An Experiment in the Rehabilitation of Nursing Home Patients

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THE RESULTS of a study of the rehabilitation potential of a disabled public assistance population in a group of proprietary nursing homes in New York City suggest that these patients have an extremely limited potential for improvement in self-care.

In this report some of the findings based on objective tests of self-care change and clinical observations of response to medical rehabilitation services are interpreted in relation to the sociomedical characteristics of the study population. Preventive and therapeutic implications for nursing home residents are discussed.

Background of the Study

Mounting public and professional concern to improve the well-being of the more than 4,500 persons residing in proprietary nursing homes in New York City in 1958 stimulated this investigation. Although surveys of nursing home residents in New York State indicated that these patients had a relatively low rehabilitation potential (*1,2*), it was generally accepted that rehabilitation services could be effective if limited to selected patients (*3,4*).

Medical rehabilitation services were used to determine whether the self-care skills of a disabled nursing home population could be sufficiently improved or maintained to justify the wider application of a maximum rehabilitation effort to all disabled nursing home residents. The study population was unselected from the point of view of anticipated rehabilitation benefit.

The specific questions which this study sought to answer were:

- Would a large-scale medical rehabilitation program offered to physically disabled patients in nursing homes or by transferring them to rehabilitation hospitals significantly alter this population's level of self-care?
- Could subgroups be identified in retrospect who would differ significantly in their response to rehabilitation treatment?

Research Design and Methods

An experimental design employing matched samples of randomly assigned treated and untreated patients was established. Differences in self-care status prior to and following 1 year of treatment were measured. The change criteria were levels of function in ambulation, dressing, feeding, toileting, and transfer skills (*5*).

All public welfare recipients residing in a

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group of proprietary nursing homes in New York City were reviewed by qualified physiatrists. All such patients with physical impairments limiting functioning in one or more self-care areas were included in the study, without regard to predicted benefit from rehabilitation services. Patients without such impairments or with impairments but for whom rehabilitation treatment was medically contraindicated were excluded. Two treatment groups (B and C) and a control group (A), each composed of approximately 100 patients, were drawn from 11 nursing homes. To guard against the possible halo effects of the treated groups upon the untreated controls, a second control group (D) of similar size was selected from an additional four nursing homes.

All study patients were transported to a hospital testing site where their initial levels of self-care function were determined by a special testing team. These evaluations were repeated following a year's treatment. The testing team was not informed of the group assignments of the patients nor were the results of the initial evaluations made known to the treatment personnel.

Prior to or shortly after initiation of the treatment programs, psychological, medical, and social and demographic data were obtained on the patients (*6*). Throughout the study, the rehabilitation treatment teams collected clinical data on the patients.

Two medical rehabilitation programs were developed.

Nursing home treatment. Patients assigned to group B were treated in the nursing home where they resided by one of two mobile rehabilitation teams. All patients were fully evaluated by a rehabilitation team consisting of a physiatrist, a social worker, physical and occupational therapists, a speech therapist, a nurse, a psychologist, and a group worker. The team devised and carried out a therapeutic program for each patient. When patients had derived maximum benefit from rehabilitation services, maintenance programs were instituted. Consultation services, as well as appliances and prostheses, were obtained from the cooperating official agencies, who retained medical responsibility for the patients. Primary nursing responsibility was retained by the nursing home staffs, with whom the rehabilitation teams established close working relationships.

Hospital treatment. Patients assigned to group C were transferred from the nursing home to one of five cooperating rehabilitation hospital centers to be given treatment there. The study's medical social work staff was responsible for initiating the transfers and for obtaining the cooperation of the patient, members of his family, and the cooperating agencies. Close liaison was established with the hospitals to facilitate the patient's return to the nursing home following completion of active treatment. During the remainder of the treatment period the rehabilitation teams described above supplied maintenance services to the patients who returned from the hospitals. Patients assigned to this group who were not willing to be transferred to the hospital from the nursing home were not treated by the study rehabilitation teams.

Controls. The control patients (groups A and D) received no treatment from the rehabilitation teams. However, they continued to receive the usual care and services in the nursing homes. Their self-care status was measured prior to and following the study period in the same manner as that of the treated patients and by the same special testing team.

Study Investigators

The principal investigators in the study were Dr. Jerome S. Tobis and Dr. Jonas N. Muller, New York Medical College. Dr. Tobis is now with Montefiore Hospital, New York, N.Y. Co-investigators were Dr. George James, New York City Department of Health; Dr. Bruce Grynbaum, New York City Department of Hospitals; Dr. Arthur Abramson, Albert Einstein College of Medicine of Yeshiva University, New York, N.Y.; and Dr. Morton Hoberman, New York State Rehabilitation Hospital, West Haverstraw, N.Y.

