TECHNIQUES FOR TRACING PAST EMPLOYEES AN EXAMPLE FROM AN ASBESTOS FACTORY

BY

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During the past 20 years there has been increasing concern about the long-term effects of occupational exposure to a wide range of substances. Different techniques have been developed to assist in the retrospective study of whole populations exposed to such hazards. Doll (1952) used a gas company's pension records to identify an occupational risk of lung cancer; he also (Doll, 1955) used the personnel records of an asbestos factory to identify the risk of lung cancer among its male workers. Case and Bidstrup (1956) measured the mortality rate of 723 chromate workers who had been clinically surveyed. Case, Hosker, Macdonald, and Pearson (1954) obtained nominal rolls of workers employed in 21 firms in the dyestuffs industry and used hospital records and death registers to establish the incidence of bladder tumour. In the United States, Mancuso (1959) and Mancuso and Coulter (1963) have used a method of tracing an industrial population which is quite independent of local factory records. The Bureau of Old Age and Survivors Insurance (BOASI), a department of the Federal Government, keeps records of nearly all employed persons in order to administer social security benefits. The record of the worker can be related to the employer. By using BOASI records they obtained data relating to those employed at a certain asbestos factory in 1938 and 1939 and studied the mortality of these cohorts.

In this paper it will be shown how the national registers and local records can assist in tracing the fate of past employees at an asbestos factory. It is hoped to determine the mortality rates from various diseases and study the influence of length of exposure, of exposure to different types of asbestos, and of different jobs. The techniques used can be applied in tracing any industrial population.

THE NATIONAL REGISTERS

NATIONAL HEALTH SERVICE CENTRAL REGISTER

A National Register was made following an enumeration of the population 2 weeks after the

outbreak of the second world war. Everyone was given a number and the new-born received theirs on registration of birth. Later the National Health Service adopted these national registration numbers. The Central Register of the National Health Service at Southport is intended to cover all those who were alive in England and Wales in 1939, those born since that year, and immigrants who have registered with a National Health Service doctor.

RECORDS BRANCH OF MINISTRY OF PENSIONS AND NATIONAL INSURANCE

Since 1948 the Ministry of Pensions and National Insurance has administered the National Insurance Scheme and keeps its records branch at Newcastle. All men and single women of employable age but under pensionable age are liable to pay National Insurance contributions unless sick, unemployed, undergoing training, or having an income of less than £260 per annum. Each has a national insurance number which is different from the National Health number.

ELECTORAL ROLL

The electoral roll is a third national register not commonly used for this type of search. The current roll is kept in the State Paper Room of the British Museum. It is bound into individual volumes for each parliamentary constituency; the streets in each area are listed alphabetically, and surnames and forenames of all qualified to vote in each household are given. The date of birth is not given.

NATIONAL DEATH REGISTER

Since July 1, 1837, deaths have been registered throughout England and Wales and a record of each death kept at the Registrar General's Office at Somerset House in London. The register is compiled from returns from local registrars. On registering a death they normally combine information from the medical certificate of cause of death, issued by the certifying doctor, or from a coroner's certificate, with

additional details obtained from the informant of death. This forms the basis of a draft death entry, which is sent to the Registrar General for statistical analysis. Copies are sent to the National Health Service Central Register and to the Records Branch of the Ministry of Pensions and National Insurance. After completion of a draft entry, the registrar enters the death in his current register, which when full is retained locally. Certified copies are made of the entries and sent to Somerset House quarterly to form a central record. These copies are not accessible to the public, but quarterly indexes are kept which may be consulted. These show the names of persons in the records listed in alphabetical order, together with the age of the deceased, the registration district in which the death was registered, and the volume and page number of the certified record. Given the reference number the Registrar General's staff can supply information from the central records.

EXECUTIVE COUNCIL

The area where most of the employees of the factory live is covered by one executive council of the National Health Service. An index card with the name, address, date of birth, and National Health Service number is kept for all patients currently on a doctor's list in the area. Old addresses are crossed out but remain legible. Records date back to the introduction of the National Health Insurance Scheme.

HOUSING AUTHORITIES

The Greater London Council and the Borough

Council of Barking and Dagenham were able to trace workers through their housing lists.

