

Survey of State-Level Programs in Mental Health Statistics

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THE FIRST U.S. facility which provided care for the mentally ill was the Pennsylvania Hospital in Philadelphia. When it opened in February 1752 as a general treatment service, the hospital established a program "for the reception and care of lunaticks" as part of its regular operations (1). In fact, one of the first two patients admitted was mentally ill. The first hospital specifically for the care of the mentally ill was the Eastern Lunatick Asylum (Eastern State Hospital) at Williamsburg, Va., which accepted its first patient on October 12, 1773. Unsuccessful earlier efforts to establish such institutions go back at least to 1730, in Massachusetts (2). The first privately operated mental hospital, the Quaker-sponsored Friend's Asylum, opened at Frankford, Pa., in 1817.

In the early period of asylum care of the insane in the United States, little thought was given to the need for statistical records or statistical reports. Names of patients admitted to institutions usually were recorded in a book in chronological order. In some institutions this information was supplemented by the patient's age, nativity, and place of residence. When patients died or were discharged, appropriate notations were made in the admission book, or

separate books were maintained for recording this information. Some of the larger facilities used a census book which showed the daily number of patients in residence and of admissions, discharges, and deaths.

The Association of Medical Superintendents of American Institutions for the Insane, predecessor of the American Psychiatric Association, was established in 1844. At its founding a committee on statistics was established under the chairmanship of Dr. Samuel B. Woodward, superintendent of the Worcester (Mass.) State Hospital and first president of the association (3). In the same year, the American Journal of Insanity was founded by Dr. Amariah Brigham, superintendent of the Utica (N.Y.) Lunatic Asylum and one of the 13 original members of the association. One of the six articles in the first issue was entitled "Number of the Insane and Idiotic, With Brief Notices of the Lunatic Asylums in the United States."

In 1848, Dr. Pliny Earle, another founding member of the association, published a statistical study of admissions to the Westchester Division of the New York Hospital between June 1, 1821, and December 31, 1844. In this study, he analyzed separately 594 cases of delirium tremens and 1,841 cases of what he considered properly to be insanity. In 1849, Dr. Isaac Ray, superintendent of the Butler Asylum at Providence, R.I., presented to the association a paper dealing with the need for accurate and meaningful statistics on mental illness (4).

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Despite these early reports and indications of interest, routine statistical programs were not established until much later, when care of the mentally ill was legally recognized as a State responsibility. Probably the first program was in Massachusetts, where the State Board of Health, Lunacy and Charity began to publish annual reports containing statistical data in 1879. New York established the first permanent statistical bureau in 1911. Illinois, Iowa, and Ohio also have had a fairly extended history in this field. In addition, a few individual facilities, such as the Worcester State Hospital in Massachusetts and the Warren State Hospital in Pennsylvania, have for some time collected and released comprehensive statistical information. In 1949, when the recently organized National Institute of Mental Health conducted a study of local statistical programs, it found only 11 States with an organized and functional statistical service. Of these, none except New York had a program director who by training and experience could be defined as a statistician.

In February 1951, the National Institute of Mental Health invited mental hospital administrators and statisticians from these 11 States to a conference in Washington which led to the establishment of the Model Reporting Area for Mental Hospital Statistics (M.R.A.) It adopted the following statement of purpose (5):

The need for uniform, comparable, and meaningful statistics on the mentally ill of the Nation is recognized by all who are concerned with this problem. In order to embark on the immense task of solving, in a constructive and cooperative manner, the complex problems involved in gathering such statistics, a group of State mental hospital authorities, with the aid and counsel of the National Institute of Mental Health, have joined together in the Model Reporting Area for Mental Hospital Statistics. The objectives set forth by this group are:

1. Development of a strong central statistical bureau in each State mental hospital system.
2. Development and use of standardized definitions of the various categories of mental hospital patients.
3. Production of a standard set of basic tabulations which every State hospital system should have.
4. Use of statistical methods appropriate to the analysis of data on patients followed for long periods of time.

