Whatever Happened to Brown Lung?  
Compensation for Difficult to Diagnose Occupational Diseases

Mary Lee Gosney†

This article examines the problems which victims of “brown lung,” the cotton workers' occupational disease, have encountered in applying for workers' compensation. The author first discusses the medical attributes of brown lung and the cotton industry's attitude toward the disease. She then analyzes current occupational disease laws and suggests a comprehensive program for reforming these laws to accommodate workers suffering from job-related diseases which are obscure in origin and difficult to diagnose. Finally, she examines four possible methods of implementing reform of the workers' compensation system.

I

INTRODUCTION

We know we got it. We know there's no cure for it. We got to live with it. It used to worry us, but we stopped worrying and left it up to the Lord. But our main goal is for the young ones ... still in the mills not to come out in the condition we are.

Willie Rappe, Brown Lung Victim

Almost everyone who watches television, listens to the radio, or reads a newspaper, has heard of “black lung” disease. “Black lung,” the colloquial name for pneumoconiosis, is a progressively debilitating lung disease which leads to severe shortness of breath and eventual death. While this disease is perhaps the most widely known occupational disease in the country, black lung is not the only lung disease caused by industrial dusts. Silicosis, the stone mason's disease, was identified, and made compensable in the United States, forty years ago. Many workers in the shipbuilding trades and other industries

† B.A. 1967, M.S. 1971, University of Kentucky; J.D. 1978, Boalt Hall, University of California, Berkeley. The author is currently employed as a research attorney for Justice Stephen K. Tamura, California Court of Appeal, Fourth District, Second Division. The author wishes to express special thanks for their invaluable assistance to Agnes T. Barling of the Industrial Relations Law Journal, and Marilyn Lewis, McEnery Library, Boalt Hall.
3. Id. at 80-112.
which make wide use of asbestos suffer from the "white lung" disease—asbestosis. Finally, a large percentage of workers in America's huge cotton textile industry suffer from byssinosis, or "brown lung," a disease caused by breathing the dust of unprocessed cotton.

Brown lung has not enjoyed the public interest or the legislative attention which has been accorded black lung. In contrast to legislation such as the Federal Coal Mine Health and Safety Act of 1969 and the Black Lung Act of 1972, which provide for enforceable safety regulations as well as for federal benefits for black lung victims and their families, there exist few legislative safeguards for workers exposed to cotton dust at the workplace. Of those currently affected by this disease only a small minority have ever received any workers' compensation benefits for their exposure to cotton dust.

4. Id. at 124-28.
5. TOXICOLOGY, THE BASIC SCIENCE OF POISONS 218 (L. Casarett & J. Doull, eds. 1975); Wolf, Occupational Diseases of the Lungs, 35 ANNALS OF ALLERGY, 5-6 (1975); Harris, Merchant, Kilburn, Hamilton, Byssinosis and Respiratory Diseases of Cotton Mill Workers, 14 J. OF OCCUPATIONAL MEDICINE 199-206 (1972). Studies of the percentage of textile workers affected by byssinosis show a wide variance. While survey results generally show a much higher percentage of affected workers in the parts of the mill where the raw cotton is prepared, especially opening, picking, and carding rooms, they reveal that workers throughout the entire plant are somewhat exposed to brown lung. The percentages found range from a low figure of 5.2% in the non-preparation areas of the mill, to a high of 41% in the carding area. The average percentage of diseased workers most commonly found is about 20%. Harris et al, supra, at 199; Dept of Labor, Occupational Exposure to Cotton Dust Proposed Standards, 41 Fed. Reg. 56,498, 56,501 (1976) (to be codified in 29 C.F.R. Parts 1910 and 1928); Wakelyn, Byssinosis—Present Situation, 136 TEXTILE INDUSTRIES 92, 94 (1972). Estimates of the number of people now suffering from byssinosis also vary. Ralph Nader, in his 1971 article, 'Brown Lung' The Cotton-Mill Killer, The Nation, March 15, 1971 at 335, quoted byssinosis researcher Dr. Arend Bouhuys to the effect that 17,000 carders and spinners then suffered from brown lung. A 1976 article in the same publication, Lynn, supra note 1, at 210, put the figure at 100,000 people across the country. Stanley & Hughes, in their article, Cotton's Legacy: Denim, Broadcloth and Brown Lung, ENVT'L ACT., June 18, 1977, at 3, cite the same 100,000 figure, but point out that it does not include those retired from the workforce due to disease. In a more recent article, Bouhuys, Schoenberg, Beck & Schilling, Epidemiology of Chronic Lung Disease in a Cotton Mill Community, 154 LUNG 167 (1977), it is estimated that at least 35,000 people in the United States may suffer from byssinosis, and the Washington Post echoes this figure. Kotz, The Brown Lung Battle, Wash. Post, Jan. 1, 1978, at B1, B4.

6. 30 U.S.C. §§ 801-960 (1976) [hereinafter referred to as the FCMHSA].
8. Reports of the number of workers who have received state compensation for brown lung vary. It is well established that at the time of the OSHA hearings in 1970, no American Worker had ever received workers' compensation for byssinosis, S. REP. NO. 91-1282, 91st Cong., 2d Sess., reprinted in [1970] U.S. CODE CONG. & AD. NEWS 5177, 5200, though byssinosis had been compensated in England since 1941 and is also compensated in Australia. Wakeley, Byssinosis—Present Situation, 136 TEXTILE INDUSTRIES 92, 94 (1972). If the sparse available figures for North and South Carolina, the two states on which this article will concentrate, are at all reflective of the situation throughout the U.S., the situation has improved little in eight years. Fran Lynn in her article states that thirty-eight people have received awards for brown lung from the North Carolina Industrial Commission, while no awards had been received, by South Carolinans by 1975. Lynn, supra note 1, at 212. Another article reports there have been four out-of-court settlements in North Carolina, and states that only one worker in South Carolina has ever received compensation for brown lung. Stanley & Hughes, supra note 5, at 5. Recently the three-year-old Carolina Brown Lung Association reported in a newsletter that for the first time one of its mem-
This article will examine the obstacles a byssinosis victim faces when he or she seeks state workers' compensation benefits. The legal, procedural, and practical problems facing these workers will be illustrated by examining the state compensation systems in North and South Carolina, two states which employ a large number of cotton workers. In response to the inadequacies in the present systems, this article presents a comprehensive reform proposal which identifies a compensation system that is both legally and politically feasible, and which may give byssinotics a greater opportunity to benefit from a workers' compensation program. Finally, this article makes recommendations for the implementation of such a system.

II

A Background To Brown Lung

A. The Medical Properties of Byssinosis

Byssinosis is a lung disease found among those who work in the processing of cotton, flax and hemp.\(^9\) It is characterized, early in its onset, by a hacking cough and by tightness of the chest on Monday mornings when work is resumed after the weekend.\(^10\) Eventually, if the worker is not removed from the dusty environment, chest tightness occurs daily and the lungs' capacity to take in air becomes progressively reduced.\(^11\) After a certain point, the condition becomes irreversible and the worker has acquired a chronic obstructive lung disease which causes constant pain, affects his or her ability to make a living, and leads to early death.\(^12\)

Chronic cough among laborers in flax and hemp was noticed and documented by Bernardino Ramazzini, the father of occupational medicine, in 1700.\(^13\) By the nineteenth century, studies had identified a respiratory disease that affected cotton textile workers, and traced its cause to exposure to cotton dust.\(^14\) The disease, with symptoms common to cotton, flax and hemp workers, came to be known as "byssinosis," from a Greek word meaning fine flax or linen.\(^15\) Through the nineteenth and early twentieth centuries, numerous studies were conducted that showed byssinotics had received a $20,000 workers' compensation award from North Carolina. Compensation News, Brown Lung Blues, Nov. 15, 1977, at 2.

9. W. Morgan & A. Seaton, supra note 2, at 274.
10. Id. at 278.
11. Id.
13. W. Morgan & A. Seaton, supra note 2, at 274.
14. Id.
ducted in Great Britain, where it was thought for some time that the cotton dust disease was peculiar to Lancashire and Ulster. These studies, which culminated in 1940, recognized byssinosis as an occupational disease for which a disabled English worker could receive compensation.

Despite the early and extensive study of byssinosis in Great Britain, other countries have only recently given attention to this occupational health problem. There were a few isolated reports of a respiratory ailment among cotton textile workers in North Carolina in the late 1930's, but the illnesses were attributed to the use of a peculiarly poor grade of cotton, and the reports were given little significance. Only in the late 1950's and early 1960's did American medical researchers begin to take heed of the British findings, and to look for similar disease states among this country's textile workers. As a result of extensive epidemiologic research, often made difficult by industry hostility, it is now firmly established that brown lung is an occupational disease endemic to workers in America's cotton mills.

Despite the positive identification of byssinosis as an occupational disease, access to the workers' compensation system remains difficult for brown lung victims. While this situation results partly from prevailing attitudes and conditions within the cotton textile industry, it is also due to the elusive, non-specific properties of the disease itself. Its etiology has not yet been established, diagnosis remains uncertain in that there are no specific tests for isolating the disease in the individual, and it is often hard to distinguish from other non-occupational lung diseases such as bronchitis, asthma, and emphysema.

A number of theories have been advanced to explain the origin of byssinosis. It has been suggested that the disease is caused by mechanical irritation when cotton dust is breathed into the lungs. Some re-
searchers have posited that brown lung is caused by the development of hypersensitivity to cotton—that byssinosis is essentially an allergic reaction to raw cotton, or to microorganisms contained in the dust.23 Others suggest that the disease is caused by bacteria or fungi, or by bacterial and fungal products known as endotoxins, which are present in large numbers in cotton dust.24 While this theory has not been conclusively disproven, lack of fever or other symptoms make the argument suspect.25 Another theory is that a trash component of cotton dust, perhaps from the bract of the cotton plant, causes brown lung. The trash hypothesis is supported by the fact that the incidence rate of byssinosis in mill workers has increased since the mechanical harvesting of cotton was begun (The mechanical method leaves a larger amount of trash in the cotton than does hand harvesting).27 Still other research suggests that byssinosis may be caused by such diverse substances as protoelytic enzymes or methyl piperonylates.28

Thirty years ago, it was thought that brown lung was actually a form of asthma,29 but comparative clinical studies of the two diseases in the last several decades have fairly conclusively ruled out this hypothesis.30 Byssinosis has also been strongly linked to chronic bronchitis and emphysema. The non-specific changes seen in x-rays and necropsies of byssinotics’ lungs are indistinguishable from those of patients with bronchitis or emphysema.31 The nature of the relationship between byssinosis and emphysema has been difficult to establish because no standard method exists for diagnosing emphysema.32 Some researchers, however, think that emphysema is quite distinct from brown lung in that emphysema causes anatomical changes in the lungs.33 Bronchitis has been even harder to differentiate from byssinosis, since the symptoms of advanced byssinosis and chronic bronchitis are quite similar: chronic cough, shortness of breath, excessive secretion,34 and severe obstruction of the bronchial tubes.35 The consensus among researchers seems to be that brown lung is a disease dis-

24. See note 23 supra.
25. Id.
26. “Cotton trash” is made up of parts of the cotton plant other than fibers, including stems, leaves, and bolls. Trash components are mixed with the cotton fibers during harvesting, and thus become part of the cotton dust which is breathed in by workers during processing. Diagnosis, Brown Lung: Prognosis, Misery, supra note 12, at 45.
28. Harris et al, supra note 2, at 203; Wakelyn, supra note 2, at 98.
29. W. MORGAN & A. SEATON, supra note 2, at 281.
30. Id.
32. Harris et al, supra note 2, at 202.
33. Wakelyn, supra note 2, at 92.
34. Id.
35. Edwards, supra note 22, at 612.
tinct from chronic bronchitis, but that there is not yet enough etiological data to explain the difference between the two illnesses. Differentiating byssinosis from other lung diseases is extremely important to workers seeking compensation for brown lung, because state workers’ compensation statutes typically fail to provide benefits for diseases such as emphysema and bronchitis which are “ordinary diseases of life.”

Though researchers are not certain what causes brown lung, they have pinpointed certain conditions which may exacerbate the disease. Cigarette smoking is generally believed to cause a dramatic increase in the incidence of the disease. The introduction of air conditioning into cotton mills, once thought to have eliminated the risk of byssinosis through removal of the larger particles of cotton dust from the air, may actually be contributing to byssinotic conditions. Mechanical harvesting, mentioned above, may also be a factor in increasing the threat of brown lung, as may the use of short staple, dirty cotton. Much work remains to be done in isolating the multiple factors which contribute to the onset of brown lung and which act to increase byssinosis victims’ discomfort and disability.

Most of the research now being done on brown lung is concentrated on isolating the causative agent of the disease. It is important that the mechanism through which brown lung is acquired, as well as its epidemiological prevalence, be identified. Such knowledge will help to establish specific techniques for diagnosing byssinosis, and distinguishing it from other diseases with similar symptoms.

There are no tests with which byssinosis can be diagnosed by observing the pathological state of a worker’s lungs. Neither x-ray nor autopsy reveals a diseased state of the lungs which can be specifically related only to brown lung. This does not mean, however, that byssi-

---

36. Wakelyn, supra note 2, at 92.
38. One study has shown that there can be as much as a 600% increase in the incidence of byssinosis among male workers who smoke as opposed to those workers who don’t smoke. Department of Labor, Occupational Safety and Health Administration, Occupational Exposure to Cotton Dust, Proposed Standards and Notice of Hearing, 41 Fed. Reg., 56498, 56502 (1976). The risk seems to be greater for males who smoke than for female smokers. Wolf, supra note 31, at 6. It is estimated that two-thirds of male cotton textile workers and one-third of female cotton textile workers smoke cigarettes, 41 Fed. Reg. supra. However, one recent study shows no straightforward correlation between smoking and the prevalence of brown lung. Zuskin & Valic, Change in the Respiratory Response to Coarse Cotton Dust over a Ten-Year Period, 112 Am. Rev. of Respiratory Disease 417 (1975).
41. Mitchell, Industrial Pulmonary Disease, 212 The Practitioner 327, 329 (1974); Wolf, supra note 6, at 6; Edwards, supra note 22, at 612, 622. A commentator does mention the presence of specific bodies in the lungs, termed “byssinosis bodies,” but their existence is not at all firmly established. Edwards, supra note 22, at 622.
nosis can never be diagnosed. An attempt to ascertain whether a patient has byssinosis begins with an occupational history and with a lengthy questionnaire probing symptoms of lung discomfort and respiratory illness as remembered by the patient. This symptomologic data can be combined with pulmonary function tests, x-rays, exercise tests, spirometry, blood samples, and diffusion studies to arrive at a diagnosis. Yet, as noted, while diagnosis with presently developed techniques may be conclusive concerning the presence of byssinosis, there are still difficulties in differentiating brown lung from other chronic lung diseases. Moreover, these techniques cannot show how much of a patient's disability is due to byssinosis rather than other causes.

B. Economic Concerns and Attitudes Toward Byssinosis in the Cotton Industry

As discussed above, brown lung was not acknowledged in the United States until relatively recently. It was not until 1965 that the growing number of research studies reporting byssinosis forced the cotton textile industry to react with a general denial of the disease's existence. Concern about brown lung came to the surface in 1970-71, with the passage of OSHA and Ralph Nader's study of byssinosis. Still, the industry's reaction was to ignore the problem, deny its existence, or to maintain secrecy, hoping that the general public would remain unaware of cotton dust's effect on textile workers' health.