Results

1. Among the early findings of significance for nursing home programing were those stemming from selection of the study population.

The physiatrists who screened the public as-

sistance population surveyed more than 2,000 patients in 15 proprietary nursing homes in order to obtain the study sample of 407 patients. Nearly 60 percent of the patients surveyed were judged to be fully independent in self-care and ambulation and were excluded from the study. Rehabilitation treatment was contraindicated for more than half the remaining 40 percent, either because they were totally incapacitated or because their prognosis for survival was poor.

The study population had a greater incidence of musculoskeletal and neuromuscular disabilities than the excluded "self-care independent" group. A review of a small sample of the excluded "self-care independent" patients suggested that in this group cardiovascular-renal medical conditions predominated.

These data suggest that there may be at least three quite different patient groups in nursing homes, each with different needs and requirements. These groups, differentiated largely by

Table 1. Percentage distribution [1] of differences [2] between initial and final scores, by self-care area according to assigned group

Group	Self-care area														
	Locomotion			Transfer [3]			Dressing			Feeding			Toileting		
	+	0	−	+	0	−	+	0	−	+	0	−	+	0	−
A (control)	20	50	30	12	69	19	14	60	26	11	77	12	18	49	33
B (nursing home)	23	48	29	13	72	15	18	59	23	12	65	23	26	51	23
C (hospital transfer) [4]	13	55	32	10	73	17	17	50	33	7	72	21	10	67	23
C (hospital refusal) [5]	18	63	19	11	56	33	18	67	15	11	78	11	12	44	44
D (control)	20	39	41	13	74	13	33	56	11	8	79	13	32	51	17
All groups	20	49	31	12	70	18	21	58	21	10	74	16	22	52	26

[1] Excluding losses.
[2] + = 1st score < 2d score; 0 = 1st score = 2d score; − = 1st score > 2d score.
[3] Ability to transfer from wheelchair to bed, or vice versa.
[4] Transferred to hospitals for rehabilitation treatment.
[5] Refused transfer to hospitals; not treated.

Table 2. Percentage distribution [1] of differences [2] between initial and final scores: all self-care areas according to whether treated or untreated

Group	Self-care area														
	Locomotion			Transfer [3]			Dressing			Feeding			Toileting		
	+	0	−	+	0	−	+	0	−	+	0	−	+	0	−
Treated [4] (N = 88–91 according to self-care area.)	20	50	30	12	72	16	18	56	26	10	67	23	21	56	23
Not treated [5] (N = 151–155 according to self-care area.)	20	48	32	13	68	19	23	59	18	10	78	12	23	48	28
All groups (N = 242–246 according to self-care area.)	20	49	31	12	70	18	21	58	21	10	74	16	22	52	26

[1] Excluding losses.
[2] + = 1st score > 2d score; 0 = 1st score = 2d score; − = 1st score < 2d score.
[3] Ability to transfer from wheelchair to bed, or vice versa.
[4] Includes group B patients and those group C patients who were treated in hospitals.
[5] Includes patients in groups A and D, and untreated group C patients (refusals).

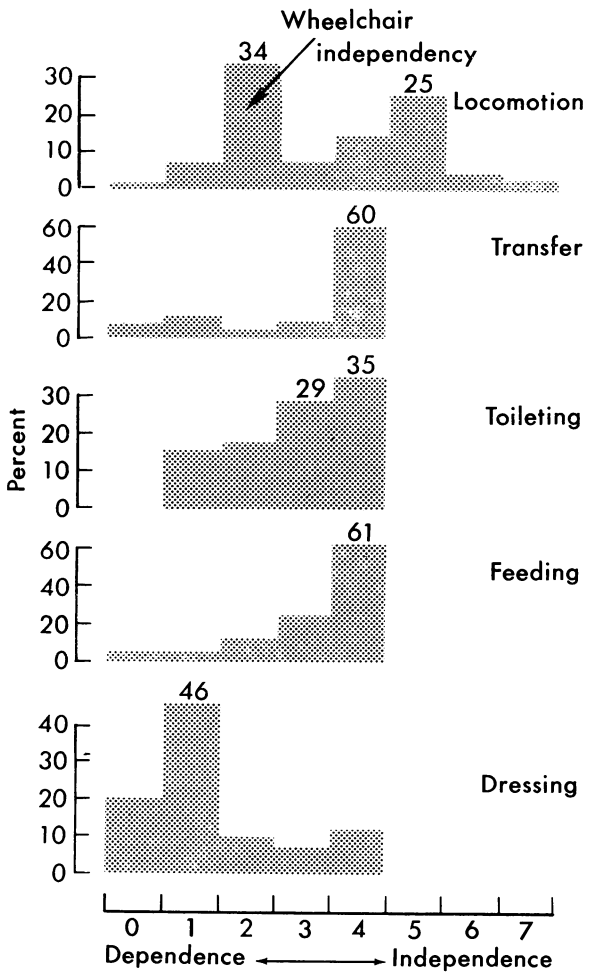
their medical condition, include: (*a*) ambulatory and self-care independent patients with predominantly cardiovascular-renal conditions, requiring minimum nursing care and supervision; (*b*) patients with neuromuscular and musculoskeletal impairments, requiring some assistance in self-care and ambulation; and (*c*) patients who have overwhelming medical problems or who are so severely incapacitated that they require maximum nursing care and assistance in self-care for the limited period of their expected survival.

