

# STATE MENTAL HOSPITALS

REPRINT FROM THE

BIENNIAL REPORT OF THE JOINT STATE GOVERNMENT COMMISSION  
GENERAL ASSEMBLY OF THE COMMONWEALTH OF PENNSYLVANIA  
1959 - 1961

In view of constantly changing techniques for treatment of the mentally ill, the Executive Committee directed a study of the expenditures and costs of State mental hospitals.

The 17 Commonwealth-operated mental hospitals have a total of 43,919 beds, of which 30,457 are "suitable," 10,641 are "unsuitable," and 2,821 are "excess."<sup>19</sup> Twenty private mental hospitals with a total bed capacity of 2,185, of which 666 are "suitable" and 1,519 "unsuitable," are located within the Commonwealth. Federal hospitals for mentally ill veterans have a bed capacity of 3,618.<sup>20</sup> Inpatient facilities for the mentally ill are available at 19 general hospitals which provide 1,278 beds for mental patients, of which 885 are "suitable" and 393 are "unsuitable." State financial aid is provided

to 20 outpatient psychiatric clinics, and special facilities for research, training, and teaching are available at the Western State Psychiatric Institute in Pittsburgh, leased to the University of Pittsburgh, and the Eastern Pennsylvania Psychiatric Institute in Philadelphia, operated by the Department of Public Welfare. In summary, State-owned mental hospitals are not the only facilities for the mentally ill in Pennsylvania, but, in terms of capacity, they far outrank all other facilities combined.

Table 1 shows for the biennia 1947-1949 through 1957-1959 total expenditures,<sup>21</sup> institutional receipts and net Commonwealth expenditures for the State mental hospitals. Over the period under review, total expenditures increased from \$46.6 million to \$114.2 million, or 145 percent. Net Commonwealth expenditures increased from \$41.0 million to \$97.5 million, or 138 percent. Institutional receipts—that is, patient charges—accounted for 15 percent of total expenditures in 1957-1959 as compared with 12 percent in 1947-1949.<sup>22</sup>

<sup>19</sup>"Suitable" beds are defined by the Pennsylvania Department of Public Welfare as "those housed in fire resistive construction in which frames, floors, wall, permanent partitions and roof are built of stone, brick, steel, or reinforced concrete; i.e., without any wood except doors or trim." "Unsuitable" units are those not in such construction. "Excess" beds are beds located in space not designed as patients' quarters. Unless otherwise noted, all data were furnished by the Department of Public Welfare.

<sup>20</sup>American Hospital Association, *Hospitals, Guide Issue*, Journal of the American Hospital Association, Part Two (August 1960).

<sup>21</sup>Total expenditures consist of disbursements from appropriations made to the Department of Public Welfare for operating expenses and current capital accounts and do not include funds spent at State mental hospitals by the General State Authority for additions, betterments and replacements which have amounted to about five percent of total expenditures.

<sup>22</sup>An insignificant portion of institutional receipts is accounted for by receipts other than patient charges.

Table 1

## EXPENDITURES AND RECEIPTS OF STATE MENTAL HOSPITALS 1947-1949 THROUGH 1957-1959

Biennium	Total Expenditures	Institutional Receipts		Net Commonwealth Expenditures	
		Amount	Percent of Total	Amount	Percent of Total
(1)	(2)	(3)	(4)	(5)	(6)
1947-1949	\$46,626,429	\$5,631,141	12%	\$40,995,288	88%
1949-1951	54,065,780	6,816,699	13	47,249,081	87
1951-1953	68,578,036	8,866,221	13	59,711,815	87
1953-1955	84,993,455	11,241,105	13	73,752,350	87
1955-1957	100,755,118	13,030,977	13	87,724,141	87
1957-1959	114,200,658	16,747,756	15	97,452,902	85

Table 2 shows the location of the 17 State mental hospitals, their current service areas, and the average number of patients at each hospital<sup>23</sup> during the biennia 1947-1949 and 1957-1959. Generally speaking, admissions to mental hospitals are limited to residents of their service areas, except for Farview, Norristown, Mayview and Philadelphia. Farview is an institution for criminally insane males and receives patients from the entire state; Norristown, Mayview and Philadelphia admit tubercu-

<sup>23</sup> Average number of patients is computed by the Department of Public Welfare by averaging patient counts taken at the beginning, middle and end of a biennium.

losis patients from outside their service areas.

