

Rehabilitation in the Hospital

By HOWARD A. RUSK, M.D.

IN THE PAST, the physician too often has thought only about the physiological and clinical aspects of a patient's disability. The vocational counselor too frequently has considered only the physical skills which could be utilized vocationally. Between the completion of medical care and the beginning of vocational training, however, there is a wide area through which most physically handicapped persons must go. In this area lies the physical retraining in skills necessary for carrying on the activities inherent in daily living and common to all types of work.

Except in a few isolated instances, the physically handicapped person must be retrained to walk and travel, to care for his daily needs, to use normal methods of transportation, to use ordinary toilet facilities, to apply and remove his own prosthetic devices, and to communicate either orally or in writing. These are such simple skills that they are frequently overlooked, but the personal, vocational, and social success of the handicapped person is dependent upon them.

Some outstanding rehabilitation programs in various parts of the world have demonstrated that rehabilitation to the point of self-care and even to full or limited employment is possible

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for many of the chronically ill who have been hospitalized for long periods. In most of our hospitals, however, the patient receives few services of this type. Hospitals complain that the chronically ill are responsible for their overcrowding, but they do little to provide the retraining services that will permit many of these patients to leave the hospital.

Survey of Hospital Rehabilitation Services

In 1951, the Commission on Chronic Illness in cooperation with the American Hospital Association sent out questionnaires to approximately 2,600 general hospitals of 50 beds or more to learn more about the problems of caring for long-term patients in general hospitals. Hospitals were asked if they had an organized rehabilitation service. For survey purposes "an organized rehabilitation service" was defined as a service which (a) studies patients with residual handicaps or disabilities due to illness or accident and (b) provides training and therapy to help the patient to adjust to, compensate for, or overcome the disability.

Among the first 1,600 hospitals responding, only 65 reported that they operated organized rehabilitation services. Only 18 of these reported that they had separate ward services with a specific allocation of beds for rehabilitation, and in many of these the services cannot be termed truly comprehensive. In the other 47 hospitals, rehabilitation patients were not segregated. Staffs ranged from those including full-time physicians specially trained in physical medicine and rehabilitation, physical therapists, occupational therapists, speech therapists,

vocational counselors, social workers, and others to those consisting of only a physical therapist and a social worker or a physician and a physical therapist. It was significant that 23 of the 65 hospitals reporting such services were hospitals of less than 250 beds.

Services in New York

The first comprehensive in-patient rehabilitation service in any general hospital in the United States and, to our knowledge, in the world was started at Bellevue Hospital in 1946 under the professional direction of the department of physical medicine and rehabilitation, New York University College of Medicine. Prior to the opening of this department, with a grant from the Baruch Committee on Physical Medicine and Rehabilitation, there was but one physician trained in this field on the staff of this 3,000-bed hospital. The hospital had a limited staff of registered occupational therapists, but physical therapy was administered primarily by unqualified "physical therapists" who had had little or no formal training. There were no registered physical therapists, no speech therapists, no rehabilitation counselors, no psychologists, no recreation specialists.

At present at Bellevue Hospital, there are 154 beds for rehabilitation: 69 beds for adults, 20 beds for children, and 65 beds for tuberculosis rehabilitation. At Goldwater Memorial Hospital, there are 200 rehabilitation beds; at City Hospital, 56 beds; at Kings County Hospital, 20 beds; and at Metropolitan Hospital, 30 beds.

The program will be expanded in the next 2 years by the opening of 22 beds at Fordham Hospital, which will be transferred to the Bronx Hospital Center when it opens. The number of beds at Queens General Hospital will be increased from 30 to 40, and the number at the Bird S. Coler Hospital will reach 400. The Bird S. Coler Hospital will then absorb the units now operating at Metropolitan and City Hospitals.

This expansion of rehabilitation services is a follow-up of the recommendations of the Hospital Council of Greater New York. In its master plan in 1947 the council suggested that 25 percent of the city's general hospital beds be allocated for convalescence and rehabilitation.