2. Comparison of differences in self-care status of the study population initially and at the end of 1 year indicated that neither rehabilitation treatment in a hospital nor in a nursing home significantly altered functional status (table 1). Similarly, when all treated patients are compared with all untreated patients, levels of self-care and ambulation were not favorably altered by treatment (table 2). These results suggest then that the disabled nursing home population, as a whole, showed little or no potential for improvement in self-care status when given rehabilitation treatment.

In considering the broader implication of this finding for nursing home programing it is important to note that large numbers of these patients performed initially at independent or nearly independent levels of self-care when tested at the hospital (chart). These initial high levels of function are performances under test conditions and at sites removed from the day-to-day living situation. Thus, the possibility of demonstrating improvement in function upon repeat testing was limited.

The study group's self-care abilities at the hospital were in marked contrast to their observed functional levels and debilitated clinical appearance in the nursing home. This is all the more remarkable when one considers that nursing home patients with no physical impairments limiting self-care function were excluded from the study. This finding, coupled with clinical observations of higher levels of patient function under certain stimulating social conditions, suggests that there is a discrepancy between the self-care capacities of these patients and their levels of performance in the nursing home. Therefore, activities designed to stimulate,

Initial self-care status of study population (all groups)



motivate, and aid disabled nursing home patients in using their physical capacities for self-care might be more appropriate than extensive clinical programs seeking to "restore" or improve physical functional skills.

3. Our findings relating to mortality, hospitalizations (tables 3 and 4), and numbers of prior hospital and nursing home placements are suggestive of the medical "fragility" of this group of disabled public assistance recipients. The rehabilitation treatment programs failed to influence favorably hospitalizations and mortality. The rehabilitation teams felt that the consequences of illnesses not requiring hospitalization, as well as of those serious enough to cause the patient to be hospitalized, were a serious obstacle to the teams' therapeutic goals for patients. These illnesses resulted in frequent and

sometimes long absences from therapy due to bed confinement, physical restrictions during recovery periods, increased fatigue and deconditioning, and loss of previous gains resulting from treatment. Improved methods for meeting their basic medical care needs are essential to successful rehabilitative efforts designed to improve the functional ability of this group. Attempts to develop more effective patterns of medical care for nursing home patients have recently been reported (*7–9*).

4. A review of some of the salient social characteristics of the nursing home public assistance population indicates that the study population is a selective one ethnically and socially.

The disabled population in this study resembled other nursing home populations (*10–12*) with respect to age and sex. The modal age was in the 70's, and women predominated (table 5). A comparison of the disabled population with a sample of the excluded "self-care independent" population showed that the latter were older (modal age in the 80's) and also contained a greater proportion of women to men. Aside from these age-sex differences and the medical and functional differences, the two groups were similar with respect to the characteristics of the disabled population, described below.

Table 3. Percentage [1] distribution of patient status at the end of 1 year

Patient status	Assigned group [2]				Total
	A	B	C	D	
In nursing home	74	70	66	71	70
Deceased	10	20	24	19	19
In hospital [3]	9	7	7	8	8
Transferred to other facility	7	3	2	2	3
Unknown	0	0	1	0	0

[1] All percentages are approximate.
[2] A and D, controls; B, treated in nursing home; C, treated in hospital.
[3] Does not include group C referrals.

Table 5. Distribution of patients, by assigned group, according to sex and age level

Sex and age	Assigned group				Total	
	A	B	C	D	Number	Percent
Total	106	104	103	94	407	[1] 100
Sex:						
Male	41	43	44	41	169	41.5
Female	65	61	59	53	238	58.5
Age (years):						
49 and under	6	4	3	3	16	4
50–59	10	7	10	10	37	9
60–69	23	18	25	18	84	21
70–79	38	39	32	37	146	36
80–89	24	30	31	20	105	26
90 and over	5	6	1	3	15	4

[1] Percentages by age are based on 403 patients on whom this information was known.

