

Vocational Rehabilitation in the United States

by

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The following article describes the considerable growth of vocational rehabilitation in the United States since it was first introduced by statute as long ago as 1920, and shows in particular how co-ordinated services are provided to the disabled through a joint federal-state programme under which the individual states conduct their own rehabilitation activities while the federal authority encourages the extension and improvement of these activities by means of substantial financial aid and through its co-ordinating, advisory and research functions. The author brings out the fact that rehabilitation, apart from its primary human and social objective of restoring the disabled to useful and active life, offers great economic advantages in that it regains for society the productive capacities of a large number of people who would otherwise be a charge on the community, to say nothing of the future contribution of such persons to the national tax income, which itself greatly exceeds the cost of their rehabilitation.

ONE of the most striking characteristics of programmes of service to people developed since the close of the Second World War is the emphasis they lay on the positive worth of every individual. The importance of preventing dependency—physical, social or economic—is self-evident in this modern world. The toll of neglected physical disability is high in any society.

The programmes to give handicapped men and women the special services they need to compete more equally and live more productively have come to be known as rehabilitation. Rehabilitation can and should be a part of every modern society's effort to improve opportunities for its people. As a special field of work, rehabilitation today involves the special skills of a variety of professions, collab-

orating to solve the complex problems which are so often presented by severely disabled persons. The benefits which flow from high-quality rehabilitation services, provided widely to reach as many disabled individuals as possible, are threefold. First, rehabilitation restores hope and confidence in the disabled men and women themselves, giving life a new meaning for them. Secondly, it demonstrates to all the people, in a practical way, that every citizen, however difficult his circumstances, has a chance to make his life useful and satisfying. And finally, it brings into the productive strength of a country thousands of workers, many of them with high skills, who might otherwise be a drain upon the national economy.

This article, describing the vocational rehabilitation programme in the United States, is written at a time when the whole field of rehabilitation is rapidly expanding, both in this country and in many other places in the world. In the United States the vocational rehabilitation programme is the principal arm by which government—national, state and local—discharges its responsibility for restoring disabled persons to usefulness. However, the many voluntary agencies which also provide rehabilitation services—many of them having several hundred affiliated units in cities and towns all over the country—also play a prominent part in the total rehabilitation effort. Public agencies and voluntary groups are working ever more closely together to serve the disabled, so that the resources of both produce the greatest possible results.

The Office of Vocational Rehabilitation has been privileged to participate, on behalf of the United States Government, in the deliberations of the International Labour Conference concerning further development of vocational rehabilitation by the States Members of the I.L.O. The Vocational Rehabilitation (Disabled) Recommendation, 1955, is a noteworthy international step in the development of services for the handicapped. Collaterally, the Office of Vocational Rehabilitation has co-operated with the International Society for the Welfare of Cripples in helping nations to exchange information to build up rehabilitation services for their peoples.

HISTORICAL BACKGROUND IN LAW

The public programme of vocational rehabilitation for the disabled was established shortly after the close of the First World War. Public demand for a civilian programme emerged immediately after the needs of disabled soldiers had been considered. Among the voluntary non-governmental organisations which took an active part in advocating rehabilitation was the Red Cross Institute for

Crippled and Disabled Men, founded in New York City in 1917 to conduct experimental work in the rehabilitation of disabled people. Early in 1918 this organisation became active in promoting state legislation.

Twelve states passed their own laws establishing rehabilitation programmes before the federal statute was enacted, although only six state programmes were actually in operation when the first federal law was passed. In 1918—one month before the law authorising a rehabilitation programme for soldiers was passed—Massachusetts became the first state in the Union to adopt a vocational rehabilitation law for civilians.

The first national programme of federal-state co-operation to restore disabled men and women became a reality when the President, on 2 June 1920, signed the Vocational Rehabilitation Act (Public Law 236, 66th Congress), commonly known as the Smith-Fess Act.¹ This federal legislation had been passed with the support of both political parties and of the National Association of Manufacturers, the American Federation of Labour, and numerous other organisations representing social welfare, medicine, education and state governments.

In this initial programme, jointly financed and developed by the federal and state governments, the services for the handicapped consisted of special assistance in job training, counselling and guidance for the disabled person, provision of artificial limbs and other prosthetic appliances where needed, and placement in a suitable job. While this range of services falls far short of those furnished in the restoration of disabled people today, it represented a first important step forward in a national effort to restore more disabled people to useful work.

Under the Smith-Fess Act the amount of the federal grant funds available to any one of the states was based on the population of the state concerned. The state was required to invest one dollar of its own funds for each dollar of federal grant funds received. During the first operating year (1921) the combined federal and state expenditures for the new programme totalled slightly less than 285,000 dollars. The following year's expenditures exceeded 736,000 dollars and the amount has never been below 1 million dollars since 1923.

