Charges, Costs, and Other Factors Related to Maintenance of Patients In Public Mental Hospitals

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A PREVIOUS publication listed the results obtained from questionnaires sent to responsible officials in 48 States and Alaska and Hawaii in July 1959 regarding charges, costs of care, reimbursement, and other pertinent facts concerning the institutionalized mentally retarded and the hospitalized mentally ill (*1*). Between July and September 1961, in preparation for a governor's conference on the Illinois Patient Pay Plan involving reimbursement by patients and liable relatives for care in State hospitals and institutions, I sent a second series of questionnaires to all 50 States seeking additional information. The details presented here are based on data from these sources and from subsequently available compilations (*2–7*). This paper is confined to the mentally ill in the 50 States. Figures pertaining to the District of Columbia and Puerto Rico have been deleted. Because of the marked differences between mental illness and mental retardation, data pertaining to the mentally retarded will be reported in a separate publication.

Number of Hospitals and Costs

Public prolonged-care hospitals and psychopathic hospitals. In fiscal 1960 there were a total of 280 public hospitals for the mentally ill, distributed among the 50 States as follows: 268 public prolonged-care hospitals for mental disease (221 State and 47 county) and 12 psychopathic hospitals (one each in California, Colorado, Delaware, Indiana, Iowa, Massachusetts, Michigan, Nebraska, New York, Pennsylvania, Tennessee, and Wisconsin).

Of the 47 county hospitals for prolonged care of mental disease, 38 were in Wisconsin, 6 were in New Jersey, 2 were in Tennessee, and 1 was in Maryland. Since fiscal 1960 the number of public hospitals has increased to 285, a net gain of 5 produced as follows: California and Texas each gained a psychopathic hospital and Tennessee gained 2; Michigan added a public prolonged-care hospital for mental disease; Ohio added 1 and lost 2; and Oregon gained a prolonged-care hospital. During the 12 fiscal years 1951–62, an average of 99.8 percent of all residents in public hospitals for the mentally ill were in the public prolonged-care hospitals (State and county) for mental disease, and only 0.2 percent were residents of psychopathic hospitals. In most of the hospitals the fiscal year ends on June 30. The exceptions are March 31 for New York, May 31 for Pennsylvania, August 31 for Texas, and September 30 for Alabama.

Pertinent data for 11 successive fiscal years for these two types of hospitals for the mentally ill are given in table 1. Statistics for Alaska and Hawaii are not included until fiscal 1960. The psychopathic hospitals are primarily for intensive treatment of short duration and for teaching or research. Because of their relatively small number and their small resident patient populations, the totals for all public mental hospitals are not affected appreciably by the unusually high values for per patient cost and percent discharges and the unusually favor-

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able patient to personnel ratios in these psychopathic hospitals. The average rate for direct discharge from all hospitals has increased from 9.2 percent in fiscal 1952 to 24.5 percent in fiscal 1962. The mean percent net releases (direct discharges and placements on extramural care minus returns from extramural care) increased from 20.6 percent in 1952 to 40.4 percent in 1961 (*8*). Total admissions excluding transfers to all public hospitals for the mentally ill increased from 161,470 in fiscal 1952 to 268,743 in fiscal 1962 (*5*), representing 31.0 and 52.8 percent, respectively, of the average daily resident patient population of the year involved.

The following trends may be noted from data for more than two decades on patients in all pub-

Table 1. Comparison of costs per patient, average daily resident patient populations, percent discharges and deaths, and patient to personnel ratios in public prolonged-care hospitals for mental disease and psychopathic hospitals in the United States for fiscal years 1952–62

Fiscal year	Number of hospitals	Average monthly cost per resident patient	Average daily resident population	Percent direct hospital discharges	Percent deaths in hospitals	Patient to personnel ratio [1]
	Public prolonged-care hospitals for mental disease					
1952	316	$77	519, 365	8. 4	8. 4	4. 4
1953	317	81	531, 258	8. 9	8. 4	4. 2
1954	343	85	540, 276	9. 4	7. 8	4. 0
1955	266	91	546, 884	10. 1	8. 0	3. 8
1956	266	98	547, 037	11. 8	8. 7	3. 7
1957	264	109	541, 234	14. 0	8. 5	3. 4
1958	265	121	538, 495	14. 8	9. 3	3. 3
1959	266	127	531, 053	16. 8	9. 1	3. 2
1960 [2]	268	139	530, 295	18. 9	9. 3	3. 0
1961 [2]	271	151	523, 708	21. 5	8. 9	2. 9
1962 [2]	269	161	512, 794	23. 6	9. 6	2. 8
	Psychopathic hospitals					
1952	12	455	923	440. 7	8. 7	0. 7
1953	14	411	1, 392	281. 4	11. 5	. 7
1954	9	475	919	352. 0	10. 0	. 7
1955	10	522	933	368. 7	11. 8	. 6
1956	11	621	946	359. 5	10. 9	. 5
1957	12	673	1, 102	318. 1	10. 3	. 4
1958	12	786	1, 185	301. 4	8. 4	. 5
1959	12	822	1, 239	299. 4	7. 9	. 5
1960	12	871	1, 247	325. 8	6. 1	. 4
1961	13	968	1, 354	336. 3	7. 1	. 4
1962	16	1, 140	1, 417	376. 0	5. 3	. 4
	All public mental hospitals					
1952	328	79	520, 288	9. 2	8. 4	4. 3
1953	331	82	532, 650	9. 6	8. 4	4. 1
1954	352	86	541, 195	10. 0	7. 8	4. 0
1955	276	92	547, 817	10. 7	8. 0	3. 8
1956	277	99	547, 983	12. 4	8. 7	3. 6
1957	276	110	542, 336	14. 6	8. 5	3. 4
1958	277	122	539, 680	15. 5	9. 3	3. 2
1959	278	133	532, 292	17. 5	9. 1	3. 1
1960 [2]	280	141	531, 542	19. 7	9. 3	3. 0
1961 [2]	284	152	525, 062	22. 3	8. 9	2. 8
1962 [2]	285	164	514, 211	24. 5	9. 5	2. 8

[1] Number of patients per full-time employee.
[2] Includes Alaska and Hawaii.

lic mental hospitals. The number of resident patients which had been increasing since 1940 reached a peak in 1955 and has been decreasing slightly every year including fiscal 1962; total admissions have been increasing since 1943 and net releases since 1944. Using fiscal 1955 as a baseline, the data for fiscal 1962 show an increase of 52.1 percent in all admissions, an increase of 82.5 percent in net releases, a decrease of 7.7 percent in number of resident patients at the end of the year, an increase of 29.1 percent in number of full-time personnel at the end of the year, and an increase of 77.6 percent in maintenance expenditures per resident patient (*7*).