Examination of Table 2 shows that between 1947-1949 and 1957-1959 the average number of patients in all mental hospitals increased from 35,539 to 38,744, or 9 percent. In 14 of the 17 hospitals, average patient population increased between the two biennia, with the three smallest hospitals showing the largest proportionate increases. In both periods, hospitals varied markedly in size; patient population ranged from 287 to 6,015 in 1947-1949 and from 754 to 6,430 in 1957-1959.

State mental hospital expenditures are customarily

Table 2  
LOCATION, SERVICE AREA, AND AVERAGE NUMBER OF PATIENTS  
STATE MENTAL HOSPITALS

State Mental Hospital	County	Counties in Service Area	Average Number of Patients	
			1947-1949	1957-1959
(1)	(2)	(3)	(4)	(5)
Allentown	Lehigh	Carbon, Lehigh, Monroe, Northampton, and part of Bucks	2,002	1,778
Clarks Summit	Lackawanna	Bradford, Lackawanna, Pike, Wayne	1,308	1,338
Danville	Montour	Clinton, Columbia, Lycoming, Montour, Northumberland, Susquehanna, Snyder, Sullivan, Tioga, Union, Wyoming, and part of Schuylkill	2,408	2,641
Dixmont	Allegheny	Beaver, Lawrence	981	957
Embreeville	Chester	Chester, Delaware	287	777
Farview	Wayne	All counties	1,171	1,338
Harrisburg	Dauphin	Adams, Cumberland, Dauphin, Franklin, Fulton, Juniata, Lancaster, Mifflin, Perry, York	2,447	2,660
Holidaysburg	Blair	Blair, Bedford, Centre, Huntingdon, and part of Cambria	359	763
Mayview	Allegheny	Part of Allegheny (Pittsburgh)	3,046	3,191
Norristown	Montgomery	Montgomery, part of Bucks, and part of Philadelphia	4,310	4,491
Philadelphia	Philadelphia	Part of Philadelphia	6,015	6,430
Retreat	Luzerne	Luzerne	1,112	1,124
Somerset	Somerset	Fayette, Somerset	443	754
Torrance	Westmoreland	Armstrong, Butler, Greene, Indiana, Washington, Westmoreland, and part of Cambria	2,614	2,999
Warren	Warren	Cameron, Clarion, Clearfield, Crawford, Elk, Erie, Forest, Jefferson, McKean, Mercer, Potter, Venango, Warren	2,671	2,992
Wernersville	Berks	Berks, Lebanon, and part of Schuylkill	1,869	1,771
Woodville	Allegheny	Part of Allegheny (excluding Pittsburgh)	2,496	2,740
All Hospitals			35,539	38,744

presented in terms of *average biennial expenditure per patient* which is obtained by dividing total expenditures by average number of patients. This measure, however, is of limited usefulness in evaluating expenditures, since it does not reflect patient turnover. The average number of patients is not indicative of the number of individual patients who have received care and treatment during the period. In 1957-1959 average number of patients as a proportion of the number of patients treated varied among hospitals, ranging from 45 to 79 percent. *Average biennial expenditure per patient treated*<sup>24</sup> relates total expenditures to the number of individual patients, regardless of length of stay, who were treated during the biennium.

Table 3 shows, for 1947-1949 and 1957-1959, average biennial expenditure per patient and average biennial expenditure per patient treated for all mental hospitals

<sup>24</sup> Average biennial expenditure per patient treated is computed by dividing total biennial expenditures by the number of patients treated defined as the number in the institution at the beginning of the biennium plus the number admitted during the biennium.

except Farview.<sup>25</sup> For all hospitals combined, average biennial expenditure per patient increased from \$1,302 to \$2,943, or 126 percent, and average biennial expenditure per patient treated increased from \$946 to \$1,988, or 110 percent. The smaller increase in average biennial expenditure per patient treated indicates an increase in the over-all patient turnover rate. Individual hospitals showed strikingly different relationships between average biennial expenditure per patient and average biennial expenditure per patient treated. For instance, in 1957-1959, Hollidaysburg and Embreeville had above-average biennial expenditures per patient but below-average biennial expenditures per patient treated. Again, in 1957-1959, Philadelphia State Hospital had the lowest average biennial expenditure per patient, but its average biennial expenditure per patient treated exceeded that of seven other institutions.