The first law authorised an experimental programme for a temporary period; the authority was extended by legislation until, with passage of the Social Security Act in 1935 (Public Law 271, 74th Congress)² the federal-state rehabilitation programme

¹ Cf. *I.L.O. Legislative Series*, 1920 (U.S.A. 1).

² *Ibid.*, 1935 (U.S.A. 2).

became permanent. During this time, more and more states joined in the programme ; by 1938, all of the 48 states were participating.

On 6 July 1943 the Barden-LaFollette Act (Public Law 113, 78th Congress)¹ was approved and it was under this Act that the rehabilitation programme operated from 1943 until 1954. The 1943 Act expanded the scope of services provided under the 1920 Act, and authorised for the first time the provision of medical services (surgery, hospitalisation and other treatment to eliminate or reduce the disability itself), the provision of services to individuals who had suffered from psychiatric illnesses, and the provision of vocational rehabilitation of the blind. This new legislative authority, coming in the midst of the Second World War, recognised several things—the need for full use of the nation's manpower resources in support of the war effort, the progress which the vocational rehabilitation programme had made in restoring individuals to usefulness, and the advances made in medicine and other fields, which greatly increased the possibilities for rehabilitation.

A different basis for financing the programme was provided in the Act of 1943. The full administrative costs of the programme within the state agencies, and the expenses for vocational guidance and placement, were borne by the federal Government. The costs of medical and other examinations to determine eligibility, as well as the cost of all case services provided for the disabled—surgery, hospitalisation, other medical care, vocational training, living expenses during rehabilitation, travel costs and occupational tools and licences—were shared equally by the state government and the federal Government.

THE VOCATIONAL REHABILITATION ACT OF 1954

By 1954 it had become evident that the rapid changes in rehabilitation in the United States and elsewhere called for revision of the federal legislation, to provide a sound basis for further development of vocational rehabilitation. The Act signed by the President on 3 August 1954 (Public Law 565, 83rd Congress) continued the basic provisions for services to handicapped people and in addition greatly broadened the scope of the programme by authorising a series of sweeping changes in professional, fiscal and technical aspects. The following (most of which will be discussed in detail later in this article) are the main changes effected by the 1954 Act :

(1) The financial basis for conducting the federal-state programme was fundamentally changed to provide for full federal participation in all phases of the programme, the state's financial

¹ Cf. *I.L.O.: Legislative Series*, 1943 (U.S.A. 4 B).

share being determined by a formula which takes account of the individual state's population and its income per head. Through this financing system states with relatively large populations and relatively small tax income pay a smaller portion of the total cost of the state rehabilitation programme than other states with larger financial resources. Thus the federal and state shares vary from state to state, the national average being about two federal dollars for each state dollar invested in vocational rehabilitation.

(2) A new system of grants to state agencies, designated as Extension and Improvement Grants, provides financial support for the states to develop new aspects of their work and to extend it to disability groups and geographical areas which have heretofore been inadequately served. Extension and Improvement Grants provide three dollars of federal funds for each dollar invested by the state, any such project being limited to a maximum of three years' duration.

(3) Grants to encourage and support research into better rehabilitation methods and to conduct demonstration projects which would be useful in spreading new knowledge to communities throughout the country were also authorised for the first time. These grants are made to state rehabilitation agencies, to non-profit voluntary groups, and to universities having research talent and facilities which give promise of advancing rehabilitation. They are made for individual projects, each application for a grant competing with other applications on the basis of merit. The sponsor of the research is required to bear a share of the total cost ; however, no fixed ratio of federal participation is specified and the actual financial shares are determined project by project, depending on the nature of the work to be done.

(4) To stimulate the training of more professional personnel for rehabilitation services grants are authorised to be made to universities, colleges and other educational institutions, as well as to selected students. The grants are of two principal types : the first is made to universities to expand their staffs and facilities and other teaching resources, or to establish courses in rehabilitation where such courses were not previously offered. The second type of grant provides financial support for selected graduate students, to help them pursue special training in preparation for professional careers in one of the several fields of rehabilitation.

In designating the professional groups for which training grants will be made, priority is given to those fields where the demand for more trained staff to operate rehabilitation centres, clinics, physical medicine and rehabilitation departments, agency programmes, etc., is greatest.

(5) The new Act strengthens the provisions for giving preference to blind persons in the operation of vending stands on federal property.