Average monthly costs per resident patient (per capita costs). The costs for maintenance of patients in public hospitals for the mentally ill have risen steadily during the past two decades. The average monthly cost per resident patient in the entire country was $25 in 1940, $32 in 1945, and $65 in 1950. From 1952 through 1962 the costs in all public mental hospitals rose from $79 to $164 (table 1).

The costs per resident patient in fiscal 1962 (*7*) and 1961 (*6*) are listed for the individual States in table 2. These sums for such maintenance expenditures as salaries and wages, purchased provisions, fuel, light, and water have been rounded to the nearest dollar. In fiscal 1962 these monthly per patient costs varied from a high of $430 in Alaska to a low of $83 in Mississippi, the median for all 50 States being $167. In fiscal 1961 Alaska was likewise at the top with a monthly expenditure of $273 per resident patient and Mississippi was also at the bottom with an expenditure of $81 per month. The median per patient value for all 50 States in 1961 was $156 per month. The recorded per capita expenditures for Wisconsin, New Jersey, Tennessee, and Maryland include some county expenditures for maintenance of county hospitals for prolonged care of mental disease, and the actual per patient disbursements from State funds, therefore, would be even less than those indicated for these States in table 2. It is common, however, to include the maintenance costs of these few county hospitals with those of the State hospitals so that interstate evaluations of per capita costs can be made.

In attempting to correlate individual State expenditures per resident patient in public hospitals for the mentally ill with the wealth of a State, the problem of which of many ways is the best one to depict State wealth becomes apparent. The frequently used per capita personal income of the citizens of a State as a criterion of State wealth is not satisfactory in this connection, for such a figure gives no indication of the funds available to the State for allocation. Some favor illustration of the wealth of a State by the State revenue per capita of population. That this is unsatisfactory can be demonstrated by listing the 10 States which ranked highest on the basis of general revenue per capita of population in fiscal 1961: Hawaii 1st, Alaska 2d, Wyoming 3d, Nevada 4th, New Mexico 5th, Delaware 6th, Louisiana 7th, Washington 8th, North Dakota 9th, and Vermont 10th. Furthermore, the eight States generally considered the wealthiest would, on the basis of general revenue per capita of population, have these ranks: California 12th, New York 22d, Pennsylvania 40th, Michigan 20th, Texas 45th, Illinois 48th, Ohio 46th, and Massachusetts 33d. A more realistic means of denoting a State's wealth is its annual general revenue—from taxes, the Federal Government, local governments, and from charges and miscellaneous general revenue.

The States with the highest expenditures per resident patient in public hospitals for the mentally ill were not necessarily those with the highest income. Some outstanding examples of high per capita expenditures for the mentally ill in fiscal 1961 (*6*) by States which were low in general revenue in fiscal 1961 (*9*) can be cited. Alaska had the highest per capita expenditure for the mentally ill in 1961 although it had the lowest general revenue of all 50 States that year (tables 2 and 3). Kansas had the second highest expenditure per resident patient but ranked 29th in general State revenue. Also noteworthy in this connection are Connecticut, Iowa, Utah, Nebraska, Idaho, and Wyoming.

Conversely, some of the wealthiest States on the basis of their general revenue in 1961 were low in their order of per patient expenditures for maintenance of the mentally ill (table 3). New York, the 2d wealthiest, was 25th on the list for per patient expenditure for the mentally ill. Pennsylvania, 3d in general revenue,

Table 2. State data on costs per resident patient, percent of revenue expended, patient population, percent discharges and deaths, and personnel ratios in 285 public hospitals for the mentally ill, fiscal year 1961 or 1962

State	Maintenance cost per month per resident patient		State general revenue (millions)	Percent of State general revenue expended for maintaining mental hospitals	Average daily resident patient population	Percent net live releases [1] [2]	Percent deaths in hospitals [2]	Patient to personnel ratio [3]
	1962	1961	1961	1961	1962	1962	1962	1962
Alabama	$101	$87	$483	1.6	7,568	36.1	7.4	4.2
Alaska	430	273	70	1.6	295	55.6	2.5	1.6
Arizona	171	155	277	1.1	1,756	76.6	11.9	2.6
Arkansas	117	102	272	2.1	4,532	68.6	9.2	2.9
California	218	195	3,341	2.5	34,916	63.8	7.6	2.6
Colorado	220	173	361	3.4	5,455	53.6	12.4	2.2
Connecticut	212	230	378	6.0	8,230	72.9	12.8	2.2
Delaware	189	161	108	3.2	1,690	56.2	14.0	2.2
Florida	133	121	742	1.9	9,731	32.4	8.4	2.5
Georgia	91	89	591	2.1	11,888	36.4	8.8	4.7
Hawaii	192	182	209	1.2	1,181	55.7	5.0	2.8
Idaho	194	189	116	1.9	932	77.5	11.1	2.1
Illinois	154	145	1,296	4.7	35,314	39.0	10.3	3.2
Indiana	166	158	650	3.4	11,693	33.8	8.6	2.3
Iowa	245	216	435	2.3	3,608	110.0	9.6	1.7
Kansas	301	266	345	3.1	3,259	74.6	7.2	1.5
Kentucky	151	136	451	2.3	5,960	74.5	10.4	2.8
Louisiana	123	109	781	1.4	7,890	71.3	6.4	2.9
Maine	147	142	150	3.3	2,919	42.4	11.3	2.8
Maryland	174	168	488	3.5	8,645	62.2	10.5	2.5
Massachusetts	207	186	781	5.8	19,776	51.0	10.2	2.3
Michigan	183	174	1,397	3.2	21,374	28.6	6.0	3.1
Minnesota	167	149	621	2.8	9,213	61.9	10.5	3.0
Mississippi	83	81	333	1.5	5,239	64.0	5.6	3.3
Missouri	140	139	540	3.9	11,070	26.1	6.8	2.5
Montana	150	132	132	2.0	1,656	65.4	11.4	2.9
Nebraska	197	194	193	4.6	3,815	55.1	9.9	1.8
Nevada	181	156	76	1.4	577	55.2	7.5	3.1
New Hampshire	168	149	86	5.2	2,523	41.2	12.0	2.5
New Jersey	187	169	626	4.1	21,216	37.9	13.2	2.7
New Mexico	168	171	244	.8	945	78.3	10.5	2.2
New York	168	156	2,720	6.3	89,750	23.0	10.0	2.8
North Carolina	143	134	681	2.3	9,776	75.4	10.4	3.0
North Dakota	147	136	140	2.0	1,735	79.0	10.1	3.0
Ohio	156	163	1,284	4.2	23,912	62.3	8.4	2.7
Oklahoma	123	118	485	2.0	6,669	44.6	8.4	2.9
Oregon	192	139	344	2.3	4,360	82.8	12.1	2.5
Pennsylvania	167	137	1,608	3.9	37,862	19.9	9.6	2.9
Rhode Island	176	174	137	5.1	3,366	38.5	14.0	2.5
South Carolina	95	91	364	2.0	6,598	41.6	9.0	3.8
South Dakota	143	125	129	1.9	1,527	71.0	11.5	2.2
Tennessee	104	88	492	1.5	8,019	67.4	9.6	3.8
Texas	122	113	1,297	1.6	15,822	66.4	10.3	2.9
Utah	218	208	174	1.4	882	87.7	11.2	1.9
Vermont	173	157	83	2.7	1,228	52.1	9.6	2.5
Virginia	114	105	522	2.8	11,520	34.9	9.5	3.3
Washington	215	203	658	2.3	5,604	60.2	10.5	2.4
West Virginia	91	90	280	2.0	5,279	56.1	11.0	4.1
Wisconsin	165	154	623	1.3	14,802	48.4	10.4	3.0
Wyoming	171	176	101	1.3	634	66.2	12.3	2.7

[1] Net live releases equal direct discharges from hospitals plus placements on extramural care minus returns from extramural care.

