Middle Articles

CONTEMPORARY THEMES

Garston Manor: An Experiment in Rehabilitation

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The aim of rehabilitation is to restore the patient to a full life after illness or injury. It has medical, social, and industrial aspects.

Medical rehabilitation is largely concerned with the restoration of physical fitness where this is possible, and with helping the patient to compensate for a disability when this is permanent. Such help may include the provision of artificial limbs, domestic aids, wheelchairs, and hand-controlled vehicles, as well as alterations to the patient's home. While medical rehabilitation is primarily the responsibility of the hospital team, many other people may be involved—in particular, the patient's general practitioner and the staff of voluntary organizations, local authorities, and Ministry of Health limb-fitting and appliance centres.

The object of industrial rehabilitation is to find jobs for disabled workers in open industry or in sheltered workshops, to assess the aptitude and skills of those who must be found alternative work, and to provide vocational training for those who must acquire new skills. The 1944 Disabled Persons (Employment) Act made industrial rehabilitation the responsibility of the Ministry of Labour, now known as the Department of Employment and Productivity. This department provides a job-finding service at some 900 employment exchanges throughout Great Britain; operates 22 industrial rehabilitation units designed to give vocational guidance; sponsors sheltered workshops which are operated by Remploy, local authorities, and voluntary bodies; and provides courses of vocational training at Government training centres, commercial and technical colleges, and a small number of residential training centres for the more severely disabled. Since 1944 some 200,000 men and women have been admitted to courses at industrial rehabilitation units and over 160,000 have received vocational training, and in this time the Ministry's disablement resettlement officers, better known as D.R.O.s, have found over two and a quarter million jobs for disabled people.

Nevertheless, doctors are still not making full use of the facilities provided by the department for their patients. There are many reasons for this, not least the physical separation of the rehabilitation services provided for the disabled by different Ministries. This problem was considered by the Interdepartmental Committee set up under the chairmanship of Lord Piercy in 1953 to review the provisions for the rehabilitation, resettlement, and retraining of disabled persons. Its report, published in 1956, recommended the provision of two or three experimental comprehensive rehabilitation and assessment centres. Such a combined centre would be associated with, and located as closely as possible to, a general hospital. It would provide within the one establishment a variety of services, including a physiotherapy department and remedial gymnasium,

and specialist services would be readily available; an industrial workshop would be provided by the Ministry of Labour, and a joint assessment unit established.

The Ad Hoc Committee on Rehabilitation set up by the Sheffield Regional Hospital Board (1962) was convinced that comprehensive rehabilitation units should be established to serve a population of about 250,000 and pointed out the necessity to plan such centres as an integral part of the new hospitals.

The first comprehensive medical and industrial rehabilitation centre in the country on the lines recommended by the Piercy Committee has recently been completed at Garston Manor, near Watford in Hertfordshire.

Garston Manor Medical Rehabilitation Centre

Garston Manor was opened as a medical rehabilitation centre in 1951 by the North-west Metropolitan Regional Hospital Board under the direction of the late Group Captain C. J. S. O'Malley, and, while our views on civilian rehabilitation have been modified by experience during the past 17 years, the centre owes much to his inspiration and ideas based on wartime rehabilitation in the Royal Air Force. In 1956 he was succeeded as physician-in-charge by Dr. A. P. H. Randle.

Garston Manor is a country house standing in its own grounds of some 60 acres (24 hectares), situated on the outskirts of Watford, 20 miles (32 km.) from London, and less than a mile (1.6 km.) from the junction of the Watford-St. Albans road and the M1 motorway. The manor house provides residential accommodation for about 60 patients. Until recently all bedrooms were on the first floor, and patients could be accepted as inpatients only if they could manage at least 27 stairs. This delayed the admission of some orthopaedic cases, particularly those with multiple limb injuries or following hip operations. Ground-floor accommodation is now available in a specially designed extension for half a dozen patients who are normally expected to graduate to a first-floor bedroom during their stay at the centre.

Patients are encouraged to look on the manor house as a temporary home rather than a hospital. On the ground floor there are lounges, dining-rooms, cafeteria, and a large recreation room, which is used for table tennis, television, film shows, and weekly dances. There is a billiards room in the basement.

