

# A Review of the Organization of Occupational Health and Safety and Occupational Hygiene in Britain

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## The Health and Safety at Work Act, 1974

Throughout the 1960's it was becoming increasingly apparent that Britain's legislation for health and safety at work was in need of overhaul. Accordingly, the Secretary of State for Employment and Productivity, in 1970, set up a committee of enquiry whose terms of reference included a review of the major enactments concerned with health and safety at work, and consideration of the necessity for further legislative action to safeguard the general public from dangers arising in connection with the activities of work. The committee reported in 1972 (Committee on Safety and Health at Work, 1972) [2]. The deficiencies identified by the committee included:

1. An outdated approach based on statutory regulations which became increasingly detailed and complex as existing legislation was modified or new legislation introduced in a piecemeal manner in order to meet new problems.
2. An existing legislative approach which as well as being too detailed encouraged people to think and behave as if safety and health at work were primarily a matter of detailed regulation by government agencies.
3. Serious fragmentation of government effort.

Several major recommendations for correcting the deficiencies were put forward by the committee and the influence of these can be seen in the 1974 Act [5]. Among the new approaches adopted for the Act are included: specifying broad purposes rather than precise detail, increasing the categories of persons with responsibilities, involving employees as well as employers in the making of arrangements for health and safety, and providing for a reorganization of government effort towards health and safety at work. Four important broad purposes are set out in Part 1 of the Act. These are intended to secure:

1. the health, safety and welfare of persons at work,
2. the protection of other persons against risk to their health and safety arising as a result of the activities of work,
3. the control of dangerous substances including explosive and highly flammable substances, and
4. the control of the emission of toxic or offensive substances into the general environment, from places of work.

The four broad purposes are to be achieved through

**Why and how did the introduction of the new law of 1974 revive the British efforts in reducing occupational diseases and accidents? What were the implications for the organization of private and public occupational medicine, hygiene and safety?**

appropriate responsibilities laid upon employers, managers, and work people; responsibilities are also laid upon manufacturers, designers, importers, and suppliers of substances or articles for use at work. Employers have wide duties to ensure, so far as reasonably practicable, the health, safety and welfare of all their employees. In addition, employers are required to prepare a written statement of general policy with respect to health and safety at work, and to bring this policy to the attention of all employees. It is a requirement that employers should consult employees' safety representatives appointed by recognized trade unions under the Safety Representatives and Safety Committees Regulations due to come into force in October 1978.

As an aside it should be pointed out that, in contrast with certain other European countries, Britain's Health and Safety at Work Act contains no requirements for the employment of professionally qualified occupational physicians, occupational hygienists, or safety advisers.

The Health and Safety at Work Act is an enabling legislation intended ultimately to replace the provisions contained in over thirty separate Acts of Parliament and some five hundred sets of subsidiary regulations. An effective start has been made; by August 1977 the number of sets of regulations in force was down to 197. However, revision is a major undertaking which is likely to take several years for completion. Ultimately responsible for the administration of the Health and Safety at Work Act is the Secretary of State for Employment; this Minister also has the powers to make regulations under the Act. Under the direction of the Secretary of State for Employment, the Health and Safety Commission is responsible for enforcement policy in relation to the Act, but the enforcement is the responsibility of the Health and Safety Executive. The Commission is a body which comprises representatives from employers' organizations, employees' organizations, and local government; it is currently chaired by an ex-trade union leader. The Health and Safety Executive consists of nearly all the

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former inspectorates, hitherto dispersed among several government departments.

In the enforcement of the Act certain powers contained in previous legislation have been brought into prominence. In particular, inspectors of the Health and Safety Executive utilize powers to enforce "notices". These are of two broad types: prohibition notices under which the person served with the notice is required to cease a stipulated activity, and improvement notices under which the person so served is required to make stipulated changes. Failure to comply with notices is a criminal offence liable to substantial fines or even imprisonment. It has been recognized for many years that small fines have little effect on large employers; prohibition and improvement notices are believed to be more effective and fairer sanctions for use by inspectors discovering dangerous conditions or practices at work. Notices do not replace sanctions such as fines and imprisonment which remain for non-compliance with statutory provisions of a general or specific nature.

In addition to the power to issue notices, an inspector has the power to seize and render harmless any article or substances presenting imminent danger in a place of work.