[2] Expressed as percent of average daily resident patient population.

[3] Number of patients for each full-time employee.

Table 3. Comparison of relative rank of States in general revenue, in expenditure per resident patient, and in percent of general revenue expended for maintenance of patients in public hospitals for the mentally ill, fiscal year 1961

State	Rank in general revenue	Rank in expenditure per resident patient	Rank in percent of general revenue expended for maintaining resident patients
Alabama	23	49	39
Alaska	50	1	38
Arizona	33	26	49
Arkansas	34	44	29
California	1	7	22
Colorado	28	15	13
Connecticut	26	3	2
Delaware	45	20	17
Florida	10	39	35
Georgia	17	47	28
Hawaii	36	11	48
Idaho	44	9	36
Illinois	6	30	6
Indiana	13	21	14
Iowa	25	4	23
Kansas	29	2	18
Kentucky	24	34	24
Louisiana	9	42	43
Maine	39	31	15
Maryland	21	18	12
Massachusetts	8	10	3
Michigan	4	14	16
Minnesota	16	29	19
Mississippi	31	50	41
Missouri	18	22	10
Montana	42	37	30
Nebraska	37	8	7
Nevada	49	23	44
New Hampshire	47	28	4
New Jersey	14	17	9
New Mexico	35	16	50
New York	2	25	1
North Carolina	11	36	25
North Dakota	40	35	31
Ohio	7	19	8
Oklahoma	22	40	32
Oregon	30	32	26
Pennsylvania	3	33	11
Rhode Island	41	13	5
South Carolina	27	45	33
South Dakota	43	38	37
Tennessee	20	48	42
Texas	5	41	40
Utah	38	5	45
Vermont	48	24	21
Virginia	19	43	20
Washington	12	6	27
West Virginia	32	46	34
Wisconsin	15	27	46
Wyoming	46	12	47

was 33d in the amount expended per capita for the mentally ill. Texas, 5th wealthiest, was 41st in the amount of money expended per resident patient for the mentally ill, and Illinois, 6th from the top in general revenue, ranked 30th. The relative rankings of Louisiana, Florida, North Carolina, Georgia, Virginia, and Tennessee likewise show great divergence; in fact, these positions were not comparable for 42 States (table 3).

When one compares the status of the States for expenditure per resident patient with that for percent of general revenue expended for maintenance of resident patients (table 3), the marked differences in both directions are obvious. Particularly extreme are the findings for Alaska, Hawaii, Idaho, and Arizona, on one hand, and for Illinois, New Hampshire, New York, Pennsylvania, and Virginia, on the other hand. These rankings were markedly divergent in 39 States.

Similar contrasts can be observed for 36 States when their rank in State general revenue is compared with rank in percent of general revenue expended for maintenance of resident patients (table 3). Texas, Louisiana, Florida, New Hampshire, Rhode Island, Nebraska, Delaware, Vermont, and Connecticut are outstanding examples.

Expenditures per patient under treatment. All previous cost data refer to expenditures per average daily resident patient, the basis on which maintenance costs of hospitals have been evaluated for many years. Recently, in order to reflect the outlays for the increasing numbers of admissions and new approaches to the treatment of the mentally ill, the value for expenditure per patient under treatment has also been used. Unfortunately, however, the number of patients under treatment, that is the number of resident patients at the beginning of the year plus admissions plus returns from extramural care during the year, has not been available from many States. It has been necessary, therefore, to estimate patients under treatment on the basis of the number of residents at the beginning of the year plus all admissions excluding transfers (*7*).

The maintenance costs per resident patient and per patient under treatment for the past 8 fiscal years (*7*) are compared in table 4. Calculations show that while the latter was only 76.1 percent of the former in fiscal 1955, the percentage decreased gradually in the ensuing years until the cost per patient under treatment was only 65.4 percent of the cost per resident patient in fiscal 1962.

Table 4. Comparison of monthly maintenance expenditures per resident patient and per patient under treatment in public mental hospitals, fiscal years 1955–62

Fiscal year	Average monthly maintenance cost [1]	
	Per resident patient	Per patient under treatment
1955	$93	$71
1956	100	74
1957	111	82
1958	123	89
1959	131	92
1960	142	98
1961	153	103
1962	165	108

[1] District of Columbia included in this table.

Maintenance costs as percent of State revenue. The data available for maintenance costs for resident patients in the public mental hospitals in the various States in fiscal 1961 (*7*) and for general revenue of the individual States in fiscal 1961 (*9*) yielded the values presented in table 2. New York was at the top with 6.3 percent, and New Mexico was at the bottom with 0.8 percent of its general revenue expended for this purpose. The mean for all 50 States was 3.3 percent; the median was 2.3 percent.

County payments. In 12 States the county of residence is liable for amounts from a few dollars per month to the full cost for care of patients in State hospitals for the mentally ill. In Iowa the county is responsible for the full cost of care of the committed mentally ill. In Maryland the county pays the amount necessary to bring the minimum payment for each patient up to $10.42 per month. In Michigan the county of residence pays the full cost of the first year of hospitalization for each patient, regardless of the financial ability of the patient or his relatives. The county must pay $10 per month per patient in Minnesota, $6 per month for the indigent in Missouri, the full cost of

maintenance in Nebraska, and half the average per capita cost in New Jersey. The county's monthly payment per patient is $45 in North Dakota, $35 in South Dakota, $16.67 in Tennessee, $12.50 for each patient not being paid for in West Virginia, and $21.67 for State hospital patients in Wisconsin.

