Report to the Colorado General Assembly:

OCCUPATIONAL DISEASE DISABILITY COVERAGE

COLORADO LEGISLATIVE COUNCIL

RESEARCH PUBLICATION NO. 38

September 1960

LEGISLATIVE COUNCIL

OF THE

COLORADO GENERAL ASSEMBLY

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The Legislative Council, which is composed of five Senators, six Representatives, and the presiding officers of the two houses, serves as a continuing research agency for the legislature through the maintenance of a trained staff. Between sessions, research activities are concentrated on the study of relatively broad problems formally proposed by legislators, and the publication and distribution of factual reports to aid in their solution.

During the sessions, the emphasis is on supplying legislators, on individual request, with personal memoranda, providing them with information needed to handle their own legislative problems. Reports and memoranda both give pertinent data in the form of facts, figures, arguments, and alternatives.

LEGISLATIVE COUNCIL

REPORT TO THE

COLORADO GENERAL ASSEMBLY

OCCUPATIONAL DISEASE

DISABILITY COVERAGE

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COLORADO GENERAL ASSEMBLY

LEGISLATIVE COUNCIL

ROOM 343, STATE CAPITOL
DENVER 2, COLORADO
KEYSTONE 4-1171 — EXTENSION 287

September 23, 1960

To Members of the Forty-second Colorado General Assembly:

As directed by the terms of House Joint Resolution No. 22 (1959), the Legislative Council is submitting herewith its report and recommendations on occupational disease coverage in Colorado.

The committee appointed by the Legislative Council to complete this study submitted its report September 22, 1960, at which time the report was adopted by the Legislative Council for transmission to the General Assembly.

Respectfully submitted,

Charles Conklin

Charles Conklin
Chairman

COLORADO GENERAL ASSEMBLY

LEGISLATIVE COUNCIL

ROOM 348, STATE CAPITOL
DENVER 2, COLORADO
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LETTER OF TRANSMITTAL

September 22, 1960

The Honorable Charles Conklin, Chairman
Colorado Legislative Council
State Capitol
Denver 2, Colorado

Dear Mr. Chairman:

Transmitted herewith is the report of the Legislative Council Committee on Occupational Diseases, appointed pursuant to House Joint Resolution No. 22 (1959). This report covers the committee's study of the various aspects of occupational disease coverage and its recommendations thereon. Included are the following subjects: comprehensive and schedule coverage, medical benefit limitations, partial disability coverage, selection and use of medical panels, rehabilitation programs, subsequent injury fund coverage, and time limits relating to claim filing.

Respectfully submitted,

/s/ Senator Charles E. Bennett
Chairman
Committee on Occupational Diseases

FOREWORD

This study was made under the provisions of H.J.R. 22, passed at the first session of the Forty-second General Assembly. This resolution directed the Colorado Legislative Council to appoint a sub-committee to make a thorough study of state laws governing occupational diseases and hazards and of the adequacy of occupational disease coverage provided by these statutes. Further, the resolution directed the committee to report its findings and recommendations, which may be in the form of proposed legislation, no later than the convening of the Forty-third General Assembly in 1961.

The Legislative Council committee appointed to make this study included: Senator Charles E. Bennett, Denver, Chairman; Representative Betty Kirk West, Pueblo, Vice Chairman; Representative Robert Allen, Denver; Representative Rex Howell, Grand Junction; Representative Carl Magnuson, Eaton; Senator L. P. Strain, La Junta; and Senator J. William Wells, Brighton. Harry O. Lawson, Legislative Council senior research analyst, had the primary responsibility for the staff work on this study.

Nine meetings were held by the Legislative Council Committee on Occupational Diseases during the course of its study. Four of these meetings were public hearings at which the committee heard the views and recommendations of representatives of labor, industry, and private insurance carriers; state officials; and medical and legal experts. In addition, the committee studied occupational disease coverage and experience in other states; analyzed occupational disease claims filed with the Industrial Commission; explored special problems relating to silicosis, other dust diseases, radiation hazards, and loss of hearing; and examined the effect of proposed changes on workmen's compensation and occupational disease insurance rates.

Because of the interrelationship of workmen's compensation and occupational disease coverage, the committee found it necessary to consider the effect on both acts of certain proposals for improvement in coverage, especially with respect to medical benefit limitations, rehabilitation programs, and broadened subsequent injury fund coverage. Along with these three subjects, the committee concentrated its attention on scheduled and comprehensive coverage, partial disability coverage, the selection and use of medical panels, and the statute of limitations applying to claim filing.

The committee wishes to express its appreciation to those state officials; labor, industry, and insurance company representatives; and others who provided consultation and advice during the study. In particular, the committee would like to thank the members of the Industrial Commission (Truman Hall, Chairman; Frank Van Portfliet; and Ray H. Brannaman); Harold Clark Thompson, Counsel, State Compensation Insurance Fund; Paul W. Jacoe, Senior Industrial Hygienist, State Department of Health; Dr. George W. Zinke, Professor of Economics, University of Colorado; and Robert Shurtleff, Manager, Mountain States Compensation Rating Bureau.

Lyle C. Kyle
Director

September 22, 1960

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COMMITTEE RECOMMENDATIONS AND FINDINGS

The Legislative Council Committee on Occupational Diseases has examined the many aspects of providing adequate coverage for workers who suffer disabilities resulting from occupational diseases. The viewpoints of management and labor were solicited by the Committee as were the opinions of legal and medical experts. Study was made of the experience in other states, and consideration was given to the possible effect of various proposals for liberalizing occupational disease coverage on insurance rates and expenditures for this purpose.

Opposition to basic changes in the occupational disease act and the liberalization of occupational disease coverage results primarily from three concerns on the part of representatives of business and industry: 1) occupational disease insurance rates will increase substantially; 2) claims will be brought and allowed for diseases which are not employment connected; and 3) employers and insurance carriers will be saddled with an inequitable and unmeasurable liability.

The Committee understands the apprehension and concern of those who pay the bill for workmen's compensation and occupational disease coverage; however, the information compiled and analyzed by the Committee during the course of its study indicates that the unfavorable consequences expected as a result of liberalized occupational disease coverage are greatly exaggerated.

The Committee consulted the National Council on Compensation Insurance (the insurance rate-making body for 24 states, including Colorado) concerning the possible effect on insurance rates of various proposals for liberalizing the occupational disease act. The National Council stated that it is extremely difficult to calculate the effect of proposals on insurance rates, because, with the exception of increases in medical benefits, these measures cannot be evaluated mathematically. The National Council was of the opinion, however, that the proposed measures would not be expected to produce an appreciable increase in total insurance rates (workmen's compensation and occupational diseases combined).[1] Further, the National Council stated that in the absence of reliable statistical data, it is likely that insurance carriers would not request any immediate rate increases, waiting rather until there is sufficient experience upon which to determine the need for and amount of rate changes. Larger rate increases can be expected, however, according to the National Council, for industries such as mining with a high degree of disease hazard.

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1. Proposals included alternatives as to diseases covered, partial disability benefits, and extension of the statute of limitations, in addition to liberalization of medical benefits.

Insurance Rate Increases

Based on the National Council's observations, the Committee is of the opinion that except for certain hazardous classifications, occupational disease insurance rate increases will not be very significant for most of the committee recommendations enumerated below.[2] Perhaps too much emphasis has been placed on the effect of proposed changes on insurance rates, because the present occupational disease insurance rate for all but 22 of Colorado's 650 classifications is only $.01 per $100 of payroll.[3] (There would only be an increase of one mill per $100 of payroll for every 10 per cent rate increase that applied only to occupational diseases.) The other 22 classifications include mining (except coal), abrasive or sandblasting operations, foundries of various types, quarries, tunneling, stone cutting and polishing, emery works, and similar industrial processes with a high amount of silica and other toxic dusts, with a rate range of from $.07 to $.98 per $100 of payroll.

Colorado employers in most classifications received a decrease in workmen's compensation and occupational disease insurance premiums as a result of the latest rate revision which went into effect on July 1, 1960. These revised rates represent an average decrease of 2.7 per cent from the rates in effect during the preceding 12 months. However, this decrease did not apply equally to all industries and classifications. By industry group the average changes in insurance rates were: manufacturing 10.1 per cent decrease; contracting 0.2 per cent decrease; mining and ore milling, 11.2 per cent increase; and all others, 2.8 per cent decrease. Within each industry group the changes varied from the average according to the kind and volume of experience.

Fraudulent Claims

There will always be those who will take advantage of the loopholes in or liberal provisions of any law, so it would hardly be surprising if claims were brought for diseases which were not employment related. It is the Committee's opinion that such claims would be few in number and would not constitute much of a problem. It would be extremely shortsighted to restrict the provision of adequate occupational disease coverage for the vast majority, because

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2. The only sizable increase would result from liberalization of medical benefits, which is discussed later in this section under the recommendation for such liberalization.
3. For rate making purposes all industries or occupations are classified. These classifications are made in several different ways; e.g., a classification may include all firms where workers are exposed to the same industrial process; it may cover an entire industry; or it may apply to an individual occupation, regardless of type of employment.

of the fear of abuse by a few. Further, with the burden of proof upon the claimant and the use of medical panels as recommended by the Committee, it is more likely that legitimate claims may be rejected for lack of sufficient evidence than it is that fraudulent claims would be honored.

Extent of Liability

It is true that the extent of liability is less certain under a liberal occupational disease coverage act, especially if there are provisions for comprehensive coverage and a statute of limitations which is flexible enough to allow for latent diseases and faulty diagnosis. On the other hand, liability cannot be measured accurately unless all occupational diseases and hazards are known and identified. This is obviously not possible with the continued development of new industrial processes, with the resulting increase in the use of new toxic materials. With limited occupational disease coverage, employers may have a known and measurable liability; but their employees have unknown risks, because they are protected only from those diseases enumerated in the act, and then only if certain conditions as to exposure, disability, and claim filing are met. It is in the public interest not to impose an unreasonable burden upon employers and insurance carriers. By the same token, it is also in the public interest to provide employees with adequate protection from occupational diseases and hazards. The consequences of the failure to provide such protection might be looked upon as a public liability, the extent of which is also difficult to measure.

Recommendations

The Committee's recommendations place emphasis on prevention and rehabilitation, as well as protection for workers disabled by occupational diseases. It is the Committee's belief that the provision of early and sufficient medical assistance, vocational retraining, and rehabilitation will enable many disabled workers to become useful, productive members of society again, who otherwise might remain totally incapacitated and a burden to themselves and society. The rehabilitation of disabled workers should effect savings in the long run to society, employers, and insurance carriers, which, in the Committee's opinion, offset the expected increase in insurance rates and expenditures resulting from liberalized coverage. Society benefits in two ways: 1) these workers do not become a public charge after their benefits run out; and 2) these workers are able to contribute to society's well-being through their productive efforts. Employers and insurance carriers benefit, because they will not have a continuing liability for disabled employees who become rehabilitated and gainfully employed.

These recommendations are also based on the Committee's agreement that employees should receive equal protection and treatment under coverage for both occupational diseases and workmen's compensation and that the provisions for both should be similar insofar as possible.

In making this study and the resulting recommendations, the Committee has not only considered possible increases in expenditures and insurance rates and administrative and technical problems, but has focused attention on the needs of the worker who suffers from an occupational disability and the legislative (public) responsibility for providing standards which offer adequate protection and a reasonable chance for recovery.

1. The Committee on Occupational Diseases recommends that coverage be provided for all occupational diseases with the burden of proof on the claimant, rather than have coverage limited only to those diseases enumerated in the act.

Findings: Thirty states, including those most highly industrialized, provide comprehensive coverage for occupational diseases. There has been a recent trend toward adoption of comprehensive coverage, with 11 states changing from schedule coverage since 1948. Experience in these states has not indicated either greatly increased expenditures or administrative difficulties with comprehensive coverage.

Some 50 occupational diseases and hazards are not covered in the Colorado schedule, according to a report prepared for the Committee by the Senior Industrial Hygienist, State Department of Health. Some of the more serious omissions include: anthracosis (coal dust), inorganic dust, organic dust (except silica and asbestos), and poisoning by aluminum, barium, beryllium, carbon, copper, cobalt, nickel, silver, thorium, tin, uranium, vanadium, and zinc, or any of the compounds of these metals. Further, this report indicated that some of the categories included in the schedule are not clear and there is some question as to what diseases are actually covered.

If the schedule were expanded to include the omissions listed above, the Colorado act would have the effect of comprehensive coverage both as to expense involved and to protection offered for known diseases. However, a schedule act does not provide protection for new diseases resulting from technological improvements. Experience has shown that there is a considerable lag between the appearance of new diseases and legislative amendment of the schedule, and it is unfair to offer protection to some workers but deny it to others whose disabilities are employment-connected, just because the disease is not listed in the act.

By placing the burden of proof upon the claimant, the possibility of claims being allowed for ordinary diseases--not employment-connected--is greatly curtailed. It is agreed that it

is often difficult to determine the cause of an occupational disease, but this is also true with respect to some accident cases. Workmen's compensation coverage is not limited because of these difficulties, and neither should occupational disease coverage be so limited.

Colorado is increasingly becoming an industrialized and urbanized state. Many of Colorado's new industries are related to the defense program and make use of highly toxic and, in some instances, radioactive materials. It is necessary and appropriate that Colorado's occupational disease legislation provide adequate coverage not only for employees in these industries, many of whom come from states where they had such protection, but for all employees as well.

2. The Committee on Occupational Diseases recommends that medical benefits, unlimited both as to time and amount, be provided for disabilities resulting from accidental injuries and occupational diseases.

Findings: Twenty-six states provide unlimited medical and hospitalization benefits for accidental injuries and occupational diseases. Colorado is one of 22 states which has either a time or dollar limit, or both, on medical benefits. Colorado is also one of several states which has further limitations imposed on medical treatment for silicosis and other dust diseases. Medical-hospitalization benefits in Colorado are limited in amount to $1,500 and in time to six months. However, an additional $500 may be authorized by the Industrial Commission, if it finds that there is a good chance that a worker's condition may be materially improved by such additional expenditure. No medical services at all can be provided in silicosis cases, unless the Industrial Commission finds that "there are substantial prospects that the condition of the employee will be materially improved by medical treatment..." There is a limit of $2,000 placed on medical treatment, if such is provided in silicosis cases.

Considerable testimony was presented to the Committee concerning the need for raising the limits on medical-hospitalization benefits. It was pointed out that dollar and time limits are not realistic with respect to radiation and dust diseases and the complications which arise from the increased use of toxic substances in industrial processes. It was also stated that workers who exhaust their medical benefits without completing treatment and/or making a recovery place an additional burden upon the public in two ways: 1) It is unlikely that they will again become productive members of society. 2) It is likely that additional medical care and perhaps support will be provided at public expense.

Any liberalization in medical and hospitalization benefits for occupational diseases should be accompanied by a similar increase in these benefits under workmen's compensation; it would be difficult to justify an increase which would apply to occupational diseases alone. Elimination of the present time and monetary restrictions under both acts would increase insurance rates more

than any other proposal for liberalizing benefits. Proposals for liberalizing medical benefits were the one series of recommendations for which the National Council was able to make statistical computations. It was the National Council's opinion that an increase to $2,500 would result in an over-all rate increase of approximately 1.3 per cent; that an increase to $5,000 would result in an increase of approximately 2.1 per cent; and that the provision of unlimited benefits would result in an increase of approximately 3.1 per cent in over-all rates. These rate estimates were predicated on the assumption that the liberalization of medical and hospital benefits would apply to both workmen's compensation and occupational disease coverage. The effect of the rate increases expected to result from the alternative approaches to liberalizing medical and hospitalization benefits should be considered in relation to the rate revisions which went into effect on July 1, 1960, and which are summarized above. Industrial representatives appearing before the committee did not comment on the desirability of raising the limits on these benefits, nor did they oppose specifically such an increase, despite the fact that this is the most expensive proposal advanced for consideration.

The most extensive rehabilitation programs for workers incapacitated by occupational injuries or diseases are generally found in those states with unlimited medical benefits. The provision of unlimited medical benefits appears to have the effect of encouraging insurance carriers to bear the costs of the rehabilitation program, either through an additional insurance premium, or through expanded financing of the subsequent injury fund. One of the big obstacles to a rehabilitation program in Colorado is the lack of funds to provide maintenance during the period of vocational retraining.

3. The Committee on Occupational Diseases recommends that partial disability coverage be provided for all occupational diseases with certain limitations applying to partial loss of hearing.

Findings: The workmen's compensation laws in all states provide for payment of benefits for partial disability resulting from accidental injuries. Some of the states, however, do not provide for partial benefits for occupational diseases--particularly for dust diseases. Colorado is one of 12 states which do not provide for any compensation for partial disability due to occupational diseases. Thirteen other states have provisions which either restrict or prohibit compensation for partial disability due to silicosis and other dust diseases, although partial disability is compensated for other occupational diseases.

Employees are entitled to the same protection under occupational disease coverage as they receive under workmen's compensation. While the difficulty in determining the extent of partial disability is recognized, this difficulty should not bar employees from receiving equal protection under both acts. Often it is difficult to determine the extent of partial disability in accident cases.

especially with respect to back injuries; nevertheless, partial disability compensation has been an accepted component of workmen's compensation coverage since its inception.

Under the present provisions of the Colorado act, no employee can receive compensation for an occupational disease disability if he is employable, even if that employment is in an occupation much less skilled and financially rewarding than the one in which the employee engaged prior to incurring the disease. This provision in effect penalizes a disabled employee for continuing to work despite his disability. An accidental injury and an occupational disease may result in the same disability, e.g., the loss of the use of an arm or leg; under workmen's compensation an employee would receive partial compensation, while under the occupational disease statutes he receives nothing.

Under the Colorado occupational disease act, no compensation for disability other than total is provided for silicosis and asbestosis. (Other dust diseases such as anthracosis are not covered.) Consequently, a silicotic is unable to receive any benefits or receive medical attention if he is in the first or second stages of the disease. There is no provision for maintenance payments during a period of vocational retraining, so unless a silicotic has financial resources, even this avenue is closed. The only remaining alternative is to continue employment in the occupation which resulted in the contraction of silicosis in the first place. Even then a silicotic may not be able to find employment, unless he signs an agreement to waive benefits for the aggravation of his condition, which is most likely to occur if he continues in the same or similar hazardous employment. Twenty-five states provide partial disability coverage for silicosis and dust diseases in the same way as for all other occupational diseases, and several states provide limited partial disability coverage.

Unlike silicosis and dust diseases, which are discernible in early stages, there is usually no physical evidence of radiation absorption, and aside from the maintenance of accurate exposure records, no way to measure such absorption. There is considerable disagreement as to maximum radiation tolerances, both for single and prolonged exposure. Many of the diseases which may result from exposure (such as lung cancer and leukemia) are not presently distinguishable from the same diseases which may result from other sources. After considerable exposure, a worker in an industry working with radioactive materials, may find himself in the same situation as a second stage silicotic. Further employment in the same occupation would increase his exposure above his long term tolerance level, and the results would be irreversible in the same way as for third stage silicosis. Consequently, there is a great need to provide partial disability coverage commensurate with the level of radiation absorption for employees who work in or around radioactive materials. The increased use of radioactive isotopes by industry, the presence of high concentrations of radon gas in radioactive metal mines, and the use of radioactive materials in the defense program all point up the importance of adequate coverage.

