiety on the part of clinicians because of the greater risk of suicide for males (20, 21). Our earlier data (8) suggests, however, that a contributing factor to the sex-suicide differential may be the lower rate at which depressed men seek clinical help.

We see in personality disorders the greatest difference by sex in both admission rates and in clinic experience. Admission rates are much higher for males while treatment rates are much higher for females. Undoubtedly both aspects reflect the fact that almost all of the court-referred cases are male. Here again we have another disparity—the low proportion (30 per cent) of male schizoid and passive aggressive personality disorders treated contrasts sharply with their substantial improvement (40 to 50 per cent).

Turning to the categories of alcohol intoxication and alcoholism addiction we find a marked similarity in experience. Both have low rates of treatment and improvement (20 to 40 per cent)(22), high withdrawal rates (30 to 55 per cent), and high referrals (15 to 30 per cent) to state mental hospitals. This suggests difficulty in differentiating these two groups diagnostically as well as rapid changes in the patient's alcoholic state. Less successful clinic experience for patients with other disorders who have also the symptom of excessive drinking, further emphasizes a hard reality—the general inability of these outpatient psychiatric clinics to serve the alcoholic effectively. Better preparation of professional personnel for the care of the alcoholic and development of better therapeutic procedures is indicated (23).

The high withdrawal rate noted for every disorder suggests the need for continuing research into the contributing factors.

This leads us also to consider what alternative modes of care may be indicated such as home visits, intensive help in a vocational setting, or other types of services yet to be devised by our ingenuity.

The data reveal impressive differences between disorders in services and outcome. Social factors and clinic policies are important in more than one way, however. For example, clinic intake policy determines the number of patients admitted with alcoholism addiction; the distribution of the specific personality disorders will vary therefore from clinic to clinic and from group to group. If our data illustrate anything, it is the value of studying the disorders in detail, of "clarifying and making more exact the classification of the kinds of ill health with which we deal" (1).

It is hoped that through cooperative, perhaps international studies, sufficient cases and experience can be accumulated to permit study of the relationship between the characteristics and detailed disorders of patients, and clinic program goals. Such studies would require, however, (a) more standard and improved diagnostic schemata, criteria, and interpretation (24), (b) objective, comparable measures of change in degree of impairment among different disorders and within the same disorder, and (c) more uniform clinic recording and reporting methods (8). We hope that this paper can be a stimulus in that direction.

The clinic episode represents an important but only one psychiatric experience for the patient. We need to know also the initial and all subsequent psychiatric experiences (25). Such information is being collected systematically through a statewide psychiatric case register in Maryland. By means of such a register, we will be able to study the pattern of change in disorder and to trace the course of psychiatric resources used by every Maryland resident (26).

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APPENDIX

An extended discussion of the life table methodology used in this report is given in Reference 8, Appendix IV, but a brief review of the procedures will be given here, based upon Appendix Table 1, which is the "life table" for the total population of 8,532 admissions 15 years of age and over.

The information on entry and termination of each admission was given in calendar months and to utilize the life table analysis this had to be converted to exact 30-day intervals after admission. The method used was to partition by one-half the number who leave in each calendar month after admission except the first, and add this to one-half the departures during the preceding month. The justification for this procedure is given in Reference 8.

The definitions and derivations of each column of Appendix Table 1 are as follows:

x—Col. 1 number of months (30 days) following admission.

t_x—Col. 3 number receiving final interview during the x^{th} *calendar* month after month of admission.

Appendix Table 1. Work table for computing probability of receiving final interview during specified month following admission, Maryland residents 15 years of age and over admitted to Maryland outpatient psychiatric clinics, July 1, 1958 to December 31, 1959.