Maximum Legal Charges

The maximum legal monthly charges for care and maintenance of patients in public hospitals for the mentally ill in fiscal 1962 are given in table 5. These maximum charges varied from a high of $307 for the patients in one State hospital in Wisconsin to a low of $35 per month in the State hospital in South Dakota. The median charge for all States was $133, but it would have been greater if the unusually high rates for intensive treatment assessed by some States were included. Thirty-seven States have maximum legal charges based on the per patient cost of the previous year or some figure close to it. In the remaining States the maximum charges are fixed figures which are less than the per patient cost, very much less in some States. Some unusual differences between the maintenance costs per resident patient (table 2) and the maximum legal charges (table 5) are apparent for Alaska, Colorado, Connecticut, Illinois, Kansas, Maine, Montana, North Carolina, South Dakota, and Utah.

Certain States also make a distinction between the maximum payment required from the patient himself and that demanded from liable relatives. In Connecticut the maximum charge to liable relatives has been frozen legislatively at $117 per month; the maximum legal charge to the patient in fiscal 1961 was $138, closer to the per capita cost. In Kansas responsible relatives pay a statutory maximum of $52 per month while the patient himself is charged a statutory maximum of $121. In Minnesota the highest amount that liable relatives must pay is 10 percent of the cost per resident patient only when their income exceeds $4,000 per year; the maximum to the patient himself is the full per capita cost. In Maryland liable relatives are required to pay only 25 percent of the per capita cost after the patient has been hospitalized for 30 months, while the patient is accountable for the full cost figure as set by the commissioner of mental hygiene, the State comptroller, and the State budget director. In Ohio the charge to liable relatives is reduced by one half after they have paid support charges for 15 years. A new Illinois law, to be effective January 1, 1964, reduces the maximum charge for liable relatives of the mentally ill and the mentally retarded to $50 per month, with a cutoff after payment has been made for 12 years; the patient himself or his estate is liable for the average maintenance cost per resident in all State hospitals for the mentally ill and the State institutions for the mentally retarded, presently slightly in excess of $123 per month.

Effect of age on charge. In Alaska the maximum legal monthly charge for children was $150 in fiscal 1962 while that for adult patients was $180. In Connecticut liability for payment by relatives ceases after the patient is 21 years old or after payments have been made for 16 years, whichever is later. In Illinois there is no charge at present for patients between the ages of 6 to 17 inclusive, but charges for their care will be reinstated when the new legislation mentioned previously becomes effective on January 1, 1964. Parents are not required to pay for children after they reach 21 in the following seven States: Hawaii, Kentucky, Minnesota, Mississippi, Missouri, West Virginia, and Wisconsin. In addition, parents do not pay for children committed after age 21 in North Carolina.

Percent paying maximum fees. The percent of patients being paid for at the maximum legal charge level either by themselves or by liable relatives varies considerably. Limited responses showed such diversity as "very few" in Missouri, "a small percent" in Nevada, 0.5 percent in Alaska, 2 percent in Arkansas, 3 percent in Mississippi, "an estimated 4 percent" in Massachusetts, 4–5 percent in New Jersey, 5 percent in Idaho, "estimated at 6 percent" in Oklahoma, 7 percent in Minnesota, 11 percent in Nebraska, 14.4 percent in Illinois, 16 percent in Maryland, and 17 percent in New Hampshire.

Liable relatives. Those actually responsible for payment of charges for the hospitalized mentally ill vary to some extent in different States. No information was available for Colorado, Maine, and South Dakota. In the re-

Table 5. Maximum legal monthly charge for care in

State	Maximum legal monthly charge (dollars)	Remarks
Alabama	75	
Alaska	180 or 150	$180 maximum for adults, $150 for children.
Arizona	150	
Arkansas	90	
California	237	
Colorado	95	
Connecticut	117 or 138	$117 statutory maximum for liable relatives; maximum for patient is the per capita cost. See text for effect of age on cutoff.
Delaware	105 to 255	Maximum varies with facilities provided the patient.
Florida	100	
Georgia	86	
Hawaii	180	Parents pay for minor children only.
Idaho	190	
Illinois	81	No charge for children 6 to 17. See text for new legislation.
Indiana	104	Statutory maximum for all is the lowest average per capita cost of the individual State mental hospitals.
Iowa	197 to 250	Maximum is the per capita cost of specific hospital of patient.
Kansas	52 or 121	Fixed by statute at $52 for liable relatives and $121 for patients.
Kentucky	128	Parents pay for minor children only.
Louisiana	93 or 103	Depends on which of the two hospitals is involved. The maximum is $397 during intensive treatment.
Maine	60	
Maryland	152	Charge is reduced to 25 percent of the per capita cost for liable relatives after patient has been hospitalized for 30 months; patient liable for full per capita cost.
Massachusetts	135 or 690	$690 at Massachusetts Mental Health Center for short-term intensive treatment.
Michigan	158 or 600	$600 at University of Michigan psychiatric units.
Minnesota	14.85 or 148.50	Liable relatives pay a maximum of 10 percent of the per capita cost only when their income exceeds $4,000 per year; pay for minor childen only. Patient liable for full per capita cost.
Mississippi	75	Parents pay for minor children only.
Missouri	125 to 180	Maximum is per capita cost of specific hospital of patient.
Montana	60 or 90	Fixed by statute at $90 per month for first 3 months; $60 thereafter.

NOTE: In a few instances where no other data except per diem rates were available, the monthly charge shown

maining 47 States the patient himself is responsible for payments. The husband of the patient is liable for payment in 41 of these States, while the wife is under obligation to pay for her husband in 39 States. Parents must pay charges for as long as the patient is hospitalized in 35 States, and for shorter periods in 12 States (Connecticut, Illinois, Maryland, and Ohio and in the 8 States where parents pay for minor children only). The children of patients are responsible for charges in 34 States. In four States, Delaware, Michigan, New Jersey, and Rhode Island, grandparents are considered liable relatives, and in Delaware and New Jersey even grandchildren must make payment for patients. Furthermore, in Iowa brothers and sisters of patients may be ruled liable by due process of law, and in Montana anyone in the family may be obligated to pay as determined by the court. In New Jersey those not paying the charges levied may be held in contempt of court. In South Dakota the liability of relatives is determined at the county level.