(6) Each state and federal employment service office is required to designate at least one staff member to provide special job counselling and placement of handicapped persons. In addition, a larger annual appropriation is authorised for the work of the President's Committee on Employment of the Physically Handicapped. This Committee and the affiliated committees of the Governors in each state carry out an educational and promotional campaign among employers and other groups to increase their understanding of the employment capabilities of properly trained and rehabilitated handicapped workers.

(7) The new Act also authorises the use of federal funds (in combination with those of states and voluntary agencies) to enlarge or alter rehabilitation centres so as to provide greater capacity for serving the handicapped.

(8) The law provides, for the first time, that local units of government (cities or counties) can establish and operate their own vocational rehabilitation programmes if they so wish, and participate in their financing, under the general direction of the state agency, state and federal funds being made available for this purpose.

Related Recent Legislation

Also in 1954, the Congress passed amendments to the Hospital Survey and Construction Act of 1947 (under which hospitals throughout the states have been built with federal co-operation) authorising federal grants to help construct rehabilitation centres. At the same time new amendments to the Social Security Act were passed to protect the retirement benefits of workers covered by the Act who become disabled. Thus an eligible worker who is disabled before reaching the age of 65 does not suffer a reduction of his retirement income because of the years when he was disabled. To carry out this new provision of the Social Security Act the Congress designated the state vocational rehabilitation agencies as the agencies that should preferably be responsible for reviewing applications for this benefit and for determining whether the applicant is in fact disabled, unable to work and eligible for the benefit.

In 1956 further amendments provided that eligible disabled workers, aged 50 or more, who were unable to work because of their disabling condition, could receive cash disability retirement benefits at once. Again the state vocational rehabilitation agencies

were named as the group that should preferably determine disability and specific provision was made that all such applicants should be referred to the state agency in an effort to restore all possible disabled workers to gainful activity.

As a result the state vocational rehabilitation agencies have not only enlarged their programme of services to the handicapped but are also undertaking considerable duties in connection with the evaluation and determination of disablement under social security—both these functions being aimed at restoring all possible disabled persons to employment.

THE PROGRAMME OF SERVICES TODAY

Those Eligible for Services

Vocational rehabilitation in the United States is designed by law to serve those disabled individuals who may become employable. (Disabled children receive rehabilitation services under other programmes.) The following conditions must therefore be satisfied before a disabled person may receive services : (1) the person must have a disability which presents a substantial handicap in securing employment ; (2) he must be of working age or near it (legal working age is determined by laws of the individual states, 15 years of age being the usual minimum) ; (3) there must be a reasonable prospect that the disabled person will be employable when vocational rehabilitation services have been completed.

Extent of Service

Each of the 48 states, as well as Alaska, Hawaii, Puerto Rico, the District of Columbia and the Virgin Islands, operates a programme of vocational rehabilitation. The size of the programme in each state and the number of disabled individuals who receive vocational rehabilitation are largely decided by the individual state and the relative scope of the programmes therefore varies according to each state's assessment of its needs.

Services Provided

Because the restoration of handicapped individuals is a highly individualised undertaking, the services provided under the public programme of vocational rehabilitation are adapted to the specific needs of the disabled person, with due regard for the nature of his disability, his own interests and aptitudes, and the employment outlook in his community.

No disabled individual is considered rehabilitated until he has been placed in suitable employment after being provided with rehabilitation services. In most cases the criterion is successful accomplishment in paid employment, verified by personal follow-up. In some cases it is the ability to perform the important work of making a home.

There are nine principal services: (1) medical diagnostic services to learn the nature and degree of disability, to help determine eligibility, to learn whether additional medical services are indicated, and to help evaluate the individual's work capacities; (2) individual counsel and guidance, including psychological testing where needed, to help select the right job objective; (3) medical, surgical, psychiatric, and hospital services to remove or reduce the disability; (4) artificial limbs and other prosthetic appliances to increase work ability; (5) job training, including occupational training and adjustment training for the blind; (6) maintenance and transportation costs during treatment or training; (7) tools, equipment, or licences if these are necessary to give the individual a fair start; (8) placement in a job commensurate with the individual's highest physical and mental capacities; (9) follow-up to ensure that the rehabilitated person is successful and that both he and his employer are satisfied.

The payment from public funds for services other than diagnosis, counselling, training, placement, and follow-up is conditional upon the economic circumstances of the disabled individual.

ORGANISATION OF STATE AGENCIES

Two types of state vocational rehabilitation agencies exist: all states have a vocational rehabilitation agency serving handicapped men and women generally; in addition, in 36 states a separate agency serves the blind.

For administrative purposes the general agencies usually form part of the Department of Education or a similar unit of state government. A few states, however, have established separate commissions for vocational rehabilitation. The special agencies serving the blind are ordinarily administered through a state department of welfare or a state commission for the blind.