In addition to the changes in average biennial expenditure per patient and average biennial expenditure per patient treated, the period under review has been characterized by significant changes in the relative im-

<sup>25</sup> Subsequent analyses of State mental hospitals apply to all hospitals except Farview, which is excluded because of its atypical patient population.

Table 3  
 AVERAGE BIENNIAL EXPENDITURE PER PATIENT AND  
 AVERAGE BIENNIAL EXPENDITURE PER PATIENT TREATED  
 1947-1949 AND 1957-1959

State Mental Hospital	Average Biennial Expenditure Per Patient		Average Biennial Expenditure Per Patient Treated	
	1947-1949	1957-1959	1947-1949	1957-1959
(1)	(2)	(3)	(4)	(5)
All Hospitals	\$1,302	\$2,943	\$ 946	\$1,988
Allentown	1,266	3,549	850	2,485
Clarks Summit	1,209	3,300	783	2,104
Danville	1,474	2,849	1,058	1,691
Dixmont	1,618	3,114	1,499	2,465
Embreeville	1,738	4,104	1,279	1,858
Harrisburg	1,161	2,659	845	1,791
Hollidaysburg	1,253	3,230	803	1,897
Mayview	1,470	3,025	966	1,916
Norristown	1,203	2,912	896	2,055
Philadelphia	1,138	2,570	958	2,001
Retreat	1,392	3,443	1,065	2,320
Somerset	1,207	3,448	1,023	2,282
Torrance	1,186	2,810	814	2,020
Warren	1,340	3,013	857	1,803
Wernersville	1,295	2,801	879	1,922
Woodville	1,612	2,917	1,219	2,059

portance of treatment expenditures and household expenditures. Treatment expenditures include the compensation of physicians, nurses, technicians, attendants, and the cost of drugs. Household expenditures include all other expenses incidental to the operation of a hospital, such as food, supplies, plant maintenance and administration.

Chart I shows that, for every hospital, between 1948 and 1958 the percentage increase in treatment expenditures per patient week exceeded the percentage increase in other expenditures per patient week. The increase in the relative importance of treatment expenditures is brought into prominence by Chart II which shows treatment expenditures as a percent of total expenditures for 1948 and for 1958. Examination of Chart II shows that in 1948 the relative importance of treatment expenditures varied greatly from hospital to hospital, ranging from about 25 percent at Somerset and Dixmont to over 40 percent at Danville and Warren. In 1958, treatment expenditures as a percent of total expenditures exceeded 40 percent in all institutions and the variation among institutions was much less pronounced than in 1948.

Other factors remaining constant, higher treatment expenditures, if not due solely to price increases, should be

reflected in greater discharge rates. Between 1947-1949 and 1957-1959, the discharge rate<sup>26</sup> for all hospitals combined increased from 16.0 percent to 21.0 percent.<sup>27</sup> In other words, for the system as a whole, the chances of a patient being discharged improved about one-third over the past decade.

Table 4 shows, for individual hospitals, treatment expenditures per patient week for 1958 and discharge rates and distribution of patients by diagnostic categories for 1957-1959. Treatment expenditures per patient week ranged from \$9 to \$17 and discharge rates ranged from 6.5 percent to 45.1 percent. To facilitate a comparison of discharge rates and treatment expenditures, the data in columns (2) and (3) of Table 4 have been plotted in Chart III.

<sup>26</sup> Discharge rate is computed by dividing the number of patients discharged during a biennium by the number treated, exclusive of those who died.

<sup>27</sup> For the system as a whole, patient composition by diagnostic categories, one of the major factors affecting discharge rates, does not appear to have changed materially over the period. In 1947-1949, patient distribution by major diagnostic categories was: acute and chronic brain syndromes 18.5 percent, psychotic disorders 66.1 percent, mental deficiency 9.8 percent, other 5.6 percent. Comparable percentages for 1957-1959 were 22.6 percent, 64.6 percent, 9.3 percent, and 3.5 percent, respectively.