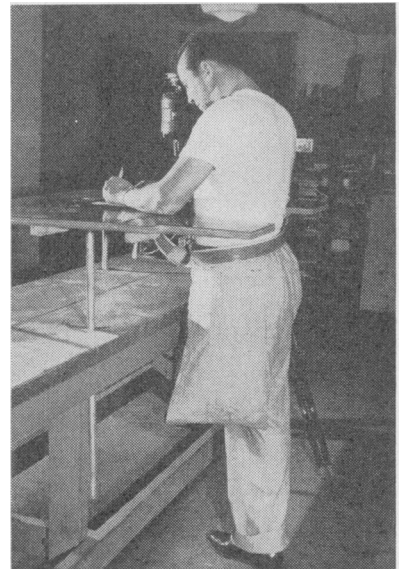
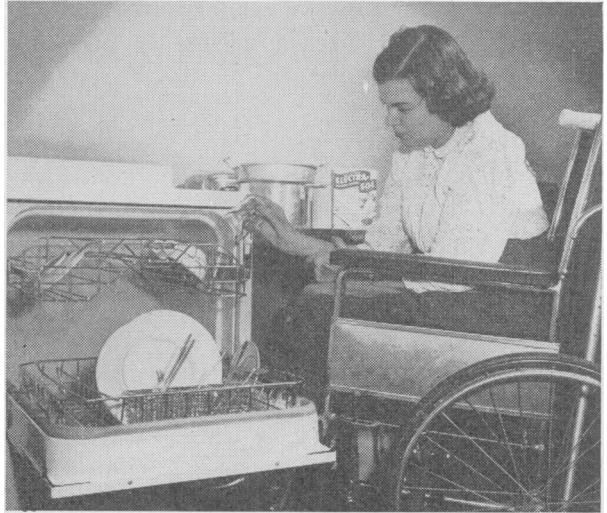
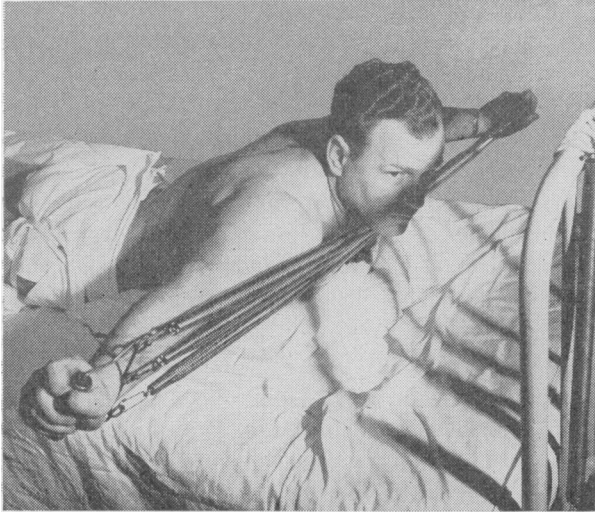
This would mean one such bed for each 1,000 of the city's population.

Organization and Operation

Physical medicine and rehabilitation in these hospitals is organized as a "service" department, usually operating in relation to the other hospital services in a manner similar to that of the X-ray or the laboratory department. For example, in Bellevue Hospital the rehabilitation service provides consultants for such other major services as fractures, pediatrics, surgery, and neurology. Its resident and visiting staff regularly make rounds with the resident and visiting staff of these services. Its staff may, for example, see a patient in consultation before his leg is removed, indoctrinating him as to what he must expect, why he cannot keep his stump on a pillow, why he has to lie on his abdomen. Medical responsibility during the period of definitive care, of course, rests with the initial or admitting service. As soon as the stitches are removed, the patient is transferred to a rehabilitation ward. At this time, the rehabilitation service assumes the major responsibility for his care, fitting of the prosthesis, and training in its use. The roles are now reversed; the surgical service has become the consulting service.

Prior to actual transfer of the patient to a rehabilitation ward, however, he attends one of the rehabilitation service's semiweekly evaluation clinics, where his problem is analyzed and discussed by all members of the staff—physical therapists, occupational therapists, nurses, vocational counselors, speech therapists, social workers, and psychologists—as well as the resident and visiting medical staff. The decision as to the feasibility of transferring the patient to the rehabilitation service is then made on the basis of the service's ability to contribute to his over-all physical, emotional, social, and vocational rehabilitation.

The rehabilitation services in New York City hospitals are unique in their scope of service, for they are among the few in the Nation, other than those operated by the Veterans Administration and some specialized facilities, which provide speech therapy, rehabilitation nursing, vocational counseling and job placement assist-



ance, psychological services, and a special therapeutic recreation program in addition to medical services, physical therapy, occupational therapy, and social services.

Economic Savings

Although it is difficult to estimate the financial savings to the city of such comprehensive rehabilitation programs, the 1951 experience of Goldwater Memorial Hospital gives some indication of how much these savings may be. In 1951, the 100-bed rehabilitation unit (increased to 200 beds in 1952) in this 1,500-bed hospital discharged 168 patients, some of whom went to other institutions but 91 of whom returned to their homes. Past experience indicates that each of these patients would have stayed at least one more year in Goldwater and many would have stayed much longer. At present hospital costs, the upkeep of these patients for one additional year would have totaled \$237,000.

Of the 91 patients returning to their homes, 12 were placed in full employment by the hospital's rehabilitation counselor working with other community agencies. An additional five patients were placed in part-time employment, and three were placed in sheltered workshops.