Ability to pay. The ability to pay the charges levied against the patient or his relatives is subject to different interpretations by the diverse jurisdictions concerned in the various States. But there is no uniformity of evaluation of "ability to pay" even within a given State. In Michigan, for example, ability to pay is determined and the amount of the charge is fixed by order of the probate judge making the commitment. Since 92 probate judges make these determinations, there is little consistency in decisions on ability to pay in Michigan. Another example is New Jersey where ability to pay is determined by 21 county adjusters who function autonomously. Ability to pay is determined by a court of law in 14 States, by the department concerned in 16 States, by the hospital in 12 States, and by the county in 5 States. This information was not available

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State	Maximum legal monthly charge (dollars)	Remarks
Nebraska	175 to 181	Maximum is per capita cost of specific hospital of patient; maximum of $530 at Nebraska Psychiatric Institute.
Nevada	150	
New Hampshire	146	
New Jersey	182	
New Mexico	150	
New York	165 or 300	$300 for first 30 days; $165 per month thereafter.
North Carolina	75	Parents do not pay for children committed after age 21.
North Dakota	136	
Ohio	150	Maximum is the general average per capita cost for all hospitals for the mentally ill. Charge to liable relatives reduced by one-half after they have paid support charges for 15 years.
Oklahoma	75	
Oregon	137	
Pennsylvania	107 to 195	Maximum is per capita cost of specific hospital of patient; charge at Eastern Pennsylvania Psychiatric Institute is $540 for first month of intensive treatment, $480 for the second, $300 per month for the third and fourth months, and $150 thereafter.
Rhode Island	120 or 420	$420 per month for first 2 months; $120 per month thereafter.
South Carolina	60	
South Dakota	35	
Tennessee	75	
Texas	117 or 300	$300 for first month; $117 thereafter.
Utah	100	
Vermont	162	
Virginia	105	Maximum is $125 per month or per capita cost, whichever is less.
Washington	165	
West Virginia	210	$210 is the maximum allowed by law. Actual charges are less; parents pay for minor children only.
Wisconsin	61 to 307	Maximum varies with per capita cost of specific hospital of patient; $273 to $307 in the State hospitals; $61 to $150 in the county hospitals; parents pay for minor children only.
Wyoming	125	

is for a 30-day month.

for the remaining three States, Hawaii, Massachusetts, and Missouri.

Such interstate differences in determining agencies lead to considerable variation in payments required from liable relatives having identical income. For example, in response to the question as to the monthly charge that would be assessed against the parents of a patient in their State hospital for the mentally ill, when these parents (no other children in the family) have a total gross income of $500 per month, various States responded as follows: Idaho $130, Colorado $95, Utah $90, Maryland $75 per month for the first 30 months and 25 percent of the per capita cost thereafter, Connecticut $62, Illinois $60, Ohio $54, Maine $45 to $52.50, New York $30 to $40, Nevada $30, West Virginia $30, Minnesota $14.85, Rhode Island "at the discretion of the director of the department of social welfare," Nebraska "whatever the county determines," Massachusetts "case decided on an individual basis," Virginia "no set amount," Arkansas "no set charge."

In 10 States a chart based on either gross or net income is used to determine the amount to be paid, in 35 States no chart is used, and for the remaining 5 (Hawaii, Massachusetts, Missouri, Nebraska, and Vermont) this information was not available. In Connecticut the law specifically states "no finding or billing shall be predicated on a universal table" and Connecticut uses as a guide "The Interim City Worker's Family Budget," a publication of the Bureau of Labor Statistics of the U.S. Department of Labor, which estimates the dollar amount required to maintain a family at a level described as modest but adequate (*10*).

Reimbursement. Data on reimbursement in the individual States are difficult to obtain. The amounts listed in table 6 for percent of maintenance costs reimbursed from payments by patients and liable relatives are chiefly those

Table 6. State data on reimbursement, lien or claims laws, funds for research and training, intensive treatment, day programs, outpatient clinics, and expenditures for community health services, fiscal years 1959, 1960, or 1962

State	Percent of maintenance cost reimbursed from private sources, 1959	Collection under lien or claims law	Funds per patient per year for research and training, 1960	Intensive treatment program, 1960	State day care or day treatment programs, 1962	Number outpatient psychiatric clinics, 1959	Annual State expenditure for community mental health services (thousands), 1960
Alabama	5.3	Yes	[1] $2.76	Yes	No	13	$50
Alaska	3.8	NA	NA	No	No	7	342
Arizona	[2] 11.2	Yes	0	Yes	No	5	13
Arkansas	5.9	Yes	NA	Yes	No	3	NA
California	15.7	Yes	[3] 62.76	Yes	Yes	85	4,853
Colorado	28.4	NA	[1] 105.92	NA	No	17	83
Connecticut	14.9	Yes	[1] 42.69	No	Yes	41	390
Delaware	[2] 16.3	Yes	0	Yes	Yes	7	120
Florida	6.1	NA	[3] 13.62	Yes	No	29	512
Georgia	0	Yes	0	No	No	11	684
Hawaii	9.7	NA	[3] 22.32	No	Yes	7	345
Idaho	8.3	NA	0	NA	No	1	157
Illinois	12.7	Yes	[3] 105.04	Yes	Yes	84	3,413
Indiana	10.4	Yes	[3] 24.19	Yes	No	20	811
Iowa	NA	Yes	[4] 9.97	Yes	NA	16	375
Kansas	12.7	Yes	[1] 133.24	Yes	Yes	21	50
Kentucky	6.7	Yes	[3] 27.55	Yes	No	19	106
Louisiana	.7	Yes	[3] 94.17	Yes	NA	22	302
Maine	10.4	NA	0	No	Yes	8	79
Maryland	3.1	Yes	[4] 1.83	NA	Yes	48	501
Massachusetts	10.3	Yes	[4] 5.74	Yes	Yes	81	1,498
Michigan	[2] 7.3	Yes	[3] 160.96	Yes	Yes	52	2,075
Minnesota	[2] 4.5	Yes	[3] 11.13	Yes	Yes	16	388
Mississippi	3.7	No	[1] 13.09	No	No	5	68
Missouri	11.8	Yes	0	NA	NA	48	NA
Montana	[2] 8.9	NA	NA	Yes	Yes	3	NA
Nebraska	11.3	Yes	[3] 67.65	Yes	NA	10	136
Nevada	14.7	Yes	0	NA	No	3	NA
New Hampshire	15.3	Yes	[4] 1.49	No	No	22	NA
New Jersey	[2] 4.0	Yes	[3] 29.65	Yes	Yes	57	2,856
New Mexico	5.0	NA	[4] 34.53	Yes	NA	2	4
New York	12.1	Yes	[3] 80.79	Yes	Yes	303	10,950
North Carolina	8.5	Yes	[3] 6.40	Yes	Yes	15	145
North Dakota	NA	Yes	NA	Yes	No	1	67
Ohio	15.2	Yes	[3] 79.65	Yes	Yes	61	3,430
Oklahoma	5.8	Yes	NA	NA	No	5	95
Oregon	16.4	Yes	[4] 2.62	No	No	15	NA
Pennsylvania	15.7	Yes	[3] 30.41	No	Yes	103	595
Rhode Island	7.8	NA	0	Yes	No	9	351
South Carolina	4.7	Yes	[1] 15.00	Yes	Yes	6	276
South Dakota	2.3	Yes	[1] 27.26	Yes	NA	3	NA
Tennessee	[2] 9.5	Yes	[3] 13.21	Yes	NA	11	606
Texas	8.6	Yes	[3] 23.11	Yes	Yes	30	389
Utah	NA	NA	0	No	NA	6	53
Vermont	13.0	NA	NA	No	No	6	143
Virginia	10.7	No	[4] 1.42	Yes	Yes	25	851
Washington	[2] 15.3	NA	0	No	Yes	12	NA
West Virginia	8.2	Yes	[3] 4.32	No	NA	8	NA
Wisconsin	3.8	Yes	[1] 7.73	Yes	Yes	21	9,094
Wyoming	8.3	Yes	NA	No	No	6	NA

[1] For training of personnel only. [2] Fiscal 1958 data. [3] For research and training of personnel. [4] For research only.