Other states providing partial disability coverage have had difficulty in evaluating claims for partial loss of hearing from industrial noise. Determination of these claims is complicated by the fact that a certain amount of hearing loss is normally expected as a person increases in age. Missouri has attempted to overcome the problems resulting from claims for loss of hearing by adopting legislation which sets a schedule for the payment of both total and partial disability from loss of hearing and prescribes how such hearing impairment is to be measured.[4] The Missouri act also sets standards for determining the extent of normal hearing loss in the general population; this normal hearing loss is then compared with the loss resulting from industrial exposure in each case, with the difference used as a measure of partial disability.

4. The Committee on Occupational Diseases recommends that the statute of limitations be changed to provide that a claim must be filed within one year of the date that a worker first had knowledge of the disease.

Findings: Colorado's occupational disease act requires that disablement, other than from silicosis or asbestosis, must have resulted within 120 days from the date of the employee's last injurious exposure to such disease while actually working for the employer against whom compensation is claimed. Further, a claim, other than for silicosis or asbestosis, must be filed within 60 days after disablement, except for poisoning from benzol and its derivatives, for which there is a 90-day limit. Disablement from silicosis must result within two years from the date of the employee's last injurious exposure to such disease while actually working for the employer against whom compensation is claimed. During this two-year period, there must have been exposure for at least 60 days while working for one employer. The Colorado act also requires that a worker claiming disability from silicosis or asbestosis must have been exposed to harmful quantities of silicon dioxide dust or asbestos dust in this state for a total period of not less than five of the 10 years immediately preceding disablement.

Colorado is one of only four states which require that disablement must occur less than a year after the last exposure. Sixteen states have the statute of limitations applying to the date of disablement. Seven set the limit at one year; four at two years; and one at 16 months. In a number of these states, further exception is made for dust and/or radiation diseases. In fifteen states, the statute of limitations begins with the date of the worker's knowledge of the disease or the manifestation of the symptons. The period in which claims must be filed in these states varies from six months to two years. Seven states have the date of last exposure as the starting point for the statute of limitations, with four providing that the claim must be filed within

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4. The full text of the Missouri legislation is contained in Appendix E of this report.

one year; two states, two years; and one state, three years. In 11 states, a combination of the above factors is used.

Colorado's statute of limitations does not provide adequate coverage for diseases which may not appear until several years after the last exposure. Included in this category are silicosis, other dust diseases, and diseases resulting from radiation exposure. Medical experts appearing before the committee pointed out that many industrial diseases, not only those caused by radiation or dust exposure, are latent in appearing and difficult to diagnose; e.g., blood diseases and exposure to various metals and their compounds, especially beryllium. Because of their complexity it is very difficult to diagnose many industrial diseases and to relate them to employment conditions. The present statute of limitations precludes a worker from bringing a claim even though he has an occupational disease, if a proper diagnosis of his condition was not made within the time limitations set forth.

For these reasons a statute of limitations based on the date of the worker's knowledge of the disease or the manifestation of symptoms is considered more desirable. Several sections of Chapter 87, Colorado Revised Statutes, relating to limitations on actions, base the starting point for the statute of limitations on awareness of the act committed and not on the time when the action took place. The statute of limitations for occupational diseases should be defined in the same way. Reports from the states which base the statute of limitations on the date of worker's knowledge indicate that this provision has been satisfactory in providing adequate coverage. By placing the burden of proof on the claimant, employers and insurance carriers are protected against fraudulent claims brought many years after alleged last exposure.

5. The Committee on Occupational Diseases recommends the development of a rehabilitation program to be coordinated with the Department of Rehabilitation, with maintenance and necessary travel during the period of retraining to be paid by insurance carriers and self-insurers; this program to apply to workers disabled as a result of both accidental injuries and occupational diseases, with the further requirement that a worker so disabled must avail himself of such training within a specified time period or lose further benefits unless he can show good cause.

Findings: The provision of unlimited medical benefits, partial disability coverage, and an adequate rehabilitation program work together in achieving protection and rehabilitation of an injured or disabled worker. The provision of unlimited medical care provides protection. Through partial disability coverage it is possible to provide medical services early, as well as rehabilitation and vocational retraining, so that disabled workers can be assisted in becoming productive members of society before they become totally disabled and beyond assistance. By requiring disabled employees to participate in rehabilitation programs, if at all possible, the stage is set for following through on rehabilitation efforts. All that is needed to complete this sequence is the provision of an adequate rehabilitation program.

All states have adopted the provisions of the Federal Vocational Rehabilitation Act, which provides federal assistance to injured or handicapped individuals. Most of the 20 states which have made some provisions for rehabilitation assistance in their workmen's compensation laws have also tied in these provisions with the state rehabilitation agencies that enforce the federal law. Such laws usually provide for the referral of all cases to the rehabilitation agency for assistance.

In Colorado, the Department of Rehabilitation provides funds for the cost of retraining and in some instances maintenance payments are provided as well. The top limit for maintenance is $100 per month, but normally these payments are between $70 and $80. Before maintenance benefits are provided, a careful check is made of the applicant's financial situation and resources. Rehabilitation programs are operated in a number of ways with retraining in each instance geared to the individual's needs. The resources used include on-the-job training, technical schools, and university extension programs.

Very few referrals have been made to the Department of Rehabilitation by the Industrial Commission. The most significant reason for the small number of referrals is the lack of funds to provide or assist in the provision of maintenance payments. As the result of the lack of partial disability coverage for silicosis and the practice of allowing first and second stage silicotics to sign waivers, miners suffering from silicosis are not referred to the rehabilitation department until it is too late to help them.

Rehabilitation programs in other states are usually financed in one of three ways: 1) by levying a surcharge on workmen's compensation and occupational disease insurance premiums; 2) by requiring the provision of rehabilitation as part of the insurance carrier's general liability; or 3) by setting aside a portion of the subsequent injury fund for this purpose. If rehabilitation for injured and disabled workers is tied in with the Department of Rehabilitation to take advantage of federal funds for retraining purposes, additional financing would probably be limited to travel and maintenance. This burden could be assumed by insurance carriers without appreciable added expense, because the disabled worker would be drawing compensation anyway, except that under this plan he would either avail himself of the rehabilitation program or lose further benefits. Once he was retrained and re-employed, benefits would cease, as they would no longer be needed.

6. The Committee on Occupational Diseases recommends the adoption of a broad subsequent injury fund to include all accidental injuries and occupational diseases with such fund to be financed as follows: 1) through payment of $2,000 by insurers and self-insurers for each death resulting from an accident or occupational disease when there is no beneficiary; and 2) through a surcharge of one per cent on workmen's compensation and occupational disease insurance written or renewed during the previous calendar

year, with self-insurers paying one per cent of the premium which they would have paid had they been covered by an insurance carrier. Further, the Committee recommends that the waiver provision in the Colorado act be repealed in conjunction with the adoption of broadened subsequent injury fund coverage.

Findings: Workers suffering from previous occupational injury or disability often have trouble in securing employment. A number of reasons are given by employers for not hiring these workers: 1) possible increase in compensation insurance rates; 2) lack of flexibility and difficulty of transfer; 3) inability to pass pre-employment physical; 4) inability to perform strenuous tasks; and 5) excessive retraining costs.

Probably the greatest concern that employers have is that a previously disabled worker might sustain another injury, with the combined disabilities resulting in permanent total disability. In such a situation, employers fear that they would be liable for the total disability rather than only for the injury occurring while in their employ.

Subsequent injury fund legislation has been developed in workmen's compensation laws to help meet some of these fears and objections and to assist the handicapped worker in securing employment. Two important elements are embodied in the second injury fund principle; first, that the injured worker who had a previous physical impairment should be paid full compensation to which he would be entitled for the combined disability; and, second, that the employer should be liable only for the compensation which is payable for the subsequent injury. Subsequent injury funds or equivalent arrangements have been established under all but five workmen's compensation acts. The trend in second injury fund legislation is to broaden the coverage rather than limit the application of the provision to workers who have lost the use of a member of the body or the member itself. The laws of 15 states cover any previous permanent disability without limitation as to type or cause.

Colorado is among the 30 states with narrow subsequent injury fund coverage. Colorado's fund applies only to a limited number of subsequent accidental injuries. If an employee who has previously suffered the loss, or total loss of the use of one hand, one arm, one foot, one leg, or the vision of one eye as the result of an accidental injury, suffers a second loss of any of these members, the loss of the second member constitutes total permanent disability. The employer in whose employment the second or subsequent injury occurred is liable for compensation only for the second injury. The difference between the compensation for the second injury and total permanent disability compensation is paid out of the subsequent injury fund. The subsequent injury fund is financed from payments of $1,750 by insurance carriers for every compensable injury resulting in death when there are no persons either wholly or partially dependent upon the deceased.

Very early in the history of workmen's compensation legislation, a number of states enacted provisions permitting handicapped workers to waive their rights to benefits for an injury caused, or contributed to, by a previous disability. This was done because of the reluctance of employers to hire or keep an employee whose physical condition created an extra insurance risk. The development of subsequent injury fund legislation should have made waiver provisions obsolete, and to some extent it did. However, 25 states still have waiver provisions. Ten of these states permit waivers for accidental injuries, while 21, including Colorado, permit waivers for occupational diseases generally or specifically for silicosis and asbestosis

The lack of broad subsequent injury fund coverage in Colorado, especially for occupational diseases, makes it necessary for employers to require waivers of previously disabled workers so that they will not be saddled with the total liability when only a portion of it resulted while in their employ. This is especially true with respect to miners with first or second stage silicosis, because third stage silicosis is virtually certain, which would make the last employer liable for total disability. By requiring a waiver before such miners are hired, the last employer is no longer liable.

Broadened subsequent injury fund legislation would benefit employer and employee alike. With respect to the former, his liability would be applied only to the injury or disability occurring while in his employ, even though this subsequent injury in combination with a previous disablement results in total disability. With respect to the latter, he would no longer be required to sign a waiver and would be assured of full protection if a further injury or disability occurred. There would be no need for a waiver provision, because the employer is protected as his liability would be limited.

7. The Committee on Occupational Diseases recommends the appointment and use of medical panels in accidental injury and occupational disease cases with the following provisions: 1) The Industrial Commission shall have the authority to select three-member boards or panels, but the medical experts selected shall be recognized specialists on the type of injury or disease for which the panel has been called. 2) Express statutory permission shall be given to labor, management, the state medical society, and the University of Colorado Medical School to suggest eligible physicians to the commission. 3) Medical panels shall not be mandatory in every case, but a panel may be called upon request of the commission or either adverse party. 4) Adverse parties shall have the right to cross-examine medical panels. 5) The panels shall be limited in authority to the consideration of medical questions and their findings shall be presented in writing to the commission. 6) These findings shall not be binding upon the commission, but shall become part of the record, and as such shall be part of the case in any appeal proceedings. 7) The expenses for such medical panels shall be financed from the General Fund.

Findings: Medical panels have been used successfully in a number of other states for occupational disease and accidental injury cases. It is considered more equitable and beneficial for both claimants and insurance carriers if a panel of three specialists can examine a case and reach a conclusion, than if an opinion is rendered by one medical expert only. The use of medical panels has proven highly desirable in other states with respect to the determination of the proportion of partial disability. It is very difficult to make such determinations without expert medical assistance.

In some states the findings of the medical panel are binding upon the workmen's compensation agency or commission. In most states, however, the panel acts in an advisory capacity. There are two major reasons why medical panels should not have decision making powers: 1) final decision by a medical panel would be an improper delegation of the authority which has been vested in the Industrial Commission by the General Assembly; and 2) many cases are decided on the basis of fact and not on medical questions, and doctors are not trained to determine evidence or credibility.

In some states, either the medical society or the state medical school appoints the panels to be used or determines the eligible list from which such panels are selected by the workmen's compensation agency or commission. This procedure also represents an improper shift of authority from the public agency responsible for administering workmen's compensation and occupational disease laws and determining the validity of claims. A better method would be to require, as in Utah, that the panel members selected must be specialists on the disease or injury involved in the case for which the panel is called, leaving the actual selection up to the Industrial Commission. However, the medical society, the medical school and labor and management groups should all have the opportunity to suggest medical experts to the Industrial Commission for inclusion on the list from which panels will be selected.

It is not necessary to require a medical panel in every case, if both adverse parties and the commission have the authority to request a panel in any case. This procedure will insure that panels will be called in difficult and complex cases, without burdening the commission with extra expense and procedures in routine cases.

8. The Committee on Occupational Diseases recommends that the so-called escalator clause applying to compensation in silicosis cases be eliminated.

Findings: The Colorado act contains a so-called escalator clause, which applies to compensation for silicosis. This provision limited compensation to $500 for total disability or death resulting from silicosis or asbestosis as of January, 1946, when the act went into effect. It was further provided that this limit was to increase $50 in each subsequent month that total disablement or death occurs, with this increase to continue until the maximum benefit for silicosis or asbestosis is equal to that for other occupational diseases.

Consequently, the maximum benefit for total disability or death from silicosis or asbestosis as of September, 1960, is $9,300 as compared with $12,598.25 for all other occupational diseases. Even if a silicotic should be allowed compensation, he would still receive more than $3,000 less than workers whose disablement was caused by any of the other covered diseases. While there was a difference of opinion among the members of the Industrial Commission on other occupational disease provisions, there was agreement that the escalator clause should be eliminated and that silicosis and asbestosis victims should be compensated to the same extent as those disabled from other occupational diseases.

9. The Committee on Occupational Diseases recommends that workmen's compensation and occupational disease legislation be combined insofar as possible, with one definition of disability applying to both accidental injuries and occupational diseases.

Findings: The Committee's recommendations have been based on the assumption that employees should receive equal protection under workmen's compensation and occupational disease statutes. Many provisions of both acts already are similar. Both apply to the same employers and have similar total disability, death, and funeral benefits.

While there is a difference in the statute of limitations, it is more restrictive for occupational diseases (rather than less restrictive as recommended above by the Committee, because of the latent nature of some occupational diseases and the difficulty in diagnosis). The occupational disease act is also more restrictive as to eligibility for total disability compensation. To be totally disabled from an occupational disease, a claimant must be incapable of performing any work for remuneration or profit. No such limitation is contained in the workmen's compensation act. The statutory provision applying to the conditions which must exist for an occupational disease to be compensable are quite extensive. In contrast, the workmen's compensation act requires only that the injury or death be proximately caused by accident arising out of and in the course of employment and not be self-inflicted. These differences should be eliminated and one definition, as in the state of Wisconsin, should apply. Wisconsin defines injury as "mental or physical harm to an employee caused by accident or disease ... sustained in performing service growing out of or incidental to employment, where not intentionally self-inflicted."

The interrelationship of workmen's compensation and occupational disease coverage with respect to medical benefits, rehabilitation, and subsequent injury funds has already been indicated and is an additional reason why the two acts should be combined with certain special exceptions, such as the schedule of partial disability payments for accidents and the statute of limitations for occupational diseases. Combination of the two acts would also relieve the Industrial Commission of the necessity of determining in certain cases whether it is an accident or occupational disease.

At present with limited occupational disease coverage, such determination may decide not only under which set of laws a person shall receive benefits, but also whether he shall receive any benefits at all.

10. The Committee on Occupational Diseases recommends that the General Assembly pass a joint resolution requesting the Industrial Commission, Bureau of Mines, and the Occupational Health Section of the State Department of Health to explore the technical and administrative problems involved in setting up a radiation exposure record system and to report their findings for legislative consideration.

Findings: Determination of causality in diseases resulting from radiation exposure is not as difficult when there has been a known overexposure on a single occasion, which is followed by disabling effects. The problem arises when there has been continuous exposure over a long period of time, followed at a much later date (perhaps years later) by the appearance of a disease such as leukemia or bone or lung cancer. The causes of these diseases have not been fully identified as yet, and while it is recognized that these and related diseases can result from radiation exposure, they may also have other causes. There has been concern that the extension of the statute of limitations to allow coverage for these diseases when they become manifest might place an inequitable burden upon employers and insurance carriers because of the difficulty in determining causality. However, with the burden of proof placed upon the claimant, the difficulty of determining causality would make it hard to establish valid claims. While it is expected that further reserach will provide some answers or at least some agreement among the experts, it is impossible to draft legislation which would anticipate these results, but these difficulties do not preclude current legislative consideration. Workers in uranium mines and in industries using radioactive material are constantly subjected to radiation exposure, and there is a legislative responsibility to provide adequate protection for these people.

The approach to this problem which has the most merit in the committee's opinion, is the proposal that accurate employment and exposure records be kept of those working with or in proximity to radioactive materials. If a disease later appears, which could have been caused by radiation exposure, such records would constitute prima facie evidence of causality. This proposal is similar to the one embodied in the British Parliament Act of 1959, which provided that any person exposed to radiation due to employment may register, and if he becomes victim of an attributable disease, it is presumed to be the result of exposure.

The question arises, however, as to whether these records are to be maintained by an employer or by a state agency or both. The two most appropriate state agencies for this responsibility are the Industrial Commission and the State Department of Health. In any legislation providing for the maintenance of such records, some power of supervision and enforcement should be given the

responsible public agency. Otherwise many small mine and milling operators might not comply with the law. There are a large number of uranium mines on the Colorado Plateau, employing an average of three to four miners; any mine with 10 employees is considered large. Many of these mines have radon gas present in quantities far exceeding normal tolerance limits, so that legislation to provide satisfactory coverage for radiation diseases should be carefully constructed so as to eliminate any possibility that the employees of these small mines would be excluded.

Because of the many problems involved in establishing an accurate exposure record system, the Committee is unable to make any specific recommendations at this time. Rather, it is suggested that the appropriate state agencies be given the responsibility of studying these problems more thoroughly, with the objective of making recommendations for legislative consideration.

Other Considerations

Increased Compensation, Compulsory Coverage

Recommendations were made to the Committee that compensation be increased, coverage be made compulsory rather than elective, and that such coverage apply to all employers rather than just those with four or more employees. Colorado's workmen's compensation and occupational disease acts state that compensation should equal two-thirds of average weekly wages (which is similar to the laws of most other states). Like most other states, Colorado's maximum weekly compensation limit has lagged behind rising wages and inflation, so that currently this limit is only 46 per cent of the average weekly wage.

There was agreement among Committee members that these recommendations were worthy of consideration, but the Committee had concentrated on other provisions of the occupational disease act as being more important; therefore, the Committee decided that no recommendations should be made on compensation limits, compulsory coverage, or extension of coverage to all employees, but that further consideration should be given these recommendations and that its (the Committee's) failure to act should not be considered as opposition to these proposals.

Relationship of State and Federal Government Re: Atomic Installations

The Committee's study of radiation hazards and occupational disease coverage raised an additional problem which was outside the scope of the study as defined by House Joint Resolution 22 (1959). Accordingly, the Committee wishes to point out the need for further study of the relationship of the state with federal installations and sub-contractors using radioactive material. More specifically, can these installations and sub-contractors be required to meet state safety standards under the state's police power to protect the

health, welfare, and safety of its citizens? This subject is worthy of further consideration, because of the increase in use of radioactive materials in the state and the efforts of the Atomic Energy Commission to shift the burden for maintaining and enforcing proper safety standards back to the states.

