

The Institutionalized Population in Minnesota

STEPHEN J. CARROLL, Jr., M.A.

STATISTICS on the number of handicapped persons in hospitals and related institutions by type of disability are rare, except for those dealing with specialized types of institutions (1-4). A number of surveys on the extent of disabling illness and disease among the general population have been conducted, but typically such surveys exclude the institutionalized population. This lack of information makes any general disability survey incomplete, since the disabled in institutions are likely to form a significant portion of such a census.

Between July 22 and August 4, 1958, a survey of the entire institutionalized population of Minnesota was conducted under the direction of Dr. L. H. Lofquist and Dr. G. W. England of the University of Minnesota's Industrial Relations Center, for the State Interim Commission on the Employment of the Handicapped. This commission was appointed to investigate the problems of the handicapped population in Minnesota (5).

The purpose of this survey was to determine the number of handicapped persons by type of disability and age in all types of institutions and hospitals in the State. Every hospital, both general and specialized, institution, special school, nursing home, and boarding-care home was covered. The survey was completed in conjunction with a related survey covering a random sample of households in Minnesota. In the household survey, interviewers were required to identify all household members who were away in a hospital, institution, or

special school to prevent disabled persons from being counted twice. The results of the household survey are published elsewhere (6). This report deals only with the institutional survey.

Methodology

A list of all licensed hospitals both general and specialized, institutions, special schools, nursing homes, and boarding-care homes in Minnesota as of May 1, 1958, was obtained from the Minnesota Department of Health (?). This list was supplemented by the addition of the names of all public specialized institutions and schools concerned with confinement and training under the control of the Minnesota State Department of Public Welfare and all Federal hospitals within the borders of Minnesota. A check of this list against all hospitals and related institutions listed in the Minneapolis and St. Paul telephone directories resulted in the addition of only one institution, a boarding-care home.

A questionnaire was designed to identify all persons who were handicapped and currently hospitalized or institutionalized in Minnesota by type of disability and age. In developing the questionnaire, consultations were held with the directors and medical personnel of several of the larger hospitals and institutions in Minneapolis. These consultations were held to determine the best method of classifying patients as handicapped and to see what terminology was most common and understandable to hospital personnel.

The questionnaire was worded in such a manner that it could be completed by the physician in charge of each ward, by the nurse in

Mr. Carroll is a research staff member of the Industrial Relations Center, University of Minnesota.

charge of each nursing station, or by the medical person in charge of each hospital or home. A patient was to be classified as handicapped if he or she was expected to be totally or partially impaired in carrying out normal activities for the next 90 days, whether still hospitalized or not. The term "impaired in carrying out normal activities" was used in place of the term "handicapped" since it was preferred by hospital and medical personnel consulted in preliminary studies. Ninety days was used as the time period for which an impairment would be considered serious enough to be classified as a handicap since 90 days, or 3 months, is the time period most frequently used to distinguish chronic diseases and severe disabilities from other less severe types (8, 9). Length of time hospitalized was not used as the criterion for classifying patients as handicapped because it excludes many chronically ill or disabled persons and also may not be indicative of the extent or severity of a disability or disease.

Fourteen broad disability categories, derived from the disability classification systems of the Minnesota Employment Service and the Minnesota Division of Vocational Rehabilitation, were used in the questionnaire. Three age groups were used to distinguish potential members of the labor force from those patients younger or older than this group.

Questionnaires were mailed to each of the 641 hospitals, special institutions and schools,

nursing and boarding-care homes on the survey list. Hospitals and institutions with a capacity of more than 150 beds were sent additional questionnaires upon request for use in each ward or at each nursing station, if this procedure was preferred. A followup postal card was sent to nonresponding institutions after 2 weeks, and a followup letter was sent to nonrespondents after 3 weeks to encourage increased returns.

As a verification of survey accuracy, returns from the large specialized institutions, such as mental hospitals and institutions for the mentally defective, were compared with data obtained from the Minnesota State Department of Public Welfare (1). The survey indicated that there were 14,338 impaired patients in such institutions, while the Minnesota State Department of Public Welfare reported 14,202 patients as of June 1958. A comparison of figures for each institution also agreed quite closely.

The proportion of usable returns gives another measure of the accuracy of the survey. In terms of this criterion (proportion of returns), the results obtained in the survey may be accepted with confidence since usable returns were received from 82 percent of the hospitals and related institutions in Minnesota. These hospitals and related institutions contain 91 percent of beds available in the State. Each table presents data adjusted to account for nonresponding institutions. In making estimates

Table 1. Number of physically handicapped patients in Minnesota hospitals and related institutions, by type of institution

Types of institutions	Bed capacity of institutions to which questionnaires were sent	Bed capacity of institutions from which questionnaires were received	Number of impaired patients reported	Percent of beds occupied by impaired patients ¹	Number of impaired patients corrected to include nonrespondents ²
Federal hospitals.....	2, 456	2, 443	1, 693	69. 3	1, 702
General hospitals.....	14, 558	14, 298	5, 273	37. 1	5, 402
Mental hospitals.....	10, 890	10, 863	10, 794	99. 4	10, 820
Institutions for the mentally deficient, epileptic, or tuberculous.....	6, 814	6, 814	6, 191	90. 9	6, 191
Other special schools, hospitals, and institution infirmaries.....	1, 008	948	706	74. 5	751
Nursing and boarding-care homes.....	13, 545	9, 718	7, 288	75. 0	10, 157
Total.....	49, 271	44, 994	31, 945	70. 9	35, 023

¹ Obtained by dividing column 3 by column 2.