NOTE: NA means information not available.

calculated for fiscal 1959 (*3*, *5*), although some are for fiscal 1958 (*11*). In certain States where the counties make payments to the State for care of the hospitalized mentally ill, accurate reimbursement statistics require separation of the county payments from the private payments. For example, in New Jersey a total of $9,105,659 was paid by counties and only $1,501,317 was paid by private sources in fiscal 1958. Thus 85.9 percent of all reimbursement for the mentally ill in New Jersey during that year came from counties. Similarly, 66.0 percent of all reimbursement in that year came from counties in Michigan, 48.6 percent from the counties in Minnesota, and 55.2 percent of all money paid in for the care of the mentally ill in Tennessee came from the counties. Reimbursement from patients and liable relatives in these States, therefore, represented only a small part of the total amount of money paid in behalf of the patients in their public hospitals for the mentally ill.

The figures for reimbursement from private sources as percent of total maintenance expenditures for the mentally ill (table 6) show Colorado at the top with 28.4 percent. Louisiana had the second lowest figure (0.7 percent), while Georgia was at the bottom with a value of zero, since Georgia did not charge for the care of the mentally ill until 1960. The median figure for all States was 8.9 percent.

There is little uniformity in reimbursement policies and performances in the various States. Because of the wide variations in per capita costs, maximum legal charges, county payments, and determinations of ability of patients and liable relatives to pay charges even on the basis of identical income, some States have been able to collect considerably more money per patient than others. Figures for costs of operation of reimbursement programs varied from 2.6 percent of collections to a high of 6–7 percent in the few States for which such data were available (*4*).

Collection and Use of Money

The hospitals collect the payments in 18 States, the responsible State departments in 14 States, and the counties in 3 States. This information was not available for the remaining 15 States. In 21 States the charges that are collected are used within the hospital, and in 25 States this money goes into the State's general fund. In Ohio the first $23.83 per month from each patient goes into the general revenue fund and any amount collected in behalf of a patient which is in excess of this amount goes into a rotary fund which is later transferred to the general fund to support the Ohio Bureau of Research and Training. Once these funds are transferred to the general fund, however, they are no longer identified as specific earmarked revenue. In Louisiana the patient fees collected by mental hospitals and by other State-owned or operated hospitals such as general and tuberculosis hospitals are placed in an account for use by the department of hospitals for a program of mental health training and research. In Illinois, all collections for the care of the mentally ill and the mentally retarded go into its unique mental health fund from which appropriations are made for various purposes. In fiscal 1961 a total of $8,707,798 was paid into the Illinois Mental Health Fund.

Unpaid charges. In 35 States unpaid charges accumulate against the patient, and claims against the estates of deceased patients are allowed. In many of these States the charges become automatic liens or preferred claims against the property and estates of the patients. This information was not available for the other 15 States. Even the estates of liable relatives are subject to claims for unpaid charges in 21 States, although two, Delaware and Louisiana, indicate that this is rarely done. In 15 States the difference between the adjusted charge and the full maximum legal charge accrues as a debt against the estate of the patient.

Liens or claims. In 36 States collections can be made under lien or claims laws (table 6). In 23 of these States this provision affects both patients and liable relatives, while in the remaining 13 it is applicable to patients only. In Mississippi and Virginia collection by this means cannot be employed. This information was not available for the remaining 12 (Alaska, Colorado, Florida, Hawaii, Idaho, Maine, Montana, New Mexico, Rhode Island, Utah, Vermont, and Washington).

Statute of limitations. The statute of limitations is applicable for charges owed for varying periods of time in a total of 22 States, but it does not apply in 10. This information was not available for 18: Alaska, Colorado, Florida, Georgia, Hawaii, Indiana, Minnesota, Mississippi, Missouri, Montana, New Hampshire, New Jersey, North Dakota, Pennsylvania, Vermont, Washington, West Virginia, and Wyoming.

Treatment Programs and Research

Intensive treatment programs. Thirty States had intensive treatment programs in fiscal 1960; 14 did not have such programs, and the information was not available for 6 (table 6). In five States the charges for intensive treatment were considerably higher than those for regular care, but in the remaining 25 the charge was the same as for regular care.

Funds allocated for research and training. In fiscal 1960 a total of $33,336,089 was appropriated by 33 States for research or training of personnel, or both, in the areas of mental illness and mental retardation (*3*). The funds allocated by the individual States, expressed on a per resident patient basis, are listed in table 6. Ten States appropriated no special funds for research or training of personnel, and this information was not available for the remaining seven. Since these expenditures for research or training of personnel, or both, in most States involve the mentally ill and the mentally retarded, calculations of per capita expenditures are based on the sum of the average daily resident patient population of each. The highest expenditure was in Michigan, $160.96 per patient per year. The lowest sum of those States with information available was Virginia's, $1.42 per patient per year. The mean value for the 33 States listed was $38.25, and the median was $23.11 per patient per year. Five States accounted for 75.6 percent of all the money appropriated for research or training of personnel, or both, in the areas of mental illness and mental retardation. New York appropriated $9,366,925, or 28.1 percent, of the $33.3 million total; Michigan, 15.5 percent; Illinois, 14.5 percent; California, 8.8 percent; and Ohio, 8.7 percent of the total allocated by all 43 States supplying information. Questions relating to unilateral, duplicatory research by States in the area of mental illness are not within the province of this paper.

Day care and day treatment programs. Day programs represent specialized outpatient services for the mentally ill. The patients live at home and are present in the hospital for a limited time during the day. Such programs have proved helpful for many mental patients although inadequate for those with psychoses. In 1962 a total of 22 States had day care or day treatment programs, most of them in a hospital setting. Nineteen States had no programs and for the other nine States information was not available (table 6).

In 1959 there were a total of 1,409 outpatient psychiatric clinics in all 50 States, operated by State and local governments, Veterans Administration, nonofficial organizations, and independent groups (*12*). The distribution of these clinics is given in table 6.

Expenditures for community mental health services. Table 6 shows the State expenditures for community mental health services in fiscal 1960. Such mental health services as treatment, post-treatment care, consultation, preventive measures, and others may be carried out successfully in community health centers. The total amount spent by 40 States was $47,292,126 (*3*). Ten States made no specific disbursements in this area. Four States—New York, Wisconsin, California, and Ohio—accounted for 60.1 percent of the total. Eight States (these four plus Illinois, New Jersey, Michigan, and Massachusetts) spent 80.7 percent of the entire expenditure by all States for community mental health services in the United States in fiscal 1960.

