Compensation for Byssinosis in Great Britain*

G. B. Rooke, B.M., B.Ch.

The guiding principles for compensation for industrial diseases in Great Britain are that the disease must be shown to be a risk of occupation and not one common to all persons, and that, in particular cases, its connection with employment must be capable of being established or presumed with reasonable certainty.

**History**

In 1831 Kay, a Lancashire physician, described "spinners phthisis," and in 1860, Greenhow noted the predominance of symptoms at the beginning of the week in flax workers. Oliver in 1902 introduced the term byssinosis (originally coined by Proust in 1877) into Great Britain, referring to it in his book as the fourth type of pneumoconiosis. Collis in 1908 confirmed that there was a prevalence of chronic disabling and sometimes fatal disease among strippers and grinders in cotton cardrooms in Lancashire. He emphasized the clinical picture of "Monday feeling," but he did not consider that there was a clear enough picture of the disease to distinguish it from chronic bronchitis. He pointed out the need to discover signs or symptoms that would stamp the condition as occupational and so allow it to be considered for compensation.

In 1927 a departmental committee was set up to investigate the effects of dust in the cotton industry. Its report was published in 1932, and although a respiratory disease of occupational origin was recognized among cardroom workers, it was not considered to present specific radiologic or postmortem characteristics.

A further committee set up under the chairmanship of Dr. W. D. Ross to consider compensation for cardroom workers reported in 1939. The term byssinosis was officially adopted for the disease, and it was agreed that physicians with experience of cotton workers' ailments could diagnose it with reasonable certainty. As a result of the "Ross Report," the first statutory provision for compensation for byssinosis was made. The Byssinosis (Workmen's Compensation) Scheme became effective on May 1, 1941. It applied only to males employed on or after that date in cotton chambers, blowing rooms, or cardrooms in which the preparation of raw cotton for spinning was carried out. They had to have been employed in the trade for at least 20 years and be totally and permanently disabled. Compensation was also payable to a dependant for a male's death resulting from byssinosis. To cover those men who had ceased employment before May 1, 1941, the Byssinosis (Benefit) Scheme 1941 was introduced. The claimants were examined by a specially constituted Byssinosis Board consisting of chest physicians and medical specialists from the Manchester area.

The Industrial Injuries Act 1946 replaced the Workmen's Compensation Acts and placed compensation on an insurance footing, based on the percentage of disability rather than loss of earnings. Its provisions came into force on July 5, 1948. Women were allowed to claim for "byssinosis" from that date on the same terms as men under the 1941 Scheme, but on Dec 28, 1948, the requirement for total disablement was modified to a loss of faculty that was permanent and assessed at not less than 50 percent. The examinations were taken over by the Manchester Pneumoconiosis Medical Panel of the then Ministry of National Insurance.

In March 1951 insurance against the disease was extended to persons employed in certain rooms in waste cotton factories. The Industrial Injuries Advisory Council in their report of 1956 considered that enough experience of the disease had been gained by medical boards to diagnose byssinosis in less severe cases and to assess the resulting disablement. It was also agreed that cases of byssinosis occurred with less than 20 years of exposure to cotton dust. As a result regulations were introduced reducing the qualifying period of 20 years to ten years in the relevant areas of cotton mills, and the 50 percent degree of disablement was reduced to "any degree" of disablement. These regulations came into effect on Feb 8, 1956. The prescription of byssinosis was extended to flax workers from Nov 1, 1965.

From Nov 27, 1974, the minimum period of employment in the prescribed occupation was lowered from ten years to five years, and it was no longer necessary to show permanent loss of faculty. Occupational coverage was also extended to include the spinning, winding, and beaming processes. From April 6, 1979, the five-year minimum period of employment condition was abolished following a recommendation by the Pearson Commission. A person may now qualify irrespective of the length of employment in the prescribed occupation.