² Obtained by projecting from percentage in column 4 to bed capacity in column 1.

Table 2. Percent of institutionalized handicapped population of Minnesota, by type of disability within major age categories

Disability	All ages (N=35,023)	Under 14 (N=1,860)	14 to 65 (N=16,408)	Over 65 (N=16,746)
Neuropsychiatric	35	6	44	29
Mental retardation	19	53	30	4
Cardiovascular	13	3	4	23
Generalized or systemic	7	2	3	12
Orthopedic	5	9	3	6
Neurological	4	4	4	5
Miscellaneous	4	2	3	6
Respiratory	3	4	4	3
Visual	2	6	1	3
Hearing	2	9	1	2
Gastrointestinal	2	0	1	2
Genitourinary	2	1	1	3
Skin and allergy	1	1	0	1
Speech	1	0	0	1
Total percent	100	100	100	100

Note: Numbers adjusted to include nonresponding institutions.

to account for nonrespondents, it was assumed that the returns from the nonrespondents in a particular type of hospital or institution would assume the same proportions regarding the number of handicapped persons in each disability and age category as did the returns from the respondents. This assumption was made in view of the high percentage of returns received and in the absence of any evidence that the characteristics of the nonrespondents were different from those of the respondents.

The percentage of available beds occupied by handicapped persons varies widely depending on the type of institution (table 1). While the whole population (99 percent) of the State's mental hospitals is handicapped, according to the definition used in the study, only a little more than one-third (27 percent) of the population of general hospitals is handicapped. This is certainly not surprising in view of the types of disability treated.

Almost all of the Federal hospital beds are located in two large veterans' hospitals in Minnesota. Since one of these is a specialized institution for the treatment of emotional disorders, it is also not surprising to find 69 percent of the available Federal hospital beds occupied by handicapped patients.

Neuropsychiatric disabilities (35 percent)

and mental retardation (19 percent) account for more than one-half of the total institutionalized handicapped population of the State (table 2). This bears out previous estimates that more than one-half of the available hospital beds in the Nation are occupied by patients with mental disorders (10). The addition of persons afflicted with cardiovascular (13 percent) or generalized or systemic (7 percent) disorders to those reported with the mental and emotional disabilities reveals that these four types of disability account for three-fourths of the institutionalized handicapped.

The most significant disability of the institutionalized handicapped population under 14 years of age is mental retardation. More than one-half (53 percent) of this age group have this disorder (table 3). Persons with emotional (44 percent) and mental disabilities (30 percent) make up almost three-fourths of the institutionalized handicapped in the productive labor force age group of 14 to 65 years. In the retirement age group of over 65 years of age, neuropsychiatric (29 percent) and cardiovascular (23 percent) handicaps are most prevalent, accounting for more than one-half of the in-

Table 3. Institutionalized handicapped population in Minnesota, by age distribution within disability categories

Disability	Number ¹	Percent in each age group			
		All ages	Under 14	14-65	Over 65
Neuropsychiatric	12,259	100	1	59	40
Mental retardation	6,592	100	15	75	10
Cardiovascular	4,532	100	1	13	85
Generalized or systemic	2,556	100	1	21	78
Orthopedic	1,759	100	9	30	61
Neurological	1,514	100	5	42	54
Miscellaneous	1,529	100	2	33	65
Respiratory	1,145	100	7	56	37
Visual	816	100	14	20	66
Hearing	741	100	24	20	56
Gastrointestinal	614	100	1	37	62
Genitourinary	613	100	3	18	79
Skin and allergy	186	100	7	36	57
Speech	158	100	3	18	79
Total	35,023	100	5	47	48

¹ Adjusted to include nonresponding institutions.

stitutionalized handicapped in this age category.

Table 3 shows that 85 percent of the institutionalized handicapped with cardiovascular disabilities are over 65 years of age, as are 78 percent of those patients who have generalized or systemic disorders. Generalized or systemic disorders include such disabilities as diabetes, cancer, and arthritis. Three-fourths (75 percent) of the mentally retarded patients are between 14 and 65 years of age.

Summary

A survey of the institutionalized handicapped population of Minnesota was conducted between July 22 and August 4, 1958. The purpose of this survey was to determine the number of physically handicapped persons in all types of hospitals and related institutions in Minnesota by type of disability and age. This information was not available before the survey.

A questionnaire, designed to obtain this information, was sent to every hospital, both general and specialized, institution, special school, nursing, and boarding-care home in Minnesota. With the aid of two followup letters, usable returns were received from 82 percent of the hospitals and related institutions in the State. These hospitals and related institutions contained 91 percent of the beds available in hospitals and institutions in the State.

The survey indicated that currently about 35,000 handicapped persons are hospitalized or institutionalized in Minnesota. These persons occupy more than 70 percent of the beds available for the care of patients in the State. Almost one-half of them are over 65 years of age. Persons with neuropsychiatric disabilities (35 percent) and mental retardation (19 percent) comprise over one-half of the institutionalized handicapped in the State. Cardiovascular (13 percent) and generalized or systemic (7 percent) disabilities bring this figure up to almost three-fourths of the total institutionalized

handicapped. Mental retardation seems to be the most significant disability for the group under 14 years of age, while neuropsychiatric disabilities are most prevalent in those 14 to 65 years of age. Neuropsychiatric and cardiovascular disorders account for more than one-half of the handicapped in the over 65 age group.

The success of this survey demonstrates that it is possible to obtain reasonably accurate disability statistics of the general institutionalized population by using a mail questionnaire method.

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