By 1972, some industry representatives had begun to admit that brown lung existed, that it was an occupational disease of cotton textile manufacturing, and that measures must be taken to clean up the workplace. Trade periodicals began to encourage the industry to protect workers through the use of respirators in dusty areas where engineering controls had not yet eliminated the threat of brown lung. Employers were urged to educate workers in the proper use of these devices, so as to be in compliance with OSHA standards. While some managers expressed fear of a "tidal wave" of both legitimate and illegitimate compensation claims for brown lung, others expressed faith that the

42. *Diagnosis, Brown Lung; Prognosis, Misery*, supra note 12, at 38.
44. Research seeks to define causes of industrial respiratory ills, TEXTILE WORLD, June, 1969, at 47; *Diagnosis, Brown Lung; Prognosis, Misery*, supra note 12, at 40.
47. *Diagnosis, Brown Lung; Prognosis, Misery*, supra note 12, at 38-42.
48. Teach them to breathe, says OSHA, TEXTILE WORLD, Nov. 1972, n. at 40.
49. *Id.*
basic integrity of southern textile workers would keep them from making false claims.\textsuperscript{50} Such faith in the workers was bolstered by knowledge that state laws placed the burden of proof on the claimant in workers’ compensation cases, and that brown lung had not yet been legally proven.\textsuperscript{51} Despite this, some sectors of the industry still refused to admit that byssinosis was in fact a problem,\textsuperscript{52} and others chose to maintain secrecy in the face of such knowledge.\textsuperscript{53}

Industrial attitudes toward byssinosis have changed somewhat in the years since 1972. No longer do manufacturers question that brown lung has been clearly identified as an occupational disease of cotton textiles.\textsuperscript{54} Rather, their concerns now center on fighting brown lung compensation claims\textsuperscript{55} and opposing stricter cotton dust standards for their mills. Potential cost is the primary factor motivating the cotton textile manufacturers’ position. The industry is aware of the large expenditures which have been required to meet claims filed by black lung victims since 1969 and it fears that under existing state workers’ compensation programs it would be forced to absorb similar costs without government assistance similar to that afforded the mining industry under the FCMHSA.\textsuperscript{56} Moreover, while technology for bringing mills into compliance with proposed federal internal air standards does exist,\textsuperscript{57} manufacturers see the costs as staggering. Industry estimates place cost of compliance with the proposed standard at from one to two billion dollars, including both equipment and energy expenditures.\textsuperscript{58}

Along with the potential cost of compensation for brown lung and compliance with federal standards, the cotton textile industry is feeling other economic pressures. Both synthetic fibers and cotton imports have made some inroads on the American cotton textile market.\textsuperscript{59} Consumer groups have begun to put pressure on the industry in recent years to provide anti-inflammatory products.\textsuperscript{60} Several substances used

\begin{itemize}
\item \textsuperscript{50} Diagnosis, Brown Lung; Prognosis, Misery, supra note 12, at 42.
\item \textsuperscript{51} Id. at 41-42.
\item \textsuperscript{52} Id. at 39.
\item \textsuperscript{53} New byssinosis findings jolt textiles, pose dollar threat, supra note 46, at 25.
\item \textsuperscript{54} Dominguez, Air Pollution and the Textile Industry, 139 Textile Industries, Apr., 1975, at 77, 81.
\item \textsuperscript{55} See, Diagnosis, Brown Lung; Prognosis, Misery, supra note 12, at 41-45. See also, Liberty Mutual, Dec. 15, 1977, at 2 and Insurance firm answers query, Raleigh, N.C. News and Observer, Nov. 24, 1977, for an account of how the North Carolina industry’s largest insurance carrier, Liberty Mutual, and some textile mills are discouraging brown lung claims and fighting those claims that do get filed. The North Carolina Insurance Commission has refused to grant Liberty Mutual a rate hike until it reveals how much money it uses to fight byssinosis claims in court.
\item \textsuperscript{56} See, e.g., Osha cotton-dust standard a time bomb for textiles, Textile World, Jan. 1977, at 23-24; Mill environment is under the gun, Textile World, March 1976, at 45, 49.
\item \textsuperscript{57} Mill environment is under the gun, supra note 56, at 45, 49.
\item \textsuperscript{58} Id. See also, Osha cotton-dust standard a time bomb for textiles, supra note 56, at 23-24.
\item \textsuperscript{59} New byssinosis findings jolt textiles, pose dollar threat, Textile World, Apr. 1972, 25, 26 (synthetic fibers); Rozelle, supra note 27, at 69.
\item \textsuperscript{60} Rozelle, supra note 27, at 69.
\end{itemize}
in processing anti-inflammatory cotton fabrics, however, are strongly suspected of being human carcinogens. All of these concerns have motivated the industry to fight compensation claims for brown lung and strict air quality standards because of what it perceives as their tremendous dollar cost in a time of economic uncertainty.

III

THE CURRENT STATUS OF STATE WORKERS’ COMPENSATION FOR OCCUPATIONAL DISEASES

Before examining possible avenues for compensation of brown lung on the state level, it is necessary to have an understanding of the current status of state workers’ compensation for occupational diseases. This involves not only review of existing laws relating to occupational diseases in North and South Carolina, but also study of the findings of the National Commission on State Workmen’s Compensation Laws established by OSHA and its successor bodies. Awareness of the impact of the National Commission and its aftermath on state workers’ compensation law is important in assessing the possibility of obtaining state benefits for byssinosis victims. Moreover, the findings and recommendations concerning occupational diseases set out by the Commission and its successors provide an excellent framework for analysis of the current status of state compensation for work-related illnesses.

A. The National Commission on State Workmen’s Compensation Laws

Congress provided for establishment of the National Commission on State Workmen’s Compensation Laws because of its concern about the adequacy and fairness of those laws in light of modern economic and labor conditions, expanding medical knowledge, and advances in industrial technology. This interest was a natural outgrowth of congressional research on state programs designed to prevent occupational injury or disease, and was based on testimony in Senate committee hearings which raised grave questions about existing state compensa-

61. Dominiguez, supra note 54, at 77, 81-83.

62. As early as 1972, OSHA cited cotton dust as one of its five national target health hazards. Yet a new, stricter cotton dust standard has still not been promulgated as of 1978. A memorandum written by George Guenther, Assistant Secretary of Labor for Occupational Safety and Health, made public in the aftermath of Watergate, reveals that the Nixon Administration promised the cotton textile manufacturers as part of its 1972 re-election campaign strategy that no controversial standards, such as those being considered for cotton dust, would be proposed by OSHA. It has been reported that the textile industry contributed more money to former President Nixon’s re-election campaign than any other single industry. Lynn, supra note 1, at 211.

While members of Congress were generally worried about the lack of response to injured workers' needs, they were particularly troubled by the fact that many state programs failed to recognize and compensate certain occupational diseases, among them byssinosis.

In July 1972, twelve months after its first meeting, the National Commission presented its conclusions in a full report on state workers' compensation to Congress and President Nixon. The Commission's lengthy report contained eighty-four separate recommendations for compensation reform. The recommendations were drawn from the Commission's analysis of the five major objectives of a modern workers' compensation system: (1) broad coverage of employees and of work-related injuries and diseases; (2) substantial protection against interruption of income; (3) provision of sufficient medical care and rehabilitation services; (4) encouragement of safety; and (5) an effective system for delivery of benefits and services. Of these recommendations, nineteen were considered so essential to an adequate program that states were urged to take steps to adopt them as soon as possible.

Only one of the Commission's essential recommendations dealt specifically with occupational diseases. This was the recommendation "[t]hat all states provide full coverage for work-related diseases." Early workers' compensation statutes had covered work-related injuries, but not occupational diseases. Legislatures typically reacted to the need for coverage of work-related diseases by compensating only diseases specifically enumerated in the state's compensation statute. The Commission was concerned by the fact that, while most states had abandoned the practice of compensating only diseases found on statutory lists, a few states still had not amended their statutes to provide full coverage for occupational diseases. Two other essential recommendations also had special significance for occupational disease law. These were the recommendations that no maximum dollar or time limits be placed on payment of medical, rehabilitation, or total disability benefits.

65. Id. at 5200.
67. The Commission's eighty-four recommendations are enumerated and explained in chapters 2 to 6 of the Report. Id. at 43-116.
68. Id. at 15.
69. Id. at 127.
70. Recommendation R2.13, Report at 50.
71. Such a list of specifically enumerated diseases is known as a statutory schedule.
Of the sixty-five non-essential recommendations made by the Commission, four specifically mentioned occupational diseases. One was a recommendation that the "[a]rising out of and in the course of employment" test, used in many states to determine whether an injury or disease was work-related, be maintained.\(^{74}\) Two other recommendations dealt with the establishment of a "disability evaluation unit" to determine the etiology of diseases and issues of causation in cases where impairment apparently stemmed from combined work-related and non-work-related sources.\(^{75}\) The Commission suggested that the decisions of the unit be treated as conclusions of fact, reviewable only to the extent that factual determinations are usually subject to review by appellate courts.\(^{76}\) A fourth recommendation was that injuries or diseases attributable to both work-related and outside causes be given full compensation, so long as "[t]he work-related factor was a significant cause of the impairment or death."\(^{77}\)

Two other non-essential recommendations, those dealing with notice to employer and time limitations for filing claims, also had important significance for occupational diseases. The Commission recommended that an employee be required to notify his employer of his work-related impairment "as soon as practical," rather than within a specified time after injury or onset of illness.\(^{78}\) Thus a person with an occupational disease which has a delayed onset (like dust diseases and cancers), or which is not readily diagnosable (like byssinosis), would not be barred from coverage by failure to notify his employer within a certain time period after contracting the disease. Similarly, the Commission recommended that the time limit for filing an initial claim be within three years of "[t]he date the claimant knows or, by exercise of reasonable diligence should have known, of the existence of the impairment and its possible relationship to his employment," instead of within a specified time after injury or onset of illness.\(^{79}\)

In addition to its official report, the Commission also published a comprehensive compendium\(^{80}\) of issues and information on workers'

\(^{74}\) Recommendation R2.14, Report at 50.
\(^{75}\) Recommendations R2.15 and R2.16, Report at 51.
\(^{76}\) Id.
\(^{77}\) Recommendation R2.17, Report at 51. It should be noticed that the Commission recognized that the employer should not have to pay the portion of compensation attributable to non-work-related factors, and suggested that this portion be made up from a separate fund such as the second-injury fund.
\(^{78}\) Recommendation R6.9, Report at 104. The Commission also felt that satisfactory reason for failure to give notice or a showing that lack of notice had not prejudiced the employer or his insurance carrier should excuse the failure to give notice. Report at 105.
compensation, and a three-volume series of supplemental studies\(^8\) which analyzed selected issues in depth.

These other National Commission publications also reflected serious questioning of the quality and quantity of occupational disease coverage by independent scholars in the field of workers' compensation. In the *Compendium*, the authors portrayed occupational disease coverage as "[t]he stepchild of workmen's compensation law."\(^8\)\(^2\) They argued that occupational diseases had not really been ignored by state legislators, but had instead received large amounts of negative attention aimed at severe limitation of coverage, possibly in contravention of the purposes of workers' compensation. The authors saw the reasons for this as three-fold: (1) comparative lack of medical knowledge about occupational diseases as opposed to work-related injuries, so that legislators thought they were covering all such illnesses with these list-oriented statutes; (2) the goal of avoiding compensation for non-occupational ills, which caused legislators to be overzealous in devising limitations; and (3) the fear that work-related illnesses might be so prevalent, particularly in the mining and quarrying industries, that broad coverage would cause bankruptcy and unemployment.\(^8\)\(^3\)

In its Report, the Commission concluded that workers' compensation reform should take place largely at the state level, with the help of "creative Federal assistance."\(^8\)\(^4\) It recommended that this assistance consist initially of the immediate presidential appointment of a new federal workers' compensation commission. The new commission would give encouragement and guidance to the states in modernizing their compensation laws, even providing technical services and commission funds if available. Moreover, the commission would explore issues of compensation law which the present Commission had not had time to study, and would develop uniform data collection systems for workers' compensation.\(^8\)\(^5\) The second component of the Commission's plan for federal assistance was an evaluation of the individual states' compliance with the nineteen essential recommendations in July of 1975. If the states had not made the changes necessary to render their compensation laws adequate and equitable by then, the National Commission recommended that Congress take steps to mandate compliance with the nineteen essential recommendations through federal legislation.\(^8\)\(^6\)

---

\(^8\)\(^2\) *Compendium* at 188.
\(^8\)\(^3\) Id.
\(^8\)\(^4\) *Report* at 126.
\(^8\)\(^5\) Id.
\(^8\)\(^6\) Id. at 126-28.
B. The Interdepartmental Policy Group on Workers’ Compensation

In response to the National Commission’s recommendation that he appoint a new commission to provide federal assistance to the states in reforming their workers’ compensation laws, President Nixon instead established an Interim Policy Group to review the National Commission’s recommendations. In May of 1974, almost two years after the completion of the Commission’s work, the Interim Policy Group reported on its review in a twelve page memorandum to President Nixon, entitled the *White Paper on Workers’ Compensation.*

Despite the brevity of its report, the Interim Policy Group gave a great deal of attention to the problem of occupational disease coverage. First, it suggested that full coverage should be given to all diseases which could be established as work-related either “by case or by class.” Though there was little explanation of the meaning of this phrase, the Group seemed to be saying that, in cases where individual work-relatedness was difficult to prove, the occupational nature of the diseases could be legally established by use of epidemiological data which showed that there was a greater incidence of the disease among certain groups of workers than among the general population. Such an approach would have great significance for a disease like byssinosis, which is difficult to diagnose in the individual though it is well established epidemiologically. Coupled with this suggestion was the statement that the states should make use of medical disability evaluation units to determine work-relatedness.

Second, the Interim Group proposed that where there was difficulty in proving which of successive employers should be liable for a worker’s illness, either the last employer should be designated as responsible, or a production tax should be levied on a particular industry to cover workers so situated. Third, the Interim Group stressed that the National Institute for Occupational Safety and Health should develop guidelines that state agencies might use to recognize health hazards and pinpoint occupationally-related diseases.

To carry out its suggested program, the Interim Policy Group recommended the formation of an Interdepartmental Task Force which would have duties and responsibilities much like those of the new commission proposed by the National Commission: providing technical assistance in the form of information, guidelines, and procedural advice to the states.

88. *Id.* at 3.
89. *Id.*
90. *Id.* at 2-3.
91. *Id.*
92. *Id.*
Despite its findings and conclusions, the Interim Policy Group's White Paper was a much less forceful document than the National Commission's report. It failed to set forth specific and clearly delineated recommendations for the reform of state workers' compensation laws. It even omitted to mention the possibility of providing some funds to assist the states in transforming their compensation programs into modern benefits delivery systems. Additionally, though it indicated that some federal action might be necessary to bring about essential changes, the White Paper did not mention the possibility of federal mandatory requirements at all. Finally, the Interim Group's proposal that an evaluation of state programs be made at the end of 1975 pushed back the time-table for reform, allowing the states six months longer to voluntarily implement changes in workers' compensation coverage.

C. The Interdepartmental Workers' Compensation Task Force

The Ford administration, responding to the White Paper, did establish an Interdepartmental Workers' Compensation Task Force. The Task Force's Policy Group [hereinafter referred to as the "Task Force"] made its official report, based upon preliminary findings, to President Ford and Congress not at the end of 1975 as the Interim Policy Group had suggested, but on January 19, 1977.93

Deep concern about the status of occupational disease law permeated the Task Force report.94 The findings of the Task Force, although preliminary, were very disturbing. While forty-nine states had adopted the broad statutory coverage approach recommended by the National Commission,95 very few victims of work-related illnesses had even attempted to obtain compensation. Of those who did file, only a small percentage were found to be compensable.96 Workers with occupational diseases who sought compensation were faced with roadblocks established by the states in the form of various arbitrary limitations on coverage. Additionally, claimants were confronted with litigation in an extremely high percentage of the cases filed.97 The Task Force Group was especially troubled about such lack of coverage in the face of NIOSH's estimate that tens of millions of American workers were being exposed to toxic substances at the workplace.98

The Task Force Policy Group reviewed existing arbitrary limitations on occupational disease coverage in some detail. It found, first of

---

94. Id. at 5, 11, 16-20, 26, 34-39, 47-49.
95. Id. at 16.
96. Id. at 19.
97. Id.
98. Id. at 18.
all, that twenty states allowed full coverage only if the disease involved was "[p]eculiar to the worker's occupation," and that many other states provided full coverage only if the illness was not an "[o]rdinary disease of life." 99 Still other states limited coverage in similar ways by requiring documentation of a clearly defined "accident" before compensation would be granted, or by requiring that causation be limited to one specifically identifiable toxic substance or working condition. 100 There were also numerous time limitations which worked to bar occupational disease claims: (1) fifteen states had the "minimum exposure rule," which required that the claimant must have been exposed to the hazard on the worksite for a specific minimum time period; (2) nineteen states had laws barring claims involving exposure to hazards more than a certain number of years before; (3) some states still required a minimum period of exposure to the hazard within that state; and (4) thirteen states had employer notification statutes which began to run at time of exposure to the hazard, rather than at the time the worker knew or should have known of his or her disease and its work-related nature. 101

The Task Force recommended coverage of all occupationally-related diseases, without any arbitrary limitations on compensability. 102 The remainder of its recommendations represented an attack on the arbitrary limitations which it had identified and on obstacles to the funding of benefits for occupational diseases.

The Task Force Policy Group's first attack was on statutory limitations to full coverage of all diseases "arising out of and in the course of employment," represented by such phrases as "peculiar to the worker's occupation," "by accident," and "ordinary diseases of life." 103 The Task Force felt that such limitations were out of step with the current medical and scientific awareness that diseases caused by worksite hazards can almost always be caused by other agents. It recommended that the focus of the legal decision to compensate be placed on the worksite exposure and the illness, and that compensation be awarded if there were "a reasonable medical certainty or a high probability" that the specific worker's disease was work-related. 104 Determination of the work-relatedness of such illnesses, the Task Force felt, should be made

99. Id. at 16. General knowledge indicates that there are few, if any, diseases of mankind that can occur only because of an activity or an exposure at work.
100. Id. at 16-17.
101. Id. at 17.
102. Id. at 34.
103. Id. at 35.
104. Id. Note the use of both medical terminology—"reasonable medical certainty"—and legal terminology—"a high probability"—in this recommendation, showing an awareness, in this author's mind, that in the absence of complete medical knowledge legal processes should be utilized to satisfy the workers' compensation goals of full coverage of work-related illnesses and prompt delivery of medical and financial benefits.
by an expert panel which would include physicians, epidemiologists, and industrial hygienists. The Task Force Group recommended a detailed set of guidelines for the functioning of an expert panel, the most important of which was a "cautious" recommendation that in cases where the etiology of a disease is unknown, epidemiologic evidence of a high incidence of the disease in a certain industry should cause the burden of proof to shift to the employer that the illness is not caused by worksite exposure. The Task Force also recommended that the federal government undertake a massive research effort to isolate the etiologies of potentially significant work-related diseases, to gather additional epidemiologic data on illnesses which might be linked to occupations and to disseminate this information to workers, legislators, physicians, and employers.