It is the further purpose of this group to aid and encourage other States throughout the country to meet the standards of the Model Reporting Area so that all may contribute to the understanding and elimination of mental disorder as a major national health problem.

Annual meetings of the M.R.A. were held until 1965, when it was dissolved by the Biometry Branch, National Institute of Mental Health, in order to develop a broader program involving both inpatient and outpatient services in all 50 States. By this time, the number of States able to produce the annual patient movement tabulations required for membership had increased from the original 11 to 36.

Despite this apparent progress, figures on past and present State mental hospital statistics programs, such as staff size, cost of operations, and data output, were not available. It was therefore impossible to measure changes which may have occurred in these programs. To bridge this gap, I prepared a questionnaire which I asked directors of these services to complete during the 1965 M.R.A. conference. In those instances in which the forms were not completed at this time, followup efforts by mail and telephone were employed in order to attain maximum completeness. I subsequently analyzed data from this survey in my doctoral dissertation (6). Data summarized here are from this survey, together with other statistics from a second, more comprehensive survey which I conducted in 1968 in a similar manner among the same group of people. Questionnaires were completed by statisticians from 46 States plus the District of Columbia (all except Alaska, Texas,

Table 1. State directors of mental hospital statistics, by specialty and highest scholastic degree attained, 1968 survey¹

Specialty	Total	Doc- torate	Mas- ter's	Bach- elor's
Psychology-----	13	2	5	6
Sociology-----	6	0	6	0
Mathematics-----	6	0	0	6
Statistics (other)-----	4	1	1	2
Economics-----	3	0	1	2
Business administra- tion-----	3	0	0	3
Accounting-----	2	0	0	2
Biostatistics-----	2	0	2	0
Education-----	2	0	1	1
Medicine-----	1	1	0	0
School administration-----	1	0	1	0
Social service-----	1	0	0	1
Mental health-----	1	1	0	0
Total-----	45	5	17	23

¹ Of 48 directors who had completed questionnaires, 3 had not graduated from college.

Table 2. State directors of mental hospital statistics, by number of years employed as a mental health statistician in May 1968 and May 1965

Number of years	May 1968	May 1965
Less than 1.....	4	5
1.....	8	3
2.....	5	4
3.....	3	5
4.....	2	3
5-9.....	10	14
10 or more.....	14	13
Not reported.....	2	-----
Total.....	48	47
Median (years).....	5.5	6.3

Vermont, and Wyoming) for the 1965 survey and by statisticians from 47 States plus the District of Columbia (all except Minnesota, Mississippi, and Washington) for the 1968 survey. In my opinion, the absence of information from the seven States does not appreciably affect the data. In addition, unpublished data on State salaries were provided me by the Biometry Branch, NIMH, from an informal survey conducted in September 1963 through its regional offices.

Current Status

In 1968, 45 of the 48 State directors of mental hospital statistics had graduated from college (table 1); the other three had attended but not

completed college. Of the 45 directors, 23 had only a bachelor's degree, 17 had also received a master's, and five had attained the doctorate. The speciality most frequently listed for the highest degree earned was psychology (13), followed by sociology (six) and mathematics (six). Two directors reported degrees in biostatistics and four had degrees in unspecified areas of statistics. The other 14 cited degrees in eight different specialties. Two directors with bachelor's degrees are now studying for their master's in biostatistics at the University of North Carolina. Comparable figures on level of education from the 1965 survey were: no college degree, eight; bachelor's degree, 17; master's degree, 14; and doctorate, eight. While this distribution differed somewhat from that noted in 1968, the number with graduate degrees remained unchanged.

In 1968 a majority of respondents (24 of 46) had been employed as mental health statisticians for 5 years or more (table 2). A somewhat larger number (27 of 47) had stated this in 1965. The median length of continuous employment declined from 6.3 years in 1965 to 5.5 years in 1968, so that in 1968 one of four had been in this field less than 2 years as compared with one of six in 1965.