Fifty-seven percent of the public assistance patients in the study were native-born, and nearly half of these were born in New York City. A significant percentage (19 percent) were southern-born. Of the 43 percent who were foreign-born approximately one-half were born in western Europe. Negroes constituted 26 percent of the study population, and the majority were southern-born. The population

Table 4. Hospitalizations during 1-year treatment period

Hospitalizations	Assigned group [1]				
	A (N=106)	B (N=104)	C (N=103)	D (N=94)	Total [2] (N=407)
Number patients hospitalized	24	35	33	24	116
Number hospitalizations	32	48	37	33	150
Hospitalizations per patient:					
0	80	69	68	69	286
1	16	24	29	16	85
2 or more	8	11	4	8	31

[1] Does not include planned referrals to rehabilitation centers.
[2] No information on 5 patients (2 group A, 2 group C, and 1 group D).

was nearly evenly divided between Protestants and Catholics, approximately 43 percent each, and a relatively smaller number, 5 percent, were Jewish.

Distribution by occupations and age at "retirement" from gainful employment is shown below.

Occupation[1]	*Percent*
Never worked	1.6
Housewife	19.4
Domestic worker	14.0
Semiskilled and unskilled labor	40.2
Skilled labor	15.0
Clerical and sales	3.4
Professional, technical, and managerial	6.5
Age (years)[2]	
Under 40	2.3
40–49	16.0
50–59	23.2
60–64	15.1
65 and over	41.6
65–69	22.7
70–74	13.3
75 and over	5.6

[1] 389 retirees.

[2] 339 retirees, 1.8 percent of whom had never worked.

The vast majority of the study population had been semiskilled and unskilled workers, many in occupations which had apparently not been covered by old age and survivors insurance. Many of the women were southern-born Negroes who had been domestic workers. Many of the men seemed to be "rootless," unattached persons of marginal socioeconomic means whose financial situation probably induced them to work well beyond the "normal" retirement age. We did not find a significantly large number of persons of middle-class origin who had "drifted" into the public assistance nursing home population because of the financially impoverishing impact of chronic illness.

Thirty-two percent of the study population had never married, and only 8 percent of those who had married had a surviving spouse. Two-thirds of the ever-married were widowed and approximately one-third were childless. Forty percent had one or two children, and the remainder had three or more. However, of the ever-married who had had children, approximately 60 percent had no children in New York City, and an additional 20 percent had only one child living in the city.

At the time separation from community living was effected, nearly two-thirds of the study population lived alone (55 percent), shared a domicile with friends (5 percent), or lived in other nonfamily community residences (6 percent).

Table 6 shows years on public assistance, length of time since separation from community living, and duration of current nursing home placement. Approximately 50 percent had been in the current nursing home for less than a year. Nearly 50 percent, however, had been separated from community living for 3 or more years, and nearly 60 percent had been receiving public assistance for 5 or more years. It is clearly evident that the study population includes large numbers of persons whose dependence upon the public assistance agency for economic support and medical and social services had been established long before their separation from the community and their eventual placement in a nursing home became necessary.

Seventy-five percent of the study population were placed in the nursing home following a prior placement in an acute hospital. Twenty percent came to the nursing home directly from their community residences. The remaining patients were transferred from other hospitals and institutions for the aged.

Our data do not allow us to understand fully the basis for the cultural, familial, and social composition of the disabled population in nursing homes, perhaps because the study sample was restricted to homes in a specific area of the city. We suspect though that it may be due in large part to the relatively small number and

Table 6. Percentage distribution of study population, by years on public assistance, years separated from community, and years in current nursing home

Status	Years				
	Less than 1	1–2	3–4	5–9	10 or more
On public assistance	7.4	19.4	13.6	23.3	35.9
Separated from community	18.1	33.4	26.0	18.1	4.4
In current nursing home	48.6	36.8	10.6	3.7	

selective character of voluntary and public facilities available to the chronically ill aged in New York City. As their medical conditions progress and worsen, disabled persons become increasingly unable to meet the requirements for physical functioning necessary in their community living situations. Particularly "at risk" of nursing home placement are individuals living alone or with friends, relatives, and children. Overcrowding and lack of someone to assist with self-care or with some routine nursing procedure or to provide some social supervision make other living arrangements necessary. Subgroups are "siphoned" off to particular facilities according to religious affiliation, economic status, family intactness and interest, ambulatory and self-care status, and other distinctive factors (*13*). What is left seems to be a residual group of chronically ill and financially dependent persons, some too disabled to be eligible for care in facilities requiring ambulatory independence, others without actively interested families, and all drawn from low and marginal socioeconomic groups.