The size and organisational arrangement of the staffs of vocational rehabilitation agencies vary from state to state according to the size, the general pattern of state organisation, etc. Except in the few very small state rehabilitation agencies the usual organisation consists of a state director of vocational rehabilitation; a headquarters staff consisting of a supervisor of physical restoration (medical services), guidance and placement services supervisors,

and medical consultants, plus administrative and clerical staff members and a staff of rehabilitation counsellors assigned to cities and towns strategically located to reach as many disabled people throughout the state as possible.

It is the rehabilitation counsellor, the key professional staff worker in the state agencies, who sees the disabled persons first for a preliminary interview. A high degree of professional skill is called for in the rehabilitation counsellor, for he must take the important step of deciding on a vocational objective for his client. To do this he must be familiar with most disabling conditions and the limitations they impose; he must have great sensitivity to psychological and social factors affecting the disabled client; he must be able to work closely and effectively with physicians, hospitals, universities, trade schools, and many other community resources; and he must have a wide acquaintance with industrial and commercial firms in his area and the job openings they offer for the disabled people he serves.

After securing the preliminary basic data about the disabled person, the counsellor arranges for medical examinations, including examinations by specialists where necessary. As complete a history of medical, vocational, family and other background data is secured as possible. Equipped with a comprehensive picture of the person's problems, his needs, his aptitudes and interests, the counsellor then works out with him a rehabilitation plan—an outline which both he and the disabled person will use as a guide in the sometimes long and difficult process of returning from disability to employment and self-sufficiency.

It is the counsellor who arranges appointments for the disabled person to see physicians, to be admitted to a hospital, to enrol in a trade school or university, to undergo psychological testing, and to have employment interviews with personnel directors and others who may be in a position to offer him a suitable job. When the individual is employed, the rehabilitation counsellor checks upon his success in his new employment during the succeeding weeks, in order to help him to overcome any adjustment problems he may have and to assure the employer that the rehabilitation agency stands ready to co-operate if any difficulties arise. In this way industrial and commercial firms learn to welcome the rehabilitation counsellor as a person who can provide skilled employees and co-operate with them in case of difficulty.

The Effects of the Programme

During the fiscal year ended 30 June 1957 nearly 71,000 disabled individuals were rehabilitated through the federal-state pro-

TABLE I. TOTAL EXPENDITURE FROM FEDERAL AND STATE FUNDS
FOR VOCATIONAL REHABILITATION 1921 TO 1957, EXCLUDING
SPECIAL PROJECTS

Year	Expenditure in dollars			Percentage	
	Total	Federal funds	State and local funds	Federal funds	State and local funds
1921	284,684	93,336	191,348	32.8	67.2
1922	736,268	312,463	423,805	42.4	57.6
1923	1,188,081	525,281	662,800	44.2	55.8
1924	1,242,558	551,095	691,463	44.4	55.6
1925	1,187,219	519,553	667,666	43.8	56.2
1926	1,273,572	578,941	694,631	45.5	54.5
1927	1,406,757	631,376	775,381	44.9	55.1
1928	1,541,121	653,858	887,263	42.4	57.6
1929	1,490,180	664,739	825,441	44.6	55.4
1930	1,699,710	739,373	960,337	43.5	56.5
1931	2,042,710	932,718	1,109,992	45.7	54.3
1932	2,185,876	998,489	1,187,387	45.7	54.3
1933	2,176,080	998,589	1,177,491	45.9	54.1
1934	2,079,905	915,659	1,164,246	44.0	56.0
1935	2,247,948	1,031,818	1,216,130	45.9	54.1
1936	2,602,657	1,229,692	1,372,965	47.2	52.8
1937	3,319,096	1,513,441	1,805,655	45.6	54.4
1938	3,862,163	1,790,843	2,071,320	46.4	53.6
1939	3,991,664	1,832,964	2,158,700	45.9	54.1
1940	4,107,806	1,972,274	2,135,532	48.0	52.0
1941	4,711,138	2,281,941	2,429,197	48.4	51.6
1942	5,205,143	2,556,969	2,648,174	49.1	50.9
1943	5,629,923	2,761,748	2,868,175	49.1	50.9
1944	6,371,992	4,051,551	2,320,441	63.6	36.4
1945	9,855,544	7,135,441	2,720,103	72.4	27.6
1946	13,749,488	10,002,239	3,747,250	72.7	27.3
1947	19,313,344	14,188,933	5,124,411	73.5	26.5
1948	24,568,814	17,706,843	6,861,971	72.1	27.9
1949	25,818,839	18,215,683	7,603,156	70.6	29.4
1950	29,346,824	20,340,142	9,006,682	69.3	30.7
1951	30,272,854	21,001,388	9,271,466	69.4	30.6
1952	32,689,354	22,122,437	10,566,917	67.7	32.3
1953	34,583,138	22,947,581	11,635,557	66.3	33.7
1954	35,366,479	22,964,504	12,401,975	64.9	35.1
1955	38,636,578	23,999,944	14,636,634	62.1	37.9
1956	48,123,028	30,000,000	18,123,028	62.3	37.7
1957	56,075,386	34,847,954	21,227,432	62.2	37.8

