Compendium on Workmen's Compensation

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Chapter 11

Rehabilitation in Workmen's Compensation

Most employees injured in work accidents return to their jobs after minor medical attention with little if any worktime lost. As the effects of the injury are transient, the incident usually fades from memory. Even those who suffer days or weeks of disability and possibly endure substantial medical treatment may find the injury is not permanent. Although the loss of income and the medical expenses are distressing, eventually, when workers resume their jobs, they recover economically, too.

A minority, unfortunately as much as 10 percent of the total injured, according to a California report by McLeod,[1] suffer injuries that disrupt their lives. Even when these workers receive effective medical care so that eventually they return to productive jobs, their lives are physically and emotionally scarred. Injuries for some are so severe that prolonged medical treatment and convalescence fail to restore them completely. Residual handicaps prevent their acceptable performance in their former jobs. Only retraining and education combined with special treatment offer a prospect for future employment.

Some never return to work. If they do not die from their injuries, they live with such severe disabilities that they barely can manage for themselves. Often, the most that health services can do is to lighten the burden on those who take care of these persons.

The treatment for workers whose livelihood is threatened by work-related impairments consists of medical rehabilitation and vocational rehabilitation, the topics discussed in this chapter.

MEDICAL REHABILITATION

It is easier to discuss individual programs than to review medical rehabilitation in the United States as a whole. Each program, whether set up by an insurance company or workmen's compensation agency, contains its own requirements for treatment, qualifications for eligibility and definitions of service.

Terminology

Medical rehabilitation is not defined everywhere the same. Some consider it the same as medical care (chapter 10). For others, it is treatment of long-term or chronic disabilities or problems such as amputation, blindness, or spinal injuries. Some regard medical rehabilitation as treatment by physical and occupational therapists.

Our studies and inquiries indicate that a worker's injury may determine whether what he receives is called medical care or medical rehabilitation. If his injury is short-term or acute, the treatment used for it seems to be called medical care. If his injury is long-term or chronic, the treatment may be called medical rehabilitation. Even so, the terms are not distinctive: proper rehabilitation begins with the first treatment of an injury whether or not the disability is expected to be chronic.

Nevertheless, 10 jurisdictions distinguish between medical rehabilitation and medical care, usually on the basis of lost worktime or the type of injury. Because of the difficulty in arriving at a universal definition, medical rehabilitation in

this chapter is defined according to the usage of the program discussed.

The Delivery System

The worker who required medical rehabilitation often receives it much as he receives other medical care. Some workmen's compensation laws obligate employers and insurers to pay costs of medical care for injured workers. The worker receives whatever medical care is needed to treat the impairment and restore lost function. He may report first to the plant nurse or physician for immediate attention. If the injury is serious, he may go to a hospital. Costs are covered by having health service workers on salary, by contractual arrangements with health personnel, or by payment of hospital and doctor bills. The insurer may or may not have much influence in the selection or course of treatment.

For injuries associated with chronic disabilities, the insurer usually attempts to control the selection of the rehabilitation services, frequently by directing the worker to a particular specialist or facility with a particular expertise. Often the insurer pays for transportation to the specialist or facility as well as for rooms during treatment.

Some insurance companies operate rehabilitation facilities, under individual or joint ownership, with medical personnel on salary, at least part-time.

When insurers contract to share rehabilitation programs or facilities, they may pay expenses case by case or through a rental agreement.

Some workmen's compensation agencies may be totally isolated from and unaware of rehabilitation procedures. Others keep relatively close tabs on the services rendered.

When informed of the potential need for rehabilitation, some agencies do little more than notify the worker and insurer that medical rehabilitation is worth considering. Other agencies conduct formal evaluations of the need for further medical care and recommend action. They seek to convince disabled workers of the wisdom of rehabilitation. When the workers agree, the insurers can be required to finance the care.

Rehabilitation in Insurance

In 1972, a questionnaire concerning rehabilitation programs in workmen's compensation insurance was sent to 25 major insurance companies in the United States. The answers from 22 revealed a variety of policies and practices in rehabilitation under workmen's compensation so that generalizations are difficult. The following comments on various rehabilitation programs, therefore, are not to be regarded as typical of the entire industry.

Medical management.—In the insurance industry, the concern some carriers have for both medical care and medical rehabilitation is termed "*medical management.*" It is the attempt to minimize the total costs of compensation through emphasis on well-timed, high quality medical treatment. The concept tends to focus attention on the physical condition of the worker rather than on the monetary compensation due. The ultimate goal is to reduce the degree of disability. The insurer would like to see the worker's earning abilities fully restored rather than pay compensation indefinitely.

Rehabilitation programs.—One well-known insurer, here known as INX, makes a special effort to interview all claimants with serious injuries. The majority of those hospitalized are examined in an effort to design the best course for recovery. Either a claimsman, a rehabilitation nurse, or a medical advisor personally consults with the claimant and attending physician on the therapy and recommends specialists or a fitting rehabilitation facility.

The ability of INX to influence the medical program is dependent on the representatives' cogency, the regulations of the jurisdiction and the circumstances of the case. In free choice States, INX takes care not to violate the claimant's protected right to choose his own physician and medical program without losing financial support from the insurer.

When the claimant cooperates with INX, the worker is directed usually to specialists and rehabilitation facilities near his home unless the nature of the injury requires particular care at a distant facility. In that event, INX will transport the worker to the required place for that special care. While INX operates its own rehabilitation center and has helped develop a spinal cord clinic, both in the Boston area, its claimants are sent to facilities available in different parts of the country.

INX uses privately and publicly operated rehabilitation facilities in a manner typical of other

insurers committed to medical management although its scale of operation is larger than most.

Another large insurer, INJ, has supplied its claims officers with a list of criteria to aid in selecting candidates for rehabilitation. When an injured worker fits the pattern, the claims officer notifies INJ's rgeional office so that a rehabilitation nurse or coordinator can examine the claimant early in the course of treatment. The criteria include such items as quadriplegic and paraplegic cases, major amputations, serious head injuries, crushed members, loss of eyes, and similarly grave injuries.

In 1971, INJ financed rehabilitation of 1,109 injured workers or 2.6 percent of its lost-time claims.[2] As with INX, these claimants received their rehabilitation services in facilities located near home if possible but some were transported to special facilities. INJ has contacts with hospitals, specialists, clinics, and rehabilitation centers across the country through which its claimants receive rehabilitation services.

INJ in 1970 established a program that contracts with other insurers to improve rehabilitation efforts. The program uses five regional offices in the United States and Canada where insurers can purchase advice and help in rehabilitation matters. Other insurers may release their rehabilitation cases to INJ's program for processing one of INJ's own. Costs are paid by the claimant's insurer either case by case or under a contract whereby INJ for a fee assumes the total rehabilitation responsibilities of the other insurer.

A similar rehabilitation service, established recently by a Texas insurer, is restricted to that States.

The amount of medical rehabilitation conducted voluntarily by insurance companies is unknown. Either disagreements as to the definition of rehabilitation or failures to record rehabilitation benefits as a separate category thwart attempts to estimate the dimension of this service. Of the 22 insurers who responded to our survey, only 10 could provide figures on the numbers of workmen's compensation claimants who received rehabilitation benefits in 1971. Even among this group, some of the numbers are approximate rather than actual.

Table 11.1 indicates the considerable variation in the programs of rehabilitation. The percentage of claims receiving rehabilitation range between 50 percent and 1.5 percent. As our questionnaire did not require distinction between medical and vocational rehabilitation, the figures probably include cases receiving vocational rehabilitation. These workers probably received medical rehabilitation in any event. It is not certain whether the wide range in percentages indicates differing definitions of rehabilitation or different counting procedures or whether rehabilitation efforts actually differ so much. Clearly, broad and narrow definitions of rehabilitation are used by different insurers. Some refuse to distinguish between medical care and medical rehabilitation while others consider only the treatment for catastrophic injuries as rehabilitation. As to counting procedures, some count all cases referred to the attention of rehabilitation nurses, while others count only those receiving services such as physical therapy, the fitting of prosthetic devices, and other care pertinent to catastrophic injuries. The data depend on the internal needs of the insurer.

Table 11.1.—PERCENTAGES OF CLAIMANTS RECEIVING REHABILITATION BENEFITS BY INSURANCE COMPANY, 1971

Insurance company [1]	Percentage of claimants receiving rehabilitation	Insurance company [1]	Percentage of claimants receiving rehabilitation
A	50	G	[3]
B	1.5–2	H	[3]
C	26	I	[3]
D [2]	7.7	J	2.6
E	25	K	[3]
F	3		

[1] All insurers are members of the Insurance Rehabilitation Study Group.
[2] Insurer is a reinsurer.
[3] No data.