According to the NIMH survey in September 1963, the median annual salary of State mental health statistics directors was \$7,850 (table 3). Data on salaries were not collected in 1965. In the 1968 survey, the median salary was \$11,333, representing an increase of 44.4 percent during

Table 3. State directors of mental hospital statistics, by annual salary in May 1968 and September 1963

Annual salary	May 1968	Annual salary	September 1963 ¹
Less than \$5,000.....	1	Less than \$5,000.....	2
\$5,000-\$7,499.....	8	\$5,000-\$5,999.....	4
\$7,500-\$9,999.....	7	\$6,000-\$6,999.....	9
\$10,000-\$12,499.....	15	\$7,000-\$7,999.....	12
\$12,500-\$14,999.....	8	\$8,000-\$8,999.....	8
\$15,000-\$17,499.....	2	\$9,000-\$9,999.....	3
\$17,500-\$19,999.....	4	\$10,000-\$14,999.....	12
\$20,000 or more.....	3	\$15,000-\$19,999.....	1
		\$20,000 or more.....	0
Total.....	48	Total.....	51
Median.....	\$11,333	Median.....	\$7,850

¹ Data from National Institute of Mental Health survey (includes District of Columbia).

this period of 4 years and 8 months, or a compound rise of approximately 8 percent per year. In 1968, three directors of mental health statistics reported annual salaries of \$20,000 or more; none were in this category in 1963. In 1968, nine had salaries exceeding \$15,000 per year in contrast to one in 1963. Concurrently, the number earning less than \$10,000 decreased from 38 in 1963 to 16 in 1968.

In 1968, annual salaries of State mental hospital statistics directors were directly related to the highest degree attained (table 4). The median salary was \$18,750 for the five directors with doctorate degrees, \$12,292 for the 17 with master's degrees, and \$10,156 for the 23 with bachelor's degrees. The three statisticians who had not graduated from college received an average of \$6,875. None of the nine directors with salaries of less than \$7,500 had gone beyond the bachelor's level. Conversely, each of the nine earning \$15,000 or more had a master's or doctorate degree.

In addition to the director, State mental hospital statistics programs had a median of 4.4 clerical and 1.4 professional employees (table 5). Both of these figures are slightly higher than in 1965. However, the low figures for both 1965 and 1968 are somewhat inflated since a number of States indicated that their count included some employees either not directly working in statistics (medical records) or primarily involved in some other, nonrelated phase of health statistics.

In 1968 the directors were asked whether during the preceding 3 years they or their staffs had presented papers at professional meetings or had papers published in professional jour-

Table 5. State mental hospital statistics programs, by size of clerical and professional staff in May 1968 and May 1965

Number of employees	Clerical		Professional	
	1968	1965	1968	1965
None.....	3	5	19	22
1.....	6	4	12	8
2.....	7	10	4	5
3.....	4	5	2	3
4.....	9	4	3	3
5.....	3	4	1	2
6.....	3	5	1	1
7.....	0	3	1	0
8.....	3	0	1	0
9.....	2	0	0	1
10-14.....	1	2	1	1
15-19.....	2	0	0	1
20 or more.....	5	5	3	0
Total.....	48	47	48	47
Median.....	4.4	3.9	1.4	1.2

nals; 33 reported no papers presented and 32 reported no papers published. Twenty-eight had neither presented nor published any papers during this period (table 6). Fifteen respondents reported a total of 64 papers presented, an average of 4.3. Sixteen respondents reported a total of 45 papers published, an average of 2.8. Only one State's staff (Maryland) had presented and published five or more papers. Similar responses to these questions had been obtained in the 1965 survey.

