

NATIONAL ASBESTOS REGISTERS

Annual Report 1992-93



DEPARTMENT OF
L|A|B|O|U|R
TE TARI MAHI

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BACKGROUND TO THE REGISTERS

The National Asbestos Registers were established in March 1992, in line with the recommendations made by the Asbestos Advisory Committee in its April 1991 report to the Minister of Labour. The relevant sections of this document are as follows:

Formation of the Asbestos Advisory Committee

The Asbestos Advisory Committee was established in October 1990 as an ad hoc body to report to the Minister of Labour on issues relating to the health effects and use of asbestos in New Zealand, adequacy of controls and legislation and clarification of the legal entitlements available for affected workers. This followed increasing public concern about the past and present effects of asbestos on workers, former workers and their families.

Establishment of the National Asbestos Registers

Recommendation 4 of the Report of the Asbestos Advisory Committee to the Minister of Labour advised:

That an asbestos medical register be established for people who have been significantly exposed to asbestos. OSH should be the organisation responsible for establishing, maintaining and funding the medical register.

The medical register should be in two parts:

Part 1 - Those notified as having been exposed to asbestos;

Part 2 - Those notified as having an asbestos-related disease.

The system should allow movement of the name of a registered person from part 1 to part 2 of the register when indicated.

Notifications to part 1 of the medical register were to be made by those who felt that they had been exposed to asbestos, or by people acting on their behalf (and following consultation) such as an employer, union official, relative or friend.

Notification to part 2 of the medical register would be done by medical practitioners.

A Notifiable Occupational Disease System (NODS) was established in 1992 and asbestos registers have been incorporated in that scheme. This was in accordance with recommendation 5 of the Asbestos Advisory Committee.

THE ASBESTOS EXPOSURE REGISTER

The Occupational Safety and Health Service of the Department of Labour (OSH), in association with Electricorp Production, undertook an extensive advertising campaign in March and April 1992. Advertisements were published in all of the major newspapers, and several trade magazines.

The interest generated as a result of this campaign has ensured a high response rate for the exposure register. Notifications have been made by individuals, trade unions, occupational health nurses, doctors, the Asbestos Diseases Association of New Zealand and by some larger companies.

Notifications are directed either to branch offices of OSH or directly to the Registrar.

In recommendation 4, the committee had envisaged that people wishing to be recorded on the asbestos exposure register would have their exposure assessed at an OSH branch. Only those people who were judged as having had “significant exposure” would then be recorded on this register. However, the huge response from those individuals who had been exposed made it impractical to screen registrants in this fashion.

Once a person has notified OSH that they have been exposed to asbestos, an asbestos exposure registration form is sent. The registration form collects information about the individual, their work exposure to asbestos and the state of their respiratory health.

When the form has been completed and returned to the Registrar the details are recorded on a database. The individual is then sent printed material on asbestos and its associated health problems. If the person indicates that they have a family doctor, the doctor is informed that their patient has been included on the asbestos exposure register, and is sent a copy of OSH's booklet *Asbestos exposure and disease: notes for medical practitioners*.

This register will provide an overview of the numbers of people exposed to asbestos through their occupation in New Zealand. OSH is providing information to the people recorded on this register and to their doctors. Through the operation of this register OSH is hoping to raise the awareness of the possible health effects of asbestos exposure among the general public and the medical profession.

THE DISEASE REGISTER

A register for those people notified to OSH as having an asbestos-related disease was also established and is operated under the auspices of the National Asbestos Medical Panel.

The establishment of both this register and the panel has been carried out in accordance with recommendations 4, 5, 6 and 7 of the Asbestos Advisory Committee's Report to the Minister of Labour.

Tenders for the National Asbestos Medical Panel were called for in 1991. A tender was accepted on 31 October 1991. The successful tender came from the group listed below:

W Glass MBChB DIH FFOM FACOM (Convenor)
R Armstrong MBChB (Hons) FRCP FRACP
R Beasley MBChB FRACP DM
J Crane MBBS FRACP
D Jones MBBS MRCP FRACP
N Pearce BSc PhD (Epidemiology)

The first meeting of the panel was held in February 1992.

Professor Glass was nominated as the panel's convenor.

The National Asbestos Radiological Panel was chosen and its members are listed below:

Dr Paul White
Dr George Foote
Dr Graeme Anderson

Dr Anderson has since retired.

The National Asbestos Medical Panel is responsible for verifying all cases of asbestos-related disease. Once a case has been verified by the panel the personal and medical details of the individual are recorded on a database.

All personal information is stored under conditions of strict confidentiality.