The Pneumoconiosis, Byssinosis and Miscellaneous Diseases Benefit Scheme provides for payment out of the National Insurance Fund for persons suffering from byssinosis who were last employed before the July 5, 1948, and who were not in receipt of Workmen's Compensation for the disease. It covers "total" or "partial" disablement. As of Sept 30, 1979, there were 81 persons receiving benefit under this scheme, nine for total disablement and 72 for partial disablement. No new cases have been diagnosed under this particular scheme since 1976.

In addition to the compensation already available, a new state compensation scheme came into force on July 4, 1979, administered by the Department of Employment. In effect a fund was made available out of which a lump sum could be paid to those suffering from byssinosis (or other specified industrial chest diseases) who no longer had a surviving employer from whom common-law damages could be claimed.

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Byssinosis has not been defined in law in Great Britain. It is specifically excluded from the definition of pneumoconiosis in the Social Security (Industrial Injuries) Prescribed Diseases Regulations. It is officially described as a chronic respiratory disease occurring in cotton and flax operatives, developing in a characteristic manner and causing demonstrable impairment of breathing. There has been a natural reluctance to be too specific about the characteristic symptoms of byssinosis in official publications because the disease can only be diagnosed by its symptoms. There is, as yet, no objective test to confirm its presence. It is not within the scope of this paper to discuss these symptoms in detail.

Before Nov 27, 1974, only those cases with ventilatory impairment as measured away from their place of work, i.e., grade III byssinotic patients using Schilling’s grading, could be accepted. Now cases with grade II symptoms but with no permanent ventilatory impairment out of the mill are accepted at a low level of disablement benefit. Byssinotic patients of both grades II and III who change their job in the interest of their health and lose earnings as a result can claim an increase of their disablement benefit known as Special Hardship Allowance. It is hoped that this may enable those with grade II byssinosis to leave the industry before permanent ventilatory impairment develops.

**METHOD**

To claim disablement benefit for byssinosis, a mill worker obtains a claim form from his local office of the Department of Health and Social Security (DHSS). When the local insurance officer is satisfied that the claimant comes within the relevant regulations, the claim is forwarded to the Manchester Pneumoconiosis Medical Panel. A medical board consisting of two of the six full-time doctors of the panel examines the claimant after taking a full industrial and medical history. Lung function tests are done, and if the claimant is considered to have byssinosis, his degree of disablement is assessed. This is done by the board’s clinical judgment of the case and by reference to how much below the predicted value are the claimant’s ventilatory capacity test results. Assessments are made from 10 percent to 100 percent in rises of 10 percent. The whole procedure is usually completed within one to two months of the claim’s being made. Once accepted the cases are reassessed at about two-yearly intervals.

**RESULTS**

The total number of byssinotic cases diagnosed since the disease first became compensatable in Great Britain in 1941 up to and including 1977 is 4,892. As of Sept 30, 1977, 3,140 of these were alive (910 men and 2,230 women). The majority of these were receiving less than 50 percent disablement benefit, and 40

### Table 1—**Lives Byssinotic Cases at Sept 30, 1977, Receiving Disablement Benefit**

<table>
<thead>
<tr>
<th>Disablement Assessment, % (No.)</th>
<th>Weekly Benefit* (£)</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 (820)</td>
<td>3.80</td>
<td>8.44</td>
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<tr>
<td>20 (750)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 (480)</td>
<td></td>
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<tr>
<td>40 (360)</td>
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<tr>
<td>50 (280)</td>
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<tr>
<td>60 (200)</td>
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<td></td>
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<tr>
<td>70 (160)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 (50)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90 (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 (40)</td>
<td>38.00</td>
<td>84.36</td>
</tr>
</tbody>
</table>

Total No. 3,140†

*Rising in steps of £3.80 ($8.44) from November 1979 to £38.00 ($84.36).
†910 men and 2,230 women.