State directors were asked whether their offices, in addition to statistics from State mental hospitals, also routinely collected patient movement data from facilities for the mentally retarded, private psychiatric hospitals, and outpatient psychiatric centers. The number stating

Table 4. State directors of mental hospital statistics, by annual salary and highest degree attained, May 1968

Annual salary	Total	Doctorate	Master's	Bachelor's	None
Less than \$5,000.....	1	0	0	1	0
\$5,000-\$7,499.....	8	0	0	6	2
\$7,500-\$9,999.....	7	0	3	4	0
\$10,000-\$12,499.....	15	0	6	8	1
\$12,500-\$14,999.....	8	1	3	4	0
\$15,000-\$17,499.....	2	1	1	0	0
\$17,500-\$19,999.....	4	1	3	0	0
\$20,000 or more.....	3	2	1	0	0
Total.....	48	5	17	23	3
Median salary.....	\$11,333	\$18,750	\$12,292	\$10,156	\$6,875

that they did was 34, 18, and 37, respectively (table 7). While 13 States reported that they received data from all three types of facilities, five stated that their program was limited to State mental hospital statistics. The remaining 30 had a variety of combinations. The largest number (17) received reports from facilities for the mentally retarded and from outpatient psychiatric centers, but not from private psychiatric hospitals.

The 43 States which supplied financial data had a median annual operating budget of \$38,888 for statistical services (table 8). In general, expenditures for statistics were closely related to total operating costs. States with annual hospital budgets of less than \$10 million spent an average (median) of \$21,875 for statistics. By comparison, States expending between \$10 million and \$29,999,999 had an average statistical budget of \$33,333, while the largest States (maintenance expenditures of \$30 million or more) reported that their statistical operations cost an average of \$125,000. Six States (California, Illinois, Michigan, New York, Ohio, and Texas) indicated that they spent \$200,000 or more for their statistical programs; all had relatively large mental hospital expenditures. Conversely, eight of the 14 States which spent less than \$25,000 per year for statistics had hospital budgets of less than \$10 million and five spent between \$10 million and \$29,999,999. My estimate is that the 50 States plus the District of Columbia annually spent between \$4 million and \$4½ million for mental health statistics pro-

Table 6. State mental hospital statistics programs, by number of papers presented at professional meetings and published in professional journals in the 3 years preceding 1968 survey

Number of papers published	Number of papers presented						
	Total	0	1	2	3	4	5 or more
0.....	32	28	2	2	0	0	0
1.....	6	1	0	2	1	0	2
2.....	1	1	0	0	0	0	0
3.....	4	1	1	1	0	0	1
4.....	1	0	0	0	0	0	1
5 or more.....	4	2	0	0	1	0	1
Total.....	48	33	3	5	2	0	5

Table 7. Number of States receiving centralized reporting of patient data from facilities for the mentally retarded, private psychiatric hospitals, and outpatient psychiatric centers, 1968 survey

Number of States	Facilities for mentally retarded	Private psychiatric hospitals	Outpatient psychiatric centers
13.....	Yes	Yes	Yes
17.....	Yes	No	Yes
4.....	Yes	No	No
3.....	No	Yes	Yes
4.....	No	No	Yes
2.....	No	Yes	No
5.....	No	No	No
Total yes....	34	18	37
Total no.....	14	30	11

grams, or approximately 0.25–0.30 percent of their total operating budgets. Nearly half of this amount was accounted for by the six States with the largest expenditures.

In fiscal year 1968, there were 2.6 statistical employees per 1,000 total employees in mental hospital programs (table 9). That is, about one of every 400 employees worked in statistics. While this ratio was highest in States with a staff of less than 1,500, a number of the States have only one hospital and they combine statistics and medical records programs. In such instances, figures submitted may not be for statistics alone but for the joint section. Most of the other States, including the six with a statistical staff of 20 or more, had a ratio slightly lower than the national average.

