Inservice Training in Stroke Rehabilitation for Care Facility Personnel in Oregon

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IN RECENT YEARS, increasing emphasis has been placed on restorative services for the disabled aged. In 1958 the Oregon State Board of Health, the Multnomah County Health Department, and various community agencies developed a demonstration project in stroke rehabilitation in Multnomah County, Oreg. Intensive physical therapy was offered to selected patients admitted to the Multnomah County Hospital with a diagnosis of acute stroke. This demonstration proved so successful in reducing both the medical and financial costs of institutional care that in 1961 Multnomah County included a continuing medical rehabilitation program in its annual budget. The Lane County Medical Society followed with a similar stroke rehabilitation program, now in its third year of operation.

It soon became apparent to the officials of the Oregon State Board of Health that these beneficial services were available to too few people. Among the largest groups demonstrating a need for this type of service in Oregon are nursing homes and small hospitals. In an effort to satisfy this need, a physical therapist was employed by the board of health as a full-time consultant to such facilities.

In 1961 the authors developed an inservice training program, the first 18 months of which are described here, to be carried out in local areas throughout the State. This program offers to the personnel of hospitals, nursing homes, and local health departments training in simple restorative techniques and rehabilitative nursing. It also provides consultation to these facilities in organizing physical therapy departments, purchasing rehabilitation equipment, and other areas of need.

Early in the program the need for a continuing professional education program for physicians became apparent. Pomrinse has commented on the leadership the physician must show in rehabilitation (*1*). Programs were held for the medical staffs of the hospitals in areas where the inservice training program was to be given. This enabled us not only to present medical information about restorative services but also about the goals and services offered through the program. It is hoped that this will further stimulate the use of these trained personnel. Larger programs on stroke rehabilitation for county medical societies have been presented by the Stroke Committee of the Oregon Heart Association.

Outline of Program

The physical therapy consultant initially contacts the nursing home administrator, hospital administrator, public health officer, and nurses, and when available the local physical therapist, and presents the plan and purposes of the inservice training program. No other publicity was given the program. Facilities receiving training are described in the table.

Participation by as many as possible of the facility personnel, especially the licensed practical nurses and nurses aides, is encouraged. Class schedules are arranged with the facility

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administrator, and frequently special classes are held for the public health nurses. All classes are conducted by the physical therapy consultant. They are held in the nursing home or hospital or in another available community facility, such as a school. In some areas it is desirable to conduct the classes in one centrally located nursing home in which there is sufficient room.

Each session is individualized. Two classes of 3 hours each are held on consecutive days, totaling 6 to 8 hours of formal instruction including lecture, demonstration, and return demonstration. During the lecture portion, the concept of rehabilitation is introduced. Emphasis is placed on helping the patient help himself. The activities of daily living (ADL) are explained. The rationale is given for maintaining the patient's joints in a mobile state, and the effect of such passive range of motion on muscle tissue, circulation, and nerve function is explained. Frequently, the films "CVD—The Challenge of Management" and "Prevention of Disability From Stroke," distributed by the American Heart Association, are shown.

The demonstration portion of the first class session includes the basic principles and methods of bed positioning as a means of preventing deformities by maintaining functional position of the extremities. The procedure for basic range of motion exercises is demonstrated and explained. Each class participant is provided with a glossary of terms and a detailed, written, step-by-step procedure for range of motion, which is used as a supplement to "Strike Back at Stroke" (*2*). The procedure sheet describes the motion to be accomplished and the manner in which the extremity is to be held for each motion of every joint. After instruction each class participant is given an opportunity to demonstrate bed positioning and range of motion exercises.

The second class consists of methods of transferring the patient. These include moving the patient while he is in bed and assisting him in turning from side to side, assuming a sitting position, and moving from bed to chair or toilet and back to bed. Emphasis is placed on the mental and physical preparation of the patient, placement of equipment, and the position assumed by the worker. The uses of a 2-inch strap, 1½ yards long, are demonstrated for lifting and stabilizing the patient. Each student is then asked to demonstrate the techniques that have been presented. The remainder of the class session is spent explaining the functional aspects of hand-finger coordination exercise routines. Selected "play school" toys that utilize the progressive finger-hand position from large grasp to finger-thumb contact in opposition are used for the exercises. The relationship of demonstrating progress in hand-finger dexterity to patient ADL is carefully explained, and the morale-building features of this procedure are stressed.

Facilities receiving inservice training during first 18 months, Oregon

Facility	Bed capacity			
	Total	Mean	Median	Range
Nursing homes (55)	2, 471	44. 9	39	10–171
Hospitals (14)	700	50	46	30–84

Followup visits are made by the consultant to the facilities that participated in the class work on a 6-month rotation basis. At this time the facility is notified of the intended visit, and personnel are encouraged to ask questions pertaining to particular difficulties. Occasionally the consultant is asked to see a particular patient, with approval of the patient's attending physician. This provides an opportunity for demonstrating the techniques previously taught. As the program progresses, additional classes are being scheduled for review and for new personnel.

Attendance of personnel from the 13 health departments, 55 nursing homes, and 14 hospitals during the first 18 months of the program is shown below.