Table 4

TREATMENT EXPENDITURES PER PATIENT WEEK, DISCHARGE RATES AND DIAGNOSTIC CLASSIFICATION OF PATIENTS IN PENNSYLVANIA STATE MENTAL HOSPITALS

State Mental Hospital	Treatment Expenditures Per Patient Week 1958	Discharge Rate 1957-1959	Diagnostic Categories, 1957-1959			
			Acute and Chronic Brain Syndromes	Psychotic Disorders	Mental Deficiency	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Allentown	\$14	15.0%	21%	66%	9%	4%
Clarks Summit	16	14.4	26	57	12	5
Danville	14	37.3	22	63	11	4
Dixmont	14	6.5	19	70	8	3
Embreeville	17	45.1	28	60	8	4
Harrisburg	13	17.7	20	66	9	5
Hollidaysburg	14	23.9	28	59	10	3
Mayview	13	22.7	30	61	7	2
Norristown	12	18.5	18	68	9	5
Philadelphia	9	11.4	23	66	9	2
Retreat	14	25.3	21	66	11	2
Somerset	15	17.4	28	54	13	5
Torrance	11	17.5	23	66	9	2
Warren	13	31.7	21	69	6	4
Wernersville	12	21.4	22	62	13	3
Woodville	13	17.3	28	58	11	3

Chart I.

PERCENTAGE INCREASES IN TREATMENT EXPENDITURES AND  
OTHER EXPENDITURES PER PATIENT WEEK  
PENNSYLVANIA STATE MENTAL HOSPITALS  
1948-1958

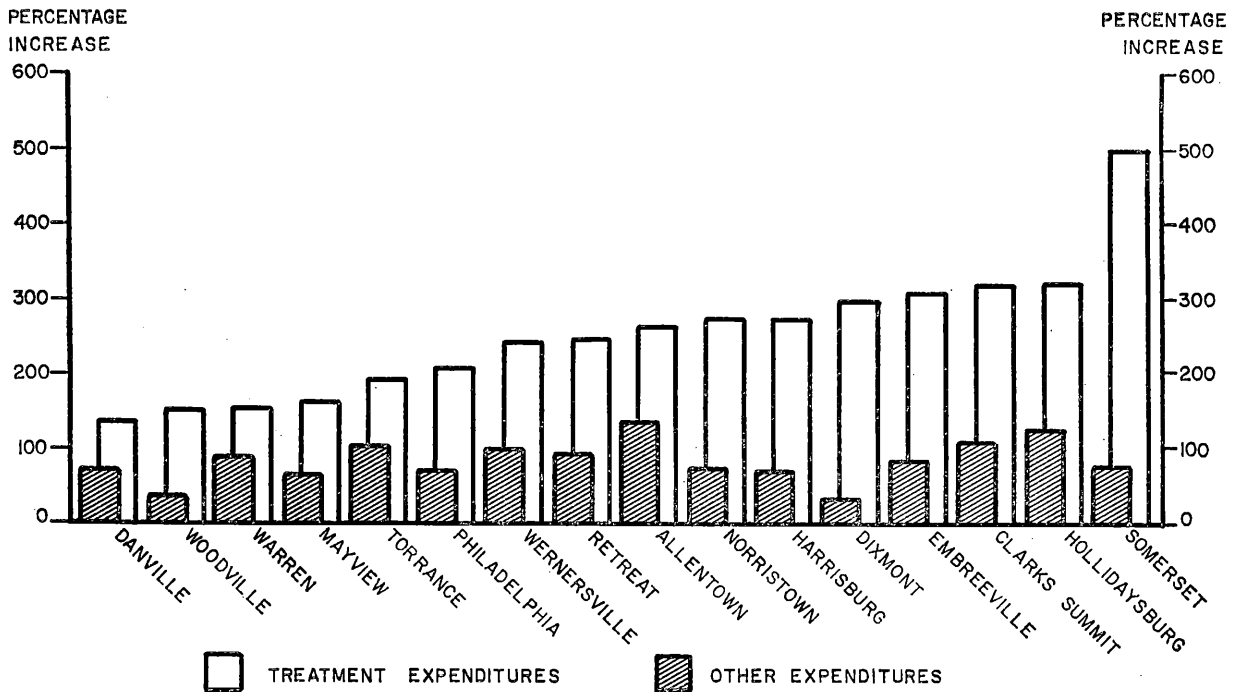
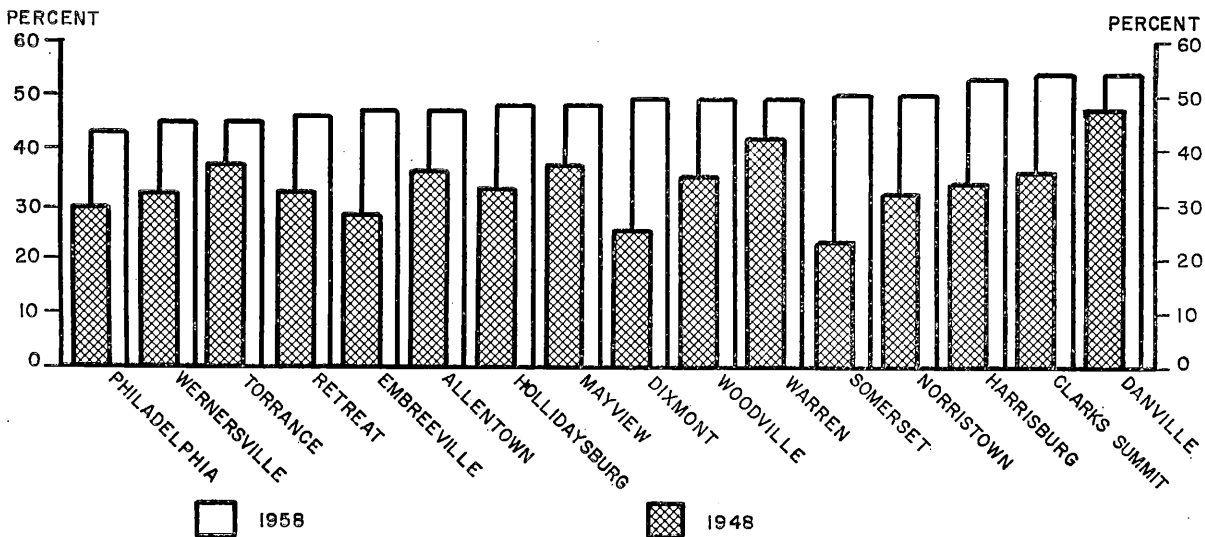