METHODS

FACTORY RECORDS

The personnel department at the factory holds the records of more than 14,000 men and women employed at the factory since it was founded in 1913. The records, excluding those of the currently employed, are kept in an alphabetical file. The names, address, date of birth, date of engagement, jobs in the factory, and date of leaving are usually recorded. No attempt was made in this survey to trace those employed for less than 30 days. The remainder comprised records of 4,811 males and 3,551 female past employees.

It was decided to transfer the data from the original records to sheets specially designed to facilitate the subsequent punching of 80-column Hollerith cards (Fig. 1). Two sheets were required for each record. The horizontal lines were divided into eighty partitions, the vertical lines separated the main items and assisted the punch operators. Names, forenames, address, and date of birth were entered together with the national registration number or national health number, and national insurance number if recorded. The dates of employment and a numerical code representing the actual jobs in the factory were also entered. This was completed in 6 months by two clerks in the factory. Design of the search procedures and the subsequent listing and tabulations have been carried out in consultation with International Business Machines.

SHEET 1

Serial No.	SURNAME	FORENAMES	No. STREET	TOWN/POSTAL DISTRICT	NAT. INS. No.	D. of B.
92419	MAYDEN	MICHAEL	9, ETON WAY	BARKING	556, 953, 42	1.6.11
92420	MAL	TOM	2, ETON WAY	BARKING	556, 953, 42	1.6.11
92421	MAL	MICHAEL	2, ETON WAY	BARKING	556, 953, 42	1.6.11
92422	MAL	MICHAEL	2, ETON WAY	BARKING	556, 953, 42	1.6.11

SHEET 2

Serial No.	D. of E.	1st JOB	2nd JOB	3rd JOB	4th JOB	5th JOB	D. of T.	MARRIED NAME	NAT. REG. No.
92419	1.1.12	2.1.12	3.1.12				1.1.12		556, 953, 42
92420	1.1.12	2.1.12	3.1.12				1.1.12		556, 953, 42
92421	1.1.12	2.1.12	3.1.12				1.1.12		556, 953, 42
92422	1.1.12	2.1.12	3.1.12				1.1.12		556, 953, 42

FIG. 1.—Data prepared for punching.

death, which is given in the death entry, has enabled the identity to be confirmed.

ELECTORAL ROLL, EXECUTIVE COUNCIL, AND OTHER SOURCES

Attempts to trace those past employees not identified by the Records Branch of the Ministry of Pensions and National Insurance or the National Health Service Central Register included not only the checking of lists and registers but visiting of the subject or his relatives, correspondence to confirm the date of birth or death, and reference to the index of the death register to confirm the place and date of death.

Electoral Roll.—The address of past employees was sought in the appropriate volume of the electoral roll. If a male with the same name and forenames was found among those listed, he was contacted by letter and asked to confirm his identity by giving his date of birth. If a woman with the same surname, or a man of that surname but different forenames was found, he or she was visited and asked if a husband or other male relative of the same age as the subject had worked at the factory during the period indicated by the records, and his fate was determined.

Executive Council.—At the offices of the executive council an alphabetical list of the remaining untraced male employees was checked against the card index of patients living in the area.

RESULTS

The Table shows the number of male past workers traced by each method. After the initial search by the Ministry of Pensions and National Insurance the succeeding searches became progressively less likely to yield positive results as the proportion of past employees on the lists with incomplete or inaccurate information increased.

The first search by the Records Branch of the Ministry of Pensions and National Insurance

identified 85 per cent. of those first employed between 1940 and 1964, 55 per cent. of those first employed between 1925 and 1939, and 28 per cent. of those who started at the factory between 1913 and 1924. The second search by the National Health Service Central Register identified 37 per cent. of the remainder.

The results of further searches are summarized in the Table: 126 were traced through the Electoral Roll, and 82 through the Executive Council; and ten of the eighty men born before 1880 were identified in the index of the death register at the Registrar General's Office. The remaining sixteen were traced through the housing authorities or through local knowledge.

DISCUSSION

The Records Branch of the Ministry of Pensions and National Insurance as far as possible maintains accuracy of its records by continuous review. The insured person pays weekly contributions by stamp, and each year a card with the stamps attached is sent *via* the local insurance office to Newcastle where it is checked against the personal record. If no card is received the Ministry makes enquiries. There are cases in which a person is lost track of but generally this is limited to those who emigrate without notifying the Ministry. Married women are not usually liable to pay insurance contributions and the Ministry takes no special action to keep track of them. That 85 per cent. of the males employed between 1940 and 1964 were traced is an indication of the completeness of the Ministry's records. Emigration without notification to the Ministry of Pensions and National Insurance and incompleteness or inaccuracy of the factory records are two reasons for failure to identify a higher proportion.