Source: Insurance Rehabilitation Questionnaire, 1972.

The many factors which influence insurers to undertake rehabilitation are discussed in Kiser's "The Demand for Rehabilitation in Workmen's Compensation".[3]

Rehabilitation Services of Agencies

Even the most conscientious insurance companies probably miss some claimants who could benefit from medical rehabilitation. What happens to such claimants or those whose insurers ignore rehabilitation needs? Do they deteriorate as social rejects or do they receive rehabilitation eventually?

New York's program.—New York State's workmen's compensation agency tries to capture these cases through a procedure known as the R

program which requires insurers, employers, and physicians to inform the agency when the worker's condition looks as though rehabilitation care would be beneficial. Insurers are required to submit an R form when the insurer initiates treatment, when the insurer or attending physician considers rehabilitation necessary, or when compensation payments have been made for 2 months and are expected to continue. The notice is meant to bring potential rehabilitation cases to the attention of both the agency and the carriers.

R forms accompanied by a full medical report and medical opinions are sent to the rehabilitation section of the New York Workmen's Compensation Board where a staff of two full-time physicians and 70 rehabilitation counselors and social workers review them to determine whether workers should receive special services not already initiated. Some claimants are given medical examinations and interviewed by rehabilitation counselors and possibly social workers who may recommend initial or additional rehabilitation, but only a physician can order the insurer to finance medical rehabilitation.

For those receiving rehabilitation services, periodic reports enable the workmen's compensation agency to follow the case to closure. Should the services be interrupted, the agency investigates.

In 1970, the agency considered reports on 41,353 injured workers and completed evaluations for 27,477. Rehabilitation programs, including vocational rehabilitation programs, were arranged for 5,037 workers, 71 percent by insurers and other sources other than the agency.

Whether so many would have received rehabilitation services without the agency's attention is unknown. Certain insurers have expressed doubts about the value of the New York program. Other observers are impressed with its achievements.[4] Altogether, New York reports that from 3 to 5 percent of workmen's compensation claims closed in 1969 received medical rehabilitation.[5]

Florida's program.—Efforts to assure adequate rehabilitation for injured workers are supported by the visiting nurse program in Florida. Cases that might be able to use medical rehabilitation are brought to the attention of 18 rehabilitation nurses in industrial areas. The nurses receive referrals from workers, employers, physicians, and insurers. Referrals are always optional. In three situations, they are mandatory: When a major amputation is probable; when an attending physician feels a permanently disabled patient can perform light work; or when the insurer's initial indemnity liability is estimated at $2,500 or more.

Referrals go to a central office where information is summarized for notice to a nurse. The nurse informs the insurer of the referral and visits the injured worker to obtain data on his condition and prospects. The nurse recommends rehabilitation if it should be included in the worker's compensation. If the central office concurs, the nurse encourages the insurer, worker, and physician to cooperate. Should the physician object, the nurse can ask the insurer to remove him. If the worker balks, he is warned that he does so at the risk of losing some compensation benefits. The insurer is required by law to finance the treatment.

In 1971, 3.2 percent of Florida's Workmen's Compensation claimants received medical rehabilitation.[5] How many of these workers received this care directly as a result of the Florida program is not known. As in New York, it is not known whether so many would have received care without the efforts of the agency. The program screened 3,622 cases in 1970 and closed 1,567 after rehabilitation, some of whom received vocational rehabilitation as well as medical rehabilitation.

Most other jurisdictions, if they make any attempt to follow up injury cases and investigate rehabilitation potential, have less elaborate procedures than those of New York or Florida. States such as California, Missouri, Minnesota, New Jersey, Michigan, and Wisconsin have established procedures to select candidates from workmen's compensation rolls but the procedures vary in purpose and expectations.

Since few jurisdictions recognize medical rehabilitation as distinct from medical care, most procedures aim primarily at finding cases needing vocational rehabilitation rather than medical rehabilitation. California, Minnesota, and New Jersey are examples of jurisdictions with this emphasis (see below). The only other program notable for its efforts to assure medical rehabilitation is that of Missouri.

Missouri's program.—The screening body in Missouri's system is the Board of Rehabilitation, comprised of three members of the Industrial Commission, the director of Workmen's Compen-

sation, and a small staff. All reports of lost-time injuries are reviewed by the Board on the day the reports are received to identify workers with a serious injury. Whenever the injury appears likely to result in extended time lost from work (3 weeks or more) it is judged serious.

If the claimant's condition implies rehabilitation, the Board directs the insurance company to submit a physician's opinion. On the basis of this report and other information, the Board decides whether or not to notify the insurer to provide rehabilitation services. The insurer may present its objections in a hearing. Insurers apparently accept the Board's judgment in most cases.

All medical rehabilitation initiated this way must be conducted in facilities approved by the Board. When the insurer initiates the rehabilitation plan any facility may be used but maintenance payments to the worker from the second-injury fund will not be paid until he is transferred to an approved facility. With this incentive, most insurers request a list of approved facilities and usually transfer workers willingly when they learn of the arrangement. Approvals for facilities are updated periodically.

In 1971, between 1 and 3 percent of Missouri's claimants received medical rehabilitation benefits. Table 11.2 compares the extent to which workmen's compensation claimants receive rehabilitation in several jurisdictions. Except for the problem of definition, noted earlier, the statistics are uniform.

Table 11.2.—PERCENTAGES OF WORKMEN'S COMPENSATION CLAIMANTS WHO RECEIVED MEDICAL REHABILITATION, 1971

Workmen's compensation jurisdictions [1]	Percentage of claimants receiving medical rehabilitation	Workmen's compensation jurisdictions [1]	Percentage of claimants receiving medical rehabilitation
District of Columbia	([2] [3])	New Jersey	([2])
Florida	3.2	New York	3–5
Massachusetts	1–3	North Dakota	3–5
Michigan	[4] 1.0	Ohio	([5])
Missouri	1–3	Washington	[6] 1–3
Montana	3–5		

[1] Includes only jurisdictions distinguishing between medical care and medical rehabilitation.
[2] No data.
[3] Medical rehabilitation program began in 1971.
[4] Percentage computed from a report of 765 cases in 1971. The total number of claimants is estimated as 71,800 in the annual report.
[5] No response.
[6] Percentage is based on the numbers receiving treatment in the Workmen's Compensation Rehabilitation Center in Seattle.

Source: Workmen's Compensation Agency rehabilitation questionnaire, 1972.

New York and Florida report no greater percentages of claimants receiving medical rehabilitation than in States with less elaborate programs.

Rehabilitation Facilities

In relatively few cases are rehabilitation services provided through facilities owned and operated by insurers. Usually workers are sent to whatever facilities are available. The facility may simply be a physician's office, a general hospital, a special rehabilitation unit in a general hospital, a special clinic, or a free standing rehabilitation center. The number of workers sent to public facilities is not known.

Financial arrangements vary, too. Presumably where the insurer directs its own rehabilitation efforts, the insurer pays most of the costs of medical rehabilitation. Where the workmen's compensation agency directly or indirectly develops the rehabilitation programs of claimants, the extent of the financial burden falling on the public ranges from 0 to nearly 100 percent (Table 11.3), according to responses from States separating medical care from medical rehabilitation when they were asked "What percentage of all medical rehabilitation cases received services financed by government?" [5]

Table 11.3.—PERCENTAGE OF MEDICAL REHABILITATION CASES WHO RECEIVED MEDICAL SERVICES FINANCED BY GOVERNMENT, 1972

Workmen's compensation jurisdiction [1]	Percent receiving government financed services	Workmen's compensation jurisdiction [1]	Percent receiving government financed services
District of Columbia	0	New Jersey	([3])
Florida	20	New York	0
Massachusetts	([2])	North Dakota	0
Michigan	([3])	Ohio	([4])
Missouri	1–25	Washington	75–100
Montana	0		

[1] Includes only jurisdictions distinguishing between medical care and medical rehabilitation.
[2] Few.
[3] No Data.
[4] No Response.
Source: Workmen's Compensation Agency rehabilitation questionnaire, 1972.

The State of Washington, with 75/100 percent of its medical rehabilitation cases receiving publicly financed services, is one of the few jurisdictions that operates special rehabilitation facilities for workmen's compensation claimants. All cases requiring medical rehabilitation are expected to

use that facility. However, self-insurers in Washington are permitted as of January, 1972, to purchase medical rehabilitation wherever they find the services convenient.