Only five States reported that they currently have research grants related to mental health statistics. While these grants amounted to approximately \$1,750,000 per year, more than three-fourths of this amount was accounted for by a single grant to New York. In addition, the Biometry Branch, NIMH, has also awarded a few small contracts; most have not been with local mental health statistics offices. The Biometry Branch has expended some of its operating funds since 1961 for the joint administration with the Maryland Department of Mental Hygiene of a statewide psychiatric case register. It is thus evident that most local mental health statistics offices are supported solely from State operating funds and do not receive sup-

plementary financial support from other sources. The impact of Federal funds, with few exceptions, has been minimal.

Estimated Future Personnel Needs

The directors stated that their programs would require an additional 174 professional and 164 clerical employees in the next 5 years (table 10). This requirement would double currently authorized professional staff and increase the clerical force by 50 percent. The six most populous States, which in 1968 employed 65 percent of all professionals and more than 40 percent of all clerks, accounted for 33 percent of the indicated expansion in professional staff and for 40 percent of the indicated expansion in clerical staff. Conversely, the 27 least populous States, which according to the 1968 survey had 17 percent of all professionals and 31 percent of all clerks, estimated a need for 24 percent of all additional professionals and 31 percent of all additional clerks. Should these changes occur, 50 percent of the professionals and 44 percent of the clerks would then be working in the six largest States. In the 27 smallest States, the figures would be 21 percent of professionals and 31 percent of the clerical force.

The statistical staff in the six largest States had a high ratio of professionals to clerks (roughly 3 to 4). In the 14 States with less than 1 million inhabitants, on the other hand, this ratio was less than 1 to 4. While this disparity would be somewhat reduced by 1973, if antic-

Table 9. Total agency staff for public mental hospitals in the United States, by size of statistical staff, June 30, 1968

Size of statistical staff	Total agency staff ¹			
	Total	Less than 1,500	1,500-4,099	4,100 or more
0-4-----	14	6	5	3
5-9-----	20	9	6	5
10-14-----	5	0	3	2
15-19-----	3	2	0	1
20 or more-----	6	0	0	6
Unknown—not reported-----	3	0	3	0
Total-----	51	17	17	17
Number of statistical employees per 1,000 total employees-----	2.6	9.1	2.3	2.3

¹ Reference 7.

ipated plans materialize, it would still remain quite substantial. The six most populous States would then have four professionals for every five clerks as opposed to a ratio of less than 2 to 5 in the least populous States.

Discussion

Data presented here point to wide variations in the levels of State mental hospitals statistics programs. While some programs have directors with graduate education in biostatistics or related fields, substantial professional and clerical

Table 8. Total maintenance expenditure of States for public mental hospitals, by estimated annual operating budget for statistics, fiscal year ending June 30, 1968

Estimated annual State operating budget for statistics	Total maintenance expenditure ¹			
	Total	Less than \$10 million	\$10 million-\$29,999,999	\$30 million or more
Less than \$25,000-----	14	8	5	1
\$25,000-\$49,999-----	9	2	6	1
\$50,000-\$74,999-----	5	2	0	3
\$75,000-\$99,999-----	4	1	1	2
\$100,000-\$149,999-----	2	0	1	1
\$150,000-\$199,999-----	3	² 1	1	1
\$200,000 or more-----	6	0	0	6
Not reported—unknown-----	8	3	3	2
Total-----	51	17	17	17
Median-----	\$38,888	\$21,875	\$33,333	\$125,000

¹ Reference 7.

² Includes cost of statistics services for other pro-

grams. Separate figures for mental health statistics not available.