A second part of the attack on limitations to full coverage was aimed at time and dollar limitations on occupational disease compensation. Initially, the Task Force Policy Group made a sweeping recommendation that compensability restrictions based on length, recency and geographic area (state) of exposure, which are not shown to be logically related to disease states by competent medical or scientific data, be eliminated. It next recommended that the time limitation on filing of claims begin to run at the time the worker "[k]new or should have known of the existence and potential compensability of the disease." The Group also stated that workers suffering from occupational diseases should receive the same level of benefits for the same length of time as those being compensated for work-related injuries.

The Task Force Policy Group's last set of recommendations for occupational disease compensation concerned the funding for such compensation. As did the earlier White Paper, the Task Force report endorsed the "last employer principle" in cases where the worker was exposed to hazards while working for several different employers. It also suggested the use of second injury funds as an alternate way to fund compensation in these cases. Finally, the Task Force recommended that the Social Security Administration be empowered to levy a surcharge on the payroll taxes of certain industries, if it became ap-
parent that disability claims for particular diseases were coming from a disproportionately high number of workers in that industry.\textsuperscript{114}

The Task Force felt that no other program would replace workers' compensation in the foreseeable future, and that the administration of workers' compensation should remain with the states.\textsuperscript{115} It recommended giving the states yet a “[w]hile longer to strengthen their workers' compensation systems,” stating that it did not think that federalization of the systems was warranted at the time.\textsuperscript{116} The Group did recognize, however, that the states were in need of federal assistance to make changes in their programs.\textsuperscript{117}

\textbf{D. State Workers' Compensation Reform Since Enactment of OSHA}

Faced with the example of the black lung laws and the threat of further federal legislation, state legislators have given much attention to workers' compensation reform since OSHA's passage in 1970. An obvious measure of this concern is the number of changes in workers' compensation laws which have been enacted during this period. In 1971, even before the Commission had made its Report, there were over three hundred changes in state statutes.\textsuperscript{118} Four hundred bills were enacted in 1973, the majority of which dealt with increased benefits and broadened coverage.\textsuperscript{119} By 1976, however, the pace of change had slowed; there were approximately one hundred amendments to state workers' compensation statutes in that year.\textsuperscript{120} It is possible that this slackening reflects the fact that the states have completed the reforms they perceived necessary. Review of states' compliance with the National Commission's nineteen essential recommendations, however, suggests rather that state legislators have withdrawn their attention from workers' compensation reform because of lessening federal pressure for change.

The great emphasis which the National Commission placed on its nineteen essential recommendations, along with the lack of forcefulness of its successor bodies in making further recommendations, have caused the states to concentrate their workers' compensation reforms on those nineteen essentials. Yet enactment of the essential recommen-

\textsuperscript{114} Id.
\textsuperscript{115} Id. at 4. The Group felt that administration of the programs should remain with the states because such programs were “[s]o affected by local employment conditions and local services, and [required] so much interaction with claimants . . . .”
\textsuperscript{116} Id.
\textsuperscript{117} Id.
\textsuperscript{118} Report supra note 66, at 119. The Commission pointed out that the number of changes made in 1971 was about 50% higher than the number of changes customarily enacted in odd-year legislative sessions.
\textsuperscript{119} White Paper at 1.
\textsuperscript{120} Task Force Report at 12. It should be noted, however, that 1976 was an even year, when there might be expected to be less legislation enacted in the various state legislatures.
Compensation has very little significance for occupational disease law. Only one of the essentials, the recommendation "[t]hat all states provide full coverage for work-related diseases," dealt specifically with work-related illnesses; and subsequent studies, including that of the Task Force Policy Group, have shown that such full coverage may be adopted only to be legislated away through arbitrary limitations built right into the statutes. If workers with occupational diseases are excluded from coverage because their diseases are not peculiar to the job setting, or because the etiologies of their illnesses are as yet unknown, reforms in benefit structures or in filing and notice limitations will afford no relief. The Task Force's finding that while forty-nine states have enacted full occupational disease coverage, few workers with occupational diseases file for compensation, and even fewer are ever benefitted illustrates the fact that work related illnesses are still the neglected stepchildren of workers' compensation.

E. The Status of Occupational Disease Law in the Carolinas

Full understanding of the problems confronting those seeking compensation for byssinosis requires analysis of specific workers' compensation statutes, as well as general review of the status of occupational disease law. The statutes of North and South Carolina have been chosen for such study. While these statutes have undergone much revision in the years since OSHA's enactment, both states' laws still contain numerous provisions which may effectively preclude coverage of brown lung disease. A thorough evaluation of these statutes must consider the five areas of concern suggested by the National Commission study: (1) the extent of coverage of occupational diseases; (2) evidentiary concerns; (3) temporal and geographic limitations on coverage; (4) provision of benefits for work-related diseases; and (5) the utilization of a special medical board or "disability evaluation unit" in occupational disease cases.

121. See notes 103-17 supra and the text at those notes, for the Task Force Policy Group's findings and consequent recommendations.


1. Coverage of Occupational Diseases

North and South Carolina each provide for broad coverage of occupational diseases in their statutory schemes. The South Carolina statute does so by utilizing the definition of “occupational disease” recommended by the National Commission: “[a] disease arising out of and in the course of employment . . . .” North Carolina has extended broad coverage to work-related diseases by adding a general clause to its statutory schedule of compensable diseases. Before this clause was added in 1973, asbestosis and silicosis were the only dust diseases which could be compensated in North Carolina.

Despite these gestures toward full coverage, both states’ statutes contain numerous qualifications which serve to limit coverage in the very ways which caused the Task Force Policy Group so much concern. The South Carolina statute restricts coverage to those diseases caused by hazards “peculiar to the particular employment.” It also excludes those diseases which are “ordinary diseases of life to which the general public is equally exposed,” unless the disease is a complication of another occupational disease or is a result of “constant exposure peculiar to the occupation itself.” Finally, South Carolina limits coverage of cardiac, circulatory, and pulmonary illnesses to those diseases caused by specific atmospheric conditions peculiar to the worksite. North Carolina echoes both the “peculiar to the particular

124. N.C. Gen. Stat. § 97-53(13) (Supp. 1977): “Any disease . . . which is proven to be due to causes and conditions which are characteristic of and peculiar to a particular trade, occupation or employment, but excluding all ordinary diseases of life to which the general public is equally exposed outside of the employment.” Before the 1973 amendment, North Carolina had added only two new occupational diseases to its schedule of compensable illnesses in 35 years—the extremely rare diseases of brucellosis (undulant fever) and psittacosis (parrot fever). Fasbaugh, Workmen’s Compensation—Development of North Carolina Occupational Disease Coverage, 7 Wake Forest L. Rev. 341, 352 (1971). In his article, Fasbaugh described the coverage of the North Carolina occupational disease statute as it existed prior to 1973. He listed a number of specific occupational diseases not covered by the law, including byssinosis, diseases caused by noise, and illness caused by the inhalation of iron oxide dust. He pointed out that, even should the General Assembly amend its list to include these diseases, persons disabled by these diseases before such enactment probably would not be compensated. Fasbaugh recommended that North Carolina amend its law to provide for general coverage of occupational diseases, so that its Industrial Commission could act when the first case of any occupational disease was raised before it. In this way, those suffering from an occupational disease before it was specifically recognized by statute would not be precluded from coverage. Id. at 353.
125. See notes 90 and 91 supra, and the accompanying text.
127. See notes 90 and 91 supra, and the accompanying text.
employment" and the "ordinary diseases to which the public is equally exposed" qualifications in its general occupational disease clause. Neither state, however, requires that an occupational disease must arise out of a discrete, recognizable "accident" or series of accidents in order to be compensated; the North Carolina statute specifically distinguishes accidents from occupational diseases.

The language of these qualifications alone does not operate as an arbitrary bar to workers' compensation awards for byssinotics. Nor do the Carolina courts' applications of this language necessarily prohibit such awards. First, the presence of cotton dust in the air of the worksite is certainly a phenomenon which is "peculiar" to the cotton processing trades. Cotton dust has been conclusively linked to the incidence of brown lung through epidemiologic studies, and thus brown lung would seem to qualify as an occupational disease caused by a health hazard peculiar to a particular employment under the language of both statutes. Second, neither statute's wording prevents coverage of "ordinary diseases of life" if the general public is not equally as likely to contract the disease as are the workers in a particular setting. This would seem to indicate that byssinotics could receive compensation even if they could not distinguish their brown lung from ordinary diseases of life such as emphysema or chronic bronchitis. Recent South Carolina case law indicates that such a showing can be made. In Sturkie v. Ballenger Corporation the South Carolina Supreme Court found that a cement truck driver's emphysema was an occupational disease. The Court held that a disease which was either caused or aggravated by atmospheric conditions was a compensable disease if the worker faced a greater risk of exposure due to his employment. Finally, South Carolina's specific limitation of coverage to those pulmonary

132. See notes 21-28 supra and accompanying text.
133. The distinction between occupational diseases and those which are not considered to be peculiar to and characteristic of the worksite is clarified by North Carolina case law relating to N.C. GEN. STAT. § 97-53 (Supp. 1977). In Morrow v. Memorial Mission Hospital, 21 N.C. App. 299, 204 S.E.2d 543 (1974), the court found that a plumber who had contracted infectious hepatitis while repairing a toilet on the worksite was not suffering from an occupational disease. The court explained the distinction in these terms: "An occupational disease suffered by a servant or employee, if it means anything as distinguished from a disease caused or superinduced by an actionable wrong or injury, is neither more nor less than a disease which is the usual incident or result of the particular employment in which the workman is engaged, as distinguished from one which is caused or brought about by the employer's failure in his duty to furnish him a safe place to work." [emphasis added].

Whatever one may think about the fact that contraction of an infectious disease has not here been characterized as a usual incident or result of plumbing work in a hospital, it seems evident that byssinosis would qualify as a usual incident of cotton processing, given that cotton dust is endemic to the internal atmosphere of cotton textile plants.

135. Id. at 122.
nary diseases which are the direct result of inhalation of foreign matter would not seem to preclude coverage of byssinosis, a disease which does result from inhaling cotton dust.

2. The Burden of Proof and Presumptions

It is the lack of a full understanding of the etiology of byssinosis which causes statutory limitations to effectively bar compensation for brown lung. The claimant has the burden of proof to show the existence of an occupational disease under workers' compensation statutes. Consequently, under the language of the Carolina statutes, byssinotic workers must show that their disease is caused by a hazard peculiar to the cotton manufacturing trade, that the disease is the direct result of entrance of organic matter into their lungs, and that any attendant conditions such as emphysema are caused by a greater risk of exposure on the worksite than in ordinary life. Despite the fact that byssinosis has been epidemiologically established as an occupational disease, it has not yet been established exactly how cotton dust causes or contributes to the onset of this disease. Thus, the specific qualifying language of the statutes causes the brown lung claimant to carry an enormous burden of proof in the face of widespread medical uncertainty.

In the Carolinas, as in the other states, the claimant is aided in some circumstances by presumptions that help to establish the minimum amount of evidence necessary for an award. Such presumptions shift the burden of proof from the claimant to the employer, who must disprove the connection between the worker's ailment and his job. Examples of presumptions which have been established by case law in the two states are (1) that an employee found dead or injured at the worksite has suffered a work-related injury, and (2) that a worker who


137. Larson, Occupational Diseases Under Workmen's Compensation Laws, 9 U. Rich. L. Rev. 87 (1974), comments directly on the burden of proof problem in dust diseases and other similar states:

If the employment is attended with unusual germs, poisons, chemicals, fumes, dusts, or similar conditions, the problem of satisfying the distinction from the "ordinary" is not serious. Controverted or unsuccessful claims will usually be found to involve, not the definition, but a problem of proof: whether these employment conditions in fact produced this disability. For example, nitric, sulphuric, and chloric acid fumes would abundantly satisfy any requirement of nonordinary tasks, but compensation for cancer of the lungs was denied for the death of a man exposed to such fumes on the ground of lack of causal relation, and in view of the fact that the decedent had smoked twenty to forty cigarettes a day for forty years.

Id. at 94-95.

died by violent means was the victim of accident rather than suicide.139

In both North and South Carolina, additional presumptions have developed relating to occupational diseases. North Carolina has created an irrebuttable presumption that the last thirty days of a worker's employment shall be deemed the period of last injurious exposure, and that the worker's date of disablement shall be the last day of work, for purposes of assigning liability in asbestosis and silicosis cases.140 South Carolina has enacted a statutory presumption that respiratory and heart diseases occurring in fire fighters are caused by their work, and thus compensable under workers' compensation.141 North Carolina's law also contained this presumption, until it was found to be unconstitutional by the North Carolina Supreme Court.142 Neither state's law, however, makes any other provision for a shift in burden of proof to aid those workers afflicted by an epidemiologically established occupational disease with an uncertain etiology. The South Carolina statute specifically forbids such a shift, stating that "[t]here shall be no presumption that disablement from any cause or infirmity is the result of an occupational disease, nor that an occupational disease will result in disablement or disability."143

3. **Time and Geographic Limitations**

In order to qualify for workers' compensation, employees must comply with two requirements that involve time limitations. First, workers must serve notice on their employers that they have been injured or taken ill. This notice must be given fairly soon after the incident, so that the employer can furnish medical diagnosis and treatment for the ailment and so that there can be a timely investigation of the circumstances surrounding the event.144 Additionally, workers must file compensation claims with the workers' compensation administrative agency within a given statutory period of limitation. The purpose of this time limit is to protect employers from stale claims which cannot be adequately investigated or defended.145

---

South Carolina has notice and filing laws which are fairly representative of those in use in the majority of states. Its statute requires that an employee shall give notice of injury to the employer immediately on occurrence of the accident or "as soon thereafter as practicable," with an outside limit of ninety days after the incident. In occupational disease cases, the courts have found that "accident" means disablement from disease, rather than contraction of the disease; consequently, the notice statute does not begin to run until claimants using reasonable diligence could have learned that their diseases were debilitating. The statute allows, and the courts have found, a reasonable excuse for not giving timely notice, if the employer is not prejudiced by the omission. Both these judicial interpretations are helpful to victims of byssinosis and other diseases with lengthy latency periods, who are not likely to know they are ill until long after they have contracted the disease. South Carolina's statute requires that claimants file within two years after the incident, or within one year after a death resulting from an accident.

There are other time limitations in the South Carolina law dealing solely with occupational diseases, and often specifically with pulmonary diseases. Workers cannot receive compensation unless their occupational diseases were contracted within one year from the last exposure to the peculiar job hazard which caused the disease; for diseases arising from inhalation of dusts, the period is two years. Before 1977, victims of pulmonary diseases caused by dust inhalation could not receive compensation unless they had been exposed to dust on the job for at least one year, and unless they were totally disabled from the illness.

148. Drake v. Raybestos-Manhattan, Inc., 241 S.C. 116, 127 S.E.2d 288 (1962). Unfortunately, the Court has not set out a clear standard for defining and identifying "reasonable diligence." This lack of standard might work a real hardship on byssinotics and others with newly isolated or difficult-to-diagnose occupational diseases. For a full discussion of this problem, recommending that the "reasonable diligence" standard include being informed of one's condition by a competent physician, see unpublished Memorandum, Ann Burton, Filing Claims for Occupational Diseases in South Carolina, on file at Indus. Rel. L.J.
The total disability requirement, when read with notice and filing time limitations, gave rise to a potential "catch-22" of occupational disease law. Claimants could have become partially disabled from a dust disease, and could have known of their work-related illnesses for a number of years; yet by the time they had become totally disabled, the statute of limitations on their claims would have run so that they could not qualify for workers' compensation. The South Carolina Supreme Court resolved this dilemma in claimants' favor by holding that the statute would not begin to run until the worker was aware of a total work-related disability.\textsuperscript{153} Now, there is no minimum exposure requirement for most dust diseases, and victims of such ailments may receive partial disability payments.\textsuperscript{154} There is, however, a new provision in the statute which requires that victims of byssinosis be exposed to cotton dust in their employment for at least \textit{seven years} before they can receive compensation.\textsuperscript{155} This is the only time that specific reference is made to brown lung in the Carolinas' workers' compensation laws.

The notice and filing requirements of the North Carolina law are much like those of South Carolina, but there are some variations of detail. The notice statute again requires alerting of the employer as soon as practicable, but the limit is thirty days from the accident.\textsuperscript{156} This rule applies for all occupational diseases except asbestosis, silicosis, and lead poisoning. Moreover, notice time for occupational diseases does not begin to run until claimants are advised by competent medical authorities that they have such a disease.\textsuperscript{157} The usual time

\textsuperscript{154} S.C. CODE § 42-11-60 (1976).
\textsuperscript{155} \textit{Id.}
\textsuperscript{156} It is inexplicable why byssinosis should have been given such a lengthy minimum exposure rule, while minimum exposures were abolished for other dust diseases; there is no legislative history available. One possible explanation is that the legislators, aware that the etiology of byssinosis is uncertain and that its individual diagnosis is difficult, wanted to present the Commission with well-documented claims for decision. Another explanation, more likely to this author's mind, is that the legislators were responding to cotton textile manufacturers' fear of a deluge of brown lung claims by arbitrarily limiting the number of claimants with this rule. This would also explain the lifting of exposure rules for other diseases such as silicosis and asbestosis; these diseases have been isolated for some years, and any swell of claims which occurred when these illnesses were first recognized has doubtless declined to a trickle.
\textsuperscript{157} N.C. GEN. STAT. § 97-22 (Supp. 1977).
limit for filing a claim is two years after an accident. However, for occupational diseases the rule is two years after death or disablement.\(^{158}\) Thus, people filing for byssinosis would have two years in which to file after learning from a reliable physician that they had an occupational disease. For asbestosis, silicosis, and lead poisoning, death or disablement must have occurred within two years since last exposure in order for the worker to qualify for compensation. This rule does not apply if claimant was already eligible for and receiving benefits for the disease at time of death.\(^{159}\) Since North Carolina has always provided compensation for partial disability from asbestosis and silicosis, the potential for a “catch-22” has not developed in that state.\(^{160}\)

Besides these time limitations, both the Carolinas adhere to one other time bar which is time-honored law—that statutes will be applied only prospectively unless the legislature indicates otherwise.\(^{161}\) The North Carolina legislature, in its 1971 amendment establishing full coverage of occupational diseases, provided specifically that the Act should not apply retroactively.\(^{162}\) Thus victims of byssinosis, or other diseases not included in the statutory schedule, who became disabled before passage of the amendment would not be eligible for compensation.