Chart II

TREATMENT EXPENDITURES AS PERCENT OF TOTAL EXPENDITURES  
PENNSYLVANIA STATE MENTAL HOSPITALS  
1948 AND 1958



### Chart III

## DISCHARGE RATES (1957-1959) AND TREATMENT EXPENDITURES (1958) PENNSYLVANIA STATE MENTAL HOSPITALS

[Discharge rate equals number discharged per 100 treated, exclusive of deaths]

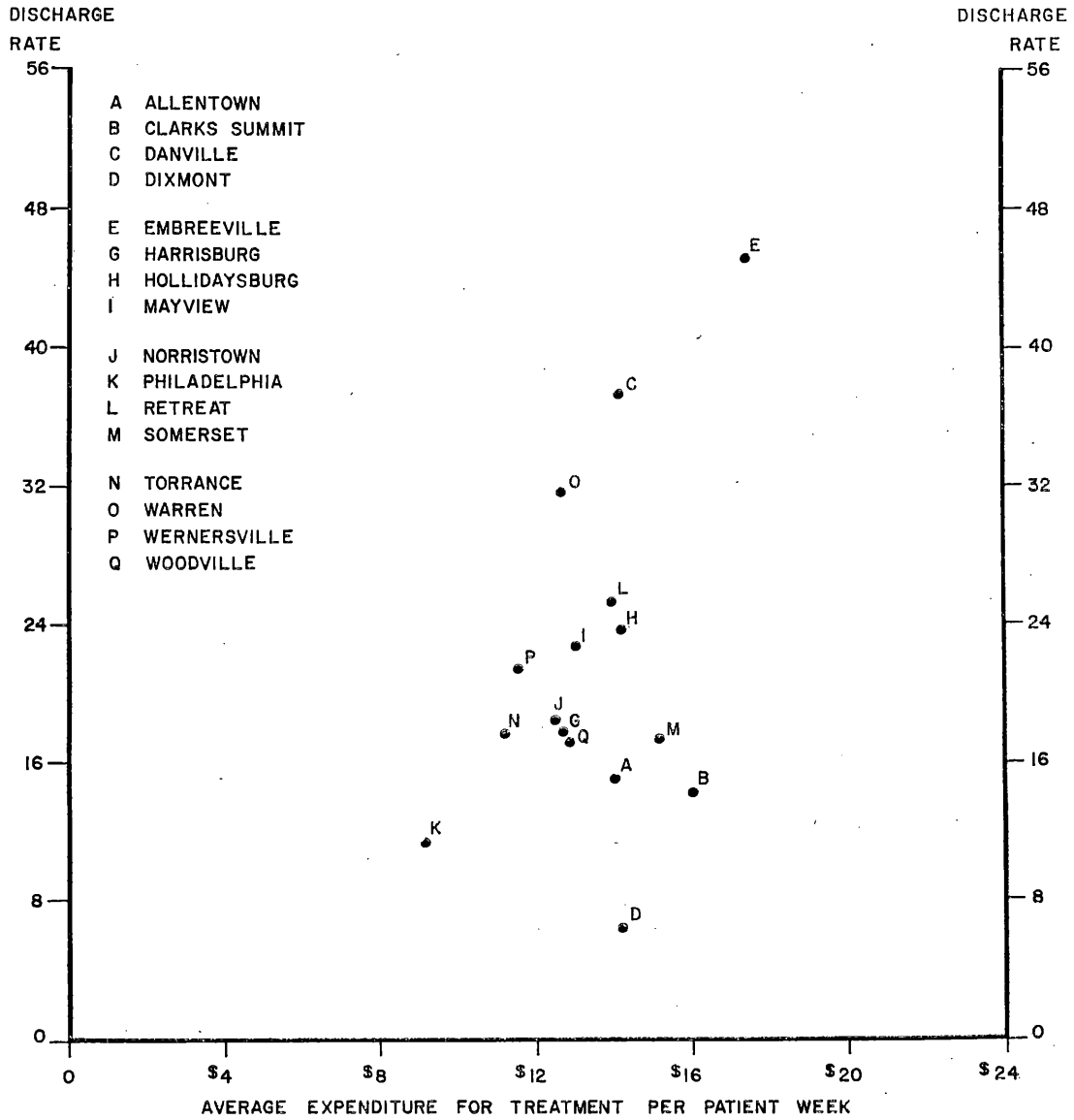


Chart III shows that 13 hospitals with average expenditures per patient week ranging from \$12 to \$16 had discharge rates ranging from 6 percent to 37 percent. These data suggest that among individual hospitals there is little, if any, consistent association between level of treatment expenditure and discharge rate. Under the circumstances, variations in treatment expenditure and discharge rate must be attributable to composition of patient population, hospital size, or medical and administrative policies.

Examination of the data presented in Table 2, column (5), and Table 4 shows that hospitals of comparable size, comparable patient composition in terms of major diagnostic categories and comparable treatment expenditures have markedly different discharge rates. For example, Danville State Hospital and Harrisburg State Hospital, with similar patient composition, average patient populations of 2,641 and 2,660, and average treatment expenditures per patient week of \$14 and \$13, respectively, have discharge rates of 37 percent and 18 percent. Hollidaysburg State Hospital, with an average patient population of 763, and Somerset State Hospital, with a comparable patient composition and an average patient population of 754, have comparable treatment expenditures, \$14 and \$15, respectively, and different discharge rates, 24 percent and 17 percent, respectively. Torrance State Hospital and Warren State Hospital, of virtually identical size, with treatment expenditures of \$11 and \$13, and similar patient composition, had discharge rates of 18 percent and 32 percent, respectively.