I

OCCUPATIONAL DISEASE LEGISLATION

All 50 states, Puerto Rico, and the District of Columbia have workmen's compensation legislation. All of these jurisdictions, with the exception of Mississippi and Wyoming, also have legislation providing some kind of coverage for occupational diseases. There are two major objectives embodied in workmen's compensation legislation (also applicable to occupational disease legislation): first, to provide weekly benefits in lieu of wages lost because of disability from a work injury; and second, to cure or relieve a worker of the effects of such injury and to restore his work ability as promptly as possible.

Workmen's Compensation Legislation

Workmen's compensation coverage was the first type of social legislation applying to employment conditions to be developed extensively in the United States. Before such legislation was passed, if an injured worker sued his employer for damages he had to prove that the employer was negligent. Under workmen's compensation and occupational disease coverage legislation, the question of fault or blame is not raised, because the expense for work injuries is considered part of the cost of production. The first workmen's compensation legislation was enacted in New York in 1910. In the following year 10 more state legislatures adopted workmen's compensation acts, and by 1920 there were 42 states and three territories with workmen's compensation coverage, including Colorado, which passed such legislation in 1919. Mississippi, in 1948, was the last state to adopt a workmen's compensation act.

Workmen's compensation coverage is usually thought of as applying to injuries resulting from a specific accident or event occurring in the course of employment. Occupational disease coverage applies to those injuries and disabilities which result from employment-related prolonged exposure to toxic materials such as silicon dust, chemical compounds, gases, and radioactive substances.

Occupational Disease Legislation

The earliest of the workmen's compensation laws did not expressly cover occupational diseases; in fact, most of these laws specifically excluded occupational disease coverage. A few covered injuries or personal injuries without any specific exclusions, and these terms were interpreted to include occupational diseases. A Massachusetts court in 1912 held that the term "personal injury" was broad enough to include occupational diseases, marking the beginnings of coverage of such diseases.[1]

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1. Occupational Disease Problems Under State Workmen's Compensation Laws, U. S. Department of Labor, Bureau of Labor Standards, August 1960, p. 2.

Coverage of occupational diseases developed much more slowly than coverage of accidental injuries. Even though 42 states, three territories, and federal employees had workmen's compensation coverage by 1920, only seven of these laws (California, Connecticut, Hawaii, Massachusetts, North Dakota, Wisconsin, and the Federal Employees Compensation Act) had provided compensation for all occupational diseases. During the next few years, although occupational disease laws were enacted in Illinois, Minnesota, New Jersey, New York, Ohio, and Puerto Rico, these laws were of the schedule type, covering only those diseases specifically listed in the law.[2] At the present time, 30 of the states and one territory which have occupational disease legislation have "blanket coverage," i.e., coverage of all occupational diseases.[3] Silicosis has the unique position of being the only occupational disease covered under all state laws.

Some states have integrated occupational disease coverage and workmen's compensation coverage, and the same legislation applies generally to both. Many states have enacted separate occupational disease legislation, which is generally comparable to the coverage provided under workmen's compensation. Other states, most notably those with coverage of specified diseases only, have separate occupational disease acts, which are more limited and restrictive than their workmen's compensation legislation. To satisfy most state requirements as to compensable occupational diseases, regardless of the type of legislation, the following conditions should be met:

1) The disease must have its inception in the employment.

2) The hazard must distinguish the occupation from the usual run of industry.

3) The hazard must have identifying characteristics.

4) A causal or generally recognized relationship must exist between the hazard and the disease.

5) The compensability of the disease must be determined by an administrative agency.[4]

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2. Ibid.
3. Alaska, Arkansas, California, Connecticut, Delaware, Florida, Hawaii, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, Nevada, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, Utah, Virginia, Washington, West Virginia, and Wisconsin.
4. State Compensatory Provisions for Occupational Disease, Margis and Davenport, U. S. Department of the Interior, Bureau of Mines, Information Circular 7650, p. 4 as quoted in "Worker Protection Under Occupational Disease Disability Statutes," Don W. Sears and Rock M. Groves, Rocky Mountain Law Review, Vol. 31, No. 4, June, 1959, p. 2.

Colorado Occupational Disease Disability Act

Although Colorado enacted workmen's compensation coverage in 1919, occupational disease coverage was not provided by law until 1945. The 1945 act applied only to 21 specified diseases (schedule coverage). Colorado legislation still applies to specified diseases, although several diseases have been added to the schedule through later legislation.

Disablement from occupational disease is defined in the Colorado act as follows: " 'Disablement' means the event of becoming physically incapacitated by reason of an occupational disease as defined in this article from performing any work for remuneration or profit. 'Disability,' 'disabled,' 'total disability,' 'totally disabled,' or 'total disablement' shall be synonymous with 'disablement.'"[5]

Injurious exposure is defined as follows: "'Injurious exposure' and 'harmful quantities' where used in this act shall be construed as synonymous terms and shall mean that any concentration of toxic material which would, independently of any other cause whatsoever, including the previous physical condition of the claimant, produce or cause the disease for which claim is made."[6]

An employer or his insurance carrier is not liable for compensation or other benefits under the provisions of the act unless the following conditions are shown to exist: "There is a direct causal connection between the conditions under which the work was performed and the occupational disease, and the disease can be seen to have followed as a natural incident of the work and as a result of the exposure occasioned by the nature of the employment and can be fairly traced to the employment as a proximate cause and does not come from a hazard to which workmen would have been equally exposed outside of the employment. The disease must be incidental to the character of the business and not independent of the relation of employer and employee. The disease need not have been foreseen or expected but after its contraction must appear to have had its origin in a risk connected with the employment and to have flowed from that source as a natural consequence. The burden of proof shall be upon the claimant to establish each and every such fact by competent medical evidence."[7]

Similarities Between Workmen's Compensation and Occupational Disease Coverage

Application to Employers. Both acts apply to the same employers. All public employers (the state and political subdivisions) and all other employers with four or more employees are subject to the provisions of the workmen's compensation and occupational disease acts. Employers of private domestic servants or farm and ranch labor are specifically excluded, regardless of the number of employees. Employers who are not subject to this legislation may elect to be covered by both acts. Colorado is one of 25 states which has elective coverage rather than compulsory coverage for employers subject to

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5. 81-18-4 (2) Colorado Revised Statutes, 1953.
6. 81-18-4 (7) Colorado Revised Statutes, 1953.
7. 81-18-10 (1) Colorado Revised Statutes, 1953.

workmen's compensation and occupational disease legislation. A private employer with four or more employees may elect not to accept coverage; but if he refuses such coverage, he is deprived of the three standard common law defenses[8] in any court action brought by one of his employees for recovery for an accidental injury or occupational disease. The denial of these defenses makes it much more difficult for an employer to win a court action, and therefore has the effect, at least in theory, of discouraging employers subject to the provisions of the two acts from rejecting coverage. Any employee of a covered employer may also elect not to accept coverage. But if he does, the employer may use the three common law defenses in any court action brought by the employee for recovery for injury or occupational disease. In other words, workmen's compensation and occupational disease legislation is designed as the exclusive remedy for employment-connected injuries and diseases, and the statutory provisions relating to the common law defenses are included to achieve this end.

Benefits. Benefits under both acts are similar with respect to the following: 1) total disability and death benefits; 2) funeral and burial benefits; and 3) medical and hospitalization benefits. The maximum benefit for death and total disability is $12,598.25, with the maximum weekly payment $40.25. Five hundred dollars in burial benefits is provided, and there is a $1,500 monetary limit and a six months time limit on medical and hospital benefits, except that under the occupational disease act an additional $500 may be allowed if the Industrial Commission finds that there are substantial prospects that the employee's condition will be improved materially by such expenditure.

Differences Between Workmen's Compensation and Occupational Disease Coverage

Occupational disease coverage is more limited in certain important respects than is workmen's compensation. Benefits for both temporary and permanent partial disability are provided in workmen's compensation coverage but are not provided in occupational disease legislation.

Statute of Limitations. Claims for accidental injuries must be filed within one year after the injury or the death resulting therefrom. The commission may extend this period an additional year if it finds that a reasonable excuse exists for having failed to file the claim within the one year limit and that the employer's rights have not been prejudiced thereby; however, any disability beginning more than five years after the date of accident shall be conclusively presumed not to be due to the accident. In contrast, the occupational disease act requires that disablement, other than from silicosis or asbestosis,[9] must have resulted within 120 days from the date of the employee's last injurious exposure to such disease while actually working for the employer against whom

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8. (1) The employee assumed the risk of the hazard complained of as due to the employer's negligence. (2) The injury was caused, in whole or in part, by the want of ordinary care of a fellow servant. (3) The injury or death was caused, in whole or in part, by the want of ordinary care of the injured employee where such want of care was not wilful. Prior to the passage of workmen's compensation legislation, these defenses were used successfully by employers in denying liability in court cases brought by injured employees.

9. Provisions and limitations applying specifically to asbestosis and silicosis will be covered in later sections of this report.

compensation is claimed. Further, a claim, other than for silicosis and asbestosis, must be filed within 60 days after disablement, except for poisoning from benzol and its derivatives, for which there is a 90-day limit.

The occupational disease act is more restrictive as to eligibility for total disability compensation. As indicated above, to be totally disabled from an occupational disease, a claimant must be incapable of performing any work for remuneration or profit. No such limitation is contained in the workmen's compensation act. The statutory provision applying to the conditions which must exist for an occupational disease to be compensable are quite extensive. The workmen's compensation act requires only that the injury or death be proximately caused by accident arising out of and in the course of employment and not be self-inflicted.

Colorado's subsequent injury fund applies only to accidental injuries. Two important elements are embodied in the subsequent injury fund principle: first, that the injured worker who had a previous employment-connected physical impairment should be paid full compensation to which he would be entitled for the combined disability; and second, that the employer should be liable only for the compensation which is payable for the subsequent injury. The difference in compensation is made up from the subsequent injury fund, which may be financed in a number of ways. The usual method, which is followed in Colorado is through payment of a lump sum into the fund by employers and insurance carriers for each employment-connected death of a covered employee who leaves no beneficiary.

Changes in Colorado Occupational Disease Legislation

Changes in the occupational disease act have been primarily of two kinds: 1) the addition of diseases to the schedule coverage list; and 2) increases in compensation, death benefits, and medical benefits comparable to increases also provided in the workmen's compensation act. Following is a brief resume of amendments to the occupational disease statutes:

1951. Maximum compensation for total disability was increased from $4,375 to $8,764, with a similar increase in death benefits. Three diseases were added to the schedule: poisoning or disease caused by exposure to radioactive materials, substances, or machines, or fissionable materials; anthrax; and dermatitis when due to infection or inflammation of the skin due to oils, cutting compounds, lubricants, solvents, synthetic cleaning compounds, and detergents.

1953. Burial and funeral benefits were increased from $125 to $150, and medical-hospitalization maximum benefits were increased from $500 to $1,000. Maximum death benefits and compensation for total disability were increased from $8,764 to $9,311.75. The section which required a disability period of 60 days before compensation payments could be made was repealed, as was a provision which prohibited any payment for the first 30 days of disability. The provision barring any other remedy for occupational disease disability for covered employers and employees was limited only to covered diseases. This change was designed to make it possible for employees to bring court action for disability resulting from occupational diseases not included in the schedule.

1955. Burial expenses were increased from $150 to $350. Maximum death benefits and compensation for total disability were increased from $9,311.75 to $9,859.50.

1957. Bursitis, synovitis, and teenosynovitis were added to the schedule. Maximum death benefits and compensation for total disability were increased from $9,859.50 to $11,466. Medical-hospitalization benefits were increased from a maximum of $1,000 to $1,500, and funeral expenses were increased from $350 to $500.

1959. The maximum death benefits and compensation for total disability were increased from $11,466 to $12,598.25. The Industrial Commission was authorized to provide additional medical-hospitalization benefits to a maximum of $500, if it finds that there are substantial prospects that the condition of the employee will be materially improved (above the $1,500 maximum provided in 1957).

Concern Over Occupational Disease Coverage Limitations

Legislation to broaden occupational disease coverage has been introduced during several legislative sessions since the initial passage of the act in 1945. Generally, this proposed legislation went much further in liberalizing the act than those changes (listed above), which were approved by the General Assembly. Replacement of scheduled coverage with comprehensive coverage, coverage for partial disability, and liberalization of the statute of limitations have been among the chief objectives of these legislative proposals. Although liberalization of occupational disease coverage has been a matter of concern at every regular legislative session in the past ten years, only once before has there been an interim legislative study on this subject.

1951 Interim Legislative Session

The 38th General Assembly (1951) passed a House Joint Resolution authorizing an interim committee for the study of industrial diseases, and this committee was directed to report back to the 39th General Assembly in 1953. The committee was composed of three members of the House, three members of the Senate, and two persons appointed by the governor. The committee membership included: Dr. Ralph M. Stuck, representative from Englewood; Representative W. J. Brown, Eaton; Representative Frank Burk, Denver; Senator William Carlson, Greeley; Senator Peter Culig, Pueblo; Dr. Edward Elliff, senator from Sterling; C. H. Groves, assistant secretary, Colorado Fuel and Iron Corporation; and Dr. Robert F. Bell, acting head, Division of Industrial Medicine, University of Colorado Medical Center. The latter two members were named by Governor Thornton.

This committee held five meetings between March and December 1952. As a result of its deliberations, four legislative measures concerning occupational disease coverage were recommended, and all four were passed by the General Assembly. (See summary above of 1953 changes in the occupational disease act.)

In its brief report to the Colorado General Assembly, the committee stated that it recommended that certain amendments be made to the Colorado Occupational Disease Disability Act, and that these amendments, and only these amendments, be adopted by the General Assembly.[10] While no mention was made of any study or consideration given by the committee to blanket coverage, partial disability benefits, liberalization of the statute of limitations, and other matters relating to a broadening of the act, the above statement implies that some of these subjects were considered, at least to the extent that the committee saw fit to recommend against General Assembly approval of any changes in the occupational disease act other than those it had proposed.

Liberalization of occupational disease coverage, as might be expected, has received the continuous endorsement of organized labor, especially with respect to the provision of comprehensive coverage. Representatives of industrial and business concerns and associations have been strongly opposed to the provision of blanket coverage and have usually opposed liberalization of the act generally, except for occasional changes in disability, death, funeral, and medical benefit limits and the addition of certain diseases to the schedule. These opposing points of view are covered in detail in Chapter III of this report with respect to various proposals for liberalizing occupational disease coverage. They are mentioned here to point up the wide area of disagreement between the two groups most directly concerned with occupational disease legislation.

Current Legislative Concern With Occupational Disease Coverage

There are many other reasons for legislative concern over the adequacy of Colorado's occupational disease coverage besides the controversy between labor and industry. Colorado is among those states with the most restrictive occupational disease legislation. With respect to some provisions, Colorado's more restrictive legislation is similar to that of a majority of the states. With respect to most other provisions, however, Colorado is grouped with a minority of the states.

Colorado is one of 18 states which have schedule coverage instead of comprehensive coverage. It is one of 22 states with either time or money limits or both on medical benefits; 26 states have unlimited medical coverage. Colorado is one of 12 states which do not provide for any compensation for partial disability. It is one of four states which require that an occupational disease claim be filed within a period of less than a year after the time of disablement. It is one of 21 states which permit workers to sign waivers to obtain employment,[11] and is one of 12 states in which this provision applies to all occupational diseases.

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10. Colorado 39th General Assembly, House Journal, pp. 50-51.
11. Early in the history of workmen's compensation legislation, a number of states enacted provisions permitting handicapped workers to waive their rights to benefits if they were injured on the job. This was done because of employers' reluctance to hire or keep an employee whose physical condition might result in an extra insurance risk.

Approximately half of the states, including Colorado, have special restrictions applying to dust diseases, most specifically, silicosis and asbestosis. Colorado is among the 30 states which have narrow subsequent injury fund coverage. It is also one of 28 states which do not provide for maintenance assistance during vocational rehabilitation.

There is concern as well because of the differences between workmen's compensation coverage and occupational disease coverage, with the former being more liberal in application. Other reasons why a re-examination of occupational disease coverage is appropriate at this time include:

1) the development of new industrial processes with the accompanying introduction of new toxic materials;

2) the increased industrial production and use of radioactive materials;

3) the industrial growth and urbanization of Colorado during the past decade; and

4) the rapidly rising costs of medical treatment and the complexity of many employment-connected diseases, which may be latent in appearing and difficult to diagnose.

Analysis of Occupational Disease Claims Filed With the Industrial Commission From July 1, 1958 Through December 31, 1959

Four hundred twenty-three occupational disease claims were filed with the Industrial Commission from July 1, 1958 through December 31, 1959. An analysis of these claims was made with the cooperation of the Industrial Commission, and the three accompanying tables were prepared based on this analysis. Table I shows the total number of claims filed by disease, according to the action taken by the insurer involved. Table II shows (by disease) the type of benefits paid in all cases in which liability was admitted by the insurer. Table III shows the disposition of all cases in which liability was not admitted by the insurer.

Procedure for Occupational Disease Claims

A brief explanation of the procedures followed in the filing and processing of occupational disease claims will serve as a background for the discussion of the information contained in the three tables.

The first action taken is the notification of disease contact filed with the Industrial Commission by the employer; these notifications are made on forms provided by the Industrial Commission and indicate that either an injury or an occupational disease is involved. The commission then mails claim forms to the employee named on the notification form. The claim must be filed with the commission within 60 days after initial contact with or disablement by the disease.[12] If a claim is filed with the commission, a referee then sets a

12. Except for poisoning from benzol and its derivatives for which the limit is 90 days and silicosis and asbestosis in which cases disablement must result within two years of the last injurious exposure.

hearing date for the claim and serves a hearing notice upon both the employee and the insurer. Unless liability is admitted by the insurer prior to the hearing date, the hearing is conducted by the referee to determine: 1) if there is a valid occupational disease claim involved; and 2) the type and amount of compensation and/or medical benefits to be awarded.

Diseases For Which Claims Filed and Denial of Liability

Slightly more than 60 per cent (or 255) of the 423 claims filed during the 18-month period were for dermatitis. No other disease accounted for as much as seven per cent of the claims filed. There were 29 claims for disability resulting from lead poisoning (slightly less than seven per cent of the total), 24 claims for bursitis (5.5 per cent of the total), and 17 claims for silicosis (four per cent of the total). Many diseases covered by the Colorado schedule, if represented at all, show only one or two claims filed. This information is contained in Table I, as is an analysis of initial admission of liability by insurance carriers.

Liability was denied initially in 295 claims or almost 70 per cent of the 423 filed. Liability was denied in 175 of the 255 dermatitis claims, 22 of the 29 lead poison disability claims, 15 of the 24 bursitis claims, 13 of the 17 silicosis claims, and in 70 of the other 93 claims filed. General liability (medical benefits and compensation) was admitted initially in 53 cases, and limited liability (medical benefits only) was admitted initially in 75 cases.

Medical benefits were paid in all 138 cases in which liability was admitted by the insurer. (The number of claims in which liability was admitted in Table I is 10 less than in Table II, because liability was originally denied in these ten cases as indicated in Table I but was later admitted before a claim was filed.) Temporary compensation was paid in 60 of these cases and permanent compensation in only three.