Number of Months Following Admission*	Number Under Observation at the Beginning of the x^{th} Exact Month	Number Receiving Final Interview during the x^{th} Calendar Month after Month of Admission	Estimated Number Receiving Final Interview during the x^{th} Exact Month after Date of Admission	Number Withdrawn from Observation on March 31, 1960, by Specified Duration	Probability, if Retained to the Beginning of the Month, of—		Probability of Starting Cohort—		
					Receiving Final Interview during Month	Not Receiving Final Interview during Month	Not Receiving Final Interview by End of Month	Receiving Final Interview during this or a Preceding Month	Receiving Final Interview during This Month
1	2	3	4	5	6	7	8	9	10
x	[1] $N'_x = N'_{x-1} - t'_{x-1} - w_{x-1}$	t_x	[2] $t'_x = \frac{t_x + t_{x+1}}{2}$	[3] w_x	$q_x = \frac{t'_x}{N'_x - \frac{1}{2}w_x}$	$p_x = 1 - q_x$	$l_{x+1} = \prod_{i=0}^{x} p_i$	$Q_{x+1} = 1 - \prod_{i=0}^{x} p_i$	$s_x = Q_{x+1} - Q_x$
0	8532.0	4297.0	4738.5	0	0.5555	0.4445	0.4445	0.5555	0.5555
1	3793.5	883.0	707.5	0	0.1865	0.8135	0.3616	0.6384	0.0829
2	3086.0	532.0	458.5	0	0.1486	0.8514	0.3079	0.6921	0.0537
3	2627.5	385.0	329.5	140.0	0.1288	0.8712	0.2682	0.7318	0.0397
4	2158.0	274.0	244.0	144.0	0.1169	0.8831	0.2369	0.7631	0.0313
5	1770.0	214.0	168.0	140.0	0.0988	0.9012	0.2135	0.7865	0.0234
6	1462.0	122.0	105.0	136.0	0.0753	0.9247	0.1974	0.8026	0.0161
7	1221.0	88.0	94.5	95.0	0.0805	0.9195	0.1815	0.8185	0.0159
8	1031.5	101.0	86.5	81.0	0.0873	0.9127	0.1656	0.8344	0.0158
9	864.0	72.0	59.5	88.0	0.0726	0.9274	0.1536	0.8464	0.0120
10	716.5	47.0	39.0	65.0	0.0570	0.9430	0.1449	0.8551	0.0088
11	612.5	31.0	41.5	55.0	0.0709	0.9291	0.1346	0.8654	0.0103
12	516.0	52.0	38.5	53.0	0.0787	0.9213	0.1240	0.8760	0.0106
13	424.5	25.0	24.0	58.0	0.0607	0.9393	0.1165	0.8835	0.0075
14	342.5	23.0	15.0	69.0	0.0487	0.9513	0.1108	0.8892	0.0057
15	258.5	7.0	7.0	37.0	0.0292	0.9708	0.1076	0.8924	0.0032
16	214.5	7.0	7.0	34.0	0.0354	0.9646	0.1038	0.8962	0.0038
17	173.5	7.0	7.5	43.0	0.0493	0.9507	0.0986	0.9014	0.0051
18	123.0	8.0	5.5	52.0	0.0567	0.9433	0.0930	0.9070	0.0056
19	65.5	3.0	2.0	34.0	0.0412	0.9588	0.0892	0.9108	0.0038
20	29.5	1.0	—	29.0	—	—	—	—	—

[1] $N'_0 = \Sigma t_x + \Sigma w_x$.
[2] Except that $t'_0 = t_0 + \frac{1}{2}t_1$.
[3] These individuals were withdrawn from observation because they had not received final interview by March 31, 1960.
* Interval extends to but does not include upper limit.

t'_x—Col. 4 $t'_x = \frac{1}{2}(t_x + t_x + 1)$ estimated number receiving final interview during the x^{th} exact month (30 days) after date of admission. An exception is made for the first month for which $t'_0 = t_0 + \frac{1}{2}t_1$. This is the partitioning procedure noted above.

w_x—Col. 5 number withdrawn from observation on March 31, 1960, because they had not received their final interview by this date, by specified number of months since admission. Since all had been admitted before December 31, 1959, they had at least a 3-month interval since admission.