### Table 2—**Cases of Byssinosis Accepted for Compensation and Their Relation to Changes in the Regulations**

<table>
<thead>
<tr>
<th>Date of Regulation, No. of Cases (Av/yr)</th>
<th>Regulation Title and Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1941, May 1 39 (6)</td>
<td>Bysinosis (Workmen’s Compensation Scheme) Males only 20 Years employed in cotton blowing and cardrooms Total permanent disability</td>
</tr>
<tr>
<td>1948, July 5 471 (59)</td>
<td>Industrial Injuries Scheme Women allowed to claim 50% Disablement allowed (from Dec 28, 1948)</td>
</tr>
<tr>
<td>1956, Feb 8 4,037 (211)</td>
<td>Industrial Injuries Amendment Regulations “Any degree” of disablement 10 Years in employment</td>
</tr>
<tr>
<td>1974, Nov 27 498 (99)</td>
<td>Industrial Injuries Amendment No.2 Regulations Permanent loss of faculty no longer required 5 Years in employment Spinning, beamiing, and winding included</td>
</tr>
<tr>
<td>1979</td>
<td></td>
</tr>
<tr>
<td>Total, 5,045</td>
<td></td>
</tr>
</tbody>
</table>
were 100 percent disabled (Table 1). The largest intake of cases occurred in the decade following the change in the regulations in February 1958, when the 20-year qualifying period was reduced to ten years and the 50 percent disablement requirement to any degree of disablement (Table 2). Since the requirement of ten years of employment in the cardroom has been reduced to five years, and more recently to any period of work in the prescribed areas of a mill, only one or two new cases of byssinosis have been added to the 20 to 30 cases diagnosed each year who have worked ten or more years in the cardroom. This confirms the belief that the majority of cases of byssinosis occur after long exposure to cotton dust. The inclusion of spinning rooms and beaming and winding areas has increased the intake by 11 or 12 cases a year.

These figures should be viewed against the background of the number of textile workers at risk in the prescribed areas of cotton mills. In 1941 there were approximately 20,500 men and women employed in cotton cardrooms in Great Britain; in 1978 there were approximately 3,500, the average over the 38 years being about 14,700. Since 1974, when spinning, winding, and beaming areas were included in the legislation, the number at risk each year has been increased by about 7,500.

A further function of the Manchester Pneumoconiosis Medical Panel is to assess whether byssinosis played a material part in causing or accelerating death in those accepted as having suffered during life from the disease. In such a case a dependant of the deceased would be entitled to claim industrial death benefit. For this reason, coroners refer cases to the panel when the deceased is known to have been in receipt of disablement benefit in life.

Death is accepted as being materially accelerated by byssinosis in those cases who showed definite disturbance of their ventilatory capacity in life and in whom there was evidence that death was due to pneumonia or exacerbation of chronic bronchitis. The coroners also refer about ten cases per year of textile workers who have died a respiratory death, but who have never been examined in life by the panel. In these cases no opinion can fairly be given because there are as yet no known criteria for diagnosing byssinosis at necropsy.

The published figures for byssinosis deaths in Great Britain relate only to those cases in which a claim is made by a dependant for industrial death benefit and death is considered to be caused or materially accelerated by byssinosis. Industrial death benefit is not normally payable for the death of a female sufferer or for the death of a male sufferer who does not leave a widow. Over the past ten years an average of 121 deaths of those in receipt of disablement benefit for byssinosis has occurred each year. Of these the panel has considered an average of 39 cases each year to have died as a result of byssinosis, but claims for industrial death benefit have been made only on an average of 18 cases per year.

Summary
Byssinosis first became compensable in Great Britain in May 1941. The claimants were examined by a specially constituted board consisting of chest physicians and medical specialists from the Manchester area. Following the Industrial Injuries Act of 1946, which became operative in July 1948, the examinations were taken over by the Manchester Pneumoconiosis Medical Panel.

At first only men who had worked for at least 20 years up to and including cotton carding processes could claim. They had to be permanently and totally incapacitated by the disease. Women workers were included from July 1948, and the disablement required was reduced from total to 50 percent in December 1948. As experience with the diagnosis was gained, the law was changed to cover any degree of disablement in 1956, and in 1974 those with byssinosis grade II were accepted.