Personnel, Admissions, and Discharges

Patient to personnel ratios. At the end of fiscal 1962 there were 185,355 full-time personnel caring for 514,211 average daily resident patients in the 285 public mental hospitals in all the States (*7*). The patient to personnel ratios, indicating the number of patients per full-time employee in fiscal 1962, are included in table 2. Kansas had the best ratio, 1.5; Georgia the poorest, 4.7 patients per full-time employee. For all 50 States the median was

2.7 patients for each full-time employee. Expressed reciprocally, the figures indicating the number of full-time employees per 1,000 mentally ill resident patients would show a high of 676 for Kansas and a low of 215 for Georgia. The median for the nation was 368 full-time employees per 1,000 resident patients. Further breakdown into patient to personnel ratios specifically for psychiatrists, physicians, dentists, psychologists, nurses, therapists, social workers, or other professional employees as well as for several categories of nonprofessional personnel can be calculated from data available elsewhere (*5*).

Age of first admissions and residents. Table 7 gives the distribution by age groups of first admissions and resident patients in public mental hospitals for fiscal years 1951 through 1960. As a basis for comparison, the distribution by age groups of the general population of the United States in fiscal 1960 is also shown. Those patients under 15 years of age at the time of first admission to public mental hospitals represented 1.7 percent of all first admissions during the 10-year period and never exceeded 2.6 percent of all first admissions in any single year. But this age group (under 15 years) comprised 31.0 percent of the general population of the country. The percent of resident patients in public hospitals for the mentally ill who were less than 15 years of age never exceeded 0.8 percent of the total resident patient population in any year during the 10-year period, an even greater divergence from the 31.0 percent representing this age group in the general population. For the higher age groups the situation is reversed. An average of 13.7 percent of all first admissions and 11.7 percent of all resident patients were 75 years of age or older, but in 1960 only 3.1 percent of the general population of the nation was 75 years old or older.

Discharge and death rates. The discharge rates given in table 1 for all public mental hospitals are for direct discharges from the hospitals proper. They increased from 9.2 percent of the average daily resident patient population in fiscal 1952 to 24.5 percent in fiscal 1962. The figures for percent net live releases from hospitals in all States in fiscal 1962 shown in table 2, however, are for percent discharges from the hospital books and represent direct discharges from the hospitals plus discharges from extramural care. The comparable change in percent net live releases from hospital books was from 20.6 percent of the average daily resident patient population in fiscal 1952 (*8*) to 44.3 percent in fiscal 1962 (*7*).

The net percent of patients released alive from the books of the public mental hospitals in all States in fiscal 1962 (table 2) varied from a high of 110.0 percent in Iowa, indicative of

Table 7. Analysis by age groups of first admissions and resident patients in public hospitals for the mentally ill, fiscal years 1951–60

Age group (years)	First admissions		Resident patients		Percent of total population in U.S. in fiscal 1960
	Percent of total	Range of 10 annual figures	Percent of total	Range of 10 annual figures	
Under 15	1. 7	0. 5–2. 6	0. 5	0. 3–0. 8	31. 0
15–24	10. 8	9. 6–13. 1	3. 4	3. 0–4. 0	13. 4
25–34	17. 2	15. 8–18. 4	9. 9	9. 0–11. 2	12. 8
35–44	17. 6	15. 5–18. 9	16. 6	14. 8–18. 8	13. 5
45–54	14. 8	13. 5–15. 4	20. 9	20. 5–21. 2	11. 4
55–64	11. 4	10. 5–12. 7	19. 7	18. 8–20. 7	8. 7
65–74	12. 2	10. 6–16. 6	16. 6	15. 2–17. 4	6. 1
75–84	10. 5	9. 8–11. 9	9. 3	8. 0–10. 2	3. 1
85 and over	3. 2	2. 9–3. 6	2. 4	1. 7–2. 7	
Age unknown	. 6	. 4–1. 1	. 7	. 3–1. 4	
Total	100. 0		100. 0		100. 0
Mean age	48. 2 years		53. 6 years		31. 8 years
Number of persons	1, 099, 887		4, 029, 453		179, 323, 000

discharge of many first admissions during the year, to a low of 19.9 percent in Pennsylvania (*7*). The median for all 50 States was 56.2 percent. Preliminary data from 14 member States of a group joined in a Model Reporting Area on Mental Health Statistics showed that 85 percent of the net releases in a given year were patients whose length of hospital stay was less than 1 year (*7*).

For deaths in hospitals in fiscal 1962, expressed as percent of the average daily resident patient population, the figures varied from a high of 14.0 percent in Delaware and Rhode Island to a low of 2.5 percent in Alaska. The median for the 50 States was 10.2 percent.

Summary

Since 1955 the total number of resident patients in all public hospitals for the mentally ill has been declining slightly every year, while total admissions have increased more than 52 percent and net releases have increased more than 82 percent in the same period. Average maintenance expenditures per resident patient for all States increased more than 77 percent in this 8-year period. In fiscal 1962 the maintenance expenditures per resident patient in the individual States varied from $83 to $430 per month and the median was $167. The highest disbursements per resident patient were not made by States with the greatest income. The total outlay by individual States for maintenance of patients in their State hospitals for the mentally ill in fiscal 1961 varied from a high of 6.3 percent of their general revenue to a low of 0.8 percent, the median being 2.3 percent.

In 12 States the county of residence must pay the State sums varying from $6 per month per resident patient to the full cost of care in the State hospitals for the mentally ill. Maximum legal monthly charges to patients and their liable relatives varied from $35 to $307, and the median charge for all States was $133. Determination of ability to pay and the magnitude of the charges assessed against family groups with identical income vary greatly in the 50 States. The statute of limitations applies to charges owed for varying periods of time in at least 22 States. That part of the maintenance cost reimbursed by payments from patients and their liable relatives in 1959 varied from 0 to 28.4 percent, the median for all States being 8.9 percent.

At least 30 States had intensive treatment programs in 1960. Although 33 States appropriated more than $33 million for research or training, or both, in 1960, 5 States accounted for 75.6 percent of the entire amount. Forty States spent in excess of $47 million for community mental health services in 1960, but 4 of these accounted for more than 60 percent of the total sum spent by all 50 States.

An analysis of all first admissions from fiscal 1952 through fiscal 1960 showed that only 1.7 percent were of persons less than 15 years of age and that the mean age was 48.2 years. During the same period only 0.5 percent of the resident patients were less than 15 years of age and the mean age for residents was 53.6 years. Direct discharges from the hospitals increased from 9.2 percent of the average daily resident patient population in 1952 to 24.5 percent in fiscal 1962. Net releases from the hospital books, which include discharges from extramural care, rose from more than 20 percent of the average patient population in 1952 to more than 44 percent in fiscal 1962. Deaths in the hospitals varied from 8.4 percent in 1952 to 9.5 percent in 1962. At the end of fiscal 1962 there were 185,355 full-time personnel caring for 514,211 average daily resident patients in 285 public mental hospitals, an overall ratio of 2.8 patients per full-time employee.