Reflecting the move in Britain generally towards "open" government there is fairly wide consultation as a matter of routine by the Health and Safety Commission and Health and Safety Executive on matters of policy, and preparatory to the drawing up of regulations or approved Codes of Practice (these are documents with a special legal status which can be used by inspectors as evidence in legal proceedings although failure to comply with a requirement in a Code of Practice is not in itself an offence; to date only one Code of Practice has been officially approved).

#### **Implications of the 1974 Act for the Professional Practice of Occupational Health and Safety in Britain**

The purposes of the Health and Safety at Work Act specified above represent broad goals which must be achieved, under the law, by employers, managers, and workpeople in industry. In fact "industry" is too narrow a term because under the Act almost all employments are covered; the scope of occupational health and safety practice is broadening in response to the Act. There are important implications in the change from detailed specifications in regulations to the broad goals of the 1974 Act. In the past, in order to comply with their statutory obligations, employers had only to comply with those obligations actually specified in the statute. Now they are required to provide a place of work which is safe and without risk to health so far as is reasonably practicable but it is left to them to devise the strategy. The Health and Safety Executive's function is to monitor the effects of the employer's strategy and to take steps, where necessary, to secure effective action. Strategies at the disposal of the Health and Safety Executive include giving advice, serving notices, or instituting prosecution.

Predictably, there has been a widespread increase in demand for knowledge about health and safety at work on the part of employers, managers, and workpeople. Although no figures are available it seems likely, from the large number of courses and conferences held over the past four years or so, that a relatively high proportion of management has received training in aspects of health and safety at work. No comprehensive evaluation has been made of this training. Although, unquestionably, it has been beneficial we shall probably never know whether a coordinated approach to training would have achieved better results. In some ways it is unfortunate that the opportunity was not taken to evaluate this training because a massive training programme for Safety Representatives is being embarked upon without knowledge of the successes and failures of the training given to management.

There are signs that increased awareness of managers of their own health and safety responsibilities is advancing their recognition of the role of persons professionally qualified in occupational health, hygiene, and safety. The views held by employers, managers, and employees of such professionals have not been studied closely. This is unfortunate because, from statements made by employers' organizations, it seems that the role of professionals in occupational health, hygiene and safety is still perceived by many managers in rather limited terms. No complete picture is available of trade union attitudes to such professionals although statements attributed to representatives of the trade union movement indicate that professionals are regarded as an extension of management and that the appointment of safety representatives, from the trade unions, point of view, is the more important development. It seems likely that over the next few years professionals employed in industry rather than the Health and Safety Executive are likely to face a testing time; the outlook is by no means gloomy but they are likely to have to work hard in order to establish their role in health and safety at work which is clearly moving into the industrial relations sector.

#### **Developments in the Professional Practice of Occupational Health and Safety in Britain**

For the following survey of the practice of occupational health and safety in Britain we have identified the five groups: government health and safety inspectors, occupational hygienists, occupational physicians, occupational safety advisers, and occupational health nurses. A number of other professional groups such as ergonomists are making significant contributions in health and safety at work but because this field is not their primary interest, these groups have been excluded from our survey.

#### **Government Health and Safety Inspectors**

Government Health and Safety Inspectors are employed by central and local government. Many, but not all, of central government's inspectors belong to the

Health and Safety Executive. Inspectors are to be found in other departments of government; for example, the Railway Inspectorate belongs to that part of the Department of the Environment which deals with transport matters. Formal arrangements exist for collaboration between the Health and Safety Executive and the other government departments with an interest in health and safety matters. There is an arrangement under which the Railway Inspectorate enforces certain parts of the Health and Safety at Work Act affecting railway employees.

When it was first established in 1974 the Health and Safety Executive combined the Inspectorates of Factories, Mines and Quarries, Alkali and Clean Air, Pipelines, Nuclear Installations, and Explosives. Later Agriculture was added.

Amalgamation appears to be working reasonably well although it is too early to say whether it has been totally successful. In particular, it remains to be seen whether the assimilation of the Mines and Quarries Inspectorate will be a successful development. In Britain, as in many other countries, coal mining is an industry with special problems and special traditions. Certainly, the first mooted amalgamation was not received with enthusiasm by the coal mining industry generally, and the coal mining trade unions in particular. Agriculture is also an industry with special traditions and problems but in this instance the employers and trade unions differed over the question of the agricultural inspectorate's inclusion in the amalgamation. However, despite the opposition of the employers the Agricultural Inspectorate came to be included, as we have seen, in the Health and Safety Executive.