N'_x—Col. 2 $N'_x = N'_{x-1} - t'_{x-1} - w_{x-1}$ number under observation at the beginning of the x^{th} exact month (30 days). N_0 = the total number admitted during the period July 1, 1958–December 31, 1959.

q_x—Col. 6 $q_x = t'_x/(N'_x - \frac{1}{2}w_x)$ = probability, if retained to the beginning of the month, of receiving final interview during the month, i.e., this is the estimated proportion of those under observation at beginning of the month, less one-half of those withdrawn from observation during the month, following the partitioning procedure, who received a final interview during the month (30 days).

p_x—Col. 7 $p_x = 1 - q_x$ = probability if retained to the beginning of the month of not receiving a final interview during the month.

l_{x+1}—Col. 8 $l_{x+1} = p_0 \cdot p_1 \cdot p_2 \ldots p_x = l_x \cdot p_x$ = probability of starting cohort not receiving interview by end of month (30 days). This is the estimated proportion of the starting cohort still under treatment at the end of each month, and, converted to a percentage, is the data shown in the tables of this report dealing with retention.

Q_{x+1}—Col. 9 $Q_{x+1} = 1 - l_{x+1}$ = probability of starting cohort receiving final interview during this *or* a preceding month (30 days). This is the estimated proportion of the starting cohort whose treatment had been terminated by the end of this month (30 days).

s_x—Col. 10 $s_x = Q_{x+1} - Q_x$ = probability of starting cohort receiving final interview during this month (30 days).

Appendix Table 2. Work table for computing percentage distribution, by service category, of admissions with final interview within 18 months of admission, Maryland residents 15 years of age and over admitted to Maryland outpatient psychiatric clinics, July 1, 1958 to December 31, 1959.

Type of Service	Total 0–18 Month	Month after Admission												
		0	1	2	3	4	5	6	7	8	9	10	11	12–17
A. Percentage distribution of patients that receive final interview during specified month (30 days) after admission, by type of service received														
Total (t'_x)	7170.0	4738.5	707.5	458.5	329.5	244.0	168.0	105.0	94.5	86.5	59.5	39.0	41.5	99.0
Treated	40.29	15.22	58.21	73.69	82.39	89.35	92.27	94.29	95.76	94.79	94.95	96.15	97.59	93.03
Improved	19.46	4.70	23.41	32.75	41.88	48.16	50.60	50.48	50.79	54.91	62.18	69.23	71.08	64.19
Not Improved or Worse	19.98	9.87	33.10	38.97	38.69	39.96	40.48	42.86	44.97	39.88	32.77	26.92	26.51	28.84
Status Unknown	0.85	0.65	1.70	1.97	1.82	1.23	1.19	0.95	0.00	0.00	0.00	0.00	0.00	0.00
Evaluation Services Only	59.01	84.31	41.09	25.22	16.39	10.04	7.15	5.72	3.18	4.05	5.04	2.56	1.20	5.12
Psychiatric Service	52.21	75.06	34.94	20.74	13.51	8.20	6.55	4.76	2.65	3.47	3.36	1.28	1.20	5.12
Psychological Service Only	1.70	2.10	2.12	1.75	1.06	0.61	0.60	0.48	0.00	0.00	0.84	1.28	0.00	0.00
Other Professional Service Only	5.10	7.15	4.03	2.73	1.82	1.23	0.00	0.48	0.53	0.58	0.84	0.00	0.00	0.00
Service Unknown	0.65	0.47	0.71	1.09	1.21	0.61	0.60	0.00	1.06	1.16	0.00	1.28	1.20	1.86
B. Estimated per cent of starting cohort that received final interview during specified month (30 days) after admission and received a specified type of service														
Total Terminated (s_x)	90.13	55.55	8.29	5.37	3.97	3.13	2.34	1.61	1.59	1.58	1.20	0.88	1.03	3.59
Treated	36.32	8.45	4.82	3.96	3.26	2.80	2.16	1.52	1.52	1.50	1.14	0.85	1.00	3.34
Improved	17.54	2.61	1.94	1.76	1.66	1.51	1.18	0.81	0.81	0.87	0.75	0.61	0.73	2.30
Not Improved or Worse	18.01	5.48	2.74	2.09	1.53	1.25	0.95	0.69	0.71	0.63	0.39	0.24	0.27	1.04
Status Unknown	0.77	0.36	0.14	0.11	0.07	0.04	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Evaluation Services Only	53.20	46.83	3.41	1.35	0.65	0.32	0.16	0.10	0.05	0.06	0.06	0.02	0.01	0.18
Psychiatric Service	47.06	41.69	2.90	1.11	0.54	0.26	0.15	0.08	0.04	0.05	0.04	0.01	0.01	0.18
Psychological Service Only	1.54	1.17	0.18	0.09	0.04	0.02	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00
Other Professional Service Only	4.60	3.97	0.33	0.15	0.07	0.04	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00
Service Unknown	0.59	0.26	0.06	0.06	0.05	0.02	0.01	0.00	0.02	0.02	0.00	0.01	0.01	0.07

