REHABILITATION AND REMEDIAL WORK IN THE
STATE EDUCATIONAL SYSTEM

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1. INTRODUCTION

It is particularly important when considering the part played by rehabilitation and remedial work, in an educational system to study carefully the precise meaning one gives to these words. The definition given in Blackie's Medical Dictionary, 'Restoring to health and working capacity of a person in-capacitated by disease, mental or physical or by injury', is probably as good as any for our purpose. Note the suggestion that the subject was originally well before his in-capacity, because a significant proportion of handicapped pupils in state schools have been disabled from birth. The more general and original meaning of the word is to 'reinstate' economically and socially. In this sense the word came to be used in Industry, and because problems in that field usually have a medical basis the word acquired the meaning given above in industrial medicine. The following passage taken from the first report of the Expert Committee on Rehabilitation of the World Health Organisation, illustrates the scope of the problem.

"Rehabilitation begins when the patient enters the hospital door and ends only when he is successfully and happily established in society. The process which brings about this involves four main services namely medical, educational, vocational and social."

In the case of young people the state educational system to a greater or lesser extent undertakes these four functions. In the more highly organised communities of North America, Western Europe and Austrail Asia these services have developed on a common plan, and it will be convenient to consider what happens in this country.

The body responsible for carrying out the work of the State system in England and Wales is the County or County Borough Council and their duty in general terms is set out in Section 7 of the Education Act 1944. "It shall be the duty of the Local Educational Authority for every area, so far as their powers extend, to contribute towards the spiritual moral, mental and physical development of the community by securing that efficient education shall be available to meet the needs of the population of their area".

This is a far reaching commitment for it includes the development of optimal physical health in the whole school population - both the fit and the disabled. The relevent facilities provided for this purpose by the Local Authority are Physical Education, Health Education, School Welfare and Meals, the School Health Service and Special Educational treatment of Handicapped pupils.

2. INSPECTION AND TREATMENT

The first task of the Local Authority is to discover, without delay those children who require special attention from the age of two years and onwards. In the past decade considerable progress has been made in this direction, for example, in the application of Developmental Paediatrics and the use of registers of 'Children at Risk'. Provision for handicapped pre-school children has recently been reviewed by a working party of the World Health Organisation at Copenhagen³ and also in the Sheldon Report.⁴

Periodic medical inspection on school entry provides a systematic assessment of each pupil, including minor conditions, which normally escape notice; for example dental disease and defective vision, which are the two defects most frequently reported by School Medical and Dental Officers to require treatment. Defects of the feet also are rarely known to the General Practitioner: yet these, particularly when accompanied by pain or malfunction, interfere with all but static physical activities. The relative frequency with which the main classes of defects are met with are shown in the following table:-

TABLE 1.

NEWCASTLE UPON TYNE

Pupils found to require medical attention at
Periodic Inspection - 1967
(7,424 Inspections)

(TOTAL SCHOOL POPULATION AGED 5-15 = 39,000)

Eyes and Vision	1,256
Ears and Hearing	390
Heart and Circulation	117
Lungs and Respiration	219
Skeleton and Posture	507
Neuro Muscular Conditions	53
Mental Conditions	<u>284</u>
Total	2,826

The incidence of the various categories of defects for the Country as a whole, are published in the biennial report of the Chief Medical Officer to the department of Education and Science. Orthopaedic defects during the past decade are shown in Figure 1.^{5a}

The next table shows the sort of clinical conditions which are included in these categories. They formed part of an analysis of 1,577 referral letters in Newcastle in 1955.

Referred to Hospital Orthopaedic defects found at Periodic Medical Inspection 1968.

1. Posture and GaitA. Posture (80 Cases)

Scoliosis	7
Lordosis	10
Kyphosis	8
Unspecified	55

B. Gait (79 Cases)

Intoeing	25
Clumsy	38
Throwing out	
Foot	14
Unspecified	2

2. Legs and FeetA. Legs (104 Cases)

Unequal Legs	3
Perthe's Hip	1
Schlatter's	
Disease	1
Genu Valgum	54
Knock Knee	45

B. Feet (309 Cases)

Archilles Bursa	4
Valgoid Ankles	101
Flat Foot	136
Cavus Foot	2
Hallux Valgus	36
Clawed Toes	27
Hammer Toes	3

3. Miscellaneous and NeuromuscularA. Miscellaneous

Hydrocephalus	1
Funnel Chest	4
Pidgeon Chest	1
Absence of Arm	1
Syndactly	1
Osteogenesis	
Imperfecta	1
Burn Contrac-	
tures	1

B. Neuromuscular

Spastic Paralysis	3
Talips	3
Myopathies	3

FIGURE 1.