In 1956 ten years replaced the 20-year qualifying period in the cotton industry, reduced to five years in 1974 and to any period in 1979. In 1951 insurance against the disease was extended to workers in the waste cotton industry and in 1965 to workers in the flax industry. In 1974 the scheduled area in the mill was extended from the carding process up to and including beaming and winding.

Acknowledgment: I wish to acknowledge the encouragement of Dr. P. J. Darby, Chief Medical Adviser (Social Security) of the Department of Health and Social Security, and of Dr. R. C. B. Williamson, Principal Medical Officer of the Pneumoconiosis Medical Panels. I also thank my colleagues and staff at the Manchester Pneumoconiosis Medical Panel for their help in the preparation of the manuscript.

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10 The National Insurance (Industrial Injuries) Act (1946).
9 and 10. Geo. 6. C62
11 The National Insurance (Industrial Injuries) Act

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CHEST, 79: 4, APRIL, 1981 SUPPLEMENT
Evaluating Work Relatedness of Diseases*

Thomas C. Brown

Johns-Manville’s chief executive told a Senate hearing last August: “...we have observed quite closely the inability of the current workers’ compensation system to deal with the broadest possible range of occupational disease problems and particularly asbestos-related disease.”

Thus, Johns-Manville joined a growing rank of workers’ compensation critics. Professor Peter Barth sifted evidence on compensation for occupational diseases and concluded, “There can be little doubt about one thing: The extent of the problem as perceived by every commentator from the medical-scientific community vastly exceeds the number of claims made by employees or their survivors through state workers’ compensation laws.”

Arend Bouhuys estimated in 1979 that 30,000 former cotton textile workers suffer total disability from byssinosis. The US Department of Labor has estimated that 85,000 active cotton workers suffer some degree of disability from cotton dust exposure. Through April 1980, states reported paying byssinosis compensation to fewer than 450 claimants.

In a 1979 followup study of 383 active and retired South Carolina cotton textile workers, Dr. Bouhuys determined that 33 were totally disabled and 54 were partially disabled by cotton dust. Of these 87, one had received workers’ compensation.

Still, not everyone agrees that most chronic occupational diseases elude the workers’ compensation system. Insurance trade associations and many employers argue that workers’ compensation should be paid only for conditions unmistakably caused by job exposures rather than for conditions more likely than not to have been caused by the job. This view is largely reflected in the 50 state laws that govern compensability for most US workers. Judicial interpretations have eased restrictive provisions in state laws, but an arduous burden of proof rests on individual claimants whenever chronic disease claims are challenged.

The adversarial system for workers’ compensation adjudication is unique to the United States, and it works to the disadvantage of persons with chronic diseases that are caused—or substantially caused—by on-the-job exposures. Most are difficult for clinicians to separate from diseases caused by other factors such as smoking or environmental pollution. A 1975 survey of closed workers’ compensation claims and an analysis of those data by Barh and Hunt show that chronic disease claims are contested much more often than injury claims, with resultant delays and compromise settlements for a fraction of the benefits provided by law. These outcomes are inconsistent with workers’ compensation’s basic purpose: to deliver fair but modest benefits to injured workers with a minimum of disputation and delay. Perhaps medical knowledge can be organized into criteria and standards that add fairness to the system.

**Criteria for Evaluation of Chronic Occupational Diseases**

Occupational epidemiology is a difficult and expensive science. Study populations are hard to keep track of, exposure information is scarce, and health effects are hard to measure—especially chronic disabling health effects. It takes years to accumulate reliable information. Yet, the task of epidemiologists may be easier than that of examining physicians in compensation cases. Epidemiologists enjoy the luxury of statistical probabilities in their studies of groups, while examining physicians are asked to answer difficult questions about individual cases.

1. What illness does the claimant have?
2. What caused the illness? If there was more than one cause, how much did each cause contribute?
3. How much is the claimant’s normal functioning impaired by the illness? To what extent is he or she