Processes for registering people

The Asbestos Disease Register is maintained by OSH as part of the NODS. The Asbestos Disease Register is operated under the auspices of the National Asbestos Medical Panel.

Notifications for this register come from two major sources. The first is from doctors

whose patients have been diagnosed, or are suspected of having, an asbestos-related disease. The second source of notification is from the individuals themselves.

As this register has been included as part of NODS, most of the notifications from doctors have come on the NODS cards which have been distributed to doctors and occupational health nurses by OSH. Other notifications from doctors have come in the form of letters.

Once a notification has been made to the Registrar, and consent has been gained from the person concerned, relevant medical records and a full occupational history are obtained.

NUMBERS REGISTERED TO DATE

The Exposure Register

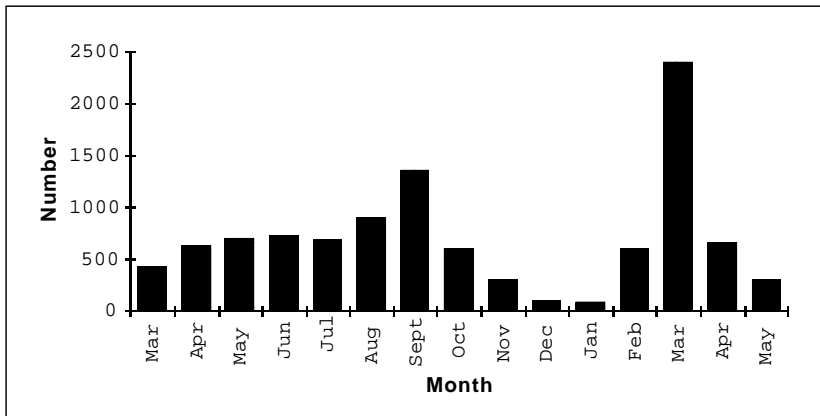
To date some 12,000 asbestos exposure questionnaires have been returned, and 7,000 of these have been fully processed.

Discussion

1. Pattern of notifications over time.

Figure 1 below represents the pattern of notifications to the exposure register over time. Peaks are noted during the months of September 1992 and March 1993. These peaks reflect the increased interest in this issue which was generated by the deadlines set by the Accident Rehabilitation and Compensation Insurance Act 1992. The first

Figure 1: Estimated number of asbestos exposure registration forms returned by month



peak occurred with the changes to lump sum payments in October 1992, the second peak in March 1993 was related to the cessation of the right to initiate common law actions.

2. Audit

The Occupational Safety and Health Service has contracted the Asbestos Diseases Association of New Zealand to audit the Asbestos Exposure Register in the following areas:

- a) Accuracy of records, by cross-checking exposure register data with a random number of registrants who have given prior permission to allow the auditors access to the data provided on their asbestos exposure forms. Access to this data is provided solely for the purpose of the audit.
- b) Satisfaction of the applicants with the services associated with registration, which are provided by OSH.
- c) Accuracy of information supplied by medical practitioners and satisfaction of medical practitioners with the registration procedures.

The audit does not include an audit of the Asbestos Disease Register.

The Disease Register

The National Asbestos Medical Panel has received 390 notifications of people diagnosed as having an asbestos-related condition, or suspected of having an asbestos-related condition. 212 of these cases have been reviewed and 199 of these have been recorded as having an asbestos-related condition. In 13 cases no asbestos-related condition could be established, and therefore they have not been included on the register. Further information is being sought for the remainder.

Confirmed diagnostic conditions are as follows:

Mesothelioma	44
Lung cancer	25
Other cancers	4
Asbestosis	38
Pleural changes without functional change	63
Pleural changes with restrictive lung changes	5
Pleural changes with obstructive lung changes	20

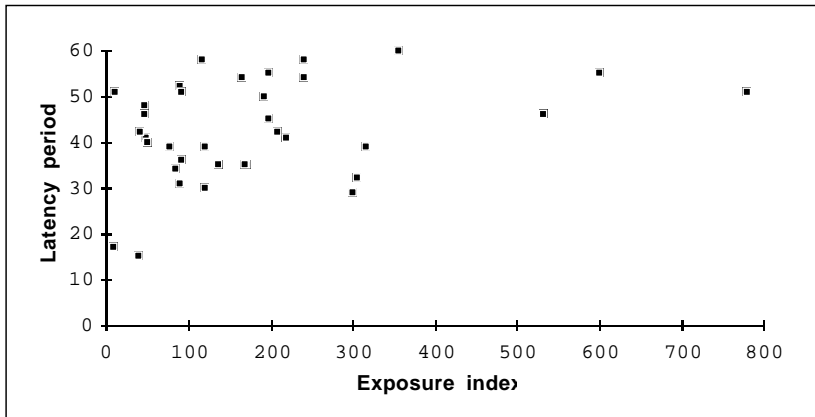
Discussion

Mesothelioma

Among asbestos-related conditions, this disease exhibits two distinct features: a variable exposure history as far as dose is concerned, and a variable time (latency) between first exposure and diagnosis. Figure 2 below illustrates both these points.