The amalgamation of the inspectorates represents an interesting experiment in government effort towards health and safety and it will take several years for it to become clear whether the experiment has succeeded. Meanwhile, the trend in amalgamation continues and developments are taking place aimed to bring Britain's North Sea Oil development within the jurisdiction of the Health and Safety Executive.

At present the Health and Safety Executive has a total of 4000 personnel of which about 1700 are inspectors in the field; about 1300 are specialists, consultants, administrators and other headquarters staff, and about 1000 are support staff. Thus a government body of about 4000 personnel has been set up to deal with health and safety problems of about 25 million people (an estimate, in round numbers, of the number of employees covered by the Health and Safety at Work Act). To this number must be added, however, a substantial proportion of Britain's non-employee population because, as previously stated, their protection as well as that of employees is provided for under the Act.

Inspectors belonging to local government recently changed their title from public health inspectors to environmental health officers, reflecting the broader scope of their work. In total there are about 6000 of

these inspectors. Their enforcement responsibilities include major enactments concerned with public health and protection of the environment. Discussions are in progress about the role of the environmental health officers under the Health and Safety at Work Act. As a group, the environmental health officers have knowledge and experience relating to the general environment which is not possessed to such a degree by the Health and Safety Executive. Moreover, the health and safety inspection of certain places of work such as offices and shops has been, for many years, a responsibility of public health inspectors, a responsibility acquired by the environmental health officers and now under discussion in regard to possible redistribution. On information currently available major redistribution of responsibilities between central and local government inspectors seems unlikely.

In 1971 it was recognized by the Factory Inspectorate that the development in legislation then being discussed would bring new requirements for training for inspectors. Generally speaking, the Factory Inspectorate had relied upon recruiting technically qualified people to become inspectors. In practice, there was great unevenness in the technical background of inspectors recruited and, from the mid-1950's onwards, there was recognition of the problems created by the unevenness [4]. In 1971 the Factory Inspectorate made the decision to send, as an experiment, ten inspectors on the course leading to the MSc in Occupational Hygiene at the University of Aston. In the light of this experiment it was decided that the MSc was most appropriate for students with some years experience as inspectors and that a six-month full-time post-graduate diploma was more appropriate for new recruits. Accordingly, in 1973 at the University of Aston the Diploma Course for factory inspectors was inaugurated. This has continued to run ever since and a parallel course has recently been established at the Imperial College of Science and Technology, University of London.

Newly recruited inspectors attend the Diploma course within the first two years of their appointment. All the newly recruited health and safety inspectors have advanced educational qualifications mostly in science or engineering (some are qualified to a level which is equivalent to the "Diploma engineer" qualifications obtainable in a number of European countries). Some of the newly recruited inspectors also have managerial experience.

Inspectors from the Health and Safety Executive use a wide range of sampling and measuring equipment including personal dust samplers, sound level meters, light meters, air velocity meters and thermal measuring equipment. For problems outside the scope of these instruments or where an investigation promises to be very time consuming, the HSE has its own central laboratory service employing specialists in several fields. In addition, a small number of mobile laboratories has recently been commissioned and these will be strategically located so as to cover most of the country.

### Occupational Hygienists

Occupational Hygienists employed full-time outside government service in Britain are relatively few. Recently, the Institute of Occupational Hygiene has been set up to meet the need of professional occupational hygienists; currently this has a membership of 59. This number is likely to include most of the fully qualified practicing hygienists in industry as well as government service. However, a much larger number of people has an interest in occupational hygiene even though they may not practice it full-time. The British Occupational Hygiene Society has a membership of about 750 drawn from a wide range of backgrounds including occupational medicine and occupational health nursing. Overall, therefore, the availability of occupational hygiene knowledge is not restricted to the small numbers practicing full-time. Even so, the number of persons with experience and knowledge in occupational hygiene is small and this is a matter for concern in Britain.

In an attempt to bring occupational hygiene to a wider audience, the British Examining Board in Occupational Hygiene, an independent Board originally set up under the constitution of the British Occupational Hygiene Society, recently introduced the Preliminary Certificate Scheme. Under this Scheme Preliminary Certificates are awarded, in specified aspects of occupational hygiene, to those who have satisfied the Examining Board on their knowledge of the principles and practice of occupational hygiene in specific aspects of the field. Candidates are normally required to have undertaken a course of not less than sixty hours tuition. Since its inception two years ago, the Preliminary Certificate Scheme has been successful and now a number of educational institutions are offering courses.