5. Another set of patient characteristics of significance to nursing home programing is suggested by the response of this disabled public assistance group to rehabilitation programs and to our clinical staff.

Clinically the patients were apathetic and reluctant participants in the rehabilitation program. Less than half of those offered treatment in hospital centers (group C) elected to participate in the program and then only after intensive and "exhortative" efforts by the casework staff.

The general impression of the rehabilitation teams who treated patients in the nursing home indicated considerable unwillingness and reluctance to participate in the formal exercise, conditioning, and other "physical" therapeutic activities offered in medical rehabilitation settings. For many patients the relevancy of these activities to their more immediate problems and concerns was less than apparent. When, however, these modalities were embedded in group social and recreational activities apathy and reluctance were less noticeable. Most patients looked forward to the therapeutic sessions—their contacts with the staff and with other patients—and often seemed willing to "endure" the physical demands of these sessions for their pleasurable social association.

There was little evidence that patients continued therapeutic activities when the study staff was not present, even when the nursing home staffs could be prevailed upon to include these activities in their programs. Patients were preoccupied with problems related to their immediate physical well-being. Somatic complaints were their outstanding concerns. Poor treatment by the nursing home staff, quality of food, thefts of clothing, money, and other personal articles, and the irritating behavior of other patients were the complaints to which they desired the study staff to address itself.

The rehabilitation goals of more independent self-care had little relevancy to many patients because of their pessimistic view of their future and their current status as nursing home residents. Also, these goals contradicted the ideology of some patients, who felt that they had a "right" to be dependent and to be cared for.

Even in terms of the immediate demands of the nursing home environment the goals of self-care improvement often seemed contradictory. Achievement of greater but less than full independence in ambulation and dressing or training leading toward this goal increased the demands on the time and energy of the nursing home staff. On the other hand, the achievement of increased independence in toileting and feeding was greatly prized by the nursing home staff, since this would result in fewer demands on their limited time and numbers.

6. We are attempting the retrospective identification of patient subgroups who improved, maintained, or worsened in self-care status. The results of a factoral analysis relating patient characteristics and self-care change are not yet available. We have, however, completed a case analysis of a small group of patients differentiated in terms of self-care change after a year of treatment (table 7). By employing a combination of test and clinical criteria we have been able to classify 33 of 65 available group B patients according to self-care change. While the results have no statistical validity, they may suggest significant variables.

Upon analysis of a large pool of medical-social variables, improvement in self-care status

Table 7. Change in self-care status of 33 nursing home patients, according to sex and age, following 1 year's treatment

Sex and age (years)	Improved	No change	Worsened	Total
Male	8	7	3	18
Under 65	3	2	1	6
65–79	2	5	2	9
Over 79	3	0	0	3
Female	3	4	8	15
Under 65	0	0	0	0
65–79	0	1	4	5
Over 79	3	3	4	10

appeared to be an age-sex phenomenon; that is, the "improvers" included a greater proportion of younger men, and the "worseners," a greater proportion of older women. The sample was too small to determine age-sex relationships, but the differences in self-care status seem to be based on sex rather than on age.

When seen initially the "improvers" were generally more independent in self-care, manifested less intellectual deterioration and less emotional instability, and showed more interest in rehabilitation treatment. They received less nursing service and more physical and occupational therapeutic services from the rehabilitation teams than the "worseners."

Diagnosis of principal disability, clinical prediction of rehabilitation outcome, medical prognosis, family and marital status, length of time on public assistance, and other sociocultural characteristics were not found to be related to self-care change. Most of these variables seem to be more closely related to sex than to self-care change. Thus, patients who improved in self-care status following treatment appeared initially to be less debilitated psychologically and less severely disabled functionally, and to have fewer complicating medical problems.

These data suggest that the age-sex differentiation may occur because women, whether single or widowed, are kept in the community under the protective eye of relatives and friends longer than unattached men. Women are older than men when they are finally placed in a nursing home and their disabilities are perhaps age-associated, for example, lower extremity fractures and arthritic conditions. They appear and are in fact more debilitated and therefore poorer "risks" for improvement in their self-care skills. It is significant, too, that deaths among this small sample 6 months following cessation of treatment occurred predominantly among older women.

Other findings from this case analysis which have implications for programing for nursing home patients relate to factors which either "impede" or are "favorable to" rehabilitation. These data, based on the frequency of factors reported by the rehabilitation teams, suggest that "improvers" and "worseners" presented a common core of clinical problems (table 8).