Rather more than half of the defects contained in the full analysis were hidden beneath clothing. A considerable number gave rise to little in the way of pain, discomfort or disability, e.g. of 514 children referred on account of orthopaedic defects, only 89 complained of foot, calf or other discomforts and were not of less significance on that account. The fact remains that in spite of the medical facilities available to these children, either because the existence of the defect was not suspected or because the need for treatment was not appreciated, they were not receiving attention.

Section 48 (3) of the Education Act requires local Education Authorities to make arrangements to ensure that pupils receive free medical treatment. Circular 179 1948 ⁷ of the Ministries of Health and Education gives guidance as to how the Local Authority may utilise the National Health Service. In the main pupils are referred to the General Practitioner or hospital for treatment. If to the latter the General Practitioner is given an opportunity to make his own arrangements. Speech therapy is regarded as Special Educational Treatment, and is provided by the Authority under Section 34 of the Act. Dental treatment must also be provided under the School Health Services regulations 1945,⁶ Other forms of treatment are permissive and provided where a need appears to supplement facilities provided by the local hospital service. Psychiatrists, Ophthalmic Surgeons and Paediatricians are so employed in School Clinics. Physiotherapy, Orthoptics and Chiropody are also sometimes provided.

3. SUPERVISION

The School Health Service constitutes a link between the Education and Health Services and an important part of its work is to ensure that pupils found to require treatment actually get it, often in the face of parental indifference and administrative and other difficulties in the Health Services. For this reason children who have been referred for treatment are followed up to ascertain that they reach the hospital or General Practitioner and that the advice given to the parent is being effectively carried out. The consistent taking of anticonvulsants by epileptics, or of antibiotics in rheumatic carditis or the wearing and proper maintenance of surgical boots for orthopaedic conditions are but three instances which come to mind.

4. OTHER TREATMENT PROVIDED BY THE LOCAL EDUCATION AUTHORITY

Certain treatment is more conveniently given on the school premises. Teachers of Physical Education who have attended one of the courses, provided by the Society of Remedial Gymnastics, may give remedial exercises as prescribed by the Medical Officer. The types of defect usually treated are flat foot, posture, asthma and under developed chests. An account of this work is to be found in the report of the Chief Medical Officer for 1947. 5b

School Nurses visit larger schools to undertake dressings for minor medical conditions and by providing regular treatment expedite recovery.

In Newcastle over 1,000 accidents are reported to have taken place on school premises each year. Not all are trivial and in some, efficient initial treatment is essential if prolonged or permanent disability is to be avoided. The Ministry of Education and Science pamphlet No.13, ⁸ 'Safety Precautions in School', deals comprehensively with the arrangements for First Aid in schools.

5. HANDICAPPED PUPILS

The Special Educational Treatment of handicapped pupils is one of the important functions of the Local Authority. These are pupils with a more severe and often permanent disability for whom education must be modified to offset their difficulties. Thus the non-sighted pupil is taught to read by the use of Braille; the classroom of the deaf pupil will be equipped with a loop induction system or group hearing aid. For the delicate child with limited stress tolerance, the curriculum is organised in short bursts of activity.

Nine categories of handicap are defined in the Handicapped Pupils Regulations 1959, ⁹ namely Blind and Partially Sighted, Deaf and Partial Hearing, Educationally Sub-normal, Maladjusted, Epileptic, Physically Handicapped and Delicate. In Newcastle with a school population of 39,000 889 pupils have been classified, and the numbers of pupils in each category is shown in table 3.

TABLE 3

NEWCASTLE UPON TYNE
Handicapped Pupils Educated in
Special Schools and Classes
1967

Blind and Partially Sighted	22
Deaf and Partial Hearing	64
E.S.N. and Maladjusted	613
Epileptic	12
Physically Handicapped	202

These children are for the most part educated in Special Schools or Special Classes in ordinary schools. A number largely for social reasons are educated in boarding schools. Where considerable medical treatment is involved hospital schools are available. In 1965 51,349 pupils were reported to be receiving education in day, and 21,696 in residential schools in England and Wales. The numbers of children in the classes do not exceed 20, and in the case of the blind and deaf 8. Physically handicapped pupils are those who by reason of disease or crippling defect cannot without detriment to their health or educational development be satisfactorily educated under the normal regime of ordinary schools.