gramme of vocational rehabilitation, the largest number ever rehabilitated in any one fiscal year. Practically every type of disabled person was represented—amputees and others with orthopaedic handicaps, paraplegics, hemiplegics, the blind, those with deafness and hearing impairments, the cerebral palsied, the mentally retarded, epileptics, victims of poliomyelitis, the mentally ill, the tuberculous and many others. About 35 per cent. were women, most of whom went into paid employment in a variety of

occupations, the remainder returning after rehabilitation to resume responsibilities for their families and homes.

The funds appropriated by the Congress and the state legislatures for the vocational rehabilitation of disabled people have risen steadily over the years, as shown in table I. Since 1954 the increase has been especially marked, the President and the Congress giving their full support to a major expansion of the programme as a principal means of coping with the problems of disability among the American people.

In addition to the funds for the basic programme of vocational rehabilitation (table I), the new law enacted in 1954 also provided for additional grants for special purposes—Extension and Improvement Grants to the states ; Special Project Grants in research and demonstrations ; and grants for the training of professional rehabilitation personnel. The growth of these aspects of the total programme is shown in table II.

TABLE II. FEDERAL APPROPRIATIONS FOR GRANTS FOR EXTENSION AND IMPROVEMENT, SPECIAL PROJECTS, AND TRAINING : FISCAL YEARS 1955 TO 1958

(Thousands of dollars)

Year	Extension and improvement	Special projects	Training	Total
1955	1,500	1,000	900	3,400
1956	1,500	2,250	2,075	5,825
1957	1,500	2,000	2,950	6,450
1958	1,500	3,600	4,400	9,500
Total . . .	6,000	8,850	10,325	25,175

Disability is one of the major reasons why individuals become dependent upon public agencies for their support, since prolonged disability usually means unemployment and a halt to the normal income of a family. Where this happens, the state public assistance agencies, with the participation of the federal Government, make payments to support individuals who cannot maintain themselves and their children. The vocational rehabilitation programme has become an effective instrument for restoring such disabled people to activity, thereby enabling them to become wage earners, no longer dependent upon public aid.

About 14,000 of the 71,000 persons rehabilitated in the past fiscal

year had been dependent upon public assistance payments. They had been receiving financial aid at the rate of about 11.5 million dollars a year. The total cost of rehabilitating these 14,000 individuals was less than the cost of their support from public funds for one year.

In addition to the millions of man-hours which these 71,000 rehabilitated people will add to the nation's production, their earnings during their first year of employment will amount to about 138 million dollars (based on their starting wages only). Research, reinforced by years of experience, shows that this group of disabled people, working and paying their taxes again like other workers, will pay into the federal Treasury during their working lives 10 dollars for each dollar spent to rehabilitate them—and this takes no account of the state or local taxes which they will also pay. Thus, in addition to the important human benefits which accrue from the return of disabled persons to usefulness and independence, experience has shown that rehabilitation constitutes a sound investment of public funds.

Practically every type of occupation performed by workers anywhere is reflected in the list of occupations which disabled people enter after completing rehabilitation. As the figures in table III illustrate they run the occupational gamut and represent a cross-section of the activities, abilities, and employment pursuits of the American people. The gains in professional, scientific and technical manpower are a welcome addition to any country's resources. In one year, for example, through the vocational rehabilitation programme 56 disabled people became chemists, 426 accountants and auditors, 274 engineers, 66 pharmacists, 557 draughtsmen, and 1,314 teachers.

TABLE III. OCCUPATIONAL GROUPINGS OF THE DISABLED PERSONS
REHABILITATED THROUGH THE VOCATIONAL REHABILITATION
PROGRAMME, FISCAL YEAR 1956

Occupational grouping	Number	Percentage
1. Professional, semi-professional and managerial fields	6,603	10.1
2. Skilled and semi-skilled workers	17,875	27.2
3. Clerical and sales occupations	12,783	19.5
4. Service workers	11,117	16.9
5. Agricultural and kindred workers	5,614	8.6
6. Unskilled workers	4,413	6.7
7. Housewives and family workers	7,227	11.0
Total	65,632	100.0

THE OFFICE OF VOCATIONAL REHABILITATION

The federal responsibilities in the state-federal programme are administered through the Office of Vocational Rehabilitation, one of the five major agencies which constitute the United States Department of Health, Education, and Welfare. As a result of its fortunate position in the Department the Office is able to carry out the planning and operation of the vocational rehabilitation programme in close co-ordination with the important related governmental activities in health, education and welfare. The activities that make up the rehabilitation programme can thus be adapted to the advances constantly being made in medicine, the social sciences, special education and many other fields.