Arbitrary time bars are not the only hurdle which victims of occupational diseases must clear in order to be compensated. There are also geographic bars which act to exclude workers from compensation if they have not worked within the state under certain conditions. South Carolina provides generally that an occupational disease must be the direct and natural result of exposure to hazards in the state.\(^{163}\) In North Carolina, only victims of silicosis and asbestosis are subject to such a bar. Before they are eligible for compensation, they must have been exposed to dust inhalation in North Carolina for at least two years, no part of which can have been more than ten years before the worker’s last exposure.\(^{164}\)

\(^{158}\) N.C. GEN. STAT. § 97-58(c) (Supp. 1977).
\(^{159}\) N.C. GEN. STAT. §§ 97-61.5(b), 97-61.6 (Supp. 1977).
\(^{160}\) Id.
\(^{161}\) 81 AM. JUR.2D Workers’ Compensation § 34 (1976).
\(^{162}\) 1971 N.C. Sess. Laws c.547, S.3, stated that the act would be in effect on July 1, 1971, and would apply only to cases originating thereafter. 1971 N.C. Sess. Laws c.1108, S.3, provided that the act would apply only to those cases in which last exposure to harm was after October 1, 1971.
\(^{163}\) N.C. GEN. STAT. § 42-11-10(1) (Supp. 1977).
\(^{164}\) N.C. GEN. STAT. § 97-63 (Supp. 1977).
4. Provision of Benefits for Work-related Diseases

The states have traditionally placed limitations on both medical and income benefits which have had an especially severe impact on victims of occupational diseases. Some of these restrictions have been general rules which applied to all beneficiaries of workers' compensation awards, such as an absolute ceiling on medical, rehabilitation, or income benefits.\(^{165}\) Other limitations have been designed specifically for occupational disease cases, such as the practice of benefitting only those suffering total disability from a work-related disease.\(^{166}\) Although there is a general trend toward abolishing both these general and specific limitations, some significant restrictions on benefits for occupational diseases remain in effect.

South Carolina provides income benefits for total disability at a level of two-thirds of the claimant's average weekly wages. The statute stipulates that the period of coverage shall in no case exceed five hundred weeks,\(^{167}\) and that the total award cannot exceed $40,000.\(^{168}\) Income benefits for partial disability are set at two-thirds the difference between the claimant's average weekly wages before incapacity and the average weekly wage the worker can earn after disablement.\(^{169}\) Again, the statute stipulates an outside limit for the period of compensation—this time three hundred and forty weeks from the date of injury.\(^{170}\) Prior to 1977, victims of dust diseases were eligible for income benefits only if they were totally disabled.\(^{171}\) In addition, partial disability benefits for victims of all other occupational diseases were limited to fifty-two weeks.\(^{172}\) Presently, all those suffering from occupational diseases are eligible for both partial and total income payments, as are those disabled by accidents.\(^{173}\) Medical treatment and supplies are fur-
nished under the South Carolina statute for a period not to exceed ten weeks after injury, and for additional time if the Industrial Commission feels such treatment will reduce the period of disability. If an injury or illness proves to be both total and permanent, however, medical care is provided for the rest of the victim's life, regardless of statutory maximum compensation limits. Thus, though South Carolina still places a ceiling on income benefits, there is no longer discrimination between accidental injuries and job-related diseases.

While the level of benefits is presently the same for victims of occupational diseases and accidents, occupational disease benefits are still subjected to more qualifications than are accident benefits. When an occupational disease is accelerated or prolonged by a noncompensable ailment, provision of benefits is limited to the occupational disability, and payment is "computed by the proportion which the disability from occupational disease bears to the entire disability." Moreover, workers who at the time of their employment willfully misrepresented the fact that they have suffered from an occupational disease are estopped from receiving any benefits for their illness. However, if employees who have had a work-related disease wish to continue in the hazardous job, they may do so and waive their rights to further benefits.

North Carolina, like its sister state, provides total disability benefits at a level of two-thirds of claimant's average weekly wages. In contrast to South Carolina, however, North Carolina no longer places any ceiling on the amount of benefits for total disability, or on the length of time during which benefits will be paid. Partial disability payments are also set at two-thirds of the difference between the claimant's average weekly wages before incapacity and the average weekly wage the worker can earn after disablement. Workers who are totally disabled by asbestosis and silicosis receive the same benefits as all other totally disabled claimants. Moreover, asbestosis and silicosis victims receive an income advantage over other disease and accident victims under the North Carolina statute. Their benefits are computed on the

(4) After the disability terminates.
175. Id.

The courts have elaborated the factors which must be present before benefits will actually be denied in situations involving false statements: (1) knowing and willful misrepresentation as to physical condition; (2) substantial reliance on that representation in hiring; (3) causal connection between the representation and the injury. Cooper v. McDevitt & Street Co., 260 S.C. 463, 196 S.E.2d 833 (1973).
basis of the wages they were earning at the time of their last exposure to the dusty hazard, while all other workers’ benefits are figured from wages earned in the same or any other employment. Thus, “disablement” from dust disease victims means the incapacity to earn as much money as they could make in their hazardous employment, while “disablement” for all others means the inability to earn the wages made at their last job.

Though asbestosis and silicosis victims receive total disability benefits in the same manner as all other workers’ compensation recipients in North Carolina, their benefits for partial disability are administered under a very different scheme. First of all, workers in industries which utilize asbestos, silica, and silicates are screened regularly to make sure that their health has not been impaired by the dust. If employees are found to have developed asbestosis or silicosis, they are removed from the industry. Upon their removal, the employer must pay them income benefits at a level of two-thirds their average weekly wages, for a period of one hundred and four weeks. These benefits, payable as soon as workers have been shown to be affected by asbestos or silica dust, and hopefully before they have become at all disabled, function as sever-

---

181. N.C. GEN. STAT. § 97-54 (Supp. 1977): “The term ‘disablement’ as used in this Article as applied to cases of asbestosis and silicosis means the event of becoming actually incapacitated because of asbestosis or silicosis to earn, in the same or any other employment, the wages which the employee was receiving at the time of his last injurious exposure to asbestosis or silicosis; but in all other cases of occupational disease ‘disablement’ shall be equivalent to ‘disability’ as defined in G.S. 97-2(9)” [see note 182 infra].

182. N.C. GEN. STAT. § 97-2(9) (Supp. 1977): There is no legislative history available which reveals why this wage differential was enacted. Case law prior to the 1955 amendment suggests, however, that the rationale for this section might be twofold: (1) the desire to have the industry bear the full burden of the expenses of the occupational disease caused by its processes; (2) the realization that asbestosis and silicosis are progressively debilitating diseases which will seriously limit a person’s ability to earn a living, so that wages earned at the end of a person’s worklife are likely to be much lower than those earned before his or her lungs were obviously damaged. See Honeycutt v. Carolina Asbestos Co., 235 N.C. 471, 70 S.E.2d 426 (1952).

183. See N.C. GEN. STAT. §§ 79-60—97-61.5 (Supp. 1977) for a description of the lengthy and complicated examination and hearing process through which asbestos and silica workers pass to receive benefits.

184. N.C. GEN. STAT. § 97-61.5(b) (Supp. 1977):

If the Industrial Commission finds at the first hearing that the employee has either asbestosis or silicosis or if the parties enter into an agreement to the effect that the employee has silicosis or asbestosis, it shall by order remove the employee from any occupation which exposes him to the hazards of asbestosis or silicosis, and if the employee thereafter engages in any occupation which exposes him to the hazards of asbestosis or silicosis without having obtained the written approval of the Industrial Commission as provided in G.S. 97-61.7, neither he, his dependents, personal representative nor any other person shall be entitled to any compensation for disablement or death resulting from asbestosis or silicosis; provided, that if the employee is removed from the industry the employer shall pay or cause to be paid as in this subsection provided to the employee affected by such asbestosis or silicosis a weekly compensation equal to sixty-six and two-thirds percent (66-2/3%) of his average weekly wages before removal from the industry, but not more than eighty dollars ($80.00) or less than twenty dollars ($20.00) a week, which compensation shall continue for a period of 104 weeks. Payments made under this subsection shall be credited on the amounts payable under any final award . . . (emphasis added).
ance pay and resettlement funds while the worker finds another trade. If these workers, at the end of one hundred and four weeks, are found to be actually partially disabled by a dust disease, their employers must pay them partial disability benefits. These benefits are set at two-thirds of the difference between employees' wages at the time of their last hazardous exposure and the wages they were able to earn thereafter, and are payable for one hundred and ninety-six weeks in addition to the one hundred and four weeks' benefits already paid. Thus asbestosis and silicosis victims, unlike any other beneficiaries of workers' compensation in North Carolina, are limited to an absolute ceiling on the time in which partial disability benefits will be paid.

In North Carolina medical treatment and supplies are presently provided to both accident and disease victims for so long as they are needed to work a cure or bring relief, and for any additional time which the Commission judges believe will help lessen the period of disability. The only difference between the accident and disease rules is that all treatment for those with work-related diseases must be based on consultation with an advisory medical committee. Before the 1973 amendments, workers with asbestosis and silicosis could qualify for medical treatment for only three years, and their medical benefits were not to exceed $1,000 in any one year. As in South Carolina, reasonable medical services are now provided for the lifetimes of all permanently and totally disabled workers. Again, prior to 1973, lifetime medical care was provided only for a very limited number of injuries. Thus, within the past five years North Carolina has eliminated discrimination between injured and occupationally diseased workers in its provision of medical benefits, and has removed any time limitations on medical care for the totally and permanently disabled.

The same qualifications which hem in workers' compensation for occupational diseases in South Carolina appear again in the North Carolina statute. This time, however, they seem to be limited to the dust diseases asbestosis and silicosis. If claimants with asbestosis or silicosis develop pulmonary tuberculosis as a complication, their payments may be reduced by one-sixth, at the discretion of the Industrial Commission. Employees who conceal the fact that they have been affected by asbestosis or silicosis during hiring are ineligible for work-

---

185. N.C. GEN. STAT. § 97-61.6 (Supp. 1977).
191. See text accompanying notes 176-77 supra.
ers’ compensation for those illnesses.\textsuperscript{193} A worker who wishes to continue in a hazardous job, even though he has been affected by asbestosis or silicosis and has collected the one hundred and four weeks of severance benefits, can waive further benefits and continue working. Despite this waiver, a worker electing to continue in the hazardous job can still receive benefits in case of total disablement or death, though the benefits will run for only one hundred weeks.\textsuperscript{194}

The benefit laws which have just been described are extremely detailed and complicated. Some of the statutory sections involved have been quoted in the footnotes. This was done partly to further illuminate the benefits provisions referred to, and partly to show the labyrinth through which a workers’ compensation claimant must wander in order to obtain needed benefits.

There remain only funding considerations to complete the picture of workers’ compensation benefits in the Carolinas. North and South Carolina have not provided special funds, nor have they furnished payments from second injury funds, to relieve hard hit industries of the burden of huge numbers of occupational disease claims. North Carolina has enacted a rule that the employer in whose employ a worker was last exposed to an asbestos or silica hazard will be liable for all compensation awards to that worker.\textsuperscript{195} South Carolina has not enacted such a law for pulmonary diseases, though it has done so in the case of ionizing radiation injuries.\textsuperscript{196} North Carolina also levies all costs incurred by the medical advisory committee in excess of its annual appropriation from the legislature against those employers who are known to subject their employees to the hazards of asbestosis and silicosis.\textsuperscript{197}

\textbf{5. Provision of Medical Panels for Occupational Diseases}

A number of states have statutory medical panels, like the “disability evaluation units” recommended by the National Commission,\textsuperscript{198} set up to review medical facts in workers’ compensation cases. In some states, these panels have jurisdiction over both accident and disease cases, while in others they review only occupational disease claims. The findings of fact of these panels are accepted as final in some states, and as expert testimony in others.\textsuperscript{199} In the Carolinas, medical panels are utilized only for workers’ compensation claims which are based on occupational diseases.

\textsuperscript{193} N.C. GEN. STAT. § 97-52; reiterated in § 97-61.5 (Supp. 1977).
\textsuperscript{194} N.C. GEN. STAT. § 97-61.7 (Supp. 1977).
\textsuperscript{195} N.C. GEN. STAT. § 97-57 (Supp. 1977).
\textsuperscript{197} N.C. GEN. STAT. § 97-75 (Supp. 1977).
\textsuperscript{198} See note 75 supra and accompanying text.
\textsuperscript{199} Larson, 3A THE LAW OF WORKMEN’S COMPENSATION § 80.12 (1976).
The South Carolina statute provides a medical board to which the Industrial Commission may refer any "medical question" concerning an occupational disease. The term "medical question" is defined very broadly to include issues of the existence, cause or duration of a disease or disablement, the date of disability, the extent of disability and the proportion which is attributable to noncompensable causes. Thus, the medical board participates in the claim procedure not only to establish the existence and source of a claimant's disease, but also to decide whether claimants meet time requirements for compensation, and, if so, how much their benefits will be. The medical board's report is binding, unless it is proven that the board's conclusion is "erroneous, due to fraud, undue influence, or mistake of law or material fact," in which case the Commission is free to disregard the board's findings.

The medical board for each case is chosen from an advisory panel made up of medical experts appointed by the Governor on the recommendation of the South Carolina Medical Association. Among the experts on the panel are three specialists in occupational diseases and two physicians qualified to treat pulmonary diseases. It is interesting to note that the legislature acknowledged this need for expertise in respiratory ailments in the same amendatory act in which it acknowledged the existence of byssinosis for the first time. The Industrial Commission is given the statutory authority to adopt a list of work-related diseases and of occupations which give rise to these diseases, on the recommendation of the medical advisory panel. This last provision sounds very much like permission to re-establish administratively the old practice of limiting workers' compensation for occupational diseases to those illnesses found on statutory schedules.

North Carolina has established a medical advisory committee which functions very much like South Carolina's medical board in reviewing general occupational disease questions. As in South Carolina, the Industrial Commission may, at its discretion, refer controverted medical questions to the medical advisory committee. The commit-

200. S.C. Code § 42-11-120 (1976). Note that the Commission may refer any medical question on occupational disease to a board if it wishes to, but must do so if either party requests it.
201. Id.
202. S.C. Code § 42-11-160 (1976). Note that prior to 1977 a medical board's findings were binding on the Commission unless they were "manifestly erroneous or unreasonable. . . ." Moreover, if the findings were so rejected, the Commission was not free to disregard board findings and make its own decision. Rather, the question had to be remanded to the same board or to a newly chosen board. S.C. Code § 42-11-160 (1976).
204. Id. Note that prior to 1977 there was no requirement that any of the panel members be qualified to treat pulmonary diseases.
205. See note 155 supra.
tee is again to report on all medical questions involved in the claim, though the term "medical question" is not defined by the statute. Despite these similarities, the North Carolina committee differs very much from South Carolina's board in the weight its reports are given. While in South Carolina the board's report is final with regard to medical facts, in North Carolina the committee's report is treated only as expert medical testimony, to be weighed with all the evidence before the Industrial Commission when it makes its decision.

The North Carolina medical advisory committee has a very large role in the state's special program for asbestos and silica workers. North Carolina requires compulsory examination of all employees and potential employees in trades where an asbestos or silica hazard has been identified. As mentioned above, any workers found to be affected by the dust hazard are removed from the industry, with severance benefits and compensation for any disability which has been incurred. To establish that an employee should be removed from his job, and that he has a disability, a series of three extensive physical examinations and two evidentiary hearings are required. Members of the medical advisory committee conduct these examinations and make detailed reports to the Industrial Commission. The reports and recommendations made by the medical advisory committee are again treated as expert testimony which the Commission weighs with all other evidence in reaching its decision. A claimant is given the right to cross-examine the committee members on their report. Thus in the case of asbestosis and silicosis, the North Carolina medical advisory committee acts to prevent disability from work-related hazards as well as to render expert opinion on the existence and extent of illness. Unless North Carolina's special program for dust hazards is extended to cover cotton dust, however, the large number of byssinotics in the state cannot benefit from the committee's preventive function.

6. **Summary**

The years since 1971, when the National Commission first went into action, have indeed brought improvements in Carolina occupational disease law. First and most dramatic, of course, was the abandonment of a statutory schedule of compensable diseases by North Carolina. Other measures as well have been of great importance to victims of work-related ills. Allowance of partial disability for pulmo-

211. See notes 183-85 supra and accompanying text.
nary diseases and abandonment of a minimum exposure requirement for compensation of those diseases by South Carolina is certainly a significant breakthrough. The years have also brought general improvements in overall financial benefits which have aided occupational disease sufferers: the extension or abandonment of ceilings on disability payments and provision of lifetime medical care for all the totally and permanently disabled. Yet the changes which have taken place in Carolina law are centered primarily in only two of the five basic areas of compensation law which were of major concern to the National Commission—broad coverage of all work-related injuries and illnesses and provision of an adequate level of benefits for all workers who are covered by workers' compensation statutes. Other areas of the law adversely affecting occupationally diseased workers have been left intact.