Patients are allowed more freedom than is possible in a general hospital. They may be given permission to go out in the evening, provided they return at a reasonable hour, and many patients go home at week-ends. Some are given permission to bring their cars to the centre. They elect their own committee to deal with complaints and to arrange entertainments, and members of this committee meet new patients on arrival and introduce them to life at the centre. Both men and women are accepted for treatment, but because of the greater liability

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of men to injury at work or on the roads they outnumber women patients by five to one.

Patients

Inpatients are transferred not only from hospitals administered by the North-west Metropolitan Regional Hospital Board but also from hospitals in London, the Home Counties, and occasionally from the Midlands, East Anglia, and Wales. A third of the inpatients are referred from the undergraduate and postgraduate teaching hospitals. Dockers are sent by the medical officers of the National Dock Labour Board from docks all over the country.

There are also about 40 outpatients under treatment at any one time who are referred by the consultant staff of local hospitals and by general practitioners. During 1967 655 patients (including 420 inpatients) were admitted for treatment for periods ranging from two weeks to several months. The average length of stay was six weeks.

More than half the patients referred to the centre each year have orthopaedic conditions, including multiple limb fractures, nerve injuries, amputations, spinal injuries, and recent operations on knee or hip joints. They are frequently manual workers who must achieve a high degree of physical fitness before returning to work. The younger patient, after a successful meniscectomy or laminectomy, will usually have no difficulty in returning to his previous job after a few weeks' intensive treatment; the older patient with osteoarthritic hips or chronic back trouble, and the labourer with stiff joints following limb injury, must often seek a change of employment.

Medical cases include those with head injuries, hemiplegia, or paraplegia, dockers with chronic bronchitis, young patients with asthma and congenital heart disease, patients with peripheral vascular disease necessitating amputation, and a small number of patients with rheumatoid arthritis, ankylosing spondylitis, and other systemic diseases. Patients with unstable disabilities such as active rheumatoid arthritis or progressive neurological disease are unlikely to benefit from the regimen, nor are the older hemiplegic patients. The younger patient with hemiplegia following head injury or subarachnoid haemorrhage may be helped in obtaining work or training for work, but is often substantially handicapped by mental changes or speech difficulties. It is often justifiable, however, to admit such patients for assessment.

It is essential that a rehabilitation centre should not "carry" too many heavily handicapped patients at any one time, for this is discouraging for the staff and for the other patients. A fair proportion of "short-term" cases are therefore admitted whose progress is rapid and in whom recovery may be almost complete.

With the exception of the stable chronic schizophrenic, patients with mental disease derive little benefit from treatment at Garston Manor and they tend to upset other patients. The psychopath, hysteric, or drug addict, including the chronic alcoholic, should not be sent to medical rehabilitation centres.

Medical Staff

The medical staff includes two part-time consultants in physical medicine, a part-time senior registrar and registrar shared with the National Hospital for Nervous Diseases and the Middlesex Hospital, and a visiting orthopaedic surgeon and psychiatrist. There is no resident medical staff, but a local general practitioner is on call for emergencies. The centre's social worker keeps in touch with the patient's hospital medical social worker. Nursing services are provided by part-time nursing sisters, one of whom sleeps in the manor house at night. The centre manager is also responsible for a remedial staff of three physiotherapists, three remedial gymnasts, and two occupational therapists. A speech therapist and surgical appliance fitter attend the centre weekly.

Medical Programme

The remedial centre is situated about 150 yards (137 metres) from the manor house. Patients attend for treatment from 9 a.m. to 12 noon, and after lunch from 2 to 5 p.m. There are breaks for morning coffee and afternoon tea, so that few patients are under treatment for more than five hours a day, five days a week. Outpatients travel to the centre by ambulances, the centre's minibus, public transport, or in their own cars.

The morning and afternoon programme starts with a "warming-up" session to music in the gymnasium. The rest of the day is divided up into half-hour periods, during which the patients are allocated to the physiotherapy and occupational therapy departments, the gymnasium, swimming-pool, or outdoor exercise. Each patient is given an individual programme on admission and this is reviewed and altered frequently during his stay at the centre. In this way patients graduate from early treatment in the physiotherapy department to more intensive group exercises in the gymnasium, interspersed with remedial games. Muscles are strengthened by weight-lifting techniques, and patients are taught correct methods to lift industrial loads and to negotiate heights on portable scaffolding which is erected in the gymnasium or outdoors. The occupational therapists provide graduated exercises, particularly for those with hand or lower limb injuries, assist patients to overcome difficulties experienced in carrying out the normal activities of daily living, including writing, assess the intelligence and educational standards of those wishing to undertake clerical work, and supervise the retraining of the disabled housewife in a specially adapted kitchen.