Apart from the Preliminary Certificate award, the British Examining Board in Occupational Hygiene also offers the certificate in Occupational Hygiene and the more advanced Diploma in Occupational Hygiene, candidates for which must have achieved a pass with credit in the Certificate in Occupational Hygiene and must also have advanced educational qualifications. Holders of either the Diploma or Certificate represent only a small proportion of the total British Occupational Hygiene Society membership.

### Safety Advisers

Safety advisers, sometimes known as safety officers are, numerically speaking, the strongest group. Many organizations in Britain now employ the services of a safety adviser whether in a full-time or part-time capacity. Of the two professional organizations available for safety advisers the larger is the Institution of Industrial Safety Officers, membership of which is about 2700. All but a few of the members are employed in industrial safety in a professional capacity. The smaller of the two organizations is the Institution of Municipal Safety Officers with a membership of about 500. As its

name implies, this organization caters for safety advisers employed in local government organizations. Their role is to advise the management of local government on matters affecting health and safety of local government's own employees. In Britain, as in many other countries, local authorities are responsible for a wide range of activities including civil engineering, and the maintenance and running of extensive transport fleets. Municipal safety advisers may, from time to time, be asked to advise on health and safety problems affecting the general public as well as the local government employees but the safety adviser has no functions concerned with the enforcement of legislation and in general they work independently of the Environmental Health Department in which the enforcement function is located.

In the past, "safety" was regarded as an area of expertise separate from that of occupational health and occupational hygiene. Now that health and safety are explicitly combined under the 1974 Act the professional compartmentalisation of the health, hygiene, and safety functions is beginning to change. Safety advisers are acquiring the skills and knowledge required to use hygiene measuring equipment (and, of course, health and hygiene specialists are acquiring knowledge in fields traditionally the prerogative of the safety expert, such as machinery guarding and personal protection).

There are suggestions that the various groups should be formed into a unified profession. At present, however, certain practical problems impede this development: one important source of difficulty is the imbalance in qualifications between the professional safety adviser, on the one hand, and the occupational health practitioners and occupational hygienists on the other. In general, but by no means invariably, the safety advisers have a lesser standard of academic qualification than the other groups. Although the Institution of Industrial Safety Officers is making rapid progress in raising the standards of professional qualifications, complete equality will take several years to achieve. Meanwhile, the educational imbalance presents a barrier to professional unification. *Atherley and Hale* [1] discussed the prerequisites for a profession based on occupational safety and hygiene and drew the conclusion that initiative by government would be an important instrument for achieving a unified profession but that at government level insufficient enthusiasm existed for the idea. In 1976 the Health and Safety Executive [6] put out a discussion document based on a survey of a sample of safety officers, the survey having been carried out by HSE personnel. A critical commentary was published by the *Institution of Industrial Safety Officers* [7]. Although the Institution cautiously welcomed the discussion document it felt that more detailed and systematic research was needed together with wider consultation with industry and the various organizations involved with the training and professional status of safety advisers. Following the discussion document, and the response to it, there has been

no sign of a major shift in viewpoint on the part of government authorities so that statutory recognition of a unified health and safety profession appears unlikely in Britain in the near future.

### Occupational Physicians

Medical practitioners, as occupational physicians, practice occupational medicine within the Employment Medical Advisory Service which is part of the Health and Safety Executive or as physicians practicing within industry on a full-time or part-time basis.

The Employment Medical Advisory Service is provided for under the 1974 Act although it was set up about two years before that Act passed through Parliament. The Service is responsible for providing medical advice to the Health and Safety Commission, the Health and Safety Executive and certain other government agents, as well as to employers and to employees. Although the major part of the work of the Employment Medical Advisory Service is connected with occupational health in the preventive sense a proportion of the Service's work is concerned with the special problems arising, in connection with work, for people who are disabled or who are undergoing rehabilitation. This concern includes people disabled not only by physical conditions but also those disabled by mental illness or disorders of mental development. The Employment Medical Advisory Service at present consists of 84 full-time physicians and 36 part-time physicians. Within the Employment Medical Advisory Service there is also a nursing advisory service employing 88 full-time nursing advisers and 3 part-time nursing advisers.

Organization of the Employment Medical Advisory Service is on a regional basis with a central information service and laboratory. The preventive aspects of the Service's work involves the identification of health hazards related to work by means of clinical studies and epidemiological surveys [3] by dissemination of information about occupational health problems and their control and the giving of advice to workpeople and their employers on specific hazards.