Personnel	*Session* 1st	2d
Registered nurses	150	115
Licensed practical nurses	35	36
Nursing aides	365	392
Public health nurses	24	10
Administrators, managers, and nursing home owners	15	26
Total	589	579

Discussion

Many studies have pointed to the need of rehabilitation nursing techniques in nursing homes (*3–8*) and general hospitals (*9*). The Oregon program appears to be a successful approach to providing training in these techniques. Many of the nursing homes that have participated in the program have incorporated rehabilitation concepts into their daily routines. More of the professional and nonprofessional personnel are taking an increased interest in proper bed positioning, transfer techniques, and patient ADL performance. As more nursing homes and small general hospitals hear of the program, requests for new classes increase.

The local health departments have utilized the inservice training program in their home care programs. It is thought that the public health nurses have been made more aware of the broad concepts of restorative care for all types of patients. In addition, these nurses have made good use of the consultation service, which has ranged from adjustment of simple appliances to exercise program planning for quadriplegia.

A more critical evaluation of the program was made in one county where 12 nursing homes were studied. (They compare closely in size to the facilities participating in our initial program.) The head nurse provided information from charts on the ADL status of each patient. This was recorded by the physical therapy consultant and scored similar to the system used by Carroll (*10*). The inservice training program was then given at the facilities. Six months later the facilities were re-evaluated.

The most interesting observation was the lack of information recorded in many of the charts. Data on diagnosis, treatment, and clinical status were frequently incomplete. It was apparent that some questions were answered with a guess rather than factual knowledge of status of the patients. While no statistically significant data can be drawn from this evaluation, it was evident that changes had occurred in most of these homes. In many cases improvement was recorded in the ADL status of the patients. In one home, of five patients discharged during the 6-month interval, the supervising nurse thought the inservice training program was directly responsible. This recorded improvement was interpreted by the consultants as evidence of improved nursing care and a more realistic understanding of geriatric rehabilitation by the nursing home staff.

We agree with Muller (*11*) that there is a need for objective evidence of the effectiveness of rehabilitation programs. Such evidence is frequently difficult to obtain. However, we are presently attempting to evaluate the activities of daily living of individual patients in 20 nursing homes, dividing the homes into two comparable groups, conducting the inservice training program in only one group, and reevaluating both groups at 6-month intervals for 18 months. We hope to demonstrate by this study a more objective improvement in ADL status and nursing care.

A major drawback to inservice training in nursing homes is the rapid turnover of personnel. Frequently, on a followup visit there were only one or two employees who had participated in the original classes. The others were new employees with no previous experience in restorative techniques. It is hoped that the more stable professional nurses together with the public health nurses, and where available local physical therapists, will be able to give the new employees sufficient training to implement some of these concepts in their daily routines. The followup classes will enable them to receive more formal training in these techniques.

Our program is growing. Plans have been made to incorporate more functional occupational therapy in the training. The Coordinating Committee for Volunteer Services, composed of a number of community agencies working through the Oregon State Board of Health, are developing statewide groups of trained volunteers to help in nursing homes. Their activities will complement this program. Through the nursing section, Oregon State Board of Health, five local public health nurses have received training in rehabilitative nursing at Ranchos Los Amigos in Los Angeles. It is anticipated that more will receive training. Continued emphasis on physician oriented educational programs is being stressed. We are continually trying to evaluate objectively the results of our efforts in terms of patient im-

provement, improved nursing skills, and, when possible, financial savings to the patient and community.

It is anticipated that a team composed of a physician, physical therapist, public health nurse, and social worker will be formed. They would be able to bring inservice training programs on a continuing basis to care facilities in the State. And perhaps more important, they would be able to coordinate the available resources in a given community into a smoothly working, effective team.

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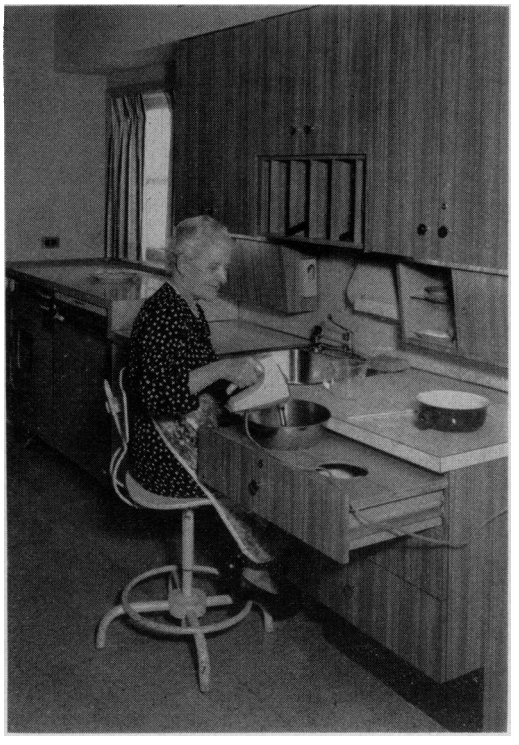
Special Housing Needs



There has been relatively little research on the special housing needs of the handicapped. It would seem, however, that some of the special design features and characteristics of housing for the elderly might also have application to the handicapped of all age groups. These features include avoidance of steps and thresholds; easy-to-reach kitchen equipment; sit-down sinks, nonskid floors, sit-down tubs and showers; wider doors and corridors; grab bars in the bathroom; heat controls at convenient heights; waist-level ovens and safety shut-offs on stoves; easily accessible wall plugs; and dwelling units whose size and design permit easy maintenance.—Sidney Spector, *Assistant Administrator, Housing and Home Finance Administration, in testimony before the Subcommittee on Housing, Committee on Banking and Currency, House of Representatives, October 21, 1963.*