Table 10. Estimated additional professional and clerical staff needed by State mental hospital statistics programs in the years 1969-73, by geographic region and State population

Geographic region and State population	Professional staff				Clerical staff		
	Total States	On duty May 1968 ¹	Additional needed	Total requirement ¹	On duty May 1968	Additional needed	Total requirement
Region:							
Northeast.....	9	38	40	78	71	35	106
North Central.....	11	67	32	99	80	33	113
South.....	16	38	77	115	109	72	181
West.....	12	27	25	52	74	24	98
Estimated State population:							
10 million or more.....	6	111	57	168	149	69	218
3-9 million.....	15	30	75	105	81	44	125
1-2 million.....	13	14	23	37	37	27	64
Less than 1 million.....	14	15	19	34	67	24	91
Total.....	48	170	174	344	334	164	498

¹ Excluding director.

staff, and relatively adequate budgets, many others do not. Although statistical services appear to have progressed in many States since 1951, the following 1968 data suggest that a majority of programs need further improvement: in about half of the States surveyed, directors do not have a graduate degree and earn less than \$12,000 per year; the total size of the statistical staff is less than seven and primarily clerical; the annual operating budget is less than \$50,000, or about 0.25 percent of the total cost of operations; and special papers have not been presented or published in the past 3 years. In fact, figures on personnel and budget may be even lower than indicated here since a number of smaller States appear to have included non-statistical functions in their survey statements. Moreover, examination of individual questionnaires revealed that States with the most limited programs often reported little or no need for additional personnel by 1973.

It seems that the goals spelled out in 1951 by the Model Reporting Area for Mental Hospital Statistics in its statement of purpose have not yet been realized in most States. For example, the M.R.A.'s first objective was "development of a strong central statistical bureau in each State mental hospital system." While the organization did not state what the characteristics of a strong bureau are, a director with graduate education in biostatistics or other appropriate fields, sufficient clerical and professional supportive personnel, and an adequate budget

would surely be required. Based on data presented here related to these criteria, programs in approximately 10 States can be readily rated as strong, about 20 can be rated as weak, and the remaining 20 between these two extremes. My impression is that most of the middle-rated group are more like the weak than the strong States.

While some improvement has been made since 1951, it is not overly encouraging. Further remedial steps are necessary and need to be concentrated in three broad areas: (a) improved education and training of biostatisticians, (b) more effective use of available data, and (c) expanded and better relationships between biostatisticians, administrators, and other professional mental health workers.

In an earlier paper (8), I presented data on the limited value to public health of many phases of presently available graduate programs in biostatistics. I proposed reform measures such as greater emphasis on applied statistics, use of practicing biostatisticians as course instructors, field training in statistics offices, jointly sponsored courses (where possible) between biostatistics and mental health departments, and use of available mental health data for dissertations and class projects.

Brooke (9) discussed some readily available means for improving the effectiveness of mental health statistics. For example, she showed the importance of counting persons treated in addition to counting treatment events. She out-

lined how available patient movement data could be easily unduplicated without expensive equipment and indicated the value of such information for mental health planning and administration if properly presented and analyzed. Such statistics are now generally unavailable.

Although statistics directors were asked in the 1968 survey to state the title of their immediate supervisor, these data were not tabulated because of the large variety of position titles mentioned. The responses indicated that in many States, statistics occupied a low-level position in the administrative structure and had no direct ties to research. Thus, the statistician should concern himself with two distinct issues: (a) to raise his status to a more appropriate administrative level and (b) to develop and promote the research potential of mental health data.

Brooke showed that statistics could play an important role in the management of, and planning for, mental health services, and she indicated how such data would be more meaningful if supplemented by appropriate text, graphs, and other visual material (9). However, the statistician's potential role goes beyond the mere supplying of information. In many situations, his unique knowledge and training can offer an important contribution at the policymaking level. It is the statistician's responsibility to bring this fact to the attention of appropriate program heads. It is the administrator's responsibility to employ these capabilities to the fullest extent possible. In States without experienced statisticians, it would be advantageous to raise salary levels as well as job requirements in order to attract and retain such personnel.

The research potential of mental health data has not been adequately recognized in the majority of States, as indicated by the survey's results on papers presented or published. We can only speculate as to the factors related to this failure. Certainly the fact that many statistics directors are overwhelmed with routine, repetitive work is an important reason. Another might be the limited knowledge that some directors have of research carried out in this field and of research needs and techniques for conducting such studies. Where statisticians do not have time for special projects, time might be

obtained by delegating work (where appropriate) to lower level employees, by reviewing work responsibilities and organizing them in a more suitable manner, and by intensifying efforts to obtain supportive staff particularly at a professional level.