IV

OCCUPATIONAL DISEASE LAWS WHICH WILL COMPENSATE BROWN LUNG VICTIMS: RECOMMENDATIONS

The previous sections of this article have reviewed federal findings and recommendations concerning workers' compensation, the states' response to these national studies, and the current status of occupational disease law in the Carolinas. This review has sought to provide a fairly complete picture of those statutory problems which stand in the way of compensation for brown lung disease. The following section will present recommendations for changes in occupational disease law which, if enacted as a unit, will provide compensation for byssinosis and other diseases which are of uncertain etiology or are difficult to diagnose. These recommendations will cover seven areas of workers' compensation law shown to be crucial to occupational disease coverage by the foregoing review: (1) the extent of coverage of diseases; (2) evidentiary concerns; (3) the utilization of medical panels or "disability evaluation units" in occupational disease cases; (4) protection of workers in hazardous occupations; (5) provision of benefits for job-related diseases; (6) temporal and geographic limitations on coverage; and (7) funding programs for occupational disease compensation. Possibilities for implementation of these recommendations on both state and federal levels will be explored in later sections.

A. Coverage of Occupational Diseases

The "arising out of and in the course of employment" formula should be retained as the statutory definition of a compensable occupational disease; all arbitrary limitations on this standard should be dropped from workers' compensation law.

The "arising out of and in the course of employment" standard is a time-honored component of Anglo-American law. It is a clear and simple statement of the law, readily understandable to lawyer and layperson alike. Moreover, as the National Commission on State Workmen's Compensation pointed out, a considerable body of useful precedent has grown up around this phrase. Consequently, it should be retained as the basic definition of occupational disease. "Arising out of and in the course of employment" effectively places workers on notice as to what they will have to prove in order to obtain compensation—that their diseases stem from their jobs and were acquired while they were working at those jobs.

All arbitrary statutory limitations on the "arising out of..." standard, however, should be discarded from workers' compensation law. These limitations include "peculiar to the worker's occupation," "ordinary diseases of life," and "by accident." As the Task Force Policy Group pointed out, such limitations disregard the current scientific awareness that many diseases which are actually caused by worksite conditions could also be the result of other hazards. The fact that certain diseases may also have non-occupational causes should not detract from those diseases' status as occupational diseases, or from the responsibility of the workers' compensation system to compensate workers if their illnesses are in fact caused by their work. Besides placing the medical and financial liability for an occupationally caused disease on the individual worker in many instances, these formulae effectively operate as presumptions against the compensability of illnesses. Workers who bring occupational disease claims must prove not only that they have diseases which stem from their jobs and were acquired while working, but also that these diseases are peculiar to their occupations and not ordinary diseases of life. Where their diseases are not obviously work-related, where the diseases have not been causally linked to a particular occupation for some time, or where the diseases are difficult to distinguish from familiar diseases of the general population, workers have the burden of affirmatively showing the peculiarity of their diseases to their jobs or the increased risk they run of contracting the diseases while working. Faced with this heavy burden of proof, it is small wonder that few occupational disease victims ever file for compensation, and that those who do are seldom benefitted. Occupational disease claimants should bear only the burden of proving that their illnesses are work-related, and should be assisted by presumptions in appropriate circumstances.

218. Id. at 19.
B. Evidentiary Concerns: Burden of Proof and Presumptions

1. In the case of occupational diseases which have been isolated epidemiologically, but whose etiology is unknown and whose specific diagnosis is difficult, the burden of proof should be shifted from workers to their employers. Once the worker has established a prima facie case of disablement based on symptoms and employment in the industry, the employer should have the responsibility of disproving the link between employment and illness.

The need for a shift in the burden of proof for certain occupational diseases has been recognized in this country and abroad for some time. As early as 1946, England established presumptions of job-relatedness for both pneumoconiosis and byssinosis. In 1964, the International Labour Office recommended that each nation-member of the organization establish a list of diseases which would be considered occupationally related in the absence of proof to the contrary. The state of New York has maintained since 1922 a list of diseases which are presumed to be occupational. This was only a few years after the workers' compensation concept was first introduced to American law. A shift in the burden of proof was also utilized by the federal government in various black lung acts. Finally, both the Interim Policy Group and the Task Force Policy Group recognized the need for a shift in the burden of proof in order to relieve the inadequacies and inequities which the workers' compensation system visits upon occupational disease victims.

The rationale for a burden of proof shift for diseases which are epidemiologically established but etiologically and diagnostically obscure has been examined at some length by commentator Richard Robblee. Robblee contends that in the case of diseases which are known to be occupationally linked but where the actual mechanism of the link is unclear, the legal system has deferred the question of proof to the medical field. A lack of medical knowledge as to how a disease is caused, or as to how it is to be distinguished from other illnesses, however, should not deprive the disabled worker of the legal right to be compensated for a disease which has a high probability of job-relatedness. It is unreasonable to make the disease victim bear the financial as well as the physical and emotional burden of an occupational disease.

223. White Paper, supra note 87, at 3; Task Force Report, supra note 93, at 36.
while medical pathology fills in the details of the work done by epidemiologists. Robblee’s analysis calls for the use of presumptions that occupational diseases are present, based on statistical probabilities derived from epidemiological studies.225

A shift in the burden of proof for diseases such as byssinosis is also supported by the goals of modern workers’ compensation programs. The National Commission established the goal of broad coverage of work-related injuries and diseases as the first of the five major objectives of workers’ compensation.226 As another commentator has said, the real question of compensation is not whether the proof of causation is absolutely certain in a given case, but “[w]hether or not this is the kind of claim for which the legal system desires to provide recovery.”227

2. Schedules of diseases which give rise to a presumption of occupational-relatedness should be developed.

Statutory disease schedules have acquired a bad name in occupational disease law, since they’ve so often been used as arbitrary devices to totally bar those with unlisted diseases from making workers’ compensation claims.228 Some states, however, notably New York, have established statutory schedules of diseases for the purpose of creating presumptions of job-relatedness.229 The presence of claimants’ diseases on the list makes it easier for them to qualify for workers’ compensation benefits once they’ve established prima facie cases of illness; yet the absence of their diseases from the schedule is not a complete bar, but only means that they will bear the burden of proving the occupational nature of their illnesses.230 Schedules of diseases which, like byssinosis, are epidemiologically proven though of uncertain etiology and diagnosis, should be utilized to give rise to presumptions of job-relatedness.

In order to safeguard victims of occupational diseases which have not yet been identified or studied, or which have not yet come to public attention, several precautions must be built into the scheduling process. Initially, the schedule of diseases should be developed by an agency which has great expertise in the field of occupational diseases plus the facilities to conduct extensive research. These requirements suggest that the National Institute of Occupational Safety and Health231 is the

225. Id. at 624-30.
228. See note 72 supra and accompanying text.
231. The National Institute of Occupational Safety and Health [hereinafter referred to as
logical body to develop the lists, rather than state Industrial Commissions with their more limited resources.\textsuperscript{232} Next, the scheduling process should be as insulated from political influence as possible, so that a diseased worker's right to compensation will not depend on the relative strengths of concerned interest groups. This requirement again favors NIOSH, rather than state agencies, because of its distance from the day-to-day machinery of state government.\textsuperscript{233} Finally, absence of an occupational disease from the presumption list must not give rise to a total bar on compensation for that disease.

The design of presumption schedules can be another important factor in safeguarding victims of occupational diseases. Typically, jurisdictions which utilize such schedules list not only the disease which is to give rise to a presumption of job-relatedness, but also the occupational process in which a worker must have engaged in order to qualify for the presumption.\textsuperscript{234} Sometimes these processes are described in very broad terms. For instance, the New York statute mandates a presumption of the presence of byssinosis if an employee has carried out "any process involving exposure to raw cotton."\textsuperscript{235} Sometimes, however, the process guidelines are drawn much more narrowly. In England, ailing workers are presumed to have byssinosis only if they participated "in any occupation in any room where any process up to and including the carding process is performed in factories in which the spinning or manipulation of raw or waste cotton is carried on.\textsuperscript{236} Such a description excludes from the shift in burden of proof all those who work in harvesting and ginning raw cotton. Thus, while it does seem necessary to describe occupational processes in order to give workers' compensation administrators adequate guidelines for assigning the burden of proof, processes need to be drawn as inclusively as possible, so as not to exclude those who logically qualify for presumptions. Again, it must be stressed that those whose occupations do not appear in the disease schedule should not be barred from presenting proof of the part their occupation played in their disease.

NIOSH is the agency which was set up under OSHA to develop and establish recommended standards for occupational safety and health, 29 U.S.C. § 671 (1976).

232. For example, South Carolina's Industrial Commission has at its disposal for investigating occupational disease questions only a medical advisory panel of at least eleven members. S.C. Code § 42-11-70 (1976). Only three of the physicians on the panel are required to be specialists in occupational medicine. North Carolina's advisory medical committee has just three members, all of whom must be occupational disease specialists. N.C. Gen. Stat. § 97-72 (Supp. 1977).

233. Of course, OSHA has not exactly shown itself to be above the fray, especially in the matter of standards for the textile industry. See note 62 supra for an account of duplicity involving OSHA in the Nixon campaign.


235. \textit{Id.}

3. Any time requirements which are built into the shift in burden of proof for occupational diseases must be logically related to the nature of the particular diseases, not arbitrary minimums meant to exclude workers from compensation.

Some statutory schemes have required long exposure to the industrial hazard before a worker will be presumed to suffer from the occupational disease which arises from that hazard. For example, England began by requiring twenty years of exposure to cotton dust before a worker could receive compensation for brown lung, and now requires ten years of exposure before the burden of proof will shift. In the United States, the black lung acts have established rebuttable presumptions of the work-relatedness of miners' pneumoconiosis if they have worked in coal mining for ten years. Other schemes, like New York's, do not require lengthy exposure before a presumption will arise. In the absence of detailed medical knowledge of the mechanism of contraction and the course of a disease, any substantial minimum exposure requirements are arbitrary limitations on compensation. They are employed not because medical data reveals that workers in all probability will contract the disease after the period of exposure, but because the jurisdiction wants to limit the number of awards which the disease will generate. Thus, these minimum exposure requirements operate to prevent potential claimants from ever filing for compensation, for being required to carry the heavy burden of proof in the absence of presumptions is tantamount to being barred from filing. In order to be fair to workers afflicted with epidemiologically established diseases with uncertain etiology there should not be any lengthy minimum exposure rules excluding them from the presumption of the occupational nature of their disease. Yet in fairness to employers and their insurers, if further scientific research reveals that a scheduled disease will not in all probability be contracted until the employee has been exposed for a certain period of time, such a minimum should then be written into the schedule.

238. The Workmen's Compensation and Benefit (Byssinosis) Act, 1940, 3 & 4 Geo. 6, c.5, § 1, reprinted in Halsbury's Complete Statutes of England, Continuation Vol. 33, 1940, pp. 252-3.
239. See note 237 supra.
241. N.Y. Work. Comp. Law § 47 (McKinney 1965) provides in pertinent part: "... Any exposure to the hazards of harmful dust for a period of sixty days... shall be presumed, in the absence of substantial evidence to the contrary, to be an injurious exposure."

Even here, dust diseases receive different treatment from other occupational diseases. While there is no minimum exposure period for other diseases, there is a sixty-day requirement for dust diseases. The legislative history does not reveal whether this difference is based on scientific data.
C. Medical Panels in Occupational Disease Claims

Whether or not medical panels should be used in the claim procedure for occupational diseases with uncertain etiologies and diagnoses depends on whether these panels conduct screening programs to protect workers from such diseases. Consequently, recommendations concerning the use of medical panels will be presented in the alternative.

I. Alternative One. In the absence of screening programs to protect workers from insidious occupational diseases, the practice of utilizing advisory medical panels as triers of fact or state-appointed expert witnesses in cases of occupational diseases of obscure etiology and diagnosis should be abolished.

Many states, among them South Carolina, utilize statutory medical panels as the triers of fact in contested occupational disease cases. Other states, such as North Carolina, use panels as expert witnesses in controverted disease claims. This practice has the effect of placing both the victims of job-related illnesses and those who defend against occupational disease claims in a different position than all other parties to workers' compensation claims. Employees and employers in states like South Carolina are subjected to a different trier of fact than in the typical compensation claim, and in either situation both parties' expert testimony will doubtless be given less weight than in the ordinary case, as its adversary nature will be measured against the supposedly "neutral" evidence of the panel by the trier of fact. In cases where the mechanism of the disease in question is clearly understood, and the only contested issues are medically ascertainable facts concerning the particular claimant's ill health, use of such "neutral" expertise may be justified. Analysis, however, will show that the use of medical advisory panels for claims involving imperfectly understood occupational diseases is logically invalid, and that the concept of "neutrality" is not viable in these situations. Moreover, the medical solution of turning over controverted questions in claims involving etiologically obscure diseases to a panel contradicts the legal solution of employing presumptions for such cases.

Both the National Commission and the Task Force Policy Group recommended the use of expert panels or "disability evaluation units" to decide disputed medical questions in cases of etiologically and diagnostically obscure occupational diseases. Yet, as commentator Robblee stated in his article on the burden of proof, to espouse the use

---

244. See note 224 supra and accompanying text.
245. See notes 75, 76, 105 supra.
of a medical panel in such cases is to "dodge the issue." The problem is not the want of true expertise, but rather the fact that medical science has not yet found the causal mechanism of the disease, or learned to distinguish the illness from others like it. A greater degree of scientific skill and a more neutral perspective will not achieve a better or fairer solution to the dilemma, where the necessary information to solve the problem does not yet exist.

In the absence of definitive medical knowledge, it is extremely difficult for a physician or other scientific expert to remain truly "neutral." Where there is a vacuum created by lack of objective medical data, there is a tendency for subjective opinion to fill that void. Thus, in cases of scientific uncertainty, the expert's preconceived medical views, and perhaps social and cultural biases, will be brought into play. It may be argued that all medical opinion is somewhat subjective, given the many variables of individual disease states. Nevertheless, a claimant's right to compensation should not hinge on the totally subjective opinion of a medical panel in the absence of objective knowledge. The concept of expert neutrality really has no place in decisions concerning the occupational nature of diseases such asbyssnosis.

2. **Alternative Two.** If the medical advisory panel conducts a screening program to protect workers from insidious occupational diseases, data gathered by the medical panel in the course of the screening process may be used as expert testimony as to whether claimant has a disease which is on the presumption schedule.

In some jurisdictions an expert panel, like North Carolina's medical advisory committee, examines all employees and potential em-

---


247. *See* Cohen & Klein, *A Proposed Solution to the Legal Problems of Workmen's Compensation Heart Cases*, Supplemental Studies for the National Commission on State Workmen's Compensation 179 (Wash., 1975). Cohen and Klein recommend a complete legal solution to the problem of the obscurity of the occupational nature of heart ailments, in the form of an irrebuttable presumption of work causation, once the stricken employees have shown that they were afflicted "after a precipitating work exertion greater than that of ordinary nonemployment life." *Id.* at 184. They point out that this is *not* a medical solution, but a legal solution utilized by the legislature to provide greater consistency and predictability of outcome, in an area of compensation law which is perhaps more confused and inequitable than even the dust disease situation. *Id.* at 187.

This author has not chosen to recommend an irrebuttable presumption for scheduled occupational diseases for several reasons. First of all, the employer should be able to offer evidence disputing work-relatedness that is not of a medical nature, such as that an employee actually contracted the disease in another setting than the jobsite. Second, the opportunity to rebut with medical evidence will hopefully spur large employers with plentiful resources, and manufacturers' associations, to fund medical research which will both reveal more about these obscure diseases and reveal how to protect workers from the hazard while working.

248. *N.C. GEN. STAT.* § 97-60 (Supp. 1977). Note that this statute applies only to industries which expose their employees to asbestos and silica hazards.
ployees in hazardous industries for signs of illness or peculiar susceptibility to occupational disease. Where this is done, data collected and reported in the course of examination should be available as expert testimony on the issue of a claimant's prima facie case of illness with a scheduled disease. Making such information available as evidence is recommended for several reasons. First, the question of an individual's illness with a particular disease is, unlike the scientifically unanswered question of the disease's etiology, within the realm of expert knowledge. Consequently, the information offered by the panel will have some validity as evidence in the case. Second, there is the very practical consideration that the records generated by the panel's examination procedures exist and should be put to use where appropriate. The collection of data for workers' compensation cases, however, should remain secondary to the panel's primary role of protecting workers from jobsite hazards, a by-product rather than the aim of the screening process.

While data generated by the medical panel should be available as evidence, it should never be considered conclusive as to the medical facts of a compensation claim. To confer finality on the findings of the medical panel would be to commit another logical fallacy in the area of occupational disease law—that of making the witnesses the triers of fact in regard to the question on which they are testifying. The expert testimony of the medical panel should be considered with all the evidence in deciding whether the claimant has established a prima facie case of disease which the employer must rebut in order to prevent compensation. Additionally, the gathering and presentation of pertinent data by the panel should be accompanied by all the procedural safeguards which are normally observed in administrative procedures. Since claimants' rights to medical and income benefits for their illnesses depend on the decision of the workers' compensation agency, their claims should not be foreclosed by improper examination techniques or sloppy evidentiary practices.