Industrial Commission Hearings

After liability was originally denied, only 55 of the 285 claimants followed through by filing a claim form as shown in Table III. This number represented only 19 per cent of the claims originally denied. Hearings were held on 43 of these 55 claims, with 16 claims or 37 per cent denied by the referee. In those 27 claims in which the referee decided for the claimant, medical benefits were awarded in 22, temporary compensation in 12, and permanent compensation in four.

Silicosis Cases

There were 17 silicosis cases filed from July 1, 1958 to December 31, 1959. Three of these cases were fatalities, which involved dependents' claims for compensation. Hearings were held on 12 cases, with compensation denied by the referee in two. Medical benefits were allowed in eight cases and permanent compensation in four cases. In one case in which compensation was denied, the referee found that the claimant was only "partially disabled" and was not eligible for benefits under the law. In the other case compensation was denied because the referee found the claim was not filed within the statutory time limit after contraction of the disease. Permanent compensation was allowed by the referee in two of the three fatal cases, but disallowed in one case, because silicosis was not found to be the cause of death.

TABLE I

OCCUPATIONAL DISEASE CLAIMS FILED WITH
THE INDUSTRIAL COMMISSION
July 1, 1958 through December 31, 1959

Disease	Total Claims	Admission of General Liability[1] No.	%	Admission of Limited Liability[2] No.	%	Liability Denied No.	%
Dermatitis	255	23	9.0	57	22.4	175	68.6
Lead Poison	29	5	17.2	2	6.9	22	75.7
Bursitis	24	3	12.5	6	25.0	15	62.5
Silicosis	17	3	17.6	1	5.8	13	76.5
Teenosynovitis	9	1	11.1			8	88.8
Cement Poison	6	1	16.6			5	83.3
Phosphate Poison	5	3	60.0	1	20.0	1	20.0
Tendonitis	3	1	33.3			2	66.7
Pneumonia	3					3	100.0
Vanadium Poison	3	2	66.7			1	33.3
Hepatitis	2					2	100.0
Anthrax	2	1	50.0	1	50.0		
Chemical Fibrosis	2	1	50.0			1	50.0
Poison Ivy	2			2[4]	100.0		
Emphysema	2					2	100.0
Acne	1					1	100.0
Nephritis	1	1	100.0				
Blood Poison	1					1	100.0
Nyalgia	1	1	100.0				100.0
Epicondylitis	1					1	100.0
Brusilliosis	1	1	100.0				
Sulfate Poison	1					1	100.0
H.E.F. Toxic Poison	1					1	100.0
Sodium Saliofluoride Poison	1					1	100.0
Chrome Poison	1			1	100.0		
Carbon Monoxide	1					1	100.0
Myositis	1	1	100.0				
Tetchlorodane Poison	1					1	100.0
Chlorine Poison	1					1	100.0
Trichloroetheline Poison	1					1	100.0
Tuberculosis	1					1	100.0
Arsenic Poison	1	1	100.0				
Hydroxide Poison	1					1	100.0
Isoyanate Poison	1					1	100.0
Paronchia	1					1	100.0
Other[3]	39	4	10.3	4	10.3	31	79.5
Total	423	53	12.5	75	17.7	295	69.7

1. General liability includes admissions of liability for all claims--medical and disability benefits.
2. Limited liability includes admissions of liability for medical expenses only.
3. Includes cases not clearly indicated and cases where no occupational disease was listed.
4. Liability admitted as accidental injury (one exposure) rather than as occupational disease.

TABLE II

OCCUPATIONAL DISEASE CLAIMS, LIABILITY ADMITTED
FILED WITH THE INDUSTRIAL COMMISSION
July 1, 1958 through December 31, 1959

Disease	Total Claims No.	Medical Benefits[1] No.	%	Temporary Compensation No.	%	Permanent Compensation No.	%
Dermatitis	84	84	100.0	28	33.3		
Bursitis	10	10	100.0	3	33.3		
Silicosis	5	5	100.0	2	40.0	3	60.0
Lead Poison	8	8	100.0	6	75.0		
Phosphate Poison	4	4	100.0	3	75.0		
Teenosynovitis	4	4	100.0	3	75.0		
Poison Ivy[2]	2	2	100.0				
Anthrax	2	2	100.0	1	50.0		
Vanadium Poison	2	2	100.0	2	100.0		
Nephritis	1	1	100.0	1	100.0		
Brusilliosis	1	1	100.0	1	100.0		
Tendonitis	1	1	100.0	1	100.0		
Chrome Poison	1	1	100.0				
Tetchlorodane Poison	1	1	100.0	1	100.0		
Arsenic Poison	1	1	100.0	1	100.0		
Chemical Fibrosis	1	1	100.0	1	100.0		
Cement Poison	1	1	100.0				
Other	9	9	100.0	6	66.7		
Total	138	138	100.0	60	36.2	3	2.2

1. Medical expenses were paid on all cases where liability was admitted.
2. Compensated as accidental injury.

TABLE III

OCCUPATIONAL DISEASE CLAIMS, LIABILITY DENIED
FILED WITH THE INDUSTRIAL COMMISSION
July 1, 1958 through December 31, 1959

Disease	Denied No.	Claim Filed[1] No.	Claim Filed[1] %	Hearing[1] No.	Hearing[1] %	Referee Decision: Denied No.	Referee Decision: Medical Benefits No.	Referee Decision: Temp. Comp. No.	Referee Decision: Perm. Comp. No.
Dermatitis	171	16	9.4	8	4.7	3	5	3	
Lead Poison	21	1	4.8	1	4.8		1	1	
Bursitis	14	3	21.4	2	14.3		2		
Silicosis	12	12	100.0	12	100.0	2	5	1	4
Teenosynovitis	5	3	60.0	2	40.0		2	2	
Cement Poison	5	1	20.0	1	20.0	1			
Pneumonia	3	1	33.3	1	33.3	1			
Tendonitis	2	1	50.0	1	50.0	1			
Hepatitis	2	2	100.0	1	50.0	1			
Emphysema	2	2	100.0	2	100.0	2			
Acne	1	1	100.0	1	100.0	1			
Nyalgia	1	1	100.0	1	100.0		1	1	
Sulfate Poison	1								
H.E.F. Toxic Poison	1								
Sodium Salio-fluoride Poison	1	1	100.0	1	100.0		1	1	
Carbon Monoxide	1	1	100.0	1	100.0	1			
Myositis	1	1	100.0	1	100.0		1		
Tuberculosis	1	1	100.0	1	100.0	1			
Chlorine Poison	1								
Trichloretheline Poison	1								
Hydroxide Poison	1	1	100.0	1	100.0		1	1	
Isoyanata Poison	1	1	100.0	1	100.0		1	1	
Phosphate Poison	1								
Paronchia	1								
Chemical Fibrosis	1	1	100.0	1	100.0	1			
Blood Poison	1	1	100.0						
Vanadium Poison	1								
Epicondylitis	1								
Other	30	3	10.0	3	10.0	1	2	1	
Total	285	55	19.3	43	15.1	16	22	12	4

1. Percentage figures are based on the percent of claims filed and hearings held of the total cases where liability was denied.

Summary of Claim Analysis

It is difficult to draw definite conclusions from this analysis, because of the lack of sufficient background information in many instances; however, some general observations can be made:

1) Very few occupational disease claims are brought initially when compared with the size of the state's work force and the number of workmen's compensation claims filed during the same period (approximately 90,000).

2) The greatest proportion of claims appear to have been brought for the purpose of obtaining medical benefits rather than compensation, possibly because disability in most instances was not total, even temporarily.

3) Only a small proportion of claimants follow through after liability is initially denied by the insurance carrier. Two observations may be made, both of which may be valid in varying degrees: First, some of these claims may have been spurious or so difficult to prove that it was felt nothing could be gained by having these cases decided at a hearing. Second, some employees may not be acquainted with the provisions of the act with respect to their rights and the proper procedure to follow after the original denial of liability.

4) For one reason or another benefits were paid in only 165 or 39 per cent of the 423 cases filed during the 18-month period included in the analysis. However, in 230 or 54 per cent of these cases, the claimant never took any further action after the initial filing, so that some sort of award was made in 85 per cent of the claims in which liability was originally admitted or in which further action was taken by the claimant after original denial of liability.

II

OCCUPATIONAL DISEASE INSURANCE RATES AND EXPENDITURES

It has been pointed out that workmen's compensation and occupational disease legislation is designed as the exclusive remedy for employment-connected injuries and disabilities and that such legislation is based on the theory that the expenses for these injuries and disabilities are a cost of production. None except the largest employers subject to workmen's compensation and occupational disease legislation has the resources to cover possible liabilities, i.e., to self-insure. Therefore, the general practice is for employers to purchase insurance which will protect them against the liabilities incurred for work injuries and disabilities.

In some states workmen's compensation and occupational disease insurance must be purchased from either a mutual or stock insurance company because there is no state compensation insurance fund. In a few states the state compensation insurance fund has a monopoly; except for self-insurers, all insurance must be purchased from the state fund. In 11 states, including Colorado, employers have a choice of purchasing insurance either from private carriers or the state fund. Those employers who insure with the state fund pay a premium which is 70 per cent of that charged by private carriers. State funds are able to offer a reduced premium because they are operated on a non profit-making basis.

In Colorado, approximately 64 per cent of the employers insure with the state fund. The remainder either carry their insurance with a private company or are self insured. One hundred forty-six stock and mutual insurance companies currently underwrite workmen's compensation and occupational disease insurance for Colorado employers, and 38 companies self insure. Included in this latter group are such industrial and business concerns as Armour and Company, Colorado Fuel and Iron Corporation, Denver Tramway, Gates Rubber Company, Holly Sugar, Humble Oil, Montgomery Ward, Mountain States Telephone and Telegraph, National Biscuit Company, and Public Service.

The Rate Making Process

The rates for Colorado's workmen's compensation and occupational disease insurance are set by the National Council on Compensation Insurance in New York. The Mountain States Compensation Rating Bureau with headquarters in Denver is the regional representative of the National Council. The National Council was organized over 30 years ago as a central statistical and coordinating body for rate-making purposes in the field of workmen's compensation. Its primary purpose and function is "the development of and securing for its membership, rates for workmen's compensation insurance that will result in a reasonable underwriting profit."[1] Its membership is composed of most of the private companies, stock, mutual and reciprocal exchanges underwriting workmen's compensation risks in the United States, as well as a number of state funds. It is the official rate-making agency for at least 24 states and serves in an advisory

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1. National Council on Compensation Insurance 1954 Annual Report, p. 7, as quoted in Workmen's Compensation in New Mexico, New Mexico Legislative Council, 1955, p. 66.

capacity in almost all other jurisdictions.[2]

In the process of rate making for workmen's compensation and occupational diseases, all occupations or industries are classified. These classifications are made in several different ways. For example, a classification may include all businesses where workers are exposed to the same industrial process such as refining; or a classification may cover a complete industry such as jewelry manufacturing; or individual occupations such as professors or school teachers may constitute a separate classification. The National Council computes a premium rate for each classification. This computed rate is based on each $100 of payroll and in Colorado varies from $.08 (auditors and accountants, church employees, college professors and school teachers, and telephone and telegraph company office employees) to $22.74 (stevedoring: handling of explosives).

Factors Involved in Rate Making

The following excerpts from a report of the New York Compensation Insurance Rating Board present a brief outline of some of the factors and considerations involved in the rate-making process.[3]

> The initial step in rate-making is the computation of the aggregate amount of money needed for losses which it is anticipated will be incurred during the period the proposed rates will be in effect. This procedure is known as determining the Rate Level. The basic figure used in the determination of the Rate Level is the amount of incurred losses for the latest policy year available. Policy year loss experience consists of all incurred losses arising under policies effective in any given calendar year. Thus a claim arising under a policy written in 1953, will be charged to policy year 1953, even though the accident occurred during 1954.
>
> Policy year loss experience has not matured sufficiently, however, to be used without adjustment. For example, in the rate filing made on July 1, 1954, the basic policy year employed was the period between July 1, 1951 and June 30, 1952. The only report available under policies effective during this period would be a first report, and consequently would be too premature to give an accurate picture of the ultimate claims that might later be reported. Permanent total cases may develop on later reports into death cases where payments may extend over the lifetime of a widow. Other cases reported as minor may subsequently require expensive long-term medical care. Consequently, the Rating Board relies on the experience of the previous five policy years to adjust the selected policy year loss experience. This adjustment is

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2. Workmen's Compensation in New Mexico, New Mexico Legislative Council, 1955, p. 66.
3. Costs, Operations, and Procedures Under the Workmen's Compensation Law of the State of New York, Report to the Governor, January 28, 1957, Appendix D, pp. 132-142.

accomplished by the calculation of a Loss Development Factor, which is computed by averaging the changes in total incurred losses under policies written in the five previous policy years from first to fifth reports. This average development, expressed as a percentage factor, is applied to the selected policy year loss experience, thereby artificially aging such experience to project probable future development. Development factors are calculated and applied separately for medical and indemnity losses.

...In addition to maturing policy data to the level indicated by the past, it is also necessary to adjust such data to meet any changes in the benefit level that may have taken place. If legislation has increased the benefits payable to workmen in the period for which the rates are to be effective, the selected policy year data must be projected to the higher level. Statistical studies are prepared and analyzed by the Rating Board to evaluate in terms of cost the effect of such changes in the compensation law. The end product of these studies is known as the Law Amendment Factor, a percentage modifier which is applied to the previous policy year losses to span the breach between the old and new benefit levels.

The Rating Board, however, does not rely solely on policy year indications in determining the Rate Level. Calendar year experience is also considered. This experience includes all losses incurred and premiums earned during the calendar year without regard to the policies to which such transactions apply. Thus an accident occurring during 1954 will be reported under calendar year 1954, even though the policy was written during 1953. This experience is more recent than that indicated by the selected policy year, since the experience of the immediately preceding calendar year normally is available. The losses reported during such calendar year must be adjusted as were the policy year losses to meet any required new benefit level.

The policy year experience and the calendar year experience are then averaged by a weighting procedure in which the indications of the policy year are given a weight of 45% and those of the most recent calendar year a weight of 55% to produce the Rate Level for the future period.

Thus far this description of the rate-making process, has been confined to the loss, or "pure premium", provision in the rates. An adequate rate, however, must also provide for the expenses incurred by the insurance carrier. These costs include acquisition, investigation and adjustment of claims, general administration, inspection and bureau expenses, taxes, and a statutory provision for profit or contingencies.

...The provision for the various operating costs of the carriers (called the Expense Loading) is based on nation

wide averages of the non-participating stock carriers. These loadings are introduced into the rating structure as a fixed percentage of the portion of the rate provided for aggregate losses.

...It is self-evident that the degree of hazard involved in compensation insurance varies according to the nature of the industry. It would be discriminatory, therefore, to charge the same rate to each employer without giving consideration to the type of risk concerned. For this purpose, risks are grouped according to types of industry, processes used, or by occupations. In New York, there are approximately 700 of these subdivisions, known as "classifications."

The mere computation of the aggregate sum of money needed to cover losses and expenses does not effectively guarantee that the rates for the individual classifications will have the proper relativity, i.e., will be distributed equitably, according to the type of hazard involved. A second step in the rate-making process is therefore necessary in order to accomplish this distribution fairly among the 700 classifications. This involves a series of complex statistical operations in which the Rating Board considers the actual experience of each individual classification over a period of five prior policy years, tempered by judgment or credibility modifiers if the experience of a classification is deemed insufficient to be relied upon exclusively. The product of this operation is the Selected Pure Premium or loss element underlying the rate of the individual classification.

The New York report goes on to explain how the Selected Pure Premium is compared with the Rate Level and the adjustments which are made in the Selected Pure Premium to provide the aggregate amount of money needed to pay claims and expenses and to realize a reasonable profit. In recognition of the fact that incurred losses are, in proportion to the premium paid, higher for smaller risks than for large, an additional dollar amount known as a Loss Constant is added to risks producing an annual premium of less than $500, and the Rate Level is adjusted to compensate for the addition of the Loss Constants. The result of all these complicated computations is the manual rate.

The manual rate may be further modified by experience rating or retrospective rating. Both of these modifications usually apply only to those employers who pay the largest insurance premiums. An employer subject to experience rating may have his manual rate adjusted up or down depending on the variation of his loss experience when compared with the average loss experience in his classification. Retrospectively rated risks are charged tentatively on a prospective basis, subject to adjustments at the end of each year, depending on the loss experience of the insured.

From the foregoing brief description of the rate-making process, it can be seen that it is extremely complicated and based on a number of factors including the industrial category of the employer, his loss experience, the loss experience of his classification, and legislative changes, among others.

Occupational Disease Rates

The insurance rates paid by Colorado employers include both workmen's compensation and occupational diseases. Occupational disease coverage is not listed separately, because, except for 22 classifications, the occupational disease rate is only $.01 per $100 of payroll. Table IV shows those classifications for which the occupational disease rate is more than $.01 per $100 of payroll.

TABLE IV

CLASSIFICATIONS IN COLORADO
WHICH HAVE AN OCCUPATIONAL DISEASE PREMIUM RATE
IN EXCESS OF $.01 PER $100 OF PAYROLL

Classification	Rate Per $100 of Payroll
Emery Works	$.98
Abrasive or Sand Blasting Operators	.76
Stone Cutting or Polishing	.66
Cleaning or Renovating Outside Surfaces of Buildings	.46
Asbestos Goods Manufacturing	.28
Foundries--Steel Castings	.19
Mining, Not Otherwise Classified, Not Coal, With Shafts	.15
Foundries--Iron	.15
Foundries--Non-Ferrous Metals	.15
Tunneling--Not Pneumatic	.15
Shaft Sinking--All Work to Completion	.15
Private Residences--Inservants	.15
Private Residences--Outservants	.15
Stone Crushing--No Quarrying	.11
Brick Manufacturing--Fire, Enamel	.09
Radiator or Heater Mfg.--Cast Iron	.08
Private Residences--Occasional Inservants	.08
Private Residences--Occasional Outservants	.08
Mining, Not Otherwise Classified, Surface, Not Coal	.07
Rock Excavation--Not Tunneling or Street Or Road Construction	.07
Quarries, Not Otherwise Classified	.07
Street or Road Construction--Rock Excavation	.07

1960 Revision of Colorado Insurance Rates

The latest revision in Colorado insurance rates for workmen's compensation and occupational diseases was submitted to the Industrial Commission by the National Council of Compensation Insurance on May 25 of this year. These rates were approved by the commission and went into effect on July 1 and will apply throughout the 1960-1961 premium year. These revised rates represent an average decrease of 2.7 per cent from the rates in effect from July 1959 through June 1960. However, this decrease did not apply equally to all industries and classifications. By industry group the average changes in premium rates which went into effect on July 1 were: manufacturing, 10.1 per cent decrease; contracting, 0.2 per cent decrease; mining and ore milling, 11.2 per cent increase; and all others, 2.8 per cent decrease. Within each industry group the changes varied from the average according to the kind and volume of experience in each classification.