Because of the observable variations in discharge rates, biennial expenditures do not facilitate evaluation of the total cost incurred to effect a patient release. An estimate of this cost, which will be referred to as *total expectable cost per patient*, may be obtained by dividing the total expenditures for a biennium by the number of patient releases (discharges plus deaths) during the biennium.<sup>28</sup>

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<sup>28</sup> Total expectable cost per patient may also be expressed as the quotient obtained by dividing average biennial expenditure per patient treated by the probability of a patient release; the probability is computed by dividing the number of releases in a biennium by the number of patients treated in a biennium. Total expectable cost per patient would, if the experience of a given biennium were continued indefinitely, be equal to actual total cost per patient released.

For all mental hospitals combined, total expectable cost per patient increased from \$3,896, based on 1947-1949 experience, to \$6,539, based on 1957-1959 experience, an increase of 68 percent. Total expectable cost per patient is shared by the Commonwealth and the patient.<sup>29</sup>

*Total expectable charge per patient*, that is, the portion of total expectable cost borne by the patient,<sup>30</sup> increased from \$445, based on 1947-1949 experience, to \$929, based on 1957-1959 experience. Since patient charges are determined by reference to income, changes in total expectable charge per patient should be evaluated in terms of changes in income levels. Over the period under review, per capita income in Pennsylvania increased from \$1,416 to \$2,168. Consequently, patient effort (the ratio of expectable patient charge to income) increased 36 percent.

Total expectable cost per patient and total expectable charge per patient for each hospital, based upon 1957-1959 experience, are shown in columns (2) and (3) of Table 5. Total expectable cost per patient ranges from \$3,579 in the case of Embreeville to \$16,555 for Dixmont. Variations in total expectable cost per patient among institutions arise from variations in biennial expenditure levels and variations in the probability of a patient release. However, the variation in the probability of release accounts for about two-thirds of the variation in total expectable cost per patient. Total expectable charge per patient ranges from \$441 at Danville to \$1,997 at Dixmont. Variations among institutions in total expectable charge per patient arise from variations in average bi-

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<sup>29</sup> Annual patient charge is determined by the annual income of the patient or his legally responsible relatives, taken in conjunction with the standards of the Department of Public Welfare and administrative implementation of these standards by the Department of Revenue. For a patient in a given hospital, the maximum annual charge is the average per patient expenditure of that hospital for the preceding year.

<sup>30</sup> Total expectable charge per patient is obtained by dividing total institutional receipts in a biennium by the number of patient releases during a biennium.

ennial patient charge<sup>31</sup> (shown in column (4)) and variations in the probability of release. The variation contributed by the probability of release accounts for

<sup>31</sup> Administrative factors aside, variations among institutions in average biennial patient charge are attributable to the expenditure per patient at the institution and the economic position of the patients at the institution and their legally responsible relatives.

about 50 percent of the variation among institutions in total expectable charge per patient.

The evidence presented demonstrates that, notwithstanding a uniform State-wide standard which governs patient charges, similarly circumstanced individuals may expect to pay varying amounts in total charges, depending upon the hospital service area in which they live.

**Table 5**  
**TOTAL EXPECTABLE COST PER PATIENT, TOTAL EXPECTABLE CHARGE PER PATIENT, AND AVERAGE BIENNIAL PATIENT CHARGE**  
**1957-1959**

<i>State Mental Hospital</i>	<i>Total Expectable Cost Per Patient</i>	<i>Total Expectable Charge Per Patient</i>	<i>Average Biennial Patient Charge<sup>1</sup></i>
(1)	(2)	(3)	(4)
All Hospitals .....	\$ 6,539	\$ 929	\$282
Allentown .....	10,917	1,676	382
Clarks Summit .....	7,971	690	182
Danville .....	3,828	441	195
Dixmont .....	16,555	1,997	297
Embreeville .....	3,579	625	324
Harrisburg .....	6,525	1,355	372
Hollidaysburg .....	5,589	877	298
Mayview .....	5,577	579	199
Norristown .....	7,435	1,713	473
Philadelphia .....	9,531	848	178
Retreat .....	7,315	647	205
Somerset .....	8,280	972	268
Torrance .....	7,868	892	229
Warren .....	4,313	601	251
Wernersville .....	6,058	1,344	426
Woodville .....	7,312	1,097	309

<sup>1</sup> Average biennial patient charge is computed by dividing institutional receipts by number of patients treated.