The data reported in this paper, important not for making particular interstate comparisons but for presenting the national picture, warrant continuous study and report. Suggested areas of need for detailed exploration are length of stay of resident patients, estimated period of hospitalization of current first admissions, and maximum legal charges and reimbursement.

REFERENCES

(*1*) Eagle, E.: Charges for care and maintenance in State institutions for the mentally retarded. Amer J Ment Defic 65: 199–207, September 1960.

(*2*) National Association of Reimbursement Officers, Committee on Reports and Publications: Report concerning the mentally ill for fiscal

1959–60. Pontiac, Mich., August 1960. Mimeographed.
(3) Council of State Governments: State action in mental health, 1958–59. Chicago, April 1960.
(4) Commonwealth of Massachusetts, Legislative Reference Bureau: Reimbursement for the care of mental patients. Boston, Feb. 19, 1962.
(5) U.S. Public Health Service, National Institute of Mental Health: Patients in mental institutions, 1952–1960. Part II. Public hospitals for the mentally ill. PHS Publication Nos. 483, 495, 523, 574, 632, 715, 781, 820 and 963. U.S. Government Printing Office, Washington, D.C., 1954–1963.
(6) U.S. Public Health Service, National Institute of Mental Health: Provisional data on patients in public hospitals for the care of the mentally ill, 1960 and 1961. Mental Health Statistics, Current Reports. Series MHB–H–6. U.S. Government Printing Office, Washington, D.C., January 1962.
(7) U.S. Public Health Service, National Institute of Mental Health: Provisional patient movement and administrative data, public mental hospitals, United States 1961 and 1962. Mental Health Statistics, Current Reports. Series MHB–H–7. U.S. Government Printing Office, Washington, D.C., January 1963.
(8) U.S. Department of Health, Education, and Welfare: HEW indicators. U.S. Government Printing Office, Washington, D.C., November 1962.
(9) U.S. Bureau of the Census: Compendium of State government finances in 1961. Washington, D.C., 1962.
(10) Lamale, H. H., and Stotz, H. S.: The interim city worker's family budget. Report No. 2346. Monthly Labor Rev 83: 785–808, August 1960.
(11) National Association of Reimbursement Officers: Report of Committee on Reports and Publications. Hartford, Conn., July 6, 1959. Mimeographed.
(12) U.S. Public Health Service, National Institute of Mental Health: Gains in outpatient psychiatric services. Public Health Rep 75: 1092–1094, November 1960.

Enzyme Center

A center for the isolation and purification of naturally occurring biopolymers and enzymes that are not now available in the state of purity or quantity needed for biomedical research has been established at Tufts University School of Medicine through a contract between the university and the Public Health Service. The center's services will be available to research centers primarily in New England and also throughout the country.

Dr. Alton Meister, head of the department of biochemistry, Tufts University School of Medicine, stated that research in many areas of biology and medicine can be accelerated by making available large and suitable quantities of purified biologicals. For example, knowledge of the relationship between molecular structure of an enzyme and its function might be furthered if enough of the pure enzyme were available for determinations of molecular weight, amino acid composition, amino acid sequence, and studies on the tertiary and quaternary configurations of the protein.

"At present," Dr. Meister said, "as much as three-quarters of a researcher's time may be spent in preparing the materials he needs to carry out his studies. Moreover, he is limited by ordinary laboratory equipment in the amounts of a given enzyme he can prepare. As a consequence, he tends to use the limited amounts he produces only on those projects that are fairly sure to yield results. By applying engineering knowledge and modern production equipment to produce such materials in a center set up for that purpose, the research scientist will have more time to do his research and much more material to work with, even enough to use on 'long-shot' studies which occasionally turn out to be of major importance."

WELFARE CHIEF URGES STEPS TO PREVENT ALCOHOL ADDICTION

The following statement was made by Dr. Ellen Winston, Commissioner, Welfare Administration, Department of Health, Education, and Welfare, to the Conference on Alcoholism in Washington, D.C., July 9, 1963.

Alcoholism is a familiar problem to State and local public welfare staffs who daily see the direct and indirect effects in relation to their caseloads. We see the social and economic problems that arise from or are accentuated by excessive drinking. We know that:

- Alcoholism is a continuing factor in the dependency of many families and individuals.
- Alcoholism is responsible for cases of serious abuse and neglect of children.
- Alcoholism contributes importantly to family breakdown and to problems of juvenile delinquency.
- Alcoholism complicates the problems of caring for and protecting older persons.
- Alcoholism complicates and makes more difficult the problem of obtaining adequate help for low-income people. It is much more likely to lead to public censure when the victim is dependent on public aid than when he is financially independent.
- Many treatment resources are geared primarily to the middle class rather than to those in low-income groups.
- Scattered data indicate extensive drinking among youth, but drunkenness is primarily an adult problem.

Resources

Through the programs of the Welfare Administration administered by State and local welfare departments, there are, however, substantial resources that are being used, or could be used, to help combat the effects of alcoholism.

1. Public assistance payments help to care for the families of persons who are so disabled by alcoholism that they are unable to support their children or who desert their families as a result of alcoholism.
2. Many individuals have been so disabled as a result of alcoholism that they receive aid to the permanently and totally disabled.
3. Medical care programs provide for indigent alcoholics and their families as well as for persons with other problems.
4. Casework services are provided the alcoholic and, more importantly, his family. (Public welfare workers are available in every county of the United States.)

Preventive Action

Preventive programs need to be greatly strengthened, and several recent developments should enable public welfare agencies to contribute to such programs. For example, as a result of the 1962 amendments, we anticipate smaller caseloads in public assistance. This could make it possible for welfare workers to undertake more intensive work with families and to make more effective use of community resources for helping the alcoholic.

With expanding child welfare programs to provide for trained social work staff in all counties by 1975, more protective services can be given children in their own homes.

Increasing emphasis on both inservice training programs and graduate study offers opportunity for more specialization in the field of prevention and treatment of alcoholism.

Demonstration and research projects need to be developed with emphasis on preventive and corrective measures. Particular opportunity is offered for constructive demonstrations at the county level.

A comprehensive study to determine the actual incidence of alcoholism as a contributing factor in the need for public assistance appears to be long overdue. The recent study by the American Public Welfare Association of closed cases in the aid to families with dependent children program showed alcoholism as a specific adult behavior problem in 14 percent of all cases, 16 percent among urban white families.

While treatment programs are obviously essential, I would hope that the major effort of the Welfare Administration in this area can be devoted to preventive services, to helping reduce the proportionate size and major effects of alcoholism as a serious social problem.