There are some 650 classifications used in Colorado for workmen's compensation and occupational diseases insurance rates. Under the new rate revision approximately 60 per cent of these classifications have rates over $1.00 per $100 of payroll, with more than half of these between $1.00 and $2.00. Fourteen per cent of all the classifications fall between $.76 and $.99 per $100 of payroll, approximately 13 per cent between $.51 and $.75, nine per cent between $.26 and $.50, and four per cent under $.25. Roughly a third of all the classifications have rates between $1.00 and $2.00, almost 20 per cent are between $2.00 and $5.00, six per cent are between $5.00 and $10.00, and only two per cent are over $10.00. Appendix A lists and identifies those classifications with rates in excess of $1.00 per $100 of payroll. It should be remembered that these are the premium rates charged by private insurance carriers and that state fund rates are 70 per cent of those charged by private carriers. Appendix A also shows the reduced rate which would apply if the insurance were underwritten by the state fund.

It is interesting to note that only 20 of the 394 classifications with rates in excess of $1.00 per $100 of payroll have occupational disease insurance rates of more than $.01. In only five of these 20 classifications is the occupational insurance rate as much as 10 per cent of the over-all rate: flint, spar, and silica grinding, 38 per cent; stone cutting or polishing, 30 per cent; asbestos goods manufacturing, 20 per cent; non ferrous foundries, 11 per cent; and steel casting foundries, 10 per cent. These data are also found in Appendix A.

Effect of Proposed Legislative Changes on Insurance Rates

Both the National Council on Compensation Insurance and the Mountain States Compensation Rating Bureau have assisted in this study by supplying data in response to questions regarding the effect of possible legislative changes on occupational disease insurance rates. These data are based on Colorado experience and not on the experience in other states, because it is not feasible to compare states in this way; legislative provisions are different, as is industrial composition, size of work force, and other factors which bear on workmen's compensation and occupational disease coverage.

Specific proposals were submitted to the two rating agencies, covering several possible changes under each of the following: extent of coverage, medical-hospital benefits, statute of limitations, and partial disability coverage. More general questions regarding the possible effect of these proposals on rates were also submitted to Ashley St. Clair, counsel for Liberty Mutual, one of the largest private underwriters of workmen's compensation and occupational disease insurance. The comments and data received are discussed in more detail in the following chapter of this report. It is important to point out here, however, that with the exception of medical-hospital limits, it is extremely difficult to calculate the effect of legislative change on insurance rates, because many of the proposed measures cannot be evaluated mathematically without actual experience upon which to base computations. In its last communication on this subject, the National Council had this to say:[4]

> With the exception of increasing the medical monetary amounts, all of the proposed measures on diseases are not susceptible to mathematical valuation and we therefore are unable to advise what the ultimate effect on rates will be when experience developed under this program enters into the ratemaking picture. In the absence of reliable statistical data it is entirely possible that the carriers would not request an immediate effect on rates if any of the proposed measures were enacted.
>
> The present disease act in Colorado is considered fairly comprehensive and the proposed measures would not be expected to produce an appreciable increase in total cost (traumatic and disease combined). On a classification basis, however, this may not be the case for industries such as mining, which has a high degree of disease hazard.

There was considerable disagreement expressed at the several committee hearings as to the effect on insurance rates of the various proposals to liberalize the occupational disease act, particularly with respect to adoption of comprehensive coverage. With the exception of liberalization of medical-hospitalization benefits, the National Council (through no fault of its own) was unable to develop data which would conclusively support either of the conflicting points of view. The National Council did indicate, however, that the over-all cost increase would probably not be appreciable and that insurance carriers might not request immediate increases, but might instead wait until the experience under the new legislation could be evaluated statistically. From the questions submitted to the National Council, it may be assumed that this comment was based on the expected passage of legislation to: 1) increase the number of diseases covered; 2) liberalize medical-hospitalization benefits; 3) extend the statute of limitations; and 4) provide some sort of partial disability coverage.

Any rate increase resulting from liberalization of the occupational disease act would be offset, at least in part, by the decrease embodied in the latest rate revision, which applied to most classifications. On the other hand, rates for some classifications were increased, especially mining, and the rates for the mining

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4. Letter from R. G. Shurtleff, Manager, Mountain States Compensation Rating Bureau, August 16, 1960.

classifications would be affected substantially by changes in the occupational disease act, especially if these changes included provision for partial disability coverage, extension of the statute of limitations, and liberalization of other restrictions applying to dust disease coverage.

Expenditures for Occupational Diseases

An inquiry was sent to each state requesting information on annual expenditures for occupational disease claims and medical benefits, as well as for workmen's compensation claims and medical benefits. The purpose of this inquiry was to determine the proportion of all compensation expenditures which was attributable to occupational diseases in states with different provisions for occupational disease coverage.

Complete usable data was received from 15 states in addition to Colorado. Five states were selected along with Colorado for inclusion in this report. These states include three with blanket coverage (Florida, Missouri, and Nebraska) and three with schedule coverage (Colorado, Arizona, and North Carolina).

During the committee hearings, conflicting statements were made regarding expenditures for occupational disease benefits in blanket coverage states as compared with schedule coverage states. Those opposing blanket coverage said that expenditures for occupational disease benefits would increase substantially (as would insurance rates). Those favoring blanket coverage agreed that there would be some increase in expenditures, but were of the opinion that the increase would not be substantial either in dollar amount or in the proportion these expenditures are of all expenditures for injuries and disabilities.

If either of these assumptions is valid, either expenditure data should show relatively little difference between blanket and schedule states, or blanket states should show much larger expenditures. Table V shows the following information for each of the six selected states:

1) total expenditures--all claims by year 1954-1958
2) total expenditures--occupational disease claims by year 1954-1958
3) proportion 2) of 1)
4) per capita total expenditures for all claims
5) per capita total expenditures for occupational disease claims
6) compensation expenditures--all claims by year 1954-1958
7) compensation expenditures--occupational disease claims by year 1954-1958
8) proportion 7) of 6)
9) medical-hospital benefits--all claims by year 1954-1958
10) medical-hospital benefits--occupational disease claims by year 1954-1958
11) proportion 10) of 9)

When per capita expenditures for occupational diseases are examined, the six states rank in the following order:

1) Arizona - schedule
2) Florida - blanket
3) Nebraska - blanket
4) North Carolina - schedule
5) Missouri - blanket
6) Colorado - schedule

(S) -- Scheduled
(B) -- Blanket
O.D.-- Occupational Diseases

TABLE V

ANNUAL EXPENDITURES FOR WORKMEN'S COMPENSATION AND OCCUPATIONAL DISEASES, 1954-1958, COLORADO AND SELECTED STATES[1]

State	Population[2]	Total Expenditures All Claims[3]	Total Expenditures O.D.[3]	Total Expenditures Per Cent	All Claims Per Capita	O.D. Per Capita	Compensation All Claims[3]	Compensation O.D.[3]	Compensation Per Cent	Medical-Hospital All Claims[3]	Medical-Hospital O.D.[3]	Medical-Hospital Per Cent
Colorado (S)												
1954	1.492	$ 3,353	$ 21	.63	$2.25	$.14	$ 2,140	$ 16	.76	$ 1,213	$ 5	.41
1955	1.547	3,700	24	.65	2.39	.16	2,306	17	.75	1,394	7	.50
1956	1.612	4,062	30	.74	2.52	.19	2,480	21	.86	1,583	8.8	.55
1957	1.680	4,467	32	.72	2.66	.19	2,764	22	.79	1,704	10.3	.60
1958	1.754	5,030	36	.71	2,87	.20	3,172	25	.78	1,858	11	.59
Arizona (S)												
1954	.930	7,910	77	.98	8.50	.83	6,038	49	.82	1,871	28	1.48
1955	1.007	9,074	51	.56	9.01	.50	6,804	19	.28	2,270	32	1.39
1956	1.057	10,599	117	1.10	10.03	1.11	7,787	76	.98	2,813	41	1.46
1957	1.086	10,861	136	1.26	10.00	1.26	8,216	94	1.14	2,644	43	1.61
1958	1.136	11,665	127	1.09	10.27	1.12	8,261	67	.81	3,404	60	1.77
Florida (B)												
1954	3.389	18,915	153	.81	5.88	.45	10,825	59	.54	8,091	94	1.16
1955	3.580	21,305	168	.79	5.95	.47	12,115	63	.52	9,190	105	1.14
1956	3.885	25,777	242	.94	6.63	.62	14,490	88	.61	11,287	154	1.37
Missouri (B)												
1954	4.124	14,077	152	1.08	2.44	.37	10,337	122	1.18	3,618	30	.82
1955	4.201	15,279	93	.61	3.64	.22	11,206	69	.62	4,004	23	.58
1956	4.197	16,597	184	1.11	3.95	.44	12,332	141	1.15	4.124	42	1.03
1957	4.238	15,577	120	.77	3.68	.28	11,581	85	.74	3,910	35	.88
1958	4.256	11,762	69	.58	2.76	.16	8,631	44	.51	3,087	25	.80
Nebraska (B)												
1954	1.359	3,474	46	1.33	2.56	.34	2,176	21	.97	1,298	25	1.94
1955	1.394	3,258	45	1.39	2.34	.33	2,004	20	.98	1,255	26	2.05
1956	1.426	4,067	60	1.48	2.85	.42	2,531	26	1.04	1,535	34	2.19
1957	1.437	3,944	71	1.79	2.74	.49	2,437	34	1.39	1,508	37	2.43
1958	1.452	4,018	61	1.52	2.77	.42	2,501	28	1.10	1,518	43	2.84
North Carolina (S)												
1955	4.344	9,108	162	1.77	2.10	.38	5,941	133	2.24	3,167	29	.91
1956	4.423	9,020	142	1.58	2.04	.32	5,677	116	2.08	3,317	26	.78
1957	4.472	9,385	119	1.27	2.10	.27	5,803	79	1.38	3,583	40	1.12
1958	(Not Available)	9,993	134	1.36			6,193	101	1.64	3,801	33	.87

1. States which have already responded to the staff request for this information
2. In millions of people; source: U.S. Bureau of Census estimates except for Colorado (State Planning Division)
3. In thousands of dollars

Ranking the six states according to the proportion of all claims expenditures which are accounted for by occupational diseases the following results are obtained:

1) North Carolina - schedule
2) Nebraska - blanket
3) Arizona - schedule
4) Florida - blanket
5) Missouri - blanket
6) Colorado - schedule

Varied results are also obtained when the six states are ranked first according to the proportion of compensation expenditures attributed to occupational diseases and second, according to the proportion of health and medical benefit expenditures accounted for by occupational diseases.

Compensation	Medical-Hospital
1) North Carolina - schedule	1) Nebraska - blanket
2) Nebraska - blanket	2) Arizona - schedule
3) Missouri - blanket	3) Florida - blanket
4) Arizona - schedule	4) North Carolina - schedule
5) Colorado - schedule	5) Missouri - blanket
6) Florida - blanket	6) Colorado - schedule

Aside from Colorado's position in these rankings, there appears to be no consistency from one ranking to the next, which can be attributed to either blanket or schedule coverage. And Colorado's position may well be the consequence of limitations in the occupational disease act other than schedule coverage.

The results achieved by the various rankings of these six states indicate that cost data used in conjunction with occupational disease coverage can not be accepted without qualification and close scrutiny. It also appears that factors other than blanket or schedule coverage have an effect on occupational disease expenditures. These include, among others: 1) extent of coverage (Is law compulsory or elective? Are any employers with a small number of workers excluded?); 2) amount of compensation, ratio of weekly maximum to average weekly wage; 3) limited or unlimited hospital-medical benefits; 4) partial disability coverage; 5) time period limitations on filing claims; and 6) limitations in respect to coverage for a specific disease or category of diseases, e.g., silicosis (possible in blanket as well as schedule states).

Differences in occupational disease act provisions in the states provide a general explanation, although perhaps a partial one, for differences in occupational disease expenditures. Other factors which have a bearing, but are difficult, if not impossible, to measure include: 1) size and composition of work force; 2) industrial categories, especially hazardous industries; and 3) safety programs, devices, and precautions.

Differences in Statutory Provisions

From examination of the statutory provisions of the six states included in Table V, only some of the variations among the states can be explained. In addition to having schedule coverage, Colorado also has some of the most severe

limitations on claim filing and hospital-medical benefits among the six states, which at least in part explains the low per capita expenditures and low proportion of expenditures for occupational diseases in this state.[5] Colorado's schedule is also shorter than Arizona's and North Carolina's. Colorado covers 25 diseases in its schedule, compared with 27 for North Carolina and 36 for Arizona. Arizona, however, has radiation coverage limited to "ulceration of the skin or destruction of tissue due to the prolonged exposure to roentgenrays or radium emanations." North Carolina's provision is even more limited, covering only radium poisoning or injury by X-rays.

Arizona's position among the six states cannot be explained in terms of its statutory provisions. While Arizona has one of the most liberal workmen's compensation laws in the country, its occupational disease act is quite restrictive with a lower limit on hospital-medical benefits ($1,000) than Colorado ($1,500), with the same time limitations as the Colorado act. It is difficult to understand why Arizona ranks second among the six states in the proportion of total expenditures for hospital-medical benefits which result from occupational disease cases. It would appear from an examination of the statute provisions that Arizona should rank near or at the end of the six states in this respect, because its medical-hospital benefits for occupational disease are the most limited of the six, while for workmen's compensation, they are among the most liberal. The statutory provisions also provide no explanation for the high per capita expenditure. Arizona's weekly compensation maximum of $40 is topped by the other states except North Carolina and Nebraska.

North Carolina's rank among the six states cannot be explained by its statutory provisions, either. Its provision for unlimited medical-hospital benefits is similar to those provided in all of the states except Arizona and Colorado. Its law is elective as in all of the states except Arizona, and employers with less than five employees are exempt. Only Missouri has a higher limit--11 employees.

General Observations

Some general observations may be made about the data in Table V, even if it is difficult to account for state-to-state variations:

1) In all of the states, for the years covered, occupational disease expenditures accounted for less than two per cent of expenditures for all claims, with only two states having more than 1.5 per cent in any one year. In most of the other states from whom answers were received occupational disease coverage accounted for less than two per cent of the total and in some instances, less than one per cent.

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5. The data shown for Colorado refer only to insurance coverage by the state fund. The per capita would be higher if data for private carriers and self insurers were included. It does not necessarily follow that the proportion of expenditures for occupational disease would be higher, however.

2) Regardless of the type of coverage and the limitations contained therein, occupational disease expenditures usually accounted for less than $.50 per capita annually. Arizona was the lone exception, and its per capita was more than two times that of any of the other five states. (Its per capita expenditure for all claims was just about in the same proportion, when compared with other states.)

Additional data on Colorado expenditures may be found in Table VI prepared by the state fund actuary.

TABLE VI

COLORADO STATE COMPENSATION INSURANCE FUND

% FUND TO COMM	NUMBER OF ACCIDS. FILED BY YEARS		YEAR	W. C. PAID			O. D. PAID			W.C. & O.D. COMBINED			WARRANTS ISSUED	YEAR
TOTAL	FUND	IND.COMM.		COMP.	MEDICAL	TOTAL	COMP.	MEDICAL	TOTAL	COMP.	MEDICAL	TOTAL	BY YEARS	
56.80	24,035	42,317	1949	952397 63	691075 54	1643473 17	6846 52	1927 89	8774 41	959244 15	693003 43	1652247 58	—	1949
			Percent	58%	42%	100%	78%	22%	100%	58%	42%	100%		Percent
55.98	25,422	45,409	1950	1155629 44	829550 64	1985180 08	7424 89	790 46	8215 35	1163054 33	830341 10	1993395 43	—	1950
			Percent	58%	42%	100%	90%	10%	100%	58%	42%	100%		Percent
57.53	30,666	53,299	1951	1405177 19	941457 28	2346634 47	6086 33	2413 44	8499 77	1411263 52	943870 72	2355134 24	—	1951
			Percent	60%	40%	100%	72%	28%	100%	60%	40%	100%		Percent
61.14	32,935	53,868	1952	1714740 61	1119487 25	2834227 86	12202 53	3196 70	15399 23	1726943 14	1122683 95	2849627 09	63676	1952
			Percent	61%	39%	100%	79%	21%	100%	61%	39%	100%		Percent
54.64	30,437	55,708	1953	1980760 86	1250242 04	3231002 90	15354 46	3405 05	18759 51	1996115 32	1253647 09	3249762 41	67929	1953
			Percent	61%	39%	100%	82%	18%	100%	61%	39%	100%		Percent
59.82	30,743	51,406	1954	2124050 19	1208088 81	3332139 00	16181 30	4990 14	21171 44	2140231 49	1213078 95	3353310 44	63335	1954
			Percent	64%	36%	100%	76%	24%	100%	64%	36%	100%		Percent
58.14	32,605	56,080	1955	2289260 50	1386819 79	3676080 29	17206 82	7026 06	24232 88	2306467 32	1393845 85	3700313 17	69134	1955
			Percent	62%	38%	100%	71%	29%	100%	62%	38%	100%		Percent
57.79	35,246	60,985	1956	2458387 75	1573831 54	4032219 29	21286 26	8781 37	30049 63	2479656 01	1582612 91	4062268 92	72233	1956
			Percent	61%	39%	100%	71%	29%	100%	61%	39%	100%		Percent
57.35	35,916	62,626	1957	2741733 71	1693377 11	4435110 82	21853 31	10318 22	32171 53	2763687 02	1703695 33	4467282 35	76004	1957
			Percent	62%	38%	100%	68%	32%	100%	62%	38%	100%		Percent
56.28	34,931	62,066	1958	3146909 30	1847049 87	4993959 17	24832 65	11031 38	35864 03	3171741 95	1858081 25	5029823 20	77018	1958
			Percent	63%	37%	100%	69%	31%	100%	63%	37%	100%		Percent
—	—	—	1959 Percent 10 Mo.	2879346 90	1665335 18	4544682 08	31613 43	8841 23	40454 66	2910960 33	1674176 41	4585136 74	68133	10 Mo. 1959
				63%	37%	100%	78%	22%	100%	63%	37%	100%		

III

PROPOSED CHANGES IN OCCUPATIONAL DISEASE LEGISLATION

Proposals for change in the Colorado occupational disease act have been concentrated primarily in five major subject areas: extent of coverage (both as to employees and diseases covered); liberalization of medical-hospitalization benefits; provision of partial disability coverage; extension of the statute of limitations (with respect to claim filing); and removal of the restrictions which apply to silicosis and asbestosis.

All of these subjects were discussed at some length at the committee's four public meetings by representatives of labor, industry and business, and private insurance carriers. Also participating in these discussions were members of the Industrial Commission, the state fund counsel, the senior industrial hygienist for the department of health, and several medical and legal specialists.[1]

To provide background material for consideration of the various proposals, an analysis was made of occupational disease legislation in other states. In addition, an inquiry was directed to selected states with comprehensive coverage. The questions asked were aimed at determining: 1) the extent of rate and expenditure increases resulting from a change from schedule to blanket coverage; 2) the effect of blanket coverage upon improvement in industrial safety; 3) the adequacy of coverage, even under a blanket act, with respect to silicosis and other dust diseases, radiation diseases, other degenerative diseases, and restrictions or special provisions relating to these diseases; 4) problems relating to the determination of causality of occupational diseases with emphasis on partial disability coverage and claim filing time limitations; and 5) recent appearance of new diseases. Replies were received from 20 states, and these are summarized under the appropriate sections below, along with pertinent material and recommendations presented at the four committee meetings and other information developed in the course of the study.