A further 600 or so full-time occupational physicians are employed in industry in Britain according to data from a study carried out by Phillips [8]. He found an apparent trend away from the employment of full-time occupational physicians. Information is not available about the number of physicians employed part-time but it seems likely that more occupational health care is delivered by part-time than full-time practitioners.

Currently the structure of qualifications for occupational physicians is the subject of change. A faculty of occupational medicine has recently been proposed, to be set up within the Royal College of Physicians, paralleling the Faculty of Community Medicine set up some years ago to meet the needs of community physicians. At one time it was thought that occupational physicians and community physicians could combine within the one faculty but this proposal foundered on the question of clinical skills, these being considered essential for occupational physicians but

not community physicians. The faculty development has been a part of the move towards the accreditation of specialists in Britain and the need for an accrediting qualification at specialist level. At the time of writing, that is prior to the establishment of specialist qualifications by the proposed Faculty of Occupational Medicine, qualifications for persons specializing in occupational medicine include the Diploma in Industrial Health, offered by two examining authorities in Britain, and degrees of Master of Science available in certain faculties of medicine within British universities. The relation between the academic and the specialist qualifications is not entirely clear at present but it is likely that the academic qualifications will represent an optional step towards the specialist qualification.

The Society of Occupational Medicine is the learned society catering for occupational physicians in Britain. Membership numbers about 1200 of which a proportion are medical teachers and research workers.

Occupational health care is available to industry in some areas of Britain from group services providing medical and nursing care on a peripatetic basis. Britain has seven such group industrial health services. In recent years the services have begun to employ occupational hygienists and latterly safety advisers in order to provide a comprehensive occupational health and safety service.

### Occupational Health Nurses

Occupational health nurses play an important role, particularly in small and middle-sized firms, in the practice of occupational health in Britain today. It is estimated that there are approximately 10,000 such nurses employed within industry, universities and hospitals and of these about half are State Registered and the rest State Enrolled. Of those of SRN status, approximately one in five hold the Occupational Health Nursing Certificate (OHNC) awarded by the Royal College of Nursing. At present, training for this Certificate is provided by some twenty centres, throughout Britain but their number is to be increased in the near future.

### Summary

Britain's Health and Safety at Work Act introduced in 1974 marked a change in approach to occupational health and safety which is having important long-term effects on the organization of occupational health and safety in Britain. The purpose of this paper is to outline the broad principles of approach to health and safety at work contained within the 1974 Act; highlight the implications of the new Act for employers, managers, employees, and representative organizations, and discuss the developments in the organization of occupational health and safety as a result of the 1974 Act.

### Zusammenfassung

#### Die Organisation der Arbeitsmedizin, Arbeitssicherheit und Arbeitshygiene in Grossbritannien

Im Jahre 1974 wurde in Grossbritannien ein Gesetz über Arbeitsmedizin und Arbeitssicherheit eingeführt, das das Problem neu angeht und die Organisation der Arbeitsmedizin und Arbeitssicherheit in diesem Land auf lange Sicht in starkem Masse beeinflussen wird. Der Zweck dieser Arbeit ist es, die diesem Gesetz zugrundeliegen-

den Prinzipien darzustellen, auf die Auswirkungen des neuen Gesetzes auf Arbeitgeber, Betriebsleiter, Arbeitnehmer und ihre Organisationen hinzuweisen, und die Entwicklung zu besprechen, die seit 1974 im Rahmen der Organisation der Arbeitsmedizin und Arbeitssicherheit als Resultat der neuen Gesetzgebung zu verzeichnen sind.

#### Résumé

#### L'organisation de la médecine du travail et de l'hygiène et de la sécurité professionnelles en Grande-Bretagne

L'introduction en 1974 du «Britain's Health and Safety at Work Act» a marqué dans les conceptions et l'approche de l'hygiène et de la sécurité professionnelles un changement qui aura à long terme des effets importants sur l'organisation de ces disciplines. Le propos de ce travail est de souligner les principes généraux de cette approche, contenus dans l'Acte de 1974, de montrer les implications de ce nouvel Acte sur les organisations d'employeurs, de chefs d'entreprises, d'employés et de représentants de l'administration, de discuter les développements dans l'organisation de l'hygiène et la sécurité du travail qui en résultent.

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