D. Protection of Workers in Hazardous Occupations

In general, the promotion of industrial safety and the inspection of worksites for potential hazards is the job of OSHA and its state counterparts. But the provision of safety equipment and careful plant inspection are not the only protections necessary to alleviate or eradicate suffering from occupational ills. Workers in industries where occupa-

249. Cohen & Klein, supra note 247, at 183, suggest that in heart cases physicians be allowed to testify only on whether the worker has actually suffered a heart attack and the extent of the worker's disablement.
tional diseases such as byssinosis are present need additional help in the areas of health, income, job security, and access to information.

1. Compulsory health screening programs should be instituted for workers in all trades in which scheduled occupational diseases are prevalent.

North Carolina has had a compulsory screening program since 1935 for all employees or potential employees who worked around asbestos or silica hazards.252 In his projected bill for the relief of byssinotics, Senator Ernest Hollings has proposed a similar program of examination and treatment for both active and inactive textile workers.253 Such programs should examine workers for disease or propensity for disease, inform both employees and employers of the presence of disease and need for treatment, and follow the course of detected illnesses through frequent re-examination. Employees in the textile industry, as well as in all other industries which generate gradually debilitating occupational diseases, would benefit from early detection and treatment of disease, or from the knowledge that they have a peculiar susceptibility to a certain disease. Employers would also benefit since they would be able to provide medical treatment early in the onset of a disease, shift workers' job assignments to prevent greater health impairment, and to change particularly hazardous areas of their operations.

Several different methods of funding and administering occupational disease screening programs have been tried or proposed. In North Carolina, dust disease screening is carried out by the medical advisory committee under the direction of the Industrial Commission.254 Basic funding is provided by the legislature, but any costs above legislative appropriations are assessed to the industries involved in screening.255 The proposed Hollings bill would authorize the U.S. Department of Labor to contract with public and private agencies and individuals for such services.256 The logical agencies to plan and administer health screening programs are public health departments on the state or federal level. These agencies have expertise in the medical field, and their basic function is health protection. If workers' compensation systems have the job of screening, there is danger that the main thrust of the screening programs will be evidentiary rather than protective. To assess the costs of such programs to the workers' compensation system or to responsible industries is logical because the need for screening is a function of the existence of occupational disease. Thus

252. N.C. GEN. STAT. § 97-60 (Supp. 1977). See notes 183 and 210-12 supra and accompanying text for a description of this program.
256. See note 253 supra.
where it is politically and economically feasible, the cost of screening should be absorbed by the workers' compensation system and charged to the industries which produce the diseases.

2. No worker should be summarily discharged for having an occupational disease or being peculiarly susceptible to such disease. Transfer, retraining, and income benefit plans should be designed for workers in industries which generate scheduled occupational diseases.

To utilize health screening systems like the program described above as devices for forcing diseased or susceptible workers from their industries would be counterproductive. The health protection system should not serve the function of creating a class of industrial untouchables who are unable to find work in their trade and who are untrained for other jobs with comparable pay and status. Yet workers who are affected by occupational hazards such as cotton dust should not have to remain in their hazardous jobs until they are hopelessly ill and totally dependent on the compensation system for all their needs. Transfer, retraining, and income benefit plans should be provided in industries which generate scheduled occupational diseases. These plans should be created with flexibility in mind to best meet the needs and circumstances of the individual worker and enterprise.

Initially, workers who have been found by the screening process to be affected by a hazard should be removed from their jobs in hazardous sections of a plant to safer positions. In the cotton mills, this would mean transferring workers from early stages of processing, such as carding, to later steps of production.\textsuperscript{257} This transfer should be accomplished without any loss in pay, seniority, or fringe benefits. Any other practice would punish the worker for having succumbed to an industrial hazard. If the health of workers has become impaired to the extent that they are unable to sustain employment at their former level of skill and pay, they should receive partial disability benefits to make up for the loss of ability to earn. In situations where there are no nonhazardous areas of a plant, where there are no job openings in such departments, or where workers want to find another trade in which they have some potential and opportunity for employment, income benefits for loss of employment and access to retraining programs should be provided.\textsuperscript{258} Again, partial disability payments should be provided where workers' capacity to earn has been diminished by their diseased state or in cases where there is the necessity of finding a new livelihood in a limited job market.

Problems of workers affected by occupational hazards are particu-
larly acute in one-industry towns which offer no alternative form of employment. Currently, in such a situation an employee ordinarily has the choice of waiving any rights to future disability benefits in order to continue at his or her present job, of being unemployed indefinitely, or of seeking work away from home. If informed workers in these cases want to continue at their present jobs, risking more serious illness as an alternative to unemployment, they should be able to do so without waiving the right to benefits. When they are no longer able to work at their jobs in the only available industry, they should receive total disability benefits, whether or not they are in fact totally unable to work at some less taxing job. If employees in these situations wish to move to new areas to seek employment, they should receive resettlement benefits to help them pay moving expenses.

3. Workers and former workers in industries where scheduled diseases are prevalent should be informed of the existence and symptomology of such diseases, and of their right to medical and income benefits for disablement from these ailments.

Often, information concerning newly isolated or difficult-to-diagnose occupational diseases is not readily available to workers. Sometimes this is because the particular disease has not yet become a matter of general public concern. In other situations, information concerning occupational diseases has been actively suppressed by the responsible industry. To combat industrial obstructiveness and media inattention, workers in industries where scheduled diseases are prevalent should be individually informed by the employer of the existence and properties of these illnesses and of their right to compensation should they be affected. Former workers and their survivors should receive the same information. In addition, when a new disease is added to the schedule, all people who have previously made unsuccessful compensation claims for that illness should be notified so that they may resubmit their claims. The right to compensation for debilitating occupational diseases should not depend on fortuitous knowledge that one's illness is occupationally related and compensable.

E. Benefits for Occupational Diseases

The provision of benefits in case of removal from a hazardous in-
Industry was discussed in the previous section. The remaining benefit problems of workers' compensation—inadequate partial disability coverage, absolute time and dollar limits on income benefits, and reduction of benefits when diseases are complicated by noncompensable ills—are well recognized and have been discussed in depth in other studies. As in most areas of compensation law, restrictions on partial disability and arbitrary time and dollar ceilings, have affected occupational disease victims more harshly than others. In recent years, however, the states have done a good job of reform in relation to these problems, though there is still much area for improvement. Since the benefit structure has been studied so thoroughly, and since reform is well under way, recommendations for change in this area of the law need only brief explanation.

1. Victims of occupational diseases should be awarded partial disability on the same basis as workers with accidental injuries.

Workers with job-related diseases have often been eligible for income benefits for partial disability for a much shorter time period than those with accidental injuries. Moreover, dust disease victims have sometimes been excluded from partial coverage altogether. The reason given for such discrimination has, of course, been the fear that the compensation system will be overburdened with claims from hazardous industries with a high incidence of disease. The National Commission and other authorities have discounted this fear as a justification for the inequitable practice, pointing out that such limitations are often retained in workers' compensation law long after the deluge of cases has subsided to a trickle. In recent years, time ceilings have been removed, and employees with dust diseases have been awarded partial disability, without the collapse or even the decline of workers' compensation programs. Workers with occupational diseases should receive the same treatment for their partial disabilities as do injury victims, since they suffer the same inability to work and earn to their full capacity.

2. Absolute dollar and time ceilings for disability payments should be deleted from workers' compensation statutes.

Absolute time and dollar limits were at one time almost univer-
sally imposed on the payment of income benefits for both partial and total disability. The operation of such ceilings is completely arbitrary, cutting off claimants from any further income benefits whether or not they have regained their health and ability to work. Workers with job-related diseases have again received harsher treatment than accident victims, in the form of lower monetary limits and shorter eligibility periods. Dust disease sufferers have again fared the worst of all.267 This practice contravenes a major goal which the National Commission identified for workers' compensation programs—substantial protection against interruption of income.268 It also represents the failure of the program to do a complete job in its segment of the social insurance system.269 Finally, forcing disabled employees to seek public assistance may injure the dignity and self-respect of some workers.270

3. When workers have scheduled diseases, there should be a rebuttable presumption that their illnesses are caused entirely by those diseases. If part of an illness is shown to be nonoccupationally caused entirely by those diseases. If part of an illness is shown to be nonoccupationally caused, benefits for that part of the illness should be provided through the second injury fund.

Workers in the Carolinas still receive somewhat reduced benefits if their occupational illnesses are complicated by nonoccupational diseases.271 In the case of diseases which are etiologically obscure or difficult to distinguish from other diseases, claimants will encounter the same problems in trying to prove what percentage of their illnesses is job-related that they initially met in trying to prove the occupational nature of their ailments.272 To avoid resurrecting such insurmountable proof barriers for claimants, there should be an additional presumption that scheduled diseases are the sole cause of workers' illnesses. The presumption should be susceptible to rebuttal if the employer can show that the employee's illness is partly nonoccupational and is able to establish what proportion of the illness is not related to the worker's job. Where such a presumption has been rebutted, however, the difference in disability should be made up by contributions from the workers' compensation second injury fund. This departure from the principle that the compensation system should provide benefits only for occupationally-related ills is justifiable in order to prevent diseased workers from becoming destitute, and to further provide them with the medical

270. Id., at 37-38.
272. See text at notes 219-227 supra for a discussion of these proof problems.
and financial support necessary to affect a cure or rehabilitate themselves to the point where they are again employable.  

F. Time and Geographic Limitations

1. Notice and filing statutes should not begin to run until claimant is informed of the existence of a compensable work-related disease by a competent medical authority; the period for filing an occupational disease claim should be the same as the usual period of limitation for other actions in the jurisdiction.

Notice and filing provisions have been judicially interpreted to mean that claimants must give notice to their employers as soon as they learn, or could have learned by "reasonable diligence," that they have work-related compensable illnesses. This interpretation has prevented victims of little-known occupational diseases and illnesses with long latency periods from being arbitrarily and completely barred from filing compensation claims. However, there has been much confusion and consequent litigation centering on the question of what exactly constitutes "reasonable diligence." North Carolina has solved this problem with its statutory provision that notice and filing statutes do not begin to run for asbestosis and silicosis until their victims learn from competent medical sources that they are ill with compensable diseases. This rule is fair to employees, since it eliminates the possibility that their right to compensation will be foreclosed before they know of their illness and its work-related nature. It is also fair to employers, since they will know of the occupational disease as soon as their employees do, and thus be at no disadvantage in defending against workers' compensation claims. North Carolina's rule should be adopted nationwide to hold that notice and filing statutes do not begin to run until claimants have been informed by competent medical authorities that they have compensable occupational diseases.

The National Commission proposed a three-year statute of limitations on filing as a nonessential recommendation in its 1972 Report. At that time, only about half of the states permitted even one year to elapse between employees' discovery of their illnesses and the end of

---

273. The National Commission recommended that workers receive full benefits if an occupational injury or disease was a significant cause of their disabilities. National Commission Report, at 51. The Commission did not provide a rationale for this departure from the basic principle that the workers' compensation system is not a general social insurance program but a system to compensate industrially caused ailments.


275. See Anne Burton, Filing claims for occupational diseases in South Carolina—the statute of limitations problem, unpublished memorandum, on file at Indus. Rel. L.J.

276. N.C. Gen. Stat. §§ 97-58(b) & (c) (Supp. 1977). See notes 157-158 supra for the text of these statutory sections and some comments on their scope.

the filing period. Presently, North and South Carolina require that workers file for compensation within two years after learning of their work-related disabilities. The rationale which is advanced for these time limitations is that employers must be able to furnish medical treatment and diagnosis and to investigate the circumstances surrounding occupational injuries or diseases soon after the event, and should not be required to defend stale claims.

While the justifications presented for a brief limitation period on workers' compensation claims are based on important considerations, there are several reasons why they are not logically or appropriately applied in the occupational disease setting. First, the requirement that employees give notice as soon as they learn of the occupational nature of their disease means that employers will be given the opportunity to provide prompt medical care and diagnosis regardless of the length of the period of limitation. Second, since occupational diseases, unlike worksite accidents, typically arise very gradually and are caused by a generalized hazard such as dust or chemicals in the atmosphere, investigation of the particular circumstances of one employee's contraction of the disease will probably yield little data pertinent to the defense of a workers' compensation claim. Third, periods of limitation for other causes of action are usually longer than the one or two years allowed for workers' compensation claims, and it does not appear that a trespass, contract, or tort claim is less difficult to investigate or defend after a lapse of some years than is a workers' compensation claim. This last factor is a particularly telling argument in states such as the Carolinas where employees may elect to reject the workers' compensation statute and sue their employers in tort. It is therefore appropriate that a period of limitations equal to the period generally in force for initiating similar or alternative actions within the applicable jurisdiction be adopted for occupational disease claims.

2. "Minimum exposure" requirements, "last exposure" requirements, and "exposure-within-state" requirements should be deleted from occupational disease laws.

Requirements that a worker be exposed for a certain minimum

278. Id.
281. In South Carolina, S.C. Code § 42-1-310 (1977) creates a "presumption of acceptance" of workers' compensation "unless he shall have given, prior to any accident resulting in injury or death, notice of election to the contrary in the manner provided in § 42-1-340." Section 340 normally requires notice 30 days prior to disability. In North Carolina, N.C. Gen. Stat. § 97-4, allowed an employer or employee to file notice of nonacceptance of a workers' compensation plan if made within 30 days before disability. This provision was later repealed. Session laws 1973 c.129, S.2.
period of time, become disabled within a certain time period after last exposure, or be exposed to the causative agent for a certain time within the state are arbitrary limitations designed to lower the number of compensation claims which can arise from hazardous industries. South Carolina’s seven-year minimum exposure rule for byssinosis is a particularly blatant example of these arbitrary qualifications which bear no logical relation to the illness and discriminate against workers in industries with a high incidence of occupational disease. Such exposure provisions might be justified if they were designed to establish presumptions that workers who had worked within a hazardous trade for a certain period were affected by a disease endemic to that trade. Instead, the rules are utilized to completely bar workers’ compensation claims, whether or not the worker is actually suffering from an occupational disease. These exposure requirements act to relieve the workers’ compensation system of its responsibility to benefit workers for their job-caused ills, and therefore these exposure rules should be deleted from laws governing workers’ compensation for occupational diseases.

3. Retroactive benefits should be provided for workers who were disabled by an occupational disease before it became compensable.

As mentioned above, the practice of limiting workers’ compensation statutes to prospective application is universal. This lack of retroactive application works more hardship on occupational disease sufferers than on injury victims. This is because occupational diseases were at first completely barred from receiving workers’ compensation benefits. Later, only those diseases which were recognized by schedule were compensated, and scheduled diseases were often saddled with restrictive provisions not applicable to accidental injuries. Thus, even when a new disease is added to the schedule or a general coverage statute enacted, a large group of workers already disabled by the disease is left unprovided for. Even if not so designed, the lack of retroactivity functions in a manner similar to arbitrary temporal and geographic limitations by drastically limiting the number of workers in a hazardous industry who can file for workers’ compensation for their job-related ailments. Denial of retroactive coverage, like imposition of exposure rules, amounts to a perpetuation of the discrimination previously practiced against occupationally-diseased workers in excluding them altogether from coverage.

Lack of retroactivity works to restrict compensation for disease

282. See Task Force Report, supra note 93, at 17, and text accompanying note 5 supra for the Interdepartmental Workers’ Compensation Task Force’s finding on the number of states which still have various exposure rules.
283. See notes 154-55 supra for the statutory reference and a discussion of the rule.
284. See note 161 supra.
285. See note 72 supra and accompanying text.
victims in two ways. As noted, in cases where a new disease is added to a schedule, or where a general law supersedes a schedule-type statute, employees who already suffer from a disease at time of enactment will be completely barred from filing for compensation. Moreover, in cases where a general statute was already in effect, though the particular disease has just been medically and legally established as job-related, workers will be restricted to applying only for those benefits available when they became disabled by the disease. Thus, a disabled worker's medical and financial benefits may be limited by a dollar ceiling no longer in effect under present law. Although legislatures have sometimes attempted to remedy the latter problem by statute, courts have found such legislation to be unconstitutional. The reason for these decisions is that retroactive application of new statutory provisions would interfere with the terms of the contract existing between employer and worker at time of disablement.286 The total bar problem, however, is not confined by constitutional considerations; it represents a serious inequity in workers' compensation law.

Exactly how to remove the inequity of totally barring claims of workers disabled before statutory acknowledgment of their ailment lies close to the heart of the problem of occupational disease coverage. It is the fear of this potential backlog of claims which has caused manufacturers to fight so hard to keep occupational diseases from being recognized and has caused legislators to ignore or slight job-related diseases.287 Several approaches have been developed to tackle the backlog problem. In England, Parliament faced this problem squarely when it provided compensation for byssinosis in 1940.288 Besides establishing a "compensation scheme"289 for cotton manufactory workers who would become disabled in the future, Parliament authorized the Secretary of State to set up a separate scheme for workers disabled before passage of the Byssinosis Act. The scheme was to be administered by a board representative of both workers and employers, and funded through payments levied against cotton manufacturers and workers by the administrative board.290 When the backlog of brown lung victims had been compensated, any remaining money would be distributed among those manufacturers who had contributed to the fund.291 Thus, the cost of funding the backlog of byssinosis claims was placed directly on the industry which produced the disease.