Exposure index

Figure 2: Mesothelioma cases recorded on the Asbestos Disease Register



One of the activities of the medical panel has been to develop a measure of exposure. This exposure index takes into account the type of industry, the duration of asbestos exposure and the frequency of that exposure.

Lung cancer

Among the lung cancers, thirteen were squamous cell carcinomas, five were adenocarcinomas, one was a large cell carcinoma, two were small cell carcinomas, one was a bronchioloalveolar carcinoma, one was an undifferentiated non small cell carcinoma, and two were not specified.

Other cancers

These include one laryngeal cancer, one oesophageal cancer, one bowel cancer and a palatal cancer.

Pleural changes

Some concern has been expressed to the panel that the disease register is recording abnormal (pathological) pleural changes. The argument being advanced is that pleural plaques are indicators of exposure but not disease. In fact, pleural changes such as localised plaques, diffuse thickening with or without calcification represent abnormal

and diseased pleura, i.e. pathological change. A study by Barnes* where he followed X-ray changes over time among asbestos-exposed workers who were no longer exposed, showed that pleural changes can increase with time.

It is also sometimes said that pleural changes do not cause symptoms, however it is well recognised that extensive pleural thickening, partially or totally encasing a lung, will lead to restriction of the lung and its function. On occasions it has been noted that patients with pleural plaques may complain of chest pain.

Although, in the light of current medical knowledge, pleural plaques and localised pleural thickening are accepted as being harmless the panel feels that it is important to document these changes.

Pleural disease with obstructive lung changes

As previously noted in this report, a number of exposed individuals with pleural changes (plaques or thickening) have associated obstructive lung changes as indicated by symptoms of cough, phlegm and shortness of breath with confirmed lung function abnormalities. In keeping with the requirements of its contract with OSH, the panel is investigating this association in relation to asbestos exposure.

Further points of interest

1. Epidemics of asbestos-related disease

The past. It can be surmised that the first epidemic of asbestos-related disease in New Zealand occurred without recognition by the medical profession or by the Department of Health. It was almost certainly a consequence of people working with asbestos in railway workshops, in the insulation of steam boilers and in the unloading of asbestos at the waterfront in the 1920s and 1930s. New Zealand did not have a government-based occupational health service until 1947, and a review of reports at that time indicates little awareness of asbestos-related diseases.

The medical profession, being generally unaware of the situation, was not well placed to diagnose instances of asbestos-related disease from the 1940s to the 1960s.

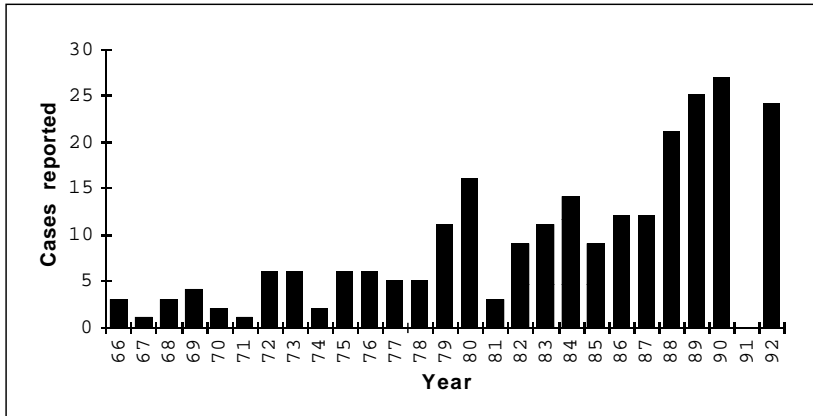
The present. Currently we are experiencing the second epidemic — a result of exposure in the 1940s, 1950s and 1960s in the asbestos cement industries in Auckland and Christchurch, at the Wairakei and Meremere power stations and as a result of the increasing use of asbestos cement products in the building industry. The effects of this exposure can be followed to some extent by the mesothelioma pattern as shown in figure 3, overleaf.

Regrettably, the diagnosis of asbestosis was seldom recorded, and lung cancer was

* Barnes, Robert. *Progression of radiographic changes in asbestos workers and ex-workers*. J Soc Occ Med. 1968; 36: 9-12

Figure 3: Reported cases of mesothelioma in New Zealand 1966-92

Sources: pre-1990 Department of Health's Cancer Data New Registrations and Deaths. 1992 figure from Asbestos Disease Register. 1991 figures not yet available.



ascribed to smoking, thus earlier records of these two diseases are incomplete and are of little value.