Table 8. Frequency rank [1] of factors reported to favor or impede treatment, according to patient's status at termination of program

Factor	Patient status [2] at termination of treatment					
	Improved		Worsened		Total	
	+	−	+	−	+	−
Physical condition of patient	5	1	5	1. 5	6	1
Psychological status of patient	2	2	2	1. 5	2	2
Medical and nursing care provided by nursing home	6	4	3	3	4. 5	3
Physical features of nursing home	1	3	1	5	1	4
Organization of treatment team	3	8	4	8	3	8
Social adjustment of patient to nursing home	8	5	7	4	7. 5	5
Administrative policies of nursing home	4	7	6	7	4. 5	7
Other	7	6	8	6	7. 5	6

[1] 1 (highest reported frequency) to 8 (lowest reported frequency).
[2] +, favored treatment; −, impeded treatment.

The major clinical problem was the nature of the patient's impairment and his medical condition, closely followed by his intellectual and emotional status and his motivation. The nursing home environment—its physical structure and the medical and nursing care provided—was the next most frequent problem. Except for the patient's physical condition, these factors were also considered favorable to the conduct of treatment.

Depending on the clinical condition of the patient and his situation in the nursing home, a factor might prove to be either favorable or unfavorable. For example, narrow corridors might limit the locomotion of a wheelchair-bound patient, they might facilitate the ambulation of an ambulatory patient with unsteady gait, or they might have no clinical significance for a totally incapacitated patient. Efforts, then, to improve standards of care in nursing homes may fall short of the mark if they are narrowly focused on the physical setup and other structural features and on administrative policies without due regard to the diverse clinical condition and needs of the patients.

Conclusions

Our data suggest that nursing homes in New York City contain a public assistance population that is relatively homogeneous socially but extremely varied medically and functionally. This population is a residual one containing social and cultural groups for whom family responsibility and community planning have been either insufficient or entirely lacking. In the absence of ready access to other long-term facilities for the chronically ill elderly, these patients tend to cluster in proprietary nursing homes.

Medically, public assistance recipients in these homes range from chronically ill but ambulatory patients requiring routine and unskilled nursing services to severely ill or totally disabled patients in or near terminal states. When populations with such diverse needs for medical, nursing, social, and other services are grouped together in a single facility, it seems evident that the needs of all groups are not being adequately met.

The clinical conditions of the patients and their response to treatment suggest that the application of medical rehabilitation programs, similar to those developed in this study, to an unselected group of physically disabled nursing home patients is neither practical, economical, nor efficacious. Activity programs within the nursing home designed to maintain physical function, to stimulate patients to assume greater responsibility for self-care, and to enlarge the bounds of the limited social and physical environment seem more appropriate. The use of rehabilitation experts as consultants, as specialists in patient care problems, and as participants in staff training programs might make good sense. Within recent years other nursing home studies have pointed to the value of selection of candidates for rehabilitation prior to their placement in nursing homes (*2, 3*), of staff educational programs to embed rehabilitation concepts in nursing home programs (*14–17*), and of development of closer links between nursing homes and other medical care facilities (*4, 7, 9*). Such programs should also aim at maintaining the self-care status of functionally independent patients, who constitute the majority of the public assistance patients in these homes.

The fact that the nursing home population has long been known to the public assistance agency and has been a recipient of its medical care services suggests certain possibilities for preventive programing.

Our data suggest that a well-organized community-oriented program to reduce secondary complications of chronic illness resulting from inactivity, poor positioning, and overabundance of bed rest would do much to avoid the fixed joints, contractures, deconditioning, and poor nutritional states of nursing home patients. Such a program would require medical rehabilitation services organized somewhat along the lines of home care programs and reaching out periodically to target populations on the rolls of public assistance agencies. Services might first be concentrated on single and widowed women living alone or with relatives and friends. Particular attention should be given to implementing the programs during and following acute hospital episodes, when separation from community living would appear to be on the agenda.

Finally, it is suggested that long-range public social planning for improvement in the social and medical well-being of aging chronically ill persons may affect those social forces which now converge to create populations at high risk for placement in proprietary nursing homes. Increased OASI coverage, increased community and hospital-based home care services, programs and services designed to strengthen family life and community ties, more adequate housing, and broadening of restrictive policies of institutional and community facilities for the aged will do much to reduce the numbers of persons now consigned to nursing homes.

Sociologically, physically disabled public assistance recipients in nursing homes suggest a "failure" population. They "failed" to provide economically for their old age by anticipation of their needs. Many of them "failed" to choose occupations which would later be covered by OASI benefits. Also, many "failed" to marry or, if they married, to produce large numbers of affluent and responsible offspring as additional insurance against later social, economic, and medical dependency.