As an example of the derivation of the values in each column, consider the line x = 6:

$N'_6 = 1462 = 1770 - 168 - 140$
where $t'_5 = \frac{1}{2}(214 + 122) = 168$
$N'_5 = 1770$ and $w_5 = 140$
$q_6 = .0753 = 105/(1462 - \frac{1}{2} \cdot 136)$
where $t'_6 = \frac{1}{2}(122 + 88) = 105$
and $w_6 = 136$
$p_6 = 1 - .0753 = .9247$
$l_7 = (.4445)(.8135)(.8514)(.8712)(.8831)(.9012)$
$(.9247) = .1974$
where these are values of p_0, p_1, p_2, p_3, p_4, p_5 and p_6
or $l_7 = .1974 = (.2135)(.9247)$
where $l_6 = .2135$ and $p_6 = .9247$
$Q_7 = 1 - .1974 = .8026$
and $s_6 = .8026 - .7865 = .0161$
where $Q_6 = .7865$

The probability study of services received requires the computation of the compound probability (s_{xj}) of receiving the final interview during the x^{th} month (30 days) after admission *and* of receiving a specified type of service, number of interviews, or disposition. From these probabilities, a weighted frequency distribution of all those who leave during the first eighteen months, by a particular characteristic, is derived. As an example, the derivation of this distribution by type of service is shown in Appendix Table 2. The steps are:

(a) The decrement function (t_x) (Col. 3 of Appendix Table 1) is classified into subcategories (t_{xj}) according to number of interviews, disposition, or, as in this example, type of service.

(b) Data are estimated for 30 day months (t'_{xj}) which add to the t'_x in Col. 4 of Appendix Table 1. These are shown on the first line of Part A of the table. Because of small numbers, the t'_{xj} for 12–18 months are combined.

(c) A percentage distribution of the t'_x by service category (t'_{xj}) is obtained for each month (30 days). (See Part A of Appendix Table 2). The first (total) column of this table is not completed until the last step.

(d) This percentage, or with the decimal moved two places to the

left, the proportion, $\frac{t'_{xj}}{t'_x}$, is considered as a conditional probability, i.e., that *if* a patient leaves in a specified month he will have received a specified service. This conditional probability is multiplied by the marginal probability of receiving the final interview during the month, s_x, given on the first line of Part B of the table from column 10 of Appendix Table 1, to obtain the appropriate compound probability, s_{xj}:

$$s'_{xj}: \frac{t'_{xj}}{t'_x} s_x.$$

These compound probabilities (with the decimal moved two places to the right) are shown in Part B of Appendix Table 2 as percentages of the starting cohort. They are derived by multiplying the percentage from the corresponding cell in Part A by the s_x for that column. For example, the 4.82 per cent of the starting cohort terminated 1–2 months after admission and treated is computed from (58.21) . (8.29) = 4.82 where 58.21 is the per cent of terminations 1 month after admission who were treated and 8.29 is s_1, the percentage of the original cohort terminated 1 month after admission.

(e) Q_{18j}, the probability of receiving the final interview any time within the first 18 months after admission and of receiving a specified type of service, number of interviews, or disposition, is obtained by summing the s_{xj} for 18 months: $Q_{18j} = \sum_{x=0}^{17} s_{xj}$. This summation is shown in the first (total) column of Part B of Appendix Table 2. *The percentage distribution of this column represents a weighted distribution of the t'_{xj} using the s_x as the weights* and is shown in the first (total) column of Part A. For example, 10.29, the weighted percentage treated equals (36.32/90.13) · 100. This weighted percentage distribution, by service category, of admissions with final interview in the first 18 months forms the basis for the tables and charts on type of service, number of interviews, and disposition service.