Other States with special workmen's compensation rehabilitation centers are Rhode Island and Oregon. The Donley Center in Providence, Rhode Island is an outpatient clinic offering a range of services for physical, psychological, and vocational needs. In 1968, it reported serving 197 claimants, in contrast to the Physical Rehabilitation Center in Portland, Oregon, which reported serving 1000 cases in 1966 and 1967.[6] Oregon's center provides a dormitory and a wide range of services, although the emphasis is on medical rehabilitation. The center began recently to provide vocational rehabilitation. Special clinics for amputees and back evaluations are part of Oregon's services.

Whether other jurisdictions should establish special rehabilitation facilities for injured workers is a lively issue. Proponents argue that if facilities were established exclusively for workmen's compensation, the injured workers would not have to compete for the limited services available for treating the handicapped. With their own facilities, workers would be more likely to receive quality care when it is most effective without risk of displacing others in need of rehabilitation.

Opponents argue that the quality of the care in a special unit would be inferior to one serving a general clientele. For example, they claim, quadriplegics and paraplegics need to be around others with similar disabilities in order to learn how much they can progress. Except in heavily populated centers, there are too few amputees under workmen's compensation to provide such mutual support in a special center. As for the less seriously injured, it is argued that adequate facilities are available for all and even better than the special workmen's compensation facilities which would move injured workers far from home. Near his home, where a worker can be treated by practitioners who are likely to be familiar with the worker's prospective environment, it is claimed rehabilitation can prepare him for his post-injury role in his family, work, and community.

An appeal to the facts in this issue is futile. Little is known about the availability of facilities especially in view of the conflicting concepts of rehabilitation and rehabilitation facilities.

A survey of rehabilitation facilities, published in 1968, provides some indication of how the availability differs from State to State. Although this survey does not tell how adequate is the supply of facilities, it does show a pattern of variation. (Table 11.4) New York, Illinois, Arizona, and

Table 11.4.—DISTRIBUTION OF REHABILITATION FACILITIES[1] AMONG THE STATES, 1968

State	Number of rehabilitation facilities	Number of facilities per 100,000 population [2]
Alabama	5	.015
Alaska	(3)	(3)
Arizona	7	.04
Arkansas	3	.016
California	46	.23
Colorado	6	.027
Connecticut	12	.04
Delaware	4	.007
District of Columbia	4	.005
Florida	8	.012
Georgia	9	.02
Hawaii	4	.005
Idaho	1	.001
Illinois	30	.27
Indiana	9	.017
Iowa	5	.018
Kansas	3	.013
Kentucky	3	.009
Louisiana	10	.027
Maine	2	.002
Maryland	9	.023
Massachusetts	19	.033
Michigan	13	.015
Minnesota	25	.066
Mississippi	(3)	(3)
Missouri	14	.03
Montana	(3)	(3)
Nebraska	3	.02
Nevada	1	.002
New Hampshire	4	.66
New Jersey	17	.024
New Mexico	4	.039
New York	61	.334
North Carolina	4	.008
North Dakota	1	.002
Ohio	31	.291
Oklahoma	3	.012
Oregon	(3)	(3)
Pennsylvania	35	.297
Rhode Island	3	.003
South Carolina	(3)	(3)
South Dakota	2	.003
Tennessee	4	.01
Texas	18	.16
Utah	1	009
Vermont	1	.002
Virginia	7	.015
Washington	5	.015
West Virginia	3	.017
Wisconsin	22	.05
Wyoming	2	.006

[1] Does not include units in general hospitals.
[2] 1970 population figures.
[3] No data.

Sources: 1968 Directory of Rehabilitation Facilities and Statistical Abstract of the United States, 1971.

Pennsylvania have relatively large numbers of facilities for their populations. Florida, North Carolina, and Tennessee have relatively few. We do not know the capacities of the facilities nor how heavily they are used. Neither do we know how many facilities were missed in the survey and whether the omissions are distributed evenly. The count does not include rehabilitation units in general hospitals.

Evaluation

Adequacy.—It is not practical to judge whether the 3 percent or so of workmen's compensation cases receiving medical rehabilitation in those few States providing such statistics indicates an adequate outreach. Casual evidence suggests that significant improvement is possible. A study of the need for medical rehabilitation in a labor union population does provide an indication of how extensive is the need.[7] By that study's method, 5.3 percent of the union members and their dependents were found to need special treatment.

The confusing nature of the data in State workmen's compensation hampers effective estimation of need for rehabilitation. Neither the severity of injuries nor the numbers of injuries are recorded well. Most States do not record the distribution of time lost as a result of work injuries. The number of injuries variously classified as temporary total, permanent partial, and permanent total disabilities do not allow an estimate of the need for medical rehabilitation. An injury that fits one category in one jurisdiction will be classified differently in another. The classifications are not clearly related to severity.

A measure of the adequacy of medical rehabilitation must rely on what seems to be the likely results of the design and operations of various workmen's compensation systems.

A simple model may show, with certain levels of financial obligation for insurers and with no arbitrary limits on medical expenditure for individual patients, that insurers who wish to maximize profits on insurance policies will provide an adequate amount of rehabilitation to insured workers.[3] These conditions are not present in State workmen's compensation systems. A few States still have maximums for medical expenditure in workmen's compensation cases, although the maximums are high relative to what needs to be spent in most cases (Table 10.1). State laws require that less than 100 percent of lost wages be replaced by financial compensation. These influences and other factors, such as the possibility of insurers' reducing compensation costs through compromise and release arrangements or through contesting cases, are expected to reduce the incentives for insurers to spend money on medical rehabilitation. The savings that might otherwise be expected to result from the rehabilitation expenditures do not materialize in the current system.

Also, claimants do not always cooperate. If they choose to disregard insurer attempts to provide rehabilitation benefits because cash benefits are greater without the rehabilitation, the insurer can do little to restore them. Except in Florida, Maryland, Michigan, and in the Federal Employees Compensation Law, compensation benefits cannot always be reduced by refusal of the claimant to accept rehabilitation. The question of whether benefits can be reduced has to be answered case by case. In 1966, a New York decision ruled that "in absence of an express statutory provision, a claimant may refuse rehabilitation benefits and still receive compensation benefits."

Equity.—It is no easier to judge the equity of rehabilitation services in workmen's compensation than the adequacy. Ideally, one would need to know the similarity of workmen's compensation cases in all jurisdictions. No one does. Nor is it known how the probability of medical rehabilitation differs from similar cases from State to State.

Casual evidence suggests inequities. The different procedures for dispatching workmen's compensation benefits in the various jurisdictions open the way for inequities. Some jurisdictions have tighter administrative procedures and better information systems than others. The State of Washington, for example, sends each injured worker a form telling of the various benefits, including medical rehabilitation, that are his. Also the form lists 16 offices where the worker can ask questions about his workmen's compensation rights. Other information on workmen's compensation is publicized through medical articles in bulletins and newspaper releases. States like Florida have a program to inform the public of the workmen's compensation program. Others do virtually nothing to tell the benefits available. They leave that aspect entirely to employers and insurance companies.[5]

Certainty.—If a worker needs rehabilitation it is not a foregone conclusion that he will receive all he requires. The discussion on adequacy and equity of rehabilitation suggests some factors that affect certainty, but certainty of rehabilitation care is affected especially by litigation. Litigation confuses the question of responsibility for rehabilitation costs. So long as no one knows who is to pay the expenses, it becomes costly from each party's viewpoint to pay the bills voluntarily. The likelihood is increased that no one pays and rehabilitation treatment is not undergone.

"Many experts feel that litigation constitutes one of the biggest barriers to a successful rehabilitation program in workmen's compensation." [8] Quotes like this are easy to find but documentation is difficult. We are not even sure of the extent of litigation let alone its effect on rehabilitation.[9]

Promptness.—Litigation can also affect the timing of rehabilitation. In the process of filing complaints, holding conferences, and conducting hearings, rehabilitation is usually neglected or ignored. Sometimes, months pass between the filing of a claim and a pretrial conference. If the controversy is extended, much more precious time passes before rehabilitation benefits materialize.[10]

Injured workers who receive early rehabilitation treatment because they are fortunate enough to be covered by policies with insurers conscious of the benefits have no complaints about promptness of care. But, as indicated, no one knows what portion of workers needing rehabilitation is served by these insurance companies. Those workers who are missed suffer serious delays in treatment, if ever they receive it. States that aid rehabilitation efforts use different periods for referring cases for review. In Missouri, all lost-time cases are reviewed immediately upon notification. In New York, disabled workers can receive compensation for 2 months before their need for rehabilitation is considered. In Minnesota, the lapsed time can be 6 months. Such delays violate the principle of early referral for effective treatment.