The future. From time to time it is suggested that with the workforce's greater awareness of the potential dangers associated with asbestos exposure, and the increased precautions which are being taken, there is little possibility of a future epidemic of asbestos-related disease. This is not necessarily so.

It is the panel's opinion that there is likely to be a third epidemic. The panel hopes it will be smaller, however the groups likely to be affected, such as asbestos removers, plumbers, electricians, computer cable repairers and installers and floor sanders, will continue to be at risk, unless proper intervention methods are taken.

To prevent a future epidemic it is important that employers and employees follow the work practices outlined in the Asbestos Regulations (the asbestos regulations are currently under review, as is an approved code of practice for the management and removal of asbestos).

The following study illustrates the hazard to floor sanders.

Audit of floor sanders and work practices involving asbestos-backed vinyl sheeting in the Christchurch area, by K.D. Sheat. 1992

The audit surveyed user awareness, work methods and environmental asbestos levels.

Asbestos dust was detected at greater than permitted levels over a 10-minute period (Asbestos Dust (Concentration of Fibres) Notice 1984).

Concern about work methods was also noted in the report with reference to:

1. A failure to prevent spread of dust to other rooms.
2. Inadequate clean up procedures.

3. Poorly maintained respiratory protection, where it was used.
4. Wearing dusty clothes home and thus transporting asbestos dust from work to home.
5. Dry sanding.
6. Disposal of asbestos waste in unlabelled bags.

2. Transfer of asbestos from work to family members

Examination of data on the register has revealed the transfer of asbestos, via work clothes, from the place of work to family members.

Cases

Case one: Mesothelioma in a woman who as a teenager shook and washed the asbestos-contaminated clothes of her brother and father.

Case two: Pleural plaques in a woman and a man, one the wife, one the son. Exposure was from asbestos dust brought into the home by the husband who worked in the asbestos cement industry.

Case three: Widespread pleural plaques in the daughter of a man who also worked in the asbestos cement industry.

3. Serious harm

The Health and Safety in Employment Act 1992 places new obligations on employers with regard to the management of hazards within a place of work.

The first schedule to the Act, which came into effect on 1 April 1993, sets out the categories of serious harm as follows:

1. Any of the following conditions that amounts to or results in permanent loss of bodily function, or temporary severe loss of bodily function: respiratory disease, noise-induced hearing loss, neurological disease, cancer, dermatological disease, communicable disease, musculoskeletal disease, illness caused by exposure to infected material, decompression sickness, poisoning, vision impairment, chemical or hot-metal burn of eye, penetrating wound of eye, bone fracture, laceration, crushing.

2. Amputation of body part.

3. Burns requiring referral to a specialist registered medical practitioner or specialist outpatient clinic.

4. Loss of consciousness from lack of oxygen.

5. Loss of consciousness, or acute illness requiring treatment by a registered practitioner, from absorption, inhalation or ingestion, of any substance.

6. Any harm that causes the person harmed to be hospitalised for a period of 48 hours or more commencing within 7 days of the harm's occurrence.

This requirement places a legal obligation on employers to notify OSH of cases of

asbestos-related disease, thus providing another source of notifications to the Asbestos Disease Register.

RESEARCH

The efforts of the Asbestos Medical Panel have been largely directed to reviewing the large number of disease notifications. However, several projects for research have been identified following preliminary examination of the data. They include:

1. Review of mesothelioma cases with reference to exposure and latency.
2. Review of cases of pleural pathology with obstructive lung changes.
3. Review of the distribution of defined respiratory symptoms among non-smokers, ex-smokers and smokers on the Asbestos Exposure Register.

CONCLUSION

The experience of the panel has shown that the procedures necessary to complete the data entry require co-operation between the patient, the general practitioner, respiratory physicians, occupational physicians, radiologists, hospital records staff and occupational health nurses. Part of the role of the Registrar is to network with this wide range of individuals. Members of the panel assist with direct contact, sometimes with the patient, but more frequently with the health professionals.

The Registrar and members of the panel wish to thank all health professionals involved, for their willing co-operation in what is frequently a time-consuming process.

The panel believes that already there have been a number of important consequences as a result of establishing the register: X-rays are more frequently being read and reported according to the International Labour Office standard and occupational health nurses are developing improved skills in taking work histories.

It is also felt that the health professionals involved are becoming increasingly conscious of work as a determinant of disease and although at this stage the issue concerns asbestos, a flow-on to other occupational illnesses can be envisaged.