Congress faced the backlog problem more circumspectly than did

286. 73 AM. JUR. 2D Statutes § 350 (1976); 81 AM. JUR. 2D Workers Compensation § 634 (1976).
287. See notes 44, 46, 47 supra and accompanying text, with regard to industrial attitudes.
288. Halsbury, supra note 238, at 252-55.
289. Id.
290. Id.
291. Id.
Parliament when it passed the FCMHSA in 1969. It provided that claims for underground miners disabled by pneumoconiosis prior to 1972 would be funded through general revenue appropriations from the U.S. treasury for the duration of the disability, under a program using payment standards analogous to those administered by the Social Security Administration. Miners who filed for benefits during 1972 would be funded through federal revenues administered by the Department of Labor for one year. After that year, their benefits and those of all future claimants would be provided by the coal industry. If, however, the mine operator liable for the disability could not be identified, the Department of Labor would remain responsible for both existing and future claims. The 1972 amendment to the FCMHSA extended federal funding of new claims for an additional year, and provided coverage for surface miners. It was not until 1978 that Congress proposed legislation fully internalizing the cost of miner's pneumoconiosis to the coal industry. In the Black Lung Benefits Reform Act of 1978, provision was made for a black lung disability insurance fund to be established and maintained by taxation of the coal tonnage extracted by each mine operator.

Occupational diseases contracted before they were recognized by workers' compensation statutes are nevertheless illnesses caused by job-site hazards. As such, they ought to be the responsibility of workers' compensation programs, rather than of the individual worker or of other segments of the social insurance system. In instances where states' second injury funds and industries' insurance plans are inadequate to meet the backlog of claims arising from a serious hazard in a large industry, contingency funds for these backlogs ought to be available. Whether such funds are obtained through direct taxation of the industry responsible for the disease or through government funding is a function of economic and political feasibility. The possibility of obtaining funding for the brown lung backlog on either the state or the federal level will be discussed in section four of this article.

G. Funding of Compensation for Occupational Diseases

Funding schemes for health screening programs and claim backlog, two very important components of occupational disease law, have

---

297. Id., §§ 423(a)(1) & 424(a)(2).
been previously discussed. Recommendations for funding claims of workers presently employed in hazardous industries like cotton processing, and for those who will be so employed in the future, are set out below. Consideration is also given to broad principles of funding for disabilities caused by insidious occupational diseases, based on the goals of workers' compensation and its role in this social system.

1. When victims of scheduled occupational diseases have worked for several employers in the industry which caused their diseases, there should be a rebuttable presumption that the last employer is the one responsible for their disability. If this presumption is successfully rebutted, benefits should be provided for these workers through the second injury fund or another special fund.

Diseases such as brown lung, black lung, and silicosis begin their work in secret; it is only very gradually that their victims become aware that they are suffering from a disabling occupational illness. When miners or textile workers have held several different jobs within their trade, it may be very difficult for them to prove that their disabilities were caused by any one employer, or to show in what proportion several employers are responsible for their predicament. Such proof problems are very similar to those encountered in trying to establish the work-related nature of a scheduled disease, or what percentage of an illness involving multiple disease states is work-related. For this reason, a rebuttable presumption should again be employed to shift the burden of proof from the workers to the last employer in the hazardous occupation. Where the last employer can successfully disprove liability, however, benefits should be provided to the disabled worker from a second injury or other fund. To require workers to assume the burden of proof after rebuttal would burden them with both a difficult evidentiary burden in the face of scant medical data and the prospect of prolonged litigation.

2. Where second injury funds are not available, a special fund should be established to cover occupational disease benefits for which specific liability cannot be placed. The fund should be financed through assessment of the hazardous industries whose workers must draw on the fund.

Compensation funds such as second injury funds are usually financed through contributions from all the industries within a jurisdic-

299. See text at notes 9-12 supra for a description of the onset of byssinosis.
300. See text at notes 137 and 224 supra.
301. This placement of liability is utilized by North Carolina for dust diseases, and by South Carolina for ionizing radiation injuries. See notes 195 and 196 supra. The Interim Policy Group suggested this placement (see note 90 supra and accompanying text), and the Task Force Policy Group recommended the practice (see note 112 supra and accompanying text).
302. The Task Force Policy Group recommended use of the second injury fund as an alternative funding source in these situations. See note 113 supra and accompanying text.
tion. Second injury funds may, however, prove inadequate to meet the demands of a large number of claims from hazardous industries, or may be statutorily limited to coverage of only specific injuries. Furthermore, huge demands on the fund from hazardous occupations may work inequities on contributing employers whose workplaces are not particularly dangerous. When these problems arise, a special fund should be set up to cover unassigned claims of disabled workers in scheduled trades like cotton textile manufacturing.

Industry contributions could be assessed either according to the number of claims on the fund from that industry or by levying a production or payroll tax on the industry. While it would seem fairer to determine contributions through the use of statistics, it may be necessary to employ a taxing method until patterns of fund usage are established.

3. Wherever practicable, the costs of compensating workers with scheduled occupational diseases should be borne directly by the industries whose processes cause the ailments.

The workers’ compensation system is not a public welfare program. It was developed to ensure provision of medical care and financial support to injured workers by their employers. The fact that workers’ compensation benefits are funded primarily through insurance plans or employer self-insurance attests to the essentially private nature of the system. In keeping with this historic aspect of workers’ compensation programs, manufacturers whose processes generate insidious occupational diseases should be required to pay the cost of compensating their employees for loss of health and ability to work.

It has been argued that the range of compensable risks ought to be limited in some way, in order to keep from imposing the high cost of accidents and illnesses on consumers or users of manufacturers’ products as a class. It is of course true that consumers should not be forced to bear the complete burden of a society’s ill health. Unfortunately, such concerns led to the arbitrary limitation of workers’ compensation coverage for those actually afflicted with diseases caused by their work. Consumers have been required to bear the costs of such

304. See A. Larson, 2 The Law of Workmen’s Compensation § 59.31 (1976), for a discussion of the coverage of the typical second injury statute.
305. Larson, supra note 137, at 215, states that such special funds have already been utilized in hazardous industry situations.
diseases indirectly through use of public funds to support the disabled. Moreover, many employees who contract such diseases have been forced to deplete their own financial reserves and to draw on the public welfare system for medical aid and a subsistence income. The cost of such illnesses should be internalized by industry, even though it will pass some of that cost on to its consumers, since the expense of occupational disease is one of the costs of production. Such costs should not be subsidized by taxpayers, some of whom may not be consumers of the products involved; nor should workers be forced to rely on public assistance which may degrade their dignity and self-esteem.

Perhaps the most important justification for internalization of scheduled disease compensation costs lies in the area of plant safety. Insurance companies routinely utilize a “merit-rating policy” to establish rates for their industrial customers based on the number of accidents which occur on customers’ worksites. This provides powerful incentives to manufacturers to make their plants as safe as possible. Insurers also participate in accident and disease prevention, providing their customers with information based on data they collect and analyze in the course of administering claims. Internalizing the cost of scheduled disease coverage will spur manufacturers to strengthen safety programs for workers in hazardous areas. Also, the burden of such costs may stimulate employers to fund medical research on imperfectly understood diseases such as byssinosis, in the hope that a better understanding of the disease will make its prevention easier.

4. Where it is impossible to place the cost of compensation for scheduled diseases directly on responsible industries, benefits should be paid from the jurisdiction’s general funds. Provisions should be made to shift such costs to employers as soon as it becomes practicable.

Economic or political considerations may render it impossible to place the cost of compensation for diseases like pneumoconiosis, silicosis, or brown lung directly on the businesses which generate these diseases. In past years, this problem was handled by arbitrary limitation of occupational disease coverage, so that costs were shifted to the individual worker or public assistance. With passage of the FCMHSA and its amendments, Congress has begun a trend of funding benefits for such diseases through general revenues. While the

309. See Task Force Report, supra note 93, at 47-49, 57, for comments on the need for internalization of costs to responsible industries.


312. For instance, when Wisconsin first introduced full coverage for silicosis, the insurance premium for monument workers soared higher than the payroll; the industry closed and the entire workforce was left to seek other work or public support. Larson, supra note 137.

313. See notes 292-95 supra and accompanying text for an explanation of the funding provisions of the FCMHSA and the Black Lung Benefits Act of 1972.
money for benefits comes from the general treasury, compensation is viewed as a right acquired through toil in the mining industry, not as a form of welfare.

Where the political clout of concerned interest groups makes it impossible to fund benefits through direct assessment of employers, or where the number of claims for a previously noncompensable disease threatens the existence of an industry, compensation funds should be provided through general revenues. But provisions for shifting costs to industry, including definite deadlines and mechanisms for orderly transfer of payments, should be included in the original enabling legislation. Such a shift comports with both the historical role and modern goals of workers' compensation.

G. Summary and Conclusion

The statutory provisions which are necessary to compensate scheduled diseases should be enacted as a unit. Courts and administrators should construe these laws liberally.

The above recommendations do contain some innovations. First of all, they present an integrated program specifically designed to compensate etiologically obscure, hard-to-diagnose diseases. Second, they call for the use of presumptions in three situations, and for deletion of arbitrary time limits on compensations from statutory schemes. Third, they propose a comprehensive program for identifying, treating, transferring, retraining and benefitting workers affected by insidious occupational diseases. The recommendations also include a reconsideration of the uses of medical advisory panels and schedules of occupational diseases. Nonetheless, most of the necessary tools for adequate and equitable compensation of diseases like brown lung have been in use or the subject of reform proposals for some time.

While the body of law required to compensate byssinotics and those with similar diseases does exist, it will not operate to provide adequate coverage unless it is enacted as a unit. If reforms are adopted piecemeal, if legislatures engage in random patching of existing restrictive statutes, provision of benefits for occupational disease victims may be blocked by conflicting laws. Broad coverage statutes have been effectually vitiated through inclusion of “by accident,” “ordinary disease of life,” and “peculiar to the occupation” clauses. Short statutes of limitation for filing and notice have barred compensation for diseases with long latency periods. If presumptions are chosen as a way of solving proof problems, expert medical panels may act to render the presumptions inoperative. Workers’ chances for regaining their health through timely medical intervention and rehabilitation may be ruined while they wait to become totally disabled and thus eligible for aid. In order for occupational disease laws to function effectively to provide compen-
Compensation for Occupational Diseases

 arbitrary and contradictory restrictions must be replaced by integrated statutory schemes.

Finally, in order to provide workers' compensation for the large number of people who are afflicted with gradually debilitating job-related ailments obscure in origin and difficult to diagnose, the principle of liberal construction has been adopted in many states. This principle should be fully incorporated into the workers' compensation laws of all the states. Information about diseases like brown lung has only recently been made available to workers, and those who apply for compensation benefits will probably be making their way through fairly complicated administrative processes for the first time. Medical histories for those who have only recently learned that their illnesses are caused by their jobs, or who died before these diseases became compensable, may be somewhat incomplete. Where the employer is not prejudiced thereby, courts and administrators should accept substantial compliance with administrative procedures and liberally interpret medical affidavits and other evidence submitted to establish a claim. Liberal construction is in keeping with the workers' compensation goals of prompt and efficient delivery of medical and rehabilitative services and income replacement to the occupationally disabled.

V

Implementation of Changes in Occupational Disease Laws

The goal of this article is to identify a program of compensation for byssinosis which is both legally and politically feasible. Study of the occupational disease laws in several states, and of recent reform proposals, has resulted in a set of recommendations for workers' compensation laws which will make brown lung compensation possible. While there is no complete medical solution to the problem of byssinosis, legal solutions for brown lung victims are fully developed and ready for use. There remains for consideration the question of how to implement these necessary reforms. It is possible to assess the feasibility of various methods of implementation by evaluating past attempts to reform workers' compensation laws. Coupled with the data revealed in this study concerning public, industrial, and legislative attitudes, such an evaluation should yield the most practical solution to the problem of compensation for brown lung victims. Four possible approaches to implementation will be considered in this section: (1) voluntary im-

314. Courts in at least thirty-two states have applied a general rule of liberal construction to workers' compensation. 81 AM. JUR. 2D Workmen's Compensation § 28 (1976).
315. Courts have held that the principle of liberal construction requires liberal interpretation of such evidence in occupational disease cases. 82 AM. JUR. 2D Workmen's Compensation § 296 (1976).
plementation by the states; (2) changes in state laws mandated by federal legislation; (3) a general federal program for all victims of insidious occupational diseases; and (4) a specific federal law providing compensation for byssinotics.

A. Voluntary Implementation on the State Level

Suggestions have been received from various quarters that the states should be left to make changes in occupational disease coverage on a voluntary basis. The reasons usually given for these suggestions are that matters of health and social insurance have traditionally been the province of the individual states, and that the states are in an excellent position to assess needs and provide services on the local level. The states' past responses to legislative programs and recommendations will shed some light on the efficacy of this approach. In addition, there are legal and political concerns which may determine whether the individual states are capable of carrying out real reform in occupational disease laws on their own.

In its publications in the early 1970's, the National Commission made a thorough review of the states' response to existing legislative programs and recommendations for change in workers' compensation law. It found that eleven different national and international organizations had published guidelines for such reform. These programs ranged from comprehensive model statutes to highly specialized proposals covering the concerns of a particular interest group. Though states had responded by making some few changes in their workers' compensation statutes, the National Commission found that encouragement of voluntary adoption of reforms had only "[a] sparse record of success."

Since the National Commission's study, the states have had several additional opportunities to voluntarily institute workers' compensation reforms. The first opportunity was presented by the National Commission's program of recommendations. States' progress in adopting these recommendations was considered in some detail in an earlier section of this article. In general, the states have concentrated changes in the area of the nineteen essential recommendations, and even there

316. The standard approach among those recommending this format has been to set out a number of guidelines (usually the National Commission's "nineteen essentials" or a similar program) which the states should be encouraged to implement and to set a definite or indefinite future time period when Congress should reassess states' progress and decide whether to mandate reforms. This approach has been suggested by a number of authorities, e.g., the National Commission Report, supra note 67, at 126-28; Policy Group White Paper, supra note 87, at 12; Millus, Is Federalization of Workmen's Compensation Inevitable? 62 A.B.A.J. 1010, 1014 (1976); Task Force Report, supra note 93, at 4. 418; National Commission Report, supra note 67, at 122-123; National Commission, Supplemental Studies, supra note 81, at 559-568.

the legislative response has not been overwhelming. Accounts of these changes in legal literature indicate that legislators have been motivated to rewrite workers' compensation statutes by the threat of federal mandates or a federal takeover of compensation programs, and as these threats have subsided, so has the volume of legislation generated by the National Commission's work.

Another opportunity for reform was presented to the states by Congress' enactment of the FCMHSA. Under its terms, the individual states would take over administration of the black lung benefit programs in their jurisdictions as soon as the Secretary of Labor found that their workers' compensation systems provided "adequate coverage" for pneumoconiosis. Requirements for adequate coverage included substantial equivalence with the FCMHSA and its amendments in matters of cash benefits, definition of "disablement," and liability of prior and successor mine operators, as well as a three-year limitation period for filing claims. When the National Commission report appeared in 1972, no state had qualified to assume administration of black lung benefits; only one state—West Virginia—had enacted a compensation program for miners' pneumoconiosis on its own. By late 1977, there were still no states which had been judged competent to take over the black lung program, though a number of states had attempted to meet some or all of the established criteria for "adequate coverage." Clearly, the states' record of voluntary adoption of workers' compensation reforms, especially in the area of occupational disease law, has not been outstanding.

Perhaps the greatest obstacle to adequate compensation of byssinosis on the local level is the state legislatures' reluctance to make wholesale changes in the compensation laws coupled with a propensity to enact reforms on a piecemeal basis. This study has shown that un-

318. See notes 118-20 supra and accompanying text.
320. See notes 177, 181-183 supra and accompanying text.
less necessary changes are enacted as a unit, any progress made toward benefitting brown lung victims in one part of a statute may be cancelled by other provisions of the law.

In the political sphere, competition for industrial expansion among the states also acts against voluntary adoption of occupational disease reforms. Though workers’ compensation costs vary little from state to state and constitute only a very small part of business expenses in any state, the spectre of runaway costs continues to haunt the state houses. Given this fear, state legislators will be particularly reluctant to enact the special funding measures which may be needed to meet the large backlog of claims for diseases like byssinosis.

B. Federal Minimum Standards for State Workers’ Compensation Programs

The method for reforming state workers’ compensation laws which has received the most attention since the National Commission’s study is that of setting enforceable minimum federal standards for the states’ programs. Numerous minimum standard schemes have been proposed, and several of these have reached Congress in bill form. As such schemes have been developed, questions of their enforceability in light of state sovereignty have arisen.