Economics of Medical Rehabilitation

Decisions about allocating resources are implicit when the supply is insufficient to the demand. In the model of a free market, those items costing too much relative to the benefits yielded are foregone. In the real world, economists seek to measure social costs and social benefits as a guide to public expenditures, although decisions to invest or spend do not necessarily follow their guidance.

Costs are the resources required to produce a good. Benefits are a measure of the satisfaction realized from the good. The guideline for efficient allocation of resources is that benefits yielded must at least equal the costs. If the costs exceed the benefits then resources should be allocated differently to maximize satisfaction.

No formal analysis has been conducted to test the efficiency of current allocation to medical rehabilitation in workmen's compensation, except for a few figures showing the costs of medical rehabilitation and the resultant savings to insurers. A New York insurer once claimed that by spending $1,111.50 in rehabilitation one year, pension costs to injured workers were cut by $8,439.96.[11] Another, in a study of the costs and savings in the care of spinal cord injury in 1965, found that while costs totalled about $2.5 million, the savings in medical and indemnity costs were about $9.7 million.[12] Such statistics often are attacked as conjectural. The critics argue that current ways of measuring savings lack credibility.

VOCATIONAL REHABILITATION

Definition

Vocational rehabilitation prepares the injured worker for a new occupation or for ways of continuing in his old one. Usually, vocational rehabilitation is assigned when medical treatment fails to restore the worker to the job he held when injured. The worker's injury may be so severe or his work requirements such that residual impairment prohibits effective performance. Workers with such impairment must be trained to surmount or by-pass the residual limitations. Many will enter new occupations. In practice, the more effective the medical rehabilitation, the less the need for vocational rehabilitation.

The definition above of vocational rehabilitation distinguishes it from medical rehabilitation more than it should. While the difference in kinds of treatment seems clear enough, retraining as opposed to medical care, the categories overlap. In the public vocational rehabilitation programs in each State, services include medical diagnosis and evaluation, surgery, psychological support, the fit-

ting of prostheses, and other health services along with education, vocational training, on-the-job training, and job placement.[13]

The two programs blend also on the record. Recordkeeping by workmen's compensation insurers does not separate claimants who receive medical rehabilitation from those who receive vocational rehabilitation, although some distinguish between medical rehabilitation and acute medical care. In contrast, records kept by workmen's compensation agencies usually separate vocational rehabilitation from other benefits.

The Delivery System

The relatively few injured workers who need vocational rehabilitation are served by several means. An employer or insurer may channel the worker to whatever sources he thinks will provide satisfactory service. Some workers are referred to the public vocational rehabilitation program where services may be financed by taxes, although insurers may reimburse the public agency. Other insurers direct workers into private facilities where vocational training is conducted by technical schools or on the job. For such services, insurers always pay the costs.

As with medical rehabilitation, some workmen's compensation agencies support vocational rehabilitation so that, if the insurer does not direct the worker into a program, the agency often will. Several jurisdictions select candidates either in conjunction with screening for medical rehabilitation or separately. Workers with serious injuries, permanent disabilities, or those who receive extended compensation payments are reviewed by the agency for referral to the State's public vocational rehabilitation agency or to the insurer.

Some workers obtain vocational rehabilitation through their own efforts. If no one refers them, they may go directly to the public vocational rehabilitation office. Since 1920, the Federal Government and the States have cooperated financially in supporting a vocational rehabilitation program, 80 percent Federal and 20 percent State, which can be utilized by anyone with a vocational handicap. Rehabilitation counselors, who usually determine a referral's acceptability, simply look for a vocational handicap without regard to the source and consider the possibilities of overcoming the handicap. If the candidate shows relatively good prospects, a plan is designed for his restoration. For those who cannot return to a paying job, the objective of vocational restoration may be to enable clients to care for themselves and to free other members of the family to earn wages.

The worker may be referred also by his physician, a friend, or a member of his family.

Once a worker is established in a vocational rehabilitation program, he is aided by whatever sources the counselors think best fit his needs. Generally, the sources are not owned and operated by the vocational rehabilitation agency but are private vendors or other public agencies. A worker may be sent to a private rehabilitation center or school or workshop such as those run by Goodwill Industries of America, or he may be enrolled in a public institution.

Vocational Rehabilitation by Insurance Companies

The description of insurance company services in medical rehabilitation, above, applies to vocational rehabilitation as well. The essential difference is that fewer workers are in need of special vocational rehabilitation because the majority who return to their jobs need only medical treatment.

Despite the lack of full data on vocational rehabilitation benefits provided through insurers, it is possible to estimate how their vocational rehabilitation services are financed and where they are procured (table 11.5).

Most jurisdictions arrange for taxpayers to finance much of the costs. In States such as Connecticut, Maryland, and Oregon, insurers pay for vocational rehabilitation even if the plans are managed through the State Division of Vocational Rehabilitation. (State rehabilitation agencies are also known by such titles as Office of Vocational Rehabilitation, Bureau of Vocational Rehabilitation or Rehabilitation Department. In this chapter Division of Vocational Rehabilitation is generally used or simply DVR.)

Either the charges for each case are billed to the insurer or paid through a fund established by taxing insurance premiums. These funds can be used by States as part of their 20 percent share in the matching grant arrangement with the Federal Government. In these States, the Federal Government shares the cost of vocational rehabilitation with insurers. Other States have no special financ-

Table 11.5.—WORKMEN'S COMPENSATION CLAIMANTS IN VOCATIONAL REHABILITATION PROGRAMS FINANCED BY GOVERNMENT, 1971

Jurisdiction	Percentage of vocational rehabilitation recipients
Alabama	No data.
Alaska	>75.
Arizona	50–75.
Arkansas	No data.
California	1–25.
Colorado	No data.
Connecticut	None.
Delaware	No data.
District of Columbia	>75.
Florida	15.
Georgia	No data.
Hawaii	>75.
Idaho	No response.
Illinois	>75.
Indiana	No data.
Iowa	>75.
Kansas	No response.
Kentucky	No data.
Louisiana	No response.
Maine	25–50.
Maryland	None.
Massachusetts	1–25.
Michigan	No data.
Minnesota	25–50.
Mississippi	No data.
Missouri	Do.
Montana	>75.
Nebraska	>75.
Nevada	>75.
New Hampshire	None.
New Jersey	>75.
New Mexico	No response.
New York	>75.
North Carolina	1–25.
North Dakota	1–25.
Ohio	No response.
Oklahoma	No data.
Oregon	None.
Pennsylvania	No data.
Puerto Rico	No response.
Rhode Island	Do.
South Carolina	>75.
South Dakota	No data.
Tennessee	Do.
Texas	No response.
Utah	No data.
Vermont	>75.
Virginia	No data.
Washington	>75.
West Virginia	>75.
Wisconsin	No data.
Wyoming	100.
Federal employees Compensation Act	>75.
Longshoremen's Act	>75.
Guam	>75.

Source: Workmen's Compensation Agency rehabilitation questionnaire, 1972.

ing arrangements for vocational rehabilitation of injured workers. Expenses for workers are handled no differently than those of other clients. Most of the costs are paid from the DVR budget. In instances where insurers have tried to pay vocational rehabilitation costs, they were informed there was no mechanism for reimbursements. (cf. Nebraska.)

A third group of States have financing arrangements where insurers and DVRs share the costs. The expenses for evaluation, diagnosis, counseling, and follow-up are usually paid by the DVR. The training costs are paid by the insurer.

There is little reason to suspect that taxes on premiums are higher in States where the DVR pays most of the costs, because the bulk of the financing (80 percent) is done by the Federal Government. The Federal Government cannot force a State to adjust its taxing procedures to make insurers pay indirectly.

Statistics from the Federal-State vocational rehabilitation program are frequently used to support a contention that too few injured workers receive vocational rehabilitation. For example, in 1969, only 1 percent of the rehabilitants in the national vocational rehabilitation program had been referred through workmen's compensation and only 1.4 percent reported that they depended on workmen's compensation as their primary source of support.[14]

Many insurers claim they finance vocational rehabilitation programs for workers not reflected in these statistics. The results of a study conducted in California during 1970, in part to test this claim, support the insurers' contention. Of 3,635 rehabilitation cases studied, where 1,395 were involved in training programs, only 530 utilized the services of the California DVR.

Apparently insurers have found ways of handling vocational rehabilitation more to their liking. They deal directly with institutions which offer training or they work directly with employers to establish on-the-job training. In this way the insurers control the vocational rehabilitation programs rather than permit counselors in the DVR to manage them. In some instances, insurers claim they have no choice but to design their own plan because the DVR will not accept some referrals from insurers (see below).