Socially, their social class origins, coupled for many with membership in minority ethnic or racial groups made them persons "deserving" of some public financial support but still beyond the realm of serious societal assumption of their larger social and medical well-being. The more "deserving" elements among this age group had been filtered out by a variety of sievelike processes.

Medically, too, this population suggests "failure." We cannot halt the progress of their underlying disease conditions. Few qualify by current standards as good candidates for medical rehabilitation. Many do not regard the belief and value system of medical rehabilitation as relevant to their concerns. Thus, they are poor contenders for the increasingly competitive, expensive, and scarce hospital bed.

As the number of aged chronically ill and disabled persons has increased, a relatively new social institution, the proprietary nursing home, has grown rapidly in the United States to fill the social vacuum created by the absence of public social planning. Isolated from the main stream of community medical care and social welfare services, and bound for the most part by financial reimbursement policies which discourage independence in patient functioning, its social role has only recently received serious public scrutiny.

Under present conditions, the direct therapeutic contribution that medical rehabilitation can make to improve the well-being of disabled public assistance recipients in nursing homes may well be a modest one. Such a contribution is dependent upon a resolution of more fundamental medical care and social welfare issues and community patterns of care. The preventive role of medical rehabilitation in relation to this population has yet to be seriously explored.

Summary

A test of the potential for self-care improvement of a disabled public assistance population in nursing homes in New York City by the provision of medical rehabilitation services in nursing homes or at hospital centers revealed that the potential of these patients for such gain is extremely limited.

The public assistance population was composed of subgroups with varying levels of self-care function and diverse medical care and nursing needs. The majority were fully ambulatory and self-care independent. Socially, they were drawn predominantly from lower socioeconomic groups, with a history of financial and medical dependency upon the public assistance agency prior to their placement in the home. Placement in a nursing home is among the last in a series of events associated with deterioration in their medical and social well-being.

The tested self-care abilities of the disabled population were higher than the levels at which they functioned in the nursing home. Clinically, they were apathetic and poorly motivated for rehabilitation services aimed at improving their self-care skills. The efficacy of such efforts was also limited by their medical "fragility"—intercurrent illnesses, hospitalizations, and death. Community-oriented preventive rehabilitation programs prior to nursing home placement m i g h t reduce the debilitating sequelae resulting from the chronic illnesses of these patients now seen in nursing homes. Such programs might contribute to a reduction in the

numbers of such persons in nursing homes or delay their placement therein.

Activity programs in nursing homes, focused upon maintenance of function of patients who are self-care independent and on the stimulation and motivation of disabled patients to use their existing physical capacities more fully are indicated. The employment of rehabilitation specialists as consultants to the nursing home staffs on patient problems or in staff training programs would appear to be helpful.

The resolution of the underlying medical and social problems of public assistance recipients in nursing homes and the role that medical rehabilitation services can play is dependent upon the achievement of a degree of community responsibility and planning for the health and social well-being of this population which has not been evident in the past.

REFERENCES

(1) Reynolds, F. W., Abramson, M., and Young, A.: The rehabilitation potential of patients in chronic disease institutions. J. Chronic Dis. 10: 152–159, August 1959.

(2) Moskowitz, E., et al.: A controlled study of the rehabilitation potential of nursing home residents. New York J. Med. 60: 1439–1444, May 1, 1960.

(3) Gimble, A. I., and Robinson, R. A.: Report of the geriatrics rehabilitation program (for the twelve-month period March 1, 1957, through February 28, 1958). Michael Reese Hospital, Chicago, January 1959. Mimeographed.

(4) Ames, W. R., et al.: Care of persons with long-term illness in nursing homes. Monroe County Chronic Illness Study, Monroe County Board of Supervisors and the Council of Social Agencies of Rochester and Monroe County, Inc., Rochester, N.Y., September 1958.

(5) Muller, J. N.: Rehabilitation evaluation; some social and clinical problems. Am. J. Pub. Health 51: 403–409, March 1961.

(6) New York Medical College: Study of rehabilitation potential of nursing home population; report of progress of first year. New York, October 1959. Mimeographed.

(7) Morris, R.: Expansion of cooperative relationships between hospitals and nursing homes. Pub. Health Rep. 75: 1110–1114, December 1960.

(8) Planning for the chronically ill in Niagara County. Survey report of the Committee of One Hundred, Niagara County Study of Chronic and Long-Term Illness. Council of Social Agencies, Niagara Falls, N.Y., 1960.

(9) Recommendations of Workshop on Hospital-Nursing Home Relationships, conducted under the joint sponsorship of American Hospital Association, American Medical Association, American Nursing Home Association, Blue Cross Commission, Public Health Service. A.M.A. Council on Medical Service, Chicago, February 1960.