State directors of mental health statistics attend annual national meetings sponsored by the Biometry Branch. It would be valuable if these meetings, as well as comparable regional meetings, provided a setting for reviewing research in this field (by conference participants and others), for discussing techniques for conducting such research, and for fostering the development of cooperative, interstate projects. In many States, statisticians need to develop channels of communication with fellow researchers such as psychiatrists, psychologists, and sociologists. Mutual research interests and objectives need to be explored and steps for carrying out joint studies need to be considered.

The Federal Government, through the Biometry Branch, must play a key role if these objectives are to be attained. It has not, as yet, fully done so. Encouraging the development of basic data banks (9), providing outlines for minimum annual tabulations, suggesting qualifications and salary levels for statistical staff, developing training courses, fostering communication and cooperation with biostatistics and mental health departments in schools of public health, and assisting in the growth of interstate projects are examples which readily come to mind of areas where efforts need to be intensified.

Summary

Of the 48 State directors of mental health statistics responding in a 1968 survey, 23 had only a bachelor's degree, 17 had also received a master's, and five had attained the doctorate. Three had not graduated from college. These figures were essentially unchanged from comparable survey results in 1965. The average length of continuous employment in mental health statistics was 5.5 years, a slight reduction from a 1965 survey result.

The median salary of the directors was \$11,333, or \$3,483 higher than the median obtained from a survey conducted in September 1963. The 1968 median salary was equal to a com-

pound annual increase of 8 percent. Salaries were related to the highest degree attained. The range was from \$6,875 for three directors with no college degree to \$18,750 for five directors with a doctorate.

State mental hospital statistics programs had an average of 4.4 clerical employees and 1.4 professional employees—a slight increase in both categories since 1965. The directors indicated a need for an additional 174 professional employees and 164 clerical employees in the next 5 years. Should this additional personnel materialize, the currently authorized professional staffs would be doubled and the clerical forces increased by 50 percent.

A majority of the directors indicated that they or their staffs had neither presented papers at professional meetings nor published any papers in professional journals during the preceding 3 years. Comparable figures had been noted in 1965.

The average budget for statistics was \$38,888. The total expenditures for these programs in all States was estimated to be between \$4 million and \$4½ million, or approximately 0.25–0.30 percent of the total cost of operations.

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Mental Health Care in Rural Areas

During the next decade Americans living in the rural areas of the United States will receive a greater share of mental health care than at any time since the rise of the large custodial mental hospitals.

In a recent tabulation of the growing number of community mental health centers, the National Institute of Mental Health reported that centers are now slated for 23 percent of the country's rural county population. These centers will bring mental health services within reach of millions of people who previously had no access to community-based care nor alternatives to hospitalization.

Centers to be created in 11 States, with the aid of Federal construction and staffing grants, will cover more than one-third of their rural county populations.

Among the States with the highest mental health service coverage for rural county residents, based on grants awarded up to early

1969, are Kentucky, 88 percent; North Dakota, 63 percent; and Vermont, 44 percent. Colorado, Massachusetts, Montana, and Michigan range from 39 to 42 percent. Pennsylvania, Florida, New Hampshire, and South Carolina range from 33 to 38 percent coverage.

Among the States which had no funded centers covering rural counties by early 1969 are Connecticut, Rhode Island, Delaware, New Jersey, Utah, Alaska, California, Nevada, and Oregon. Approximately 2,260,000 citizens reside in the rural counties of these States. Of the 500 poorest counties in the country, 486 are rural. Funded centers will serve 122, or 25 percent, of these.

Most of the 134 new rural centers will cover several counties, using mobile treatment teams or satellite clinics. They will provide a comprehensive range of services, as required by the Federal aid program.