Many patients have difficulty in walking. They must progress from walking with crutches to walking with sticks and can often dispense with walking-aids altogether before they leave the centre. They are taken outside the grounds in walking and cycling parties. Those who have difficulty managing public transport first practise mounting a stationary "bus" in the grounds and are subsequently taken on public transport to local shopping centres. Patients who are not expected to use public transport in the future are referred as early as possible to the Ministry of Health Appliances Centre at Cambridge so that they can be provided with their own vehicles.

Work Therapy

While reablement is one of the main aims of the rehabilitation team at Garston Manor, we have always been concerned in the resettlement of the patient at home and at work. Patients must not only learn to walk again but must regain their confidence and ability to get about, possibly by public transport, and their capacity to do a day's work and earn a day's pay. This is in the interests not only of the patient and his relatives but also of the community as a whole, which bears the cost of medical care and of unemployment. In some cases re-employment presents no problems. The patient may be restored to complete physical fitness and can return to his previous job, or at any rate, if recovery is not complete, to lighter work with his former employer. Clearly physical fitness is more essential for the heavy manual worker than it is for the man doing a sedentary clerical job. The unskilled manual worker with a residual disability has little to offer a prospective employer. Choice of work may be limited by the severity of the patient's disability, his intelligence, aptitude, skills, and interests, and not least by the type of work available in his home area. The patient's ability, inclinations, and potential skills must be developed and assessed before recommending future employment or training.

For many years the centre's own small workshops have been used to transfer a patient progressively from medical treatment to a work routine, euphemistically called "work therapy," and to assess his ability to return to his previous job or to undertake

alternative work or training. Under the close supervision of two engineering instructors, patients have been put to work at capstan and centre lathes, milling and drilling machines, gas and electric arc welding, bench fitting, and carpentry, as well as heavy manual work in the grounds. At first time spent in the workshops was limited to an hour or two a day, but gradually medical treatment was stopped and on discharge the patient was often working five hours a day, five days a week. This progression from "medical" to "industrial" rehabilitation was regulated by a weekly case conference attended by the remedial staff and by the D.R.O. from the Watford Employment Exchange. Patients with potential skills were sent to Government training centres for vocational training in such trades as light engineering, welding, and bench carpentry. The more severely disabled were referred to Queen Elizabeth's Training College at Leatherhead for residential training courses. It has been clear, however, for some time that our own workshops were inadequate, since we could not progress the patient to a full working day on production work or provide the variety of work or vocational guidance normally found in the Ministry of Labour's industrial rehabilitation units.

Industrial Rehabilitation Unit at Garston Manor

After negotiations between the North-west Metropolitan Regional Hospital Board, the Ministry of Health, and the Ministry of Labour it was decided that an industrial rehabilitation unit, operated by the Ministry of Labour, should be

built alongside the existing medical rehabilitation centre at Garston Manor. The Ministry of Public Buildings and Works, responsible for building and equipping the unit, leased a site in the grounds from the Ministry of Health, and work began in September 1967. The building was completed in May 1968 (see Figs. 1 and 2).

It is intended that the unit should replace the existing centre workshops and that, while patients may in due course be recruited for the unit in the usual way through local employment exchanges, priority will be given to those already attending Garston Manor for medical treatment. Patients requiring industrial rehabilitation will be transferred to the unit initially for half a day, and will subsequently progress to a full working day, five days a week. If necessary they will return to the remedial centre each day for short periods of specific treatment. Similarly, patients referred to the unit for a course of industrial rehabilitation may attend the medical centre for remedial exercises if these are recommended. Transfers between the medical centre and the industrial rehabilitation unit will be arranged at case conferences.

Other services will be shared so far as possible—for example, the hospital will provide midday meals in the manor house for all patients and staff, and the unit's tea bar will operate as part of the hospital catering service. Cleaning services will be provided by the hospital staff, and transport and some premises will be shared. The physician-in-charge at Garston Manor, Dr. A. P. H. Randle, will be responsible for all medical, paramedical, and nursing services. Dr. M. O. Jenks, at present clinical assistant at Garston Manor, will undertake additional duties as medical officer to the unit. The rehabilitation officer in charge of the unit will be responsible for its day-to-day management and the industrial resettlement of all our patients. Decisions which affect the centre as a whole will be taken by a committee consisting of the physician-in-charge, the manager of the remedial centre, the rehabilitation officer, and the hospital secretary, subject to ratification by the hospital authorities and the Department of Employment and Productivity.