Extent of Coverage

Concern over the extent of occupational disease coverage in Colorado has centered on three provisions of the act, of which the first two also apply to workmen's compensation. The first of these is the numerical exemption provision which requires only those employers with four or more employees to be subject to workmen's compensation and occupational disease legislation. Closely related to this question of numerical exemptions is the provision which makes both acts elective rather than compulsory for employers subject to this legislation. The major concern, however, has been with the schedule disease feature of the occupational disease act, which limits coverage only to specified diseases, and there was more discussion and disagreement over the respective merits of schedule and comprehensive (blanket) coverage than on any other subject considered during the study.

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1. See Appendix B for lists of those participating in the four meetings. Copies of the minutes of these meetings are available in limited supply at the Legislative Council office and may be had upon request.

Numerical Exemptions

The laws in 23 states make no exemption for workmen's compensation and occupational disease coverage based on number of employees. In the other 27, including Colorado, employers of less than a certain number of employees are exempt from coverage. This numerical exemption ranges from two employees to 15, as illustrated in Figure 1.

Proponents of eliminating the numerical exemption argue that workers employed in establishments with few employees are usually in need of the protection offered by workmen's compensation and occupational disease laws. The small establishment is more likely to lack a formal safety program and the financial resources to protect the injured workers in case of serious injury. Further, it is stated that the employer in a small business establishment also needs the protection of workmen's compensation to protect himself against lawsuits for injuries to employees.

Those opposed to elimination of the numerical exemption point out that the small employer can avail himself of the provisions of workmen's compensation and occupational disease legislation if he chooses, so that he is not denied protection because of the numerical exemption. It is also argued that it would impose an additional financial burden upon small establishments, many of which are having a difficult time remaining in business. In many of these small business establishments there is a personal relationship between employer and employee. Because of the employer's personal interest, proper safety precautions are taken, and employees receive adequate protection. For this reason and the fact that most small businesses do not ordinarily involve the complicated and hazardous operations of larger establishments, there is no reason to make them subject to the same legislation as are large and diversified industrial and business concerns.

Compulsory or Elective Law

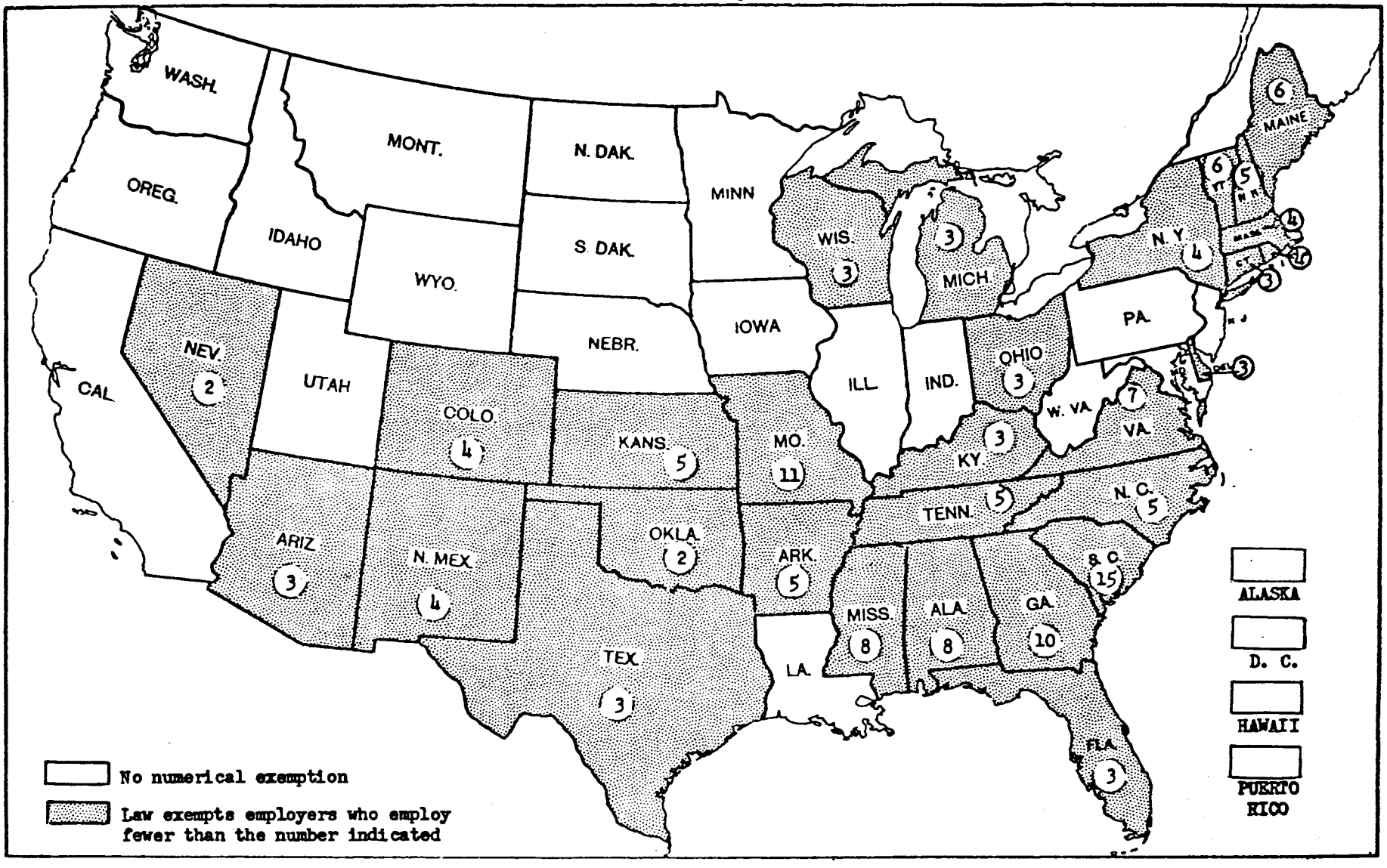
Approximately one-half of the states have compulsory coverage of employers subject to workmen's compensation and occupational disease legislation, while the remaining states, including Colorado, permit elective coverage. The distribution of states as to type of coverage is shown in Figure 2.

It is argued that all workers should be given the protection of workmen's compensation and occupational disease coverage, and a compulsory law would at least provide such protection for those workers in industrial and business establishments subject to the provisions of the two acts. While it is true that if an employer elects against coverage, an injured or disabled employee can bring suit for damages without the common law defenses being used against him, lawsuits are a cumbersome and time-consuming process. Even if an employee wins his suit, trial delay and court appeal could defer his award and create a real financial hardship for him and his family. It is unfair for an employee to have to gain recovery in this involved way when other workers can receive benefits much more quickly and surely under the workmen's compensation and occupational disease acts.

FIGURE 1

STATE WORKMEN'S COMPENSATION LAWS

Numerical Exemptions

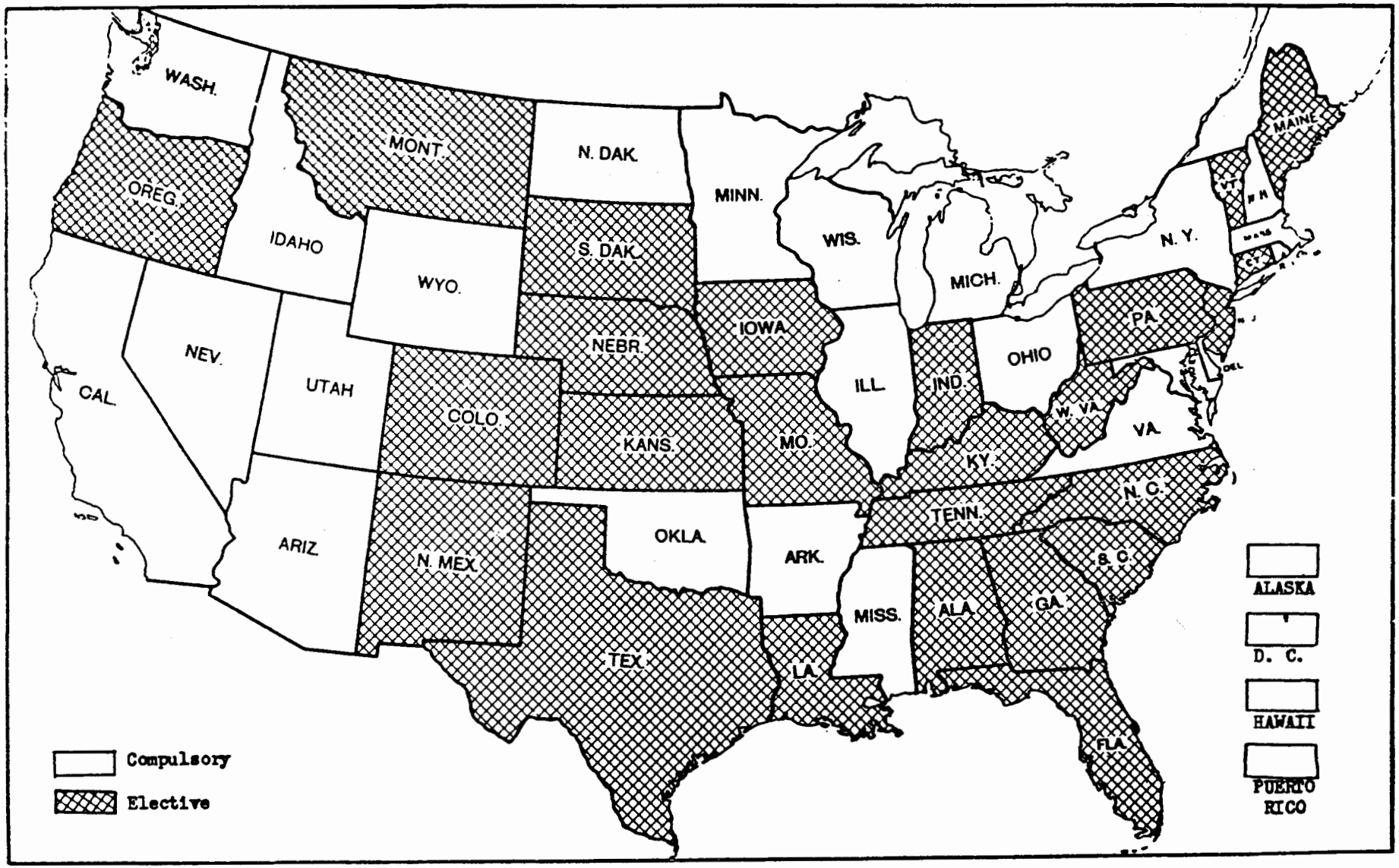


Source: State Workmen's Compensation Laws, A Comparison of Major Provisions with Recommended Standards, U. S. Department of Labor, Bureau of Labor Standards, December 1959.

FIGURE 2

STATE WORKMEN'S COMPENSATION LAWS

Compulsory and Elective Laws



Source: State Workmen's Compensation Laws, A Comparison of Major Provisions with Recommended Standards, U. S. Department of Labor, Bureau of Labor Standards, December 1959.

Opponents of compulsory coverage state that the elimination of common law defenses for employers electing not to be covered by the two acts encourages coverage without making it compulsory. Even if an employer decides against coverage, the loss of one lawsuit for damages is usually sufficient for him to elect to come under the provisions of the two acts. An employee has an excellent opportunity of winning such a suit, often for more than the benefits available under the workmen's compensation and occupational disease acts.

Comprehensive and Schedule Coverage

Colorado is one of 18 states which have schedule coverage of occupational diseases; however, in three of these states--Montana, Tennessee, and Virginia --employers may elect full coverage. Two states--Mississippi and Wyoming--have no occupational disease legislation, and 30 states provide comprehensive coverage of all occupational diseases. (See Figure 3.) Comprehensive coverage is usually provided in these states in one of three ways:

1) One definition covers both accidental injuries and occupational diseases, and the same legislation applies to both. Wisconsin, for example, defines injury as "mental or physical harm to an employee caused by accident or disease."[2]

2) Occupational diseases are defined as any disease arising out of or in the course of employment. In New Jersey, occupational diseases are defined as follows: "...'compensable occupational disease' shall include all diseases arising out of and in the course of employment, which are due to causes and conditions which are or were characteristic of or peculiar to a particular trade, occupation, process, or employment, or which diseases are due to the exposure of any employee to a cause thereof arising out of and in the course of his employment."[3]

3) Previous schedule legislation was amended by adding a subsection providing coverage for all occupational diseases not included in the schedule. In Rhode Island this was done by adding the following to its schedule of covered diseases: "Disability arising from any cause connected with or arising from the peculiar characteristics of the employment."[4]

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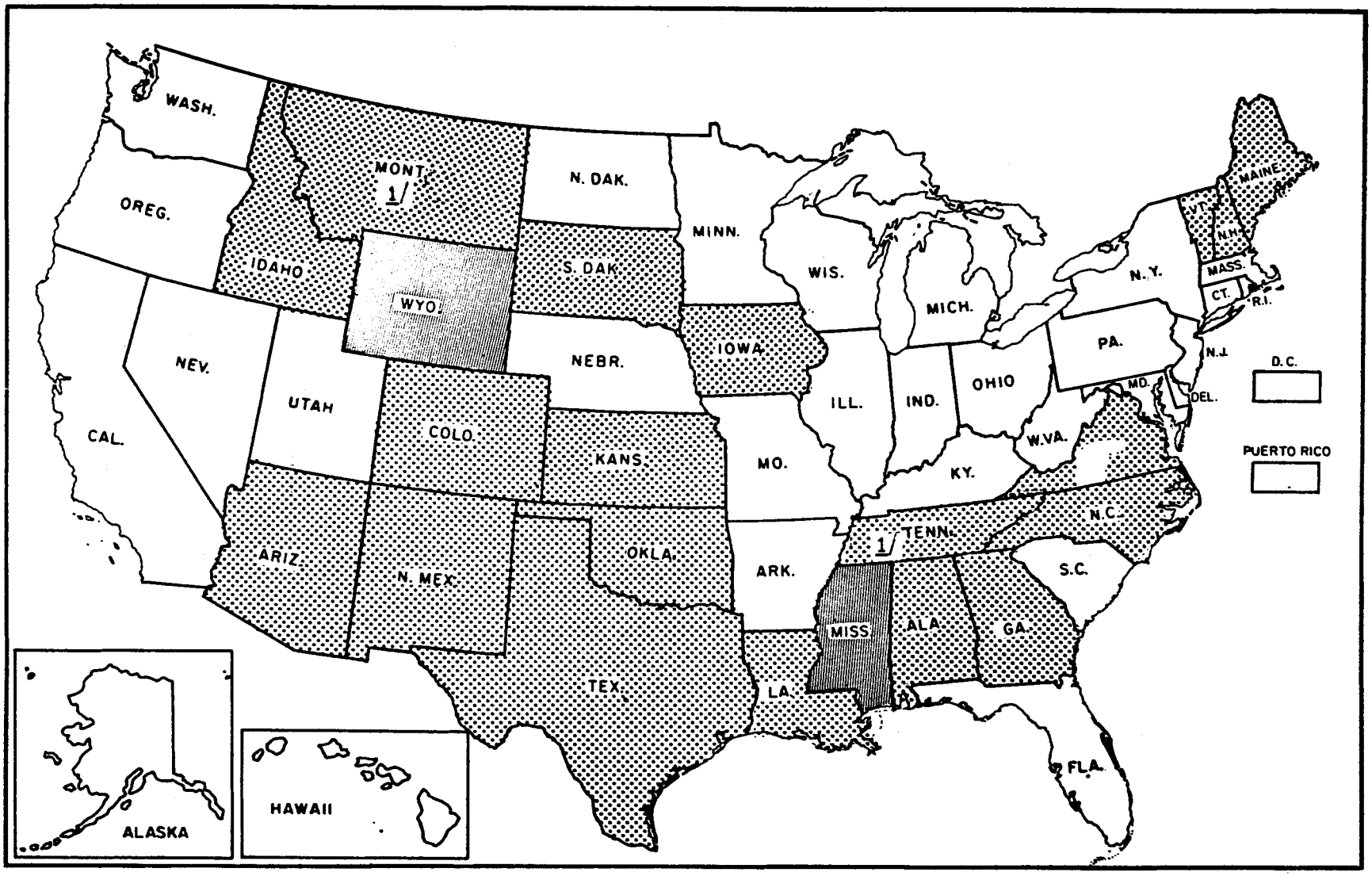
2. Section 102.1, Wisconsin Statutes, 1957.
3. 34:15, New Jersey Revised Statutes, 1937.
4. 28-34-2, General Laws of Rhode Island, 1956.

FIGURE 3

STATE WORKMEN'S COMPENSATION LAWS

Occupational Disease Coverage



Full coverage

Schedule coverage

No coverage

[1] Employer may elect full coverage.

Source: State Workmen's Compensation Laws, A Comparison of Major Provisions with Recommended Standards, U. S. Department of Labor, Bureau of Labor Standards, December 1959.

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Diseases Included in the Colorado Schedule. Following is the list of 25 occupational diseases presently covered in the Colorado Occupational Disease Disability Act:

Section 9. (81-18-9) Occupational diseases listed. -- The following diseases only shall be deemed to be occupational diseases, and compensation as provided in this article shall be payable for disability or death of an employe resulting from such diseases and from no others:

(1) Poisoning by aldehyde compounds.
(2) Poisoning by cyanogen or its compounds.
(3) Poisoning by chlorine, iodine, flourine, bromine, or their compounds.
(4) Chrome poisoning.
(5) Poisoning by arsenic or its compounds.
(6) Poisoning by antimony or its compounds.
(7) Poisoning by cadmium or its compounds.
(8) Poisoning by lead or its compounds.
(9) Poisoning by manganese or its compounds.
(10) Poisoning by mercury or its compounds.
(11) Poisoning by selenium or its compounds.
(12) Poisoning by tellurium or its compounds.
(13) Poisoning by vanadium or its compounds.
(14) Poisoning by phosphorous compounds.
(15) Poisoning by sulfur compounds.
(16) Poisoning by carbon monoxide.
(17) Poisoning by nitrogen oxides or nitric acid.
(18) Poisoning by toxic hydrocarbons, including benzol or its derivatives; toluol, zylol, or the nitro, nitroso, and amino derivatives of these substances; and other organic solvents.
(19) Methanol poisoning.
(20) Silicosis as herein defined.
(21) Asbestosis as herein defined.
(22) Poisoning or disease caused by exposure to radioactive materials, substances, or machines, or fissionable materials.
(23) Anthrax.
(24) Dermatitis when due to infection or inflammation of the skin due to oils, cutting compounds, lubricants, solvents, synthetic cleaning compounds and detergents.
(25) Bursitis, synovitis, and teenosynovitis.

Occupational Diseases and Hazards Not Covered in the Colorado Schedule. In response to an inquiry from the committee, Paul W. Jacoe, Senior Industrial Hygienist, Occupational Health Division, State Department of Health, prepared a comparison of occupational health hazards and the Colorado schedule. Some 53 hazards or diseases were listed by Mr. Jacoe as not being included. Following is a summary of Mr. Jacoe's report:[5]

In comparing the Occupational Diseases list in Section 9 in the Colorado Occupational Diseases Disability Act, it appears that the following occupational health hazards and industrial atmospheric contaminants are not covered.