Vocational Rehabilitation Through Agencies

As in medical rehabilitation, insurance companies arrange for vocational rehabilitation both with and without participation by workmen's compensation agencies. In some States, the agency leaves the decision on vocational rehabilitation entirely to the insurers and claimants. Other agencies have screening procedures. California and Minnesota

aim primarily at the vocational needs of injured workers.

California's program.—Section 139.5 of the California Labor Code authorizes a voluntary arrangement for employers and insurers to sponsor rehabilitation. A rehabilitation unit within the Division of Industrial Accidents encourages parties in workmen's compensation cases to engage in vocational plans with the State Department of Rehabilitation. Although employers or insurers must initiate the action, the rehabilitation unit will provide advice on plans. Should the worker object to vocational rehabilitation, the unit will encourage his participation.

Neither party is obliged to proceed, however. Should either refuse, the action stops. Presumably, a refusal comes with full knowledge of the benefits and costs of vocational rehabilitation. The unit's primary function is to provide this essential information.

The Department of Rehabilitation in California also has a Referral Unit to encourage vocational rehabilitation of injured workers. It, too, is primarily an information device. The unit screens physicians' first reports of work injury and permanent disability rating forms to find candidates for vocational rehabilitation. These are told of the rehabilitation department's services. If interested, the worker is told where to reach a rehabilitation counselor so that a program can be set in motion promptly. In fiscal 1971, this unit referred 4 percent of the clients with reported job-incurred disability to the Department of Rehabilitation.[15]

Minnesota's program.—In Minnesota, the workmen's compensation agency advises insurers to give it notice whenever a claimant is thought unable to return to the job held when injured or whenever the time lost totals 26 weeks. Disabilities reported are assigned to a DVR counselor who sends a letter to each worker asking whether he is interested in vocational rehabilitation. If interested, he is referred to the Director of DVR for evaluation and programming. It is the worker's responsibility to approach the DVR.

Use of the DVR.—One of the conditions a State is supposed to meet to participate in the Federal-State sharing arrangement for funding the public vocational rehablitation program is enactment of a written agreement for cooperation between its workmen's compensation agency and DVR.[16] Although this provision apparently is loosely enforced, most States have complied.[17] In some States the agreement has grown into a formal arrangement such as those described for California and Minnesota. New York's R program, described above, is another example. In addition to screening referrals to medical rehabilitation, the R form is also used to find referrals to the DVR.

New York, North Carolina, Alaska, and Georgia are among other States which have a procedure to select injured workers for referral to DVR.

A 1971 estimate of the percentages of workmen's compensation claimants receiving vocational rehabilitation benefits (table 11.6) finds that most frequently less than 1 percent of a jurisdictions' claimants receive vocational rehabilitation. A number of jurisdictions, however, indicate that 1 to 3 percent of their injured workers receive vocational rehabilitation. The extent to which the State DVRs are engaged in vocational rehabilitation programs for these workers is not known, although all States except Florida, Nebraska, New Hampshire, and North Dakota indicate that their DVRs supervise at least some workmen's compensation cases.

A crude comparison in table 11.6 matches available figures on workmen's compensation referrals by the State agencies and the numbers of DVR rehabilitants claiming workmen's compensation as their main source of support. Since the data include only rehabilitants, those successfully completing a DVR plan, workmen's compensation utilization of the public program can be higher than indicated. Also, a compensation claimant does not have to be referred by the agency, employer, or insurer to use DVR services. Workmen's compensation utilization of DVR, estimated by source of referral or source of support, is surely too low. In Minnesota, 9.1 percent of DVR clients in 1970 were workmen's compensation claimants, although only 1 percent of rehabilitants were referred by workmen's compensation and 2.5 percent claimed workmen's compensation as their main source of support, according to unpublished data for 1968 from the Rehabilitation Services Administration.[17]

Observers of the relationships between workmen's compensation and the DVR in some States have sometimes noted a surprising lack of cooperation. Workmen's compensation seems to fail to use the DVR or the DVR seems uninterested in injured workers. According to a 1964 study, the

Table 11.6.—PERCENTAGE AND NUMBER OF WORKMEN'S COMPENSATION CLAIMANTS IN VOCATIONAL REHABILITATION

Workmen's compensation jurisdiction	Percent of claimants receiving vocational rehabilitation [3]	Numbers receiving vocational rehabilitation [1]	Number of referrals to Federal-State vocational rehabilitation program by workmen's compensation	
			Estimates based on referrals by workmen's compensation	Estimates based on reports of workmen's compensation as main source of support
	(1)	(2)	(3)	(4)
Alaska	1 to 3	25–76	[2]	[2]
Arizona	−1	[2]	[2]	[2]
Connecticut	1 to 3	214–641	1	20
Florida	1 to 3	323–970	143	167
Hawaii	−1	88	6	21
Iowa	3 to 5	267–445	9	44
Kentucky	1 to 3	[2]	[2]	[2]
Maine	1 to 3	60–179	4	10
Maryland	7 to 10	1,126–1,608	[2]	[2]
Montana	10+	[2]	[2]	[2]
Nebraska	−1	47	[2]	[2]
New Hampshire	1 to 3	[2]	[2]	[2]
New Jersey	5 to 7	2,709–3,793	519	213
New York	1 to 3	1,160–3,480	347	412
North Carolina	−1	173	[2]	[2]
North Dakota	−1	29	[2]	[2]
Oregon	−1	227	[2]	[2]
Puerto Rico	3 to 5	[2]	[2]	[2]
Rhode Island	3 to 5	164–273	[2]	[2]
South Carolina	3 to 5	216–360	13	30
Virginia	3 to 5	407–678	72	45
Washington	−1	[2]	97	218
West Virginia	−1	127	[2]	[2]
Wisconsin	7 to 10	[2]	51	128
Wyoming	−1	15	3	15
Federal Employees Compensation Act.	5 to 7	[2]	[2]	[2]
Longshoremen's Act	−1	[2]	[2]	[2]
Guam			[2]	[2]

[1] Estimated by multiplying data in column (1) by reported claims for either year 1968, 1969, or 1970.

[2] No data.

[3] −1 Indicates less than 1 percent.

Sources: Workmen's Compensation Agency questionnaire, 1972; NCIC, 1971; RSA-HEW, 1969.

likelihood of referrals from workmen's compensation being accepted into the rehabilitation program was found to be among the lowest of referrals sources checked.[18] In rating by acceptance for each referral source (table 11.7), workmen's compensation ranks next to last.

Reasons for this relatively poor showing are not clear. One suggestion is that often a State's DVR will concentrate on particular types of disabilities. If these do not happen to be the kinds found in workmen's compensation, then referrals from workmen's compensation find acceptance difficult. During recent years, the Federal Government has encouraged States, through attractive funding ar-

Table 11.7.—RATE OF ACCEPTANCE INTO NATIONAL PUBLIC VOCATIONAL REHABILITATION PROGRAM BY SOURCE OF REFERRAL, 1964

Source of referral [1 2]	Referred Number	Accepted	
		Number	Percent
Artificial appliance companies	1,007	835	83
Physicians	8,399	6,218	74
Hospitals	11,222	7,588	68
Educational institutions	9,233	5,957	65
Self-Referred	7,509	4,590	61
Another individual	6,559	3,938	60
Health institutions other than hospitals	4,830	2,806	58
Other Sources	4,113	2,137	52
U.S. employment service	5,337	2,696	51
Welfare agencies	13,275	5,903	44
Unknown	154	62	40
Workmen's compensation	2,821	936	33
OASDHI	10,230	1,780	17

[1] Ranked in descending order.

[2] By telescoped RSA code.

Source: Dishart, October 1964.

rangements, to expand services to the mentally retarded, emotionally ill, and culturally disadvantaged. These preferences seldom favor disabled workers.

Evaluation

Adequacy.—A 1961 California study determined that only 0.6 percent of the industrially injured in that State need vocational rehabilitation services.[19] Even with this surprising figure, the study found that services were inadequate. In 1959–60, 1,026 injured California workers required vocational rehabilitation but only 313 were cared for. Similarly, a New York City area study found that 16 to 33 percent of seriously injured workers could benefit from vocational rehabilitation but that only 10 percent received the services.[20]

A contrary conclusion is suggested by an updating and expansion of California's 0.6 percent and a comparison with replies to our 1972 questionnaire. The 0.6 percent is applied to current work-loss data in several States (table 11.8). These figures are rather crude. The actual figures on the need for vocational rehabilitation are probably higher than these estimates.[3] Even with this caution, the figures on need in several jurisdictions are in reasonable range of the numbers estimated (table 11.6)) to receive vocational rehabilitation.