In a recent article, federal minimum standards proponent Mark Solomons examines the constitutional questions raised by the federal government’s involvement in state workers’ compensation laws. Solomons notes that “[t]here are constitutional limits to the exercise of the Commerce power in compelling the states to enforce federal standards.” He points first to the Supreme Court’s decision in National League of Cities v. Usery, which, for the first time in many years, invoked the tenth amendment to limit Congress’ ability to regulate the wages of state employees. Next, he reviews the conflicting circuit court decisions involving the EPA administrator’s power to compel the states to enforce the Clean Air Act, finding that some circuits have invoked the tenth amendment to invalidate this procedure. Given these constitutional parameters, Solomons concludes that either an “indirect” approach in which standards are made private rights enforceable in state or federal forums or a “tax/coercive” approach of utilizing

326. See note 311 supra.
329. Id. at 196.
331. Solomons, supra note 328, at 235.
332. Id. at 238-43.
tax schemes to force states to adopt standards would be viable.\textsuperscript{333} Though he seems to favor the tax/coercive program because of its likely success in convincing all the states to set up unemployment insurance systems, Solomons fails to make a specific recommendation for an enforcement mechanism for federal minimum workers' compensation standards.\textsuperscript{334}

The degree of difficulty likely to be encountered in finding a constitutional method of enforcing federal standards and the types of enforcement available within the limits of the federal Constitution has direct bearing on the feasibility of utilizing such a workers' compensation standards program to benefit brown lung victims. As Solomons indicates, the indirect approach of styling standards as private rights enforceable against employers through the courts has been found constitutional in the black lung cases.\textsuperscript{335} There are, however, several drawbacks to such a procedure in the minimum standards setting. The most obvious is the tremendous volume of suits which might flood court systems on either the state or federal level.\textsuperscript{336} Victims of the whole panoply of established and emerging occupational ills, not just one disease, would be pressing for relief. Another concern specific to byssinotics is that the lack of a strong advocate, such as a large union, places the burden of litigation on individuals or on a federal administrative agency which may be inundated with similar suits. The tax/coercion technique, which induces states to set up adequate programs in order to avoid federal taxation of the industries in their jurisdiction, seems more viable. Such an approach would defuse legislators' fears of plant removal to other states, since the refusal to act would cause additional tax burdens on state employers. Yet even here there might be drawbacks to implementation; some states might find that the employers' tax would be less of a burden on their industries than the special funds needed to take care of backlog claims and diagnostic treatment units for scheduled diseases.\textsuperscript{337} People with brown lung might wait long periods for relief while the federal government first tried coercion, then established a taxing system, and finally imple-

\textsuperscript{333} Id. at 243-47.

\textsuperscript{334} Id. at 246-47.

\textsuperscript{335} \textit{Usery v. Turner Elkhorn Mining Co.}, 428 U.S. 1 (1976). For an in-depth discussion of this case, see Solomons, \textit{supra} note 328, at 211-21.

\textsuperscript{336} Solomons was well aware of this problem. He suggested that the sheer weight of such suits on a state's compensation or court system might convince the states to adopt federal minimum standards for their workers' compensation programs. Solomons, \textit{supra} note 328, at 245.

\textsuperscript{337} This problem would, of course, be alleviated somewhat by federal grants to the states under the spending power to modernize their programs and build in the additional components necessary to meet federal standards. \textit{Id.} at 246-47. Provision of grants has been part of federal thinking on workers' compensation reform since the time of the National Commission study. See National Commission \textit{Report}, \textit{supra} note 67, at 125; National Commission \textit{Compendium}, \textit{supra} note 82, at 311.
mented its own compensation program with the revenues from its taxing program.

C. A Federal Law Covering All Occupational Diseases

This article centers on the need to provide workers' compensation for a specific, well-defined group of cotton textile workers. But there are millions of people with insidious ailments who have also met, or will meet, the same problems with the workers' compensation system as have byssinotics. This stark reality has led to proposals for federal legislation to provide compensatory remedies for toxic substance exposures at the workplace.

A far-reaching model act for compensating victims of industrially produced hazards has been proposed by Stephen M. Soble. This proposal utilizes the well-known workers' compensation principle of internalizing the costs of an industrial hazard to the responsible industry. In Soble's act, however, not just the workers in a particular industry receive medical and income benefits from their employer; rather, all those whose health is damaged, or their survivors, would receive compensation from the polluter. The Soble proposal provides for a new federal agency, the "Administrative Board for Compensation of Victims of Toxic Substance Pollution," to administer the compensation scheme. Evidentiary provisions to aid disease victims in establishing their claims include five rebuttable presumptions, a shift in the burden of proof from claimant to defendant, and strict liability for polluters. There are elaborate filing and claim procedures which take into account the formidable problems confronted by people suffering from diseases which have never before been manifested. The Administrative Board is authorized to establish a schedule of "designated

339. Id. at 730, 775-80.
340. Id. at 744-47, 797:
   REBUTTABLE PRESUMPTIONS
   (1) the manufacturer did produce the toxic substance in question at the time and in the manner necessary to have caused the pollution;
   (2) the toxic substance was distributed through the pathway indicated by the showing;
   (3) the toxic substance did result in the etiology attributed to the toxic substance pollution by the showing;
   (4) the manufacturer was solely responsible for the toxic substance pollution in question; and
   (5) the toxic substance by itself, not a mixture or a synergistically formed toxic substance, comprised the polluting and injury-causing or disease-causing substance.
341. Id. at 747-48, 797-98.
342. Id. at 743-44, 794.
343. Id. at 794-96, 802. Note that the provision for filing a medical report rests, not on medical ascertainment of illness as is recommended by this author in § III(F)(1), supra, but on claimant's exercise of "due diligence." Id. at 795.
diseases" which will give rise to compensation.\textsuperscript{344} An ombudsman is provided to hear complaints about and critique the work of the Agency.\textsuperscript{345} Costs of compensation are allocated to individual polluters to an extraordinary degree; there is no general fund made up from employers' contributions comparable to the workers' compensation second injury concept, and only a small amount of money from general revenues is provided for an emergency relief fund.\textsuperscript{346}

A less ambitious alternative to the Soble proposal is a program of federal benefits for all occupational diseases which, like byssinosis, have an obscure etiology and are difficult to diagnose. A program of this nature would cover all workers who became ill because of toxic substance pollution in their industries, though the general public would be left to private insurance and tort remedies. The structure of the program can be quickly sketched, in light of the exhaustive study which has already been made of occupational disease law. Benefit levels could be based on provisions such as those found in the Federal Longshoremen's and Harbor Workers' Act.\textsuperscript{347} As in the present black lung acts and the recently proposed Hollings brown lung bill,\textsuperscript{348} a mechanism could be provided for the states to take over direction of the scheduled disease program when they become competent to do so. NIOSH could be given the role of establishing presumptions and medical standards for disease schedules, and the Department of Labor the job of administering the program on the federal level. The technique of taxing industrial production utilized by the Black Lung Benefits Reform Act of 1978 could be appropriated for assessing all industries which harbor insidious health hazards. If the political climate would not support immediate placement of the full burden of compensation on responsible industries, provision could be made for general revenues to cover backlogs of claims, while employers took on the cost of present and future claims.

Both of the above measures are legally feasible. Neither involves the constitutional problems which restrict federal minimum standards programs, since neither includes provisions to which the states must adhere. Moreover, the two systems represent an equitable approach to

\textsuperscript{344} Id. at 800-801.
\textsuperscript{345} Id. at 780-87.
\textsuperscript{346} Id. at 807-12. Note that where the responsible companies do not have sufficient funds to cover all claims, victims must share scarce funds. Id. at 806-07. Perhaps the explanation for the fact that more funds from general appropriations are not provided is that the amount of money necessary to make up inadequate coverage would be so devastating that the federal tax base would not support it. Nevertheless, if the federal compensation is to preclude both tort claims and state workers' compensation, then it would seem that funds to make up the deficiencies in claims must be gotten somewhere.
\textsuperscript{348} FCMHSA, 30 U.S.C. § 931(b)(1) and (2) (1976); S. 2249, 95th Cong., 2nd Sess., 4(b)(1) and (2) (1978).
the problem of industrial hazards. Under a toxic substances victim's statute, no one would be left to the vagaries of the torts field for compensation of a pollution-related illness. A federal occupational disease law would end the disparate treatment of ailing workers in different states. Both programs would alleviate the heavy burden of proof which must be borne by those who contract etiologically obscure industrially-related illnesses.

Ideally, then, broad-based national laws are the best solution to the problem of overall compensation for insidious industrial diseases. They would reach more victims on a more equitable basis than existing state systems, and they are more compatible with the legal structure of our federal system than federally mandated minimum standards. The present politico-economic climate, however, suggests that sweeping federal disease programs like those just described will not become the law in the foreseeable future. Angered and frightened by persistent inflation and recession, the citizenry has begun a taxpayers' revolt. Congress, in turn, is leaning toward fiscal conservatism in its legislation. The Humphrey-Hawkins full employment bill, for example, was passed only after long debate and crippling compromise, and the concept of national health insurance has yet to gain the support of the majority of Congress. In addition to these current problems, traditional opposition to expansion of the federal role in areas of health and welfare must be taken into account, as well as industries' continued resistance to internalization of their less obvious operating costs. Despite the evident justice of seeking coverage for all industrial hazard victims, the pursuit of such legislation does not seem to be the best course for brown lung victims currently in need of compensation for their disability.

D. A Specific Federal Brown Lung Law

When Congress passed the original black lung legislation, members of Congress probably thought that this federal intervention in the field of workers' compensation would be unique. They were re-

sponding to repeated disasters in the coal fields and to the resulting public pressure for aid to distressed miners. In passing OSHA, they showed their concern for other occupational diseases—not with specific provisions for federal benefits, but with establishment of the National Commission on State Workmen’s Compensation Laws. Now that eight years have passed without significant reform of state occupational disease laws, some legislators are turning their attention to federal benefit programs for other diseases. This approach is the most feasible at this time. It is comprehensive and yet not so broad in scope as to be unpalatable to the Congress. In light of the legal, political, and practical problems which face the other methods of implementing the reforms needed to make compensation more available to byssinosis victims, it is this author’s belief that a specific federal Brown Lung Act offers the most promising and pragmatic opportunity to bring relief to cotton workers. Two brown lung bills embodying this approach were introduced in the 95th Congress. These bills comprise an excellent framework for a federal brown lung law.

I. Proposed Brown Lung Benefits Acts

Both of the bills which were introduced during the 95th Congress drew heavily on the FCMHSA and its amendments, though there are significant differences between the proposals. S.2449, introduced by Senator Hollings, is the more comprehensive of the two. It provides coverage for the backlog of uncompensated workers who have been ill for some time, as well as for those who have not yet become disabled by byssinosis. Representative Phillip Burton’s bill, H.R. 3480, is an interim measure designed to relieve state systems of the backlog burden for a two year period. Both bills, like the FCMHSA, provide benefits only for those who are totally disabled by brown lung disease, or for their survivors.

Each measure provides compensation for workers only for disease which arises “[o]ut of their employment in the textile industry.”

The Hollings bill is very similar to the FCMHSA in its basic de-
sign and purpose. Both programs provide for the federal compensation of a large group of workers disabled by an occupational disease which has traditionally been ignored by state workers' compensation systems. Each also anticipates that the states will eventually take over compensation for the disease, and sets up criteria by which to measure when state systems are competent for such a take-over.\textsuperscript{359} S.2449 also contains a number of innovative provisions which go far toward meeting the special needs of byssinotics. It utilizes a definition of "total disability" which takes into consideration the problems of workers disabled in a depressed economy or a one-industry area.\textsuperscript{360} Its anti-discrimination clause forbids the firing or harassment of any worker for contracting brown lung.\textsuperscript{361} The bill's limitation period for filing does not begin to run until it has been medically determined that the worker has byssinosis.\textsuperscript{362} The Secretary of Labor is authorized to contract with public and private agents for extensive screening programs to diagnose and treat textile workers' respiratory ailments.\textsuperscript{363} Finally, the bill provides for research on brown lung, and specifically mandates that all research results be made available to the general public.\textsuperscript{364}

Other sections of S.2449, however, weaken its responsiveness to the plight of brown lung victims. The bill's most significant drawback is its failure to insist upon the use of presumptions of work-relatedness, as the black lung benefit statutes have done from the outset.\textsuperscript{365} Instead, the Secretary of HEW is given authority in conjunction with NIOSH to establish standards for diagnosis and ascertainment of causality, which "may include appropriate presumptions."\textsuperscript{366} Almost as serious is the failure to provide partial disability benefits, although the functional definition of total disability alleviates the effects of this omission somewhat.\textsuperscript{367} There is a clause (recommending that the HEW Secretary establish standards for apportioning benefits among mill operators) which may open the door to prolonged litigation over liability for a

\begin{footnotes}
\textsuperscript{360} S. 2449, 95th Cong. 2nd Sess. § 3(f) (1978):
"Total disability" has the meaning given it in regulations of the Secretary of Health, Education and Welfare, except that such regulations shall provide that a worker shall be considered totally disabled when byssinosis prevents such individual from engaging in gainful employment requiring the skills and abilities comparable to those of any employment in a textile plant or plants in which such individual previously engaged with some regularity and over a period of time.
\textsuperscript{361} Id. at § 12. Not only is there an anti-discrimination clause, but it is backed up by enforcement provisions empowering the Secretary of Labor to investigate all alleged discriminations and discharges, and to order employers who violate the clause to take affirmative action to redress their actions. Id. at § 12(b).
\textsuperscript{362} Id. at § 6(a).
\textsuperscript{363} Id. at § 11(a).
\textsuperscript{364} Id. at § 11(b).
\textsuperscript{367} See note 360 supra.
\end{footnotes}
workers' illness. There is also a vaguely worded section allowing adjustment of benefits if it is determined that smoking, asthma, lung infection or other factors have contributed with byssinosis to a worker's disability. There is no indication as to whether this "adjustment" will be in an operator's liability for payment or in the amount of the worker's benefits.

Congressmember Burton's bill, though brief, incorporates several of the most important features of the black lung acts. Like the Black Lung Benefits Reform Act of 1978, it internalizes the cost of funding the backlog of claims to the textile industry through a tax on cotton tonnage used by the mills in producing cotton goods. It also mandates the use of three presumptions of job-relatedness. Two of these presumptions are modelled directly on those used in the FCMHSA, suggesting that they were proposed not because of their scientifically established relationship to the course of byssinosis but for legislative convenience. There is also an irrebuttable presumption of the presence of byssinosis based on a pulmonary function test developed by the Army and the Veterans Administration. The bill is very deficient in other respects; it makes no provisions for partial disability, screening, research, information dissemination, or treatment.

When taken together, the Hollings and Burton proposals provide an excellent framework for a federal brown lung law. S.2249 is a detailed program for assuring workers' compensation for both those presently in the mills, and those who've been injured by the cotton dust hazard in the past. H.R.3480 embodies the principal of internalization of compensation costs to the responsible industry and establishes the necessary shift in burden of proof. In order to provide adequate and equitable coverage to byssinotics, however, this framework requires additional elements. There should be provisions for screening all cotton workers for any sign of disease or propensity for disease. Programs for

370. Id. at § 4(c).
371. Id. at § 4(c)(1) and (2):
  (1) if a textile worker who is suffering or suffered from byssinosis was employed for ten years or more in one or more textile plants there shall be a rebuttable presumption that his byssinosis arose out of such employment;
  (2) if a deceased textile worker was employed for ten years or more in one or more textile plants and died from a respirable disease there shall be a rebuttable presumption that his death was due to byssinosis; . . ."

Compare with the rebuttable presumptions mandated for miners' pneumoconiosis at 30 U.S.C. § 921(c) (1976).
   [If] a textile worker is suffering from a chronic dust disease of the lung where the forced expiratory ventilation (FEV) value is less than 50 per centum of the value expected for workers of his age, sex, and height as defined in the "Veterans' Administration Army Cooperation Study of Pulmonary Function: II", [sic] then there shall be an irrebuttable [sic] presumption that he is totally disabled due to byssinosis or that his death was due to byssinosis.
transfer, retraining, and partial disability payments should be included.
It should be made clear that benefits will not be reduced because work-
ers have other respiratory diseases which complicate their byssinotic
condition. There should be presumptions of the work-related nature of
a worker's entire illness, and of the liability of the worker's last em-
ployer for that illness. Finally, coverage for brown lung should not be
limited to those who work or have worked in cotton textile plants; a
federal byssinosis act should cover workers throughout the cotton in-
dustry.373

A number of signs indicate the desirability of pursuing brown lung
compensation through specific federal legislation. First, there is the
lack of any assurance that benefits for byssinotics will be obtained from
the states voluntarily or through federal minimum standards in the
near future. Second, there is the fact that miners' pneumoconiosis has
been compensated through such a program. The black lung acts pro-
vide a model mechanism for federally benefitting occupational disease
victims, and for internalizing the costs of compensation to hazardous
industries. Moreover, recent amendments to these acts indicate a con-
tinued willingness on Congress' part to deal with occupational illnesses
on an individual basis. Third, brown lung is also beginning to attract
the attention and concern of the media and the general public,374 while
its victims gather strength to fight for compensation through their un-
ions and associations. Fourth, there is the consideration that specific
legislation can be tailored to meet the peculiar needs of byssinot-
ics—for diagnostic and etiological research, screening and treatment
programs, and presumptions of the occupational nature of their dis-
eases. Finally, federal legislation will preclude plant removal by manu-
facturers to a different state to avoid the costs of compensation. It is
therefore the conclusion and recommendation of this author that, in the
near future, a federal brown lung law is the most viable method of
attaining compensation for those who fall victim to byssinosis.

373. Note that the FCMHSA erred also in being underinclusive by covering only those work-
ers involved in underground mining. 30 U.S.C. § 902(d) (1976). This was corrected by the first
amendments to the act in 1972 to include surface miners. 30 U.S.C. § 902(d) (1976).
374. See, e.g., Nader, Cotton Mill Killer, THE NATION 335 (March 15, 1971); The Washington