The industrial rehabilitation unit will provide production work in light engineering, bench fitting, machine operating, assembly work, and carpentry. Heavy manual work will be

FIG. 1.—Garston Manor, southern aspect.

FIG. 2.—Industrial rehabilitation unit. 1, Clerical supervisor's office. 2, Chief occupational supervisor. 3, Occupational psychologist. 4, Disablement resettlement officer (and assistant). 5, Social worker. 6, Accounts and general office. 7, Office manager/industrial rehabilitation unit accountant. 8, Conference and reception room. 9, Reception, telephone, and typist. 10, Rehabilitation officer. 11, Tea-bar servery. 12, Staff room. 13, Store-rooms and store-cupboards. 14, Toilets. 15, Medical consulting-room. 16, Nurses' room, or medical consulting-room. 17, Staff room.

available both indoors and outdoors in the grounds. A records, revision, and clerical section will be used to assess the aptitude of those patients wishing to do clerical work in the future or who need a short period of revision before taking pre-entry tests required for some courses of vocational training. The staff of the unit will include workshop supervisors, an occupational psychologist, a social worker, a full-time D.R.O., and a chief occupational supervisor in charge of the workshops. A staff and organization chart is shown in Fig. 3.

FIG. 3.—Staff and organization chart.

Discussion

We hope that the siting of an industrial rehabilitation unit alongside an existing medical rehabilitation centre will facilitate

the process of rehabilitation by which a patient can return to a full life at home and at work. Patients must be weaned from medical treatment before they can be discharged from medical care. As they get fitter, or their disability becomes stabilized, they require less physical treatment. Active use supercedes active exercise. But at this stage they are often not yet fit enough to go to a conventional industrial rehabilitation unit, to work an eight-hour day, and to travel daily by public transport. In any case, transfer from one unit to another often results in delay and lack of continuity in care as one team hands the patient over to another, possibly in another part of the country. For efficient rehabilitation speed is the key to success, particularly when dealing with patients injured at work.

In the past we have attempted to eliminate delay by "work therapy" at Garston Manor, assessing the patient's aptitudes and skills in our own workshops as he progressed from medical treatment to a full day's work. But we have not been able to provide production work at an industrial tempo and our workshops have been inadequate in size and scope. The new industrial rehabilitation unit will provide a more realistic working environment, as well as the incentives of increased allowances as the patient is transferred progressively from one unit to the other. The success of the combined centre will depend, however, not only on close liaison between the staff of the two units but also on a steady supply of patients referred from outside sources who are likely to benefit from their services.

Lip-service is often paid to the concept that rehabilitation is, and should be, a continuous process from the ambulance to the work-bench. It will remain an ideal so long as present divisions exist between medical and industrial rehabilitation, and until the medical profession makes full use of the facilities provided for its patients by the Department of Employment and Productivity.

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OUTSIDE EUROPE

Ethiopian Cardiovascular Studies: II Treatment of Pulmonary Oedema in Outpatients

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It has been shown that lobar pneumonia in Africa can be managed efficiently and economically from the outpatient clinic except in cases with serious complications (Sibellas, 1966). This method of treatment is thoroughly relevant to the developing countries, where it is very expensive to admit patients to hospital. In these countries people often do not go to hospital until they are very ill, and those with heart disease may first be seen with pulmonary oedema. It is conventional for such patients to be admitted, but is this necessary? Is it possible to treat pulmonary oedema successfully in outpatient clinics? The results of the studies reported below suggest that such treatment is indeed possible, and is also safe and effective.

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Patients Studied

A weekly cardiac clinic is held at the Tuberculosis Centre, Addis Ababa. Patients are referred when their miniature radiograph shows an abnormal cardiac shadow (Parry and Gordon, 1968). Since March 1967 34 patients with pulmonary oedema have been treated by the method described. The criteria for this diagnosis have been both radiological and clinical. The following signs have been used: tachypnoea (about 30 a minute or more), cough, inability to lie flat, crepitations in the lungs, tachycardia, and evidence of an abnormal heart—for example, a gallop rhythm, a murmur, an enlarged left ventricle, and an abnormal blood pressure. Signs of systemic venous congestion have been found in some cases, but patients have been included in this report only when pulmonary oedema has overshadowed all other signs. None of the patients were coughing up the