The discussion above on the adequacy of medical rehabilitation suggests reason why those receiving medical rehabilitation may be less than the number

Table 11.8.—ESTIMATES[1] OF NEED FOR VOCATIONAL REHABILITATION BY WORKMEN'S COMPENSATION CLAIMANTS, 1972

Workmen's compensation jurisdiction[2]	Number of claimants needing vocational rehabilitation	
	Derived by 0.62 percent × total number of work-loss cases	Derived by 0.79 percent × total number of work-loss cases
Alabama	98	125
Alaska	20	26
Arkansas	105	133
California	1,301	1,658
Connecticut	174	221
Delaware	18	23
District of Columbia	36	46
Florida	357	455
Georgia	151	193
Hawaii	66	84
Idaho	50	63
Illinois	531	676
Iowa	98	125
Louisiana	183	234
Maine	66	84
Maryland	131	166
Massachusetts	422	538
Mississippi	74	94
Missouri	114	145
Nebraska	51	66
Nevada	51	65
New Jersey	599	763
New Mexico	39	50
New York	1,282	1,636
North Carolina	191	243
North Dakota	28	35
Oregon	185	235
Rhode Island	44	57
South Carolina	80	101
South Dakota	12	15
Texas	654	834
Utah	25	31
Vermont	23	29
Virginia	150	191
West Virginia	140	179
Wyoming	12	15
Guam	2	2

[1] Based on California demand study and New York State experience.
[2] Information not available for jurisdictions omitted.

Sources: NCIC, 1971; California State Department of Education, 1961; New York Workmen's Compensation Board, 1970.

in need. The same reasoning applies to the inadequacy of vocational rehabilitation. The tentative conclusion is that vocational rehabilitation in workmen's compensation is inadequate.

Promptness.—A recent review of Minnesota's DVR handling of workmen's compensation cases found that, for 94 percent of the cases, at least 4 months passed between the date of the worker's accident and the date of referral to the DVR. At least a year passed before referral was made for 39 percent. For 13 percent, the wait was more than 2 years.[17]

Referrals for vocational rehabilitation do not guarantee an immediate course of restoration. Although referral may be prompt, months may pass before services begin. In the Federal-State program, the average time between referral and remedial action in 1969 was 4 months. Some States reported average lags as high as 6 months and as low as 1 month.[14]

Delays can result from instituional schedules and the timing of referrals. If a claimant is referred after a training course has begun or well in advance of the beginning of such a course, he must wait for a course to begin. A delay will result also if a course about to begin is overlooked.

Sometimes a counselor with a heavy caseload cannot give the claimant immediate attention. Counselors are responsible for arranging plans, enrolling clients in programs, seeing that clients attend courses, and helping clients find jobs when vocational rehabilitation is finished.

A California study in 1970 found that the time between injury and the beginning of vocational rehabilitation program, whether by an insurer or DVR, was at least 2 years for 40.5 percent of the 3,635 workers in training. The wait for 18.3 percent was at least 3 years. A few, 2.7 percent, waited 5 years.[15]

Such data suggest that, in workmen's compensation insurance, vocational rehabilitation is the last effort to restore an injured worker to a job. Apparently, the hope is that medical treatment alone will be sufficient. With this policy, enough time must pass before the need for vocational rehabilitation becomes known or before a disability has stabilized enough for vocational rehabilitation to begin. Since, however, California broadly defines vocational rehabilitation to include aspects of medical rehabilitation, which most experts say should begin early, all of the delay cannot be excused on such grounds.

Workers sometimes hesitate to begin vocational rehabilitation, generally because they do not wish to change occupations. Many are falsely optimistic about returning to their old jobs. Only when they confront the reality do they appreciate that if they are to work again, they must learn new skills. Others, after a trial period, having found they could not perform satisfactorily at their familiar duties, begin delayed vocational rehabilitation.

Economics of Vocational Rehabilitation

A number of attempts have been made to calculate benefits and costs of vocational rehabilitation to see if society is efficiently allocating resources to these services.[14 21-26] Where the benefits exceed the costs, the implication is that resources allocated to vocational rehabilitation were well spent and that spending should continue at least equal to the past rate or even faster in the future. This implication is not entirely correct. Because studies must rely on previously generated data, the current situation may not be represented. Furthermore, all analyses use average costs and average benefits, whereas decisions on expanding a program depend on marginal factors.

The costs and the benefits measured depend on the approach. The decision to spend on rehabilitation can be viewed from society's position or from the positions of private individuals, taxpayers, employers, or insurance carriers. Each will see different costs and different benefits. Since many of the costs are publicly financed, private individuals will not include some costs of the program in their calculations. On the other hand, private individuals, notably the worker and his family, make sacrifices that are seldom considered as a cost of rehabilitation.

Analyses generally calculate the monetary costs, including the evaluation and diagnosis of a disability, counseling and guidance, costs of medical care, training or education, the expense of equipment and tools, administrative costs, placement costs, and followup. Some analyses have included the earnings a worker had to forego to remain in a rehabilitation program and the additional living costs such as transportation and lodging incurred during rehabilitation.

The benefits usually are calculated as the effect that rehabilitation is presumed to have on the disabled person's earnings. Generally, investigators necessarily use earnings figures recorded at acceptance into a vocational rehabilitation program and the figures recorded at closure. This difference is presumed to be the result of vocational rehabilitation. The weaknesses of this approach are thoroughly discussed by Conley.[21] Some important benefits from rehabilitation cannot be measured in dollars: no account is made of the pleasure of recovering self-sufficiency which accrues to the restored person and family.

As the cost-benefit studies cited use different data sources and estimating techniques, it is not surprising that they produce different results. Even so, benefits exceed costs in all but one calculation. Dr. Ronald Conley's investigations of the national program find benefit-cost ratios of 3.30 to 1 and 17 to 1.[21 22] Other studies yield ratios as low as 7.56 to 1 and high as 70 to 1.[23 24 25]

Only an Ontario study deals with the benefits and costs of rehabilitation specific to workmen's compensation claimants. This study computes the net benefits (benefits minus costs) of rehabilitation to workers in the Ontario workmen's compensation program. After disabled workers are grouped in different categories by disability type, net benefits are computed for each group. The results show that rehabilitation of the average workmen's compensation case in Ontario in 1967–68 produced net benefits of $15,200 over the expected working life.[26] The only workers whose costs outweighed benefits were in the category suffering 10 to 30 percent permanent disability to the eyes. The average for that group was a net benefit of minus $2,200.

According to the benefit-cost studies, the allocation of resources to vocational rehabilitation is efficient both for society and the disabled individual. Why then are some workers hesitant to engage in vocational rehabilitation? Perhaps workers are not aware of the gains to be realized through vocational rehabilitation or perhaps important private costs have been omitted from the calculations. Private benefits may be over-estimated. Another possibility is that studies based on averages can not match the particular costs and benefits of individual workers.

Maintenance Benefits

Whatever the reason, both workmen's compensation and the Federal-State vocational rehabilitation program have provided monetary incentives to encourage vocational rehabilitation, such as maintenance benefits for workers in rehabilitation plans.

All State DVR's arrange for small weekly allotments to be paid clients in financial need. Indiana pays as much as $20 or $30 a week, depending on the severity of the injury. New Jersey pays about the same amount. Counselors rely on an informal

financial check to determine whether a client needs the aid.

Some jurisdictions rely on DVR's to provide maintenance allowances. Others arrange for maintenance within the workmen's compensation system (table 11.9).

Table 11.9.—MAINTENANCE BENEFITS FOR WORKMEN'S COMPENSATION CLAIMANTS IN VOCATIONAL REHABILITATION

Workmen's compensation jurisdiction [1]	Does w.c. order additional compensation paid to claimant in VR programs? [2]	Maintenance maximum indicated in workmen's compensation law
Alaska	Yes	$100 per month to $5,000, then 50 percent TT award.
Arizona	Yes	
Arkansas	Yes	40 weeks.
California	Yes	$52.50 per week.
Connecticut	Yes	$40 per week.
District of Columbia	Yes	
Hawaii	Yes	$35 per week.
Iowa	Yes	$20 per week for 13 weeks.[3]
Kentucky	Yes	50 percent TT award for 36 weeks.[4]
Maine	Yes	
Maryland	Yes	
Massachusetts	Yes	
Minnesota	Yes	104 weeks.
Mississippi	Yes	
Missouri	Yes	$10 per week for 20 weeks.[5]
Montana	Yes	
Nebraska	Yes	
New Hampshire	Yes	
New York	Yes	
North Dakota	Yes	72 weeks.
Ohio	Yes	
Oregon	Yes	
Puerto Rico	Yes	$45 per week for 26 weeks.
Utah	Yes	Life-time pension if determined non-rehabilitative.
Virginia	Yes	
Washington	Yes	
West Virginia	Yes	
Wisconsin	Yes	$73 per week.
Wyoming	Yes	$10 per week for 72 weeks.[6]
Federal employees	Yes	$100 per month.
Longshoremen	Yes	$25 per week.
Guam	Yes	$10 per week.