Abnormalities of Air Pressure
- Compressed air (increased atmospheric pressure)
- Rarefied air; altitude (decreased atmospheric pressure)

Abnormalities of Temperature and Humidity
- Heat
- Sudden variations of temperature

Dampness

Defective Illumination

Dust
- Inorganic dust (except asbestos) containing no free silica
- Organic dust

Infections
- Fungus infections
- Septic infections
- Undulant fever (brucellosis)

Repeated Motion, Pressure, Shock, etc.

Poisons
- Acetanilide
- Acridine
- Acrelain
- Aluminum
- Aluminum oxide
- Ammonia
- Barium
- Beryllium
- Brass
- Carbon dioxide
- Carbon disulfide
- Cobalt
- Copper
- Cresol (cresylic acid)
- Formic acid
- Furfural
- Iron carbonyl
- Iron oxide
- Magnesium
- Magnesium oxide
- Nickel
- Nickel carbonyl
- Nicotine
- Nitroglycerin
- Oxalic acid
- Ozone
- Picric acid (trinitrophenol)
- Potassium hydroxide
- Pyridine
- Silver
- Sodium hydroxide
- Tar and pitch
- Thallium
- Thorium
- Tin
- Titanium oxide
- Uranium
- Vanadium
- Vinyl chloride
- Zinc
- Zinc oxide

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5. Comments Regarding Industrial Atmospheric Contaminants and Hazards, Paul W. Jacoe, Report to Legislative Council Committee on Occupational Diseases, March 25, 1960.

All of the above, which are apparently not covered in the Colorado schedule, are occupational diseases more or less common to industry. Organic dust [diseases] should be compensable, as there are thousands of organic compounds, either solids or liquids, being used in industry today, which are capable of causing an occupational disease. All metals and their compounds should be listed, rather than a select few, because of the increasing use of most metals and the extremely toxic potentialities of many of those not listed. Among these are beryllium and barium, which are commonly used in the manufacture of guided missiles. Uranium and thorium should also be covered and deserve special mention because these two metals and their compounds are not only radioactive, but are poisonous as well. All acids and bases should be covered because, in addition to some of them being poisons, all of them are capable of causing dermatitis. All gases should be covered because those few which are not considered toxic are capable of causing suffocation.

In the Colorado schedule, Number 18 "poisoning by toxic hydrocarbons including benzol or its derivatives, toluol, zylol, or the nitro, nitroso, animo derivatives of these substances and other organic solvents" is very vague. The Industrial Commission has been extremely liberal in interpreting this section and granting compensation. The word "toxic" requires definition, and the word "solvents" could be extremely limiting, because if the material were used as a solvent in industry, poisoning therefrom would be compensable; however, if it were used in synthesis, it would not be compensable. Also, many of these materials are solvents (as is any liquid), but may not be used as such. It is my opinion that Number 18 should be changed to read "poisoning by organic materials in the solid, liquid, or gaseous form."

Number 22 in the Colorado schedule "poisoning or diseases caused by exposure to radioactive materials, substances, or machines, or fissionable materials" is meaningless inasmuch as these materials, due to their radioactivity, do not in some cases cause poisoning or diseases according to the definitions. They also cause burns, tissue damage, cataracts, etc. Very careful consideration should be given to the inclusion of occupational cancer arising from the exposure to toxic materials or radiation, as many of them do cause this disease.

Number 24 in the Colorado schedule lists dermatitis from a few materials; however, there are thousands that do cause dermatitis. Dermatitis from any material should be covered with no limitations, and the difference between dermatitis and poisoning should be defined.

Very careful thought as well should be given to the consideration covering hearing loss as this is an increasing problem in modern industry; and inclusion in the Occupational Disease Disability Act requires precise medical, legal, and engineering information.

The inadequate and practically non-existing coverage regarding silicosis is well understood, and the need for radical change here is quite clear. It is beyond the scope of these brief comments to elaborate more in detail on these hazards; however, certain areas have been pointed out where deficiencies do exist and where further discussion is necessary in order to evaluate the problem completely.

Possible Insurance Rate Increases Resulting from Provision of Comprehensive Coverage. Both the National Council on Compensation Insurance and Ashley St. Clair, counsel for Liberty Mutual Insurance Company, were contacted regarding possible increases in occupational disease insurance rates resulting from the adoption of comprehensive coverage. The National Council, as indicated in Chapter II of this report, was unable to compute mathematically the effect of such a change in the Colorado act but commented that the present disease act in Colorado is considered fairly comprehensive, and an appreciable increase in cost is not expected.

Mr. St. Clair made the following observation: "...the schedule of compensable occupational diseases listed in the Colorado Occupational Disease Disability Act is so comprehensive that to make every occupational disease compensable would result in only a very small increase in the number of compensable disease claims. It follows that the increase in cost would be small and probably should be described as miniscule."[6]

The National Council stated that although the average rate increase may be small, this would not be true for all industries, especially those in hazardous classifications such as mining. This would also apply to mining operations not particularly affected by the present act; for example, anthracosis (coal mining dust disease) is not covered in the Colorado schedule. Should a comprehensive act result in a substantial number of claims for this disease, it is highly probable that the rates for coal mining classifications would increase; but the present insurance rate for coal mining is $.01 per $100 of payroll because of the exclusion of anthracosis. An official of the United Mine Workers told the committee that there had not been any occupational disease claims brought by the union's membership because of the disease exclusions under the act.[7] If this is the case, then even the small rate presently paid by mine owners is excessive, because they are being insured against claims for diseases which are barred under the act.

Dust diseases and radiation hazards are commonly thought of as potentially expensive items under a comprehensive occupational disease act; however, other diseases such as loss of hearing could also have an adverse effect on rates for certain industries, depending on how these diseases are defined and restricted.

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6. Letter from Ashley St. Clair, counsel, Liberty Mutual Insurance Company, March 29, 1960.
7. Testimony of Fred Hefferly, United Mine Workers official, before the Legislative Council Committee on Occupational Diseases, October 16, 1959.

Opponents of blanket coverage appearing before the committee have argued that blanket coverage would increase insurance rates appreciably because there would no longer be any measurable liability, and it might even be possible that claims resulting from ordinary diseases of life and not related to employment would be allowed. It was pointed out that there is insufficient information as to the costs from those states with comprehensive coverage, and that it may take from five to 10 years or more after such an act is passed before the extent of coverage is realized and the act fully utilized. At that time a cost analysis would reflect the increased expense more accurately.[8] The statement was made that "to open coverage to unknown hazards would have the result of scaring employers and insurance companies out of business."[9]

The Association of Casualty and Surety Companies did not indicate any fear of insurance companies going out of business for any reason as a consequence of adopting blanket coverage. The Association did caution against making comprehensive coverage so unrestrictive as to make possible the inclusion of ordinary diseases of life:[10]

> We do not believe that as insurance carriers we should make any specific recommendation indicating a preference for either broad or schedule coverage of occupational diseases. However, we are glad to furnish such information as might be helpful to this Committee to make a decision on this question. Broad occupational disease coverage enables employees to receive protection against occupational hazards which possibly may be unknown at the time the law providing compensation for such hazards is enacted. As new technological processes are developed new hazards may be created which would be compensable without the necessity of amending the Occupational Disease Act to specifically cover them. A scheduled coverage act has the advantage of making the conditions which are compensable under the law certain for the benefit of both labor and industry. Both employees and employers are thus advised exactly what conditions are compensable. Under the broad coverage it is ultimately up to the court to decide which conditions are compensable. Under a schedule it is known in advance that compensation is payable for the named diseases...There is a possibility under a broad type of coverage that it might be construed to cover ordinary diseases of life such as common colds, pneumonia, tuberculosis, etc., merely because some act in the employment or the mere fact that an employee goes to work instead of staying at home contributes to or aggravates the condition. That is why a specific exclusion of ordinary disease of life is very desirable.

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8. Testimony of Dr. Robert F. Bell before the Legislative Council Committee on Occupational Diseases, October 16, 1959.
9. Ibid.
10. Excerpts from prepared statement by representatives of the Association of Casualty and Surety Companies before the Legislative Council Committee on Occupational Diseases, April 8, 1960.

Effect of Comprehensive Coverage on Rates and Expenses in Other States. The other states providing blanket coverage were asked whether there was any increase in occupational diseases expenses or insurance rates following their conversion from schedule to blanket coverage.

Eight states (California, Florida, Hawaii, Missouri, Nevada, Oregon, South Carolina, and Wisconsin) were unable to answer the question, because they have had blanket coverage since adopting an occupational disease act. Nevada has both schedule and blanket coverage, but does not separate claims on this basis. South Carolina commented that the addition of occupational disease coverage did not increase over-all expense for workmen's compensation coverage, and Utah stated specifically that no increased expense resulted from broadened occupational disease coverage.

The actuary of the Oregon fund reported that when the blanket occupational disease act was first enacted in 1943, the legislation provided for a surcharge for occupational disease coverage. However, this surcharge has never been made by the state fund, because the cost of occupational diseases has been so small in comparison with the costs of accidents that the rates for workmen's compensation have covered occupational diseases as well. Occupational disease expense was estimated at two per cent of the total for all claims.

Five states (Delaware, Rhode Island, Virginia, West Virginia, and Washington) were unable to make a comparison because of the lack of data. Rhode Island changed from schedule coverage to a combination of schedule and blanket. Virginia had the same experience, and has now shifted to blanket coverage exclusively. Washington reported that any comparison would not be meaningful for several reasons: 1) The several increases in benefits under the Washington act since 1941 are primarily responsible for the gain in compensation payments and medical-hospital benefits. 2) Washington had only four years' experience under a schedule act (1937-1941). 3) The schedule during those four years was so broad as to be comparable to blanket coverage.

Prior to enactment of the Illinois law in 1936, the number of claims classified under occupational diseases ranged annually between .6 per cent and 1.1 per cent of all claims. Since 1936 the total has ranged between .6 per cent and two per cent and was .6 per cent of all claims closed in 1958. Similarly, the compensation paid annually in occupational disease cases has also been between .6 per cent and two per cent and .6 per cent of all claims closed in 1958.

New Jersey reported that, in the opinion of the manager of the compensation rating and inspection bureau, the shift from schedule to blanket coverage resulted approximately in a one per cent increase in the proportion of the total compensation expense accounted for by occupational diseases.

Occupational disease claims in New York represented .9 per cent of cases closed in 1935, and 1.1 per cent of the total compensation awarded in such cases. For cases closed in 1956, occupational disease claims represented three per cent of the compensable cases and six per cent of the benefits awarded. Compensation paid increased from $282,000 in 1935 to $6,000,000 in 1956. Work force increase and the broadening of benefits in addition to the provision of blanket coverage have had an effect on the compensation increase, but New York did not estimate the proportion of increase resulting from these factors.

Arguments in Support of Comprehensive Coverage.[11] Proponents of comprehensive coverage state that workers are entitled to the same degree of protection for occupational disease disabilities as for accidental injuries. It is a basic concept of workmen's compensation legislation that benefits apply to any work-connected accidental injury, and the same concept should apply to occupational diseases as well. There have been a number of claims before the Industrial Commission for bonafide occupational diseases, which were rejected because the disease was not included in the Colorado schedule. Protection against spurious occupational disease claims is provided by placing the burden of proof on the claimant. It is agreed that it is often difficult to determine the cause of an occupational disease, and it is very easy to cite difficult cases as examples, when these cases are only a small proportion of those filed. There are accident cases in which work-connection is also very difficult to determine; however, workmen's compensation coverage is not limited because of these difficulties, and neither should occupational disease coverage be so limited.

New occupational diseases are constantly appearing as a result of exposure to toxic and radioactive materials involved in new industrial processes. For this reason a schedule of specified diseases quickly becomes obsolescent, and the legislative process is unable to keep pace with the changes.

In recent years the trend has been toward blanket coverage, with 11 states adopting such coverage since 1948. Comprehensive coverage is provided in all of the highly-industrialized states; in a major portion of these such coverage has been in effect for a good number of years, and from all reports it is working satisfactorily. Colorado is increasingly becoming an industrialized and urbanized state. Many of Colorado's new industries are related to the defense program and make use of highly toxic and, in some instances, radioactive materials. It is necessary and appropriate that Colorado's occupational disease legislation provide adequate coverage not only for employees in these industries, many of whom come from states where they had such protection, but for all employees as well.

Comprehensive coverage also encourages employers to adopt good safety practices, including the elimination or control of hazards and instruction of employees in the use of precautionary measures. Adequate coverage is important, but even more important are adequate preventive measures; once a disease is contracted, no amount of benefits can compensate for the potential damage.

Arguments Against Comprehensive Coverage.[12] Opponents of comprehensive coverage state that employers and insurance companies would be faced with an open-ended liability if a blanket act were adopted. With a schedule act, liability limits are defined, because it is clearly understood what constitutes an occupational disease. For this reason administration of a schedule act is less difficult and costly.

Employers should not be held liable for diseases which anyone might contact as an ordinary living hazard. Because of the difficulty in determining causation and the usually liberal administrative interpretation of workmen's compensation and occupational disease legislation, it would be quite possible to establish claims for such diseases; it is not the purpose of an occupational disease act to provide a general health insurance program.

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11. Summarized from testimony given at Committee meetings and material developed during the study.
12. Ibid.

Any disease traceable to employment should be covered, but coverage for new diseases should not be added until the occupational relationship of these diseases is established. A much better approach to expanding coverage than a comprehensive act would be an annual review of the schedule, with the addition of only those diseases which have been proven to be employment-connected. Employees now have protection against those diseases not in the schedule, because they can bring a court suit for recovery. Loss of a case or two of this nature, not only would establish the causality of the disease, but would also encourage employers to request additions to the schedule.

It is much easier for an employer to take proper precautions against hazards and develop an effective safety program, when he knows definitely what those hazards are. Under a comprehensive law, employers are forced to protect their workers against all diseases whether they can be anticipated or not, and this scatter-gun approach to safety makes it difficult to organize and administer an adequate program.

Improvement in Industrial Safety in Other States Resulting from the Adoption of Comprehensive Coverage. The 30 states with blanket coverage were also asked their opinions as to the effect of such coverage on the development of industrial safety programs in their states.

Eight states (Delaware, Florida, Missouri, Nevada, New Jersey, Washington, West Virginia, and Wisconsin) reported that blanket coverage has a favorable effect on industrial safety improvement and the reduction of hazards. On the other hand, Nebraska, Rhode Island, and Virginia stated that they have no evidence to indicate that industrial safety has been improved as a consequence of comprehensive coverage. Hawaii and Oregon both stressed safety programs, but were unable to answer the question because of not having had schedule coverage.

Delaware and Missouri indicated that they thought blanket coverage had led to industrial safety improvements, but did not substantiate this opinion.

Florida reported that it is the opinion of the staff of the department of industrial safety that better safety devices and precautions have resulted from blanket coverage. At the time occupational diseases were included in the amendment to the workmen's compensation law, a study was made of occupational diseases by the industrial commission and the state board of health. This study caused employers to be aware of the diseases and of precautionary measures, and the department of industrial safety has followed up with continuous educational programs on occupational disease hazards.

New Jersey quoted the state health department to the effect that blanket coverage has led to better safety devices and precautions, especially in respect to silicosis-type hazards. Nevada's and West Virginia's answers to this question were similar to New Jersey's, with emphasis on those industries where silicosis and silicosis-type hazards are present.

Washington had a somewhat different answer. Blanket coverage has led to better safety devices and precautions in that state, because under blanket coverage there are no exceptions or exemptions to deter the safety division from having complete jurisdiction over all occupational disease hazards.

While Wisconsin did not have schedule coverage prior to adopting blanket coverage, it was the opinion of the workmen's compensation division director that blanket coverage does lead to better safety devices and precautions. Wisconsin had many silicosis claims during the early depression years of the 1930's, but due to safety promotion such claims are now relatively few. Safety precautions have reduced the incidence of a number of occupational diseases, such as lead poisoning. During the past decade, Wisconsin has had a considerable number of claims for occupational deafness due to noise exposure. Industry and labor are now cooperating in attempts to eliminate or decrease noise exposure by better maintenance, changes in the construction of machines, and the use of protective devices. Studies are also being made for protection from radiation hazards.

Position of the Industrial Commission on Adoption of Comprehensive Coverage. The Industrial Commission is divided in its opinion as to the adoption of comprehensive coverage. Two members of the commission favor a change from schedule to comprehensive coverage, while the third member of the commission (the chairman) opposes any such change at this time.

In its majority report to the committee, the commission stated that it "wished to go on record as favoring the passage of a comprehensive occupational disease law which will compensate every true occupational disease which is fairly traceable to the work of the employee afflicted thereby in his employment as a proximate cause and does not come from a hazard to which the workman would have been equally exposed outside of the employment. In short, this commission believes that occupational diseases should be placed on the same basis insofar as compensability is concerned as accidental injuries arising out of and in the course of the employment and that the compensation benefits for occupational disease should be the same as those provided for compensating injuries under the Workmen's Compensation Act of Colorado."[13]

In his minority report to the committee, the chairman of the Industrial Commission summarized his position as follows: "My investigation of the manner in which the present Colorado Occupational Disease Disability Law was developed forces me to conclude that those who made the original study were convinced of the desirability to proceed with caution and to year by year add specific diseases to the schedule of those covered under the law, those diseases about which the medical profession had advanced in knowledge. This procedure has in the past and will in the future enable employers in industry to institute loss prevention programs or to eliminate entirely the hazards which are the cause of specific diseases. This approach seems to me to be the logical and sensible approach to the problem."[14]

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13. Majority Report of the Industrial Commission to the Legislative Council Committee on Occupational Diseases, October 16, 1959. For complete text of this report, see Appendix C 1.
14. Minority Report of the Industrial Commission to the Legislative Council Committee on Occupational Diseases, October 16, 1959. For complete text of this report, see Appendix C 2.

New Industrial Diseases. The states with comprehensive coverage were asked for information concerning new industrial diseases for which claims had been filed in recent years. This information was requested, because it provides some indication of the incidence of new diseases which are outside the scope of the Colorado schedule, although it is recognized that the value of this information is limited because each state's industrial composition and experience is somewhat different.

Twelve states supplied information on this subject. Three states (Florida, South Carolina, and Utah) reported that no claims involving new diseases had been filed in the past two or three years. A substantial increase in dermatitis cases was mentioned by three states (Nevada, New Jersey, and Oregon). Nevada attributed this increase to the use of new chemical solutions, while Oregon reported much of the increase occurring in food processing plants. Oregon also referred to the loss of vision from rare earth fumes.

Loss of hearing from excessive noise was listed by New Jersey and Wisconsin. Illinois and New York reported an increase in diseases attributed to beryllium or its compounds (berylliosis). New York stated that these diseases have been an unexpected complication in fluorescent tube manufacturing. Hawaii has had an increase in virus infections and salmonella disease, and Washington reported an increasing incidence of staphylococcal infection (bacteria which often form grapelike clusters and are parasites on the skin and mucous membranes). Washington added that it is very difficult to determine the validity of claims in these cases.

During the past two years, West Virginia has had a number of claims filed for a disease which appears to be a type of pneumoconiosis. This disease, contracted by several employees of the Vanadium Corporation of America, was first diagnosed as silicosis. The ailment is now under study by the Kettering Institute of the University of Cincinnati, and while the study is still being made, it has definitely been determined not to be silicosis.