(10) Eller, C. H.: Patients in private nursing homes in Jefferson County, Kentucky. Kentucky State Department of Health, Louisville. January 1959. Mimeographed.

(11) Poland, E., Lembcke, P. A., and Shain, M.: Kansas Nursing Homes. Publication No. 129. Community Studies, Inc., Kansas City, Mo., November 1959.

(12) Solon, J., Roberts, D. W., Krueger, D. R., and Baney, A. M.: Nursing homes, their patients and their care. PHS Pub. No. 503 (Public Health Monogr. No. 46). U.S. Government Printing Office, Washington, D.C., 1957.

(13) Goldfarb, A. I.: Report to the Commissioner of Mental Hygiene of New York State. Summarization of activities for the year 1958. Office of the Consultant on Services for the Aged, New York State Department of Mental Hygiene, Albany, N.Y. Mimeographed.

(14) Hackley, J. A.: Instructing nursing home personnel in rehabilitation techniques. Pub. Health Rep. 74: 989–994, November 1959.

(15) Soller, G. R.: Training nursing home aides. Pub. Health Rep. 75: 283–290, April 1960.

(16) Park, W. E., and Moe, M. I.: Rehabilitation care in nursing homes, Pub. Health Rep. 75: 605–614, July 1960.

(17) U.S. Public Health Service. Division of Special Health Services: Selected articles on nursing homes: PHS Pub. No. 732. U.S. Government Printing Office, Washington, D.C., 1960.

Federal Publications

A Health Study in Kit Carson County, Colorado. *PHS Publication No. 844; 1961; 148 pages.*

This publication, including four papers, reports an extensive field study conducted by Public Health Service researchers in cooperation with the Colorado State Department of Health to develop methods for identifying local public health requirements and patterns for providing health services in sparsely settled sections of the Great Plains.

The paper on the county morbidity survey, one phase of the project, contains a critical review and the methodological implications of such surveys. Other papers report selected findings on health statistics and services, and describe the county people and their health practices.

Hospital Elements—Administration Departments: Planning and equipping for 50-, 100-, and 200-bed general hospitals. *PHS Publication No. 892; 1961; 19 pages; 25 cents.*

Designed as a guide for those responsible for planning and equipping general hospitals, this publication sets forth in detail the procedures and functions of an administration department. A checklist for planning and a suggested equipment list are included.

Research Grants Index. Sample issue, fiscal year 1961. *PHS Publication No. 876; 146 pages.*

This sample issue, based on 17 percent of the research grants awarded in 1961, illustrates how the Division of Research Grants, National Institutes of Health, will index the scientific content of PHS-supported biomedical research projects beginning with fiscal year 1962.

Data are indexed by a modified keyword indexing system, using approximately 4,000 single-word headings, or phrases, alphabetically arranged. The keyword headings were derived from an analysis of 2,300 abstracts, sampled from 13,500 investigators' summaries of current research grants.

The Dental Service Corporation: Oregon report. *PHS Publication No. 896; 1962; 26 pages.*

This publication traces the development of a dental service corporation by the Oregon State Dental Association. It discusses some of the legal and operational problems encountered and describes the corporate structure finally adopted. The bylaws of the corporation and a contract with a consumer group are included in the appendixes.

A Report of the ILWU–PMA Dental Care Program: The first three years. *PHS Publication No. 894; by Quentin M. Smith, Robert R. Fuchsberg, and James N. Ake; 43 pages; 1962.*

A comprehensive survey describes origins and characteristics of the prepaid dental care program for children sponsored by the International Longshoremen's and Warehousemen's Union—Pacific Maritime Association. It follows the course of a single group of children through the first 3 years of the program, defining scope of service, care provided, and changing nature of dental needs. The survey also examines differences between dental service corporations, group practices, and an indemnity plan, each of which took part in the program.

Text tables and appendixes illustrate kinds and amounts of treatment, frequency and costs for specific care, and the yearly pattern of services.

Swine Brucellosis and Human Health. *PHS Publication No. 895; 1962; leaflet; 5 cents.* Discusses swine brucellosis as a source of human disease. Includes description of disease, modes of transmission, and preventive measures.

Terms Used in Cardiovascular Diseases. *PHS Publication No. 860; July 1961; 16 pages; 20 cents.*

Prepared primarily for registered nurses who do not have ready access to a library, this booklet contains more than 150 definitions considered most needed by nurses in caring for their patients. It should be useful also for staff education in hospitals, industry, and public health agencies and for teaching short-term intensive refresher courses.

This section carries announcements of new publications prepared by the Public Health Service and of selected publications prepared with Federal support.

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