[1] Information not available for Alabama, Colorado, Delaware, Georgia, Idaho, Indiana, Kansas, Louisiana, and New Jersey.

[2] Additional compensation not ordered in Florida, Illinois, Michigan, Nevada, New Mexico, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, and Vermont.

[3] Additional 13 weeks possible in selected cases.

[4] Additional 36 weeks possible in selected cases.

[5] Additional 20 weeks possible in selected cases.

[6] $15 per week possible in selected cases.

Sources: Workmen's Compensation Agency rehabilitation questionnaire, 1972 Chamber of Commerce, 1971.

The amounts included in maintenance allowances are not certain but some laws indicate maximum allowances (table 11.9). In four jurisdictions, Florida, Maryland, Michigan, and the Federal Employees Compensation Act, compensation payments can be reduced if a claimant refuses to engage in an approved rehabilitation plan, even as in medical rehabilitation, discussed earlier.

Although there are no hard data on the effect of maintenance provisions or the threat of reducing compensation benefits because of refusal to cooperate in rehabilitation, the consensus appears to be that both increase worker willingness to enter such programs.

Reemployment of Disabled Workers

Despite efforts to determine how difficult it is for the disabled to find jobs or to return to old jobs, not much is known yet about the obstacles to reemployment. A study of seriously disabled workers in the New York metropolitan area found that 86 percent of those surveyed were employed, although few had experienced formal rehabilitation.[20] Another study found that 40 percent of workmen's compensation cases, surveyed 13 to 21 months after a settlement of their claims, were without work.[27] A third study, a follow-up of Michigan rehabilitants of DVR 2 years after closure, found 87 percent of workmen's compensation cases employed.[24] Since the usual employment rates for the labor force range around 94 to 96 percent, these data suggest the degree of difficulty for disabled persons seeking reemployment.

Most attempts to explain the difficulties of reemployment for the disabled have been directed at employers' attitudes. In the nature of such research, attitudes are found to be confused and sometimes contradictory. During the 1971 IAIABC meetings in Boston, Burke L. Dailey, Director of Administrative Services in Michigan's Department of Rehabilitation, claimed the most prevalent reason for employers' not hiring the handicapped is the additional workmen's compensation costs these employees incur.[28] Although comments from other authorities agree, a recent survey reported by C. A. Williams suggests employment problems for the disabled are not that simple.[17] Of 98 Minnesota employers surveyed, 52 percent considered workmen's compensation an extra cost when hiring a person with a back ailment. Only 33.7 percent considered compensation an extra cost when hiring a person with epilepsy.

The results of a 1959 survey make the costs of workmen's compensation seem even less important. When asked if workmen's compensation costs prevent them from hiring a disabled person, 32 percent

of the employers answered yes. Late in the interview, when asked if changes of any kind in workmen's compensation would increase the probability of their hiring the disabled, most of this 32 percent answered no. If workmen's compensation costs are a true barrier against the hiring of the disabled, a change in workmen's compensation would presumably increase their employment chances.

Those analyzing the survey results conclude that probably less than 10 percent of the employers had given any serious consideration to statutory disability costs when deciding whether to hire a disabled person.[29] Perhaps employers do not care to admit, even to themselves, why they do not hire handicapped people.

On the other hand, some disabled probably hinder their own reemployment prospects. They refuse to take a cut in wages or work on a part-time basis. Or they do not wish to jeopardize their workmen's compensation benefits. Also, the disincentives for workers to take vocational rehabilitation apply here. If workers are unwilling to learn new occupations or otherwise prepare themselves for reemployment, they hurt their own chances.

Subsequent-injury funds.[30]—Workmen's compensation has tried to relieve reemployment obstacles for disabled workers by establishing subsequent-injury funds (second-injury funds) in most jurisdictions. A second-injury fund insures that an employer who hires a handicapped worker will not, in the event such a worker suffers a subsequent injury on the job, be responsible for an impairment or disability other than that linked to current employment. The employer pays only the benefits due for the last injury. At the same time, the employee is protected by the fund which pays the difference between what he actually receives from the employer and what he would have received for the full degree of his impairment or disability.

By removing an employer's fear of excessive compensation charges, second-injury funds are intended to enhance employment opportunities for disabled workers. By paying the worker full benefits, they free him from the humiliation of seeking charity.

Subsequent-injury funds or equivalent arrangements have been established in 46 States, the District of Columbia, Puerto Rico, and under the Longshoremen's Act. The only States still lacking such legislation are Georgia, Louisiana, Nevada, and Virginia.

The subsequent-injury principle requires an allocation of the charges to the employer or insurer, on the one hand, and the special fund, on the other. The most common rule, as noted, is that the employer or his insurer pays for the disability caused by the second-injury and the special fund makes up the difference. There are, however, some exceptions to this policy, both from State to State and for particular types of cases within any one State. In Massachusetts, the employer is charged for one-half the amount due for permanent disability or death and for the full amount due for scheduled injuries; the special fund pays the other 50 percent due for the permanent disability or death.

New York divides the costs on a benefit-week basis rather than by a numerical proportion related to the size of the benefit. Whatever award is made in a special fund case results in the employer being reimbursed from the fund for all cash benefits and medical payments after the first 104 weeks (260 for dust diseases). This rule, like that of Massachusetts, has the advantage of eliminating controversy over the proportionate sharing in individual cases and of expediting the other determinations needed to assure that the employee or his beneficiaries receive payments.

The New York plan appears to be gaining in favor because of increasing awarness of the difficulty, if not the impossibility in certain cases, of determining the proportion of disability caused by the preexisting impairment.

Coverage provisions of the funds.—Among the several important features of subsequent-injury-fund laws, none is more significant than the coverage provision. As used here, "broad coverage" refers strictly to coverage of prior impairments without regard to their type or cause. Some of the funds offering broad coverage in this sense have serious limitations of their own; e.g., they may require that the combination of the subsequent injury and the prior permanent condition must cause permanent and total disability, or that the previous impairment must have been registered with the State's workmen's compensation agency, or that there is no provision for reimbursement of medical losses. These limitations are discussed below. The laws of 22 jurisdictions cover all types of pre-existing permanent impairments, regard-

less of type or cause: these are classed as having broad coverage. These jurisdictions are: Alaska, Arizona, California, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Idaho, Maine, Maryland, Minnesota, Missouri, Nebraska, New York, North Dakota, Oregon, Puerto Rico, Utah, Washington, West Virginia, and Wisconsin.

Many of the laws, on the other hand, limit coverage of a pre-existing disability to loss or loss of use of a hand, arm, foot, leg, or eye. Others extend coverage to certain additional specified impairments, but not to all.

In Massachusetts, North Carolina, and South Carolina, the basic subsequent-injury fund is limited to cases involving the loss of a member or of an eye but broader covererage is provided for disabled veterans.

If a law covers only the "loss, or the loss of use, of a hand, arm, foot, leg, or eye," it will fail to protect the majority of handicapped workers or their employers. Only a small percentage of all permanent disabilities consist of amputations or serious eye impairments.

The current trend toward broad coverage for subsequent-injury funds reflects growing recognition of the importance of encouraging employment of handicapped workers. If the laws are to cover not only traumatic injuries caused by accident but also occupational disease, they must be unrestricted as to the type or cause of preexisting disability.

In most States having narrow coverage for previous disability, coverage of the subsequent injury also is restricted, usually to the loss of another member or eye. A few of the States which substantially limit coverage of prior disability to amputations and sight losses cover any type of subsequent disability.

Most States limit their subsequent-injury fund provisions to cases in which the covered first and second impairments have a specified combined effect. About 30 States limit the application to the fund to injuries which in combination produce permanent total disability. In some cases a particular type of injury or combination of injuries, eyes, are presumed to constitute permanent total such as the loss of two arms, hands, legs, feet, or about half of the States having so-called broad disability. This sort of limitation, found even in coverage provisions, greatly reduces the effectiveness of the subsequent injury fund law. It is estimated that less than one-tenth of 1 percent of all occupational accidents result in permanent total disability.