The amount listed above was not, of course, a net saving to the city, as the additional cost for physicians, therapists, and other personnel for the rehabilitation unit was about \$100,000 for the year. The additional cost cannot be charged entirely to the rehabilitation program, however, since these physicians and specialists also provided definitive services for the entire hospital.

Substantial savings accrue also from the lowered cost of care for patients who, as the result of rehabilitation training to the point of self-care, are transferred to the City Home and Farm Colony. The patient-day cost at the colony in 1950 was \$3.25 as compared with \$7.15 at Goldwater.

Similar economic savings were made through the organized rehabilitation units at Bellevue Hospital, which discharged 264 patients; at Metropolitan Hospital, which discharged 71; and at City Hospital, which discharged 135. The human value of these services, of course, cannot be measured by money.

Further evidence that this approach pays off economically and socially can be found in the

first year's experience of such a program on the chronic wards of Grasslands Hospital at Valhalla, N. Y. The original outlook for the majority of the 58 patients participating was continuous, indefinite hospitalization. Many had been in the hospital for months; some for years. At the end of the study, half of the group were walking without help and two-thirds had been discharged to their homes. Most significant was the fact that two-thirds required less than 60 days of rehabilitation training to make them self-sufficient.

Similar results have been reported at the Veterans Administration Los Angeles Center in a study of 105 patients, a typical group of elderly persons with declining or nonexistent economic potentials. All were physically disabled; a large number were chronically ill, many having histories of long periods of hospitalization prior to referral for rehabilitation. For various reasons, rehabilitation training was discontinued in 29 of the patients. Of the 76 completing their training, 34 were discharged to their homes, and the remaining 42 were transferred to the center's domiciliary unit, as they were ambulatory and capable of complete self-care.

From an economic standpoint, each of those discharged to their homes represents a saving of \$15.08 per day. Costs of maintaining those transferred to the domiciliary unit were reduced from \$15.08 to \$3.04 per day. Based on the 1950 Veterans Administration in-patient operating costs per day, the cost of providing care for the group of 105 patients at the time of their referral for rehabilitation was approximately \$1,583 per day. At disposition, the cost per day of caring for those remaining at the Los Angeles Center amounted to \$378, a reduction of over 300 percent, or an annual saving of approximately \$440,000.

In November 1950, a physical medicine and rehabilitation department was established at Gallinger Hospital in Washington, D. C., as a joint undertaking of the Public Health Service, the District of Columbia Office of Vocational Rehabilitation, and the District of Columbia Health Department. During the year prior to the formation of this new department, orthopedic patients spent an average of 55 days in the hospital. With the new program, the length

of hospital stay of orthopedic patients was reduced to 33 days, a saving of \$122,000 for orthopedic patients alone, based on a patient-day cost of \$12.50.

Experience has shown that the cost of additional specialized rehabilitation personnel largely offsets the over-all savings resulting from dynamic training programs for patients with chronic illness and rehabilitation patients who need fewer special services, such as drugs, dressings, operating rooms, X-rays, laboratory, and anaesthesia. The great saving results from the reduction in the length of hospital stay and the enabling of patients to return to lives of economic productivity or to care for themselves.

The Future

The hospital of today is being recognized

more and more as the focal point in public health activities. With the changing demands being placed upon it because of the growing incidence of chronic disease and disability, it must also play a more important role in the rehabilitation of patients. In the past, hospitals have concentrated almost solely upon the definitive aspects of medicine and surgery. If the hospital is to meet the changing health needs of the public, it must assume greater responsibility for all three phases of health: prevention, definitive treatment, and rehabilitation. As Bayne-Jones has said, ". . . they must become increasingly houses of prevention instead of houses of pity." The problems of chronic disease can be met only by the creation and utilization of abilities, not merely by the building of facilities.

The Visiting Scientist Program

The Public Health Service visiting scientist program established at the National Institutes of Health has been expanded to include research workers with demonstrated ability and specialized training. The plan, which permits the visiting research workers to conduct their investigations in the laboratories at Bethesda, Md., has been formalized in preparation for the opening of the Public Health Service Clinical Center.

The visiting scientist and the research associate are the two categories of visiting investigators. Requirements for the first category are a doctor's degree or its equivalent in training and experience, at least 6 years of postdoctorate research, and demonstrated ability in a specific research problem. Research associates must have the same training and experience, but not necessarily the same degree of identification with a specialized field.

Already among the guest scientists are Nobel Prize winners Albert Szent-Györgyi, Bernardo A. Hussay, and Otto H. Warburg. The first visiting scientist to be appointed under the new program is Dr. Horace A. Barker of the University of California, an investigator in the field of metabolism.