In list 42 of the Department for 1966 ¹⁰ 51 boarding schools appear for physically handicapped pupils which provide places for 2,871 pupils. Fifteen of these schools are maintained by Local Authorities. There are 133 day schools of which 125 are maintained with 14,623 places. A number of places are also available in independent schools. The Newcastle Authority maintains a Day School with some 200 places, and the following table gives an indication of the kinds of medical conditions on account of which pupils are admitted.

TABLE 4

NEWCASTLE UPON TYNE

Types of Physical Handicap at Pendower Hall

Hydrocephalus	6	Asthma	25
Spina Bifida	10	Bronchiectasis	7
Muscular Dystrophy	10	Cystic Fibrosis	3
Poliomyelitis	3	Cardiac Conditions	12
Permanent Injury	9	Haemophilia	2
Brain Damage	5	Reticulosis	2
Defects of Locomotion			
and Limbs	4	Rheumatism	3
Other Orthopaedic	5	Renal Disease	4
Epilepsy	5	Skin Disease	4

The Medical Staff of this school consists of a Medical Officer on the staff of the University, who is in close contact with the Consultant Staff of the adjacent teaching hospital. There is a full time School Nurse and Nursing Assistant, and two physiotherapists. The Physiotherapy Unit is equipped to give heat light electrical treatment, massage manipulations and remedial exercises. A Speech Therapist and Educational Psychologist from the Committees Staff also visit. Pupils are periodically seen by appointment at the hospital by a Consultant, who is responsible for the overall direction of their medical treatment.

6. SOCIAL WORK

The home background of the handicapped child is generally below average in its economic status, emotional climate, and child care adding by lack of co-operation to other difficulties in helping him. Teachers by their daily contact are among the first to know when difficulties arise in the home, and much social work is quietly done by the school.

The School Welfare Department in addition to enforcing school attendance, is instrumental in making many forms of assistance provided by the Education Authority available to parents and their children. The School Nurse/Health Visitor is concerned with social

work with a medical bias. In the case of maladjusted pupils a Psychiatric Social Worker is employed. The Co-ordinating Committee deals with problem cases by bringing together Social Workers in the Education and Allied Services, in an endeavour to reach a solution by their united effort. The Young husband Report¹¹ of 1957 contains a comprehensive review of Social Workers and includes those within the Education Authority. More recently further reference to the Welfare Service was made in the Plowden Report, ¹²

7. VOCATIONAL GUIDANCE AND TRAINING

The Porett Report 1962 ¹³ referred to the value of the final medical inspection in school as an opportunity to provide vocational guidance in ordinary as well as Special Schools. Pupils found at inspection to have physical defects on account of which certain types of employment should be avoided, are reported to the Youth Employment Officer, and this information is taken into account when the pupil is interviewed by the Careers Advisory Officer. A register of pupils with impaired health requiring extra care in finding suitable employment is kept at the Youth Employment Bureau, where an Officer is given special responsibility for work with handicapped young persons. The majority of these Bureaux are under the control of the Educational Authority. Some handicapped young persons require vocational training which is arranged through the Bureau, and is a shared financial responsibility between the Educational Authority and the Ministry of Employment, until the young person reaches the age of 18. A more detailed review of the facilities available to handicapped school leavers is to be found in the report on the Handicapped School Leaver 1963. ¹⁴

To sum up: in the state educational setting rehabilitation does not exist as a separate entity but its essential ingredients are to be found integrated in a complex system designed to "enable the children not merely to reach their full development as individuals, but also to become upright and useful members of the community in which they live, and worthy sons and daughters of the Country to which they belong." ¹⁵

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DISCUSSION.

In the discussion following this communication, several points were raised, and a summary of the replies is given.

The teacher in physical education has less opportunity today to take an active part in re-habilitation, because he has insufficient free time within the school time table in which to give regular remedial exercises to those children who require them. However, the break with formality in the P.E. lesson permits him to provide for any handicapped children present in the class of an ordinary school by including suitable exercises in group or individual work.

The physical education teacher is essentially equipped to educate normal pupils and incidentally to prevent the development of defects resulting from incorrect posture and movement. Remedial exercises should be regarded as remedial physical education and it is highly desirable that members of the P.E. staff should take advantage of the shortened courses offered by the Society of Remedial Gymnasts.

Many children with postural defects reach hospital late in their school career, or after leaving school, when secondary structural changes have begun to appear. Not enough attention is paid to posture today. Possibly development in physical education have tended to over-shadow the importance of postural training, which the obsolete concept of 'drill' helped to preserve, but this is a wide and controversial problem, to which even expert opinion seems unable to give an adequate answer.

The problem of the handicapped in adapting their lives after leaving school to fit in to the community is discussed in the 'Handicapped School Leaver' 1963, published by the British Council for the Disabled.