The other States with subsequent-injury laws are divided between those which in various ways modify the requirement of permanent total disability as the combined effect (California, Ohio, and Wisconsin) and those which adopt, as a substitute, a rule that the degree of impairment caused by both the first and second injury must be greater than the impairment which would have resulted from the second injury considered by itself, namely Alaska, Connecticut, Florida, Kentucky, Maryland, Minnesota, Missouri, Nebraska, New Mexico, New York, North Dakota, Oklahoma, and Utah.

Methods of financing the funds.—Most States provide that the fund shall be maintained by an assessment or tax upon employers or insurers. Two States (California and Pennsylvania) finance their funds entirely with State appropriations. Two others (Kansas and Wyoming) divide the cost between employers and the State.

Some States place the support of their funds upon employers alone with what might be called fixed amount assessments. To illustrate, they finance their funds entirely or in part by assessments against employers of accidentally-killed workers with no dependent survivors. In some instances they combine this method with employer payments in certain permanent partial disability cases or with annual assessments against insurance carriers. A few States, on the other hand, finance the special funds either entirely or in part by requiring employer payments in all death cases. Generally, the amount to be paid into the fund in no-dependency death cases is a flat sum ranging from $100 in Iowa to $17,640 in Texas. On the other hand, Wisconsin relies entirely on a flat assessment of $1,500 in each case of loss or total impairment of a hand, arm, foot, leg, or eye.

Another plan of employer-financing assesses a percentage of the total compensation awards paid during the preceding year. A variation of this is an assessment measured as a percentage of premiums paid to insurance companies or the premiums that hypothetically would have been required of self-insurers. This method appears to be gaining approval.

Table 11. 10.—BALANCE AND ACTIVITY OF 2D-INJURY FUNDS

	Cash balance of fund	Activity during last fiscal year				
		2d-injury benefits paid from fund	Employer/carrier payment into fund	Other payments into fund	Number of claimants receiving benefits	Number of new claims filed
Alabama	$172,447	$8,242	$13,500	$7,320	3	1
Alaska	149,613	69,744	134,795	11,223	63	25
Arizona	29,599	346,523	1,037,188	263,248	605	217
Arkansas	56,425	6,799	3,000	----	4	1
California	(1)	1,636,207	0	(1)	256	462
Colorado	(2)	(2)	----	----	----	----
Connecticut [3]	(2)	739,402	589,538	(2)	(4)	(4)
Delaware	67,634	16,050	49,227	----	11	6
District of Columbia	----	----	----	----	----	----
Florida	1,342,483	1,516,092	1,156,410	28,142	366	453
Georgia	(5)	----	----	----	----	----
Hawaii	36,411	371,417	257,547	----	(6)	(6)
Idaho	6,650	5,828	9,212	----	6	0
Illinois	181,962	135,083	151,909	0	96	9
Indiana	126,519	82,868	0	0	[7] 50	(4)
Iowa	56,559	1,462	0	3,504	2	2
Kansas	0	101,274	7,500	(8)	20–25	----
Kentucky	567,627	8,135,561	8,824,148	0	1,204	----
Louisiana	(5)	----	----	----	----	----
Maine	36,735	0	----	----	0	0
Maryland	820,000	159,376	0	----	(4)	47
Massachusetts [9]	120,969	2,555	12,625	0	(4)	5
Michigan	3,335,443	2,683,124	4,270,267	96,725	379	78
Minnesota	97,976	552,298	317,731	537	(2)	(2)
Mississippi	29,766	8,662	5,990	0	5	0
Missouri	100,000	429,646	300,000	250,000	196	----
Montana	5,128	4,631	2,000	1,552	0	0
Nebraska	29,627	8,097	17,500	0	9	0
Nevada	(5)	----	----	----	----	----
New Hampshire	70,582	0	0	0	0	0
New Jersey	1,187,438	2,803,899	2,732,503	41,247	1,198	74
New Mexico	(2)	----	----	----	----	----
New York	6,370,642	8,281,590	8,276,525	342,351	5,463	1,048
North Carolina	71,238	18,553	1,575	14,537	7	2
North Dakota	(2)	----	----	----	----	----
Ohio [10]	----	----	----	----	----	----
Oklahoma	112,245	195,181	216,480	216,480	(4)	(4)
Oregon [11]	----	----	----	----	----	----
Pennsylvania	----	24,215	(12)	----	13	1
Puerto Rico	----	----	----	----	----	----
Rhode Island	392,600	353,387	426,833	----	192	5
South Carolina	122	1,342	0	0	1	0
South Dakota	(2)	----	----	----	----	----
Tennessee	155,391	104,991	72,440	0	[7] 17	19
Texas	45,268	35,288	36,300	----	7	4
Utah	4,300	53,129	76,186	25,969	82	10
Vermont [13]	25,517	----	----	----	----	----
Virginia	(5)	----	----	----	----	----
Virgin Islands	----	----	----	----	----	----
Washington	----	[14] 1,554,074	----	----	(4)	40
West Virginia	6,000,000	3,763,037	2,052,462	0	(4)	105
Wisconsin	924,345	27,871	86,863	----	16	5
Wyoming	102,822	0	10,074	----	0	0

[1] California: Fund is supported by a State appropriation and unexpended balances revert to general fund at end of fiscal year.

[2] Not reported.

[3] Connecticut: Fund covers cost of living payments, concurrent employment, waiver, no insurance, and previous disability cases.

[4] No data.

[5] No fund.

[6] Hawaii: Fund is labeled a special compensation fund and is not exclusively used for 2d injuries.

[7] Approximate.

[8] Kansas: General assessment.

[9] Massachusetts: A special fund is provided for veterans.

[10] Ohio: State collects payments for 2d-injury purposes, which then go into general fund.

[11] Oregon: Law was amended in 1971 to combine two 2d injury funds and change requirements. No pertinent statistics available at present.

[12] Pennsylvania: Fund maintained by State appropriation.

[13] Vermont: 2d-injury applicable in rare cases only.

[14] Washington: Amount transferred from 2d-injury fund.

Four States and Puerto Rico support the fund by allocations from the State workmen's compensation insurance fund, ordinarily financed by premiums paid by covered employers. The earmarking of monies for special funds in these States, all of which have exclusive insurance funds, may be either periodic or "as needed".

The methods of financing which appear most acceptable are: annual assessments against employers or their insurers; State appropriations; or allocations from the State insurance fund, a method which is appropriate only for exclusive State insurance funds. Under any system, the objective is to keep the income geared to actual needs. The New York system of pro-rating annual assessments against insurers on the basis of actual expenditures is well calculated to keep income and outgo in balance.

Use of subsequent-injury funds.—The activity of the State subsequent-injury funds in table 11.10 shows the cash balance, benefits paid, payments into the fund, number of claimants receiving benefits, and new claims filed. Since the amount of money available depends in large measure on the method of financing, as discussed earlier, the choice of financing method has a significant effect on employment of the handicapped.

Inasmuch as less than 1 percent of all job-connected injuries result in death, comparatively little income accrues to subsequent-injury funds supported solely by payments for occupational deaths. These inadequately financed funds are used sparingly, either in the 3 broad coverage jurisdictions or in the 12 narrow coverage States.

The reason is readily apparent. Where the financial basis for the fund is actuarially unsound, as is likely where no-dependency death payments are the sole source of support, and the coverage is broad, the administrators of the fund, seeking to prevent the fund from insolvency, will tend to discourage claims and will give the fund little of the publicity needed for encouraging employment of the handicapped.

Conclusions.—The qualifications and limitations of the subsequent-injury fund provisions in most States have materially reduced their effectiveness. They have been much too restricted in their coverage, as in the majority of States they apply to cases where the prior disability was the loss of a member or of an eye. Even where coverage of prior disabilities is broad, the fund provisions of many States are inoperative unless the combined effect of the prior and the subsequent disabilities is permanent total disability. The provisions rarely are applicable, inasmuch as few work injuries cause the loss of a member and only about one-tenth of 1 percent of all injuries result in permanent total disability.

Still the role of these special funds, while limited, is essential. Where they are not used, where their coverage is too narrow or their financing is inadequate, either the employee does not get compensated as liberally as may be considered equitable or his employer may have to pay more than he should.

In contrast, where there is a special fund providing broad coverage for second-injuries, the employee is more likely to be fully compensated and the cost is not borne entirely by his present employer. The effect is to remove some barriers to employment of the handicapped. Even so, much depends upon concurrent financing which meets the cost of the fund in a manner that is both equitable and adequate.

Furthermore, to be fully effective, the nature and purpose of the funds must be carried to employers by constant and pervasive information methods.

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