Organisation

The Office of Vocational Rehabilitation at present operates with slightly less than 150 employees, approximately two-thirds of them being located in the central office in Washington and the others serving in the nine regional offices of the Department. These regional offices, spread geographically throughout the country, enable the regional representatives in vocational rehabilitation to work directly and frequently with the states in developing and improving the work for the handicapped. They are located in Boston, Massachusetts; New York, New York; Charlottesville, Virginia; Atlanta, Georgia; Chicago, Illinois; Kansas City, Missouri; Dallas, Texas; Denver, Colorado; and San Francisco, California.

The central office is divided into four main groups, each under an assistant director, as follows: Programme Planning and Evaluation (comprising the divisions of Research, Publications and Reports, and Programme Statistics, as well as units for legislative matters and for disability benefits under the Social Security Amendments); State Administration and Development (comprising the divisions of State Plans and Grants, and State Administration Development); Rehabilitation Services (comprising the divisions of Medical Services and Facilities, Services to the Blind, General Rehabilitation and Placement Services, and Training of Professional Personnel); and Management Services (comprising the divisions of Budget and Management, and Administration).

The regional office staff reports to the director through the Assistant Director for State Administration and Development.

In carrying out the programme of research and demonstration grants the Office has the assistance of a National Advisory Council on Vocational Rehabilitation, which is composed of outstanding

authorities in medical, educational and other aspects of rehabilitation, as well as leaders in business and labour. The Council reviews all applications for research and demonstration grants and recommends the action to be taken on each.

The States Vocational Rehabilitation Council, composed of all State Directors of Vocational Rehabilitation, is the official advisory body through which the state rehabilitation agencies join with the Office of Vocational Rehabilitation in developing and adopting policies for the guidance of the programme on a national basis.

Research in Rehabilitation

Despite the phenomenal growth of rehabilitation in the United States and in many other countries since the end of the Second World War there has been a dearth of good research designed to produce new knowledge and better methods for restoring the disabled. A limited amount of research was carried on in certain clinical aspects of restorative medicine, but other aspects of rehabilitation were neglected for the most part.

The Vocational Rehabilitation Act of 1954 authorised the establishment of a programme of federal grants to help finance such research. After three years' experience in this work, it is now evident that concentration on research yields great dividends and that it is possible to find new ways to rehabilitate many handicapped persons who were formerly considered hopeless, particularly in terms of return to employment.

A large proportion of this research is directed toward solving problems in the rehabilitation of persons with severely disabling conditions. In one project, for example, specific criteria and procedural methods were developed to evaluate the potentialities of cerebral-palsied individuals and special step-by-step techniques were evolved to train them for selected types of employment suited to their individual characteristics. This procedure, now being put into practice in various parts of the country, offers definite promise that a very substantial number of persons who previously had no prospects of performing useful work can now be systematically brought back into the labour force.

In another project, conducted jointly by the Institute of Physical Medicine and Rehabilitation of New York University and the Georgia State Division of Vocational Rehabilitation, a group of paraplegics were studied intensively—their medical condition, their physical abilities in terms of ambulation, self-care, etc., their family backgrounds, employment history, intelligence levels and other psychological characteristics, as well as the standard

statistics of age, sex and educational accomplishments. The report ¹ of this study provided further insight into the reasons for success, limited success and comparative failure in the total rehabilitation of paraplegics; the negative factors were predominantly those having to do with psychological attitudes of the patients, their family backgrounds, geographical factors in relation to employment and transportation, and other elements which, for the most part, were not related to their physical capacities.

Another interesting study is at present being carried out in connection with a recently developed surgical procedure for persons suffering from Parkinson's disease. This surgical method (known as chemopallidectomy) halts the tremors associated with Parkinsonism by introducing a small quantity of absolute alcohol to the *globus pallidus* of the brain. Once the tremors have been halted, rehabilitation becomes possible on a scale not heretofore contemplated. Thanks to a research grant from the Office of Vocational Rehabilitation, the neuro-surgeon in charge of this work and his associates are now studying and developing specific post-operative rehabilitation procedures for these patients, their goal being to restore all possible patients to activity and usefulness.

More than a hundred research studies and demonstration projects were under way at the close of the calendar year 1957.