Medical-Hospitalization Benefits

Twenty-six states provide unlimited medical and hospitalization benefits for accidental injuries and occupational diseases. Colorado is one of 22 states which has either a time or dollar limit, or both, on medical benefits. Figure 4 shows all states according to the type of medical benefits provided, and Appendix D indicates the specific differences in these provisions.

Colorado is also one of several states which has further limitations imposed on medical treatment for silicosis and other dust diseases. Medical-hospitalization benefits in Colorado are limited in amount to $1,500 and in time to six months. However, an additional $500 may be authorized by the Industrial Commission, if it finds that there is a good chance that a worker's condition may be materially improved by such additional expenditure. No medical services at all can be provided in silicosis cases, unless the Industrial Commission finds that "there are substantial prospects that the condition of the employee will be materially improved by medical treatment..."[15] There is a limit of $2,000 placed on medical treatment, if such is provided in silicosis cases.

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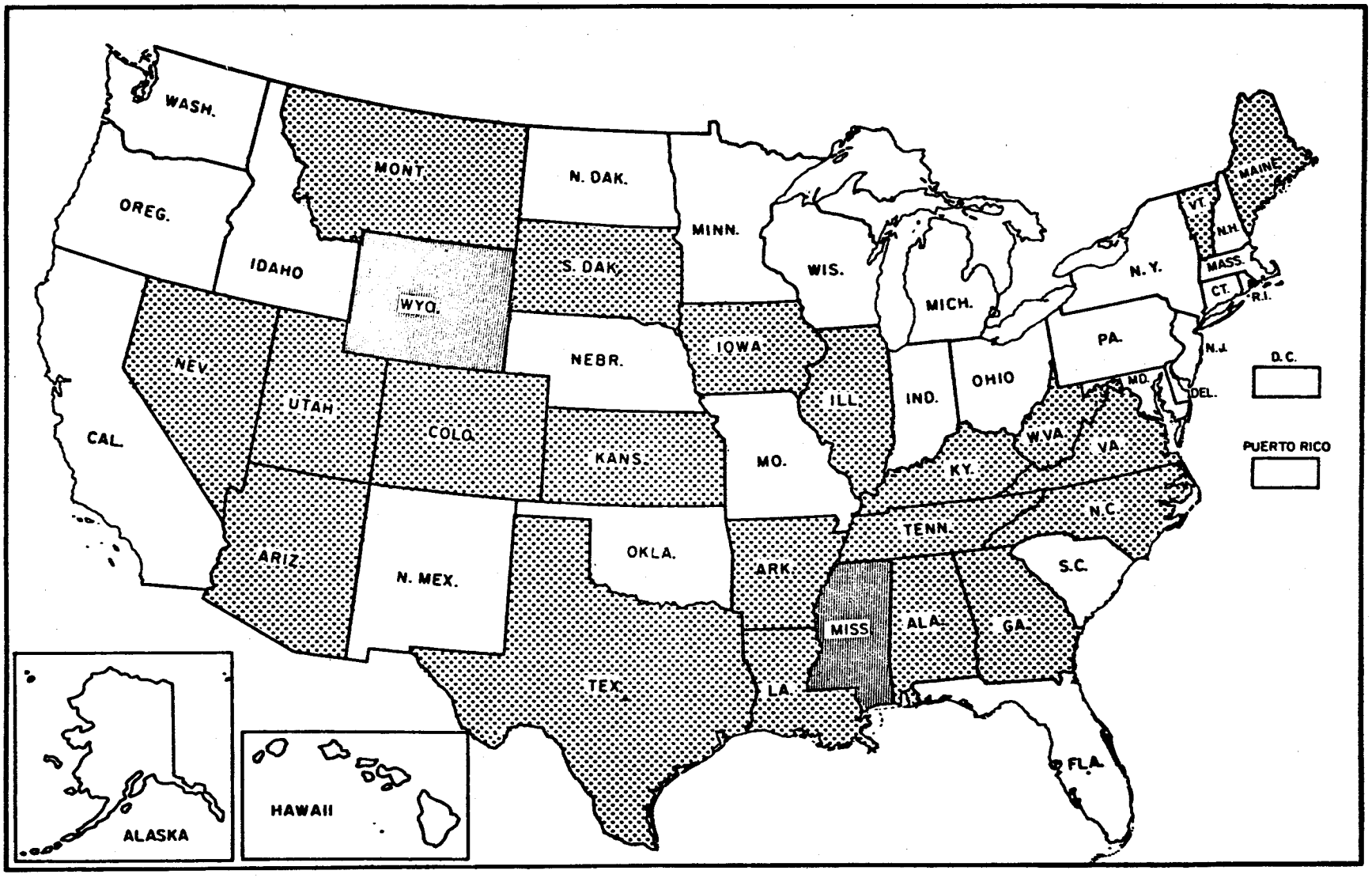
15. 81-18-20 Colorado Revised Statutes, 1953, As Amended.

FIGURE 4
STATE WORKMEN'S COMPENSATION LAWS

Medical Benefits For Occupational Diseases



Source: State Workmen's Compensation Laws, A Comparison of Major Provisions with Recommended Standards, U. S. Department of Labor, Bureau of Labor Standards, December 1959.

Considerable testimony was presented to the committee concerning the need for raising the limits on medical-hospitalization benefits. It was pointed out that dollar and time limits are not realistic with respect to radiation and dust diseases and the complications which arise from the increased use of toxic substances in industrial processes. It was also stated that workers who exhaust their medical benefits without completing treatment and/or making a recovery place an additional burden upon the public in two ways: 1) It is unlikely that they will again become productive members of society. 2) It is likely that additional medical care and perhaps support will be provided at public expense. Ashley St. Clair, counsel, Liberty Mutual Insurance Company, made the following comments on medical benefits:[16]

> As a matter of fact, a workman who suffers a serious injury or a serious occupational disease cannot pay for the medical care he requires after the benefits given him by your compensation law or occupational disease law are exhausted...Someone other than the injured workman is going to bear the expense, and the question is will that expense be paid by some governmental agency out of tax funds? I submit that in every work injury case the total cost of medical and hospital care should be paid under the workmen's compensation law, not only because will the injured man thereby have reasonable assurance of getting adequate medical and hospital care, but because it is the fairest way of distributing the cost of such cases among the general population.

Some of the medical experts who testified at the committee hearing on June 29, 1960 were of the opinion that the complexity of industrial diseases and the cost and extent of treatment necessary make the present dollar and time limits in the Colorado act inadequate and unrealistic. Dr. Allen Hurst, chest disease and allergy specialist, in particular, stated that the $1,500 limitation on medical benefits was not realistic and was of the opinion that the limit should be left open, depending on each individual case.[17]

Rate Increase Resulting from Liberalization of Medical-Hospitalization Benefits

Any liberalization in medical and hospitalization benefits for occupational diseases should be accompanied by a similar increase in these benefits under workmen's compensation; it would be difficult to justify an increase which would apply to occupational diseases alone. Elimination of the present time and monetary restrictions under both acts would increase insurance rates more than any other proposal for liberalizing benefits.

The National Council on Compensation Insurance and the Mountain States Compensation Rating Bureau were asked what the effect would be on insurance rates for three different proposals to liberalize medical and hospitalization

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16. Op. cit., St. Clair, Letter of March 29, 1960.
17. Testimony of Dr. Allen Hurst before the Legislative Council Committee on Occupational Diseases, June 29, 1960.

benefits: 1) increase the monetary limit to $2,500; 2) increase the monetary limit to $5,000; and 3) provide unlimited benefits.[18]

This was the one group of alternate proposals for which the National Council was able to make statistical computations. It was the National Council's opinion that an increase to $2,500 would result in an over-all rate increase of approximately 1.3 per cent; that an increase to $5,000 would result in an increase of approximately 2.1 per cent; and that the provision of unlimited benefits would result in an increase of approximately 3.1 per cent in over-all rates.[19] These rate estimates were predicated on the assumption that the liberalization of medical and hospital benefits would apply to both workmen's compensation and occupational disease coverage.

The effect of the rate increases expected to result from the alternative approaches to liberalizing medical and hospitalization benefits should be considered in relation to the rate revisions which went into effect on July 1, 1960. The revised rates represented an average decrease of 2.7 per cent from the preceding year. By industry group the average changes were: manufacturing, 10.1 per cent decrease; contracting, 0.2 per cent decrease; mining and ore milling, 11.2 per cent increase; and all others, 2.8 per cent decrease. There were also variations within each industry group, depending on the kind and volume of experience in each classification.

It is interesting to note that the industrial representatives appearing before the committee did not comment on the desirability of raising the limits on these benefits, nor did they oppose specifically such an increase, despite the fact that this is the most expensive proposal advanced for consideration.

Relationship between Medical Benefits and Rehabilitation Programs

The most extensive rehabilitation programs for workers incapacitated by occupational injuries or diseases are generally found in those states with unlimited medical benefits. The provision of unlimited medical benefits appears to have the effect of encouraging insurance carriers to bear the costs of the rehabilitation program, either through an additional insurance premium, or through expanded financing of the subsequent injury fund. One of the big obstacles to a rehabilitation program in Colorado is the lack of funds to provide maintenance during the period of vocational retraining.

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18. The question was also asked as to whether there would be any difference in rates for increases to $2,500 or $5,000, if the time limit either: 1) remained at six months; 2) was increased to a year; or 3) made unlimited. The National Council did not differentiate as to time limitations in quoting approximate rate increases based on an increase in monetary limits.
19. Op. cit., Shurtleff, Letter, 8/16/60.

Partial Disability Coverage

The workmen's compensation laws in all states provide for payment of benefits for partial disability resulting from accidental injuries. Some of the states, however, do not provide for partial benefits for occupational diseases--particularly for dust diseases. Colorado is one of 12 states which do not provide for any compensation for partial disability due to occupational diseases. Thirteen other states have provisions which either restrict or prohibit compensation for partial disability due to silicosis and other dust diseases, although partial disability is compensated for other occupational diseases. Table VII shows a state by state summary of partial disability provisions and restrictions.

Generally, there are two bases for partial disability compensation. All states with this coverage provide compensation for partial disability from diseases which result entirely from employment, with certain exceptions as indicated in Table VII. Some also provide compensation for partial disability arising out of a disease which was employment aggravated.

Arguments in Support of Partial Disability Coverage[20]

Proponents of partial disability coverage again call attention to the fact that employees are entitled to the same protection under occupational disease coverage as they receive under workmen's compensation. While the difficulty in determining the extent of partial disability is recognized, it is argued that this difficulty should not bar employees from receiving equal protection under both acts. It is pointed out that often it is difficult to determine the extent of partial disability in accident cases, especially with respect to back injuries; nevertheless, partial disability compensation has been an accepted component of workmen's compensation coverage since its inception.

Under the present provisions of the Colorado act, no employee can receive compensation for an occupational disease disability if he is employable, even if that employment is in an occupation much less skilled and financially rewarding than the one in which the employee engaged prior to incurring the disease. This provision in effect penalizes a disabled employee for continuing to work despite his disability. An accidental injury and an occupational disease may result in the same disability, e.g., the loss of the use of an arm or leg; under workmen's compensation an employee would receive partial compensation, while under the occupational disease statutes he receives nothing.[21]

Arguments Against Partial Disability Coverage[22]

Opponents of partial disability coverage state that it is extremely difficult to determine the degree of partial disability resulting from occupational diseases, and even in some instances to determine whether there is any partial disability at all, especially if the evaluation is made by a lay board rather than a panel of medical experts. When these difficulties are added to those involved in determining occupational disease causality in the first place, it makes it impossible

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20. Summarized from testimony presented at committee hearings and data gathered during the study.
21. The special problems pertaining to partial disability coverage for silicosis and other dust diseases and arguments for and against such coverage are covered in a separate section below.
22. Summarized from testimony given before the committee and from data gathered during the study.

TABLE VII

Indemnity Benefits for Permanent Partial Disability from Occupational Diseases Under State and Federal Workmen's Compensation Laws [1]

A. Jurisdictions authorizing payment of same indemnity benefits for permanent partial disability from any occupational disease covered as for accidental injury

Alabama	Illinois	New Jersey	Texas
Alaska	Indiana	North Carolina	Virginia
California	Kentucky	North Dakota	Washington
Connecticut	Louisiana	Oregon	West Virginia [2]
Delaware	Massachusetts	Puerto Rico	Wisconsin
District of Columbia	Missouri	Rhode Island	
Hawaii	Nebraska	Tennessee	

Federal Employees' Compensation Act.
Longshoremen's and Harbor Workers' Compensation Act.

B. Jurisdictions authorizing no indemnity benefits for permanent partial disability from some or all occupational diseases, or limiting them as noted

Arizona	None, for any occupational disease.
Arkansas	Provides compensation for asbestosis or silicosis if disability is one-third or more of total disability.
Colorado	None, for any occupational disease.
Florida	None, for any dust disease.
Georgia	Provides benefits in the case of occupational disease causing total (but not partial) loss, or loss of use, of members or loss of vision of an eye.
Idaho	None, for any occupational disease.
Iowa	Provides compensation for silicosis if disability is one-third or more of total disability.
Kansas	None, for any dust disease.
Maine	None, for any dust disease.

1/ Occupational Disease Problems Under State Workmen's Compensation Laws, op. cit., pp. 22-23.

2/ West Virginia has special provisions applicable to silicosis. See text.

Jurisdictions authorizing no indemnity benefits for permanent partial disability from some or all occupational diseases, or limiting them as noted

Maryland	—— Provides for payment of $1,000 if the worker has demonstrable evidence of a pulmonary dust disease and his capacity for work has been inpaired but the impairment is less than total.
Michigan	None, for any dust disease.
Minnesota	Provides compensation for partial disability from silicosis or asbestosis only if it follows compensable total disability.
Montana	None, for any occupational disease.
Nevada	None, for any occupational disease.
New Hampshire	None, for any dust disease.
New Mexico	None, for any occupational disease.
New York	Committee of expert consultants on dust diseases may determine the feasibility of allowing compensation for partial disability.
Ohio	None for silicosis or occupational disease of the respiratory tract other than berylliosis.
Oklahoma	None, for silicosis or asbestosis. No limitation on anthracosis pulmonary fibrosis.
Pennsylvania	None, for silicosis, asbestosis or anthraco-silicosis.
South Carolina	Benefits lower than for accidental injury. For permanent partial disability due to occupational disease limited to 52 weeks.
South Dakota	None, for any occupational disease.
Utah	Benefits lower than for accidental injury. The total maximum for permanent partial disability due to occupational disease is $4,042.50 as compared with $8,421.90 in case of accidental injuries.
Vermont	None, for any occupational disease.

to provide partial disability benefits on an equitable basis. The provision of partial disability compensation would be extremely costly to employers, especially if such compensation was not barred for occupational disease disabilities aggravated by employment.

In effect, employers would be required to finance an over-all health insurance program, which is not the intent of workmen's compensation and occupational disease legislation. Such coverage would also make it possible for employees to be compensated for a pre-existing condition or sensitivity of which the employer had no knowledge and could even lead to compensation for an employee who is unable to work in an industry in which he sought employment, because of a pre-existing allergic sensitivity. The provision of partial disability coverage would lead to more careful screening by employers and more extensive pre-employment physical examinations, with a resulting restriction on employment, which would force workers with a choice of being jobless or competing for the most menial unskilled jobs.

States with partial disability coverage provisions have found proper administration extremely difficult and compensation costly. Partial disability has caused more problems than any other provision in states with so-called more liberal laws, and many of these states would like to repeal these provisions.

Experience in Other States

There was little indication of special problems resulting from partial disability benefits in the replies on this subject from those states with comprehensive coverage. Most of the states said that the determination of causality and extent of partial disability in occupational diseases was handled in the same way as accidental injuries and posed no special problems. Some of the states reported that medical panels were extremely useful in these determinations, particularly Utah and West Virginia.

Two states (Illinois and Oregon) reported that their occupational disease legislation prohibited coverage for diseases aggravated by employment. Utah reported that disease aggravation is not compensated unless such aggravation is substantial. Nevada apparently has no restriction on compensation for diseases aggravated by employment, but stated that such cases are examined very carefully before an award is allowed. A few states, particularly New York and Missouri, cited difficulties in determining the extent of disability resulting from loss of hearing.[23] New York also indicated the difficulties in determining causality, stating that perhaps the most difficult problem encountered is the proper definition and identification of a disability as an occupational disease. The administrators and the courts have found it necessary to consider whether an individual reaction due to employment conditions, or aggravation of pre-existing pathology, may constitute an occupational disease. In one important case, the court held that "there must be a recognizable link between the disease and some distinctive feature of the claimant's job."[24]

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23. Missouri passed special legislation pertaining to loss of hearing at the 1959 legislative session. This legislation and loss of hearing problems are discussed in a separate section.
24. New York has a special study underway on the determination of partial disability in silicosis and other dust disease cases. The special problems relating to partial disability coverage for dust diseases is also covered in a separate section.

Testimony of Medical Experts[25]

The medical experts who testified before the committee at the June 29, 1960 meeting emphasized the difficulties of determining partial disability resulting from occupational diseases. However, none of them clearly opposed such coverage for this reason, and a few indicated that a reasonable approach might be worked out through the use of medical panels and related methods.

Dr. Osgood Philpott, dermatology specialist, said that while it would be difficult to determine the degree of temporary or permanent partial disability in a dermatitis case, he felt that a committee of the Colorado Dermatology Society could be formed to study and recommend a partial disability guide and schedule. Dr. William A. Rettberg, hematology specialist, said that it is very difficult to determine the amount of disability resulting from diseases of the blood, because there are very few statistics available concerning the rate of recovery, number of patients who recover, and the length of time required for recovery. (Dr. Allen Hurst, chest disease and allergy specialist, directed most of his remarks to the difficulties involved in determining the degree of disability in respiratory diseases with special emphasis on silicosis, and these remarks are covered below.)

Dr. Irving Ohr, medical director, Martin-Denver, emphasized the difficulty in determining the proportion of heart disease disability which could be attributed to employment and cautioned against establishing disability award provisions which would prevent a disabled worker from seeking or performing some type of gainful employment.[26]

Dr. B. Dixon Holland, director of the Department of Occupational Health, American Medical Association, stated that the AMA has established a number of committees to study medical problems relating to occupational disease and workmen's compensation coverage. It is expected that the work of these committees will result in standards which will serve as guides in the determination of partial disability, but he emphasized that the problems are extremely complex and that there is no immediate or easy solution.

Medical Panels

Dr. Hurst explained to the committee that the state of New York provides for panels of medical specialists to give testimony before the Workmen's Compensation Board as to whether a disease could be caused by toxic substances used for industrial purposes and as to the proportion of partial disability.[27]

He advocated similar panels and procedures for Colorado. If a panel of three specialists could discuss a case and arrive at a consensus of opinion, it would be more equitable and beneficial for both employees and employers than an

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25. Abstracted from testimony before the Legislative Council Committee on Occupational Diseases, June 29, 1960.
26. In its reply to the committee's questions, California reported the same difficulties as stated by Dr. Ohr, stating that when a heart attack results in permanent disability an apportionment is frequently made, because the medical evidence indicates that a part of the disability is the result of the natural progression of the pre-existing disease, and a part is the result of employment
27. Testimony before Legislative Council Committee on Occupational Diseases, June 29, 1960.