There is no similar system of continuous review used by the National Health Service Central Register. Births and deaths are notified by local registrars. A

TABLE
PROPORTION OF MALE PAST EMPLOYEES AT AN ASBESTOS FACTORY TRACED THROUGH VARIOUS AGENCIES

Date First Employed	First Search			Second Search			Third Search			Total Traced	
	Min. Pens. Nat. Ins.			Nat. Health Service Central Register			Elec. Roll, Ex. Council, and Other Sources				
	No. Searched	Traced		No. Searched	Traced		No. Searched	Traced		No.	Per cent.
		No.	Per cent.		No.	Per cent.		No.	Per cent.		
1913-24	400	112	28·0	288	33	11·5	255	45	17·6	190	47·5
1925-39	859	470	54·7	382	162	42·1	220	55	25·0	687	79·9
1940-64	3552	3013	84·8	539	256	47·9	283	134	47·3	3403	95·8
1913-64	4811	3595	74·7	1209	451	37·3	758	234	30·9	4280	90·0

person is assumed to be alive and in the same part of the country unless there is evidence to the contrary. Use of the National Health Service is positive evidence of continuous existence and information about emigration is received by the Central Register from various sources. However, the Central Register may lose track of those who transfer from one doctor to another if the second doctor does not obtain sufficient information to connect the new registration with an existing record.

The identification of the additional 234 males came from several sources which together agreed on the surname, forenames, and date of birth. If the date of birth did not agree within 5 years, the identification was not accepted.

The greatest difficulty among the males has been in tracing those first employed between 1913 and 1924. Many of these men must be dead, but unless they qualified for an old age pension the Ministry of Pensions and National Insurance is unlikely to have recorded their death. The National Health Service Central Register dates from September, 1939, and has no knowledge of those dying before this date. Although the deaths are registered at the Registrar General's Office, search for them without some indication of the date of death is too laborious to be rewarding.

These methods were not successful in tracing women workers. Most women were single while employed and subsequently married and changed their names. Maiden names have been recorded by the National Health Service Central Register since 1952, but a technique of tracing married women through their maiden name has not yet been evolved.

Together the two national registers traced 4,280 (85 per cent.) of the given population. Searches of the electoral roll and local searches produced only a further 234, that is 4.4 per cent. of all those traced. This may appear to be a poor yield for several months of file searching, foot slogging, and letter writing. The disparity in the results obtained by using the National Registers and by making local searches emphasizes the importance of recording accurately both the insurance number and the national health number on the records of industrial workers. With the aid of these, the Records Branch of the Ministry of Pensions and National Insurance and the National Health Service Central Register can easily give reliable information about the fate of male workers and, if dead, the date and place of death.

SUMMARY

An asbestos factory which had kept records of all those employed since its foundation in 1913 provided the essential data for tracing their male past employees, the first step in a study of occupational mortality in this factory.

Information from these records was extracted by clerks and then coded and punched on to Hollerith cards. Records of all with less than 30 days' service were excluded. The Records Branch of the Ministry of Pensions and National Insurance and the National Health Service Central Register successfully traced 85 per cent. of 4,811 male past employees. The name and place of the registration of those who died was also given, so that the cause of death could be obtained from the Registrar General's Office.

Searches of the Electoral Roll, the index files of the Executive Council, and other sources are also described. These methods identified 30 per cent. of those not traced by the Ministry of Pensions and National Insurance and the National Health Service Central Register, and contributed 4.4 per cent. of the total number traced.

The difficulties of tracing women employees, the majority of whom changed their names on marriage after leaving the factory, proved to be insuperable.

This study emphasizes the importance of recording accurately both the National Insurance and the National Health number in occupations where there may be long-term effects on health.

We are very grateful to the Records Branch of the Ministry of Pensions and National Insurance, the Central Register of the National Health Service, the Registrar General, the Executive Council for N.E. London, and the Housing authorities of the Greater London Council and the Borough Council of Barking and Dagenham for their assistance.

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