The Training Programme

As the demand for more and better rehabilitation services has increased in recent years, the need for a greatly increased supply of trained professional workers has become urgent. To help stimulate the recruitment of young people for careers in the several professional fields in rehabilitation and to aid the universities and other teaching institutions to expand their facilities for professional training in this field, a programme of training grants was launched in 1955.

At present 100 universities and other teaching institutions are participating in the training programme, under which additional courses have been introduced, curricula broadened and new departments established, in order to offer well-rounded graduate training for those pursuing specialist work in preparation for their service to the handicapped. These courses are at the graduate level, most of them leading towards a Master's Degree in the student's professional speciality (a principal exception being the resident training of physicians).

¹ Institute of Physical Medicine and Rehabilitation: *Spinal Cord Injury—Rehabilitation Costs and Results in 31 Successive Cases Including a Follow-up Study*, Rehabilitation Monograph XIII (New York, New York University—Bellevue Medical Center).

To aid and encourage students interested in entering one of the fields of rehabilitation, traineeship awards are made, through the universities, which help the graduate student to defray the major expenses in the specialised phase of his education.

Teaching grants and traineeship stipends are made available for the following types of rehabilitation personnel: (1) vocational rehabilitation counsellors; (2) physicians pursuing resident training in the speciality of physical medicine and rehabilitation; (3) physical therapists; (4) occupational therapists; (5) social workers; (6) speech and hearing therapists. On a smaller scale, graduate training in the rehabilitation aspects of nursing, prosthetics and certain other specialised fields is also supported.

TABLE IV. TRAINING GRANT PROGRAMME, FISCAL YEAR 1958.
SUMMARY OF GRANTS MADE AS AT 31 AUGUST 1957

Field	Teaching grants (to teaching institutions)		Traineeship grants (for students)		
	Number	Amount in dollars	Number	Amount in dollars	Number of trainee- ships
<i>Long-term training:</i>					
Rehabilitation counselling	35	545,339	32	825,600	501
Medicine	19	347,720	26	695,826	135
Nursing	6	57,130	3	44,000	19
Occupational therapy . .	16	101,025	22	52,800	80
Physical therapy	10	74,196	—	—	—
Prosthetics education . .	4	235,993	—	—	—
Social work	29	266,285	29	202,200	107
Speech and hearing . . .	8	95,169	6	70,800	32
Other	4	72,657	2	10,668	7
Total	131	1,795,514	120	1,901,894	881
<i>Short-term training</i>	5	38,481	16	112,124	471
Grand total	136	1,833,995	136	2,014,018	1,352

A summary of the number of grants and the amount of funds devoted to each during the year 1957-58 is given in table IV. This table does not show grants to state vocational rehabilitation agencies for intensive short-term courses for newly employed rehabilitation counsellors or for certain other specialised courses of brief duration.

A number of short-term intensive courses are provided, with emphasis on the techniques of co-operative work among the several specialities designed to produce a thoroughly integrated programme

of rehabilitation, in which all of the professional skills may be combined and used to the best advantage to solve the problems of severely disabled persons.

The same emphasis is given to co-operation in the formal graduate training mentioned above, so that the student's training experience in the university will prepare him to collaborate with physicians, therapists and all the others who constitute the "rehabilitation team".

Services for Blind Persons

As pointed out earlier, 36 states operate separate agencies to provide vocational rehabilitation services for blind persons; in the remaining states, services for both blind and sighted individuals are provided through one general agency.

During 1956 a total of 3,765 blind persons were rehabilitated and entered gainful employment, in a wide range of occupational fields. Experience over the years has demonstrated that, as our competence in training, job analysis and employer education grows, the jobs which are considered suitable for blind persons grow correspondingly. As a result the range of occupations in which the blind perform successfully widens each year.

In addition to the Vocational Rehabilitation Act, the Office of Vocational Rehabilitation also administers the Randolph-Sheppard Act (passed in 1936), under which preference is given to blind persons in establishing and operating vending stands on federal property. Most states give similar preference in the operation of vending stands on state and local properties, with the result that several thousand blind persons have established themselves in their own retail businesses throughout the country. In 1956 the 1,727 vending stands operated in this way did a gross business of 25,849,730 dollars, the average net income of all vending stand operators being 2,532 dollars for that year.

Through the programme of research and demonstration grants, many aspects of the problems faced by blind persons in adjusting themselves to a sighted world and preparing themselves for activity and usefulness are being studied. These investigations take many directions; for example, study is at present being carried on into the use of binaural sound; for this purpose recordings are made of a great variety of situations with which the blind have to familiarise themselves, e.g. recordings of street traffic, and of noises in shops, at home, etc. The interesting feature of these recordings is that the sound is separately recorded on two systems and is brought separately and directly to each ear without being mixed; as a result the recordings produce not only sound but also a sensation

of motion, such as one experiences in watching moving traffic or in following the footsteps of a person crossing a room. It is hoped that, through the binaural sound system, recordings—and practical methods of using them—will help persons who have recently become blind to overcome the fears and general difficulties that so often surround their readjustment to hazardous and strange situations. Other projects are concerned with perfecting technical features of optics by means of which persons with extremely low visual acuity or with unusual sight impairments may be fitted with special lenses and other aids to permit them to read, travel and carry on many other activities of sighted persons.

REHABILITATION CENTRES

As professional knowledge has grown there has been a strong trend in rehabilitation toward the establishment of centres in which the several professional specialists may jointly direct their skills to solving the complicated problems which nearly always arise in connection with severe disability. To encourage and support the development of more rehabilitation centres, the Congress in 1954 enacted the Medical Facilities Survey and Construction Act (Public Law 482, 83rd Congress). This authorised an annual expenditure of 10 million dollars, to be allotted among the states on the basis of population. Each state which participates is required to make available one dollar of state funds for every three dollars of federal funds used. This programme is administered through the same federal-state system as the Hospital Survey and Construction programme, which has been instrumental in building large numbers of hospitals in the United States since 1947. Grants are made subject to the approval of both the Surgeon-General of the Public Health Service and the Director of the Office of Vocational Rehabilitation.

Sixty-three proposals to build new rehabilitation centres have been approved to date, and most of them are under construction or have already been completed. Many of these centres are located in hospitals, medical teaching institutions, etc.

In addition, the Vocational Rehabilitation Act of 1954 authorises financial support for the alteration or expansion of existing rehabilitation centres and a large number of them have extended their capacity and enlarged the scope of their services under this programme. In addition many sheltered workshops, which provide severely disabled people with a transitional training experience to prepare them for later employment, have been enlarged, re-equipped and modernised.

RELATIONS WITH OTHER AGENCIES OF THE FEDERAL GOVERNMENT

Because disabled people present needs which are in many respects similar to those of people in general, the Office of Vocational Rehabilitation collaborates with numerous governmental agencies and groups to help insure a complete range of services to disabled people.

This co-operative work is carried out regularly with the Veterans' Administration, and experience is pooled so that veterans and non-veterans alike may enjoy the best possible programme. Veterans of the Second World War and of the Korean War receive rehabilitation services under special laws enacted by the Congress and administered by the Veterans' Administration, which maintains widespread and extensive hospital services, and provides vocational training and education services and adjustment benefits through its system of regional and local offices throughout the country. However, many veterans are aided by the federal-state programme in their capacity as citizens, rather than as veterans.

The United States Employment Service and the state employment services perform an important function in aiding rehabilitated persons to secure employment suited to their individual needs. The Office of Vocational Rehabilitation and the state rehabilitation agencies work in close co-operation with the employment services, so that the information available to both agencies—as well as the selective placement skills of both—is used to full advantage in securing jobs in the community.

General acceptance of the worth and productivity of handicapped employees has been greatly enhanced during the last ten years by the work of the President's Committee on Employment of the Physically Handicapped. All states have an affiliated Governor's Committee on Employment of the Physically Handicapped and many communities conduct similar educational and promotional work through local committees. Representatives of employers' groups and individual businesses, organised labour unions, newspapers, radio and other communications media, civic and veterans' organisations and other groups participate actively. Through this co-operative effort the American people generally have acquired a better understanding of the ability of rehabilitated persons, and employment opportunities have grown very substantially. The Office of Vocational Rehabilitation and the President's Committee regularly conduct joint projects to achieve the same ends.

CONCLUSION

The Office of Vocational Rehabilitation and the co-operating state rehabilitation agencies are engaged in a major effort to build

the vocational rehabilitation resources of the United States to the point where all disabled individuals who need rehabilitation services can receive them promptly. As part of this long-range plan, programmes are now under way (1) to increase the size and scope of vocational rehabilitation; (2) to carry out the research necessary to secure new knowledge and new methods for restoring more handicapped people during coming years; (3) to produce an increased supply of well-trained professional rehabilitation personnel; (4) to increase the number and size of rehabilitation centres and other facilities for complete and comprehensive rehabilitation.

Since rehabilitation has come to be a matter of considerable concern to the leaders and citizens of many nations throughout the world, it is important that the experience gained in the United States and other countries should be pooled so that handicapped men and women everywhere may ultimately have the full advantage of the best possible rehabilitation services and thus be given the opportunity of contributing their talents and skills to the development of their countries.
